

AGRICULTURAL HOUSEHOLDS IN MOUNTAIN AREAS IN PRE- AND POST-ACCESSION SLOVENIA

Štefan Bojnec

Ph.D., Full Professor

Faculty of Management Koper

University of Primorska

Cankarjeva ul. 5, p.p. 345, SI-6104 Koper, Slovenia

e-mail: stefan.bojnec@fm-kp.si

Kristina Knific

M.Sc.

Faculty of Management Koper

University of Primorska

Cankarjeva ul. 5, p.p. 345, SI-6104 Koper, Slovenia

e-mail: knific.kristina@siol.net

UDK: 631.111(497.4-23.01)

COBISS: 1.02 – Review article

Abstract

Agricultural Households in Mountain Areas in Pre- and Post-accession Slovenia

This paper analyses structural changes in agriculture and agricultural households in the mountainous areas of the Gorenjska region in Slovenia. The focus is on agricultural multifunctional roles, agricultural and agricultural households' structural changes pre- and post-accession of Slovenia to the European Union (EU) on the basis of datasets obtained by two in-depth surveys from 2001 and 2007. The analyses confirm adjustments of farm households to the use of subsidies and new regulations, and diversification of agricultural households' incomes. Short-term and long-term strategies of farm households vary depending on farms' natural factor endowments for agriculture, farm size and structures of farm households, availability of agricultural land and their rental values, diversification of incomes with self-employment and employment outside the farm household.

Keywords

mountainous areas, agricultural structures, income diversification, household strategies, multifunctional development, Gorenjska, Slovenia, European Union

The editor received the article on 8.2.2010.

1. Introduction

Around 73% of agricultural land in Slovenia is situated in the less favourable areas (LFAs) for agricultural production (e.g. Dernelc et al 2002). Difficult natural production conditions for agriculture are reflected in lower production ability of agriculture and farms, limited selection of production of products, specialisation of production and adjustment of technologies, and higher production costs (IAMO 2003 and 2004). Due to this, farms in these natural LFA conditions are economically less competitive and less structurally adjustable, but can play an important role in multifunctional agricultural and rural development (OECD 2001; Abler 2004; Ballin et al 2005). In addition to the supply of safe and quality food with focus on ecological farming, the multifunctional roles of agriculture and farms are the preservation of landscape, social and cultural heritage, the development of supplementary activities on the farms and in non-agricultural activities particularly in mountainous areas.

There are rare studies to analyse and compare structural changes in agriculture and agricultural households in general and particularly in the mountainous areas during pre- and post-accession of Slovenia into the European Union (EU). Therefore, the aim of this paper is to analyse and open a policy debate on the most recent structural changes in agriculture, in agricultural households, and in rural areas in Slovenia by focusing at the mountainous areas in the Gorenjska region in Slovenia. The in-depth empirical analysis is conducted using a sample of the agricultural households categorized by the socio-economic types, by areas with different level of development, and by differentiated natural endowments for agricultural production.

2. Methodology

The empirical analyses of structural changes in agriculture, in agricultural households, and diversification of incomes of agricultural households are based on the survey sample of the agricultural households in one part of the Gorenjska region (areas around Škofja Loka) from the years 2001 and 2006. The surveys of the agricultural households were conducted in 2001 using a questionnaire which was prepared for the international research project: EC-PHARE, Project No P98-1090-R, EU Accession in the Balkans, Policy Options for Diversification in the Rural Economy. 60 agricultural households were included in the survey. The questionnaire used in April 2007 was prepared by Möllers (2007) for the GTZ Project 2002.3514.3-003.00, Croatia's EU Accession, Socio-Economic Assessment of Farm Households and Policy Recommendations (Möllers et al 2009). 34 agricultural households were included in the survey. The agricultural households were selected on the basis of proportional stratified sample according to socio-economic types of agricultural households. By 2007, some agricultural households stopped practicing farming, and some did not desire to participate again, which is why there is a smaller number of agricultural households in the sample.

The focus of the analyses and comparisons is on the diversification of households' incomes and factors that determine the decisions of agricultural households, the importance of subsidies for agricultural activities in mountainous areas and strategies of agricultural households. The socio-economic type of agricultural households is an indirect indicator of income diversification in agricultural households, which are divided into pure agricultural, mixed, supplementary, and elderly farms. On the basis of the changes in the socio-economic types of agricultural households between

the years 2001 and 2006, we have analyzed structural changes in agriculture and in agricultural households. The results of the two samples are compared to investigate the structural changes in agricultural households.

3. Explanation of empirical results

The number of farms, which are professionally engaged in farming in the analyzed mountainous areas, has declined (Knific and Bojnec 2007). One of the reasons is the increased number of farms, which practice farming for market oriented agricultural and food production. The speed and direction of the structural changes in agriculture and in agricultural households in the mountainous rural areas vary due to different micro natural conditions for agricultural production. In the areas with more favourable conditions for agricultural production, there are also a greater number of pure farms and supplementary farms. However, even in such natural factor endowments conditions, the number of pure farms is increasing, while the number of mixed farms is in decline.

Farms that deal only with agricultural production rent land to neighbouring farms, or sell it to other farms or to the state Fund of Agricultural and Forest Land. The pure farms can intensify their agricultural production by renting land, which is so far the most important determinant for the increase of the operational land farm size for the farms, which continue with farming. In the micro local areas with LFA conditions for agricultural production, there is the overall pattern of the decline in the number of pure and supplementary farms due to the abandonment of agricultural production, however, there is an increase in the number of mixed farms that combine sources of income from agriculture, supplementary activities on farms, and particularly off-farm employment of the households' members. The intensification of agricultural production in this mountainous area is hindered due to the difficult natural conditions for machinery use and due to the fact that in the land structure meadows and pastures prevail, which were in the past, during the traditional, agriculture used for livestock production (Knific 2008). Nevertheless, the supply of land for renting is relatively small, what is even more important, there is a considerable lack of interest for cultivation in agricultural households.

In the years 2001 and 2006, the sources of households' incomes from agriculture for most of the agricultural households were not big enough for the households' survival. Most of the agricultural households in the analysed mountainous areas covered their income needs by the diversification of incomes, by self-employment at the agricultural household and by regular off-farm employment. Only a small number of agricultural households allocated households labour only to agricultural activities.

Among socio-economic types of agricultural households we have not found comparable differences on the level of real and relative incomes of the analysed agricultural households between the years 2001 and 2006. The increased government subsidization and thus the higher level of the government subsidy supports for agriculture in the mountainous areas in the year 2006 was identified as the crucial determinant for the increase of income of the agricultural households from agriculture. Moreover, between 2001 and 2006, the relatively high rates of economic growth provided job opportunities for the off-farm employment of the members of agricultural households, which increased the incomes of the mixed agricultural households in the rural mountainous areas.

Between 2001 and 2006, differences were identified as regards the households' incomes among the socio-economic types of agricultural households (Knific 2008). There was a statistically significant increase in the income of mixed farms due to off-farm employment, and of farms in the LFA conditions for agricultural production due to the crucial role of the government subsidies. The share of the governmental budgetary support in households' incomes from agriculture between the years 2001 and 2006 increased substantially. In 2006, the share of governmental budgetary support in households' incomes was a very important source of households' incomes from agriculture, one of the main sources of income of pure farming agricultural households and also an important source of income of mixed farms, which are engaged in farming in the LFA conditions for agricultural production. However, an important source of income of mixed agricultural households in the mountainous areas is regular off-farm employment, and for some supplementary agricultural households also self-employment with supplementary activities in the agricultural households. During the pre-enlargement (in 2001), the implementation of the pre-enlargement SAPARD programme provided the implementation of the measures for investments in agricultural households and for diversification of agricultural households' incomes.

The attitude of the members of agricultural households towards the diversification of agricultural incomes with regular off-farm employment and with self-employment is statistically dependent mostly on education and age of the agricultural households' members. This finding is consistent with the finding of Bojnec and Dries (2005) as regards the whole Slovenia. The diversification of the households' incomes with self-employment was the most favourable for the members of agricultural households with vocational education and the members aged between 46 and 55 years. The regular off-farm employment was the most preferable among the members of agricultural households with secondary or higher education and the members aged from 16 to 25 years. The members of agricultural households decide for self-employment and regular off-farm employment due to the limited incomes of from agriculture that are needed for survival, as well as due to the opportunities for higher incomes from non-agricultural employment (see also Ashok et al 2002).

The results of the survey confirmed that between 2001 and 2006 the agricultural households' real incomes from the supplementary activities, which include incomes by the self-employment, were reduced by half (Knific 2008). The reason for such a sharp reduction in the agricultural households' incomes from the supplementary activities in the households was the implementation of the new legislation regarding quality and environmental standards. Several agricultural households did not comply with more developed marketing of produce or they had limited own capacities for processing of agricultural produce to comply with the new set of higher quality standards.

Nevertheless, the diversification of the households' incomes with self-employment is often present in the agricultural households. This employment is however less associated with food processing, and more with forestry and rural services related to agricultural mechanization and similar activities. The reasons for such self-employment activities are relatively low incomes from agriculture in agricultural households, market opportunities for forestry activities, and other market oriented activities which include more innovative products. Among economic opportunities there is also farm tourism and rural tourism with tourism associated rural services. These are additional cash flow income activities among the supplementary activities,

which have positive impacts on the increase of households' incomes and the living standards as a source of incomes for investments in the agricultural households and for the improvement of the overall economic situation of the agricultural households in rural mountainous areas.

The diversification of the households' incomes by the regular off-farm employment is also rather frequent in the agricultural households in the analysed mountainous areas. The main reason for the regular off-farm employment is to assure a higher income and a better living standard for the agricultural household. The regular off-farm employment also contributes to more efficient use of economic capacities in the agricultural household, particularly family labour, and provides opportunities for assuring economic sources for investments in personal development of the households' members, such as education and additional training.

The EU legislation and policy measures are on average positively evaluated by the agricultural households (Knific and Bojnec 2007). Three years after the entry of Slovenia into the EU, the agricultural households share a positive opinion on the impacts of the EU membership. Among the most frequently positive assessments are: the greater market size, the opened borders, the common currency (Euro), and particularly agricultural subsidies and policy measures for the mountainous rural areas. Among the negative implications of the entry of Slovenia into the EU is, according to the agricultural households, bureaucracy, rigorous legislation, the Single European Market associated with the higher degree of competition, which reduces the prices of agricultural produce. The agricultural household's adjustment to the EU regulations caused some difficulties for the agricultural households. The most emphasized are the adjustments to the set veterinary and fitosanitary standards, which require investments.

The agricultural households are successful in the applications for the subsidy measures for agriculture and rural areas. However, the procedures for the subsidy applications are evaluated as complicated. The agricultural policy measures for the agricultural households in the mountainous areas focus towards land concentration and market price support measures. Agricultural households in the mountainous areas are rather well informed about agricultural and rural subsidies and how to apply for them. Among the most important sources of information about the development of policies and support measures for agricultural households are TV, radio, agricultural advisory services and professional agricultural reviews. Less important sources of information for agricultural households are considered to be sources of information from Farmers Alliance and local markets.

Among the strategies of agricultural households the focus is on the strategies of responsiveness and the strategies of adjustments of agricultural households (Fig. 1, Fig. 2). The strategic behaviour of agricultural households is in an early stage of development. The reasons for this are lack of knowledge, relatively low mobility of production factors, and relatively limited investment resources. For most of the agricultural households significant impacts have caused changes in the enabling of macro-economic and local environment, and relatively low competitiveness of the agricultural households. The most often implemented strategies are the strategy of responsiveness with the lagged responses when the effects are already visible, and the strategy of adjustment with the up-to-day adjustments to the changes in the macro-economic and local environment. About half of the agricultural households in the sample use one or another main strategy. None of the strategies is typical for a

certain type of farming (pure, mixed or supplementary). Among measures of the strategy of responsiveness the important ones are those which contribute to the growth of the farm, improve the search for the off-farm employment, and contribute to investments in non-agricultural entrepreneurship.

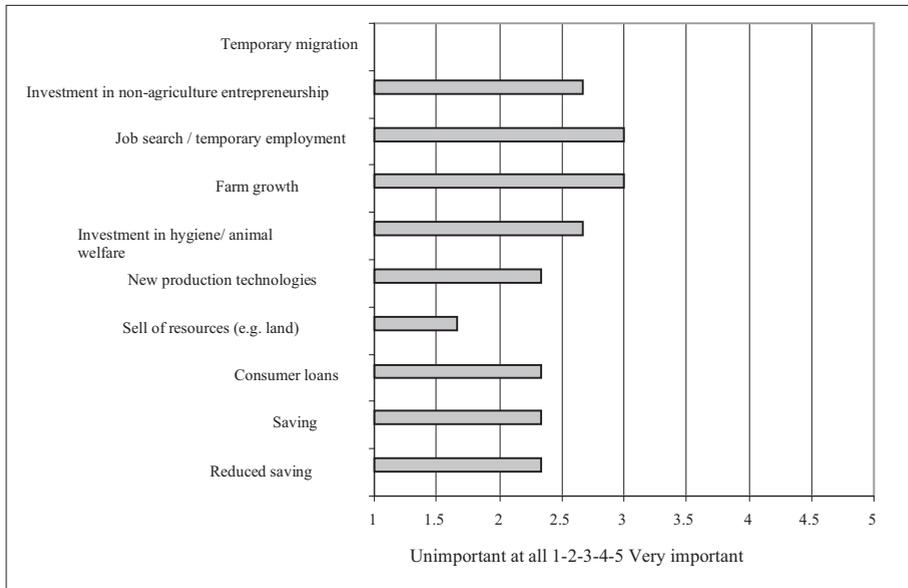


Fig. 1: Importance of measures for responsiveness strategy.
Source: Authors' calculations.

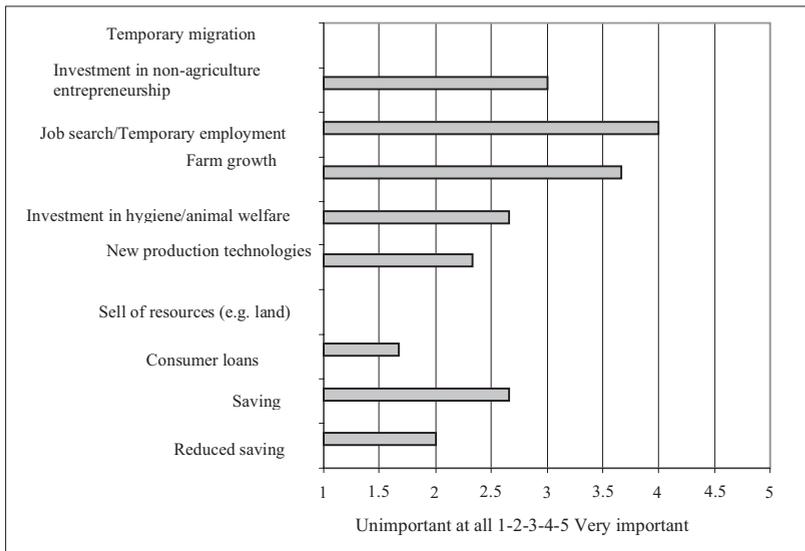


Fig. 2: The importance of measures for adjustment strategy.
Source: Authors' calculations.

The strategic decisions of the agricultural households in the sample to invest in agricultural activities are most frequently determined by the following factors: access to direct subsidy payments, agricultural price increases and assurance of selling of agricultural produce, and access to land. The other important factors to stop with the agricultural production in the analysed agricultural households are ranked in the following order: programmes for the early retirement in the agricultural household, better opportunities for the off-farm employment, and access to loan for investment in non-agricultural entrepreneurship in the agricultural households. The least important factors to stop with agricultural production are better opportunities for land sale.

On average, the agricultural households in the sample have expected to encounter difficulties related with the adjustments to the stipulated EU regulations and the increased competition from the enlarged EU markets (see also Kožar et al 2003). In general, the analysed agricultural households in the mountainous areas aim to maintain the farming activity. However, the future of the farming activity in the agricultural households on the long-term (20 years) is more or less unclear. The agricultural households in the mountainous areas do not have developed long-run strategies so far. The reasons are the inability to forecast future, immobility of production factors due to limited knowledge, and relatively limited resources for investments.

The objectives of the agricultural households are oriented towards preservation of the farm for the next generation, and the maintaining of the family tradition and life in rural areas. Due to a small farm size and the unclear future expectations, the agricultural households adjust ad hoc business strategies to the ongoing macro-economic, local and other changes, which come from the environment. The abandon of the farming activity is most likely to happen with the generational change of the head of the farm, and particularly if the incomes from the non-farm employment are enough for the survival of the agricultural household. The agricultural households live from the farming activity due to the small size of the farms and the limited incomes from agriculture for the household survival. The most important factor for the decision to stop with the farming activity is the better opportunities for the households' members to work outside the farm.

4. Conclusion

The farms in the mountainous areas in Slovenia are on average bigger than the average farm size in Slovenia. In the land structures in the mountainous meadows, pastures, and forest land prevail (Knific 2008). In addition, due to more difficult natural conditions for farming, agricultural production in the mountainous areas is more oriented towards livestock production on grass land.

We have presented the structural changes in agriculture on the sample of the agricultural households in the mountainous areas in the Škofje Loka's mountainous in Slovenia. We have highlighted the prevailing structures and structural changes pre- and post-accession of Slovenia into the EU. The empirical analysis is based on two in-depth surveys from 2001 and 2007.

The households' incomes from farming are not sufficient for the household's survival for around one-sixth of the agricultural households. The measures of the EU policies are in general positively accepted by the agricultural households in the mountainous

areas, but some reservations and shortcomings are found as regards adjustments to the EU legislation. The agricultural households are also well informed about the EU policies and state subsidies, which are invested in the agricultural activities for the growth of the farm or for self-employment.

Due to the limited incomes from the farming, the agricultural households have diversified their incomes by self-employment in the agricultural household, and by regular off-farm employment outside the agricultural household. Among the main reasons for self-employment are the internal households' factors (limited incomes and income variability from agriculture) and the external environment factors (market opportunities). Among the economic activities for self-employment, employments that are associated with forestry and rural services prevail. The self-employment contributes to higher incomes in comparison with agriculture as well as to a higher quality of employment. The diversification of the households' incomes through the regular off-farm employment outside the agricultural household is frequent for the sample of the agricultural households. Among the internal households' factors, limited households' incomes prevail, and among the external factors, the higher wages from the off-farm employment than from agriculture on the agricultural households prevail. Among the reasons for the regular off-farm employment, the prevailing are opportunities for additional resources for personal development and the more efficient use of the households' economic capacities.

Agricultural households in the analysed mountainous areas aim to maintain farming, but they have not developed long-run strategies. The objectives of the agricultural households are oriented towards the preservation of the farm for the next generation and the maintaining of the family tradition and the life in the mountain rural areas. Due to the small farm size and the unclear future expectations, the agricultural households ad hoc adjust business strategies to the ongoing changes. The household's abandon of the farming activity is the most probable at the generational change of the head of the farm, particularly if the incomes from the non-farm employment are enough for the survival of the agricultural household. The current economic recession with the job destruction in the region might give different short-run results. However, in the long-run we might expect that the most important factor for the household's decision in the mountainous areas to stop with the farming due to the small size of farms is the limited households' incomes from agriculture for the household's survival, better opportunities for the employment and incomes outside the farm as an issue for the future research.

References

- Abler, D. 2004: Multifunctionality, agricultural policy, and environmental policy. http://findarticles.com/p/articles/mi_qa4046/is_200404/ai_n9396969/print
- Ashok, M. K., El-Osta, H. S., Morehart, M. J., Johnson, J. D., Hopkins, J.W. 2002: Income, wealth, and the economic well-being of farm households. Washington DC: USA, Economic Research Service.
- Ballin, M., Mancini, A., Pizzoli, E. 2005: Farm multifunctionality, households incomes and sustainable rural development. <http://www.nass.usda.gov/mexsai/Papers/farmsmultifunctp.doc>
- Bojnec, Š., Dries, L. 2005: Causes of Changes in Agricultural Employment in Slovenia. Evidence from Micro-Data. *Journal of Agricultural Economics* 56 (3), 399–416.
- Dernulc, S., Iljaš, U., Kutin, B., Orešnik, I., Cunder, T., Golež, M., Juvančič, L. 2002:

- Popis kmetijskih gospodarstev, Slovenija 2000. Ljubljana: Statistical Office of the Republic of Slovenia.
- Knific, K. 2008: Prestrukturiranja kmetijstva po vstopu Slovenije v Evropsko Unijo: Primer kmečkih gospodinjstev na Škofjeloškem. Magistrsko delo. Univerza na Primorskem, Fakulteta za management Koper.
- Kožar, M., Kavčič, S., Erjavec, E. 2003: Ocena učinkov pristopa Slovenije k Evropski uniji na dohodkovni položaj kmečkih gospodinjstev. Slovensko kmetijstvo in Evropska unija. 2. konferenca DAES, zbornik. S. Kavčič (ed.). 289-303. Ljubljana.
- IAMO 2003: Subsistence Agriculture in Central and Eastern Europe: How to break the Vicious Circle?. Halle (Saale): Institut für Agrarenwicklung in Mittel – und Osteuropa (IAMO).
- IAMO 2004: The Future of Rural Areas in the CEE New Member States. Halle (Saale): Institut für Agrarenwicklung in Mittel – und Osteuropa (IAMO).
- Knific, K., Bojnec, Š. 2007: Kmečka gospodinjstva tri leta po članstvu Slovenije v Evropski uniji, Farm households three years after the Slovenian accession into the European Union. In: Kavčič, S. (ed.). Slovensko kmetijstvo in podeželje v Evropi, ki se širi in spreminja. 1. izd. Ljubljana: Društvo agrarnih ekonomistov Slovenije – DAES. 89-99.
- Möllers, J. 2007: Questionnaire for Households. Halle (Saale): Institut für Agrarenwicklung in Mittel – und Osteuropa (IAMO).
- Möllers, J., Zier, P., Froberg, K., Buchenrieder, G., Bojnec, Š. 2009: Croatia's EU Accession: Socio-Economic Assessment of Farm Households and Policy recommendations, Studies on the Agricultural and Food Sector in Central and Eastern Europe, Vol. 48. Halle (Saale): Leibniz-Institut für Agrarentwicklung in Mittel- und Osteuropa (IAMO).
- OECD 2001: Multifunctionality, towards an analitical framework. Paris: Organisation for Economic Cooperation and Development.

AGRICULTURAL HOUSEHOLDS IN MOUNTAIN AREAS IN PRE- AND POST-ACCESSION SLOVENIA

Summary

This paper analyses structural changes in agriculture and in the agricultural households at the mountainous areas in Slovenia. The research on structural changes in agriculture focuses on the empirical analyses of the income diversification on the sample of agricultural households in part of the Gorenjska region in the years 2001 and 2006. The number of farms, which are professionally engaged in farming, has declined. The number of farms, which live from commercial farming, has increased. In the mountainous areas with more favourable conditions for agricultural production, there are a greater number of pure farms and supplementary farms. The number of farms that live from farming has increased, whereas the number of mixed farms has declined. Farms that live from agricultural production rent land out or they sell it to pure farms.

For most of the analysed agricultural households incomes from agriculture were not enough for households' survivals. Most of the analysed agricultural households have covered their income needs by the diversification of incomes with the self-employment and regular off-farm employment. Only a smaller number of agricultural are oriented only towards agricultural activities on the farm. The increase of government subsidy supports for agriculture in mountainous areas in the year 2006 contributed to an increase in incomes of agricultural households from agriculture, but on the other hand the relatively high economic growth during the analysed years had provided opportunities for off-farm employment of the members of agricultural households.

An important source of incomes of agricultural households in the mountainous areas are regular off-farm employments, and for some agricultural households also self-employment with supplementary activities on the farm. The attitude of the members of agricultural households towards diversification of agricultural incomes with regular off-farm employment and with self-employment depends on the education and age of the agricultural households' members.

The agricultural households in the mountainous areas have not developed long-run strategies. The objectives of agricultural households are oriented towards preservation of farms for the next generation and maintaining of family tradition and life in rural areas. Due to relatively small farm size and unclear future expectations, the agricultural households ad hoc adjust business strategies to ongoing changes. The abandon of the farming activity is most likely to happen at the generational change of the head of the farm, particularly if incomes from non-farm employment are enough for the household's survival.