

The impact of financial support program in creation on farm jobs, Kosovo's case

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Abstract

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Job creation is a top policy and political priority of the country, but the unemployment level is high and persistent, ranging up to about 35%. Youth and rural residents are among the most affected by the lack of gainful employment opportunities. Further modernization and development of the agri-food system in the country can generate a double win of job creation and economic growth, but rural areas of Kosovo face many structural and socio-economic challenges. Huge rural areas remain depopulated and their resources unutilized, with negative economic, social and environmental consequences. Rural populations are stagnant or dropping in the country, at the same time, the rural employment base is narrow and dominated by extensive agriculture. All these factors limit rural and general employment and economic growth. Nevertheless, agriculture continues to hold an important role in the Kosovo's socio-economic situation, yet, primary agricultural production remains caught in a low productivity – low income trap. Most agricultural producers are engaged in subsistence and semi-subsistence activities, and suffer from hidden unemployment and poor labor force mobility. These producers capitalize on their current competitive advantages, i.e. low labor costs and high-quality natural resources, but at the same time, they face low levels of labor productivity. An unfavorable age structure further compounds the sector's challenges. Kosovo's farmers are ageing, and 18% of farm managers and/or farm workers above 65. Young farmers are reluctant to enter the sector, given its low returns as well as land market distortions. Therefore, modernization and transformation of Kosovo's agriculture are needed both for increasing the sector's competitiveness and for maximizing its benefits from EU accession.

Keywords: farm jobs; direct payments; grants; value chain coordination; distribution channels

Introduction

The Republic of Kosovo is one of the poorest countries in the Balkans. The sector of small and medium-sized enterprises and the agriculture sector are the most important sectors for the economy of Kosovo in terms of employment and economic growth opportunities and represent a good potential to ensure the progress of Kosovo towards EU in-

tegration. Moreover, the sector of small and medium-sized enterprises has played an important role in increasing both income levels and employment, following the end of hostilities. Therefore, the further development of this sector has an important role to play in job creation and in poverty alleviation in the country.

The agricultural sector plays an important role in further economic development of Kosovo. Participation of agricul-

ture in GDP in 2015 is estimated to be around 10.5% (KAS, 2016), and plays an important role in employment. Currently it is estimated that the agriculture sector accounts for 26.7% of total employment, and agricultural products make about 12% of total export value (MAFRD, 2017).

Despite the current investment in the agriculture sector, Kosovo is still facing trade deficit of agricultural products. Imports of agricultural products remain relatively high, accounting for about 10% of all imports. Of this amount, 30% comprise food and food products. On a per capita basis, Kosovo is one of the largest importers of food in Europe. This is largely due to the fact that the sector has remained predominantly subsistent/semi-subsistent in nature and faces several diverse and inter-related challenges that are reducing competitiveness and preventing the sector from meeting its production potential.

Primary production is not sufficient and it is directly reflected in the agro-food industry, and therefore the agro-food industry is quite fragmented, and includes food products, beverages, plant and animal production, hunting and related services, which combine to represent one of the largest sectors in the economy. Within the processing industry, food processing constitutes the largest part of financial turnover of 50%, while the processing of beverages constitutes 25%. Besides the processing industry other important business activities include plant and animal production, hunting and related services that have a turnover of 15%, wood production and its products with 9% participation and fishing with aquaculture by 1% (MAFRD, 2014).

Furthermore, the negative trade balance is due to many challenges that domestic producers face such as: access to market intelligence and consumers' increasing demand for high quality imports. As a country in transition, the common problem identified was a proper and tighter linking of domestic supply and demand for economic development. In a centrally planned economy, production targets are set by the government, but with Kosovo's current market reform, market intelligence becomes the main driver of production however the demand preference information is either missing and/or the link to the markets is a challenge. However, there has been relatively high growth over the last three years, but job creation is lagging and not enough jobs are created to reduce labour market pressures, particularly in rural areas (O'Hara, 2011; Gjokaj and Ortner, 2014; Schuh et al., 2016).

Establishing a strong link to the market is imperative and a priority for making the agricultural industry competitive, efficient and able to introduce innovation for quality and food safety that benefits consumers and the actors in the supply chain. The dearth of information on the food industry

and consumption trends in the country is variable and sometimes not systematic as demand preferences changes due to two drivers: income changes and the flood of cheap imports, which are becoming more flexible in the context of regional free trade agreements on one hand, and the expansion of supermarket chains on the other hand. Government role in data collection has been dismal, while agriculture various support schemes have not been based on in depth understanding of consumer expectations and preferences for (local) food products (O'Hara, 2011).

As a key sector of Kosovo's economy, the agriculture sector is associated with systemic and structural challenges that need to be addressed in order to harness its competitive and growth potentials. In addition, the main objective of this study is to quantify and qualify impacts of the financial support in terms of employment creation, incomes, competitiveness and productivity through statistical quantitative analysis as well as qualitative in-depth studies from the field. The need for jobs is especially acute when large numbers of young people enter the labor force and seek employment like in Kosovo. Job creation remain important issues around the world, in this respect there are studies showing a positive direct impact of the financial support program on agricultural and rural employment, and others showing a negative or a mixed impact. However, it is important to note that many authors also found indirect financial support program effects on agricultural and rural employment (Brooks et al., 2013; Schuh et al., 2016).

Agriculture and rural development – state of art in Kosovo

Given its economic potential, Kosovo's agriculture and rural development sector has benefited from a comprehensive sector strategy. The Agriculture and Rural Development Program (ARDP- Strategy based on Common Agriculture Policy of EU – CAP) established initially in 2007 by the Ministry of Agriculture, Forestry and Rural Development (MAFRD). It takes into account the current and changing nature of the EU's Common Agricultural Policy, in particular direct support such as measures of the Pillar I of the CAP, as well as the measures and axes of the EU's Pillar II, Rural Development Strategy; which are the EU's Instrument for Pre-accession assistance (IPA); and the European Partnership Activities.

In addition, the Agriculture and Rural Development Program 2014-2020 (ARDP) was prepared in accordance with IPA II regulations by adapting it to the country's conditions and in close consultation with socioeconomic partners and other stakeholders (civil society organizations, local action groups, organizations of agricultural producers, agro-busi-

nesses, municipalities and other Ministries) related to the sector of Agriculture and Rural Development.

The overall strategic objectives for agriculture and rural development in Kosovo are defined as:

- Development of the agro-food sector, which is based on competitiveness and innovation, with increased production and productivity, able to produce high quality products and meet the demands of EU market, by contributing to the provision and security of food supply, and by pursuing economic, social and environmental goals, through the promotion of employment and development of human and physical capital;
- Protection of natural resources and the environment of rural areas, by addressing the challenges of climate change thereby attaining more sustainable and efficient use of land and forest management and by introducing agricultural production methods for preserving the living environment; and
- Improving the quality of life and diversification of employment opportunities in rural areas by promoting employment, social inclusion and balanced territorial development of rural areas.

ARDP 2014-2020 is a multi-annual program, according to the Law on Budget and Finances, the budget for implementation of ARDP is allocated in annual basis. The legal basis for implementation of ARDP 2014-2020 is the Law on Agriculture and Rural Development, and the Minister issues Administrative Instructions for the purpose of annual implementation of ARDP.

The Agency for Agricultural Development (AAD) was established by Law No. 04/L-090 on Agriculture and Rural Development, amending and supplementing Law No. 03/L-98 creating it as an Executive Agency under the MAFRD. The AAD is responsible for implementing the Program for Agriculture and Rural Development by implementing the written policies and procedures of Direct Payments and Rural Development Projects. Based on the requirements of IPARD II and demands of the time, the need for AAD enhancement, the new regulation on the Duties, Responsibilities, Powers and Organizational Structure of AAD was drafted during 2016 in cooperation with the EC project for supporting the Ministry.

Nonetheless, Kosovo's current growth model is unsustainable over the longer term. Growing private sector activities and investments will become increasingly critical as engines to generate growth and, in turn, improve job and income perspectives, in case consistent support actions will not be applied (World Bank, 2016). Agriculture is the largest employment sector in Kosovo which provides opportunities for investment not only in primary production but

also in modern post-harvest handling facilities, cold storage distribution centres and logistics centres. Kosovo also offers a flexible and cheap labour force. Modern and efficient processing facilities could be brought closer to centres of production thus providing economies of scale and higher value added products that could compete effectively with the products that Kosovo is currently importing (especially dairy products, fruit and vegetables, meat products, wine production and other beverages).

Some important investments were made in recent years – many of them with EU support but also with the support of governmental funds, and as a result some processors made visible progress on their production capacity and the quality of their products and thus on competitiveness. Still, the agri-food sector is facing serious challenges related to conforming to EU standards – especially in relation to milk and meat processing (including slaughterhouses), thus limiting its capacity to export, while a key issue on fruits and vegetable remains the storage of these products and related post-harvest. Further development of the local agri-food industry should be strongly linked with the increase of the production quality and food safety standards, hence adhering to the trade integrated perspective “through the promotion of regional trade and investment linkages and policies that are non-discriminatory, transparent and predictable” – as mentioned within the South East Europe (SEE) Strategy. Limited variety of products is another issue which faces the local agri-food processors (European Commission, 2015).

Kosovo is now a market economy quite open to international trade. Nevertheless, in spite of gradual recovery of its supply chains, the country is still dependent on food imports as the recovery and expansion of primary production and processing base remains hampered by a number of competitiveness challenges mainly related to standards and labour productivity. Such factors include the unfavourable farm structures, high dispersion of land ownership, outdated farm technologies and equipment as well as farm management practices which led to low productivity and quality, high seasonal concentration (which requires investments in storage centres) and an underdeveloped infrastructure, a rudimentary rural advisory system and limited access to credit and investment capital. Cumulatively, these factors are reducing the quantity and quality of agricultural production and implicitly its competitiveness in local and foreign markets. For the implementation of market standards in line with EU requirements, especially for fruits and vegetables, the agricultural sector will need greater institutional capacity building for introducing the standards in legislation, the establishment of inspection bodies, support for establishing producers groups (who, for example, may have in common

fruits sorting per class, using the same equipment), training in advisory services.

As farming competitiveness is also affected by unfavourable farm structure, the need arises for a targeted implementation of grants schemes: establishing a target group at the level of commercial farms. However, this cannot be established in a simplistic manner (e.g. based only on geographic factors, such as minimum 2 ha), as in farming the economic size unit (ESU) matters, size that is established based on standard output. Rural development and agricultural competitiveness also depend on an appropriate infrastructure regarding sustainable water and electricity supply, waste management, and proper roads to reach even remote areas. It is also worthy to mention that the share of agricultural land under irrigation in Kosovo is still not sufficient for efficient agricultural production; therefore, investments in new or maintenance of existing irrigation systems should be considered based on benefit-cost analyses. In respect of this, the farmers should receive support for the establishment of structures, which improve the environment, e.g. for the collection, storage, production and disposal of manure as fertiliser.

Methodology and Data

This research was developed in the context of the EC Project “Ex-post Evaluation of the Agriculture and Rural Development Program 2007-2013 of Kosovo” (2015/2016). In general, the study follows the steps described below:

- **Desk Phase** – The desk review phase includes: collection and analysis of relevant documentation, including relevant policy paper, strategies and other sector planning documents; and the completion of the evaluation approach and methodology;

- **Field Phase** – The field study phase will include site visits and /or interviews to gather the necessary and relevant information directly by interacting with all relevant stakeholders relevant to the areas analyzed;

- **Synthesis Phase** – This phase is mainly devoted to the preparation of the evaluation study based on the work done during the desk and field phases and taking into consideration the outcomes;

- **Internal quality control** – The quality control should ensure that the deliverables comply with the requirements and meet adequate quality standards before proposing them for consideration/comments. The quality control should ensure consistency and coherence between findings, conclusions and recommendations. It should also ensure that findings stated are duly substantiated and that conclusions are supported by relevant judgment criteria.

The study will try to make sure that the assessment is

objective and balanced, observations are accurate and verifiable, and will present findings, conclusions and recommendations.

Moreover, the study followed a rigorous methodology and process. It was structured around four evaluation questions that assess the financial support program impact in terms of net employment creation and productivity, competitiveness (including business linkages) and incomes. The evaluation framework relied on a Theory of Change describing the chain of intended effects from inputs until overall objectives. The study used a mix of quantitative and qualitative approaches and faced several challenges as further detailed below.

The Theory of Change provides a comprehensive picture of how and why desired changes are expected to happen in a particular context. In this particular case, it helps to explain how and why the intended effects of the financial support program occurred. It enables to map out the link between the supported activities, and how these investments, have led to the attainment of expected goals throughout the chain of effects (input-output, outcome-impact). This approach enables analyses to measure progress towards the achievement of longer-term goals and to understand the causal chain of effects as well as the conditions that must be in place for the materialization of the expected outcomes and impact. The Theory of Change include in itself the ratio between inputs-outputs-outcomes and impacts, taking into consideration as well as the main assumptions.

The financial support program, financed by the government and international partners, and funding methodologies have been designed (among other reasons), to complement the efforts of the financial support program in the areas of milk, fruits and vegetables and vineyards by offering matching grants to finance investments. These play a crucial role in supporting the development of the sector characterized by small farm size, absence of updated farm infrastructure, and lack of financial means for investment.

The questionnaire and description of the data collected

This information was collected by the completion of 330 closed questionnaires, collected from all over the country. In addition, a standardized questionnaire was used to capture all sources of information, in order to indicate the observed effect on one supported unit. Samples of similar unsupported farm and food processing businesses were used as control groups. The change in the impact indicators in the control group was measured from the data provided by the completion of the same closed question questionnaire. The average difference in the value of the indicator before and af-

ter the investment was used to indicate the observed change in one unsupported unit. Information on the indirect effects of the grant aid (deadweight and leverage) in the supported business was also collected by the questionnaire and possible indirect effects in the local regional economy (multiplier, displacement and substitution) were explored. Most of the information on indirect effects is qualitative and cannot be used to produce a complete quantification of the direct and indirect effects of the grant aid interventions. After finishing the data collection and entry of the interviews from regions into a MS Excel database, the data quality were processed in SPSS.

Results

The qualitative analysis shows that the financial support program contributed to partially strengthening the effect of investments on employment. Government and international partners support catalyzed some improvements in increasing the productivity, especially by increasing the income of the producers and through establishing new production facilities and equipment, but probably less through encouraging stronger linkages along the value chains.

Nevertheless, the Kosovo agricultural and food sectors remain particularly inefficient, notably due to previously-mentioned constraints linked to an insufficient existence of important public goods or circumstances (for instance, inefficient land market, obsolete irrigation systems, imperfection on the capital market, badly functioning advisory services, underdeveloped village infrastructure, insufficient cooperative actions between various types of producers and inadequate vocational training and skill acquisition).

However, the effect of investments on employment is indicated by before and after change in the labor requirement on supported farms measured in Full Time Equivalents

(FTE). The change in employment, broken down by the status of workers on supported farms is shown in the first five rows of Table 1. Total change in employment in unsupported farms is shown in the second set of rows. Employment increased in both situations but at twice the rate on supported farms. The rate of increase in contracted employment is 352%. The average net direct change that can be attributed to the effect of the investments is .85 FTE. Multiplied by the number of supported projects (2280), this produces an estimate of 1938 FTEs created as a result of the support provided by the measure.

In addition, labour productivity is used to indicate the ability of the farm to sell goods at the prices prevailing on the open market. Those markets are open to producers all over the world and prices for many products are under downward pressure. The farmer's ability to make a sustainable income from those prices depends on his ability to keep production costs as low as possible. The indicator is calculated as net additional value added divided by the number of FTEs applied on the farm. Calculated in this way it takes account of direct production costs, intermediate consumption, and costs of one of the main factors of production (labour). For the reasons already stated, in Kosovo it is not possible to quantify direct production costs at the farm level and so the indicator is calculated as net increase in gross output divided by the number of FTEs applied on the farm.

The before and after changes in labour productivity in the sample of supported farms is shown in the first row of Table 2. The changes in labour productivity in the sample of unsupported farms are shown in the second row. The labour productivity of supported farms has declined by 1% while there has been an increase in 34% in the unsupported farms. It is worth noting however that labour productivity in both the before and after situation is higher on supported farms than in the sample of unsupported farms.

Table 1. Change in employment on sample of supported and unsupported farms, 2016

Sample of supported farms	Total FTE before	Total FTE after	Difference (No)	Average differ
Farmers	266	317	51	
Family	252	440	188	
Non family; not contracted	34	95	61	
Non family; contracted	21	95	74	
Total	573	947	374	1.34
Sample of unsupported farms				
Farmers				
Family				
Non family; not contracted				
Non family; contracted				
Total	138	170	32	.49

Source: Farm surveys

Table 2. Change in labour productivity on a sample of supported and unsupported farms, 2016

	Gross output (GO) before (€)	FTE before. No	GO/FTE before (€)	GO after (€)	FTE after (no)	GO/FTE after (€)	Difference in GO/FTE (€)
Sample of supported farms	3 182 089	573	5553	5 205 298	947	5496	-57
Sample of unsupported farms	670 241	138	4856	728 699	170	4286	-570

Source: Farm surveys

It can be argued that labour productivity is not always a good indicator of competitiveness. In a small farm economy with a high dependency on family labour, high unemployment and low wage rates some production tasks can be completed more efficiently by manual, rather than mechanized means. This is especially the case where product quality is protected by manual handling.

Particularly in the case of fruit destined for the fresh market, manual harvesting is preferred to avoid damage and loss. Eligible investments for the establishment of orchards were confined to those aspects of infrastructure that are critical to production efficiency – drip irrigation, plant support systems fencing and hail protection. These items were all carefully installed in the orchard projects visited by the evaluators and a high standard of husbandry was reflected in healthy and well established plant stock. It is quite possible that labour productivity on these farm enterprises has declined but there is no doubt that they can be competitive in the market place.

Leverage is defined to be the extent to which the support indirectly motivates the farmer to make unsupported investments. For example, a farmer who receives grant aid for the construction of modern cow shed decides to buy more cows in order to make full use of the increased housing capacity. The samples of 280 supported farmers were asked if they had made any related but unsupported investments. Sixty four percent said they had, and they specified the type of investments. Most were also able to indicate the cost of the investments. Purchase of stock, land and equipment were the most frequently quoted investments and the total value of this leveraged investment was 1,666,000 Euro. This sum was equal to 53% of the public investment on the sample of supported farms.

In addition, we tried to analyze the dead weight, which is defined to be the amount of the supported investment the farmer would have made if there had been no grant aid. The data in Table 3 shows the response of the sample of supported farmers to the question: “*What % of the support investment would you have made without the financial support program assistance?*”. Almost half said they would have no investment at all and 43% said less than 50%. So it would be reasonable to infer that significantly less than half of the

investment would have been made without the support. The overall indirect effect on the supported projects (leverage less deadweight) is likely to be positive.

Table 3. The amount of investment that beneficiaries would have made without the grant aid, 2016

1-25%	57	20.36%
26-50%	39	13.93%
51-75%	8	2.86%
76-99%	5	1.79%
All of it	35	12.50%
None of it	136	48.57%
Total	280	100.00%

Source: Farm surveys

The implementation of the program could also have had indirect effects on the economy of the regions in which the projects are located. Probably the most important is the regional multiplier effect where growth in one business or sector creates growth in the other sectors that have input or output linkages with that sector. For example, growth in the volume of milk produced by farms will create growth in the milk processing plants that add value to the raw material produced by the farms. The effect can also operate in the other direction – for example, the establishment of a company to process tomatoes into high quality/value products for sale in export and domestic markets will create a demand for raw material that leads to expansion in tomato production.

Furthermore, the study’s data show that the unit public expenditure cost of net direct increase in gross output is 17,243,609 € divided by 14,564,640 = 1.18. If this increase in gross output can be sustained then the return to investment will certainly be positive. The unit public expenditure cost of net direct increase in employment is 17,243,609 divided by 1938 = 8898 Euro. This compares favourably with the unit cost in other rural development programs in the EU.

The unit cost of increase in gross direct increase in gross output is used to indicate the relative efficiency of the sub measure investments because the survey of unsupported farms could not produce reliable data at sub measure level. The results are shown in Table 4.

Table 4. Public expenditure cost per unit increase in gross output on sample of supported farms; total measure and per sector, 2016

Operations	Gross output (€)		Difference	Public expenditure (PE) (€)	PE/Difference (€)
	Before	After			
Milk	775 293,78	1 289 066,70	513 773	816 924	1.60
Poultry	605 936,94	956 137,94	350 201	224 043	0.64
Bees	63 040,42	96 570,36	33 530	118 900	3.54
Orchards	443 324,52	713 535,52	270 211	522 818	1.93
Soft fruit	89 289,18	155 581,18	66 292	240 552	3.63
Vineyards	159 540,73	238 208,80	78 668	170 231	2.16
Vegetables in open fields	262 951,39	334 405,63	71 454	28 689	0.40
Greenhouses	548 521,39	1 010 665,64	462 144	771 850	1.67

Source: Farm surveys and Monitoring Unit

Table 5. Public expenditure cost per gross direct FTE created on the sample of supported farms by sector, 2016

Sub measure operations	FTE created (Q6)	TPE	Cost per job created
Milk	60	816 924	13 650
Poultry	19	224 043	11 512
Bees	20	118 900	5 909
Orchards	55	522 818	9 505
Soft fruit	32	240 552	7 634
Vineyards	32	170 231	5 313
Vegetables in open fields	8	28 689	3 552
Greenhouses	83	771 850	9 278
Pilot projects	26	272 424	10 432

Source: Farm surveys and Monitoring Unit

Poultry projects and vegetable growing projects in open fields were the most efficient. The efficiency of the largest (in terms of public expenditure and number projects) sub measures, milk, orchards and greenhouses is around the average for the measure as a whole. The least efficient were bee keeping and soft fruit projects.

The cost of creating gross additional employment with the investments in the milk, poultry, and orchard sectors is considerably higher than the average. The lowest costs of creating additional employment are in beekeeping, open field vegetables and vineyards.

Table 6. Cost of increasing gross output and employment on different farm business sizes, 2016

Farm business size	TPE/Gross output difference	TP/Additional employment
2 – 4 000	1.65	9052
4 001 – 8 000	0.93	6468
8 001 – 15 000	2.74	9190
15 001 – 25 000	2.65	11138
> 25 000	1.1	6400
Total	1.56	8511

Source: Survey of supported farms

It is clear that the cost of producing both impacts on the farm business sizes in the 8-25,000 Euro gross output range is substantially higher than the average. The most efficient investments are in farm businesses with a gross output of 4-8000 Euro.

The cost of producing an increase in gross output and additional employment increases consistently and very significantly with increased project size.

The cost producing one additional FTE employment is much lower on specialist farms Utility relates to the ex-

Table 7. Cost of increasing gross output and employment on different project sizes, 2016

Project size EUR	TPE/Gross output difference	TPE/Additional employment
1 – 5,000	0.58	3772
5,001 – 10,000	1.28	6363
10,001 – 15,000	1.12	10232
15,001 – 20,000	2.13	12508
20,001 – 30,000	2.90	10265
> 30,001	3.422	17195
Total	1.56	8511

Source: Survey of supported farms

Table 8. Cost of increasing gross output and employment on mixed and specialist farms, 2016

Type of farm	TPE/Gross output difference	TPE/Additional employment	TPE/Labour productivity difference
Mixed farms	1.43	10720	1666
Specialist farms	1.67	7404	Decline
Total			

Source: Survey of supported farms

tent which the interventions have met the prioritized development needs. In terms of the need for structural change these could be summarized as the modernization of farms, increase in farm business size, improved food quality and safety, improved animal welfare and increased adoption of environmentally friendly farming practices. The evidence shows that all of these needs are being addressed. In terms of the need for social and economic improvement these are additional employment in rural areas, improvement in farm incomes and improvement in the competitiveness of farms. The evidence shows that more employment has been created and incomes will have improved in supported farms. Labour productivity has declined slightly on supported farms but the evaluators have reservations about the use of that indicator in Kosovo and particularly in relation to some labour intensive forms of production.

However, the study's data show that the proportion of structural and socio economic need that has been met is very small. For example, only 1.7% of all commercial farms in Kosovo have been helped to modernise. The estimated improvement in the level of gross output that can be attributed to the ARDP is 1,847,181 Euro. According to the Green report for 2013, the value of agricultural production in 2007 was 594,100,000 Euro so the relative improvement that can be attributed to the program is very small (MAFRD, 2013).

Conclusions

For the main part, the impacts are sustainable, but there would be some reservations about the sustainability of impacts of some investments in the milk and egg production sectors. Overall, the supported investments in milk production are associated with a small improvement in production capacity (size of herd) and milk output. However, the data base showing the survey results for all the supported milk production projects shows that there are several cases where the size of the herd and level of milk output has declined after the supported investment. This has also been the trend at the national level as milk producers find it more and more difficult to make a profit in the face of a fairly steady decline, and also greater volatility, in producer's milk prices. The indications are that this downward pressure on prices is expected to continue. The milk production systems using mul-

tipurpose breeds, fed in fixed stalls and milked with outdated technology, cannot compete in this very aggressive market place. The design of the sub measure should be changed to ensure that support will be focused on systems using breeds that produce high milk yields, whose food intake is related to yield and are milked in a parlour with isolated cooling and storage systems.

Gross output on the sample of supported farms increased by 63% in this period. Gross output does not take production costs into account but the general accounts for Agriculture in the Green Report show that the ratio of gross output to gross value added remained more or less constant over the period. The conclusion is that the target has been met.

This relates to the efficiency with which public resources have been used and is indicated by the unit public expenditure cost of producing impact. It has been possible to calculate this indicator for the main targeted impacts of measures, that is increase in gross output and increase in employment. This value is then compared to the cost of producing the same impacts in previous rural development programmes or other similar development programs. The scope of this analysis should be extended to include an assessment of the efficiency of investments made on different farm business sizes, the value of the investment project and the degree of specialization on the farm.

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