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# Redistributive effects of CAP liberalisation: From the sectoral level to the single farm

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**Abstract**

There is a growing public and political interest in effects of agricultural policy on income distribution in the agricultural sector. Most of the literature regarding redistributive effects of agricultural policy is ex-post and static in nature and many tools for an ex-ante analysis of impacts of sectoral or macroeconomic policies depict farm groups or representative farms rather than individual farms. However, the measurement of inequality is highly sensitive to the aggregation of individual data. In this paper, redistributive effects of an abolishment of different instruments of the European Common Agricultural Policy (CAP) are analysed with a tool that is able to consistently assess impacts of sectoral policy on individual farm incomes. We find that an abolishment of the main components of the CAP, direct payments and market and price policies, results in a more unequal income distribution in relative terms, but a more equal income distribution in absolute terms. Based on the latter, we conclude that if the CAP aims at a more equal income distribution within the agricultural sector, then significant scope for improving the design of respective policy instruments exists.


*JEL classification:* Q18; D31

*Keywords:* Farm model; Market model; Micro accounting; Income distribution

## 1. Introduction

The last two decades of reforms of the Common Agricultural Policy (CAP) of the European Union (EU) were characterised by replacing classical market price support measures by direct

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payments. Moreddu (2011) argues that due to this shift, agricultural support has become more visible and consequently, the distribution of support among farmers has gained more public attention. Fittingly, the European Commission (2012, p. 8) states in its annual "Report on the distribution of direct aid to farmers" that "direct payments have lost their compensatory character over time and have increasingly become a support ensuring a certain farm income stability". Increasing public interest in the distribution of agricultural support and the question 'who gets what' is reflected by general media coverage (e.g. Cowley & Eaton, 2012) and in the specialised press (e.g. Agra-Europe, 2013, p. 3). Thus, equity issues in the agricultural sector increasingly become an area of political concern, even on a national or sub-national basis. The European Commission (2012, p. 8) e.g. claims that "the proposals for the CAP after 2013 [...] aim to reduce the discrepancies between the levels of payments obtained after full implementation of the current legislation, between farmers, regions and Member States". Besides growing public and political interest, there are also good reasons to analyse the effects of agricultural policy on income distribution in the agricultural sector from an economic point of view. For instance, Mishra, El-Osta, & Gillespie (2009) refer to links between farm income inequality and technology adaption, productivity, sectoral growth, and social issues such as family health.

This interest is also reflected in the scientific literature. However, most of the literature regarding redistributive effects of agricultural policy is ex-post and static in nature. Several studies focus on the distribution of direct payments (e.g. Keeney, 2000; El Benni & Finger, 2013; Severini & Tantari, 2013; Severini & Tantari, 2015). Fewer authors also take effects of market price support into account and aim to assess redistributive effects of the whole system of agricultural support (e.g. Allanson, 2006, 2008; Moreddu, 2011). Yet, despite the undoubted usefulness and importance of ex-post analyses, they are of limited use when it comes to the evaluation of distributional impacts of policies that do not currently exist, but that might exist in the future. For such an exercise counterfactual situations have to be constructed, at best accounting for incentive effects and the behaviour of individuals (Bourguignon & Ferreira, 2003).

Simulation models account for behavioural effects. But most macro or sectoral models apply representative groups rather than individual income units and the measurement of inequality is highly sensitive to the aggregation of individual data. Consider a population being divided into $k$ mutually exclusive groups and $I^{\text{total}}$ representing an additively decomposable[1] income inequality index of the form: $I^{\text{total}} = I^{\text{within}} + I^{\text{between}}$ with $I^{\text{within}}$ representing a (weighted) sum of income inequality inside the $k$ groups and $I^{\text{between}}$ the inequality between subpopulation means (Deutsch & Silber, 1999). In the extreme case of just one representative group all the desired information would be hidden in $I^{\text{within}}$ whereas only $I^{\text{between}}$ would be measurable, but without any meaning in this case. Obviously, inequality inside of aggregated groups is not observable and thus, the loss of information generates a downward bias in the measurement of overall inequality by only incorporating grouped income data. Even the assumption of an exogenous constant degree of inequality within the groups and the application of group specific changes in average income to all group members is likely to produce biased results because there is no reason why within-group income distribution should be unaffected by different scenario assumptions (Bourguignon, Robilliard, & Robinson, 2005; Savard, 2005). The share of inequality that is accounted for by the

[1] The term 'additively decomposable' refers to the property of an inequality index, to be subgroup decomposable into exactly two terms: the between-groups inequality component which is gained by replacing all individual incomes by subgroup means and the within-group component, which is a weighted average of inequality within subgroups. The Gini coefficient e.g. is not additively decomposable in this sense (Deutsch & Silber, 1999).