

Reform of the Single Farm Payments Scheme: Distributive and Production Effects

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Introduction

On March 20th the EU Council of Ministers reached a common position on the future of the Common Agricultural Policy post 2013. One of the key issues of interest for Ireland arising out of this negotiation is the reform of the Single Farm Payment (SFP) Scheme. While the initial European Commission proposal of October 2011 recommended a relatively short transition to a flat-rate payment system, known as internal convergence, the Council of Ministers have agreed that some flexibility should be granted to Member States on this transition. Following the significant agreement reached by the Council of Ministers last month, negotiations are still ongoing and it is hoped that the trilog process of consultation between the European Commission, Parliament and Council of ministers will conclude before the end of the Irish Presidency in June.

This paper considers the impact of reforming the current SFP scheme. Using Teagasc National Farm Survey (NFS) data the impact of two payment models, one which involves full transition to flat-rate payments and another involving a more gradual transition, is assessed relative to the status quo, i.e. the historical payment model which is currently in operation in Ireland. The paper also considers the number of farmers that are likely to be impacted by the Commission's proposed greening measures.

Payment Models

The analysis first considers the impact of complete internal convergence which we refer to here as "flattening". Under this scenario it is assumed that every farmer is paid €272 per hectare. Following this, the more flexible convergence model proposed by Ireland, known as the Irish approximation model, is considered, which we refer to here as "approx". Under the "approx" scenario, every farmer with a per hectare payment less than 90 percent of the national average figure, i.e. 90 percent of €272 being €244.80, receives a top-up of one-third of the difference between their current payment and 90 percent of the average. In order for the national envelope of payments to balance, every farmer with a payment greater than the national average will have their payments reduced in order to fund the redistribution. Such farmers will have their payments reduced at a rate of 26.5 percent applied to the difference between their current payment and the national average. For greater clarity, see the working example below.

Farmer A: currently has a payment of €210 per hectare. Under the “flattening” scenario his payment increases to €272. Under the “approx” scenario he receives a top-up of €11.59 per hectare, i.e. the difference between his payment and 90% of the national average is €34.80 and one third of this figure is €11.59. His new payment is €221.59 per hectare.

Farmer B: currently has a payment of €300 per hectare. Under the “flattening” scenario her payment decreases to €272. Under the “approx” scenario her payment is reduced by €7.42, i.e. 26.5 percent of €28. Her new payment is €292.58 per hectare.

The impact of these two payment models is estimated relative to the status quo in a static setting, in other words, it is assumed that all other sources of income on the farm, such as market based income and other grants and subsidies, other than the SFP remain unchanged. The advantage of using the NFS for this analysis, as opposed to the Department of Agriculture’s official payments database, is that the Teagasc NFS includes information on farm income, gross output and the importance of the SFP to total farm income. Hence, it is possible to assess the impact of the alternative payment models on the distribution of income as well as on the proportion of production generated by farms that would gain or lose. However, it should be noted that the NFS represents approximately 105,000 farms out of a total population of almost 140,000 farms. The 35,000 farms excluded from the survey are pigs, poultry and/or very “unproductive” farms, with a standard gross output of less than €4,000. The majority of these very small and very “unproductive” farms are likely to gain under both the flattening and approximation models and hence this analysis is likely to underestimate the total number of farmers gaining. The findings in relation to gross output however, are likely to be more representative as the NFS represents over 90 percent of farm output.

Income effects

According to the Teagasc National Farm Survey (NFS) about 49 percent of farms will gain under the flattening scenario with 51 percent of farms losing (Figure 1).¹ Under the approximation scenario 51 percent of farms also lose but only 41 percent gain and that is because all farmers with payments between €244.80 and €272 per hectare do not experience any change to their income.

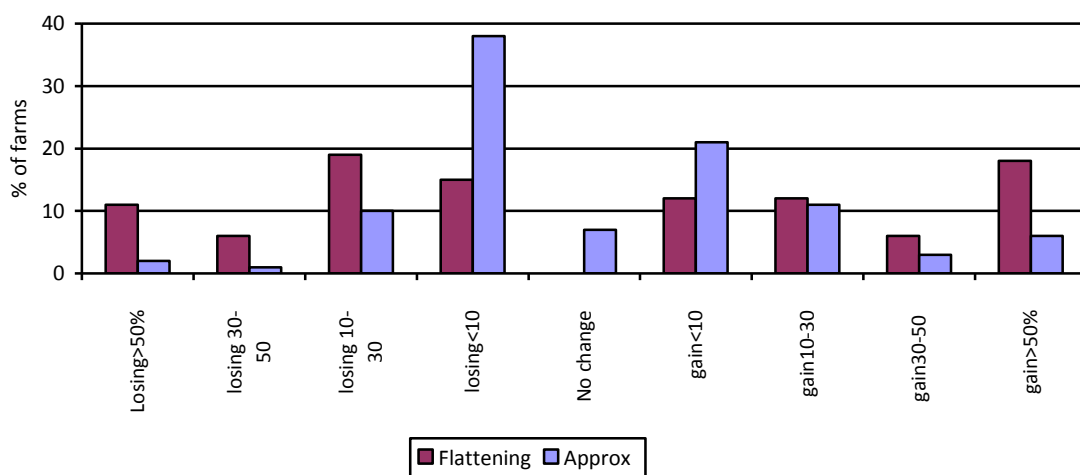
Relative to the flattening model, the approximation model reduces the quantity of monies being redistributed among farmers and as such, a greater proportion of farmers experience extreme changes to their income under flattening as opposed to approximation. The approximation model pushes more farmers into the centre of the graph in Figure 1, that is a greater proportion of farmers experience smaller changes to income under approximation.

¹ It is important to note that due to the exclusion of very small farms in the NFS sample, the number of gainers is under-estimated.

About 11 percent of farms would experience extreme losses of more than 50 percent of income under the flattening model. The majority of these farms are in cattle production, mostly in the finishing system, with very low or indeed negative income positions before flattening, i.e. this group have an average pre-flattening family farm income of €4,800. As the extent of losses are minimised under the approximation model to just 26 percent of the difference between the payment and the national average, the number of farmers experiencing extreme losses in income is much lower at just 2 losing 50 percent of their income or more. For farms to experience extreme losses in income under the approximation model the current payment per hectare must be very high, the output of the farm must be very low and/or the reliance on payments must be very high. The 2 percent of farms losing 50 percent of their income or more are very low income farms with an average family farm income of approximately €500.

At the opposite end of the spectrum, the approximation model also reduces the possibility of farmers experiencing windfall gains. About 18 percent of farms would increase their income by 50 percent or more as a result of flattening and these are mostly cattle and sheep farms. Again these farms are starting from a very low base with an average farm income of €3,500 before flattening. This figure reduces to 6 percent under the approximation model.

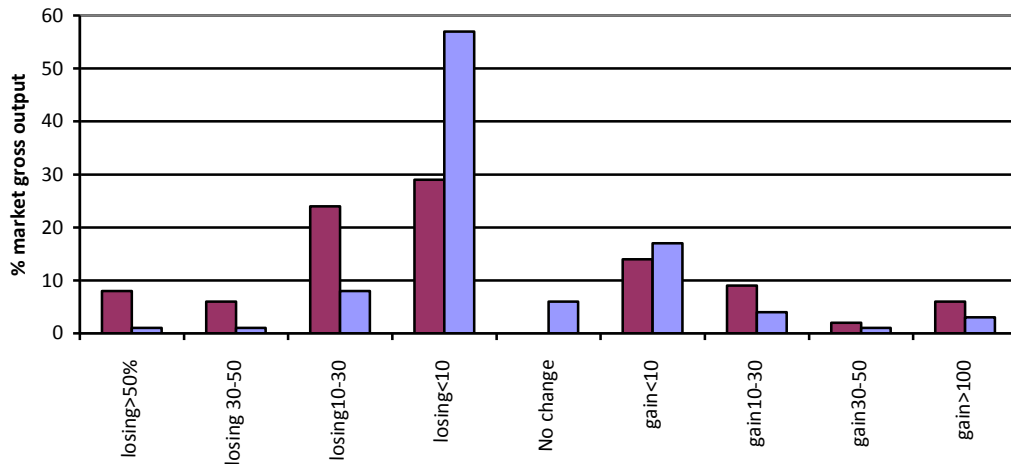
Figure 1: Percentage of farms gaining and losing income as a result of alternative payment models: All Farms



Output effects

There are concerns that flattening will lead to a redistribution of income from more “productive” to less “productive” farms. It is therefore important to consider the size and level of activity on farms that are set to gain or lose due under the alternative payment models. The proportion of output accounted for by each group of losers and gainers is displayed in Figure 2. Output is measured as market based gross output, that is the market value of the products produced on the farm before and grants and subsidies are paid.

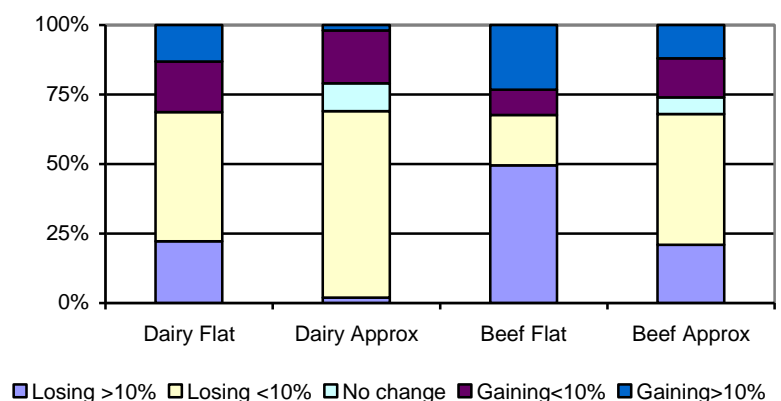
Figure 2: Market based Gross output of all farms by Gainers and Losers



Some farm organisations have argued that farmers rely on the SFP to support low profitability enterprises especially in the drystock sector and that if payments to these farms are cut, then production levels will decline. It is therefore important to consider the amount of production that is generated by farms that would lose significantly under the two payment models. Under the flattening scenario, about 40 percent of gross output is generated by farms that would lose 10 percent of their income or more. Under the approximation model this proportion of output decreases to 11 percent. It can therefore be concluded that if production is at risk due to losses in income, then the amount of production at risk is far lower under the approximation model than under the flattening model. In general, the approximation model pushes the majority of gross output into the centre of the graph, i.e. 81 percent of gross output is generated by farms losing or gaining less than 10 percent of their income under approximation compared to just 43 percent under flattening.

The output story varies by sector, see Figure 3. The vast majority of milk output is generated on farms that would experience relatively small changes in income. Even under the flattening scenario over two-thirds of dairy output is produced on farms that would experience income changes of less than 10 percent and this proportion increases to 96 percent in the approximation scenario. The cattle situation is quite different, with almost 50 percent of gross output being produced by farms that would lose 10 percent or more of their income under flattening, although this figure does reduce to 20 percent of output under the approximation model.

Figure 3: Market based Gross Output by Sector (%) and Income Losses (%): Dairy and Beef



Over 78% of crop gross output is generated on farms that would lose under flattening and most strikingly, 62% of gross output is generated on farms that would lose 10% or more of their income. Again this figure declines to just 10 percent under the flattening model.

Greening measures

Farmers will be required to abide by a number of greening measures in order to qualify for the green component of their Single Farm Payment. The measures include:

1. retention of permanent grassland – farmers may not convert more than 5 percent of their permanent grassland to arable area
2. crop diversification – farmers with arable area of 10 hectares or more must maintain a variety of crops. Farmers with between 10 and 30 hectares must have at least 2 crops while those with more than 30 hectares must have at least 3 crops
3. ecological focus areas – if the non permanent grass area of the holding is more than 15 hectares, then 5 percent of the arable area must be ecological focus areas

The vast majority of farms in Ireland have some grassland and therefore will be affected by the first measure. The second two measures are targeted towards farms with arable area, Table 1 outlines the number of farmers that are likely to be affected by these measures. Approximately 19,000 farms have some arable area but over half of these have less than 10 hectares and therefore are not impacted by the crop diversification measures. Just over 6,000 farms have between 10 and 30 hectares of arable area but about 2,700 of those already have two crops and so would not be further impacted by the crop diversification requirements. Just over 3,000 farms have 30 hectares of arable land or more but the vast majority of them already have 3 crops. If a farmer has more than 15ha of arable land then they must set aside 5% as Ecological Focus Areas, but this 5% can include forests, hedges and short rotation coppice. This affects about 7,000 farms.

Table 1: Number of Farms to be affected by Greening

	Number of farms
No arable area	86,253
Some arable area	19,281
0 - 10 hectares of arable area	9,648
10 - 30 hectares of arable area (currently only 1 crop)	3,629
10 - 30 hectares of arable area (currently 2 crops or more)	2,724
30 hectares or more of arable area (currently less than 3 crops)	882
30 hectares or more of arable area (currently less 3 crops or more)	2,398
EFA: 15 hectares or more of arable area	7,085

Conclusions

In this paper we've simulated the effects of complete flattening and the more flexible Irish approximation model on both the distribution of income and the production of farm output using the Teagasc National Farm Survey. These scenarios are used merely for illustrative purposes and can be considered the two opposite ends of the spectrum as it is most likely that the negotiations that are in train will lead to a payment model that falls somewhere between these two.

Relative to complete flattening, the approximation model significantly reduces the number of farmers that would experience extreme changes to their farm income and as a consequence the proportion of output being generated by farms experiencing extreme losses. Under the flattening model about 40 percent of output was being generated on farms losing 10 percent of their income or more and this reduces to just 11 percent of output under the approximation model. If decoupled payments are production inducing and if farmers that experience a reduction in their payments will produce less as a result, then one can conclude that less of the country's agricultural output is at risk under the approximation model than under the flattening model.

Appendix 1: Links between payments and productivity

Farmers with higher than average Single Farm Payments (SFP) per hectare were intensively farming enterprises supported by direct payments during the reference period. Moving to a flat rate payment model, or even the approximation model, will shift payments away from this group. Hence the argument made by many groups that the movement to a flat rate payment model will shift payments from more “productive” to less “productive” farmers. This argument is based on the assumption that farmers that currently have higher payments per hectare are still more productive than those with lower payments, however, it is possible that some farmers with higher than average SFPs reduced their productivity since decoupling was introduced. Using Teagasc National Farm Survey data it is possible to examine the relationship between SFP per hectare and productivity.

Table 1 presents the correlation co-efficient between SFP per hectare and market gross output per hectare, i.e. that is the value of production per hectare less all grants and subsidies, for 2010 and 2011. Figures 1 to 3 present scatter plots of the raw data. In general the correlation between the two variables is positive but relatively weak for all farms at approximately 0.3 in the two years. It should be noted that the correlations are much stronger when the tillage category is omitted from the dataset and the cattle and sheep systems in particular have a stronger relationship between payment per hectare and gross output per hectare.

Table 1: Correlation Coefficient SFP & Market Gross Output per hectare

	All	Dairy	Cattle Rearing	Cattle Finishing	Sheep	Tillage	Mixed Livestock
2010	0.33	0.44	0.48	0.51	0.54	0.01	0.39
2011	0.31	0.47	0.48	0.49	0.51	0.03	0.48

Figure 1: Scatter plot of SFP & Market Gross Output per hectare for all farms 2010

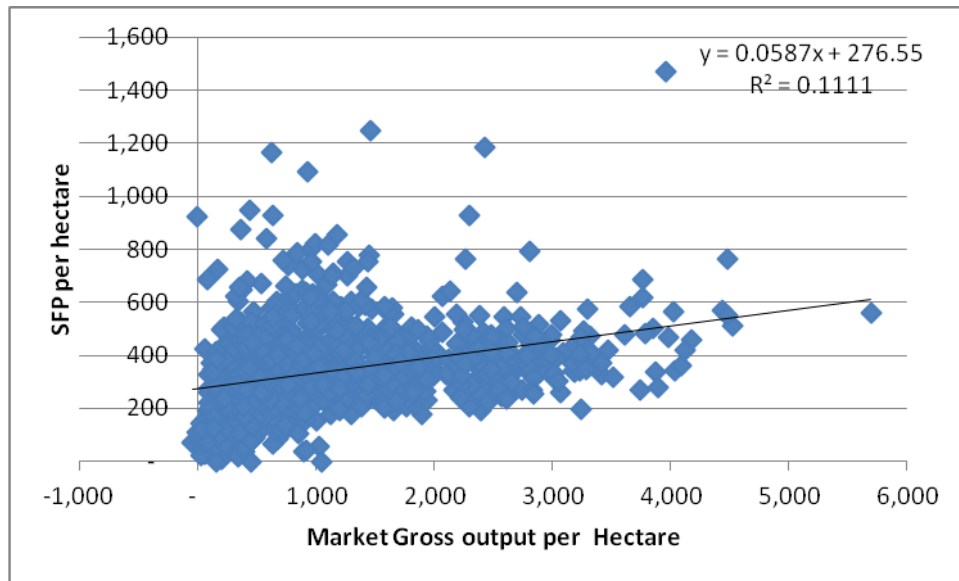


Figure 2: Scatter plot of SFP & Market Gross Output per hectare for Cattle Finishing Farms 2010

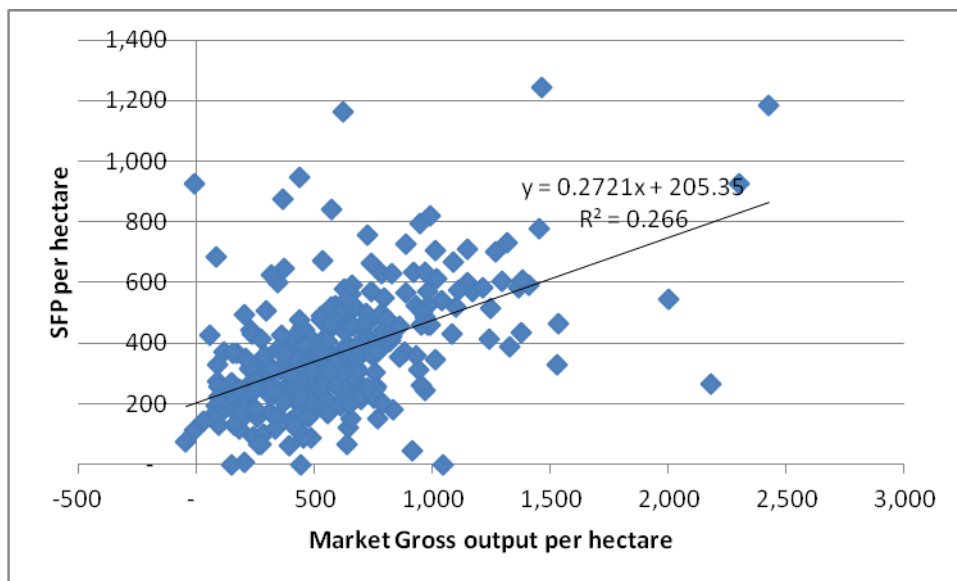
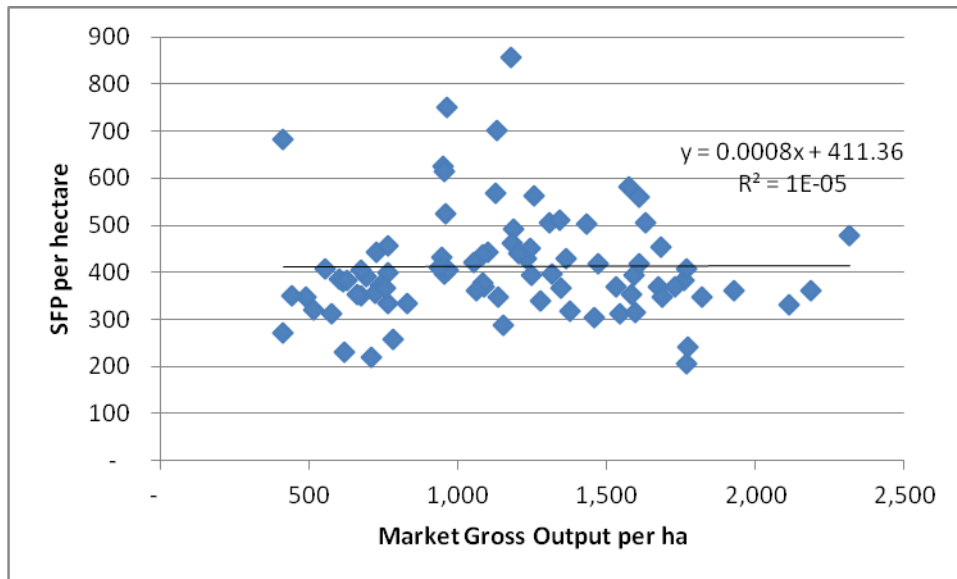


Figure 3: Scatter plot of SFP & Market Gross Output per hectare for Tillage farms 2010



The relationship between SFP and output per hectare is particularly low on tillage farms. There are a number of reasons for this, first there are a number of farms with very high payments per hectare on relatively small and low output farms, this seems to be a consequence of stacking. Second, gross output per hectare on tillage farms is relatively homogenous compared to the other systems, with a coefficient of variation of 0.43 compared to 0.81 for all farms, whereas the coefficient of variation on the SFP is 0.28 for tillage farms compared to 0.46 for all farms.