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The methodology of the EU Commission to evaluate the impact of direct payments

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The legislator of the European Union (EU)[1] has commissioned the European Commission (EC) to evaluate Pillar 1 measures of the Common Agricultural Policy (CAP), particularly direct income payments. The legislator has laid out the policy objectives and has instructed the EC to specify the impact indicators for the evaluation. This policy brief argues that the EC had to accept the task, which could not be solved with the state-of-the-art methodology generally followed by professional economists. However, the objectives have not been clearly defined by the legislator, and the EC has failed to suggest a clear definition of objectives to measure the expected positive changes resulting from the policy intervention. Moreover, the approach of the EC does not solve the identification problem; it failed to compare the situation with and without direct payments. Thus, the EC is unable to justify the need for direct payments based on its diagnosis and to show that the measure is effective and efficient. The EC uses so-called impact indicators in line with the proposal of the legislator. Specific indicators have been selected to relate to specific objectives (e.g., changes in entrepreneurial income are considered to contribute to the change in the objective 'variable production'). This article argues that this relationship has to be challenged. The same conclusion holds for the impact indicator 'factor income'. The impact indicators used by the EC provide no information about the direct impact on the specific objective variables. Moreover, the EC approach only focuses on potential benefits, and competely neglects economic costs.

Introduction

It seems that the need to evaluate the impact of policy interventions has become a high priority. The Organisation for Economic Co-operation and Development (OECD) recently published a report (OECD, 2015) on how the impact assessment of policy regulations is currently evaluated. The review included 33 OECD countries and the EU and concluded that there is much room for improvement in each of the considered countries and the EU. Specific EU measures have been assessed in the article by Lee and Kirkpatrick (Lee et al., 2006). The authors' rating of the selected policy interventions is generally disappointing, but the article 'also considers what lessons might be drawn from this experience and the measures that might be taken to strengthen future assessment practice.' (Lee et al., 2006) These publications assessed evaluation procedures of OECD countries and the EC, which were based on past data which reaches back to 2003 in the case of the EU. It is of interest to investigate whether the EC has learned from the past and is well prepared for the task that it has accepted from the recent legislation.

According to the new legislation (European Union, 2013), the EC is in charge of evaluating Pillar 1 measures of the CAP, while Member States (MS) have to evaluate Pillar 2 measures. Pillar 1 measures are of utmost importance for EU expenditures, amounting to a share of about 40 per cent of the EU

[1] Legislation of the EU is initiated by the Commission and approved by the Council and the EU Parliament.

budget. The request for evaluation is a significant step forward. In the following pages we focus on one specific measure, direct payments, for two reasons. First, these payments make up more than 70 per cent of the total CAP expenditure, and second, the EC has already published respective evaluation results.

The structure of this policy brief is as follows: We first focus on the investigation of the impact of direct payments on 'viable production'. The focus is justified because the EC seems to consider viable production as the most important objective and direct payments are the measure with the highest budget implication. We concentrate on one specific impact indicator: entrepreneurial income. This indicator, also called 'family farm income', is used to challenge the rationale of using impact indicators for policy evaluation. An evaluator must know whether an objective is well defined; therefore, we will explore whether the EC's task is well defined and whether a change in the value of the objective can be measured. We also examine how the EC deals with multiple and unclearly defined objectives, and investigate whether the EC's approach deals adequately with the identification problem. Quantifying changes in the contributions of policy objectives is an important task in the evaluation because it indicates the effectiveness of the policy intervention. However, the final judgement of any policy intervention must be based on a comparison of the benefits and costs.

The EC's approach

Definition and clarification of objectives

The task of the EC is specified in Article 110 of EU Regulation 1306–2013, which states that a common monitoring and evaluation framework shall be established with a view to measuring the performance of the CAP, particularly with respect to direct payments provided for in Regulation (EU) No. 1307/2013. This article also defines the following objectives for measuring performance:

'(a) Viable food production, with a focus on agricultural income, agricultural productivity and price stability.
(b) Sustainable management of natural resources and climate action, with a focus on greenhouse gas emissions, biodiversity, soil, and water.
(c) Balanced territorial development, with a focus on rural employment, growth, and poverty in rural areas.'

These are not just three of the objectives as implied by the enumeration. Take, for example, the first objective, viable production. The additional description (a focus on agricultural income, agricultural productivity and price stability) might be considered a specification of viable production; however, this interpretation can only be accepted if the additional attributes do not completely, or at least partly, conflict with each other. Agricultural income is not clearly defined. It could mean the average income of the agricultural sector in the EU or in individual member countries, the average income of family farms, the income of marginal producers, the income of a specific group of farmers (e.g., family farms) or individual farm income. The specification of the agricultural income policy goal determines the degree of conflict with the agricultural productivity objective.

The term agricultural income or its change over time is not a reasonable indicator of the agricultural sector's efficiency neither at present nor in the future. Small farmers may have low productivity, but low opportunity costs for labor due to a lack of alternative employment opportunities. These farms are economically efficient.

In contrast, there may be highly efficient and productive farms with incentives to grow. Direct payments might increase the average income of the sector, meaning that less efficient and less productive farmers, the present marginal producers, will continue their production and reduce the shift of land from low productivity to high productivity farms. Hence, an increase in average farm income may conflict with the objective to increase productivity.

As long as policymakers fail to specify the objectives clearly or inform the evaluator of the trade-off between the achievements of alternative objectives, no adequate policy evaluation is possible. The EC could reject the evaluation based on the above reasoning. However, to overcome this situation, the EC developed a specific approach based on impact indicators and their assumed relationship with the stated policy objectives, which will be analyzed below.

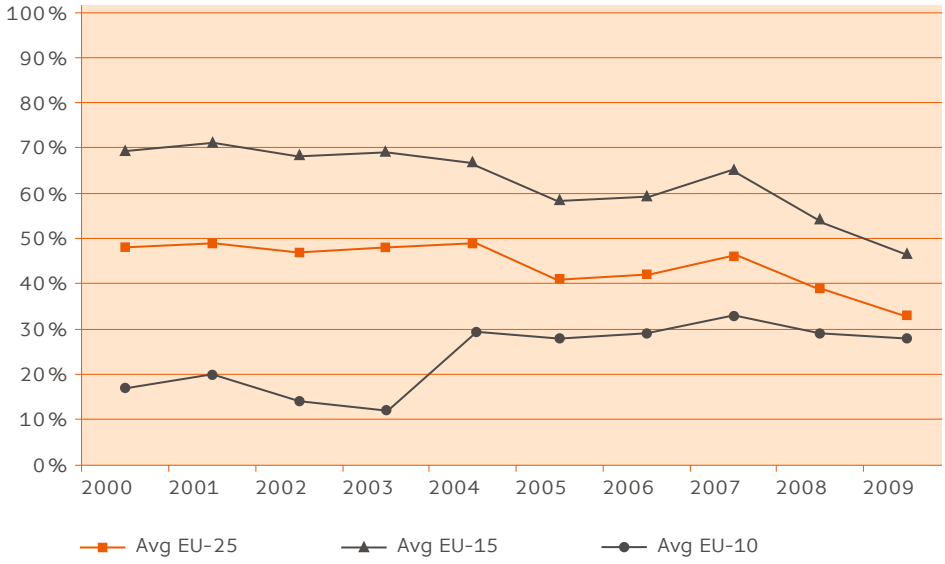
Implication of unclear definition, quantification, and the justification of policy intervention – the problem of providing a diagnosis

A rational design for a policy action must be based on a comparison of the actual situation and the desired situation. The desired situation should achieve or at least contribute to better achievements of the policy objectives. Hence, the need for policy intervention can only be rational if a gap exists between the desired and actual situations. Of course, identifying this so-called diagnosis is not easy. Because the impact of the policy intervention is only known after it has been applied, the comparison must be based on future situations with and without the policy intervention.

The EC has yet to follow the well-known methodology for providing a diagnosis. This observation is not surprising because the desired situation cannot be defined due to multiple and unclearly defined objectives.

The legislation recommended that the EC use impact indicators: 'The performance of the CAP in achieving its common objectives shall be meas-

Figure 1: Evolution of agricultural income as a per cent of average income in the economy[2]



Source: European Commission (2009).

ured and assessed on the basis of common impact indicators, and the underlying specific objectives on the basis of result indicators.' (European Commission, 2014)

The use of impact indicators by the EC's policy evaluation

The EC has suggested that the following impact indicators reveal the contribution to the objective viable production. (European Commission, 2014)

(a) Agricultural entrepreneurial income
(b) Agricultural factor income
(c) Agricultural productivity
(d) EU commodity price variability

These indicators are calculated for consecutive years. A positive change over time is interpreted as a positive impact of policy interventions.

Below we only discuss the calculation of the first impact indicator, which might be most closely related to the objective viable production, and the use of this indicator for evaluation purposes. This allows us to identify the main problems using this and other impact indicators for policy evaluation.

Agricultural entrepreneurial income

The method for calculating this variable is well described in the document quoted above. However, the question remains how this variable can be used in the evaluation process. According to the EC, 'The impact indicators thus will be relevant:

(1) in structuring the overall assessment of the performance of the CAP
(2) as the subject of cross cutting evaluations, e.g. the impact of CAP on biodiversity
(3) when assessing the contribution of (individual) first pillar instruments and RDP programmes.' (European Commission, 2009)

Agricultural entrepreneurial income is equal to the part of farm income that is available for the remuneration of unpaid labor of the farm family and the capital owned by the farm family. This income can be calculated for individual farms or for an aggregate of farms. The EC uses data from Eurostat, which includes the entire agricultural sector with income generated by full-time farmers, legal entities, part-time farmers, subsistence farmers, and hobby farmers. It is highly questionable how this aggregate of income should inform on viable production, however it is defined. Entrepreneurial income per agricultural work unit (AWU) for the highly heterogeneous sector is not informative for policy conclusions.

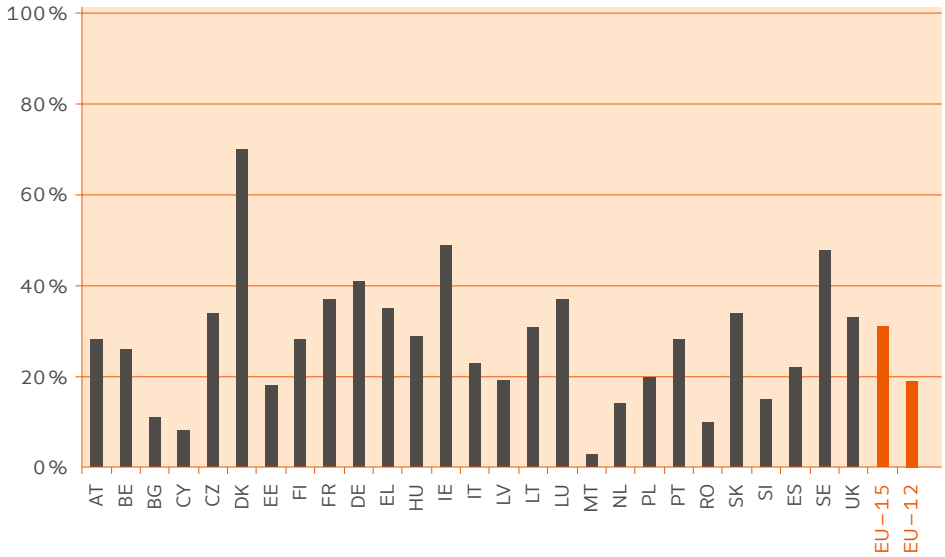
Notably, this income includes all direct payments. When the farmer cultivates rented land, a portion of the direct payments is passed on to the landowner. Consequently, the assumption that agricultural entrepreneurial income would be reduced by the same amount as a decrease in the amount of direct payments received by the farmers only holds for famers who own their cultivated land. For others, the assumption may be highly misleading. In this case a significant difference exists between the recipient of the payments and the beneficiaries. The transfer efficiency is significantly smaller than one.

Hence, this indicator cannot be used to explain the performance of the CAP. The indicator does not show what the performance of the CAP, with respect to viable production or income, might have been without direct payments.

The EC also uses this variable to describe the

[2] The figures in the graph reflect the agricultural entrepreneurial income/AWU as a percentage of wages and salaries/AWU in the total economy. Note that these figures should be interpreted with care owing to conceptual differences between the measurement of farmer's income from agricultural activities and average wages in the economy, and that, due to the lack of reliable data on full-time equivalent labour statistics for the total economy for some Member States, only some of them have been considered to calculate the averages (EU-15: EL, ES, FR, IT, NL, AT, PT; EU-10: CZ, EE, HU, PL, SK; EU-25 = EU-15 + EU-10 countries).

Figure 2: Share of direct payments (expenditures) in agricultural factor income (avg. 2007–2008)



Source: DG AGRI, Eurostat.

present state of agriculture concerning the income situation: 'The indicator uses in its calculation non-salaried AWU in order to show results on the standard of living of self-employed in agriculture per working unit.' (European Commission, 2009) Agricultural entrepreneurial income is divided by AWU; the result is family farm income per unpaid farm labor unit. This derived variable is compared with 'an average of the gross wages and salaries in the whole economy at current prices in cash and in kind.' (European Commission, 2009) Figure 1 presents the result of the EC's comparison.

The EC interprets Figure 1 as follows: 'While the EU agricultural sector has displayed a rapid increase in farm size and a significant improvement of productivity, many farms still depend heavily on direct payments due to the low profitability of agricultural activities. Direct payments represented on average 29 per cent of agricultural income in the period 2007–2009 (with total subsidies coming close to 40 per cent of agricultural income)' (European Commission, 2009). This interpretation is highly questionable for the following reasons:

First, the income comparison is misleading. The data are taken from Eurostat Economic Accounts for Agriculture, Agricultural Labor Input Statistics, and National Accounts. So-called farm family income does not refer to a specific section of farmers, but includes the entrepreneurial income earned by the whole agricultural sector. Hence, this includes income generated by agricultural activities of part-time farmers, hobby farmers, family farms, and legal entities.

So, first, it is not at all obvious how the variable family farm income relates to viable production. Moreover, this variable does not include farmers' income from non-farm activities such as remuneration from off-farm work and capital owned and invested in the non-farm sector.

Second, as noted by the EC, the data in AWU are only rough estimates and are not available for all EU MS.[3]

Third, the qualification of farm labor and non-farm salary and wage earners is different; on average, it is likely much higher for the latter.

Fourth, entrepreneurial income does not include non-monetary income from ownership of houses and savings for renting apartments or houses. Many wage and salary earners spend up to 30 per cent of their net income on housing. If this difference is taken into account, the presented income gap would vanish in most years for the EU-15.

Fifth, it is misleading to compare gross income if taxation for farmers differs from that of non-farmers; this is the case for some countries such as Germany.

Sixth, comparing average incomes of a large group of individuals with huge differences in income can hardly be used for income policies, such as direct payments linked to land endowment. The statement of the EC, 'Direct payments represented on average 29 per cent of agricultural income in the period 2007–2009 (with total subsidies coming close to 40 per cent of agricultural income)' (European Commission, 2009) is highly misleading, because it completely neglects the transfer from the recipient to the landowners. Those who transfer part of the payments directly reduce their income by the same amount because payments for rental land are expenses.

This last point restricts the intended message of Figure 2, because it does not show the pure effect of direct payments on agricultural factor income if the beneficiaries of the payments are landowners rather than the active farmers.

The EC used the variable agricultural entrepreneurial income for another income comparison. According to the Treaty of Rome and the following amendments, one objective of the agricultural policy is to contribute to a fair standard of living for the agricultural community. The EC assumes that agricultural entrepreneurial income (family farm

[3] See footnote 2.

income) is an indicator of the standard of living of the self-employed in agriculture that can be used to assess the impact of changes in the level of public support (i.e., direct payments) on the standard of living/purchasing power of farmers. (European Commission, 2009) Based on the qualifications regarding the entrepreneurial income above, this statement must be rejected.

In conclusion, the data presented by the EC does not make clear whether the objective viable production has been achieved due to past policy interventions.

Moreover, the data provided (Figure 2) do not support the EC's conclusion that direct payments have positively contributed to the achievement of the viable production objective.[4] The graph assumes implicitly that the structure of the agricultural sector with respect to farm sizes and productivity would not be very different without direct payments.

We may conclude that:

The EU's approach does not clarify whether there is a need for policy actions to improve contributions to the viable production objective.

The change of an indicator over time does not indicate the determinants of the change.

Any indicator can change due to numerous exogenous variables, and not only or mainly due to policy intervention. Thus, one of the most difficult tasks in policy evaluation is identifying the effect of all determinants of the change in a policy objective and specifying the pure effect of policy intervention. The EC has completely neglected these important steps in its policy analysis.

Finally, the EC fails to investigate the costs of direct payments or compare benefits with costs.

The quantification of costs requires the quantification of what could have been produced in the whole economy in monetary terms without direct payments to farmers as well as with the direct payments system. The comparison must take into account the impact of payments on structural change of the agricultural sector as well as governance costs, including administrative costs and compliance costs on farms. The comparison would most likely show that the costs would be significantly higher than the benefits without affecting the viable production objective negatively.

[4] 'As an evaluation of the income effects of direct support has underlined, direct payments have proven to be an effective tool for enhancing the income of farmers and have made a positive and robust contribution to the stability of these incomes.' (European Commission, 2009)

Further Information

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