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Impact on UK Agriculture of Changes to Direct Payments Following Brexit – Policy Brief

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Research Aims and Key Findings

The primary aim of this research is to investigate the impacts of reducing or eliminating direct payments, as currently delivered to farmers, on UK and Devolved Administration agriculture. To do this the FAPRI-UK modelling system is used to project changes in production, producer prices, imports, exports and domestic use for the major UK agricultural commodities.

The main findings are:

- Reducing or eliminating decoupled direct payments to farmers has uneven impacts on production and farm-gate prices for the main UK agricultural commodities;
- Agricultural commodities produced by farm sectors that are most dependent on subsidies for farm income, experience the biggest projected changes in farm-gate prices and production volumes, most notably beef and sheep meat;
- The UK-EU trading framework in place when decoupled direct payments are reduced or eliminated, has a significant effect on production and other market parameters for different agricultural commodities;

The scenarios modelled in this research are a considerable departure from current policy. As the modelling system is calibrated using historical data, the more radical the scenario and the greater the departure from the status quo and past experience, the more uncertain the results. The model generates results at the sector-level. Therefore interpretation of the farm-level or economy-wide impacts require considering the results in the context of complementary analyses[1].

Introduction

This policy report contains FAPRI-UK modelling results for a number of post-Brexit domestic farm policy scenarios, applied in combination with results for a range of future trading relationships between the UK and EU.

The modelling system provides a range of projections for numerous variables: livestock numbers and cropping areas, production volumes, imports and exports, producer prices and consumption volumes.

To provide a point of comparison for the scenarios to be modelled, baseline projections are initially generated under the assumption that current EU policies remain in place - essentially that the UK remains in the EU subject to pre-2020 policies. For the baseline, global macroeconomic projections determined outside the model are used, and average weather conditions apply. Baseline projections are made for each country in the UK, extending forward over a ten year period to 2027.

The research investigates the likely impacts on UK agriculture sectors of changes in farm payment levels and payment mechanisms (decoupled or coupled), but assuming the CAP Pillar I framework is retained. Specifically, the FAPRI-UK partial equilibrium modelling system is used to quantify the market impacts of two scenarios:

1. *Reduction or elimination of direct payments*: Direct decoupled (Pillar I) payments - (including in the case of Scotland coupled payments for beef and sheep production) – are (a) reduced by 50%; and (b) eliminated completely.

[1] One aspect of this, and other work that looks at how subsidy changes might impact viability at a farm-level, is discussed further on page 60 of the full report.

2. *Expansion and increase of coupled payments*: These payments are introduced - increased in the case of Scotland - for specific sectors with a corresponding decrease in the budget for decoupled payments[2].

Although decoupled payments are not linked to production, they can influence farmers' behaviour, resulting in higher levels of output than would otherwise be the case. There is considerable uncertainty concerning the extent to which decoupled payments influence production, and therefore three alternative scenarios are considered for the purposes of policy analysis. In line with the decoupling assumption made within the rest of the FAPRI EU modelling system, it is first assumed that the production impact of the decoupled Pillar I payments is relatively 'weak', *i.e.* the physical production impact of a £1 increase in direct payment is 30% of that of a £1 increase in price. A 60% 'moderate' assumption and 100% 'strong' assumption are also included. The latter induces the same production response as fully coupled support.

The impacts of these domestic support scenarios on agricultural commodity markets are in addition to those resulting from post-Brexit trade arrangements. Thus analysis of the above scenarios was undertaken in the context of three alternative post-Brexit trade arrangements with the EU:

- A Free Trade Agreement with zero tariffs between the UK and the EU (abbreviated as UK-EU FTA);
- The implementation by the UK of WTO default tariffs (abbreviated as WTO)[3];
- The implementation by the UK of the 2019 No Deal Tariff schedule (abbreviated as No Deal).

For each scenario the impacts of changes in direct payments (with the UK-EU FTA, WTO and 2019 No Deal Tariff frameworks in place) were determined and considered alongside those changes arising from trade arrangements alone. In this way it was possible to isolate the impact of changes in direct payments within each alternative trade arrangement.

Reduction or Elimination of CAP Pillar I Direct Payments

The results (set out in detail in the main body of the report and annexes) show that the impact of reductions in direct payments (for the most part decoupled across the UK administrations but with an element of coupled support in Scotland) vary by commodity and according to the trade arrangements in place between the UK and EU. Given the number and complexity of the scenarios modelled, only some of the extensive results available from the analysis can be described here. Fuller results can be found in the tables in the main body of the report and annex.

Changes in commodity production volumes are a key indicator when assessing the impact of changes in trade and domestic policy. It encapsulates how the sector responds to the totality of available government subsidies and market returns. For each of the major farm commodities included in the analysis, production impacts are reported below. The scenario reported shows the change in production when all subsidies are removed, under three

[2] Coupled payments scenarios are not applied directly in the case of Wales, so only the indirect effects of hypothetical use elsewhere in the UK is estimated for the agricultural sector in Wales.
[3] In May 2020 the UK announced the MFN tariff regime, the UK Global Tariff (UKGT) that will replace the EU's Common External Tariff on 1 January 2021. It largely adopts the WTO default tariffs with some simplifications rounding down tariff rates.

possible trading relationships between the UK and EU, and with a range of assumptions about the influence of subsidies on farmers' decision to produce (strong, moderate and weak). The main document also reports the impacts of a smaller, 50 per cent reduction in direct (CAP Pillar I) payments.

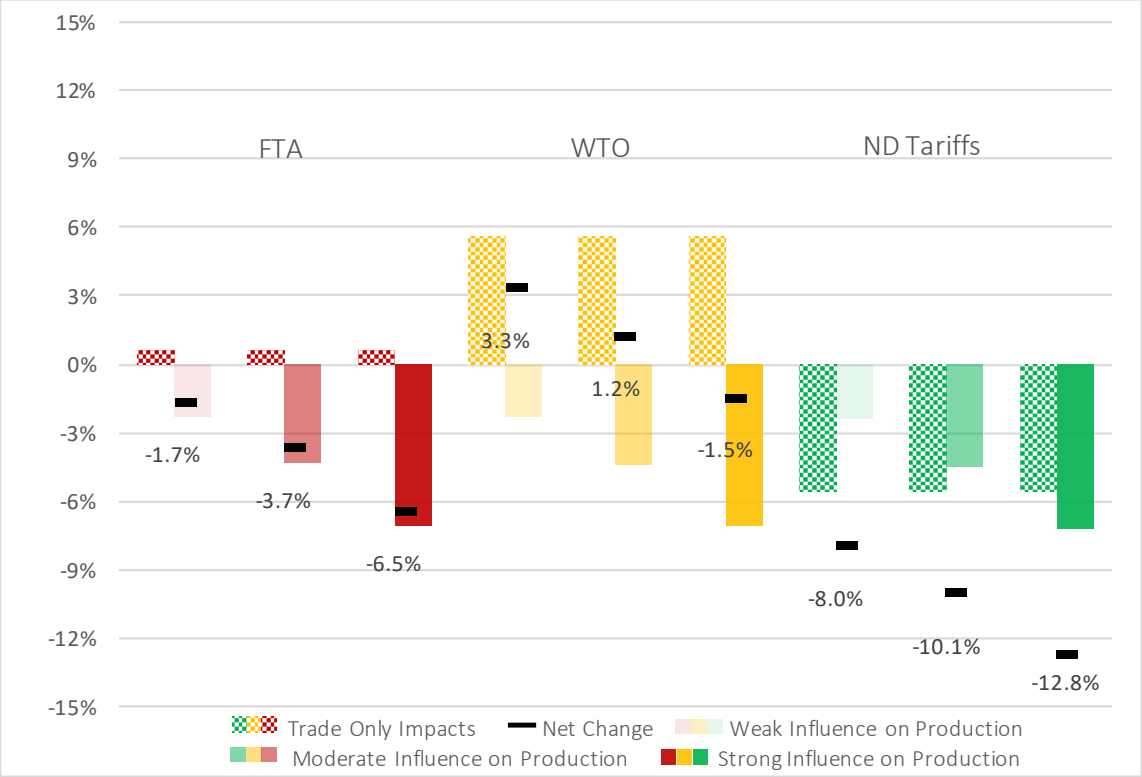
Each chart below shows the change in overall production against the baseline at the end of the projection period (2027), with the trade and domestic subsidy effects shown separately. These are then combined to show the overall impact on production.

Beef

The complete elimination of direct (CAP Pillar I) payments impacts beef production by similar amounts under all future UK-EU trade scenarios. Considered separately from the underlying impacts of future trading regimes, it sees reductions of between 2 to 7 per cent in production, depending on whether direct payments are assumed to have a 'weak' or 'strong' influence on supply. Beef cow numbers fall by between 5 and 15 per cent under all trade scenarios. The former applies when a 'weak' link is assumed between direct payments and production, and the latter when a 'strong' link is assumed. However, as removing all subsidies has a limited impact on the size of the dairy herd, the volume of beef from this source is little changed. This mitigates the fall in overall beef production. Farm gate cattle prices are little changed from the baseline projection, as is domestic use. Any reduced domestic supply is replaced by imports, precluding significant UK market price increases.

Adding the impacts of alternative trading arrangements to the effects of eliminating all direct payments, reveals a wide range of possible production levels. Under the WTO tariff schedule and assuming a 'weak' link between subsidies and domestic supply, production is 3 per cent higher than the baseline projection. In contrast, assuming a 'strong' link between subsidies and domestic supply, under the 2019 No Deal Tariff schedule production is approximately 13 per cent lower than the baseline projection.

Impacts of eliminating Pillar I direct payments on beef production assuming weak, moderate, and strong subsidy effects



Sheep

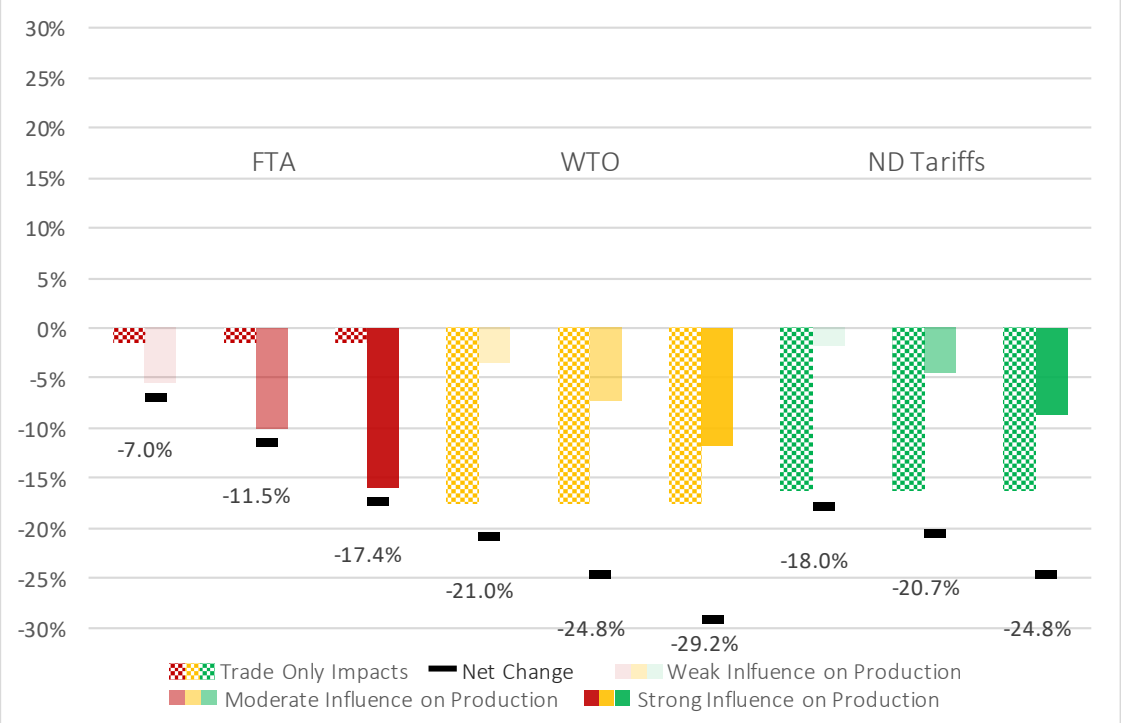
The complete elimination of direct (CAP Pillar I) payments impacts sheep production differently, depending on the UK-EU trading framework modelled in conjunction with the change in domestic policy. Considered separately from the pure trade effects, it sees reductions of between 2 and 16 per cent in production, depending on whether direct payments are assumed to have a 'weak' or 'strong' influence on supply. Falls in production are reflected in a national flock that is smaller by between 1.5 and 15 per cent compared with the baseline projection. Only small reductions in sheep numbers are found with both the WTO and 2019 No Deal Tariff scenarios (but see below on the significant concurrent reduction in production associated with trade-only impacts). The greatest impact from the elimination of direct payments on production is under the UK-EU Free Trade Agreement scenario. This trading arrangement largely maintains the status quo before subsidies are removed and the shock of the domestic policy change therefore results in a relatively big decline in ewe numbers.

Farm gate prices for sheep increase in all scenarios but only by a modest 1 per cent under a UK-EU Free Trade Agreement. Under this scenario, UK sheepmeat exports decline sharply, by between 15 and 42 per cent, again depending on whether 'weak' and 'strong' assumptions are made about the link between direct payments and production. However, lower production that manifests itself in reduced exports has little impact on farm gate prices. In contrast, prices rise sharply, (by 18 and 19 per cent respectively), under the 2019 No Deal Tariff and WTO trade frameworks, when direct payments are assumed to have a 'strong' influence on supply. This is because exports are already minimal under these trade frameworks, with little scope to fall further. As a result, farm gate prices increase in response to lower production (notwithstanding higher imports), mitigating the fall in sheep numbers.

Domestic use changes little, against the baseline projection, when direct payments are removed under a UK-EU Free Trade Agreement, but falls by 7 per cent when the WTO scenario is combined with a 'strong' assumption about the impact of subsidies on supply. Imports change little following the removal of domestic support when a UK-EU Free Trade Agreement is in place. However, under the 2019 No Deal Tariff and the WTO scenarios, imports increase by 3 per cent and 10 per cent respectively, when subsidies are assumed to have a 'strong' impact of domestic supply.

Adding the impacts of alternative trading arrangements to the effects of eliminating all direct payments, reveals uniformly negative impacts on sheep production levels. Under a Free Trade Agreement and assuming a 'weak' link between subsidies and domestic supply, production is 7 per cent lower than the baseline projection. In contrast, assuming a 'strong' link between subsidies and domestic supply under a WTO framework, production is approximately 29 per cent lower than the baseline projection.

Impacts of eliminating Pillar I direct payments on sheep production assuming weak, moderate, and strong subsidy effects



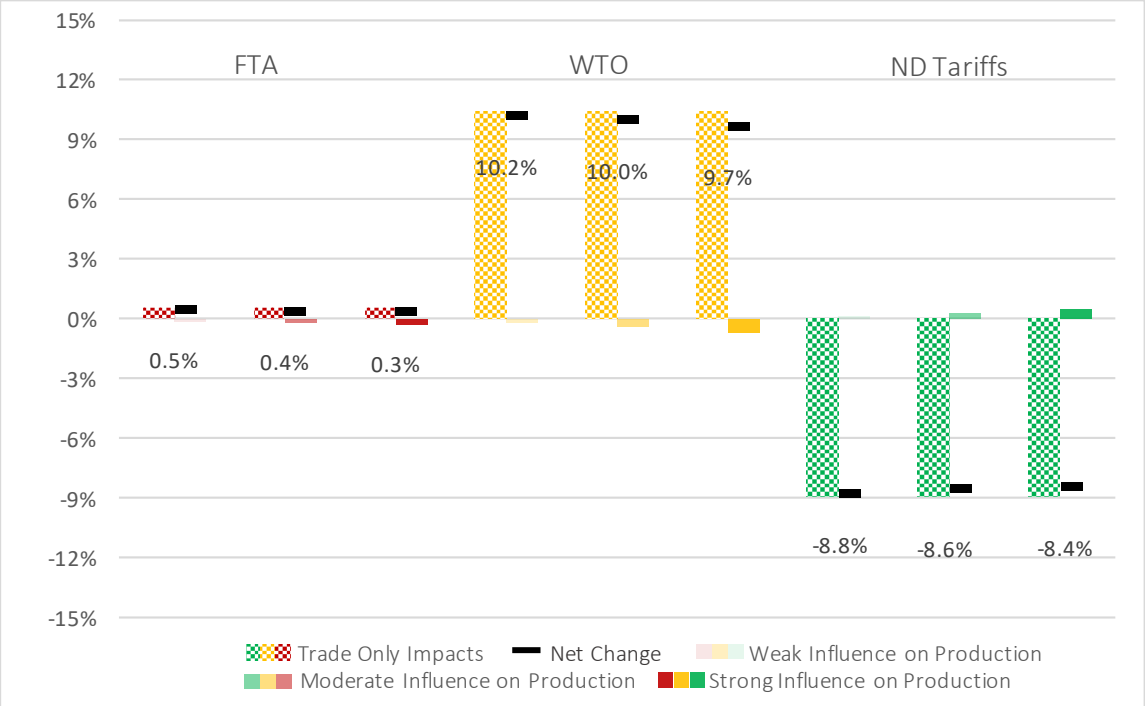
Pigs

The complete elimination of direct (CAP Pillar I) payments impacts pig production very little under all UK-EU trade scenarios. Considered separately from the pure trade effects, it sees reductions of no more than 1 per cent in production, even when direct payments are assumed to have a 'strong' influence on supply. Likewise pig numbers, domestic use, imports, exports and farm gate price are effected by no more than +/- 1 per cent under any scenario. The pig sector has not benefitted from direct (Pillar I) payments to a significant extent and is therefore little impacted by its removal.

Adding the trade only impacts to the analysis brought about little change under the UK-EU Free Trade Agreement scenario, as it preserves the status quo. However, under the WTO framework scenario pig production increases by 10 per cent, while the 2019 No Deal Tariff

framework sees production reduce by about 9 per cent. Both WTO and 2019 No Deal Tariff scenarios see new levels of imports and exports, with the former WTO trade regime increasing farm gate prices by 10 per cent and the 2019 No Deal Tariff arrangement reducing prices by 9 per cent, compared with baseline projections.

Impacts of eliminating Pillar I direct payments on pig production assuming weak, moderate, and strong subsidy effects

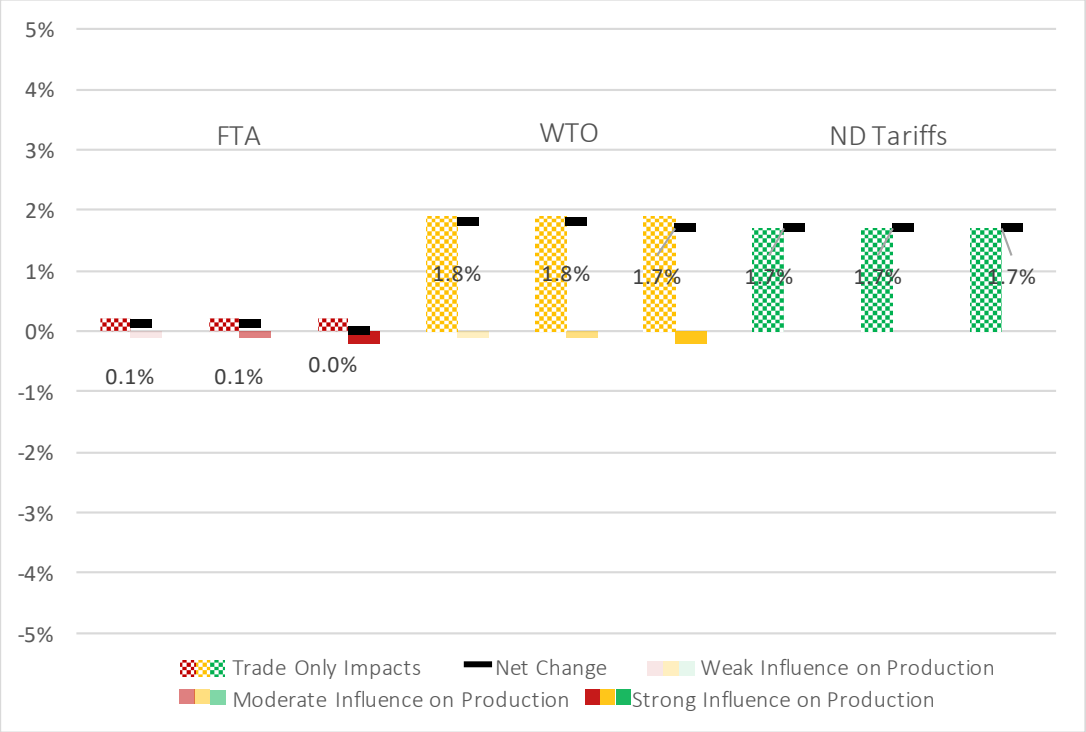


Poultry

The complete elimination of direct (CAP Pillar I) payments impacts poultry production very little under all future UK-EU trade scenarios. Considered separately from the pure trade effects, it sees no significant change in production, even when direct payments are assumed to have a 'strong' influence on supply. Likewise poultry domestic use, imports and exports are not effected and farm gate prices increase by 1.5 per cent but only under the WTO trade scenario. As with pigs, the poultry sector does not benefit from direct (Pillar I) payments and is therefore little impacted by their removal.

Again, as with pigs, adding the impacts of alternative trading arrangements brought about little change under a UK-EU Free Trade Agreement framework. In contrast with pigs only modest increases of up to 2 per cent in production are projected under the WTO and 2019 No Deal Tariff scenarios, when compared to baseline projections.

Impacts of eliminating Pillar I direct payments on poultry production assuming weak, moderate, and strong subsidy effects



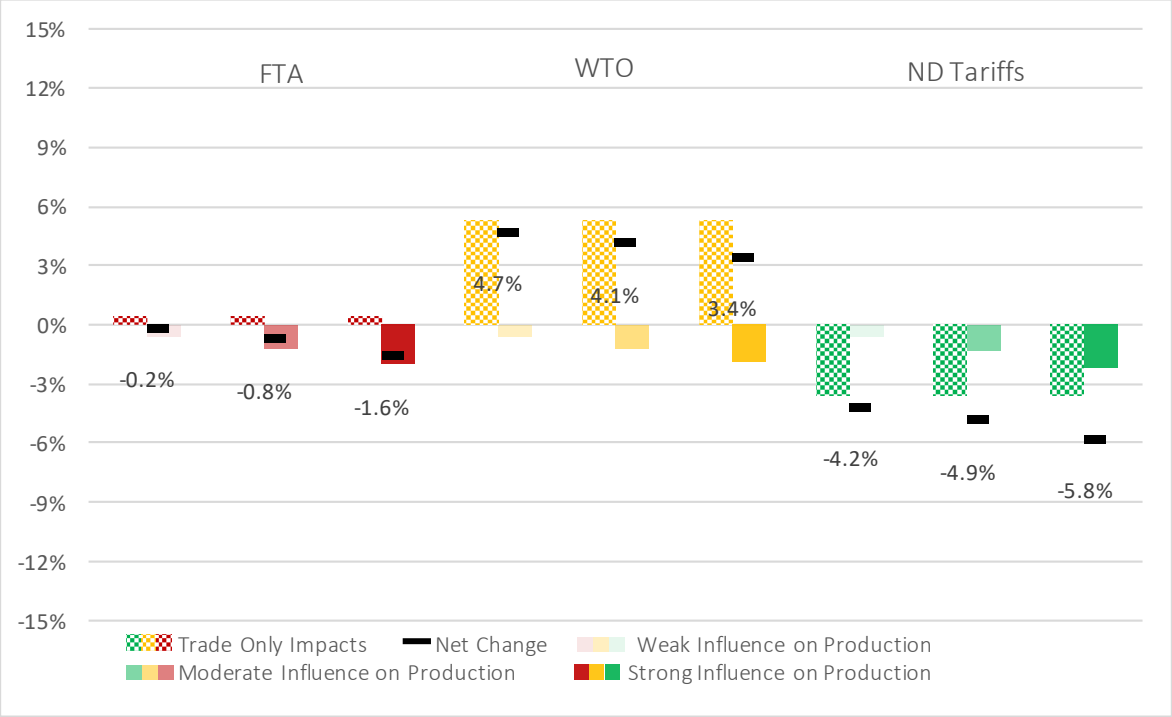
Milk

The complete elimination of direct (CAP Pillar I) payments has modest impacts on farm milk production under all UK-EU trade scenarios. Separate to trade only impacts, it sees reductions of up to 2 per cent in production, when direct payments are assumed to have a 'strong' influence on supply. This reflects the relatively small proportion of farm income provided by Pillar I direct payments compared with suckled beef and sheep.

Manufacturing use falls, under all trading scenarios, by about 2 per cent when direct payments are assumed to have a 'weak' influence on supply. When direct payments are assumed to have a 'strong' influence on supply, their removal reduces manufacturing use by 4 per cent. The reduction in manufacturing use is more pronounced than farm production because sales of higher value pasteurised milk are maintained at the expense of other processing uses. Producer milk prices are marginally higher under all the future trade scenarios, compared with the baseline projection.

Adding the impacts of alternative trading arrangements to the effects of eliminating all direct payments, reveals mixed impacts on overall production. Under a WTO framework and assuming a 'weak' link between subsidies and domestic supply, production is 5 per cent higher than the baseline projection. In contrast, assuming a 'strong' link between subsidies and domestic supply under a 2019 No Deal Tariff framework, production is approximately 6 per cent lower than the baseline projection.

Impacts of eliminating Pillar I direct payments on milk production assuming weak, moderate, and strong subsidy effects



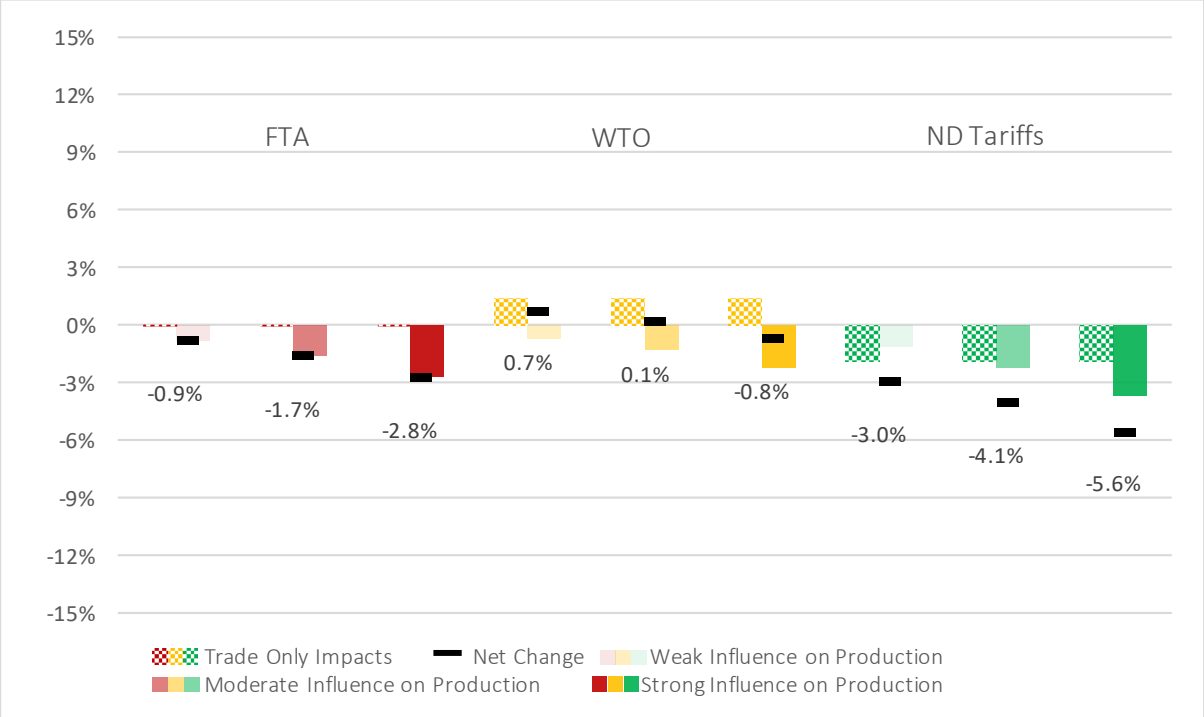
Wheat

The complete elimination of direct (CAP Pillar I) payments impacts wheat production by uniformly negative, but relatively modest, amounts under all future UK-EU trade scenarios. Wheat production reduces between 1 and 4 per cent, depending on whether direct payments are assumed to have a 'weak' or 'strong' influence on supply.

Domestic use is little impacted under all scenarios, but exports fall by up to 16 per cent, compared to the baseline projection, under a UK-EU Free Trade Agreement scenario when direct payments are assumed to 'strongly' influence supply. Exports fall by 10 per cent under the 2019 No Deal Tariff scenario, when direct payments are assumed to 'strongly' influence supply but the removal of direct payments has no additional impacts on production when a WTO tariff framework is already in place. Imports increase only modestly under either a UK-EU Free Trade Agreement or WTO framework, but rise by 24 per cent under the 2019 No Deal Tariff scenario.

Adding the impacts of alternative trading arrangements to the removal of direct payments, counterbalanced the negative impacts under a WTO framework, and reinforced the negative impacts on production under both the UK-EU Free Trade Agreement and the 2019 No Deal Tariff framework. This was most pronounced for the 2019 No Deal Tariff framework, when the combined effects of the trade and domestic policy regimes, assuming direct payments have a 'strong' influence on supply, reduced production by 6 per cent, compared to the baseline projection.

Impacts of eliminating Pillar I direct payments on wheat production assuming weak, moderate, and strong subsidy effects



It should be noted that the removal of direct payments entail significant departures from existing policies. The modelling system is robust for relatively modest changes in direct payments. However, there is uncertainty whether the final £1 cut from farmers' subsidies has the same impact as the first, when a scenario such as the removal of all subsidies is modelled. This means it is not possible to validate the results against previous real world experience. In addition, the modelling system does not capture changes in factor markets, particularly possible reductions in land rents following the removal of subsidies. Likewise, if alternative environmental subsidies are introduced these may indirectly support production if this is required to deliver public goods, such as the maintenance of traditional farming landscapes.

Expansion and increase of coupled payments

Modelling the reallocation of payments from decoupled to coupled support for the individual nations of the UK (excluding Wales) leads to relatively modest changes in activity levels, for the UK as a whole. The results are set out in full in the main body of the report and annexes.

Differences in the size of the production base in each of the UK administrations, means there are asymmetric impacts at UK level following a policy change to fully coupled farm support for any of the UK administrations.

The UK-EU trade regime in place has a significant impact on the projected UK production, and farm-gate price changes when direct payments are assumed to be 100 per cent coupled. Changes in imports and exports play an important role in reaching new price levels.

Beef markets are most impacted if all Pillar I support is coupled to production. While modest increases in production and decreases in farm-gate prices are projected for the UK as a whole, the impact on the production base (cow numbers) is more significant for individual UK nations following the adoption of coupled support measures.