TOPIC 3: REPORTING ON NET CONTRIBUTIONS OF SOCIO-ECONOMIC IMPACT INDICATORS

WORKING PACKAGE 1

THEMATIC WORKING GROUP No 8
'EX POST EVALUATION OF RDPs 2014-2020: LEARNING FROM PRACTICE'

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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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INTRODUCTION

This document has been developed as part of Working Package 1 of the Thematic Working Group 8, 'Ex post evaluation of RDPs 2014-2020: Learning from practice', which analyses the emerging evaluation issues in relation to the assessment of RDP effects on achieving balanced territorial development of rural economies and communities. Moreover, this document examines issue related to reporting from the AIR 2019 on net contributions of socio-economic impact indicators.

This is a non-binding document, which aims to support Member States to exchange and learn from current practices of assessing RDP impacts related to the CAP objective, 'balanced territorial development of rural economies and communities'. Additionally, this document should serve the purpose of supporting the needs of evaluation stakeholders in improving the quality of evaluations when preparing for the ex post evaluation of RDPs 2014-2020.

REPORTING ON NET CONTRIBUTIONS OF SOCIO-ECONOMIC IMPACT INDICATORS

1. Context

Three common socio-economic impact indicators (I.14 'Rural employment rate', I.15, 'Degree of rural poverty' I.16 'Rural GDP per capita') measure RDP impacts for the CAP objective 'balanced territorial development of rural economies and communities'. To establish the impact of an RDP on this CAP objective, Member States are required to calculate the net contribution to the changes in each socio-economic impact indicator value and report on them in the AIR in 2019[1] and ex post evaluation of RDPs (2014-2020).

2. Relevant guidance

The following technical documents can support Member States in their assessment of their RDP's results, achievements and impacts related to the CAP objective 'balanced territorial development of rural economies and communities':

Technical support document	Relevant parts, sections
Impact Indicator fiches	Fiches for impact indicators I.14, I.15 and I.16
Assessing RDP achievements and impacts in 2019	Part II – Approaches for assessing RDP impacts in 2019 Part III – Fiches for answering CEQs 22-30
Interactive decision tools: Data for the assessment or RDP achievements and impacts	Interactive Tool I.14, I.15, I.16

3. Key facts

The analysis of the evaluation sections in the AIRs submitted in 2019 revealed a **low level of reporting on net contributions** of the socio-economic impact indicators. More specifically, around 70% of AIRs reported updated values for the relevant socio-economic impact indicators. A significantly smaller number of Managing Authorities **(~12 %) reported on net contributions of socio-economic impact indicators**. (See Table 1)

Table 1 - Reported values of socio-economic indicators

CAP impact indicator	Sub-indicator	% of RDPs reporting update values	% of RDPs reporting net contributions
I.14 Rural employment rate	15-64 years	75	16
	20-64 years	66	10
I.15 Degree of rural poverty	Total poverty rate	75	16
	Poverty rate in rural areas	66	10
I.16 Rural GDP		70	10

4. Identified issues and solutions applied

In addition to the analysis of the evaluation sections in the AIRs, feedback from Yearly Capacity Building Events and complementary interviews with evaluation stakeholders in the Member States have further identified several issues and possible solutions related to these socio-economic impact indicators.

The issues listed below, are those most commonly reported by RDPs and which have been identified as bottlenecks in the reporting on net contributions of the socio-economic impact indicators.

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[1] Annex VII, of Regulation (EU) No 808/2014.

Issue 1: **It has been difficult to calculate net effects on employment (I.14 'Rural employment rate') through the use of a counterfactual**

This has been due to a lack of data on beneficiaries and non-beneficiaries who do not form part of the FADN (e.g. farmers are registered in FADN, however, rural enterprises may not be registered in FADN or anywhere else). Conducting a counterfactual in this case may require surveys while also overcoming personal data protection issues.

Solution: Greece has addressed this issue by using a general equilibrium model. The starting point was micro-analysis based on the result indicators concerning job creation in supported projects. In order to validate these micro level results and assess the net contributions of the programme at the macro level, a dynamic retrospective regional computational model of general equilibrium was applied.

Box 1 provides a detailed description of the model, its rationale and the specific steps taken for building it as well as the results obtained.

Issue 2: RDP effects on employment (I.14 'Rural employment rate') have been difficult to separate from other factors and therefore the calculation of net effects have been challenging, additionally measuring causal effects on poverty (I.15) have also been difficult to calculate

This has been a challenge as they are often indirect, depend on multiple intervening factors and take time to become evident. This issue has been encountered by 16 programmes in 10 Member States in relation to employment and by 23 programmes in 11 Member States in relation to poverty.

Solution: Austria has separated the effects of the RDP from other factors and/or programmes by using existing computational economic models (partial equilibrium model 'PASMA [grid]' and general equilibrium regional economy model 'BERIO-ASCANIO'). This approach was used to evaluate the overall programme effects covering the whole economy, taking into account the influence of other ESI Funds. These models are robust; however, they can be costly and therefore not all RDPs may be able to afford their use. Similar models have been utilised in Greece, Cyprus, Estonia, Poland and Slovakia.

Box 2 provides a more detailed description of the Austrian approach, which can also be found on the Evaluation Helpdesk's Good Practices Section of the ENRD website.

Issue 3: **Lack of statistical data on the components of the indicator I.15 'Degree of rural poverty'**

The population at risk of poverty and social exclusion is a composite indicator and statistical offices in some countries do not collect this data or do not collect it at the required level of detail (i.e. NUTS 3).

Solution: Poland addressed this issue by using five proxy indicators instead of the indicator I.15 'Degree of rural poverty'. Through the use of panel regression models for each of these indicators, it was possible to check the overall trend in terms of changes in these indicators as a result of the RDP. The models illustrated the scale of poverty in rural areas in Poland and served as a validation of the different results. The outcome was similar for all models and proxy indicators used, which supported the conclusion that the RDP had a significant impact on the reduction of poverty in Poland.

Box 3 provides a more detailed description of the Polish approach.

DETAILED EXAMPLES FROM SELECTED MEMBER STATES ADDRESSING THE IDENTIFIED ISSUES RELATED TO SOCIO-ECONOMIC IMPACTS

Box 1.	Finding alternatives to the use of a counterfactual when data is scarce in Greece (I.14 'Rural employment rate')

Issue addressed

In the case of Greece, a counterfactual assessment was not able to be implemented in order to calculate net effects on employment (I.14 'Rural employment rate') due to a lack of data in the FADN on beneficiaries and non-beneficiaries.

Background

The promotion of social inclusion, poverty reduction and economic development in rural areas (Priority 6) represents 12,44% of the RDP budget in Greece. Job creation in predominantly rural and intermediate rural areas in Greece increased by 237,000 employment posts between 2014 and 2017. This increase is reflected in the value of the impact indicator I.14 'Rural employment rate' (employment rate in rural and intermediate rural areas) which went from 57.6% in 2014 to 60.8% in 2017. The impact indicator I.14 measures the creation of employment with primary contributions to Focus Areas 6A and 6B through Measures 6.4, 7 and 19.

Methodology applied

The results of the micro-analysis based on the result indicators concerning job creation in supported projects reveal that the RDP made a very small contribution to job creation. 1,309 jobs were created as a result of the RDP Measures 6.4, 7 and 19, which represent only 0.5% of the total 237,000 increase in employment posts over 2014-2017.

In order to validate these micro level results and assess the net contribution of the programme at the macro level, a dynamic retrospective regional computational model of general equilibrium was used to support the evaluation activities of the RDP.

The model was based on the creation of a set of simultaneous (non-linear) equations that record production and consumption activities and the interactions between economic factors. It was used to calculate different types of results and effects, taking into account different forms of interactions such as 'displacement' (i.e. if the benefits in the intervention area, for example in terms of business creation, lead to business shutdowns in other areas) 'deadweight' (i.e. if the increase in investments and the strengthening of entrepreneurship would take place anyway, without the programme intervention and if primary and secondary effects, desired (intended) and unintended effects and optimal allocative efficiency occurred). The level of analysis was at the regional rural and macro levels.

The following data units were used for building the model:
1. The utilisation of the Social Accounting Matrix (SAM) for Greece through the Global Trade Analysis (GTAP) database (three years).
2. The use of data at the regional unit level (NUTS 3) for sectoral employment for the creation of agricultural/urban control sets (annual data).
3. The division of agriculture into 14 sub-sectors based on FADN data (annual data).
4. The use of the results of the Eurostat Structural Business Survey for focusing the data on processing and services (annual).
5. The categorisation of households into different categories based on the Household Income and the Expenditure Data (Annual Survey of Household Budgets - Greek National Statistical Office).
6. The use of production, trade and consumption elasticities from GTAP (three years).
7. The use of various studies to determine macroeconomic and production factors (factor closure rules).
8. Utilisation of various official documents and studies to determine development trajectory paths (annual).
9. The use of detailed expenditure per RDP measure (MA data - annual).
10. The classification of RDP expenditures by sector/category of investment expenditure (for each Measure - MA annual data).
11. Application of the model for the 'production' of estimates.

Results reported

According to the result indicators (Jobs created in supported projects) which measures the creation of employment through operations implemented under Measures 6.4, 7 and 19 with a primary contribution to Focus Areas 6A and 6B, there were 1,309 jobs created as a result of the RDP, of which 905 jobs refer to men (69%) and 404 to women (31%). Additional analysis of primary data from the projects (technical memos) revealed that most of the jobs created were for men above the age of 25 years old. Additionally, there was an equal distribution between self-employed men and self-employed women.

Job creation is almost entirely a result of private investments, since the majority of supported public investments relate to projects that do not generally create employment (e.g. renovations of public spaces, paths, sports facilities) while there are no projects for the creation of social infrastructure which facilitates job creation (e.g. kindergartens that indirectly create conditions for parents to gain jobs).

The impact indicator I.14 'Rural employment rate' (employment rate in rural and intermediate rural areas) increased from 57.6% in 2014 to 60.8% in 2017. However, the general equilibrium model, which analysed the RDP's effects on employment, reveals a negative impact of the programme, albeit of small magnitude (-0.04% on a yearly basis during 2015-2017, in comparison to 2014). The model, however, indicated when considering different economic sectors that there was an increase in employment in the processing sector by +0.69%. This finding was validated when comparing it with the completed investment projects under Measure 19.2, where 311 of them concern enterprises of first processing and marketing of agricultural products and handicrafts.

Based on the use of this model the overall results show that the net contribution of the programme to the increase in employment in rural and intermediate rural areas was zero, but this is mainly the consequence of the fact that operations concerning private investments were not yet implemented at the time of the evaluation. This conclusion confirms the issue that the assessment of impacts is more meaningful when there is already a critical mass of interventions (paid or complemented projects).

Further information

Annual Implementation Report submitted in 2019 for the Greek RDP 2014-2020

http://www.agrotikianaptixi.gr

Box 2. Difficulties in separating RDP effects from other factors in Austria (I.14 'Rural employment rate')

Issue addressed

RDP effects on employment (I.14 'Rural employment rate') have been difficult to separate from other factors and therefore the calculation of net effects has been challenging.

Background

Austria analysed all measures and all expenditures simultaneously, taking into account all ESI Funds and their potential interactions. Rural development is an important policy in Austria, but its effects need to be isolated from those of other programmes and Funds, while at the same time allowing for the comparison between different types of areas (predominantly urban, intermediate and predominantly rural).

Methodology applied

Two evaluation approaches were applied in Austria to assess the impact indicator 'GDP per capita'. The use of more than one method was chosen because of the complexity of the programme and the heterogeneity of evaluation questions on economic and environmental aspects. [2]

a) Econometric methods aiming at identifying causal effects, notably an **econometric panel analysis** with and without fixed-effects.
b) **Computational economic models**, notably a partial equilibrium model (PASMA [grid]) and a general equilibrium regional economy model (BERIO-ASCANIO).
   o The integrated **computational bottom-up agricultural and forestry model PASMA [grid]** was used to quantify the effects of RDP measures.
   o The **regional input output model BERIO-ASCANIO** is a general equilibrium model representing financial flows of the whole economy (including all sectors, not just agriculture and forestry). It is based on the input-output table for Austria. The specific feature of this model is its regional structure at the level of 99 administrative districts.

The spatial level for the data used in the analysis was:

- Farm micro data aggregated to 1x1 km grid for the integrated bottom up agricultural and forestry model PASMA [grid];
- Firm level data aggregated to administrative district level for the parametrisation of the general equilibrium model;
- Data at municipality level for the econometric evaluation;
- Data on the structure of the economy and regional trade flows in 99 administrative districts;
- Various statistics on the economic structure, employment and farm production in 35 NUTS 3 regions.

Results reported

The model analysis showed that the programme is not only advantageous for those regions which receive most of the funds, but also, regions were few beneficiaries have achieved higher added value and employment. The reason being the economic integration of the individual sectors, whereby business-related services are mainly obtained from the regional centres.

Further information

Annual Implementation Report submitted in 2019 for the Austrian RDP 2014-2020

https://www.wifo.ac.at/pubid/61913

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[2] These approaches were used not only for the assessment of I.16 'Rural GDP per capita' but for other programme indicators as well

> ### Box 3. A lack of statistical data on the components of the poverty indicator in Poland (I.15 'Degree of rural poverty')
>
> **Issue addressed**
>
> Lack of statistical data on the components of the poverty indicator (I.15 'Degree of rural poverty') in rural areas.
>
> **Background**
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> In Poland, between 2013-2017 there was a decrease in the poverty rate in rural areas by a total of 8.3%. While in 2013 the poverty rate in rural areas in Poland was higher than the EU average by 5.1% amounting to 24.2%, in 2017 it was already lower by 0.2% than the same reference variable. These changes have been attributed to:
>
> 1) an improvement in the labour market (reduction of unemployment and increase in the level of salaries),
> 2) introduction of new social transfers.
>
> This means that the average economic situation of the employee has improved (reduction of deprivation depth) and the percentage of employees has increased (reduction of deprivation range).
>
> The Polish statistical office does not calculate the components of the poverty indicator used by Eurostat and it was not possible to receive information from other Polish sources. At the time of the evaluation, it was not possible to perform econometric modelling on annual data for a period of 3 years and when such data was available, it was at national level (NUTS 0; n=1).
>
> **Methodology applied**
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> This evaluation first hypothesised that the RDP could potentially influence poverty in three distinct ways. First, by increasing the intensity of work in households, thus affecting one of the three criteria for identifying people at risk of poverty. Second, from an increase in overall farm income due to transfers from the programme (e.g. as a result of increased productivity). Third, while transfers from the programme are not included directly in farmers' income, they can contribute to financing specific investments on the farm and thus reduce the opportunity costs of individuals. Thus, it was recognised that not only social support directed at a given person can improve his or her financial situation, but indirectly this effect can also be generated by investment co-financing or, more broadly, by improving living and farming conditions in the place of residence.
>
> In order to estimate the impact on poverty, five proxy indicators were used:
>
> 1. The number of households using environmental social assistance in rural areas below the income criterion per 1000 inhabitants of the rural area (for RDP 2007-2013 and RDP 2014-2020).
> 2. Poverty coverage index (% of persons in households with expenditure below the 'statutory' poverty line) (only for RDP 2014-2020).
> 3. The number of households using environmental social assistance in the rural areas below the income criterion (only for RDP 2014-2020).
> 4. At-risk-of-poverty rate after social transfers (in macro-regions) (only for RDP 2014-2020).
> 5. Average monthly disposable income per capita from an individual farm in agriculture (for RDP 2007-2013 and RDP 2014-2020).
>
> Panel regression models were designed for each of these indicators. To obtain a greater number of observations, it was necessary to use time-spatial data (i.e. for voivodships (NUTS 2; n=16) and macro regions (NUTS 1; n=7). Modelling results on time-spatial data made it possible to infer about the direction of the RDP's impact for the whole country.
>
> **Model 1:** Due to the lack of current statistical data on the level of poverty in rural areas, the model used the first indicator. This indicator indicates the poverty of rural inhabitants in individual voivodships (NUTS 2; n=16) and individual years (2014-2017; t=4). The panel model (with determined effects) was estimated based on data for voivodships for 2014-2017 and data on RDP 2014-2020 and 2007-2013. Due to such use of time-spatial data, the number of observations in the model was 64 and allowed for an estimation.
>
> **Model 2:** The model for the second indicator considered only the RDP 2014-2020 funds (i.e. from 2016 and 2017; t=2) going to sixteen Polish voivodships (NUTS 2; n=16 and the number of observations in the model

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amounting to 32) was estimated. Based on this calculation the poverty rate in 2016-2017 decreased in voivodships as a result of an increase in average two-year payments from the RDP 2014-2020 for those working in agriculture.

Model 3: Model 3 is similar to Model 1, but took into account only funds from the current RDP 2014-2020 (i.e. from 2016 and 2017, t=2) going to individual voivodships (NUTS 2; n=16). It should be noted that, unlike Model 1, the average two-year RDP payments from 2016 and 2017 were used instead of the value of RDP payments per inhabitant of the rural areas compared to the average payments per inhabitant of the rural areas. In this case, the use of space-time data allowed the number of observations to be 32.

Model 4: In terms of the at-risk-of-poverty rate after social transfers, the combined regression panel model was estimated for seven Polish macro-regions (NUTS 1; n=7) in 2016-2017 (t=2; the overall number of observations n=14), because this indicator could only be calculated at this level.

Model 5: For the fifth indicator a panel model (with determined effects) was used for 16 voivodships (NUTS 2; i=16) for the years 2014-2017 for transfers from the RDP 2007-2013 and 2014-2020 (i.e. 2014-2017, t=4). Due to such use of space-time data, the number of observations in the model was 64.

Results reported

Below are the results obtained from the estimation of each individual indicator indicated above illustrating the scale of poverty in rural areas in Poland.

Model 1 results: It was estimated that in 2017 the number of households benefiting from environmental social assistance in rural areas below the income criterion per 1000 inhabitants of the rural areas would have been on average almost 3% more without the RDP (i.e. 17.6% instead of 14.6% households below the income criterion of using social assistance per 1000 inhabitants of the rural areas).

Model 2 results: The poverty coverage rate in 2016-2017 decreased in voivodships as a result of an increase in average two-year payments from the RDP 2014-2020 for those working in agriculture. Based on the model, it can be estimated that in 2016 the poverty coverage rate would have been 23% higher without the RDP, and in 2017 28% higher.

Model 3 results: In 2016, without the RDP 2014-2020, the number of poor households needing social assistance in rural areas would have been 23% higher, and in 2017 29% higher. It should be noted that the previously presented Model 1 (covering a longer period, i.e. funds from RDP 2007-2013 and 2014-2020), showed about 17% impact of the programme on poor households. Since Model 1 was estimated on a longer series of data, allowing for more accurate estimates, it should be expected that the impact of RDP 2014-2020 on reducing poverty in rural areas was around 20% (i.e. without the RDP, extreme rural poverty would be much higher).

Model 4 results: The model showed that the increase in the at-risk-of-poverty rate after social transfers in 2016-2017 was lower in individual years in macro-regions with higher average two-year payments from the RDP 2014-2020 for those working in agriculture. The model, however, had poor explanatory properties, hence the exact impact of the RDP was not estimated based on it.

Model 5 results: RDP payments resulted in a higher average monthly disposable income per capita from an individual farm in agriculture in the voivodship in a given year. Based on the model, it can be estimated that in 2017 without the RDP, the average monthly disposable income per capita from an individual farm in agriculture would be on average for all voivodships lower without the RDP.

The overall conclusion is that the estimated impact of the RDP 2014-2020 on poverty reduction is high, even considering the methodological diversity between the models used.

Further information

Annual Implementation Report submitted in 2019 of the Polish RDP 2014-2020

https://www.gov.pl/attachment/c074199a-5c27-445d-a24d-68bca71534d4

Ecorys (2019): The Evaluation of the results and impact of the RDP 2014-2020 in the years 2014-2018: part 3 devoted to the issue of employment and local development. Warszawa