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Comparison of Structures, Development and Influence of Basic Conditions of Agriculture and Rural Development on Selected Alpine Regions

Abstract: *The specific conditions of mountain and especially Alpine farming require experienced and qualified farmers to guarantee sustainable agriculture in a sound ecological and economic environment. Beside natural-resource endowment, cultural, social and political conditions are important influencing factors. Based on a comprehensive study conducted by the authors in 2015, this paper compares the current structures, the development and basic conditions of selected Alpine NUTS III regions in Austria, Germany, Switzerland, France, Italy and Slovenia.*

Despite the common location in the Alpine space and – with the exception of Switzerland – the EU Common Agricultural Policy (CAP), the regions analysed show considerable variations in altitudes and climatic zones, regional demographic and economic contexts, different approaches in shaping the CAP as well as other basic socio-political conditions, for example taxation and rules of inheritance. Altogether these differences have led to very heterogeneous regional development paths and diverse effects on rural development in the area of conflicts between sustainability, resilience, competitiveness, preservation or innovation of structures, balancing or increasing regional disparities. Comparing these findings with the respective overall national characteristics may be decisive in understanding the necessities of mountain farming.

Keywords: *agricultural policy, rural development, mountain farming*

Alpine and mountain farming in the area of the Alps, as defined in the Alpine Convention (Ruffini et al., 2004), is marked by continuous decline. In the last three decades (1980-2010), the number of farms in the whole Alpine Convention area has halved, and since 2000 has declined by 22% (Streifeneder et al., 2014). The closure rates vary, sometimes considerably, between the seven Alpine states: the number of farms has fallen most severely in the Italian and the French Alpine area, the most stable numbers have been in the Bavarian area, followed by the Slovenian and Austrian areas. The Swiss mountain farms are in the midfield. At the same time, abandonment of farms in the Austrian and Bavarian Alpine areas is less frequent than at the national level, whereas the reverse is true for Italy and France. In Switzerland and Slovenia, there is almost no difference between the Alpine area and the national level (Streifeneder et al., 2014).

Although general trends in agricultural development in the Alpine area can be documented, for example a rise in average farm size (Streifeneder, 2010; Mann, 2003; Flury et al., 2004), intensification of farming in favourable areas and extensive utilisation / abandonment of areas in lower-yield areas (Bätzing, 1996), or ageing in the agricultural sector and uncertain succession of farms (Vogel et al., 2007; Rossier, 2007), regionally these trends vary greatly and are decisively influenced by the respective socio-economic, agricultural and general politico-economic conditions (Baur, 1999; Mann, 2003; Juvaničič, 2006).

There is a great need for experience and training, particularly under the difficult conditions of the Alpine area. Therefore, in Austria, there has been increased emphasis on adult education, for some years now, in the field of Alpine pasture and mountain farming. As part of this study, a survey of the status quo in Alpine pasture and mountain farming in selected exemplary regions of Austria, Germany, France, Italy, Slovenia and Switzerland is to be conducted in order to provide a good overview of the starting position in Alpine and mountain farming and the educational situation in Austrian Alpine regions in comparison to similar neighbouring regions abroad.

The starting point was the basic information on natural and economic areas of the regions (NUTS III regions were considered the appropriate regional level). Agricultural structural and agri-economic data on the situation of the mountain-area economy in the regions are to provide more detailed information. Here the very different general agricultural policy conditions are very important and decisive for Alpine farming in the individual countries. Existing special educational provision for the Alpine farming production sector in the wider sense (e.g. also Alpine experience, nature education on the Alps) were presented in order to locate possible deficiencies and possibilities for development or the need for action. On the one hand, the paper compares the status quo in the different countries, on the other hand, it discusses the different development trends and compares respective national averages in order to assess

the possible effects of agricultural-policy measures. The necessary data come from various sources. As far as possible, the attempt has been made to refer to central sources (Eurostat, European Commission) and to draw on existing data from the literature in order to minimise problems of differing definitions and time frames. As part of this study, however, it was not possible to go into overall data-harmonisation aspects. Socio-economic data were largely taken from Eurostat, supplemented by national data and information from national experts. However, it was not possible to elicit data for all regions in comparable form.

The NUTS III regional unit was chosen in order to present the mountain area in greater detail and with the available agricultural and socio-economic secondary data. In consultation with the commissioner, representative NUTS III regions were chosen that lie completely within the Alpine area. The selected regions and their abbreviated description in the following graphics are presented in table 1, their location in figure 1.

Table 1. Name and abbreviation of selected regions

Country	Nuts III Code	Name	Abbreviation in the following figures
Austria	AT223	Eastern Upper Styria	ATÖO
	AT322	Pinzgau Pongau	ATPP
	AT333	East Tyrol	ATO
	AT341	Bludenz-Bregenzerwald	ATBB
Switzerland	CH056	Graubünden	CHG
Germany	DE13A	Waldshut	DEW
	DE21F	Miesbach	DEM
France	FR717	Savoy	FRS
	FR822	Hautes-Alpes	FRHA
Italy	ITC20	Valle d' Aosta	ITVA
	ITD10	Bolzano Province	ITBO
	ITD33	Belluno	ITBE
Slovenia	SI009	Gorenjska	SIG

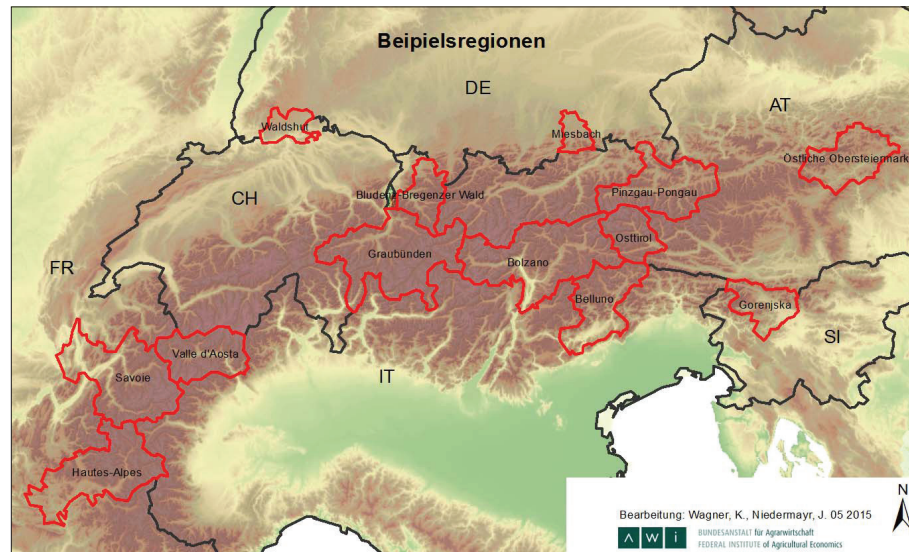


Figure 1. Selected NUTS III regions – overview

Source: Niedermayr, Wagner, 2015.

Natural conditions and general regional data

The difficult production conditions for agriculture are reflected, on the one hand, in the high average altitude, between 700 m (Waldshut) and 2,100 m (Valle d’Aosta) but also in the wide range between minimum and maximum altitude often exceeding 3,000 m. Climatic conditions differ widely as a result of the extreme differences in altitude of smallholdings, relief energy and exposure. In the Histalp project (ZAMG, 2015) at least four major zones are differentiated on the basis of long-term climate data analysis, whose north-south and east-west dividing lines intersect in the area of Salzburg/ East Tyrol in Austria. In general, the average temperatures in the two northern zones are somewhat lower than in the southern zones. The precipitation in the northern and western zones is somewhat higher than in the eastern and southern zones.

In 2014, the selected NUTS III regions had populations between 49,000 (East Tyrol) and 516,000 (Bolzano province). The population density also varied greatly, between 24 and 145 people per square km. What the regions have in common, however, is the fact that the population densities are well below the respective national averages. However, measured against available long-term settlement area, the Alpine area is relatively densely populated (Tyrol Atlas, 2005). In a few areas there is a negative change in population as compared over decades (eastern Upper Styria, East Tyrol, Waldshut and Belluno). Only in Austria is the change in population below the national average; in most other comparison areas the change is at or above the national average. In 2012, the migration balance was only negative in eastern Upper Styria, in East Tyrol,

Bludenz-Bregenzerwald and in Gorenjska, and some regions, despite negative natural population growth, even registered an overall positive population development (Valle d' Aosta, Graubünden, Miesbach and Waldshut, figure 2). The age ratio (ratio of over 65 to the 15-65 age group) is above the respective national averages in many of the NUTS III regions selected. It is also usually high in places where there is a fall in population.

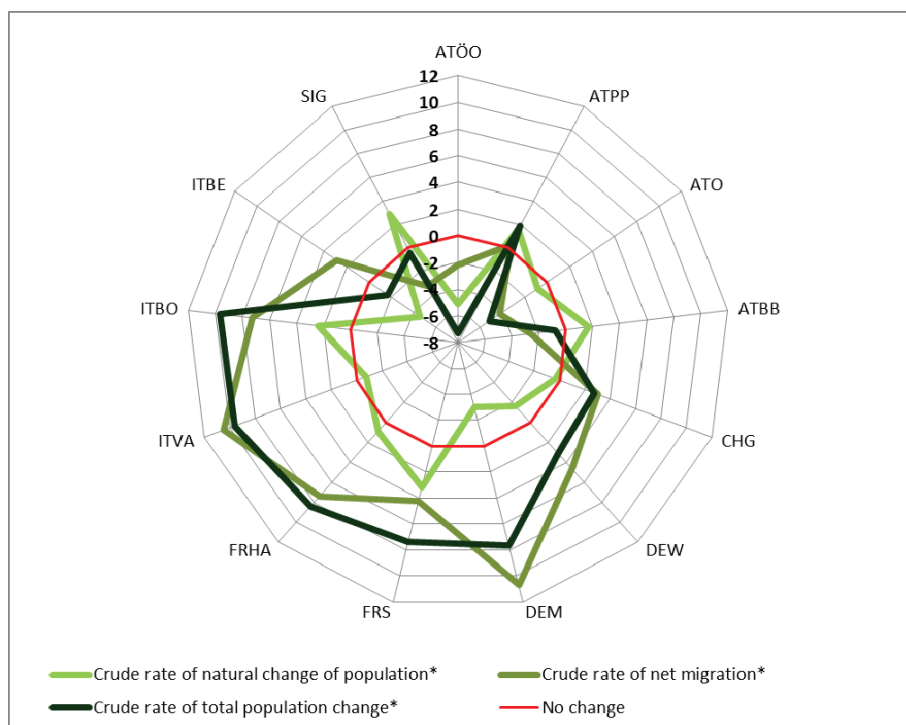


Figure 2. Demographic balance in per cent, 2002-2012

*plus statistical adjustment

Source: own visualisation according to EUROSTAT, 2012.

Many of the regions are below the respective national averages for gross regional product. In 2011, the figure for East Tyrol, Waldshut, Miesbach, Hautes-Alpes and Belluno was EUR 26,000 per capita, Gorenjska below EUR 18,000. The ratio of the working population in the first sector of the economy is by far the highest in East Tyrol (13.9%), in most NUTS III regions this ratio is above the respective national average. Only in Waldshut, Savoy and Belluno the ratio of the first sector of the economy is relatively low, at fewer than 2%. The third economic sector is heavily marked in the Swiss and French regions in particular. The number of guest beds, as an indicator of the importance of tourism, is the highest in absolute terms in Pinzgau-Pongau (124,000 guest beds), in Savoy and Bolzano province. At 764 guest beds per 1,000 inhabit-

ants, Pinzgau-Pongau has the highest number of guest beds per inhabitant, and Bludenz-Bregenzer Wald (506) and Hautes-Alpes (685) also have very high ratios. Usually, this is above the respective national averages.

Agricultural structures

The number of farms in the NUTS III regions varies between around 1,000 in the German region of Miesbach and 20,000 in the province of Bolzano. Farm numbers are most stable in Pinzgau-Pongau in Austria, while the greatest reductions are recorded in Belluno; here there were two thirds fewer farms in 2010 than ten years previously. There are also considerable differences within the Alpine states, and with the exception of the regions of Graubünden, Belluno, Valle d'Aosta and Savoy farms in the regions studied in the Alpine area are more stable than the respective national averages.

The ratio of farms classed according to utilised agricultural area (UAA) is shown in figure 3. At just over 50%, the Italian regions have the highest ratio of small farms (<5 ha UAA). One reason for this is the relatively low, and regionally differing regional threshold values (<1 ha). In other regions this ratio is far lower (from 4% in Waldshut to a maximum of around 30% in Bludenz-Bregenzerwald). Hautes-Alpes and Savoy have a particularly high ratio of large farms (>50 ha UAA), followed by Waldshut. Between 2000 and 2010, all regions showed a relatively greater decline in small farms (<5 ha UAA) than in large farms (>50 ha UAA). Only in Gorenjska is the number of small farms stable. The decline in small farms is the lowest in the Austrian regions and the province of Bolzano. The greatest decline in the number of small farms is in the regions of Belluno, Savoy and Graubünden. A chronological and spatial comparison within this category is not significant for the German regions, as the survey limit of the agricultural census was raised to 5 ha in 2010. In comparison to the respective national averages, the number of small farms in the regions in Austria, in Gorenjska and the province of Bolzano is falling less steeply, while the regions of France, Valle d'Aosta and Belluno are significantly below the national figures, i.e. declining more sharply in the Alpine area than nationally. The large farms (>50 ha) are faring much better in these regions and their numbers are even increasing. Large farms in eastern Upper Styria, in the regions of Miesbach, Waldshut and Gorenjska are also stable or growing.

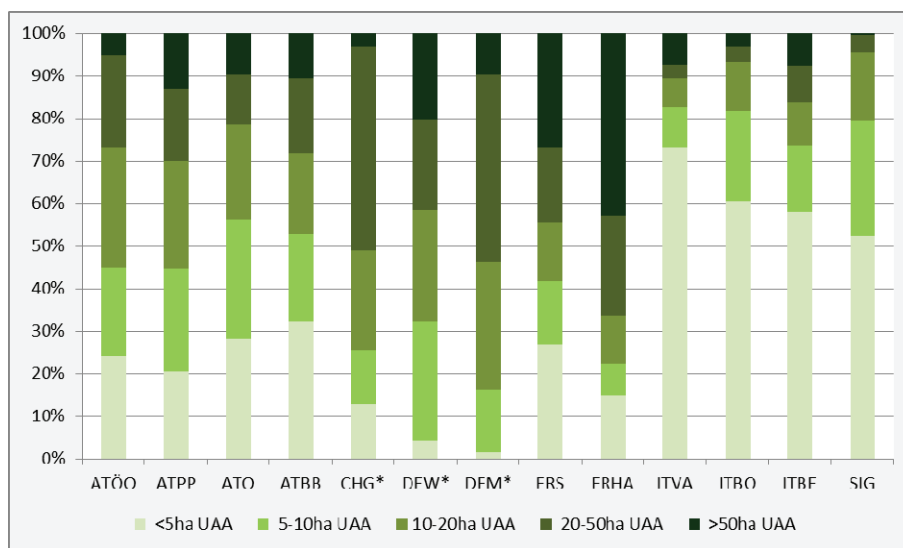


Figure 3. Share in farms by size classes of utilised agricultural area (UAA)

*please note the changed farm structure survey thresholds in Germany, from 2 ha until 2007 and 5 ha in 2010

Source: EUROSTAT 2010; ISTAT 2010; DESTATIS 2010; BLW 2010; SI-STAT 2010.

The most frequent types of land use in the mountain area are, as would be expected, long-term grassland and forestry areas. Between 2000 and 2010, the agricultural and forestry area changed most sharply in the Italian and Austrian regions. Here the forestry areas are increasing and grassland is being lost – in particular in the Austrian regions.

Animal husbandry in the Alpine area is mainly marked by cattle farming, to a lesser extent also by sheep, goat and pig farming. The province of Bolzano has the largest animal stocks in these four categories (113,060 LU), and East Tyrol has the smallest (18,700 LU). Dairy-cow farming predominates in the province of Bolzano, Valle d'Aosta, Savoy, Miesbach and Bludenz-Bregenzerwald, while in the other Austrian regions, in Gorenjska, Graubünden and Waldshut other types of cattle farming (i.e. suckling cows and young cattle) predominate. Sheep and goat stocks play a role in the French Alpine area, particularly in Hautes-Alpes with a share of 49% (24,310 LU); sheep and goat stocks are much lower in Savoy (8%) and Graubünden (12%). In general, the livestock holdings in the NUTS III regions remained relatively stable between 2000 and 2010. According to livestock categories, numbers of suckling cows are falling most rapidly (exceptions are stable stocks in Savoy and Gorenjska), while other cattle in all Austrian regions and Graubünden have risen. The sheep and goat stocks remain largely stable or are increasing (in particular in Belluno), but in the Hautes-Alpes, with the largest absolute number of livestock, they are falling most sharply.

The Austrian average for the number of workers per farm (figure 4) is 7.6 annual work units (AWU) and in the Austrian exemplary regions between 0.62 (East Tyrol) and 0.77 (Pinzgau-Pongau). In all other regions, the labour force per farm is significantly higher (between 0.85 and 1.48), being particularly high for the Swiss average (2.84).

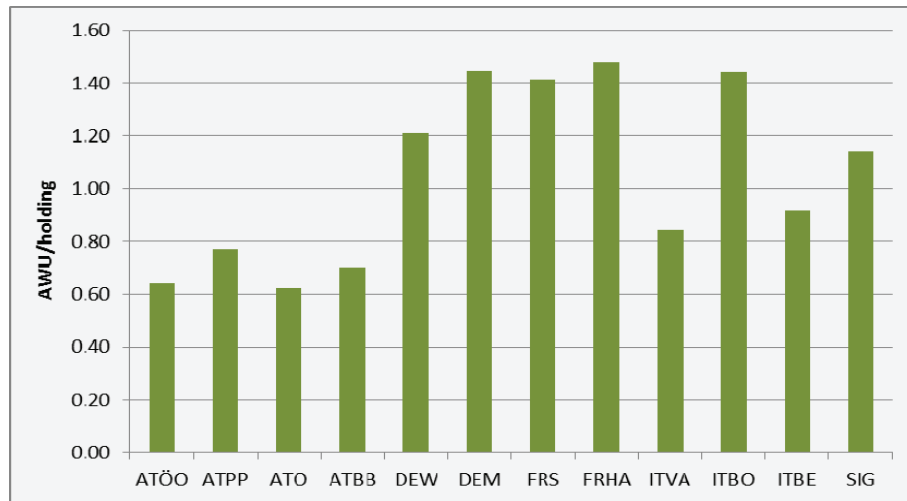


Figure 4. Agricultural work units (AWU) per holding, 2010; no data for Graubünden
Source: EUROSTAT, 2010.

Broken down according to age and working hours of the farm owners, in all regions for which data are available there are proportionally more farm owners aged over 55 than under 35, a distribution that is particularly pronounced in the Valle d'Aosta region. Apart from the Valle d'Aosta and Belluno regions, the numbers of young farmers are declining faster than older ones. Whereas in the Austrian regions the number of farmers with <50% working hours on the farm is mostly increasing and the number with >50% is falling, this ratio is precisely the reverse in the regions in the neighbouring countries.

The economic development of the agricultural sector is shown in the European Commission's Farm Accounting Data Network (FADN), in order to provide a viable basis for decision-making and to assess its impact. The most current data come from 2012; in order to reduce fluctuations, a three-year average was used for the assessment (DG Agri 2010, 2011, 2012). This shows, for example, that the two French regions have absolutely the highest input of workers per farm, at the same time, the ratio of paid labour is the highest there. The lowest input of workers per farm is in the province of Bolzano, the region of Gorenjska has the lowest ratio of paid labour. The studied farms in the Austrian regions use work almost completely of non-paid labour (i.e. family members).

The economic size of the holdings is given in standard output (SO) and is shown in figure 5. The highest value of economic holding sizes are in the French Alpine regions (Savoy: EUR 79,523, Hautes-Alpes: EUR 74,903) and in Oberallgäu (EUR 72,310); in contrast, at ca. EUR 30,000/farm, the farms in the region of Valle d'Aosta, in Pinzgau-Pongau, East Tyrol and the province of Bolzano have the lowest values. In comparison with the 2007-2009 three-year average, the economic holding size in the region of Valle d'Aosta, in Pinzgau-Pongau and Hautes-Alpes has declined, in the other regions it has increased, in particular in Bludenz-Bregenzerwald and eastern Upper Styria.

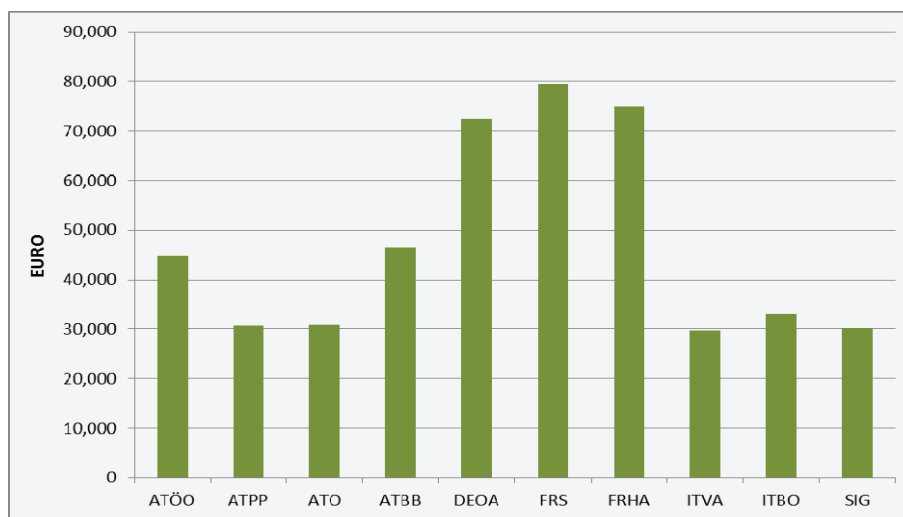


Figure 5. Average economic size of farm enterprises, three-year-average of 2010, 2011, 2012, in Euro; no data available for Graubünden, Miesbach and Waldshut, instead available for Oberallgäu, Bavaria (DEOA)

Source: DG Agri 2010, 2011, 2012.

Measured against the sum of gross domestic product and agri-policy payments, the Hautes-Alpes region has the highest ratio of agri-policy payments (around 40%). It thereby diverges relatively strongly from the national French average (15%), while Savoy, at 11%, is below it. Among the studied regions, the province of Bolzano (7%) has the lowest ratio. The regions also differ considerably when broken down according to the type of agri-policy payments received. In the Austrian regions and the Italian regions of Valle d'Aosta and Belluno, the payments predominantly come from the second pillar of the CAP (above all, payments for disadvantaged areas and environmental measures), while in the German, French and Slovenian regions, the decoupled payments (pillar 1 of the CAP) also make up a considerable amount of the funding. In absolute terms, the enterprise taxes and duties (excluding personal taxes) are the highest in the province of Bolzano (EUR 2,777). At 0.66%, tax as a proportion of gross farm income is the lowest in the Slovenian region of Gorenjska and the highest in Bolzano, at 7.39%. In most Austrian regions it is relatively low – under 1%.

At current product prices, Alpine pasture and mountain farming cannot cover its costs. In the complex structure of economics, ecology and socio-culture, the most diverse functions of Alpine pasture and mountain farming are regarded as important (cf. BMLFUW, 2006), and therefore especially emphasised in agricultural policy. The measures mentioned here in international comparison as far as possible concern the 2014-2020 support period.

In pillar one of the CAP (market regulation and direct payments) there are fundamental differences between Austria and the neighbouring countries in the level of direct payments (average value from EUR 93 in France to EUR 875 per hectare in Switzerland). The additional rules for young farmers and coupled payments also differ. Some payments from pillar one in agricultural policy can only be claimed in connection with Alpine pasture farming. Thus, in Austria there are coupled supplements for Alpine pasturing of livestock. In France, Italy and Slovenia there is a supplement for suckling cows in mountain regions, but without special reference to the need for Alpine pasturing.

In pillar two of the CAP there are numerous different measures with very diverse payment structures that have an indirect effect on Alpine pasture farming, such as knowledge transfer especially for mountain areas in the province of Bolzano, quality regulations especially for mountain areas in Savoy, investment and development measures especially for farms in mountain areas in Hautes-Alpes, Savoy and the province of Bolzano. Under the basic services and village renewal measure, specific mountain-area measures are offered in Austria and the province of Bolzano. Special compensatory payments for natural disadvantages in mountain farms are offered in all countries, but at very different levels and with systems differentiated according to the degree of disadvantage and the difficulty of farming. In the province of Bolzano the Leader measures are conceived especially for mountain areas. The environmental measures contain multiple general measures for grassland farming, but also, to some extent, measures conceived especially for Alpine pasture farming: e.g. measures for farming mountain hay meadows in Austria, Graubünden Waldshut, the province of Bolzano, and Gorenjska, measures for Alpine pasturing and herding in Austria, Graubünden, Miesbach, the province of Bolzano, and Gorenjska.

In addition, further national and regional measures have a direct or indirect influence on Alpine pasture farming: e.g. there are provincial state contributions to Alpine farming in Salzburg and Vorarlberg, in Miesbach there are programmes for Alpine pasturing and improvement of working conditions of the Alpine workforce, in the region of Valle d'Aosta there are measures for maintaining Alpine huts. Not least, the subsidy for agri-diesel prices also plays a certain role. In Austria this has been abolished, in all neighbouring countries in the Alpine area there is compensation of about 20 to 50%.

Succession at the farms is also differently regulated in the countries in the Alpine area. Whereas in Austria there are detailed special regulations in inheritance and tax law, partly also at provincial level and also being taken account of in pension law, in most countries the general conditions also apply for succession at farms in agriculture. Exceptions to this, for example, are taking the yield value as a basis rather than the market value, when taking over farms in Graubünden. In Waldshut those giving up their inheritance are compensated according to the yield value. In the French areas and in the province of Bolzano there are tax and duty reliefs, but otherwise no special regulations. In Slovenia too, there are no special regulations for farm succession.

The special features of Alpine pasture farming with relation to the management of nature, logistics and also legal issues, demand particular experience and training. In order to maintain a continuous specialist and, as far as possible, economic Alpine pasture farming in the context of changing new challenges for farming and society, Austria, through the Rural Training Institute (LFI), offers a multifaceted range of trainings in various subject areas of Alpine pasture farming (LFI, 2013). These address those responsible in the Alps and the workforce. The curriculum ranges from basic training to issues for specific forms of utilisation (milk processing, suckling cow husbandry, pasture management) to technical, economic and legal issues, to diversification, tourism and nature issues. As per current information, private providers of special Alpine pasture training measures are not involved.

The provision in Austria's neighbouring countries in the Alpine area is far less extensive and varied. In Switzerland, for example, the public Plantahof advisory centre offers courses on the subjects of safety, Alpine herding, shepherd's huts and sheepdogs. In Bavaria, two-to-three-day practical courses are offered for Alpine-pasture staff and farmers in the Alpine farming associations and specialist centres as well as inspections of and educational excursions to Alpine pastures. In France, themes such as pasture management, diversification, tourism and sheepdog training are offered by public institutions, but issues such as pasture improvement and weed control are also covered by a private institution. In Italy, training measures on grassland farming are predominantly offered by public bodies; special Alpine pasture farming measures are only known in South Tyrol. In Slovenia, there are no special training provisions for Alpine pasture farming.

Discussion and conclusions

Despite the shared features of location in the Alpine area and – with the exception of Switzerland – membership in the European Union with its Common Agricultural Policy, the regions display very different preconditions for farming. This causes different forms of farming, e.g. in dry areas more extensive farming, in wetter areas with better feed provision, more intensive forms of utilisation. The proportion of various altitudes and forms of relief in the regions also varies and affects the accessibility and length of use, with resulting effects on the forms of farming and livestock categories.

The interaction between socio-economic aspects and the agricultural structures are indicated by selected demographic aspects such as population growth and balance, economic performance and the regional labour market. The proximity to large, economically prosperous (job) centres or industrial areas creates a different web of relationships or also a different competitive or alternative situation between the economic sectors, and can, on the one hand, facilitate additional income for agriculture in the form of non-farming earnings (e.g. the province of Bolzano, Streifeneder, 2010). On the other hand, however, it can create a drain on the agricultural labour force (e.g. southern Belluno; Zanetti, 2013). In addition, the attractiveness of a region for tourism and the related opportunities for diversification has a particular structurally supportive effect on agriculture (Streifeneder, 2010; Weber and Seher, 2006) and for example can be seen in Pinzgau-Pongau, Bludenz-Bregenzwald, South Tyrol and Hautes-Alpes. On the whole, the total regional economic structure thus determines developments in demography, with feedback effects on development possibilities in agriculture too. With a young population and high employment rate, as in Pinzgau-Pongau or Bludenz-Bregenzwald for example, this will be more dynamic than in areas at risk of ageing, as for example in eastern Upper Styria, in Hautes-Alpes or Belluno.

The numbers and size structures of the farms reflect the structural change and the interventions by agricultural policy. In Austria, Italy and Slovenia, the proportion of small farms is very high. This is related, for instance, with historic developments in the agricultural structure (agricultural maximum in Slovenia, the gavelkind system (division of land among heirs) in the western Alpine areas), the economic orientation (small-scale permanent crop farms in the province of Bolzano, Valle d'Aosta) or the form of employment (secondary jobs) and the above-mentioned regional labour market (Streifeneder, 2010). In Switzerland, Germany and particularly in the French regions, the proportion of small farms is relatively low, both measured by hectare as well as by standard output categories. In the French regions, these are in Savoy, above all, intensive suckling-cow farms and in Hautes-Alpes large-scale extensive sheep farming. Nevertheless, in particular in Savoy the rates of abandonment are higher than in the smaller-scale agricultural regions, which despite a well-advanced structural change in agriculture still indicates an extensive restructuring processes (greater reduction of small farms in relation to the medium and larger farms) (Noury and Girard, 2013). In most regions the numbers of young farm-owners are falling more rapidly than those of the older ones (exceptions Belluno and Valle d'Aosta); this contains dangers for the future development dynamics.

The utilised agricultural area (UAA) is falling faster, above all, in Austria than in the regions of the neighbouring countries; although, depending on the surveys, the chronological comparison is blurred. What is common to all regions is an increase in forested areas. In stockholding, above all the relationship between dairy-cows and other cattle, is determinant for the intensity of labour. In some regions (Graubünden, East Tyrol and particularly Hautes-Alpes), sheep

and goat farming is already very significant and in most regions it is becoming more important. Likewise the generally rising numbers of other cattle in contrast to dairy cows indicate a trend to more extensive farming in Alpine pasture and mountain farming.

The economic situation of the farms and the labour-force situation – as far as data exist and are significant for this regional level – indicate that family labour predominates in the mountain regions in comparison to the national average, but here too the ratio of paid workers is generally rising. In regional comparison, the French regions have the highest number of workers per farm and also the highest ratio of paid workers, while the ratio of family labour is the highest in Austria and Slovenia. The gross total production per farm and the farm size according to standard output are also comparably very high in the French regions (above all Savoy).

The agri-policy payments in the mountain farming regions are spread widely and are very differently structured: while agri-environmental measures make up a large proportion in the Austrian regions, in German, French and Slovenian regions the decoupled payments are very high. The EU's Common Agricultural Policy establishes certain principles, the specific design in the selected exemplary regions, however, varies greatly. On the one hand, the pillar one measures of the CAP differ in the respective Member States, as do the equivalent measures in Switzerland, on the other hand, rural development programme measures – regionally determined in Germany, France and Italy, otherwise nationally – are nevertheless differently focused. Thus, there are considerable differences in the level of direct payments. In pillar two, rural development, special regulations in the support of less-favoured areas (Austria, France, Italy) and environmental measures, such as the farming of mountain pastures and payment for Alpine pasturing and herding (Austria, Germany, Italy, Slovenia), have a special effect on Alpine pasture and mountain farming. In addition, other measures independent of the EU agricultural policy influence agriculture to a lesser extent, such as different levels of agri-diesel subsidy, differing farm succession regulations and individual measures at state or provincial level. The provision of training especially for Alpine pasture farming is by far the most extensive in Austria as compared to the neighbouring countries.

All in all, mountain and Alpine pasture farming in the Austrian regions is provided with comprehensive and multifaceted support and advice as compared to the neighbouring countries in the Alpine area, which together with a rather favourable regional economic environment, presumably also contributes to the comparatively limited fall in farm numbers. Nevertheless, a change in the utilisation structure towards extensive forms of farming, to afforestation and a secondary employment economy is to be noted, usually more strongly marked than in the regions of the neighbouring countries.

The selected aspects are intended to highlight the dimensions that are decisive for mountain farming and their embedding in the economic, social and ecological structures of rural regions. A comparison of the development paths in agriculture produced very divergent developments. How decisive the measurable influencing factors ultimately prove to be and what specific effects they have depends on less tangible, soft factors. These are, for example, the social, societal and institutional capital, cooperation and network formation and the readiness to innovate on the part of the regional players as well as a governance towards an integrated, territorial approach (Shucksmith et al., 2005).

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