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CALCULATING THE ‘GREENING’ EFFECT –
A CASE STUDY APPROACH TO ESTIMATE THE GROSS
MARGIN LOSSES IN DIFFERENT FARM TYPES IN
GERMANY DUE TO THE REFORM OF THE CAP

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Abstract

The European Union's Common Agricultural Policy is currently undergoing a reform process which inter alia aims to achieve a higher environmental standard in agricultural production by binding direct payments to practices beneficial for the climate and the environment (the so-called 'greening'). Some experts as well as some farmers doubt the effectiveness of the proposed measures. I simulate how farms would respond to these measures using a case study farm modeling approach and data for different farm types in Germany. I find that the currently envisaged 'greening' measures can be expected to function in general due to the linkage to the direct payments, which provide a strong disincentive to forego participation. The individual economic outcome strongly depends on the current intensity of the farm in question and on the implementation details of the introduced measures. However, farms with very high gross margins per hectare will forego the support scheme.

Keywords

Greening, Common Agricultural Policy, reform of the CAP, direct payments, ecological focus area

1 Introduction

A lively discussion is going on between politicians and agricultural stakeholders in the EU about appropriate instruments to make European agriculture more environmentally friendly. Many suggestions have been made, and in mid-October 2011 the European Commission has tabled concrete proposals which inter alia contain a number of additional environmental requirements (referred to as 'greening'). The basic idea is to achieve these requirements by binding the direct payments not only to existing specific legislation as has been the case in the past (Cross Compliance) but also to the following greening obligations:

1. Maintenance permanent grassland from 2014 on.
2. Establish ecological focus area of 7 % of the farms' arable land that may consist of land left fallow, terraces, landscape features, buffer strips or afforested areas.
3. Ensure crop diversification of at least three crops, where the main one shall not exceed 70 % of the arable land and none of those shall cover less than 5%.

The Commission has proposed that 30 % of the direct payments be linked to compliance with these measures. Organic farms are exempted from the 'greening' requirements.

Some experts as well as some farmers doubt the effectiveness of the proposal. The purpose of this paper is to provide a first assessment of the impact of 'greening' the CAP on different farm types in Germany.

2 Data & Method

I employ a simple simulation exercise that compares the reduction in gross margin of 17 constructed average farms when assuming different 'greening' scenarios. The farms cover important farm types in Germany and a variety of environmental and climatic conditions. The

calculations are carried out on a hectare basis, for each farm separately and compare the effect of the three proposed greening measures to a baseline. The sample contains five arable farms, three fattening farms, four dairy farms, two mixed and two suckler cow farms and one vineyard. The data are mainly derived from the publicly available part of the test enterprise network of the German Federal Ministry of Food, Agriculture and Consumer Protection and the standard gross margin database of the Association for Technology and Structures in Agriculture (KTBL), supplemented by other sources as well as personal communication.

3 Results

The results indicate that on the whole ‘greening’ can be expected to function in general in terms of formal compliance with the proposed measures. The overall picture suggests that farms with higher gross margins and farms with little nature-oriented area face higher greening costs, i.e. the greening effect is higher. Furthermore, dairy farms and farms with grassland are more affected than fattening farms, in special cases farms would forego the direct payment scheme to avoid losses.

When differentiating between the greening obligations, one finds that the ecological focus area is the most costly in many cases and it is generally binding at all farms with arable land. However, some farms already fulfilled the obligation before the reform. Three farms need to adapt to crop diversification, two of them are severely affected.

4 Discussion & Conclusions

Restrictive assumptions regarding changes in factor endowments (e.g. renting or buying land) are made, opportunity costs for maintaining permanent grassland and manure spreading are ignored and indirect and regional effects are not included (e.g. less supply of feed grains and thereby increasing prices).

The calculations show clearly that farms face different costs to comply with the greening and that the ecological focus area is the most costly obligation in many cases. Farms with high shares of grassland are more affected than others which raise the question if this outcome is intended by the Commission.

I find that the greening measures function in general due to linkage to the direct payments. They might be ecologically beneficial especially in intensively farmed regions (ecological focus area in particular), but if farms use legal loop holes to circumvent these measures, they will not have any ecological effect and the goals of the greening will be severely threatened. Therefore, implementation design is crucial to ensure at least some ecological progress.

Reference (for detailed references please see)

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