Chapter 2
Indicators of Demographic Change: A Brief Comparison of Data from Selected Alpine Regions

Naja Marot, Barbara Černič Mali

Abstract A comparative demographic analysis of ten Alpine regions was based on the results from a comprehensive quantitative and qualitative data collection. It can be generalized that in selected areas, municipalities can be found with negative and positive natural growth. A clear shift of childbearing to an older age is evident, likely caused by a longer education process, poor accessibility to housing, more demanding job conditions and other factors. The structure of age groups has dramatically changed in most of the regions since the late 1970s or early 1980s. In qualitative analysis, problems, such as job provision and housing for the youth were brought forward, so was the deterioration of services of general interest on one side, but also the introduction of innovative measures on the other. In addition the ways of tackling these issues through spatial planning have been examined. The results show that some of the regions have already started programmes or measures and in some cases incorporated them into policy documents. However, wider political promotion and recognition of the problem, especially on the local level, is still awaited for.

2.1 Methodology Description

One of the tasks in DEMOCHANGE was to analyze the demographic structure of Alpine regions as well as their socio-economic status, with the aim of thoroughly explaining the regional and spatial impacts of past, current and future demographic changes. The work was structured in multiple phases and started with data collection, i.e. 73 indicators covering 6 topics and time dimensions, albeit these indicators

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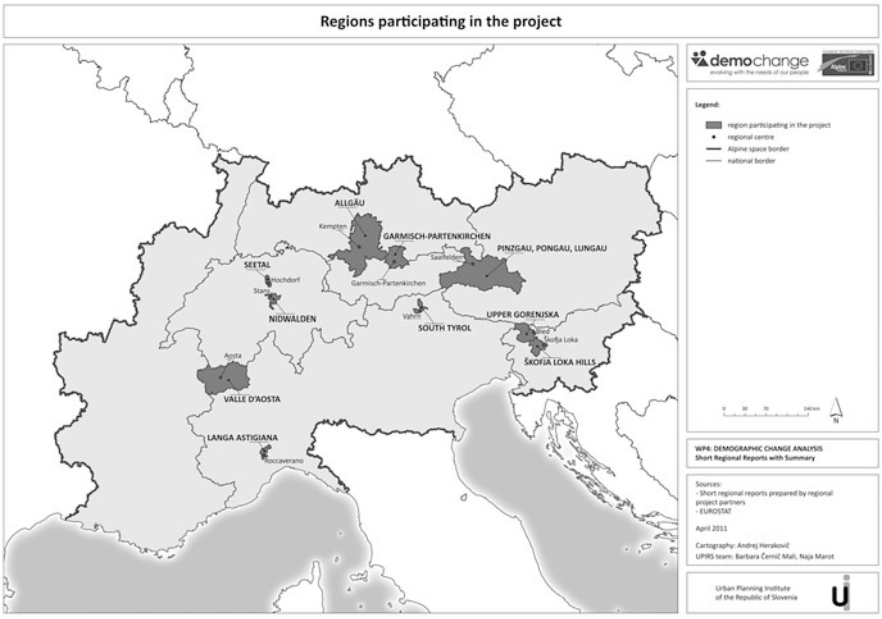

Fig. 2.1 Model regions participating in the project

were not equably covered in all selected regions. In addition, this quantitative data was checked and updated with qualitative data gathered through focus groups as well as interviews with relevant regional and local actors such as workers in tourism, service provision, youth, local and regional planners, farmers etc. While qualitative data was collected on the basis of unified questionnaires and focus group protocols prepared in advance, quantitative data comes from five different national, and in some cases also regional, statistical databases. This presented quite a challenge during the synthesis phase.[1]

Altogether, the analysis has been performed in ten regions (see Fig. 2.1): one Austrian, two German, three Italian, two Slovenian and two Swiss regions which have been selected on the basis of partners' knowledge and interest about their respective demographic change situation, e.g. decrease in population due to outmigration or tourism as major economic activity which is significantly influenced by demographic change (Černič Mali and Marot 2011).

[1]Besides discrepancies in the data availability regarding time scale, researchers also needed to tackle differences in definitions, lack of territorial data, data on health services, broadband internet or social transfer data as well as differences in administrative frameworks.

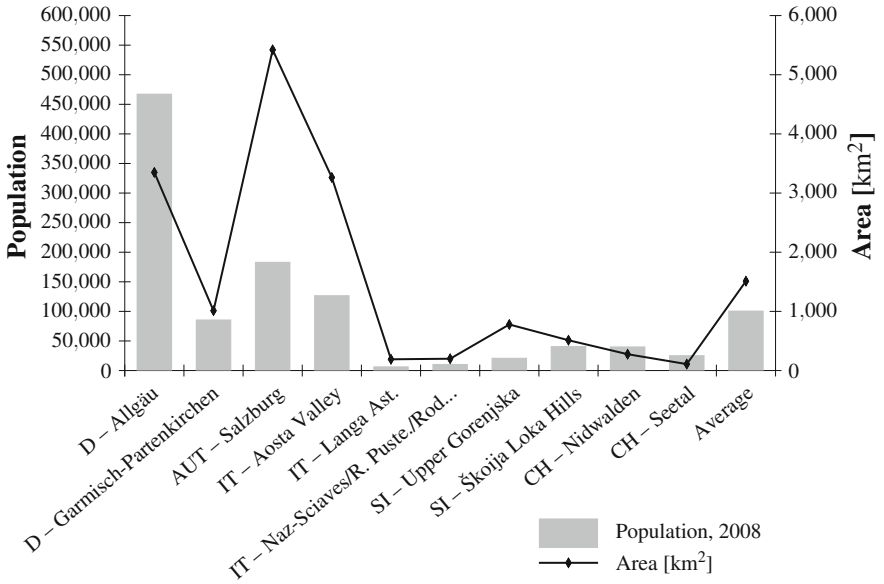

Fig. 2.2 Population and area of selected regions

2.2 Geography of Selected Regions at Glance

The selected regions nicely illustrate the overall Alpine area landscape features and settlement network of which the major characteristics are heterogeneity (Alpine Convention 1999, 2007) and duality between the highly densely populated valleys bottoms and scarcely populated remote hilly areas. The heterogeneity of the regions is also reflected by their considerable variation in size (see also Fig. 2.2): the largest is Austrian Pinzgau-Pongau-Lungau (5,420 km^2) and the smallest Swiss Seetal with 108 km^2; as well as in the number of residents: the largest is German Allgäu (467,969) and the smallest Italian Langa Astigiana (7,177). As is typical of Alpine regions, the selected regions' population density is low; in 4 out of 10 regions (Aosta Valley, Langa Astigiana, Salzburg, Upper Gorenjska) even lower than 40 inh./km^2 which almost half of the average value of 73 inh./km^2 for the whole Alpine area (2001; Alpine Convention 2007). Regions are differently administratively organized, which coincides with how Alpine space countries are governed on the national level and the levels below (regional level exists only in some countries). Consequently, this also influences the number of municipalities incorporated in the DEMOCHANGE model regions, e.g. from 4 (South Tyrol and both Slovenian regions) to 60 or more in the case of Allgäu (60), Salzburg (68) and Aosta Valley (74).

In terms of land use, there is a major division between the regions with a greater share of agricultural land (40 % and more: Allgäu, Langa Astigiana, Nidwalden, Seetal) and those with only up to 15 % devoted to agriculture like Upper Gorenjska

Table 2.1 Statistics on the land use in selected regions, Černič Mali and Marot (2011)

Region	Agricultural land (%)	Forest (%)	Built up area (%)	Other (water, rock) (%)
Seetal	70	20	10	0
Langa Astigiana	65	35	0	0
Allgäu	53	32	8	7
Nidwalden	43	31	4	22
Aosta Valley	37	5	55	3
Model region in South Tyrol	33	43	3	21
District of Garmisch-Partenkirchen	25	49	5	21
Škofja Loka Hills	22	75	3	0
Pinzgau—Pongau—Lungau	11	38	2	49
Upper Gorenjska region	11	71	2	16

region or Pinzgau-Pongau-Lungau. In these two regions, a factor decreasing the extent of agricultural production is the altitude because, for example, in Pinzgau-Pongau-Lungau the majority of the population lives 1,000 m above sea level. Forest covers more than half of the region in Upper Gorenjska region (71 %), Škofja Loka Hills (75 %) or nearly half in the District of Garmisch-Partenkirchen (49 %). Decline of agricultural area is explicitly evident in three regions (Allgäu, District of Garmisch-Partenkirchen and Seetal) and corresponds to the general trend of the whole Alpine area. In the disadvantaged areas extensification and abandonment of the agricultural land is a prevailing land use change while in the lower, flat areas we can report agricultural intensification (Alpine Convention 2007) (Table 2.1).

2.3 What Numbers Reveal About Demography

Due to the heterogeneous size of the regions it was difficult to generalise their population development. Nevertheless, many parallels have been discovered between the regions both in past population development as well as in the future projections. One example of heterogeneity is the case of Salzburg where in some municipalities population grew by as much as 79 % (Piesendorf 1971–2009), while in some municipalities the number of people declined (30 % in Lend). Such population polarity has been discovered across the whole Alpine area (Alpine Convention 2011, 2012). Overall, the population in the period from the mid 1990s to present has been stable in Allgäu, District of Garmisch-Partenkirchen, growing in Aosta Valley, South Tyrol, Nidwalden and Seetal, and decreasing in Upper Gorenjska, Langa Astigiana and Škofja Loka Hills. Growing or stable population has been more often a result of immigration rather than of changes due to the natural growth rate which is also a trend projection of the EU until 2030 (Giannakouris 2010). It can be generalized for the whole Alpine region that in selected areas municipalities can be found with negative and positive natural growth, the latter being indicated as a

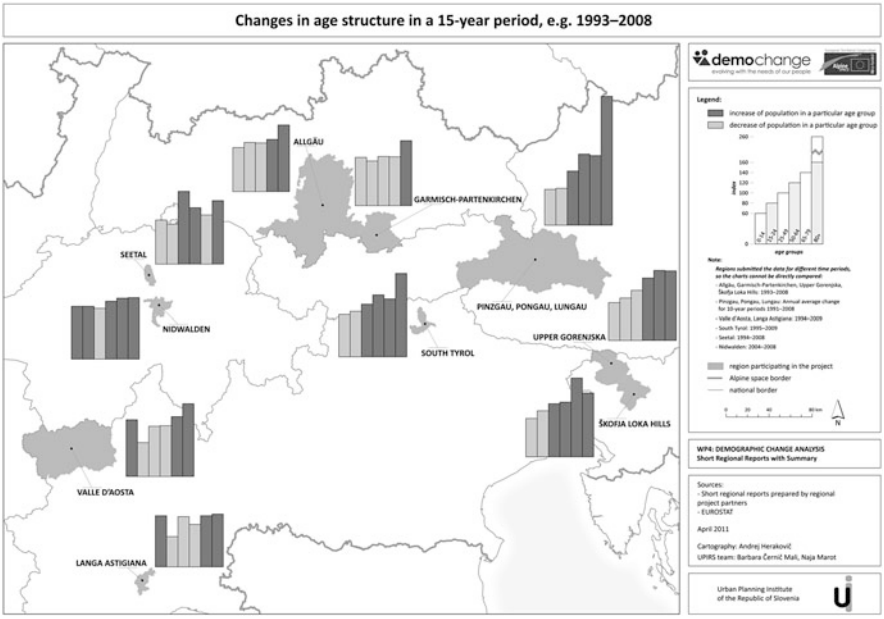

Fig. 2.3 Change in age structure in a 15-year period, e.g. 1993–2008

rarer one. Moreover, negative demographic trends can be expected, since in more than two thirds of the Alpine municipalities the death rate exceeds the birth rate (Tappeiner et al. 2008). Similarly, the fertility rate which relates the average number of children that are born to a woman over her lifetime, has dropped significantly to 1.4 on average, on the other hand the life expectancy has been extended.

A clear shift of child bearing to an older age is evident, possibly caused by a longer educational process, poor accessibility to housing, more demanding job conditions and such factors. In contrast, in South Tyrol it has been reported that the tendency of low fertility rates is at least partly absorbed by migrant females who are giving birth at a younger age (under age of 30 vs. Italian women 30–39) which is a so-called "juvenescent effect".

The structure of age groups has dramatically changed in most of the regions since the late 1970s or early 1980s (see Fig. 2.3). The decrease of the youth population in the age group 0–14 in the period from mid 1990s until present stands at 30 % or less (Salzburg, Upper Gorenjska, Škofja Loka hills, see Fig. 2.4), only in Aosta Valley the youth population grew by 11 %. Just in Italian regions the youth population remained more or less stable, although in absolute terms the population has fallen as in the case of Langa Astigiana (Fig. 2.5). Reports from the Alpine Convention indicated a trend of strong immigration of younger people from other German states to the German Alpine region (Statistisches Bundesamt 2009). Additionally, in geographical terms, the youth resides in the attractive valley floors while remote valleys and regions at higher altitudes are mostly areas from which the youth emigrates, although, for example, in Slovenian Škofja Loka Hills they prefer to stay

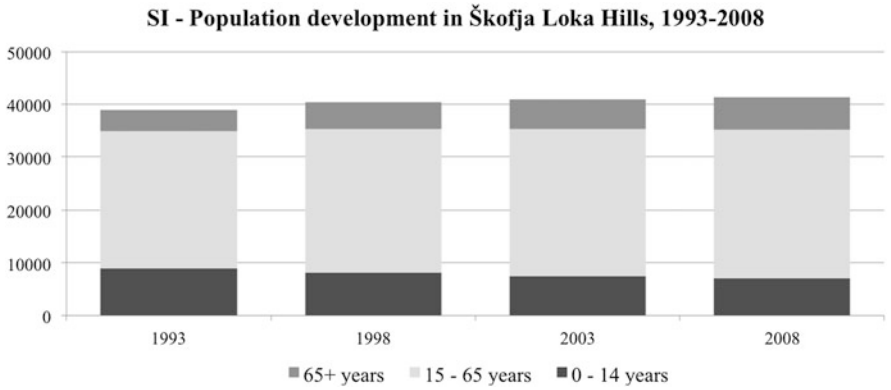

Fig. 2.4 Population development in past decades in the region SI-Skofja Loka Hills, 1993–2008

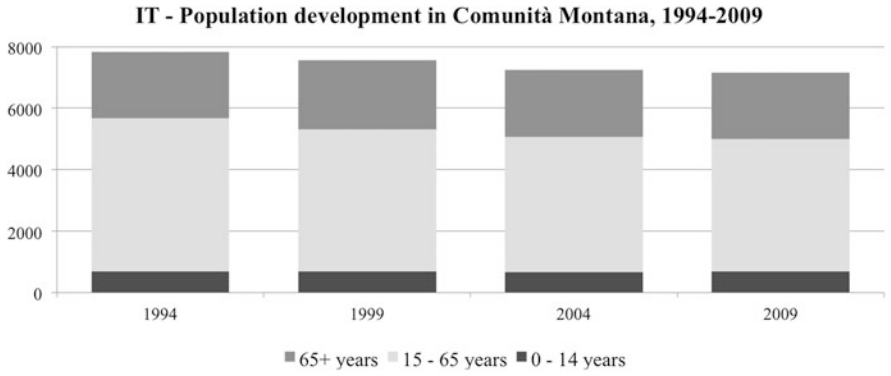

Fig. 2.5 Population development in past decades in the region IT-Langa Astigiana, 1994–2009

at home due to the lower prices of real estate, and to commute daily. Regardless of the trends in the share of youth, most of the regions face an increase in population age 65+, the so-called phenomena of an aging population.

The charts representing natural population and migration change per 1,000 inhabitants again resemble irregularities across the Alpine territory. While in the regions of Salzburg (Fig. 2.6) and Naz-Sciaves/Rio Pusteria/Rodengo/Varna population changes mainly occur because of a natural increase of inhabitants, in Allgäu, Upper Gorenjska Region (Fig. 2.7) and Aosta Valley migration movements prevail. Such trends have been noticed in both Alpine areas, where comparisons between the periods 1970–1980 to 1980–1990 shows increased importance of the net migration in the total population change from 57 to 80 % (Alpine Convention 1999). Similarly, in Europe migration accounts for around 90 % of change both in EU-15 and EU-25.

In the future, the negative population trend is expected in the German regions, Aosta Valley, Upper Gorenjska, Škofja Loka Hills, especially once women born during the Baby Boom will come out of fertile age. Projections are positive in the

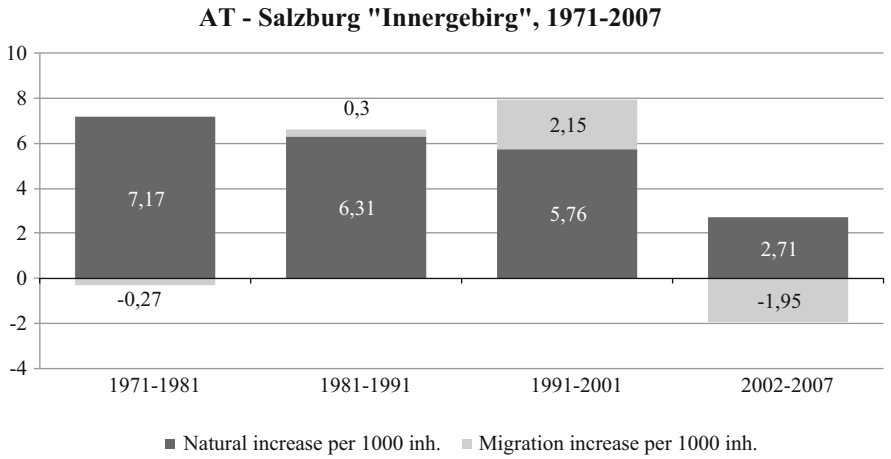

Fig. 2.6 Natural population change and migration per 1,000 inhabitants in past decades in the region AT-Salzburg, 1971–2007

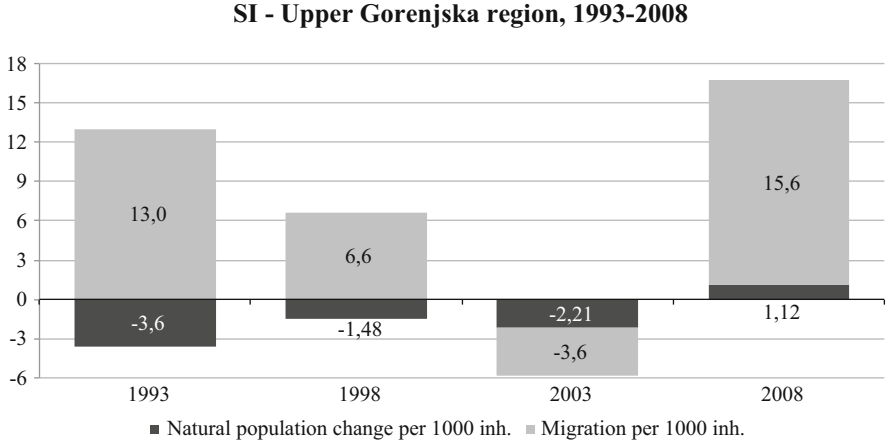

Fig. 2.7 Natural population change and migration per 1,000 inhabitants in past decades in the region SI-Upper Gorenjska region, 1993–2008

case of Langa Astigiana, South Tyrol, Canton Lucerne and Nidwalden. Similarly to the current demographic picture, a strong decrease in young population is expected, a shift within the working age population to an older age and a strong increase in the population at retirement age. Projections of net migration were only available for a few regions, but it is forecasted that immigration will usually not outset the natural loss of population where this was the case in past decades, e.g. Allgäu or District of Garmisch-Partenkirchen. Migration flows include internal migration within the Alps, which has its roots in the search for the attractive location in terms of quality of life, and adds to peri-urbanisation processes as well as international immigration, which is especially evident in Italy.

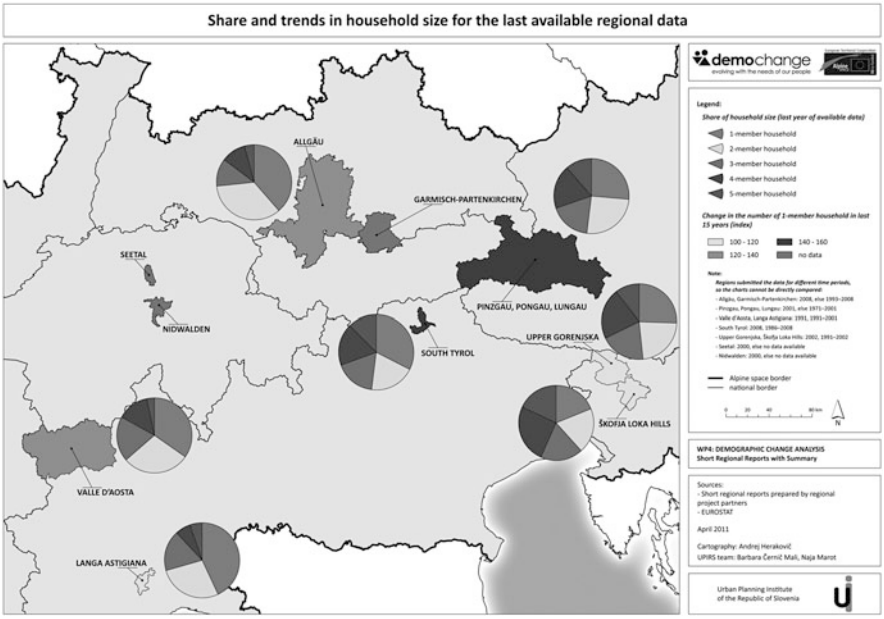

Fig. 2.8 Share and trends in household size in selected regions

Household size (see Fig. 2.8) also indicates changes in the individualistic style of life with an increasing number of smaller households, e.g. in the period 1971–2001 the number of single households increased by 40 % (Allgäu), accounting for the higher number of total households and smaller average household size. Influencing factors are societal changes such as more singles, marriages at a later age and a longer life expectancy. Such changes especially affect rural areas, as for example, in Slovenia where older people live alone in their own houses, struggle to maintain them, and thus cannot afford the previous standard of living anymore. In some of the regions a bigger household size than the national average was detected (South Tyrol 2.7 vs. 2.4 for Italy), which could be explained with traditionally larger families in rural areas.

2.4 Demography Influencing Economy and Utilities Provision

Demographic data was also accompanied with a brief economic analysis of the regions.[2] On average the selected regions do not represent the major economic players in the Alpine area which can be illustrated by the gross domestic product

[2]Under the socio-economic topic we first aimed at provide basic monetary indicators such as a gross value added per person on the level of selected regions, however, the difference in

per person of the regions lagging behind national or regional averages, e.g. 84 % in Allgäu or 70 % in the District of Garmisch-Partenkirchen, Langa Astigiana is 24 % behind the region of Piemonte, and 13 % behind the national average in disposable income per capita. A notable exception is Aosta Valley, one of the richest regions in Italy, where GDP per capita considerably exceeds the national average. Among regions which perform above national average are also Swiss Nidwalden and Seetal. Seetal, however, is slightly below Canton Lucerne financial performance, and is thus net receiver of financial equalisation compensation.

Typical for the Alpine territory, regions engage in similar activities, such as tourism, manufacturing of ski equipment, small businesses etc., thus two clusters of regions can be identified. The first cluster consists of regions where tourism is joined by the industry and services, and in the second cluster agriculture prevails. Tourism has been reported among important economic activities in 8 out of 10 regions, however its importance varies. In three regions it was reported as the most important one, in two of those regions both winter and summer season create significant revenue (South Tyrol, Upper Gorenjska, Pongau-Pinzgau-Lungau). Although creating wealth in the economy, in the rural regions with a strong tourism sector, problems have been reported, such as seasonality, low paid jobs, lack of adequately skilled labour, immigration of foreign workers and traffic congestion in peak season. In small communities the number of tourists or overnight stays is sometimes not proportional with the size of the local population (e.g. Salzburg region accounts for 200 overnight stays per resident). In regards to demographic changes, the German selected regions reported they are already very popular with elderly tourists and even residents who choose these locations for their retirement (Tappeiner et al. 2008). Demographic changes have called for two alterations of the touristic offers already: firstly, an average stay of a guest has shortened to 3 or 4 days, and secondly, new or adapted tourist products should be available for the elderly tourist considering that this new group of tourists, at an age of 55+, possesses financial sources, want adventure, and will in the future require adapted physical accessibility of the touristic sights.

Besides tourism other services and small businesses have been recognized as important, especially in Switzerland (Nidwalden, Seetal) and Germany where it was depicted as the first most important economic activity. Manufacturing is more commonly ranked in second or third place, as prevailing types of industry we may find the food industry in Allgäu and Langa Astigiana, ski equipment manufacturing in Salzburg and Škofja Loka Hills. As described in the land use section, agriculture is the major contributor to the economy in Škofja Loka Hills and Langa Astigiana. Such categorization is a consequence of the fact that the selected regions mostly do not include a larger core city of the Alps, in which the tertiary sector accounts for more than 60 % of local jobs (Alpine Convention 2012).

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administrative and statistical coverage of the regions did not allow that. The lack of transnational comparison was compensated with the comparison of national with regional data.

Development of the majority of economic activities is strongly dependent on the infrastructure. Although most of the regions are connected to the motorways and the driving distance to the nearest centres of higher importance does not exceed two hours by car, or half an hour more by train, the regions are not necessarily satisfied with the existing infrastructure, public transport is missing and has especially been shut down in the last years as an effect of the decrease in population. In some of the regions such as Škofja Loka Hills, dependence on a car is high, which limits especially the mobility of older people. In addition, the selected regions can be denoted as commuting regions, since imbalances of the labour market and the lack of a qualified workforce result in a high ratio of commuting with all associated problems (congestion, pollution, inefficiency). Most problematic regarding connectivity are regions with low density of population where connections between remote places and municipal centres are inadequate, roads are in need of repair or the train network is deficient.

2.5 Deteriorating Number of Services on One Hand, Increasing Offer of Innovative Services on the Other Hand

Demographic changes are also apparent in the housing market. The predominant type of housing in the Alpine area is single family houses, and the construction of these is also increasing. Similar to Slovenia and also in other regions, a high percentage of housing is owner-occupied, rental dwellings have a higher share only in regional centres. An imbalance on the housing market was detected, in the sense that the rental housing demand often exceeds supply, e.g. in South Tyrol and in Upper Gorenjska, and is especially problematic in touristic areas where demand for secondary homes forces up prices for land and for built structures above the regional average, and dwellings are not accessible for local residents. The most deprived group is the youth who struggle to attain independence from their parents, and thus move out of the tourist regions such as District of Garmisch-Partenkirchen and Kranjska Gora in Slovenia. This phenomenon was called in a report from Salzburg region “competition between wealthy and elderly amenity migrants and young local families”.

Smaller settlements prevail in the selected regions which is reflected in a moderate provision of health services including pharmacies, doctors, hospitals. While the provision is estimated as good in Nidwalden and Seetal, and even above average in Garmisch-Partenkirchen, some of the regions reported a lack of it, e.g. in Škofja Loka Hills. In touristic regions accessibility to the general doctor improves seasonally during summer or winter, yet the specialist’s treatment is usually available in distant regional centres of higher importance, which now in these times of an aging society and an increased demand for health care provision, present an important obstacle to an adequate quality of life.

The inclusion of children in professional child care is higher in urban areas than in remote and rural ones. The present organisation of day care and opening times do not meet the standards of nowadays parents who work longer hours. Lacking provision of these necessary services can render such areas as unattractive for young families. Although it is costly, some regions still succeed in keeping primary schools in smaller settlements (Upper Gorenjska and Škofja Loka Hills, Salzburg region), while others provide school buses to the nearest regional centres where secondary schools are located too.

The provision with basic consumer goods complies with "the vicious cycle" where declining quality of life encourages residents to move to less peripheral areas which then triggers additional closures of services and lowering of the quality (Alpine Convention 2011). The smaller settlements and remote villages are problematic, especially for the non-mobile population. Even in urbanized areas retail centres are found only in the outskirts of larger centres because many stores in the centres of smaller towns have closed down. This makes provision of goods hardly accessible (Upper Gorenjska, Salzburg, Škofja Loka Hills).

2.6 Conclusion

Data analysis has shown that the selected regions mostly resemble the demographic situation in the whole area of the Alps, in which one of the most common characteristics is heterogeneity. Heterogeneity has been not only noticed in demographic trends, but also in settlement patterns, utilities provision and in the way individual types of regions develop. The aging of population is not only a result of the higher average age and life expectancy, but also of the lively migration movement of the wealthy retirees from other parts of the country, who want to live in a healthy, intact nature. On the other hand half of the regions have exposed the problem of a shrinking population with a natural decrease, but an increased migration flow was also reported. Firstly, because of the labour/seasonal immigrants in agriculture and tourism from South East Europe and other non-European countries, and secondly because of the permanent residents seeking a better quality of live in the Alpine region. Such immigration is needed due to a mismatch between workplace conditions on offer, qualifications and desired workplaces, although it may provoke conflicts with the local people if they are not willing to integrate newcomers into their community.

Besides social aspects demographic change has also resulted in closing down services, e.g. railway connections, post office, schools, health centres, and limited accessibility, especially when taking into account housing and mobility issues of elderly. Demand for new products in the sector of elderly care has been as well addressed by German and the other regions which tried to develop new training courses, and new products to provide the elderly the care required, and prolong their stay at home, while at the same time also enable their children to retain their job.

Regarding this project topic, integration of demographic change into the spatial planning has been examined. Some of the regions are already aware of the demographic trends and have established special programs, such as Vitality in Langa Astigiana, with the goal of realizing actions focusing on alternative energy, renewal of historical villages, valorization of agricultural and food production, improvement of the infrastructure, tourist promotion etc. Some policy documents, such as regional development programs, recognize demographic change and have listed some measures, yet wider political promotion and recognition of the problem, especially on the local level, is still awaited.

In conclusion, the analysis has shown that demographic change is present in all selected regions, but its extent and traits are different. The chapters in the second part of this publication show how the partners within the DEMOCHANGE project have developed several strategies and measures to tackle these issues. This is useful not only to the DEMOCHANGE model regions, but can be likewise implemented in other Alpine areas. This is possible due to the similarity of the demographic traits and simultaneously heterogeneity which was discovered with the data analysis, and was also confirmed in the regions right across the Alpine area (Alpine Convention 2012).

References

Alpine Convention (1999). *Indicatori demografici della regione Alpina—Risultati di uno studio effettuato nell'ambito della Convenzione Alpina. System of Observation and Information of the Alps (SOIA)*. Innsbruck: Permanent Secretariat of the Alpine Convention.

Alpine Convention (2007). *Report on the State of the Alps. Alpine signals, special edition 1. Transport and mobility in the Alps*. Innsbruck: Permanent Secretariat of the Alpine Convention.

Alpine Convention (2011). *Report on the state of the Alps. Alpine signals, special ed. 3. Sustainable rural development and innovation*. Innsbruck: Permanent Secretariat of the Alpine Convention.

Alpine Convention (2012). *Preliminary paper to the XII Alpine conference. Working group demography and employment of the Alpine Convention* [Draft]. Poschiavo: Permanent Secretariat of the Alpine Convention.

Černič Mali, B., & Marot, N. (2011). *Demographic change in the Alpine space: Summary of short regional reports: DEMOCHANGE: Output 4.5—Work package 4*. Urban Planning Institute of the Republic of Slovenia.

Giannakouris, A. (2010). *Regional population projections EUROPO2008: Most EU regions face older population profile in 2030. Population and social conditions* (Eurostat, Statistic in focus 1/2010). Luxembourg: Publications Office of the European Union.

Statistisches Bundesamt (2009). *Bevölkerung Deutschlands bis 2060, Ergebnisse der 12. koordinierten Bevölkerungsvorausberechnung*. Wiesbaden: Statistisches Bundesamt.

Tappeiner, U., Borsdorf, A., & Tasser, E. (2008). *Alpenatlas—Atlas des Alpes—Atlante delle Alpi—Atlas Alp—Mapping the Alps. Society—Economy—Environment*. Heidelberg: Spektrum Akademischer Verlag & Springer.

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