ASSESSMENT OF SECOND PILLAR PROGRAMS AT THE **REGIONAL LEVEL**

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Abstract-

The second pillar of the CAP is expected to play a key role for rural development – especially for less favoured areas. Conservation of biodiversity and the cultural landscape and the competitiveness of farmers are important objectives addressed by different measures. The importance of the second pillar has been heavily emphasised for all the different objectives. The aim of the present paper is to analyse the programs of the second pillar for the federal state of Hesse, Germany. To give an overview of the programs the design of the measures is illustrated in detail. The programs are assessed from a theoretical point of view. Furthermore, the programs are classified into three axes in regard to the main objectives. The findings are threefold. Firstly, the Hessian rural development plan is very diverse in terms of program design, objectives and co-financing. Secondly, the assessment of second pillar programs lacks a detailed analysis considering effects and costs and comparing alternative measures. Thirdly, in Hesse the largest emphasis by financial means is applied to environmental and land management issues, namely the agri-environmental program.

Keywords- Common Agricultural Policy, Second Pillar and Regional Policy Impact

JEL Code: Q18, Q19

Introduction

Over decades EU's Common Agricultural Policy was primarily concerned with market policies. In 1992 the MacSharry reform was agreed and therewith a reduction in prices support for several products was implemented to bring domestic prices closer to the world market. In order to compensate farmers for the reductions in price support, direct payments tied to production were introduced with a set of accompanying measures as agrienvironmental, forestry and early retirement programs. In 1999 with the aim of facing new challenges like the EU enlargement to the east, the budgetary constrains and the upcoming world trade negotiations further reform of the CAP was necessary. The issues were how to include countries with large agricultural sectors – also many social and economic difficulties and how to reorganise the post-MacSharry agricultural policy to make it more appropriate to trade liberalisation and to limit spending at a certain level respectively. This was the background for the CAP reforms in 1999, i.e. the Agenda 2000.

The modifications of the CAP due to the Agenda 2000 included additional cuts in market price support for grain, dairy products and beef to come closer to the market. Furthermore, the Rural Development Regulation 1257/1999 was a significant part of the reform with the ambition to move the CAP more into an integrated policy for rural development and environmental enhancement (Lowe et al. 2002). The measures in the regulation became the second pillar of EU's CAP. The second pillar was established to adjust the CAP in a way to have the capabilities to promote what was seen to be a particular and unique European model of agriculture whose defining feature is its 'multi-functionality'. The concept implies that agriculture produces goods and services further than food commodities (Glebe 2006). Although the CAP had a new orientation the new pillar contained several existing measures and some new ones. Existing measures were those concerning the structural adjustment of the farming sector, support for farming in less favoured areas, remuneration of agrienvironmental activities, support for investments in processing and marketing, and forestry measures. The newly introduced policy measures promoted the adaptation and development of rural areas (Dwyer et al. 2002). To some extent the second pillar can be regarded as a renationalisation of the CAP as member states can choose the instruments to apply. The only binding programs are the agri-environmental measures. The third major part of the Agenda 2000 reform was financial projection of the CAP for the period from 2000 to 2006.

The Fischler reform in 2003 brought mainly changes for the first pillar. Market price support has been further reduced. Farmers receive decoupled income support – the Single Farm Payments – instead of payments tied to production from 2005 onwards, for preserving obligatory cross compliance. Modulation was enacted to shift support from the first to the second pillar in order to fulfil different functions.

The second pillar is expected to play the key role for rural development – especially for less favoured areas. Additionally, it is expected that the second pillar programs justify support to agriculture in a better way than the first pillar programs (Lowe et al. 2002, Glebe 2006).

Conservation of biodiversity and the cultural landscape and the competitiveness of agricultural producers are important objectives addressed by the different measures of the second pillar. The importance of the second pillar has been heavily emphasised for all the different objectives. Hence, the second pillar of the CAP sometimes is regarded as a black box as it covers all the different functions in an appropriate way (Martins and Marques 2006, Dwyer et al. 2002). But, one has to bear in mind that the second pillar still is less important in terms of its budget share relative to total CAP support (Peters 2002).

Given this background, the aim of the following paper is to look at the structure of the second pillar and to analyse the mix of the included instruments in the federal state of Hesse, Germany. The crucial question is whether the measures of the second pillar can address all issues cited above. The paper is organised as follows. In the second part the different programs are examined in order to elaborate the differences in design, structure and funding, i.e. the share of EU co-financing, various forms of co-financing by the EU, national and state funds. The programs are described in detailed way to provide a complete overview of the different program designs, objectives and indicators. In the third section the instruments are assessed from a theoretical point of view in regard to their objectives. Further, the theoretical assessment considers empirical results from former examinations and case studies additionally. In part four the programs are classified into three axes in regard to their main objective to highlight the most relevant instruments for each function. Furthermore, the distribution of support under the rural development regulation in Hesse is examined for all measures for the period from 2000 to 2006. The last section concludes, with a summary of the main findings.

The second pillar in Hesse

The rural development regulation 1257/1999 (1999) gives all member states the opportunity to implement their rural development plans at the most appropriated level. Germany decided to enrol rural development plans at the state level. In Hesse there are seven programs accounting for almost the whole Hessian Rural Development Plan (HRDP) which are studied in this paper. To assess the second pillar this section gives an overview of the program design. The programs are corresponding to: investments in agricultural holdings; support to less favoured areas and areas with environmental restrictions; the agri-environment (two programs regarding environmental policies); the improvement of processing and marketing of agricultural products; forestry; and promote the adaptation and development of rural areas. From table 1 it can be seen that the programs contain up to four measures.

Table 1: Measures of the programs in the Hessian rural development plan (2000-2006)

Programs	Measures						
Investments in agricultural holdings	support to investmentssetting up for young farmers						
	training for farmers						
Support to less favoured areas	support to less favoured areas						
HEKUL	support to organic farming						
	support to extensive grassland use						
HELP	contract nature protection scheme						
Improvement of processing and	improvement of processing and marketing of agricultural						
marketing of agricultural products	products						
Forestry	conservation of forests						
	afforestation scheme						
	support of investments in silviculture						
Promotion of the adaptation and development of rural areas	marketing of regional high quality products						
development of fural areas	rural development						
	modernisation and development of villages						
	development of rural tourism						

Source: Own illustration according to the HRDP (2000).

The investments in agricultural holdings cover support for investments in agricultural holdings, credits to agriculture¹, setting up for young farmers and training for farmers. All investment measures are designed to support single farms individually. In the rural development plan the objective of investment programs is to improve the income, living and working conditions of farmers and their families. Quantifying the objectives there should be support to investments for 200 to 250 farms per year, to support on average 50 young farmers per year and 5,000 to 10,000 participation days of educating farmers per year. The criteria are to reduce income disparities and yearly working time as well as an improvement of qualitative working conditions. Indicators are income per farm and working unit, average yearly working time. This can be summed to improve competitiveness of farms. The investments and credits are EU co-financed by 25 %. 75 % is GAK² and state support. The setting up for young

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¹ Credits to agriculture are an additional support to investments and tied to the investment measure.

² The GAK (Gemeinschaftsaufgabe zur "Verbesserung der Agrarstruktur und des Küstenschutzes" – the common task to improve the structure of agriculture and the protection of coasts) is a fund with is commonly financed by national payments and the Laender.

farmers is EU co-financed by 50 %. 50 % is support from GAK. The training and education programs are 50 % EU co-financed. 50 % is state support.

Support to less favoured areas and areas with environmental restrictions are covered by one measure. The objective is to generate and maintain an agricultural structure which is appropriate to location and preserve farming practices that take account of protecting the environment (HRDP 2000). This objective is quantified in supporting circa 400,000 ha. This is remarkable because it accounts for 52 % of the total farming land in Hesse. The criteria are to maintain farms, the variety of the cultural landscape and to hinder succession in the sector. A further criterion is to support sustainable and resource-saving farm practices. Indicators are the number of farms, income situation, number of animals, the share of land used, the equipment costs and the intensity of livestock breeding. The less-favoured-area payments are 25 % co-financed by the EU and 75 % by GAK and the state.

The agri-environmental programs are separated into two programs. The first is HEKUL – the Hessian cultural landscape program. HEKUL contains two measures one to support organic farming and one to support extensive grassland use. The objectives of HEKUL are the support of farming practices to maintain and improve the sustainability of the environment and the conservation of the habitat. These objectives are quantified in the increase of organic land use from 5.5 % in 2000 to 6 % in 2006 and in stabilising the share of extensively used grass land at the level of 32 %.3 These shares correspond to 45,000 ha arable land and 87,000 ha grass land respectively. The criteria are the conservation of the land resources, an increasing biodiversity by an enhancement of crop rotation and an abdication on chemical use. Further criteria are the maintenance of the cultural landscape in less favoured areas, adequate animal housing and to stabilise farms which take part in the program in economic terms. Indicators are farm practices according to the location in regard to erosion and the number of farms that practise organic farming. Furthermore indicators are the share of land and farms which are extensively farming in disfavoured areas, the number of live stock fretting roughage in the Hessian mountain land, construction and reconstruction according to the Hessian support regulations, the number of working units in extensively farming farms, and the stability of extensively working farms. HEKUL is 50 % EU co-financed and 50 % by the GAK.

The second is HELP – the Hessian program for serving the landscape. HELP is implemented by a contract nature protection scheme. The only objective of HELP is support of land use practices which are environmentally compatible due to measures of environmental protection and serving the landscape. This is quantified in 16 regional concepts for serving the landscape, prioritising certain biotypes and groups (meadow with scattered fruit trees, cane brakes, wetlands, tall forb cultures, extensive pasture on new locations) and contracts on environmental protection (meaning conditional agreements on farming). The HELP area

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³ Two minor instruments of HEKUL are not included in this analysis because they are less relevant. These are the support of 115 ha wine in steep slopes and the preservation of 4 old farm animal breeds.

should increase from 13,000 ha in 1999 to 30,000 ha in 2000. Criteria are the fulfilling of the regional concepts for serving the landscape related to the resources available, the conservation and development of the specific biodiversity, service and development of environmental protection zones, securing of a minimum use of land conditioned on conservation und development of environmental protection zones. Another criterion is the attractiveness of contracts for farmers providing a service to improve ecological quality that is demanded by society. Indicators are the degree of fulfilling the regional concepts, the shares of the prioritised bio types and groups and the share of HELP contracts demanded in areas which are endangered to be not used any more. HELP is 50 % EU co-financed and 50 % by the GAK.

The program for the improvement of processing and marketing of agricultural products is implemented by one measure supporting individual projects. The program has three objectives which are the assurance of value added, jobs and income in rural areas; the guarantee of an adequate local provision with environmental friendly and regional produced products, and the consolidation of regional processing and marketing companies. Projects are supported up to 30 % of the total costs. Due to the HRDP 86 projects should be supported with a total support of 125 million euros in the whole support period. The criteria are the increase of the quantitative grouping of agricultural products as well as the optimisation of the production capacity. Others are the consolidation of the competiveness of food industry companies, the conservation of economic power of food industry companies by rationalisation and cost saving and the stabilisation of jobs in food industry companies in rural areas. Furthermore criteria are stabilisation and improvement of farm income, the increase of the share of certificated companies in regard of quality and environmental management and the conservation of processing and marketing close to agriculture and market with short transports conserving freshness and quality and support environmental and animal protection. Indicators are the number of production facilities, the utilisation of production capacity on value and number basis. Further are the returns, market shares and number of jobs in food industry companies and the number of certified companies in the food industry. Other indicators are the routes of transport to the market and the income of agricultural producers. The improvement of processing and marketing of agricultural products is 66.66 % EU cofinanced, 33.33 % is financed by the GAK.

The forestry program contains three measures. It has is objective to conserve the forest stand, to support the future forest composition, to improve the income opportunities in rural areas and support the rural infrastructure. These objectives are quantified in conserving a forest area of 889,000 hectares, the increase of forest by 250 hectare per year, on 3,000 hectares should be done arrangements improving the structure to stabilise forest composition. Further objectives are the support of silviculture in accordance with the location in respect to environmental protection concepts and a growing number of forest enterprises, to preserve job opportunities and improve incomes, strengthen part-time farms in silviculture. Moreover the development of marketing structures and the conservation of the road and path

network (rural infrastructure) are objectives of the forestry program: The criteria are the conservation of the share of forests to total land, the conservation of the cultural landscape, the stabilisation and revitalisation of forest ecosystems. Further criteria are the creation and integration of habitat protection concepts in silviculture, the increase of yields from forestry, to take pressure off the markets by reforestation on agricultural land, the stabilisation of job opportunities in rural areas. The indicators in the HRDP are the balance of forest areas, the area of afforestation in hectare, the number of supported companies, the share of supported area to total farm size or forest area and the supported area for liming to protect the soil. Further are the number of companies, the number of developed habitat concepts and supported measures, the development of afforestation on arable land in hectare per year, the number of supported part time farmers, the development of conserved and improved road and path network in meters per year and the number of new marketing facilities. The forestry program is 50 % EU co-financed and 50 % is financed by the state.

The program to promote the adaptation and the development of rural areas covers four measures: The marketing of regional agricultural high quality products, rural development, modernisation and development of villages and the development of rural tourism. The objectives are to promote marketing of regional agricultural high quality products, the improvement of the rural life quality in Hesse by new services, the provision of regional markets by small farms with regional products and services. Further are the conservation and enhancements of the economic, social and cultural function of villages as living space of the rural population and the improvement of public and private infrastructure for rural tourism. These objectives are quantified in supporting 10 to 20 projects for regional marketing for high quality products per year, creating 50 facilities with an equivalent of 70 full time jobs for rural service, modernising and developing 40 villages and increasing the number of overnight stays by 5 %. The criteria are the improvement of high quality supply, strengthening of demand by creating marketing structures, the improvement of the cooperation of farmers, processors and marketers, the stabilisation of the jobs in agricultural and following area and to professionalise direct marketers. Another is the reduction of supply deficits in rural services due to increase of existing businesses or the foundation of new services. Further criteria are the stabilisation of historical village centres, the endowment with utility and common services, and the development of overnight stays. The indicators to the objectives are bounded groups of ecological or regional produced agriculture goods, the increase of farmers in producer co-operations, the number of jobs, the number of service facilities and number of new jobs. Others are the number of unused and modernised buildings, the degree of satisfaction and the increase of accommodation facilities. The program is 50 % GAK cofinanced and 50 % financed by the state and the communities respectively. The instruments summed under the seven programs account for nearly 85 % of transfers which are due to second pillar measures in Hesse. The majority of the programs have a bundle of objectives, criterions and indicators.

Assessment – theoretical considerations and findings from the literature

The following section has the aim to assess the Hessian programs theoretically and considers findings from the literature. The investment support for single farms improves competitiveness, income, working and production conditions as it provides financial resources and generates incentives for investments because of cost reduction for the single farm (Martin and Marques 2006). Therewith farms are conserved and especially small farms have the opportunity to grow or diversify. A case study in Baden-Württemberg found that the support of investment had very strong effect on income and conservation of farms (BMELV 2007). For young farmers the program is important as it reduces the individual investment cost significantly – maximum is a support of 40 % of the total investment tied to certain criterions. The support of training has positive effects as it generates incentives for farmers to join training courses to enrich their knowledge in production techniques and to realise ecological and environmental regulation properly. A major point of critique on this program is that also farms are supported which would have invested anyway - they just take the transfers. However, farms which make their investment decisions dependent on support are considered to be less dynamic structurally and economically. Therefore part of the improvements of the supported farms comes at costs of competitiveness of the economic stabile farms. In most cases the investment leads to an increase in production capacities with an increase in productivity (FAL 2005). Farm income increases only in one of three farms which were investing which is in contrast to expectations (FAL 2005). However, the effectiveness of the program depends on which farms are supported and its relative performance to alternative support programs.

Support to less favoured areas and areas with environmental restrictions reduces succession and conserves the landscape in Hesse. The aim of compensating farms for farming in less favoured areas is fulfilled. But the net effect of the program is hard to capture as in some regions farm land still declines. The resource saving farming practise in most of the less favoured areas not only contributes an important part to conserve the attractive landscape. It is further associated with environmentally friendly farming (Martins and Marques 2006). This program has strong linkages to the agri-environmental programs in Hesse as their objectives are very similar (HRDP 2000).⁴ The support of less favoured areas also has to be seen in regard to the issue of farm with its negative social and environmental consequences (Glebe 2006).

The HEKUL program comprises the main measures of organic farming and extensive farming on grassland. The support of organic farming generates incentives to changes farming practises, which is due to the objective of increasing the area of organic farming. Schmid and Sinabell (2007) find exactly this result in their study for Austria. A critique of this argument is that the relevant references are support but also the world market prices for grains, i.e. the market or demand has a large impact on effectiveness of the measure. The HEKUL program

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⁴ Also have a look at section two of this paper.

also has the aim of conserving the farming in less favoured areas, improving the valued added in the Hessian low mountain ranges and the protection of soil and biodiversity. All this objectives are addressed with the support for organic farming as it reduces the use of fertilisers and chemicals (FAL 2005). The objectives are addressed but the effectiveness of the measure remains unclear. The support for extensive grassland farming goes in the same direction (Dobbs and Pretty 2008). This measure creates incentives for maintaining farming in less favoured areas especially at locations with a high share of grassland which is most often devoted to livestock farming. Therefore the measure increases the attractiveness of grass land especially in hilly regions. Both are seen as support compensating farmers for applying certain resource saving farm practices that are associated with the conservation of the cultural landscape which is seen as an environmental good demanded by society (Madureira et al. 2007, Martins and Marques 2006). The quantitative objectives of 45,000 ha organic and 87,000 ha extensive grassland use are achieved (FAL 2005). But, it has to be noted that for a detailed analysis costs and benefits as well as a comparison to alternative measures is needed.

The HELP program also conserves the landscape as it supports farming practices that are resource saving on permanent grass land. It generates economic incentives to farm less productive grassland and therewith improves biodiversity. The measure also applies for the Hessian meadows with scattered fruit trees which are regarded to serve several important tasks. Hence, support from HELP is conserving the landscape, the biodiversity and generates some value added in rural areas with the application of work intensive practises (Dobbs and Pretty 2008, Kampmann et al. 2008). For this reason HELP contributes to several objective of the HRDP. The support is considered as some kind of compensation for providing a certain service to society (Glebe 2006). The contract nature protection scheme covers more than 32,000 ha which fulfils the quantity claimed by the plan. The overall impact of the agrienvironmental measures on landscape and farm structure is conserving (Martins and Marques 2006, Baylis et al. 2008). However, the welfare implications of the measure are not analysed so far.

The program to improve processing and marketing of agricultural products strengthens the rural economic power as it creates some new jobs and regional marketing structures. This is done by rationalisation, product innovations and qualitative differentiation which conserve competitiveness for rural companies because of diversification, the price premium of product with higher quality and or regional labels. The increase in competiveness conserves jobs in rural areas or creates even new jobs (FAL 2005). Further the income of local processers and producers is increased by the program which also contributes to assure rural jobs and may create some new. The assessment of the program has to be done at the project level to identify the effects appropriately. Especially the diversification of farms can have a significant impact on rural jobs and farm incomes and there are regions which very successfully applied this program and where the jobs (full time equivalents) increased from 2.46 to 3.0 per farm (BMELV 2007).

The forestry program preserves the cultural landscape as it creates incentives to maintain the forest area and increase it with the afforestation support. The program increases the supply of timber and supports rural marketing. The investment measure accelerates structural change in silviculture only little (FAL 2005). Therefore, structural change affects income possibilities, production, working and overturn conditions in silviculture and conserves the rural job opportunities much less than expected by the HRDP. The assistance for founding of co-operations enables the Hessian small scaled silviculture to adapt to global trends with large scaled producers and processors. Co-operations can bundle supply and adapt modern technique and a more efficient organisation. This results in an improvement of production, working and marketing conditions. Certainly, the impact of the measures is smaller than expected because rationalisation does decrease the number of jobs in short run (FAL 2005). In the longer run a more effective silviculture may create some new jobs because of higher yields and the opening of areas unused so far. For an assessment of the measures alternatives have to be considered as well as the welfare effects.

The program to promote the adaptation and the development of rural areas includes four single measures. The marketing instrument for regional agricultural high quality products is very similar to assess as the program for the promotion of processing and marketing of agricultural products except that this is for high quality. This conserves rural jobs and some economic power in rural areas. However, it is hard to quantify in number of jobs an income (FAL 2005) The instrument for rural development is very important as it pushes the communication facilities in rural areas. Broad band internet is often seen as an important and basic tool for modern communication in rural areas to attract and maintain companies and businesses. The instrument for modernising and developing rural villages also contributes to the conservation of rural job opportunities and some economic power (FAL 2005). The conservation of historic sites and the basic historic structure of buildings in rural areas have to be seen as complementary to rural tourism as it generates strong synergy effects. The instrument for developing rural tourism generates positive effects for rural jobs, income and economic power. Together with the modernisation of villages this can create strong effects on accommodations and has high potential for further development (FAL 2005). But, for this program to assess the measures in an economic way effects and costs has to be compared.

Assessing the second pillar programs from a theoretical point of view on the one side the programs fulfil their objectives to very high degree. The objectives are addressed very directly and therewith adequate in most cases. On the other side the second pillar as whole is complex and contains a bunch of different measures. There are numerous different objectives within the second pillar which are even going in opposite directions (Dwyer et al. 2002): The improvement of competitiveness of farms and food industry companies with investment in cost saving technology and the conservation of the landscape and farms in small scaled regions are just one example here. For this reason the individual programs in the second pillar of EU's CAP have to be assessed individually. However, the effects or fulfilled objectives

have to be analysed in regard to the costs and alternatives has to be considered. From an empirically point of view the assessment is much more complicated. Firstly, a lot of the measures address individual farms or projects. For evaluating these measures detailed data for the farms or projects are needed. Secondly, as the Hessian regions are not very equal in structure the assessment shows some average results for measures that address areas. Thirdly, in both cases it is difficult to observe the treatment effect of programs which are allocating transfers to nearly all regions. There are several overlaying effects going on in rural areas. The number of jobs is decreasing despite the program for the improvement of processing and marketing of agricultural products. That does not mean the program does not create jobs, income and economic power. It may be that the overall structural change is much stronger. In that case without the programs the decrease in the number of jobs, income and economic power would have been even stronger. For an exact assessment of the second pillar detail data of support is needed, effects have to be compared to costs and alternatives have to be included in the analysis.

Classification of second pillar programs

The former chapters had a look at the design and the theoretical impact of the different programs in the second pillar. There are opposing objectives and instruments within the different programs. The aim of this section is to classify the main objectives of the second pillar into three axes and sort the programs to the different axis and give an overview how support is distributed between the axes and measures. According to the rural development regulation (EC 1999) the objective of the pillar is to contribute to the achievement of the objectives laid down in Article 33 of the Treaty. According to Article 2 of the regulation the measures shall give support for rural development, be related to farming and their conversion. These objectives have a similar characteristic – opposing objectives – as the European CAP in the Treaty of Rome. Not only the objectives itself go in opposite directions (farm competitiveness and conservation of the cultural landscape), also the individual addressed are not similar, some address farmers, some jobs, others address areas or parts of the rural areas and further address whole regions with all individuals. To simplify this in the following the programs of the HRDP are separated into three groups that belong to three main categories of the plan. These categories are competitiveness of farms; environmental and land

⁵ More specific the objectives are the improvement of structures in agricultural holdings and structures for the processing and marketing of agricultural products; the conversion and reorientation of agricultural production of new technologies and the improvement of product quality; the encouragement of non food production; sustainable forest development; the diversification of activities with the aim of complementary or alternative activities; the maintenance and reinforcement of viable social fabric in rural areas; the development of economic activities and the maintenance and creation of employment with the aim of ensuring a better exploitation of existing inherent potential; the improvement of working and living conditions; the maintenance and promotion of low-input farming systems; the preservation and promotion of a high nature value and a sustainable agriculture respecting environmental requirements; and the removal of inequalities and the provision of equal opportunities for men and women, in particular by supporting projects initiated and implemented by women.

management; and life quality in rural areas. Figure 1 gives an overview how the whole programs or individual measures are assigned to the axes.

Figure 1: Three axes of the Hessian rural development plan

Hessian rural development plan (2000-2006) axis I axis II axis III competitiveness environmental and life quality land management • support of investments, • support to less favoured • improvement of • credits to agriculture, areas. processing and • setting up for young • organic farming, marketing for agricultural products, farmers, • extensive grassland use, • improvement of · contract nature marketing of regional protection scheme, processing and agricultural high quality marketing for • conservation of forests, products agricultural products, • afforestation scheme rural development • support of investments • modernisation and in silviculture, development of villages • marketing of regional • development of rural agricultural high quality tourism products

Source: Own illustration according to the EC regulation no. 817/2004 (2004).

Axis one includes all the programs for investments in agricultural holdings, the program for the improvement of processing and marketing of agricultural products, the investment measure of the forestry program and to some extent the program to promote the adaptation and development of rural areas – namely the instrument to improve the marketing of regional high quality products. The second axis covers the program to support less favoured areas and areas with environmental restrictions and the measures of the both agri-environmental programs (HEKUL and HELP). Furthermore, two of the forestry measures are concerning the land management the conservation of forests and the afforestation scheme. The third axis includes to some extent the program for the improvement of processing and marketing of agricultural products and all the measures of the program to promote the adaptation and the development of rural areas. Moreover, the measures assigned to the second axis exert influence on the life quality in rural areas in an indirect way (Baylis et al. 2008). These axes still have opposing objectives and will affect regions in a very different way. But, the axes give an overview how the rural development measures can be classified to pool their objectives and effects to a basic aspect

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⁶ The three agri-environmental measures are primarily concerned with the conservation of the cultural landscape and the compensation of farmers farming in the program areas but the cultural landscape also contributes to the life quality in these regions. Both of the forestry measures assigned to axis two exert influence on the landscape.

According to the HRDP (2000) the period from 2000 to 2006 had a budget of about 638 million euros. The sum of EU co-financing was planned with about 279 million euros. The budget was not allocated equally over the years. From 2000 (75 m euros) the budget increased substantial to 2001 (89 m euros). For the following years until 2006 the budget increased slowly and continuously to 99 m euros. Due to limitations in the GAK budget and the Hessian state budget the support paid in the first years undershoot the agreed budget of the HRDP. EU funds that are not called go back to the EU budget. For this reason the German states and Federal Ministry of Consumer Protection, Nutrition and Agriculture (BMVEL) introduced the Federal Table between the Laender. The Federal Table regulated the use of the EU funds for rural development making funds of a program not called by one state available for other states which demand more funds for this program as there were agreed in their development plans (FAL 2005). The Federal Table is a tool to keep EU funds for rural development in the area of rural support, more precisely close to the program and objectives.

Table 2: Sum of support from the Hessian rural development plan (2000-2006)

	2000	2001	2002	2003	2004	2005	2006	sum		
sum of support (in million euros)										
HRDP planned	74.60	89.12	91.13	92.38	94.77	97.26	98.92	638.18		
Federal Table	62.02	69.51	70.47	82.22	84.57	80.42	81.90	531.12		
HRDP payments	52.53	69.31	70.37	82.19	84.57	105.84	96.46	561.27		
sum of EU co-financing (in million euros)										
HRDP planned	37.30	38.12	38.98	39.70	40.60	41.60	42.50	278.80		
Federal Table	31.07	27.61	32.74	41.33	42.25	41.08	41.75	257.84		
HRDP payments	25.95	27.51	32.69	41.32	42.25	50.04	45.61	265.38		

Source: Own calculation with data from FAL (2005) and the Hessian Ministry of Agriculture.

They were planned for. As indicated by table 2 Hesse is a good example for the usefulness of the Federal Table. From 2000 to 2002 Hesse did not call all the funds available for rural development. For 2003 and 2004 all funds were used and some money from other states was demanded. The sum of EU co-financing lay between the planned and the sum calculated by the federal table. The largest share of the HRDP is devoted to axis two – the environmental and land management – which account for 278 million euros (43.63 % of total support) and 41.23 % of the total EU co-financing. Axis one – the competitiveness of farms – receives 142 million euros (22.32 % of total support) but the sum of co-financing is rather small with 56 million euros. Hence, axis one accounts only for 19.93 % of the total EU co-financing. Axis

three – the life quality of rural areas – receives 120 million euros (18.83 %). This axis is cofinanced with 60.09 million euros (21.55 % of total EU co-financing). A remarkable fact is that axis three has co-financing share of 50 % which is much higher than in axes one and two.

Table 3: Distribution of total support to the axes and the different programs (2000-2006)

	Hessian Rural Development Plan planned						
	support (in m €)	%	EU co-f. (in m €)	%			
axis 1	142.46	22.32	55.57	19.93			
Investments in agricultural holdings A)	97.88	15.34	27.73	9.95			
Marketing for agricultural products	33.33	5.22	22.22	7.98			
Marketing for high quality products	11.25	1.76	5.62	2.02			
axis 2	278.45	43.63	114.95	41.23			
Less favoured areas	115.05	18.03	33.25	11.93			
Agri-environment A)	137.86	21.60	68.93	24.72			
Forestry A)	25.54	4.00	12.77	4.58			
axis 3	120.17	18.83	60.09	21.55			
Rural development	30.26	4.74	15.13	5.43			
Modernisation/develop. of villages	73.86	11.57	36.93	13.25			
Rural tourism	16.05	2.52	8.03	2.88			
others	97.10	15.21	48.19	17.28			
sum	638.18	100.00	278.80	100.00			

Source: Own calculation with data from FAL (2005) and the Hessian Ministry of Agriculture. A) For some programs there are no data how funds were allocated between the measures.

A look at table 3 shows that the agri-environmental programs and program to promote the adaptation and development of rural areas are the most important programs in terms of financial resources.⁷ The latter program accounts for the whole third axis and the instrument to support marketing for high quality products thus about 131 million euros. The former includes HEKUL and HELP which account for 138 million euros. Following the financial

⁷ Lowe et al. (2002) found that in France and the UK the agri-environmental programs receive the largest share of the rural development plans. However the programs to promote the adaptation and development of rural areas are less important in France (0.2 %) while it receives 9.5 in the UK.

weighing the least important programs are the forestry program and the program for the improvement of processing and marketing they receive 26 million euros and 33 million euros respectively.

Conclusion

In this paper it is shown that the Hessian rural development plan is very diverse in terms of program design, objectives and co-financing. According to EC regulation 1257/1999 on support for rural development the HRDP covers several different objectives in an accurate way. The assessment lacks a comparison of effects and costs and alternative measures. The three axes of the plan are the competitiveness of farms, the environmental and land management and the life quality of rural areas. The agri-environmental programs and the program for promoting the adaptation and development of rural areas are the most important for the Hessian rural development plan. Besides, it is analysed that in Hesse the largest emphasis by financial means is applied to environmental and land management issues.

The programs in the HRDP have a bulk of objectives, criterions and indicators to define the objectives more accurately. In addition the program design is directed to different aims like individual farms, villages, projects and area in Hesse. The share of EU co-financing varies from 67 % to 25 %.8 The seven most relevant programs are the support program for investments in agricultural holdings, the program to support less favoured areas and areas with environmental restrictions, the two agri-environmental programs (HEKUL and HELP), the program for the improvement of processing and marketing of agricultural products, the forestry program and the program to promote the adaptation and development of rural areas. On the one side the measures address the objectives adequate. Hence, from a theoretical point of view most measures fulfil the according objectives. However, to assess the programs detailed analysis of the effects of single measures has to be compared with costs. Further, alternative programs have to be found, i.e. analysing measures with similar objectives to identify the most effective. Therefore the present assessment is based on theoretically considerations and findings from some case studies. The distribution of support indicates a clear hierarchy in the axes as well as in the programs. Axes two – the environmental and land management – receives more than 43 % of the total support of the second pillar in Hesse. At the program level the agri-environmental programs and the program to promote the adaptation and development of rural areas receive the largest shares of support while the forestry program and the program for the improvement of processing and marketing receives the lowest.

The paper shows that there are numerous objectives addressed by the programs of the second pillar. Several measures are analysed in case studies or regional surveys. However,

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⁸ It has to be remarked that for some projects or investment cases support from EU funds can be zero.

there is a lack of empirical studies comparing effects and costs and calculate for the interaction of the different programs. Further research may address this issue.

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