

EUROPEAN
EVALUATION
HELPDESK
FOR RURAL DEVELOPMENT



REPORT

ASSESSING THE CONTRIBUTION OF RDPs TO A COMPETITIVE AND VIABLE AGRICULTURAL SECTOR

GOOD PRACTICE WORKSHOP
ONLINE, 09-10 DECEMBER 2020

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The Evaluation Helpdesk is responsible for the evaluation function within the European Network for Rural Development (ENRD) by providing guidance on the evaluation of RDPs and policies falling under the remit and guidance of DG AGRI's Unit C.4 'Monitoring and Evaluation' of the European Commission (EC). In order to improve the evaluation of EU rural development policy the Evaluation Helpdesk supports all evaluation stakeholders, in particular DG AGRI, national authorities, RDP managing authorities and evaluators, through the development and dissemination of appropriate methodologies and tools; the collection and exchange of good practices; capacity building, and communicating with network members on evaluation related topics.

Additional information about the activities of European Evaluation Helpdesk for Rural Development is available on the Internet through the Europa server (<http://enrd.ec.europa.eu>).

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LIST OF ACRONYMS

AIR	Annual Implementation Report
ATE	Average Treatment Effect
ATNT	Average Treatment effect on Non-Treated
ATT	Average Treatment effect on Treated
CAP	Common Agricultural Policy
CATI	Computer-Assisted Telephone Interviewing
CEQ	Common Evaluation Question
CMEF	Common Monitoring and Evaluation Framework
CGE	Computable General Equilibrium
DG AGRI	Directorate General Agriculture and Rural Development
DiD	Difference in Differences
EC	European Commission
ENRD	European Network for Rural Development
EU	European Union
FA	Focus Area
FADN	Farm Accountancy Data Network
FAO	Food and Agriculture Organisation of the United Nations
GPW	Good Practice Workshop
IACS	Integrated Administration and Control System
JC	Judgement Criteria
JRC	Joint Research Centre
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale (original acronym)
MA	Managing Authority
NUTS	Nomenclature of Territorial Units for Statistics
PA	Paying Agency
PAGE	Pisa Agricultural Economics
PSM	Propensity Score Matching
RDP	Rural Development Programme
SABI	Analysis System of Iberian Balances (Sistema de Análisis de Balances Ibéricos)
SH-DiD	Spatial Hierarchical Difference in Differences
SNA	Social Network Analysis
SAFA	Sustainability Assessment of Food and Agriculture systems

EXECUTIVE SUMMARY

The 15th Good Practice Workshop of the Evaluation Helpdesk on 'Assessing the contribution of RDPs to a competitive and viable agricultural sector', took place online on 9-10 December 2020. It brought together 80 participants from 25 Member States, including RDP Managing Authorities (MAs), evaluators, European Commission representatives, researchers, National Rural Networks, and other evaluation stakeholders. The overall objective of the workshop was to share and reflect on experiences in relation to assessing the contribution of RDPs to a competitive and viable agricultural sector within a properly functioning food supply chain and the EU capacity for crisis management.

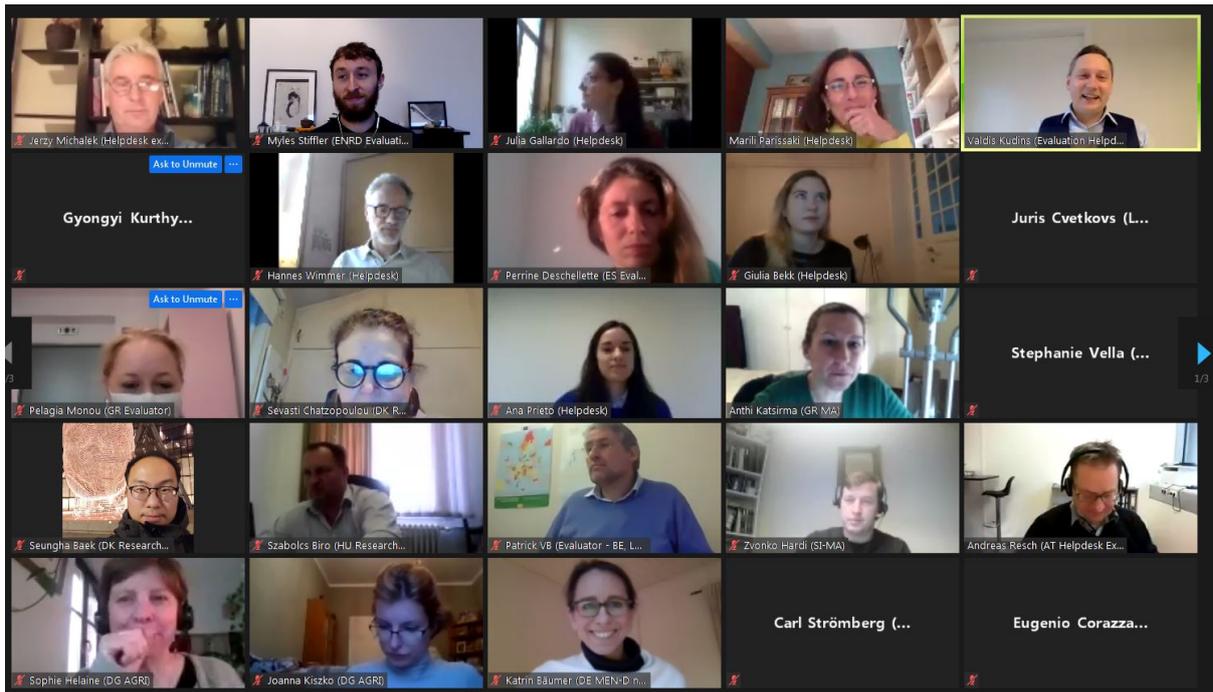
The first day of the workshop focused on specific Member State experiences from assessing the effects of RDPs on competitiveness, with two case studies from Hungary, one on the calculation of Priority 2 effects and another on Priority 3 effects on food processing and the involvement of producers in the food chain. A third case study from Spain gathered lessons from the evaluation of the previous programming period looking specifically at the competitiveness of the agri-food sector, including the agri-food chain and its quality. The second day of the workshop opened up the perspective, by looking at holistic approaches used in Italy to analyse the competitiveness and environmental impacts along the food supply chain as well as the results of research studies from the University of Pisa on the assessment of competitiveness and sustainability of rural areas through the non-farming sector. Expert input from the Evaluation Helpdesk on the estimation of RDP effects on the agri-food sector complemented the case studies and guided the group discussions throughout the workshop. The workshop culminated in a number of overarching lessons for MAs and evaluation stakeholders:

The Golden Triangle

- The experiences shared highlight the importance of **additional evaluation elements** for the assessment of competitiveness, looking inter alia into the participation of producers in the food chain, increased quality, higher level of processing and value added, and successful integration of beneficiaries into the food chain. The assessment of the actual effects of the RDP on supported beneficiaries (through counterfactual assessment) using these evaluation elements, is an important driver for future policy decisions, since what matters is to be able to determine whether the mix of interventions and their delivery model can improve competitiveness and to what extent, along the food chain.
- The use of **quantitative methods** to perform a counterfactual assessment of the actual effects of the RDP on supported beneficiaries of measures related to competitiveness needs to make the best use of available data sources. These include inter alia FADN for the basic characteristics of supported farms, especially for small farms, farm-bookkeeping data for larger samples of micro data, regional databases (e.g. for agri-food companies) and beneficiary surveys, the latter most relevant for obtaining data for beneficiaries and non-beneficiaries along the food supply chain (production, processing, distribution, consumption).
- **Triangulating** the outcomes of such quantitative approaches with expert assessments, surveys and stakeholder inputs adds value by analysing causality and interpreting the quantitative findings. This is particularly relevant for the assessment of competitiveness which covers both the farming and non-farming sectors and is characterised by multiple internal and external linkages in a multi-step value chain. Broader or holistic approaches that take into account the complexity of farming and non-farming systems are therefore relevant in order to provide context to the numbers calculated.

Adapting to new realities

- There is a need to potentially complement the existing evaluation elements with revised or additional elements due to the changing context.
- Economic, environmental or health related contextual changes (like the current COVID-19 crisis) will have implications on the intervention logic of programmes, including the mix and focus of measures and their delivery. Future evaluations of competitiveness cannot ignore the important effects on the food chain from external shocks like the current health crisis.



1 SETTING THE FRAME

1.1 Introduction

RDPs interventions play an important role in contributing to improve the competitiveness of agriculture, one of the key CAP objectives. RDPs may affect the competitiveness of the agricultural sector through supporting operations with primary contributions to Priority 1 (Knowledge transfer and innovation), Priority 2 (Farm Viability and competitiveness) and Priority 3 (Promoting food chain organisation). There may also be secondary contributions from the remaining priorities.

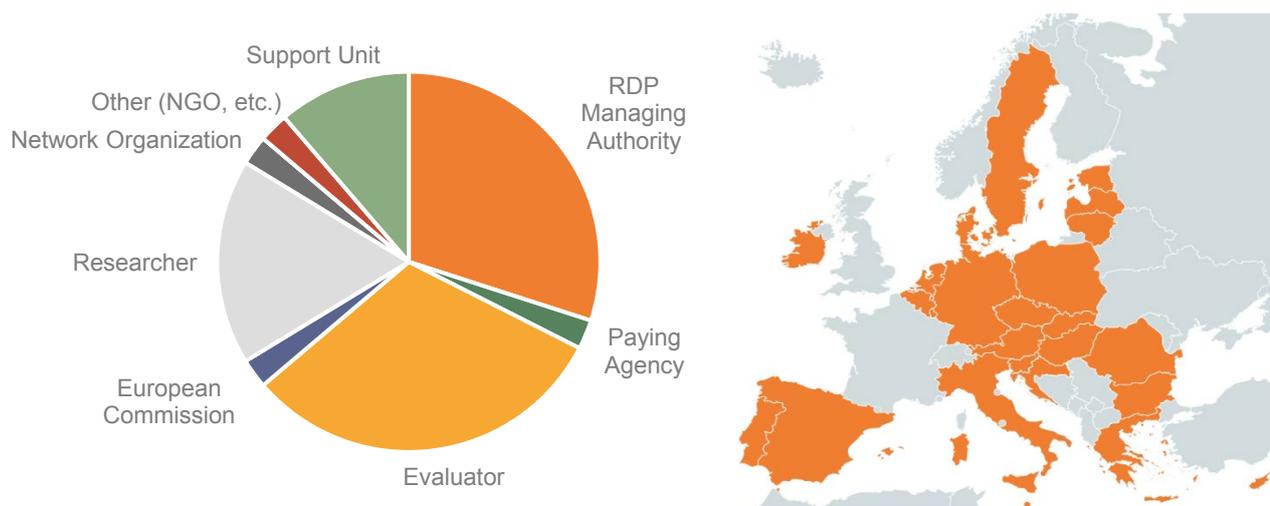
According to the Synthesis of Annual Implementation Reports (AIRs) submitted in 2019, the assessment of Priority 2 'Farm viability and competitiveness' has been addressed by answering all the related common evaluation questions (CEQs). At least 90% of the RDPs reported achievements in relation to the economic performance of farms, modernisation and restructuring and the entrance of adequately skilled farmers in the agricultural sector. In the case of Priority 3 'Promoting food chain organisation' however, not all RDPs which programmed this Priority answered the respective focus area-related CEQs and out of those, a smaller share reported achievements (89% reported achievements for FA 3A and only 68% for FA 3B). The achievements reported under Priority 3 covered inter alia: competitiveness of primary producers by better integration in the food supply chain; introduction of quality schemes; quality of food production; promotion of local markers and short supply chains; and participation of farms in risk prevention and management schemes. Difficulties with assessing achievements included the low quality of data provided through monitoring systems and the insufficient information offered by the common indicators to answer the CEQs.

Furthermore, the contribution of RDPs to competitiveness and thus to the economic objective of the CAP, is influenced by external factors, such as the financial crisis of 2008 whose effects are still evident in some countries or the most recent health crisis due to Covid-19 and its socio-economic and health consequences. Such crises have a significant impact along the food supply chain, from primary production through to food processing, marketing and food retail and services.

In this context, the Good Practice Workshop (GPW) No 15 had the overall objective to reflect on experiences in relation to assessing the contribution of RDPs to a competitive and viable agricultural sector within a properly functioning food supply chain and EU capacity for crisis management. The specific objectives were to exchange practices on the methods and challenges for assessing competitiveness along the food supply chain, taking into account all available evidence; to discuss specific issues identified that may affect the evaluation of competitiveness along the food supply chain in the ex post and beyond and identifying potential approaches/solutions to them; and to identify needs for further support for Managing Authorities and evaluators in relation to the above issues for preparing the ex post evaluations and building knowledge for future CAP evaluations.

80 participants from 25 different EU Member States attended the online event, including RDP Managing Authorities, evaluators, European Commission representatives (e.g., European Commission, ENRD Evaluation Helpdesk), researchers, National Rural Networks, and other evaluation stakeholders.

Figure 1. Participants of the Good Practice Workshop per role and Member State



1.2 Policy and evaluation framework

Ms Sophie Helaine (DG AGRI Unit C.4 Monitoring and Evaluation, Head of Unit) highlighted the importance of the CAP economic objective. Farm to Fork strategy ambition can be only realised if we have viable agricultural sector and the Commission is committed to strengthen the position of farmers in the food supply chain. Sectoral programmes are powerful instruments for F&V, wine and apiculture that can be an inspiration for other sectors in the new CAP. When it comes to evaluating the contribution of the RDPs to a competitive and viable agricultural sector, the availability of data becomes a critical issue, especially when looking at the non-farming sector. Application forms play a crucial role in obtaining valuable data for evaluation, thus the importance to clarify now data needs so that MSs can timely adapt application forms. Also, developments of FADN to include in the future producer organisation variables are undertaken to improve the data universe. In any case, the actual value of the performance assessment of the CAP is not achieved through result indicators alone, but through the whole exercise of evaluation. The importance of evaluation was stressed by the Commission, and in case of the lack of quantitative data also qualitative assessments should be undertaken to obtain the lessons for the future of the policy. To conclude, Ms Helaine mentioned several studies¹ that can bring inspiration on different methodological approaches.

¹ List of studies:

- Pilot project from the JRC on [Best ways for producer organisations to be formed, carry out their activities and be supported \(pilot project\)](#)
- [Pilot](#) (on-going) EP project: [Establishing an operational programme for the agricultural sectors: structuring the agri-food sectors to safeguard the handing-on of family farms and the sustainability of local agriculture \(to be completed in 2023\)](#)
- Regarding quality schemes, a study called [Economic value of EU quality schemes, geographical indications \(GIs\) and traditional specialties guaranteed \(TSGs\)](#)
- [Improving crisis prevention and management criteria and strategies in the agricultural sector](#)
- A study from the JRC on the importance of quality schemes on local development will be available in 2021
- [Monitoring of Prices and margins in EU Food Supply Chains](#) – JRC Technical reports
- [The impact of producer organisations on farm performance: A case study of large farms in Slovakia](#) – JRC Technical reports

After the intervention, participants made the following remarks:



It is indeed essential to highlight the importance of evaluation; this was not as evident in the first discussions about the CAP post-2020, based on performance, but now it is more and more clear.

Ms Sophie Helaine explained that more elements linked to evaluation will appear in the implementing acts, whereas monitoring issues are already present in the basic acts. In this sense, data requests for evaluation are beyond what is requested for monitoring in Annex I of the basic act, especially in this case, data on the food chain and sectoral interventions. This work is starting now, the implementing act will be ready in 2021.

2 SHARING EXPERIENCES

2.1 Day 1 - Assessment of RDP effects on better integration of producers in local markets and the food chain

2.1.1 Experiences from Hungary: RDP assessment approaches focusing on the agri-food sector

Mr Szabolcs Biro (Research Institute of Agricultural Economics, Researcher - HU) presented 'Methods for the calculation of Priority 2 effects of RDPs 2014-2020', dealing with the assessment of Focus Area 2A by answering CEQ 4 using the common indicators and applying quasi-experimental evaluation methods, also including a reflection on data availability issues.



Ms Gyöngyi Kürthy (Research Institute of Agricultural Economics, Researcher - HU) presented the 'Effects of developing food processing on the involvement of producers in the food chain' (focusing on Priority 3). The case study is part of a series of ongoing evaluations and a request from the Hungarian Managing Authority to have a more in-depth analysis on the above-mentioned effects. Additional evaluation questions, judgment criteria and indicators have been developed in order to perform the evaluation, since the current common evaluation elements to assess the competitiveness of the agri-food sector are limited. The additional evaluation elements look inter alia into the competitiveness of Hungarian food products, the participation of producers in the food chain, increased quality, higher level of processing and value added, and successful integration of beneficiaries into the food chain. Beneficiaries of the related measures are enterprises which are out of the traditional scope of the farming sector. Data sources go beyond the FADN database to include data from surveys and from the National Tax Office. The Hungarian case hence works with different data sources and different evaluation approaches to answer the evaluation questions.



After the presentation, participants asked the following questions to Ms Kürthy:



Do you have to propose indicators for the database to put in the application forms? Are there already some results available regarding productivity, profitability, and competitiveness?

Applicants should give information on sales and profit before tax, capital, number of employees, as these figures are easy to obtain. This data should be provided in the year of the application for support, as well as in the end of the investment, so that a comparison can be made. Unfortunately, the necessary data is not yet available. Only 20% of the subsidies have been paid. We will be able to perform the assessment only 2-3 years after the development process. Furthermore, the current programme was targeted to small and micro-enterprises. Their share amongst the whole agri-food sector remains small, hence the effects in the whole sector will be limited.

What are the points in time when the beneficiaries have to fill in data in the operations database? The issue of missing data in the operations database is a highly relevant yet never-ending issue.

During the application, beneficiaries need to fill out lots of data sheets, meaning that this should already be a fixed point. After this, it would be optimal if beneficiaries fill in the data at the end of the project and sometime after the end of the project. Paying Agency experts would better answer this question.



Is the data from the non-beneficiaries collected solely from the questionnaire? How often will the questionnaire be conducted?

Data is also collected from additional sources (e.g., National Tax Office). It is possible to compare the beneficiaries and non-beneficiaries. This applies only to the larger agri-food companies, as these are obliged to provide data to bookkeeping. Family farms and small farms are not in this database.

The questionnaire is not sent yet, it is planned to be sent to beneficiaries and to potential beneficiaries. The intention is to send it only once.

As an indicator, 'export ratio' was used. To what extent is there qualitative data regarding this issue? e.g., type and size of businesses that increased exports, factors that enabled the increase in exports, the link with the primary sector and the processing sector. This qualitative analysis will be very useful to provide lessons learnt.



It is very difficult to measure competitiveness. The situation of food processing in Hungary was subject to research. One of the main results was that those food processing companies that have higher exports are also more competitive. For this reason, the export ratio and competitiveness were linked in the analysis, as the export ratio is an easy indicator. This is dependent on the context: in Hungary, increasing exports means that the price will also increase because the level of Hungarian prices is very low. Even if the added value does not increase, the final price will increase. In general, if foreign markets are reached, this often entails better quality and more added value products, as this is the demand of consumers in, for instance, western countries. This situation is probably not the same in other Member States.

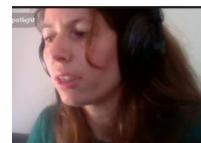


Why was it not possible to identify control groups on the basis of the data received from the tax office? In principle, it should be possible to apply quantitative methods with this quantitative data that would enable to separate two groups and have more details on what the comparable groups are.

The problem is that this quantitative information from the tax office can be used very well in food processing companies. However, in the case of agricultural producers, half of the population are family farms and small farms, for which financial data is not available. This is because micro and small size firms from any sector of the economy can apply for food processing subsidies assuming that they start a new activity (food processing), but our Institute has access only to the data of sectors linked to food economy (agriculture, food processing, food trade and food retail) and no data for these so-called "newcomers".

2.1.2 Assessing the competitiveness of the agri-food sector in Spain

Ms Perrine Deschellette (Red2Red, Evaluator - ES) presented the 'Ex post evaluation of the impact of Andalusia's RDP 2007-2013 on the agro-food industry', looking specifically at the competitiveness of the agri-food sector, including the agri-food chain and its quality. PSM-DiD with monitoring data from the Measure 'Adding value to agricultural products' and with data from the Analysis System of Iberian Balances (SABI: 'Sistema de Análisis de Balances Ibéricos', a private database) were applied, covering beneficiaries and non-beneficiaries in agro-food industries. The case study constitutes a good example of using other regional data sources for carrying out counterfactual analysis in this specific sector. The approach was complemented with extensive qualitative analysis based on interviews to a wide range of actors.



After the presentation, participants posed the following questions/remarks to Ms Perrine Deschellette:

Was sectoral analysis (e.g., regarding the milk sector, fruit and vegetables) conducted?

A description of the context was made, but the analysis did not focus on any specific sector but rather a global analysis of the agri-food sector.



What about the small and medium size enterprises? To what extent was it possible to find information from other sources about the beneficiaries who did not belong to that sample?



Recommendations were made regarding this issue: first, in relation to beneficiaries, to carry out an automatic collection of information with the beneficiary companies; but for the non-beneficiaries, it could be possible to look at the regional database or to improve the relationship with the financial department. The main problem is the confidentiality of this kind of data. Another alternative would be a questionnaire similar to the one mentioned in the previous Hungarian presentation.

Even in an ex post evaluation, the sample size is very small. When conducting the enhanced evaluations for AIR 2019, the small sample size issue was considered a temporary phenomenon that would be solved by the time of the ex post, when a bigger sample size is expected. It seems that even in ex post there will be serious problems to have enough matched businesses. This seems to potentially threaten the robustness of the counterfactual approach.



Links to the presentations:

- [Methods for Calculation Priority 2 Effects of RDP 2014-2020](#) - (HU) (Szabolcs Biro, Evaluator, Research Institute of Agricultural Economics Hungary).
- [Effects of Developing Food Processing on the Involvement of Producers in the Food Chain: Experience from Hungary](#) - (HU) (Kürthy Gyöngyi, Evaluator, Research Institute of Agricultural Economics Hungary).
- [Impact of Andalusia's RDP 2007-2013 on the Agro Food Industry: Ex Post Evaluation](#) - (ES) (Perrine Deschellette, Evaluator, Red2Red).

2.1.3 Expert input on the topics of the presentations

Mr Jerzy Michalek (Evaluation Helpdesk Expert) summarised the main take away points from the case studies and gave further input by reflecting on the Hungarian and Spanish experiences. Mr Michalek concluded by briefly answering a key question: how can the RDP effects on the entire agri-food sector be estimated?



- A first possibility would be to use disaggregated regional data (e.g., NUTS4 or NUTS5 levels) and use quasi-experimental methodology to compute RDP effects on regions where support (e.g. Focus Area 2A) took place, or on regions with various support intensities (if all regions were supported). In this case, intra-regional spill-overs are considered but inter-regional spill-overs are not².
- A second possibility would be to use adopted sectoral- regional- or country models (partial- or general equilibrium type). The parameters (supply elasticities) in these models should originate from calculation of ATT (Average Treatment effect on Treated) for supported units.
- Finally, a third possibility would be to apply the recently developed micro-economic approaches, e.g., a new Spatial Hierarchical Difference-In-Difference (SH-DID), or spatial Propensity Score Matching (PSM), etc.



An exchange of good practices with the audience took place, after Mr Michalek raised the following question: What is your experience regarding the evaluation of RDP effects on the entire agri-food sector?

- In **Italy**, an input-output approach was attempted in this field to have an idea of the effect on the entire agri-food sector, but usually input-output tables are not ideal for agricultural analysis, there is a problem of scaling and canalisation of all the issues coming from the RDPs.
- The evaluation team in **Austria**, for the 2019 enhanced AIR, applied two different models: a microeconomic model at beneficiaries' level and a macro model at the sectoral level. An interesting result was that with this macro model (a regionalised input-output model developed by Mr Franz Sinabell), data from the previous programming period was necessary, because the most recent data is from 2014. Hence it is only possible to assess the effect of the previous programming period. It is expected that for the ex post, there will be more recent data.
- Ms Marili Parissaki commented that given that the ex post will take place later than initially foreseen, it can be expected that the data availability issues will be less difficult to solve.
- **Greece** used the same macro model approach as in Austria, especially for Focus Areas 2A, 2B and 6A. According to the Greek experience, only a macro model and a general equilibrium model can assess the overall impact of the RDP on the whole agri-food sector. Impacts on beneficiaries can be assessed using the micro approach.

Mr Michalek reminded that the models should be adjusted. This is the whole issue. The elasticity used in macro models does not reflect the impact on beneficiaries. The total supply

² Michalek, J., P. Ciaian and F. Di Marcantonio, (2020), "Assessing the EU Rural Development Programme: Poland's food processing sector", in: *Regional Studies* DOI: 10.1080/00343404.2019.1708306; <https://doi.org/10.1080/00343404.2019.1708306>

elasticities should reflect the elasticities of beneficiaries. It is also necessary to take into consideration spill over effects.

- Mr Fabrizio Tenna (**Italy**) commented on the second possibility suggested by Mr Michalek (i.e., adopted sectoral- regional- or country models) that the elasticity needs to be updated. However, there is also another issue. If different regions are used, the propensity of consumption for each case needs to be considered, which varies a lot depending on the economic condition. If the input-output approach is used without considering the institutions, families, household consumption and market issues at large, only one part of the picture is achieved.

Mr Michalek explained that the consumption should be adjusted using the whole consumption function. It depends on the type of model, e.g., Computable General Equilibrium (CGE) models and others with one-country one-region model. For a small regions structure model, the consumption function should be adjusted in a way that the different elasticities in different regions are taken into consideration.

After the presentations and expert input, participants shared their experiences in smaller group discussions, focused on a central question on how to assess the RDP contribution to the competitiveness of agriculture, taking into account the non-farming sector. The detailed outcomes of the group discussions can be found in the document "[Group discussion outcomes](#)".

2.2 Day 2 – Experiences from holistic approaches and broader research

2.2.1. The big universe approach from Valle d'Aosta, Italy

Mr Fabrizio Tenna and Mr Virgilio Buscemi (Lattanzio KIBS, evaluators - IT) presented the holistic approach that has been applied in four Italian RDPs to analyse the competitiveness and environmental impacts along the food supply chain. The presentation focused on the example of Valle d'Aosta and covered the supply chain from primary production to processing and marketing, product value added, retail and the potential for increasing the price of some products due to increased quality. By focusing on producers, it offers information for policy makers that allows to understand food supply chain repercussions, especially in relation to the long supply chain. The added value of this approach is that it can reverse the paradigm, since the Common Monitoring and Evaluation Framework (CMEF) asks vertical questions, while this is a transversal approach, putting together competitiveness and environmental effects. With the help of clusters, groups of producers with different farming practices and business strategies were identified. The assessment was done through participatory approach methods, and it showed the impact of the RDP measures, which was reflected in changes in the clusters' position. Several additional indicators were used.



After the presentation, participants posed the following questions and remarks, which were answered by Mr Tenna:



Is the number of farms based on total number (census) or on the FADN universe?

The total number of farms is based on the Paying Agency data. The 1700 farms are receiving Pillar I payments and are beneficiaries of RDPs as well. Valle d'Aosta is a particular region where all farms adopt mountainous areas measures, therefore it is impossible to have a counterfactual. Maybe a counterfactual could be performed depending on the type of measures the farms implemented, but all of them have access to RDP measures.

The methodology is very interesting for the holistic measurement of the different production systems. Has the influence of direct payments on competitiveness in the clusters been considered in the analysis as a 'baseline' for their impact potential?

The way Pillar I payments are important for the farms in terms of sustainability has been considered. Besides data, the potential lack of market organisation in Valle d'Aosta has been taken into account. That is also considered a cluster, especially for the wine farms and fruit farms.





Is this an inductive interpretative study? Are farmers the point of departure?

In the cluster representation diagram, some clusters (e.g. Cluster 10) have the highest competitiveness, but at the same time they have better environmental contribution. What are the factors that contribute to positioning these clusters? If these clusters are compared with the ones that are in the other quadrant, what are they missing? Is due to the type of the farm?

The approach is very good as a supplementary approach. However, in order to separate effects of the programme from all other factors, it is necessary to have the same type of clusters for non-beneficiaries and see in which direction they move.

In these clusters, it is necessary to ask farmers what happened before and after the programme, which means asking data from 10 years ago to compare to the situation now, which can be difficult for farmers to remember.

That means that the estimation is very rough, it is not possible to place a cluster in a certain point on the axes because of the lack of data.



This is a new way of evaluation, focusing on the 'why'. Could the link between the analysis and the questions of the interviews be explained? Could it be applicable to LEADER evaluation?

It is an inductive interpretative study depending on which techniques are used in the expert involvement. Farmers are the point of departure.

This was determined by an expert. Cluster 10 are traditional farms, which do extensive grazing, have large pasture areas and therefore low pressure on the environment. The positioning depends on the type of farm practice, and the same applies to sheep and goats. The farms in Cluster 10 do not keep them all year in the valley as in Cluster 7, but they use a progressive migration which is more sustainable.

Computer-Assisted Telephone Interviewing (CATI) is being used to understand in which cluster the farmers say they are. What is asked is not which is their actual cluster, but if they were in another cluster in the past, and where they think they will be in the future as part of their business strategy. This can be done for both beneficiaries and non-beneficiaries.

Data is not being asked, but questions about business strategy. The farmers are asked if they already have a business strategy or not, and then if they are developing another business strategy based on the RDP measure they are implementing.

There are limitations, but the intention is to focus on the reasons for decision-making and to show the trajectory. And it is not important if a cluster is placed in a certain point, but to show which are the trajectories. Evaluation needs to make sense to policy makers and to the stakeholders involved.

The group mapping concept is a key technique applied for the short supply chain projects and it works. Different dimensions or axes were used: the range of supply chain and typology of beneficiary – whether it is an individual or collective entrepreneur –. By doing that, there is a different configuration of spill over effects in the systems, because there can be a collective effect or an individual effect on a long supply chain. If the target of LEADER along the supply chain is just one entrepreneur, there will be an individual effect but not an effect on the community.



Is it possible to recognise the clusters through the FADN system?

If what is meant is using FADN for a machine learning algorithm, it is something that could be experimented, although it is quite difficult. That would be the subject of another research.

How is the bias dealt with, since the study relies on farmers' opinion, which are important but individually determined? Does a quantitative analysis complement this analysis?

Bias occurs in all questionnaires, but the CATI interviewers are well trained because it is important to get a good quality of data. Self-administered questionnaires are not useful; a CATI interview should be performed so that the quality of data minimises the bias. To understand behaviours, it is necessary to know about concrete practices. For example, if a farmer claims to be sustainable but does not have a biological certification, this is not something easily proved.



2.2.2 How to assess the capacity of rural development policies to improve competitiveness of rural areas while maintaining sustainability

Mr Gianluca Brunori (University of Pisa (PAGE) researcher - IT) presented a broader perspective on the assessment of competitiveness and sustainability of rural areas through the non-farming sector. Mr Brunori shared relevant results and conclusions of three research projects related to the performance of food supply chains and agribusiness. The presentation analysed how value is created along the food chain, looked at the efficiency of short and long supply chains and their links and connections, always in relation to the characteristics of the system under analysis. It offered a broader picture for evaluation by recognising the importance of the links between the farming and non-farming sectors as well as the link between sustainability and competitiveness.



After the presentation, participants posed the following questions, which were answered by Mr Brunori:



What method was used to identify the actors in the mapping of the network? Was Social Network Analysis (SNA) statistics used for the relational patterns of the actors?

Yes, but since Social Network Analysis is very invasive, a mixed method of SNA with participatory approaches was used. Once the actors were identified, they were grouped, and the image of the network was discussed with them. This helps to identify actors and missing links and helps them to reconstruct the configuration of the value chain. The output is not the exact representation of the value chain but the configuration of the chain.



The definition of the indicators and measurement are very interesting. Could further details be provided?

This is the result of a 3-year-long project with an interdisciplinary group; quantitative, qualitative, and institutional economists. Firstly, it was considered necessary to have a good comprehension of the matter before collecting data - what were the problems, etc. The sustainability framework was set in a moment when the sustainability goals were not public. This anticipated the indicators on sustainability internationally.

Currently, it is understood that sustainability is not an isolated issue, but that economic and ecological sustainability are interlinked. It should be considered that there are trade-offs: for example, if there is a push for competitiveness, there can be a minor performance on other aspects of sustainability. The criteria were based on the issues discussed in several media fields: scientific literature, mass media and specialised media. In some cases, safety was very important, as well as nutrition, etc. After identifying these criteria, fieldwork was conducted; interviews were performed to gather information on which criteria were more relevant for the food supply chain. For example, in the case of Parma ham, it was asked which criteria were more important: the issue of nutrition, the profitability of farmers, etc. After that, some criteria were extracted to look for indicators.

There are other sources useful for indicators, such as the framework developed by FAO, [Sustainability Assessment of Food and Agriculture systems \(SAFA\)](#), which includes indicators for sustainability, but only at farm level. Life cycle assessment is also appropriate because it looks at the flows of materials in the chain. However, it does not reflect the origin of different inputs. For example, if pigs from China were considered, there would be a different performance. Assessing organic performance is not possible with FADN data at the moment.

Links to the presentations:

- [The 'Big Universe' Approach: A Mixed Method Approach to Build a Common Sense on RDP's Effects on Competitiveness and Environment](#) - (IT) (Virgilio Buscemi and Fabrizio Tenna, *Evaluators, Lattanzio KIBS*)
- [Competitiveness and Sustainability of Rural areas Through Non-farming Sector](#) - (IT) (Gianluca Brunori, *Researcher, University of Pisa (PAGE)*)

2.3 Parallel sessions on assessing the competitiveness of agriculture along the supply chain

The participants were separated in four groups according to their preferences to further discuss different experiences from assessing competitiveness. Two of the groups discussed in more detail the presentations of Mr Tenna and Mr Buscemi on holistic approaches and of Mr Brunori on the sustainability of supply chains. The other two groups discussed how to make best use of FADN for the assessment of competitiveness and the effects of the changing context on the implementation and evaluation of RDPs in relation to competitiveness. For these last two sessions, two papers were presented by the Evaluation Helpdesk experts Mr Jerzy Michalek and Ms Marili Parissaki and were discussed with participants.

The detailed outcomes of the group discussions can be found in the document "[Group discussion outcomes](#)". Some of the most noteworthy points are mentioned here.

2.3.1 The use of holistic approaches for assessing RDP effects and impacts on the agro-business system as a whole

The group discussion started with the question: 'How relevant are the presented holistic approaches for evaluating ex post?'. Participants discussed with the presenters Mr Tenna and Mr Buscemi around this question.

The main points discussed were the strengths of the method, the limitations and trade-offs, the role of Managing Authorities in implementing this approach and general methodological issues.

The conversation led to the following conclusions: The presented holistic method brings a human perspective on evaluation and allows to better design targets according to farmer's attitudes. It also allows for triangulation within the method as well as to understanding the meaning of the figures of indicators. However, it is more costly and time consuming than standard evaluations, and difficult to apply in the Covid-19 context. Managing Authorities could promote this type of approach for the ex post evaluation. The methodology for developing the questionnaires was explained, and the benefits of involving universities, experts and the Managing Authorities in the process was stressed. The questionnaires addressed all the focus areas.

2.3.2 How the sustainability of short and long supply chains contributes to competitiveness

The group discussion started with a question: 'How does the sustainability of short and long supply chains contribute to competitiveness?'. The participants discussed with the presenter Mr Brunori around this question.

The discussion focused on the following topics: Improving the influence of evaluation in the policy cycle, methods, data and new indicators.

The following points were highlighted: Evaluations should play an important role in policy making, therefore it is necessary to increase awareness and focus on the usability of their results. The future shift in the objectives of evaluation towards sustainability was mentioned. It was suggested that the supply chain assessment could be done through a territorial approach considering synergies and differentiation besides individual competitiveness of enterprises. To successfully assess the value chain, the availability of data was pointed out as a main challenge. Digitalisation will improve data collection systems. For the collection of data, a long-term collaboration between Managing Authorities, Paying Agencies and evaluators was proposed. A new indicator, 'Capacity creation' was proposed, and it was also suggested to redefine the meaning of competitiveness.

2.3.3 Making best use of FADN for the assessment of competitiveness in agriculture

Mr Jerzy Michalek presented the main results of a recently published paper on the efficient use of FADN for the assessment of competitiveness in agriculture.

The main points discussed were the CEQs to assess competitiveness and the data needed, data representativeness and basic sources of farm micro-data, potential solutions to small sample size, and the suitability of FADN variables and information on small farms to answer CEQ4.

Figure 2. Main discussion points on the session 'Making best use of FADN for the assessment of competitiveness in agriculture'



The identified CEQs linked to competitiveness were CEQ 4, focused on supported farms, and CEQ 27, focused on the whole agriculture. Micro-data was suggested as the best way to answer CEQ 4, since the effect is always a net effect. An example from Italy was given, where the changes in FADN indicators were identified to isolate the net effect. Regarding the representativeness of micro-farm data, it was mentioned that FADN gives basic characteristics of supported farms and that it is important to know how much support farmers received under Focus Area 2A and distinguish this from other Focus Areas or the previous RDP. As main sources, it was recommended to use farm-bookkeeping data as a larger data-sample which has also less delays, as well as surveys. As a solution for too small farm sizes, it was suggested to include neighbouring RDPs and use shifters (dummies) in the list of control variables indicating farm location (RDP area). Generally, it was concluded that CEQ 4 can be answered with FADN data, although there are some limitations.

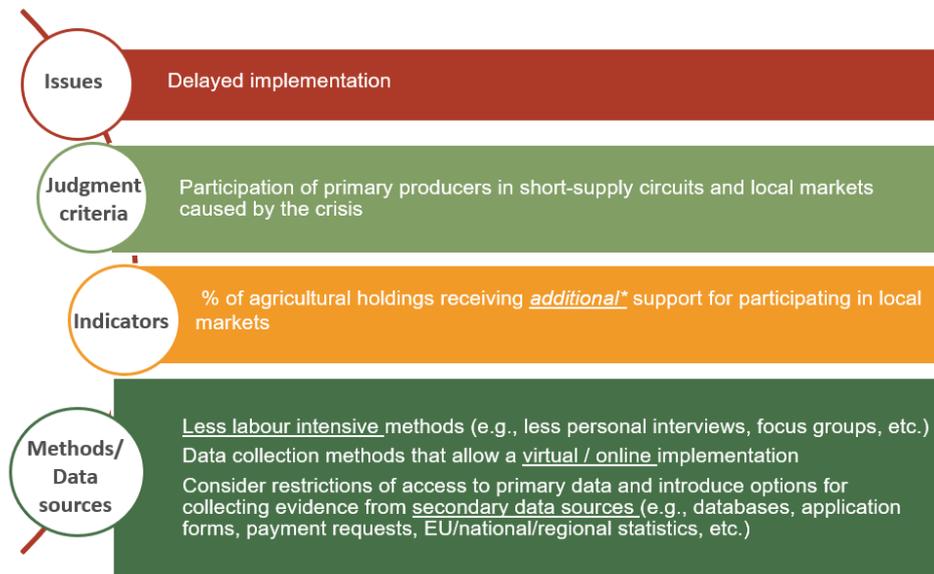
2.3.4 The effects of the changing context on the implementation of RDPs along the value chain and consequences for the evaluation activities

Ms Marili Parissaki presented a number of insights on the effects of the changing context on the implementation of RDPs and on the assessment of RDP interventions, targets and results related to the competitiveness in agriculture. Contextual changes can have effects on production, processing, distribution, and consumption. Moreover, they can influence evaluation activities at all stages: tendering, revision of intervention logic, preparing the evaluation (e.g., evaluation questions, JC and indicators) and conducting (e.g. fieldwork, data collection).

The main points discussed were the elements of the changing context, the effects in the value chain, changes in the evaluation objectives and scope, implications for evaluation topics, evaluation elements and methods, the scope for revising the intervention logic and additional evaluation elements.

The main contextual changes that were identified during the discussion were Covid-19 and the increase in the demand for healthier and more sustainable products. Examples were given of negative and positive effects of Covid-19 along the value chain. The effects of Covid-19 on evaluation elements and methods and the intervention logic were also discussed. Besides Covid-19, the sustainability goals marked by the European Green Deal were mentioned as a contextual change which could affect the scope of evaluation.

Figure 3. Example of revised/additional evaluation elements and methods for answering CEQ 6 in view of contextual changes



3 CONCLUDING REMARKS

The outcomes of the discussions on the case studies, research studies and expert input, together with the group discussions provided some suggestions for facilitating and improving the evaluation of competitiveness taking into account the available methodological experience and good practice.

Suggestions for improving the assessment of competitiveness of agriculture, taking into account the non-farming sector

- There are **several quantitative methods that work well**, such as PSM, macro models and general equilibrium models, but it is important to combine them with qualitative approaches for understanding causalities and other effects that are not captured by the quantitative methods (e.g., behavioural or contextual effects).
- **Be inventive for assessing the counterfactual** when FADN data is not sufficient by exploring all possible alternatives, such as using regional databases, undertaking sectoral surveys or comparing neighbouring regions with similar characteristics.
- **Additional evaluation elements**, notably judgment criteria and indicators are important for covering existing gaps and answering the CEQs and the case studies and discussions offer a number of concrete suggestions.
- **Data availability and accessibility issues can be overcome** by using alternative data sources (e.g., regional databases, business registers, bookkeeping data, combining IACS with FADN and the operations database) and ensuring good contacts /cooperation with data providers (e.g., PA, tax offices).
- **The scope of the evaluation needs to be clear from the start** by defining the non-farming sector and the extent of the effects that are analysed, i.e., macro level (entire ecosystem effects) or micro level effects. An analysis of the delivery model of the measures can help understand the various expected effects of RDPs along the supply chain.

The relevance of broader methodological approaches

- **Holistic approaches can be useful for analysing the complex systems** of human relations and human behaviour, by analysing not only how farmers behave and what decisions they make but also how this behaviour and their strategies evolve and the underlying reasons for this evolution.
- **Broader approaches may use clusters or networks** as a means to analyse complex agricultural systems and processes, including internal and external links and their interfaces.
- **Policy making is at the centre of broader approaches** by providing a holistic picture to policy makers and by focusing on what is of relevance for assessing and redesigning policies. In this sense, evaluation is seen an important component of policy.
- **Managing Authorities should also be at the centre of such approaches** as participants in the evaluation process as well as recipients of the evaluation results, with a key role in transferring the results into better policy design.
- **Triangulation is common in these broader approaches**, in terms of methods (quantitative and qualitative), data (various sources) and governance (involvement of MAs, PAs, evaluators and other evaluations stakeholders, such as data providers).

- **The qualitative component of broader methodological approaches entails a certain bias** as it relies heavily on farmers' opinions and expert input. However, this is offset with the use of multiple, detailed questionnaires that cover several topics (not just competitiveness, since this is only one part of a more complex range of effects) and the involvement of a variety of technical expertise with specific knowledge of the topics and territories covered.
- **Broader approaches challenge the interpretation of existing concepts** so as to redefine and concretise for instance, the meaning of competitiveness, sustainability or competitive advantage.

Suggestions for making best use of FADN for assessing the competitiveness in agriculture

- The **starting point is to understand the different focus of CEQs** related to competitiveness, notably that CEQ 4 focuses on supported farms while CEQ 27 focuses on the whole agricultural sector.
- **Effects are always net effects** therefore non-beneficiaries need to be covered as well. For net effects it is important to follow the development of indicators and potentially also use case studies.
- Representativeness is important and **if FADN does not offer a representative sample there are other solutions**, such as inter alia using neighbouring RDPs, applying qualitative methods, conducting independent survey.
- FADN is not a panacea, **farm bookkeeping data** offers larger samples for micro data and less delays.
- **FADN information on small farms is sufficient to answer CEQ 4** but evaluators need to be aware of potentially limited comparability between countries and different thresholds.

The relevance of contextual changes in evaluation

- **Understanding the effects of contextual changes on implementation:** unanticipated outcomes in terms of policy implementation (e.g., socio-economic crisis, health crisis) can affect all stages of the value chain: production, processing, distribution, consumption.
- **Contextual changes may change the evaluation objectives and scope**, e.g., Covid-19, the European Green Deal with the Biodiversity Strategy and the Farm to Fork Strategy may change the scope of evaluations. Adaptability and resilience to contextual changes may become the subject of evaluations.
- **The revision of the intervention logic**, especially given that RDPs will most probably introduce amendments to their strategies to adapt to the new reality, **provides a better understanding** of any direct and indirect effects on the farming and non-farming sector due to contextual changes and offers information inter alia on renewed needs (e.g., the food sector may be very affected by Covid-19) and revised assumptions for certain measures (e.g., some food industries may not implement some investments).
- **Revised or additional evaluation elements** in terms of programme-specific evaluation questions and revised/additional judgment criteria and indicators can help assess RDP effects in view of any contextual changes.

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