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Impact on UK Agriculture of Changes to Direct Payments Following Brexit

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Impacts on UK Agriculture of Changes to Direct Payments Following Brexit - Policy Brief

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 analyses¹.

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

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.

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.
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 payments².

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

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.

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 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.

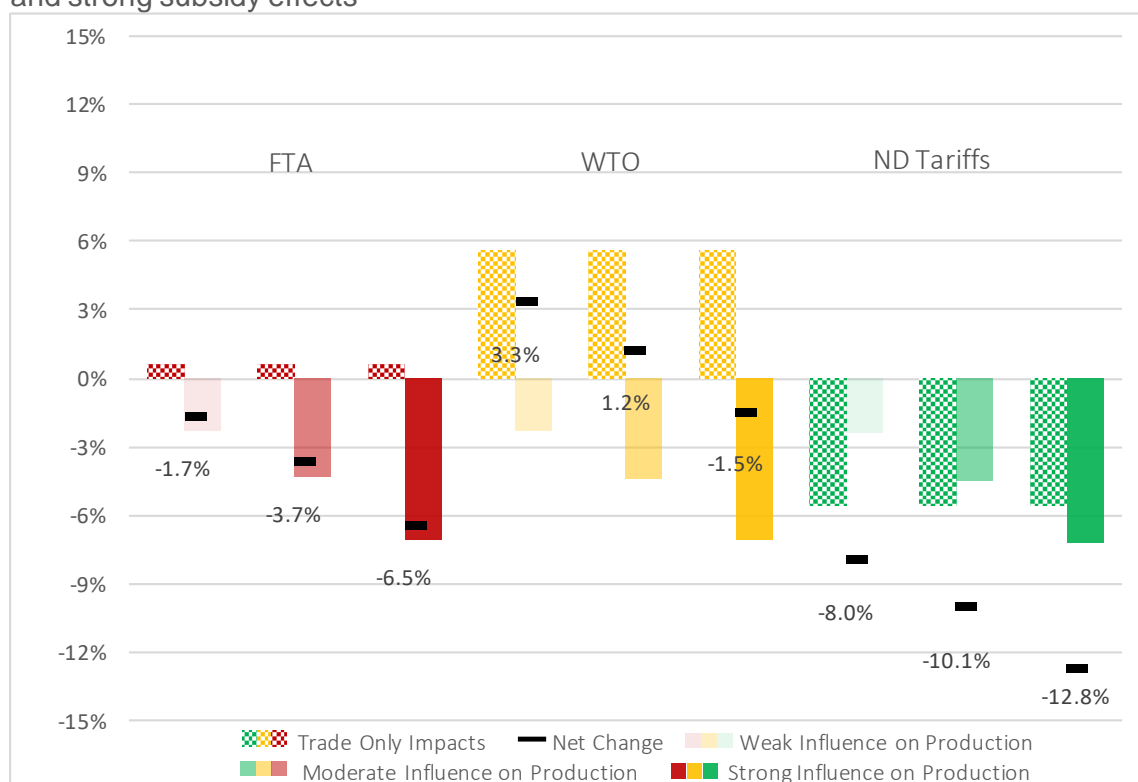
Each chart below shows the change in overall production against the baseline at the end of the projection period (2027), with the trade and domestic subsidy effects shown separately. These are then combined to show the overall impact on production.

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

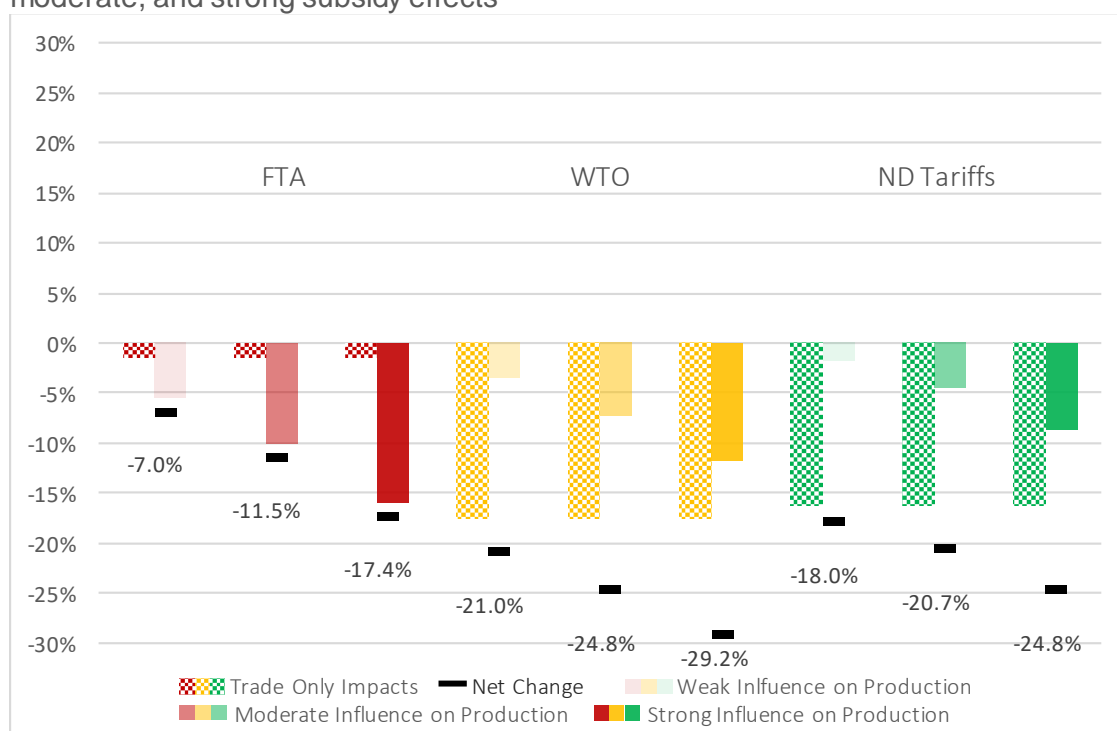
The complete elimination of direct (CAP Pillar I) payments impacts sheep production differently, depending on the UK-EU trading framework modelled in conjunction with the change in domestic policy. Considered separately from the pure trade effects, it sees reductions of between 2 and 16 per cent in production, 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



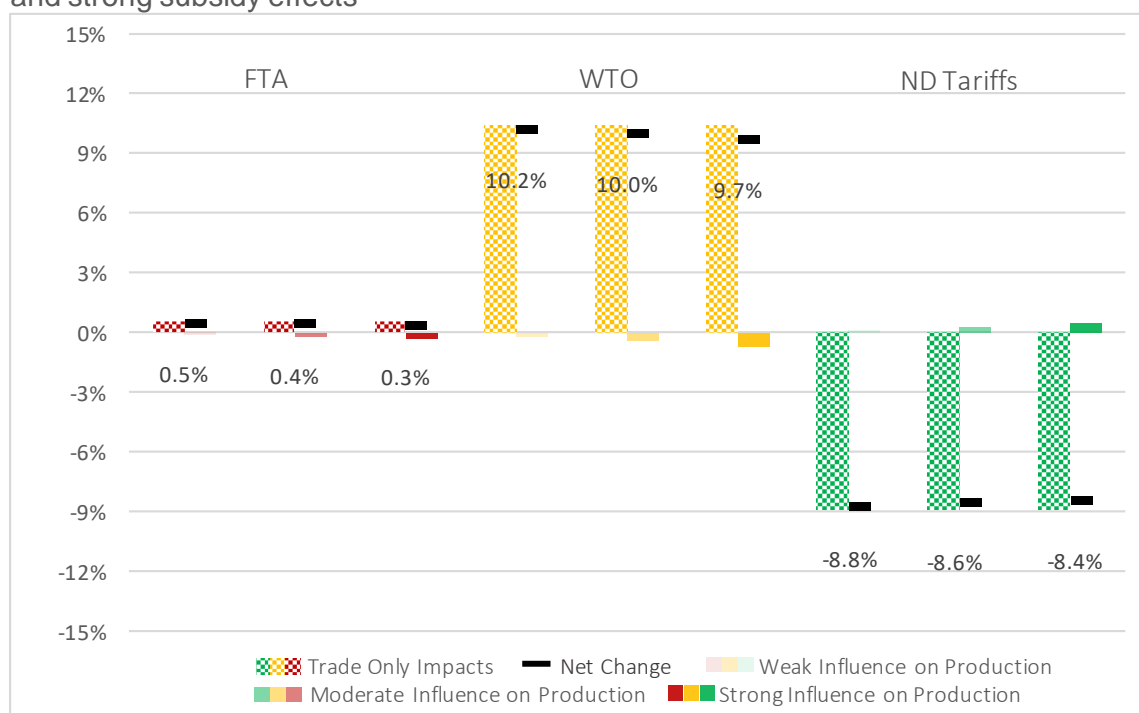
Pigs

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

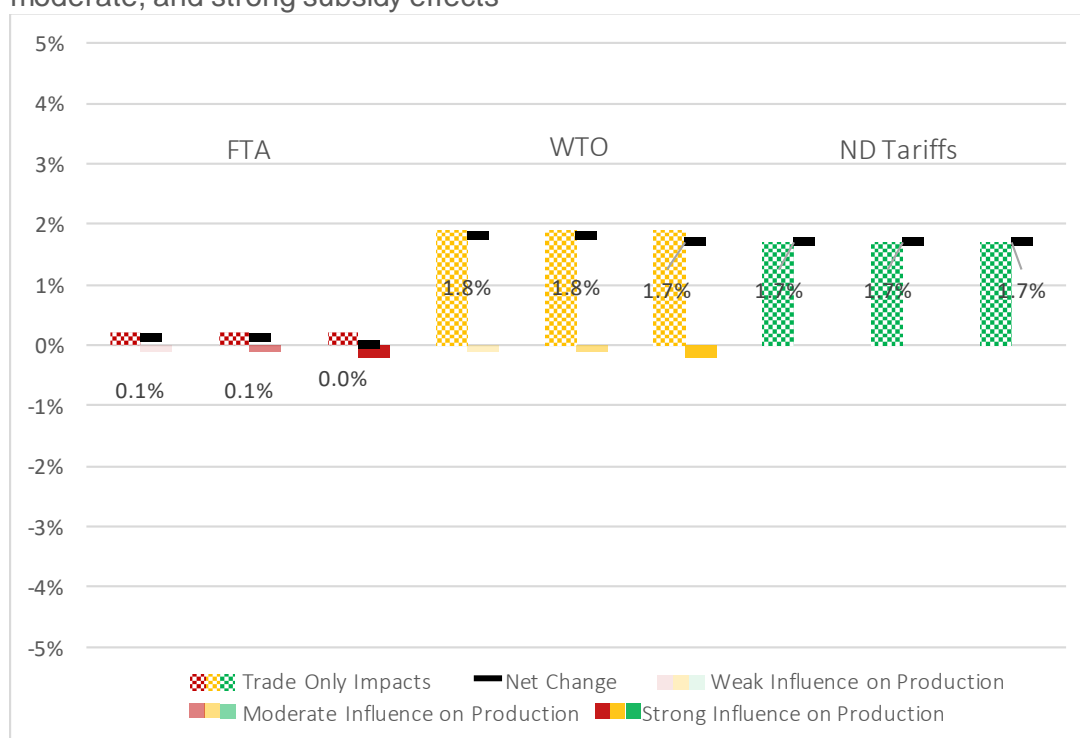


Poultry

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



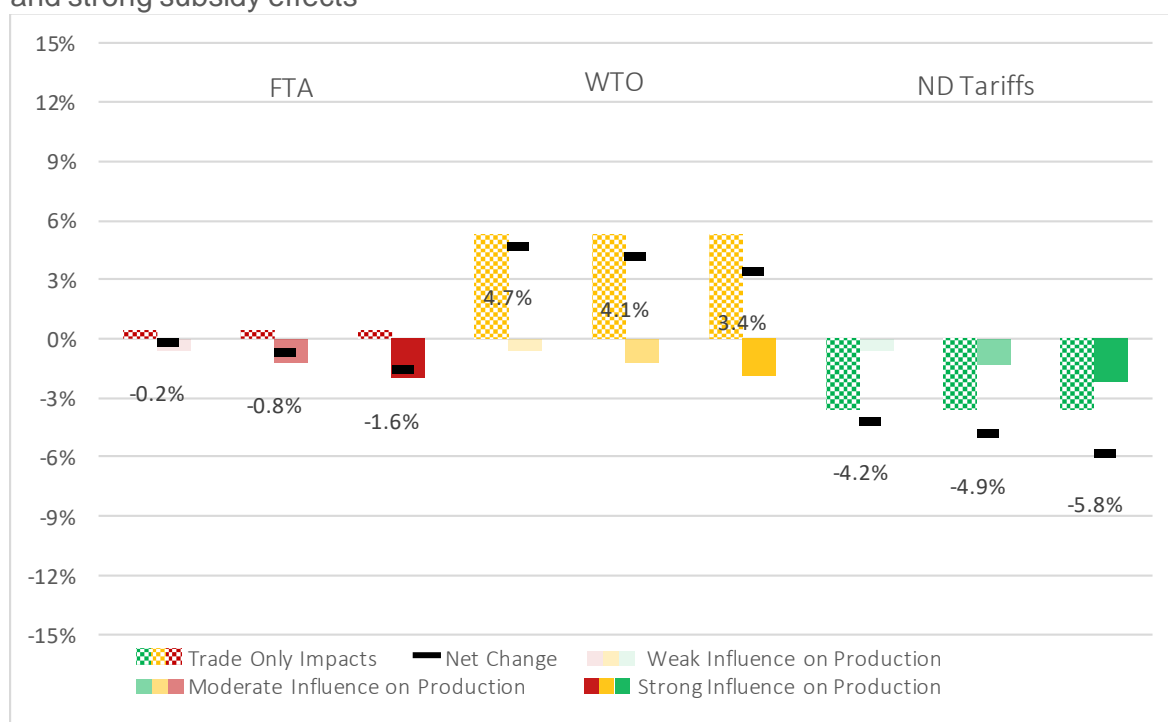
Milk

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



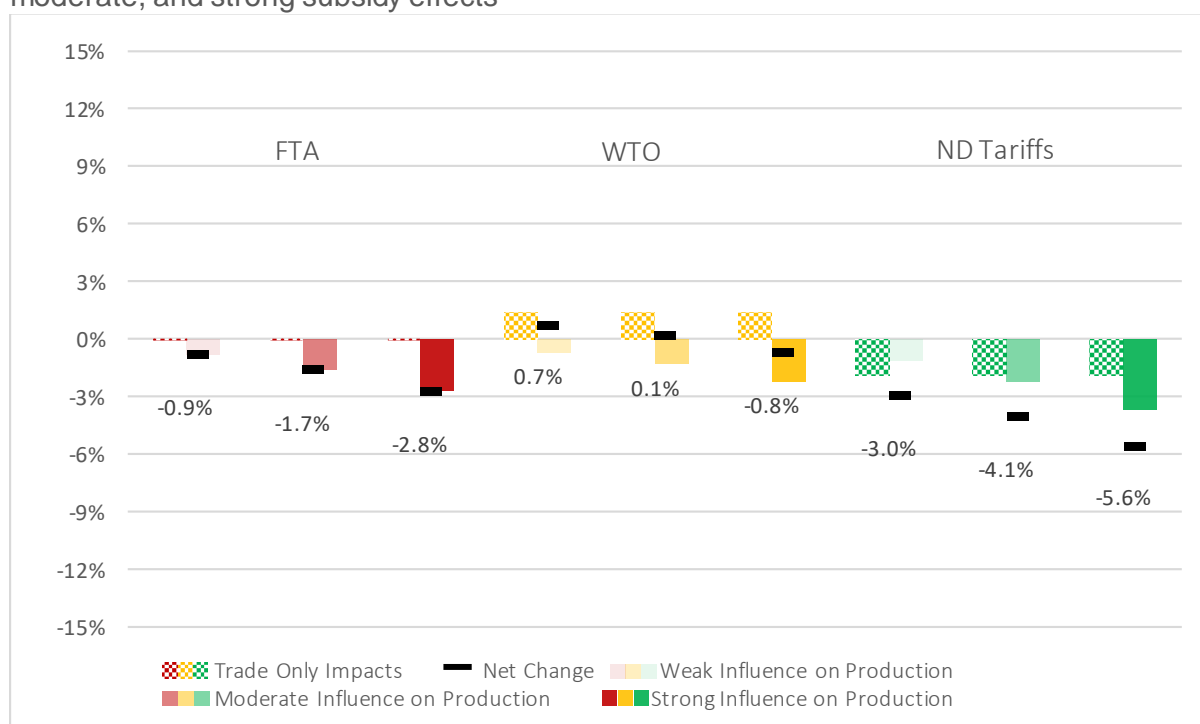
Wheat

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.

Impacts on UK Agriculture of Changes to Direct Payments Following Brexit - Main Report

Introduction

The future of direct payments is likely to change considerably following the UK's exit from the EU and the resulting move away from the Common Agricultural Policy (CAP) to new agricultural policies in the UK. These policies are likely to differ across the administrations in the UK. In England, Defra has indicated its intention to phase-out current direct payments by 2027 and instead provide payments based on the delivery of public goods, such as biodiversity, water quality and flood alleviation (Defra, 2018). In Wales, the Welsh Government has proposed replacing direct payments with a new Sustainable Farming Scheme providing support to deliver sustainable land management outcomes. (Welsh Government, 2019). The administrations in Scotland and Northern Ireland also intend to implement new agricultural policies with a variety of objectives, including enhanced environmental outcomes, but to date there has been no declaration of policy decisions (Scottish Government (2018) and DAERA, 2018). Given that direct payments under the Common Agricultural Policy represent the largest pre-COVID industrial subsidy in the UK, it is important to assess the economic impact of potential changes to this form of support. Within this study, the FAPRI-UK modelling system is used to capture the market impacts of changes in domestic support policy in the context of changing trade arrangements. In particular, two scenarios are considered:

- i) 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.
- ii) 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 payments⁴.

Details concerning the scenarios are provided in the next section.

The modelling system provides a wide range of projections for numerous variables, including agricultural activity levels, production, trade, producer prices and consumption. The model is firstly simulated to generate Baseline projections based on the assumptions that current policies remain in place, specific macroeconomic projections hold and average weather conditions apply. It is assumed under the Baseline that the UK remains within the EU. Baseline projections for each country in the UK are generated for a ten year period, which extends out to 2027. Within this study, the modelling system is further simulated under various policy scenarios to incorporate changes in trade arrangements and Pillar I support to provide a variety of comparisons.

⁴ Coupled payments scenarios are not applied directly in the case of Wales, so that only the indirect effects of hypothetical use elsewhere in the UK are estimated for the agricultural sector in Wales.

Scenario Definitions

Changes in Pillar I Direct Payments

The first policy scenario investigates the impacts of altering the level of direct payments (CAP Pillar I). The value of Pillar I support paid out in the UK, and in each Devolved Administration, in the five years 2014 to 2018 is provided in Table 1. In the policy scenario, two different magnitudes of change to Pillar I payments (both decoupled payments and in the case of Scotland coupled payments) are explored: (a) a 50% reduction; and (b) elimination⁵. Although the decoupled payments are not linked to production in an administrative sense, within the modelling system it is assumed that such payments continue to exert an influence on production. This assumption is in keeping with the literature which indicates that decoupled direct payments influence production decisions due to a variety of mechanisms, including influence on risk preferences, credit constraints, allocation of labour, expectations about future preferences and cross compliance obligations (Hennessy (1998), Goodwin and Mishra (2006), Ahearn *et al.* (2006) and Coble *et al.* (2008)).

Within the UK modelling system decoupled payments are included within revenue per unit of production terms incorporated within supply equations (beef cows, ewes, milk production, and crop area). The revenue term contains a market revenue component and a direct payment component. The magnitude of the direct payment term relative to the market revenue term is calibrated using Farm Business Survey data for different farm types and therefore reflects variations in the importance of direct payment across administrations and, in the case of the beef cow and ewe equations, across land types (Lowland, Disadvantaged Area and Severely Disadvantaged Area). Furthermore the direct payment term is multiplied by a coefficient to capture the production stimulating impact of decoupled payments. A coefficient equal to one signifies that the direct payment is fully coupled and exerts the same production stimulating impact as market revenue, while a coefficient less than one diminishes the production stimulating impact of the payment.

There is considerable uncertainty concerning the extent to which these payments exert a production stimulating impact 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 EU modelling system, it is firstly assumed that the production stimulating 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. This assumption is in keeping with the treatment of decoupled payments within the FAPRI US model, where there has been a longer history of decoupled payments and hence, more empirical evidence is available. However, this empirical evidence is primarily based on the crop sector. Given the uncertainty sensitivity analysis is undertaken using two alternative assumptions concerning the production impact, assuming there is a moderate influence on the level of production *i.e.* 60% of the direct payment is acted on as a price increase by producers, and a relatively strong influence, whereby 100% of the 'decoupled' payment is assumed to trigger a production response due to being interpreted as a price increase by the sector. The latter is equivalent to assuming that the payments are fully coupled.

⁵ Under the Baseline Pillar I (Basic Payment Scheme) decoupled payments in 2017 equate to £1,768 million in England, £235 million in Wales, £425 million in Scotland and £292 million in Northern Ireland. This encompasses the Basic Payment Scheme, Greening and the Young Farmer Payment. A further £47 million is paid via coupled payment schemes in Scotland. Note Less-Favoured Area Support Scheme remains unchanged within this scenario analysis.

Table 1 Pillar I payments made to UK agriculture 2014 - 2018 (million euros)

Euros million			2014	2015	2016	2017	2018
UK CAP payments							
	Pillar 1		3234	3150	3121	3171	3174
	of which:	Direct Aids	3195	3112	3035	3080	3126
		Market price support (b)	39	38	86	91	48
England CAP payments							
	Pillar 1		2048	2026	2018	2069	2084
	of which:	Direct Aids	2009	1988	1932	1988	2036
		Market price support (b)	39	38	86	81	48
Wales CAP payments							
	Pillar 1	Direct Aids	301	269	260	268	263
	of which:	Direct Aids	301	269	260	264	263
		Market price support	-	-	-	4	-
Scotland CAP payments							
	Pillar 1	Direct Aids	566	534	522	507	503
	of which:	Direct Aids	566	534	522	504	503
		Market price support	-	-	-	3	-
Northern Ireland CAP payments							
	Pillar 1	Direct Aids	319	321	321	327	324
	of which:	Direct Aids	319	321	321	324	324
		Market price support	-	-	-	3	-
(a) Information based on EU financial year 16th October - 15th October. Figures exclude financial corrections/penalties.							
(b) Market price support covers interventions in agricultural markets, e.g. public intervention and private storage aid. Most of these schemes are administered by the Rural Payments Agency on behalf of the UK.							
Source: Adapted from Defra, Agriculture in the UK datasets: Chapter ten - public payments, Table 10.7, 23 September 2019.							

Modelling this shadow-coupling effect of 'decoupled' support involves a complex set of interactions to determine the ultimate supply response because the commodity markets are all interlinked. However, if considering a simplified example, for a single commodity market, the greater the proportion of the payment assumed to influence production, the more the supply curve will move, and the larger the quantity supplied.

Note that the analysis does not consider the potential production impact of the new schemes that will replace the decoupled Pillar I payments.

The market impact of this policy change will depend on the underlying trade arrangements and hence the scenario analysis is undertaken using three alternative post-Brexit trade arrangements, namely:

- *UK Free Trade Agreement with the EU (FTA)*: As in the Baseline, this scenario entails tariff and quota free access for UK exports to the EU and vice-versa tariff and quota free access for imports into the UK from the EU (EU-27). However, trade facilitation costs (equal to 5% of the commodity price) are applied to exports/imports to and from the EU to reflect additional trade costs associated with exporting and importing.
- *WTO Default (WTO)*: Under this scenario, default MFN tariffs are applied to imports from the EU, as well as the rest of the world. In addition, it is assumed that the EU applies MFN tariffs to imports from the UK. In terms of exports from the UK to the rest of the world, it is assumed that the UK inherits the EU's tariff structure to 3rd countries; *i.e.* tariffs applied to exports from the UK to the rest of the world remain unchanged under this scenario compared to the Baseline. Trade facilitation costs equal to 8% are applied to exports/imports to/from the EU in this scenario to capture additional costs associated with less integrated trade arrangements.
- *2019 No Deal Tariff Schedule (No Deal)*: Under this scenario, the UK government's planned tariff schedule in the event of the UK leaving the EU without a deal is applied to imports from the EU and the rest of the world (Department for International Trade, 2019). Tariff rate quotas are applied where appropriate. Default MFN tariffs are applied to UK exports. In addition, trade facilitation costs equal to 8% are applied to exports/imports to/from the EU. Further details regarding the assumptions underlying this scenario are provided in Table 2 and Figure 1. While the No Deal Tariff Schedule provides temporary arrangements prior to the agreement of a long-term relationship with the EU, under this scenario, it is implemented for the entire projection period so as to isolate the market impact of these specific changes. Note that in terms of imports/exports, the model treats the UK as a single entity and consequently, the analysis does not account for the potential non-application of tariffs for Irish produce entering the Northern Ireland market.

The full combination of Pillar I direct payment scenarios is provided in Table 3.

Table 2 New tariffs and tariff rate quotas applied to UK imports under the 2019 No Deal Tariff Schedule scenario

Sector	Tariffs applied to Imports to the UK	Tariffs applied to UK Exports to the EU ¹
Dairy		
Cheese (Cheddar, not grated or for processing)	€22.1/100 kg	€167.1/100 kg
Butter (Natural butter, fat content <=85%)	€60.5/100 kg	€189.6/100 kg
Crops		
Wheat (low and medium quality)	0	€9.5 /100 kg
Barley (low and medium quality)	0	€9.3 /100 kg
Livestock		
Pig meat (Fresh/chilled pig carcass)	€7.1/100 kg	€53.6/100 kg
Sheep meat (Fresh/chilled lamb carcass)	12.8%+€171.3/100 kg	12.8%+€171.3/100 kg
Poultry (Not cut in pieces, fresh or chilled (65% chickens))	€19.5/100 kg	€32.5/100 kg
Beef (Fresh/chilled cattle carcass)	6.8%+€93.3/100 kg	12.8%+€176.8/100 kg

1) Assumed that tariffs applied to UK exports to the rest of the world remains the same as the baseline, i.e. the UK inherits the EU's tariff structure to 3rd countries.

Figure 1 Tariff Rate Quotas under 2019 No Deal Tariff Schedule

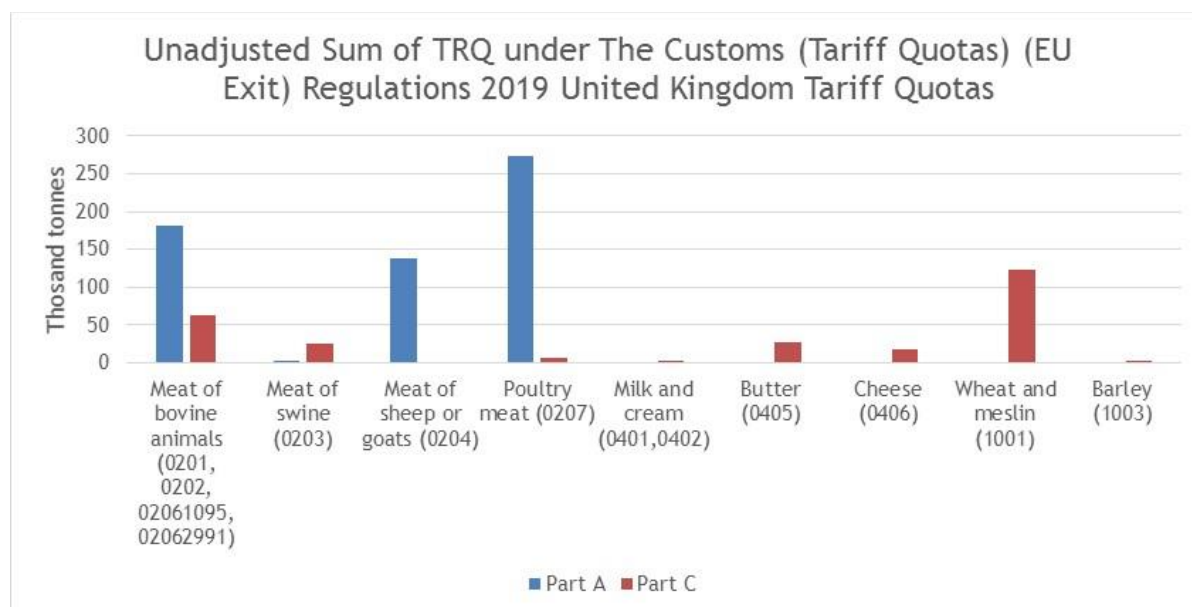


Figure refers to total TRQ under different quota regimes, including country and non-country specific. Part A and Part C categories set out in The Customs (Tariff Quotas) (EU Exit) Regulations 2019 United Kingdom Tariff Quotas, version 1.0, 7 March 2019)

Table 3 Pillar I direct payments matrix

Trade Agreement Type	Production Impact of Decoupled Payment	Reduction in PI Payment
FTA with EU	30%	50%
FTA with EU	30%	100%
WTO	30%	50%
WTO	30%	100%
No Deal Tariff Schedule	30%	50%
No Deal Tariff Schedule	30%	100%
FTA with EU	60%	50%
FTA with EU	60%	100%
WTO	60%	50%
WTO	60%	100%
No Deal Tariff Schedule	60%	50%
No Deal Tariff Schedule	60%	100%
FTA with EU	100%	50%
FTA with EU	100%	100%
WTO	100%	50%
WTO	100%	100%
No Deal Tariff Schedule	100%	50%
No Deal Tariff Schedule	100%	100%

Provision of Coupled Payments

Under this scenario, coupled payments are introduced for specific sectors (increased in the case of Scotland), with a corresponding decrease in the budget for decoupled payments. The policy change is implemented in England, Scotland and Northern Ireland (but not in Wales) on an individual country basis. Specifically, two coupling scenarios are analysed:

- *20% Coupled payments:* 20% of the Pillar I budget within individual countries is transferred to coupled payments. Within the Baseline, coupled payments make up 10% of relevant Pillar 1 payments (i.e. Coupled Payments/(Coupled Payments + Basic Payment Scheme + Greening Payment) in Scotland⁶.
- *100% coupled payments:* 100% of the Pillar I budget within individual countries is transferred to coupled payments.

The allocation of the coupled payments across sectors is provided in Table 4. This allocation is based on consultation with the agricultural administrations but is purely hypothetical. The payments solely target the beef and sheep sectors under the 20% coupled payment scenario, with the allocation in Scotland reflecting the current sub-division across these sectors. Under the 100% coupled payment scenario, the coupled budget is distributed in the same manner in Scotland, i.e. coupled payments are just provided to the beef and sheep sectors. In contrast, coupled payments are distributed across the beef, sheep, dairy and crop sectors under the 100% coupled payment scenario in England and Northern Ireland.

⁶ Within the revenue term the coupled payment component is multiplied by a coefficient of one.

Table 4 Allocation of the coupled payments across sectors (Percentage of coupled budget allocated to sectors)

	Sector			
	Beef	Sheep	Dairy	Crops
20% Coupled Payments				
England	74	26		
Scotland	85	15		
Northern Ireland	75	25		
100% Coupled Payments				
England	21	7	31	41
Scotland	85	15		
Northern Ireland	51	9	35	5

This analysis is undertaken using the 30% assumption regarding the production stimulating impact of the decoupled payments. As before, the scenarios are undertaken using alternative assumptions for underlying trade arrangements. The full combination of coupled payment scenarios is provided in Table 5.

Table 5 Coupled payments matrix

Trade Agreement Type	Country	Extent of Coupling
FTA with EU	England	20%
FTA with EU	Scotland	20%
FTA with EU	Northern Ireland	20%
WTO	England	20%
WTO	Scotland	20%
WTO	Northern Ireland	20%
No Deal Tariff Schedule	England	20%
No Deal Tariff Schedule	Scotland	20%
No Deal Tariff Schedule	Northern Ireland	20%
FTA with EU	England	100%
FTA with EU	Scotland	100%
FTA with EU	Northern Ireland	100%
WTO	England	100%
WTO	Scotland	100%
WTO	Northern Ireland	100%
No Deal Tariff Schedule	England	100%
No Deal Tariff Schedule	Scotland	100%
No Deal Tariff Schedule	Northern Ireland	100%

Results

Note that the following tables of results and associated text are based on the difference between combined changes in direct payments and trade arrangements against changes in trade arrangements alone i.e. just the patterned bars in the executive summary. This comparison is used to isolate the impact of changes in direct payments in the context of alternative trade arrangements. The impact of changes in trade arrangements on a stand-alone basis compared to the Baseline is provided in Appendix 1, while the impact of combined changes in direct payments against the Baseline is shown in Appendix 2. The percentage changes in the tables and text refer to the end of the projection period (2027).

Changes in Pillar I Direct Payments

Beef Sector

The impact on the beef sector of reducing/eliminating Pillar I direct payments using the 30% decoupling assumption is shown in Table 6. Reducing Pillar I direct payments by 50% has a downward impact on beef cow numbers. However, the impact is fairly modest, with the decline in UK beef cow numbers due to the change in direct payments ranging from -2.6% to -2.9% across the alternative trade arrangements.⁷ The downward impact is greater in Scotland (-4.2% to -4.7%) and Northern Ireland (-3.9% to -4.1%) compared to elsewhere in the UK. The former reflects the reduction of both decoupled and coupled payments in Scotland. The impact in the latter is attributable to the substantial dependence on Basic Payment direct payments by beef farmers in Northern Ireland.

The projected impact of reducing/eliminating direct payments is similar across all the trade arrangements. The downward impact on beef cows is more marked when direct payments are fully eliminated (100% reduction in Table 6), but still fairly modest (UK beef cows are -4.7% to -5.0% lower). Again, Scotland and Northern Ireland experience the largest declines. The downward impact of the reduction/elimination of Pillar I support is less on dairy cows compared to beef cows (see dairy section below). As a result, progeny from the dairy herd continue to support beef production and the decline in beef production is less pronounced than the decline in beef cows.

As shown in Figure 2, it is projected that the decline in suckler cow numbers is variable across land categories (Severely Disadvantaged Area (SDA), Disadvantaged Area (DA) and Lowland). In particular, the decline is most marked in the SDA land category, where decoupled Pillar I payments comprise a substantial component of farm income.

It is important to stress that the reductions in direct payments examined under these scenarios go beyond the boundaries upon which the models have been calibrated. The substantial nature of the changes in direct payments considered in this analysis could lead to structural changes not captured by the modelling system. In addition, the assumption that the progeny from the dairy herd are finished for beef under the 2019 No Deal Tariff Schedule version of this scenario is perhaps questionable due to the significant decline in the beef price (and hence the profitability of finishing animals from the beef herd) that occurs due to the change in trade arrangements.

The response of the beef price is mainly determined by the underlying trade arrangements. Across all the scenarios imports increase to make-up for the modest decline in production and hence there is little change in available supplies (production plus imports). Specifically, under the FTA version of this scenario, imports from the EU increase and thereby limit the

⁷ Note that these percentage changes are in addition to the reduction in numbers due to the change in trade arrangements that are reported in the Appendix. As shown in Appendix 2, combining the 50% reduction in Pillar I payment and trade arrangement impacts, the projected declines in UK beef cow numbers under the FTA, WTO and No Deal Tariff Schedule compared to the Baseline are -2.0%, +3.9% and -15.5% respectively.

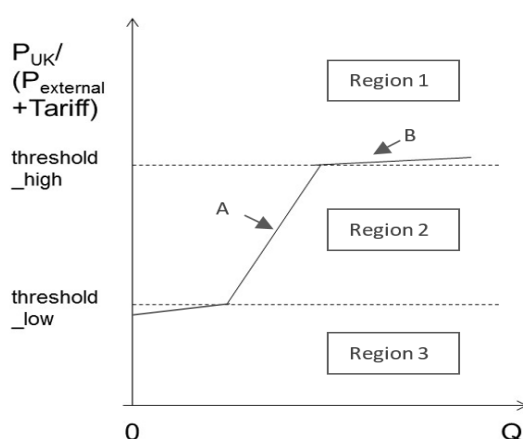
price increase. Under the WTO version of this scenario, when the trade arrangements are applied on a stand-alone basis the UK price reaches the 'World Price + MFN Tariff level', which acts to curb further price rises following the reduction/elimination of direct payments. Under the 2019 No Deal tariff schedule, there is a large inflow of imports from the rest of the world when the trade arrangements are changed on a stand-alone basis, which leads to a decline in the domestic beef price. The competitiveness of imports from the Rest of the World following the change in tariffs limits further price changes. As a result, it is projected that the reduction in direct payments leads to negligible beef price responses and hence, there is limited variability in the price impact across all the scenarios. See Box 1 for more details on how the WTO and No Deal tariff trade arrangements limit the extent of domestic beef price increases following changes in direct payments.

Box 1: Trade Threshold Effects under the WTO and 2019 No Deal Tariff Schedule Scenarios

When WTO default tariffs are applied on a stand-alone basis, the UK beef price rises due to reduced imports from the EU. The price rises until it reaches the 'World Price + MFN Tariff level'. As explained in more detail in Appendix 4, the $P_{UK}/(P_{RoW} + \text{Tariff})$ price ratio increases following the change in trade arrangements and triggers the threshold point in which imports from the Rest of the World increase sharply (Region 1 in the diagram below). This trigger point effectively curbs the extent to which the UK beef price can rise further. Consequently, following the reduction/elimination of direct payments, the resulting fall in UK production does not lead to significantly higher domestic prices.

When the 2019 No Deal tariff schedule trade arrangements are changed on a stand-alone basis, the cut in tariffs to imports from the Rest of the World leads to the large inflow of imports since the $P_{UK}/(P_{RoW} + \text{Tariff})$ price ratio increases and triggers an elastic inflow of imports (Region 1). The UK equilibrium price falls until equilibrium is reached at this threshold level. Following the further reduction/elimination of direct payments, imports from the RoW adjust and hence there is little change in price.

Threshold Effects within Import Supply Curve



The implications of using alternative decoupled payment production stimulating assumptions are shown in Table 7 and Table 8. The negative impacts on beef cow numbers and production are inevitably more marked when 'medium' and 'strong' (60% and 100% decoupling assumptions) are employed about the impact of subsidies on production. For example, when it is assumed that the production stimulating impact of decoupled payments

is 'strong' UK beef cow numbers fall by approximately 15% when the direct payments are fully eliminated. Under these conditions Northern Ireland experiences the largest decline (-27%) due to importance of existing direct payments in the beef sector. The differential results across land categories are more marked under the 'moderate' and 'strong' assumptions, compared to the 'weak' 30% assumption (Figure 2).

The above analysis is based on a particularly competitive reference world beef price. The implications of using a higher beef price is provided in Appendix 3.

Figure 2 Projected changes in suckler cow numbers under 100% reduction of Pillar I direct payments scenario

a) 30% decoupling assumption



b) 60% decoupling assumption



c) 100% decoupling assumption



Sheep Sector

The impact on the sheep sector of reducing/eliminating Pillar I direct payments using the 'weak' 30% decoupling assumption is shown in Table 9. The projected declines in ewe numbers and production are variable depending on the underlying trade arrangements. The decline in ewe numbers is most marked under the FTA trade arrangements. The price response is small under these trade arrangements. For example, following the reduction of Pillar I payments by 50% the sheepmeat price increases by 0.4% under FTA trade arrangements, compared to 4.3% and 2.3% under WTO and No Deal trade arrangements. Under the FTA version of this scenario, UK sheepmeat exports decline, thereby offsetting the decline in production, which limits the price increase. Under WTO and No Deal trade arrangements, UK exports are already minimal and hence have little room to fall further. As a result, price increases in response to the decline in production under the WTO and No Deal trade arrangements.⁸

Similar to the beef sector the reduction/elimination of Pillar I payments on ewe numbers and production is most pronounced in Scotland and Northern Ireland. This again reflects the fact that coupled as well as decoupled payments are reduced in Scotland and the large contribution of decoupled payments to farm income in Northern Irish sheep farmers.

Disaggregating the changes in ewe numbers according to land category, demonstrates different results in lowland areas (Figure 3). In particular, it is projected that the price increases under the WTO and No Deal versions of these scenarios offset the decline in decoupled payments within lowland areas in England, Wales and Scotland under the 'strong' 100% reduction scenario in direct payments, which results in a slight increase in numbers. However, the price increase is not sufficient to have an offsetting impact in disadvantaged areas.

As shown in Table 10 and Table 11, a similar pattern regarding the impact of trade arrangements emerges under the different production stimulating assumptions. The projected declines in ewes and production at the UK-level are more marked when larger decoupling assumptions are employed. For example, when it is assumed that the decoupling effect is 100% (strong) UK ewe numbers fall by 15% following the elimination of Pillar I direct payments under FTA trade arrangements. In this case the sheepmeat price rises by 4%. The price response is more favourable under WTO and No Deal trade arrangements (+19% and 18% respectively following the full elimination of direct payments). However, it should be noted that compared to the Baseline it is still projected that sheepmeat prices fall due to the large negative impact on price of the changes in the terms of trade under the WTO and No Deal scenarios (see fall in sheepmeat prices under different trade arrangements in Appendix 2).

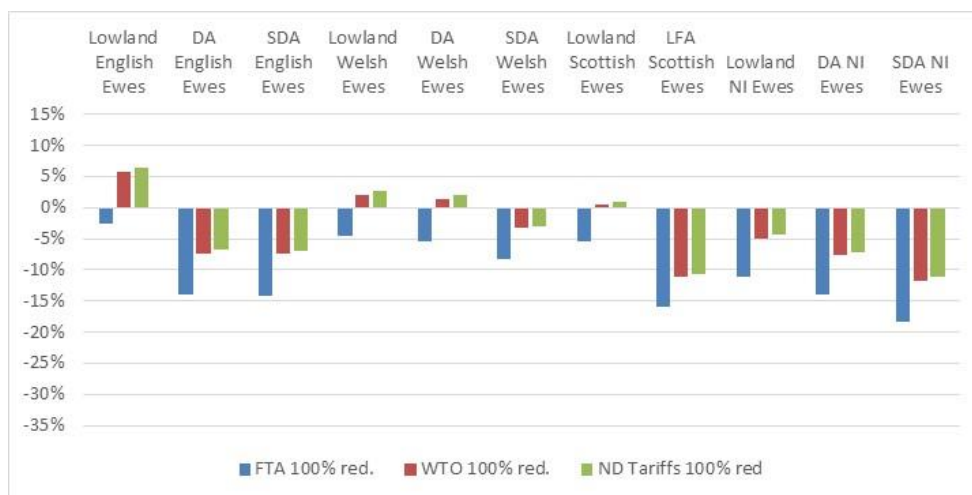
⁸ See Appendix 4 for further discussion of sheepmeat price response under WTO and No Deal trade arrangements.

Figure 3 Projected changes in ewes under 100% reduction of Pillar I direct payments scenario

a) 30% decoupling assumption



b) 60% decoupling assumption



c) 100% decoupling assumption



Pigs and Poultry Sectors

The pig and poultry sectors are less dependent upon Pillar I support. As a result, the reduction/removal of these payments within the modelling system has little impact on production and prices in these sectors, regardless of the decoupled payment production stimulating assumption (Table 12 to Table 14).

Dairy Sector

The projected decline in milk production following the reduction and elimination of Pillar I direct payments under the 'weak' 30% production stimulating assumption is limited (Table 15). For example, when Pillar I payments are fully eliminated UK milk production falls by 0.6%. This reflects the relatively small proportion of farm income represented by Pillar I direct payments compared to other pasture based farm types. The knock-on impacts of this decline on dairy cows, manufacturing use, prices, etc. are small.

The projected declines in dairy cow numbers are slightly greater under the alternative production stimulating impact of direct payments assumptions, but still modest (Table 16 and Table 17). For example, the fall in dairy cow numbers ranges from -1.9% to 2.2% under the different trade arrangements following the elimination of direct payments under the 100% decoupling assumption.

Crop Sector

It is projected that the change in crop areas and consequently production within the UK due to the change in Pillar I payments are small (Table 18 to Table 20). This partly reflects the observed inelastic relationship between income and area planted. Again, the applicability of these elasticities is perhaps questionable following such extreme changes in direct payments.

In addition, the limited production impact is also attributable to the fact that the reduction in direct payments is partially offset by projected increases in crop prices. Note that the production/price response is variable across the different trade arrangements. In particular, the decline in wheat production is smallest under the WTO scenario, which is consistent with the UK wheat price displaying the greatest increase compared to other trade arrangements. This partly reflects the fact that exports fall to zero following the change in trade arrangements since under WTO animal numbers increase significantly and hence the self-sufficiency of wheat is particularly lowest. Since exports are already zero following the change in trade arrangements, they cannot fall further when production declines in response to the change in direct payments. As a result, the adjustment in imports following the reduction/elimination of direct payments is fairly small. In contrast, wheat imports exhibit a substantial increase in response to the change of direct payments under the No Deal version of this scenario as zero tariffs are applied to imports to the UK. Consequently, this version of the scenario experiences the smallest price increase and largest production decrease.

Value of Output

The projected changes in value of output (price multiplied by production) due to changes in Pillar I payments are shown in Table 21 to Table 23. The beef sector exhibits similar declines in the value of output across the different trade arrangements. In contrast, the change in the value of output for the sheep sector following the reduction in direct payments is negative under the FTA version of the scenario, but positive under the other trade arrangements. Under the WTO and No Deal Tariff versions of these scenarios the positive price response offsets the decline in production.

The overall impact on the UK value of output – defined as the summation of the quantity produced of each commodity multiplied by its respective price – is fairly modest (decline following full elimination ranges from -0.2% to -0.8% under three alternative trade

arrangements and 'weak' 30% decoupling assumption). The overall decline in the value of output is diluted by the limited decline in crop and dairy sectors. The negative impact is greater in Scotland and Northern Ireland due to the larger negative production impact in the beef and sheep sectors in these countries. When decoupled support is assumed to have a 'strong' impact on production (100% decoupling assumption), the value of total agricultural output (with a UK-EU FTA in place) falls by only 1 per cent in England, but by 4 per cent in Wales, and 6 per cent in both Scotland and Northern Ireland. The reduction in value of output is smaller under the WTO and 2019 No Deal Tariff frameworks. Note that the changes in the value of output noted above are additional to the changes in trade arrangements. As shown in Appendix 1, the projected change in value of output differs markedly according to the specific trade arrangements.

When the value of support payments (Pillar I and Pillar II) is included in the definition 'Value of output plus direct payments'⁹, there is, understandably, a considerably larger impact, given Pillar I payments are cut by half or completely eliminated as part of the scenario design. The pattern of impacts also reflects the scenario design in line with expectations (Figure 4). The impact approximately doubles for England and the Devolved Administrations with the Pillar I payment support changes from 50% of the baseline to no payments at all. However, there is little variation in impacts when comparing across the three different trade environments. For example, Northern Ireland ranges between a -7.8% and -8.0% change under a 50% cut of Pillar I payments and all three trade scenarios. In the case when direct payments are eliminated, the impact ranges between -15.6% and -16.1% across trade regimes. Other devolved administrations experience similar fluctuations of around or below 1% when moving between trade assumptions, with the major difference, driven by the change in policy support.

Figure 4 Excerpt from Table 23, value of output including Pillar I and Pillar II direct payments

	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% reduction	100% reduction	50% reduction	100% reduction	50% reduction	100% reduction
Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)						
England	-7.2%	-14.5%	-6.7%	-13.3%	-7.0%	-14.2%
Wales	-7.8%	-16.0%	-6.0%	-12.4%	-5.4%	-12.3%
Scotland	-11.0%	-21.9%	-10.1%	-20.1%	-9.6%	-19.8%
Northern Ireland	-9.9%	-19.9%	-9.6%	-19.3%	-9.0%	-18.3%

⁹ This measure include both Pillar I and Pillar II direct payments.

Table 6 Projected changes in beef sector due to changes in Pillar I direct payments: 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Beef cows	-2.6%	-4.7%	-2.7%	-4.9%	-2.9%	-5.0%
Dairy cows	-0.3%	-0.6%	-0.3%	-0.6%	-0.3%	-0.6%
Total Cattle	-1.4%	-2.5%	-1.4%	-2.6%	-1.5%	-2.6%
Production	-1.2%	-2.3%	-1.3%	-2.3%	-1.3%	-2.4%
Domestic use	0.0%	-0.1%	-0.2%	-0.3%	-0.1%	-0.2%
Exports	-0.6%	-0.4%	0.0%	0.0%	0.0%	0.0%
Imports	2.2%	4.3%	2.0%	3.8%	2.3%	4.3%
Cattle price	0.1%	0.2%	0.2%	0.3%	0.1%	0.2%
England						
Beef cows	-1.4%	-2.9%	-1.6%	-3.1%	-1.6%	-3.2%
Dairy cows	-0.3%	-0.6%	-0.3%	-0.6%	-0.3%	-0.6%
Total Cattle	-0.7%	-1.5%	-0.8%	-1.6%	-0.8%	-1.6%
Production	-0.6%	-1.2%	-0.7%	-1.3%	-0.7%	-1.3%
Wales						
Beef cows	-1.8%	-3.8%	-2.0%	-3.9%	-2.0%	-4.0%
Dairy cows	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.5%
Total Cattle	-1.0%	-1.9%	-1.0%	-2.0%	-1.0%	-2.0%
Production	-0.8%	-1.6%	-0.8%	-1.6%	-0.8%	-1.6%
Scotland						
Beef cows	-4.2%	-6.1%	-4.2%	-6.2%	-4.7%	-6.7%
Dairy cows	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.5%
Total Cattle	-3.0%	-4.5%	-3.0%	-4.5%	-3.3%	-4.8%
Production	-2.8%	-4.4%	-2.8%	-4.4%	-3.0%	-4.6%
Northern Ireland						
Beef cows	-3.9%	-7.9%	-4.0%	-8.1%	-4.1%	-8.1%
Dairy cows	-0.4%	-0.8%	-0.4%	-0.8%	-0.4%	-0.8%
Total Cattle	-2.1%	-4.2%	-2.2%	-4.3%	-2.2%	-4.3%
Production	-2.1%	-4.1%	-2.1%	-4.2%	-2.1%	-4.2%

Table 7 Projected changes in beef sector due to changes in Pillar I direct payments: 60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Beef cows	-4.7%	-9.0%	-4.8%	-9.0%	-5.0%	-9.2%
Dairy cows	-0.6%	-1.2%	-0.6%	-1.2%	-0.6%	-1.3%
Total Cattle	-2.5%	-4.8%	-2.5%	-4.8%	-2.6%	-4.9%
Production	-2.2%	-4.3%	-2.3%	-4.4%	-2.3%	-4.5%
Domestic use	-0.1%	-0.1%	-0.5%	-0.7%	-0.4%	-0.5%
Exports	-0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
Imports	4.3%	8.5%	3.4%	7.0%	3.7%	7.6%
Cattle price	0.2%	0.3%	0.3%	0.6%	0.2%	0.5%
England						
Beef cows	-3.0%	-6.2%	-3.1%	-6.3%	-3.2%	-6.3%
Dairy cows	-0.6%	-1.2%	-0.6%	-1.1%	-0.6%	-1.3%
Total Cattle	-1.5%	-3.1%	-1.6%	-3.1%	-1.6%	-3.2%
Production	-1.2%	-2.6%	-1.3%	-2.6%	-1.3%	-2.7%
Wales						
Beef cows	-3.8%	-7.8%	-4.0%	-7.9%	-4.0%	-7.9%
Dairy cows	-0.5%	-1.0%	-0.5%	-0.9%	-0.5%	-1.1%
Total Cattle	-2.0%	-4.0%	-2.0%	-4.0%	-2.1%	-4.1%
Production	-1.6%	-3.2%	-1.6%	-3.3%	-1.7%	-3.3%
Scotland						
Beef cows	-6.0%	-9.8%	-6.0%	-9.7%	-6.5%	-10.3%
Dairy cows	-0.5%	-1.0%	-0.5%	-1.0%	-0.6%	-1.1%
Total Cattle	-4.3%	-7.2%	-4.3%	-7.2%	-4.6%	-7.5%
Production	-4.1%	-7.1%	-4.1%	-7.1%	-4.3%	-7.4%
Northern Ireland						
Beef cows	-8.0%	-16.1%	-8.1%	-16.2%	-8.1%	-16.3%
Dairy cows	-0.8%	-1.7%	-0.8%	-1.6%	-0.9%	-1.7%
Total Cattle	-4.3%	-8.6%	-4.3%	-8.6%	-4.4%	-8.7%
Production	-4.2%	-8.4%	-4.2%	-8.5%	-4.3%	-8.5%

Table 8 Projected changes in beef sector due to changes in Pillar I direct payments: 100% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Beef cows	-7.6%	-14.7%	-7.6%	-14.7%	-7.8%	-14.8%
Dairy cows	-1.0%	-2.0%	-1.0%	-1.9%	-1.1%	-2.2%
Total Cattle	-4.0%	-7.9%	-4.0%	-7.8%	-4.1%	-8.0%
Production	-3.6%	-7.1%	-3.6%	-7.1%	-3.7%	-7.2%
Domestic use	-0.2%	-0.3%	-0.6%	-0.9%	-0.7%	-0.9%
Exports	0.6%	1.1%	0.0%	0.0%	0.0%	0.0%
Imports	7.1%	14.0%	5.7%	11.8%	5.5%	11.9%
Cattle price	0.2%	0.4%	0.5%	1.0%	0.3%	0.7%
England						
Beef cows	-5.2%	-10.5%	-5.2%	-10.5%	-5.3%	-10.6%
Dairy cows	-1.0%	-2.0%	-0.9%	-1.9%	-1.0%	-2.1%
Total Cattle	-2.6%	-5.3%	-2.6%	-5.2%	-2.7%	-5.3%
Production	-2.2%	-4.4%	-2.2%	-4.4%	-2.2%	-4.4%
Wales						
Beef cows	-6.6%	-13.3%	-6.6%	-13.2%	-6.6%	-13.3%
Dairy cows	-0.8%	-1.7%	-0.8%	-1.5%	-0.9%	-1.8%
Total Cattle	-3.4%	-6.8%	-3.4%	-6.7%	-3.4%	-6.9%
Production	-2.7%	-5.5%	-2.7%	-5.5%	-2.8%	-5.6%
Scotland						
Beef cows	-8.5%	-14.7%	-8.4%	-14.5%	-8.9%	-15.0%
Dairy cows	-0.9%	-1.8%	-0.8%	-1.6%	-1.0%	-1.9%
Total Cattle	-6.2%	-10.9%	-6.1%	-10.7%	-6.4%	-11.1%
Production	-5.9%	-10.8%	-5.9%	-10.6%	-6.1%	-10.9%
Northern Ireland						
Beef cows	-13.5%	-27.1%	-13.6%	-27.1%	-13.6%	-27.2%
Dairy cows	-1.4%	-2.8%	-1.3%	-2.7%	-1.4%	-2.9%
Total Cattle	-7.2%	-14.5%	-7.2%	-14.4%	-7.3%	-14.5%
Production	-7.0%	-14.2%	-7.0%	-14.1%	-7.1%	-14.2%

Table 9 Projected changes in sheep sector due to changes in Pillar I direct payments: 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Ewes	-2.7%	-5.1%	-0.8%	-1.4%	-0.9%	-1.6%
Total Sheep	-2.6%	-5.0%	-0.9%	-1.5%	-0.8%	-1.5%
Production	-2.8%	-5.5%	-2.3%	-3.5%	-1.2%	-1.8%
Domestic use	-0.1%	-0.2%	-1.6%	-2.5%	-0.9%	-1.3%
Exports	-7.8%	-15.0%	-0.5%	-0.8%	-0.3%	-0.4%
Imports	0.1%	0.2%	0.8%	1.3%	0.4%	0.7%
Sheepmeat price	0.4%	0.8%	4.3%	6.8%	2.3%	3.4%
England						
Ewes	-1.9%	-3.9%	0.3%	0.6%	0.3%	0.3%
Total Sheep	-1.9%	-3.8%	0.1%	0.3%	0.3%	0.4%
Production	-2.1%	-4.4%	-1.5%	-2.1%	-0.1%	0.2%
Wales						
Ewes	-1.9%	-3.8%	-0.3%	-0.6%	-0.3%	-0.8%
Total Sheep	-2.0%	-4.1%	-0.4%	-0.8%	-0.4%	-0.9%
Production	-2.0%	-4.1%	-1.1%	-2.0%	-0.6%	-1.1%
Scotland						
Ewes	-5.1%	-8.8%	-3.7%	-5.9%	-3.8%	-6.1%
Total Sheep	-4.6%	-8.0%	-3.5%	-5.5%	-3.4%	-5.5%
Production	-4.9%	-8.6%	-4.8%	-7.7%	-3.9%	-6.1%
Northern Ireland						
Ewes	-3.9%	-7.9%	-2.0%	-4.1%	-2.1%	-4.4%
Total Sheep	-3.9%	-7.8%	-2.1%	-4.3%	-2.1%	-4.3%
Production	-4.2%	-8.5%	-3.7%	-6.7%	-2.6%	-4.7%

Table 10 Projected changes in sheep sector due to changes in Pillar I direct payments: 60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Ewes	-4.9%	-9.6%	-2.1%	-3.3%	-1.4%	-2.7%
Total Sheep	-4.8%	-9.4%	-2.4%	-3.6%	-1.5%	-2.7%
Production	-5.0%	-10.0%	-5.2%	-7.3%	-3.6%	-4.5%
Domestic use	-0.2%	-0.4%	-3.8%	-5.3%	-2.6%	-3.3%
Exports	-13.8%	-27.6%	-1.1%	-1.6%	-0.8%	-1.0%
Imports	0.1%	0.3%	1.9%	2.8%	1.4%	1.7%
Sheepmeat price	0.7%	1.5%	10.1%	14.6%	7.1%	9.1%
England						
Ewes	-3.8%	-7.7%	-0.4%	0.0%	0.5%	0.6%
Total Sheep	-3.7%	-7.4%	-0.9%	-0.6%	0.2%	0.5%
Production	-3.9%	-8.2%	-4.4%	-5.2%	-2.3%	-1.6%
Wales						
Ewes	-3.7%	-7.4%	-1.3%	-2.1%	-0.7%	-1.6%
Total Sheep	-4.0%	-8.0%	-1.6%	-2.5%	-0.9%	-1.9%
Production	-3.9%	-8.0%	-3.2%	-4.6%	-2.0%	-2.9%
Scotland						
Ewes	-8.1%	-14.9%	-6.0%	-10.1%	-5.5%	-9.7%
Total Sheep	-7.4%	-13.6%	-5.8%	-9.5%	-5.2%	-8.9%
Production	-7.7%	-14.4%	-8.4%	-13.2%	-7.1%	-11.0%
Northern Ireland						
Ewes	-7.9%	-15.9%	-5.0%	-9.4%	-4.3%	-8.8%
Total Sheep	-7.8%	-15.7%	-5.3%	-9.6%	-4.4%	-8.8%
Production	-8.2%	-16.6%	-8.8%	-14.4%	-7.0%	-11.2%

*Table 11 Projected changes in sheep sector due to changes in Pillar I direct payments:
100% decoupling assumption*

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Ewes	-7.5%	-15.2%	-5.1%	-6.9%	-3.1%	-5.2%
Total Sheep	-7.4%	-14.9%	-5.4%	-7.2%	-3.5%	-5.3%
Production	-7.8%	-15.9%	-8.9%	-11.7%	-7.5%	-8.6%
Domestic use	-0.9%	-1.2%	-4.6%	-6.6%	-5.5%	-6.3%
Exports	-19.5%	-42.1%	-1.7%	-2.3%	-1.6%	-1.8%
Imports	0.6%	0.9%	8.6%	9.8%	2.8%	3.3%
Sheepmeat price	3.2%	4.4%	12.8%	19.2%	15.2%	17.6%
England						
Ewes	-5.9%	-12.4%	-3.0%	-2.3%	-0.5%	-0.3%
Total Sheep	-5.7%	-12.0%	-3.5%	-2.9%	-1.2%	-0.6%
Production	-6.3%	-13.3%	-8.0%	-8.5%	-6.3%	-4.5%
Wales						
Ewes	-5.8%	-11.9%	-3.8%	-4.9%	-2.0%	-3.5%
Total Sheep	-6.3%	-12.9%	-4.3%	-5.7%	-2.5%	-4.1%
Production	-6.2%	-12.8%	-6.1%	-8.1%	-4.7%	-5.9%
Scotland						
Ewes	-11.5%	-22.1%	-9.8%	-16.0%	-8.3%	-14.8%
Total Sheep	-10.5%	-20.2%	-9.3%	-15.0%	-8.0%	-13.7%
Production	-11.1%	-21.4%	-12.4%	-19.3%	-11.6%	-17.1%
Northern Ireland						
Ewes	-13.1%	-26.6%	-10.5%	-17.8%	-8.4%	-16.0%
Total Sheep	-12.9%	-26.2%	-10.8%	-18.0%	-8.8%	-16.1%
Production	-13.7%	-28.0%	-15.3%	-24.1%	-14.0%	-20.7%

Table 12 Projected changes in pig and poultry sectors due to changes in Pillar I direct payments (UK-level): 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
Pigs						
Sows	0.0%	-0.1%	-0.1%	-0.2%	0.0%	0.0%
Total pigs	0.0%	-0.1%	-0.1%	-0.2%	0.1%	0.1%
Production	-0.1%	-0.1%	-0.1%	-0.2%	0.1%	0.1%
Domestic use	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.1%	0.3%	0.4%	0.0%	0.0%
Pigmeat price	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%
Poultry						
Production	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
Exports	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry price	0.2%	0.3%	0.4%	0.6%	0.1%	0.1%

Table 13 Projected changes in pig and poultry sectors due to changes in Pillar I direct payments (UK-level): 60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
Pigs						
Sows	-0.1%	-0.2%	-0.2%	-0.4%	0.1%	0.1%
Total pigs	-0.1%	-0.2%	-0.2%	-0.4%	0.2%	0.3%
Production	-0.1%	-0.2%	-0.2%	-0.4%	0.2%	0.3%
Domestic use	0.0%	-0.1%	0.2%	0.3%	0.1%	0.2%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.1%	0.1%	0.6%	0.9%	0.0%	0.0%
Pigmeat price	0.2%	0.3%	0.1%	0.2%	0.1%	0.0%
Poultry						
Production	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%
Domestic use	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%
Exports	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry price	0.3%	0.6%	0.5%	1.0%	0.1%	0.2%

Table 14 Projected changes in pig and poultry sectors due to changes in Pillar I direct payments (UK-level): 100% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
Pigs						
Sows	-0.1%	-0.3%	-0.3%	-0.6%	0.3%	0.2%
Total pigs	-0.1%	-0.3%	-0.3%	-0.7%	0.3%	0.4%
Production	-0.2%	-0.3%	-0.4%	-0.7%	0.3%	0.5%
Domestic use	0.0%	-0.1%	0.2%	0.3%	0.2%	0.3%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.1%	0.2%	0.8%	1.3%	0.1%	0.1%
Pigmeat price	0.3%	0.6%	0.2%	0.4%	0.3%	0.2%
Poultry						
Production	-0.1%	-0.2%	-0.1%	-0.2%	0.0%	0.0%
Domestic use	-0.1%	-0.1%	-0.1%	-0.2%	0.0%	0.0%
Exports	-0.2%	-0.3%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry price	0.5%	1.0%	0.7%	1.5%	0.2%	0.4%

Table 15 Projected changes in dairy sector due to changes in Pillar I direct payments: 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Cow's milk						
Production	-0.3%	-0.6%	-0.3%	-0.6%	-0.3%	-0.6%
Manufacturing use	-0.5%	-1.1%	-0.5%	-1.1%	-0.6%	-1.2%
<i>Prices</i>						
Producer milk price	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
Cheese price	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%
Butter price	0.0%	0.1%	0.5%	1.0%	0.0%	0.1%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Cheese</i>						
Production	-0.5%	-1.0%	-0.6%	-1.1%	-0.6%	-1.2%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	-0.3%	-0.5%	0.0%	0.0%	-0.4%	-0.8%
Imports	0.3%	0.6%	0.4%	0.9%	0.3%	0.7%
<i>Butter</i>						
Production	-0.3%	-0.6%	-0.2%	-0.3%	-0.4%	-0.7%
Domestic use	0.0%	0.0%	-0.1%	-0.3%	0.0%	0.0%
Exports	-0.7%	-1.5%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.1%	0.0%	0.0%	0.6%	1.1%
England						
Milk production	-0.3%	-0.6%	-0.3%	-0.6%	-0.3%	-0.6%
Dairy cows	-0.3%	-0.6%	-0.3%	-0.6%	-0.3%	-0.6%
Milk price	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
Wales						
Milk production	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.5%
Dairy cows	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.5%
Milk price	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
Scotland						
Milk production	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.6%
Dairy cows	-0.2%	-0.5%	-0.2%	-0.5%	-0.3%	-0.6%
Milk price	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
Northern Ireland						
Milk production	-0.4%	-0.8%	-0.4%	-0.8%	-0.4%	-0.9%
Dairy cows	-0.4%	-0.8%	-0.4%	-0.8%	-0.4%	-0.9%
Milk price	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%

Table 16 Projected changes in dairy sector due to changes in Pillar I direct payments: 60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Cow's milk						
Production	-0.6%	-1.2%	-0.6%	-1.2%	-0.6%	-1.3%
Manufacturing use	-1.1%	-2.3%	-1.1%	-2.2%	-1.2%	-2.5%
<i>Prices</i>						
Producer milk price	0.2%	0.4%	0.2%	0.4%	0.0%	0.1%
Cheese price	0.1%	0.3%	0.1%	0.2%	0.0%	0.1%
Butter price	0.1%	0.2%	0.9%	1.9%	0.0%	0.1%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Cheese</i>						
Production	-1.0%	-2.1%	-1.1%	-2.3%	-1.2%	-2.4%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	-0.5%	-1.1%	0.0%	0.0%	-0.8%	-1.7%
Imports	0.6%	1.3%	0.9%	1.8%	0.7%	1.4%
<i>Butter</i>						
Production	-0.6%	-1.2%	-0.3%	-0.6%	-0.7%	-1.4%
Domestic use	0.0%	-0.1%	-0.2%	-0.5%	0.0%	0.0%
Exports	-1.5%	-3.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.1%	0.2%	0.0%	0.0%	1.1%	2.3%
England						
Milk production	-0.6%	-1.2%	-0.6%	-1.1%	-0.6%	-1.3%
Dairy cows	-0.6%	-1.2%	-0.6%	-1.1%	-0.6%	-1.3%
Milk price	0.2%	0.4%	0.2%	0.4%	0.0%	0.1%
Wales						
Milk production	-0.5%	-1.0%	-0.5%	-0.9%	-0.5%	-1.1%
Dairy cows	-0.5%	-1.0%	-0.5%	-0.9%	-0.5%	-1.1%
Milk price	0.2%	0.3%	0.2%	0.4%	0.0%	0.1%
Scotland						
Milk production	-0.5%	-1.0%	-0.5%	-1.0%	-0.6%	-1.1%
Dairy cows	-0.5%	-1.0%	-0.5%	-1.0%	-0.6%	-1.1%
Milk price	0.2%	0.3%	0.2%	0.4%	0.0%	0.1%
Northern Ireland						
Milk production	-0.8%	-1.7%	-0.8%	-1.6%	-0.9%	-1.7%
Dairy cows	-0.8%	-1.7%	-0.8%	-1.6%	-0.9%	-1.7%
Milk price	0.1%	0.2%	0.1%	0.3%	0.0%	0.1%

*Table 17 Projected changes in dairy sector due to changes in Pillar I direct payments:
100% decoupling assumption*

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Cow's milk						
Production	-1.0%	-2.0%	-1.0%	-1.9%	-1.1%	-2.2%
Manufacturing use	-1.9%	-3.8%	-1.8%	-3.7%	-2.0%	-4.1%
<i>Prices</i>						
Producer milk price	0.3%	0.6%	0.3%	0.6%	0.1%	0.1%
Cheese price	0.2%	0.5%	0.1%	0.3%	0.1%	0.1%
Butter price	0.1%	0.3%	1.6%	3.3%	0.1%	0.2%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Cheese</i>						
Production	-1.8%	-3.6%	-1.9%	-3.8%	-2.0%	-4.0%
Domestic use	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Exports	-0.9%	-1.9%	0.0%	0.0%	-1.4%	-2.8%
Imports	1.0%	2.1%	1.5%	3.0%	1.1%	2.3%
<i>Butter</i>						
Production	-1.0%	-2.0%	-0.5%	-1.1%	-1.2%	-2.4%
Domestic use	0.0%	-0.1%	-0.4%	-0.8%	0.0%	-0.1%
Exports	-2.5%	-5.1%	0.0%	0.0%	0.0%	0.0%
Imports	0.2%	0.3%	0.0%	0.0%	1.9%	3.8%
England						
Milk production	-1.0%	-2.0%	-0.9%	-1.9%	-1.0%	-2.1%
Dairy cows	-1.0%	-2.0%	-0.9%	-1.9%	-1.0%	-2.1%
Milk price	0.3%	0.6%	0.3%	0.6%	0.1%	0.1%
Wales						
Milk production	-0.8%	-1.6%	-0.8%	-1.5%	-0.9%	-1.8%
Dairy cows	-0.8%	-1.7%	-0.8%	-1.5%	-0.9%	-1.8%
Milk price	0.3%	0.5%	0.4%	0.7%	0.1%	0.1%
Scotland						
Milk production	-0.9%	-1.7%	-0.8%	-1.6%	-0.9%	-1.9%
Dairy cows	-0.9%	-1.8%	-0.8%	-1.6%	-1.0%	-1.9%
Milk price	0.3%	0.5%	0.4%	0.7%	0.1%	0.1%
Northern Ireland						
Milk production	-1.4%	-2.8%	-1.3%	-2.7%	-1.4%	-2.9%
Dairy cows	-1.4%	-2.8%	-1.3%	-2.7%	-1.4%	-2.9%
Milk price	0.2%	0.3%	0.2%	0.4%	0.0%	0.1%

Table 18 Projected changes in crop sector due to changes in Pillar I direct payments: 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
<i>Wheat</i>						
Production	-0.4%	-0.8%	-0.3%	-0.7%	-0.5%	-1.1%
Domestic use	-0.2%	-0.5%	-0.3%	-0.6%	-0.2%	-0.3%
Exports	-2.3%	-4.6%	0.0%	0.0%	-1.4%	-2.9%
Imports	0.4%	0.8%	0.1%	0.2%	3.6%	7.3%
<i>Barley</i>						
Production	-0.5%	-0.9%	-0.5%	-1.1%	-0.6%	-1.2%
Domestic use	-0.2%	-0.4%	-0.1%	-0.1%	-0.2%	-0.3%
Exports	-1.8%	-3.7%	-3.4%	-6.8%	-3.3%	-6.6%
Imports	1.5%	3.0%	0.0%	0.0%	0.0%	0.0%
<i>Area</i>						
Wheat	-0.5%	-0.9%	-0.4%	-0.8%	-0.6%	-1.2%
Barley	-0.5%	-1.1%	-0.6%	-1.2%	-0.6%	-1.3%
<i>Prices</i>						
Wheat	0.8%	1.6%	1.2%	2.6%	0.3%	0.5%
Barley	0.8%	1.5%	0.2%	0.4%	0.2%	0.4%
England						
<i>Area</i>						
Wheat	-0.5%	-1.0%	-0.4%	-0.8%	-0.6%	-1.2%
Barley	-0.5%	-1.0%	-0.5%	-1.0%	-0.6%	-1.2%
<i>Production</i>						
Wheat	-0.4%	-0.9%	-0.4%	-0.7%	-0.6%	-1.1%
Barley	-0.4%	-0.9%	-0.5%	-1.0%	-0.6%	-1.2%
Rapeseed	-0.6%	-1.2%	-0.6%	-1.2%	-0.5%	-1.0%
Wales						
<i>Area</i>						
Wheat	-0.3%	-0.7%	-0.2%	-0.5%	-0.4%	-0.8%
Barley	-0.3%	-0.7%	-0.4%	-0.8%	-0.4%	-0.8%
<i>Production</i>						
Wheat	-0.3%	-0.5%	-0.2%	-0.3%	-0.3%	-0.7%
Barley	-0.3%	-0.6%	-0.4%	-0.7%	-0.4%	-0.7%
Scotland						
<i>Area</i>						
Wheat	-0.1%	-0.3%	0.0%	0.0%	-0.2%	-0.4%
Barley	-0.6%	-1.2%	-0.7%	-1.5%	-0.7%	-1.4%
<i>Production</i>						
Wheat	-0.1%	-0.2%	0.1%	0.1%	-0.2%	-0.4%
Barley	-0.5%	-1.1%	-0.7%	-1.4%	-0.7%	-1.3%
Northern Ireland						
<i>Area</i>						

Wheat	-1.0%	-2.0%	-1.0%	-1.9%	-1.1%	-2.3%
Barley	-1.0%	-2.0%	-1.1%	-2.2%	-1.1%	-2.3%
<i>Production</i>						
Wheat	-0.9%	-1.8%	-0.9%	-1.7%	-1.1%	-2.1%
Barley	-0.9%	-1.9%	-1.0%	-2.1%	-1.1%	-2.2%

Table 19 Projected changes in crop sector due to changes in Pillar I direct payments: 60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
<i>Wheat</i>						
Production	-0.8%	-1.6%	-0.7%	-1.3%	-1.1%	-2.2%
Domestic use	-0.5%	-0.9%	-0.6%	-1.2%	-0.3%	-0.6%
Exports	-4.7%	-9.5%	0.0%	0.0%	-2.9%	-5.8%
Imports	0.8%	1.7%	0.2%	0.4%	7.2%	14.6%
<i>Barley</i>						
Production	-0.9%	-1.9%	-1.1%	-2.2%	-1.2%	-2.4%
Domestic use	-0.4%	-0.8%	-0.1%	-0.2%	-0.3%	-0.6%
Exports	-3.8%	-7.5%	-6.7%	-13.8%	-6.6%	-13.4%
Imports	3.0%	6.0%	0.0%	0.0%	0.0%	0.0%
<i>Area</i>						
Wheat	-0.9%	-1.9%	-0.8%	-1.6%	-1.2%	-2.4%
Barley	-1.1%	-2.1%	-1.2%	-2.3%	-1.3%	-2.6%
<i>Prices</i>						
Wheat	1.6%	3.2%	2.5%	5.1%	0.5%	1.0%
Barley	1.5%	3.1%	0.4%	0.8%	0.4%	0.8%
England						
<i>Area</i>						
Wheat	-1.0%	-2.0%	-0.9%	-1.7%	-1.2%	-2.5%
Barley	-1.0%	-2.0%	-1.1%	-2.1%	-1.3%	-2.5%
<i>Production</i>						
Wheat	-0.9%	-1.7%	-0.7%	-1.4%	-1.1%	-2.3%
Barley	-0.9%	-1.8%	-1.0%	-1.9%	-1.2%	-2.3%
Rapeseed	-1.2%	-2.3%	-1.2%	-2.4%	-1.0%	-2.0%
Wales						
<i>Area</i>						
Wheat	-0.7%	-1.3%	-0.5%	-1.0%	-0.8%	-1.5%
Barley	-0.7%	-1.4%	-0.8%	-1.6%	-0.8%	-1.6%
<i>Production</i>						
Wheat	-0.5%	-1.1%	-0.4%	-0.7%	-0.7%	-1.4%

Barley	-0.6%	-1.2%	-0.7%	-1.5%	-0.7%	-1.5%
Scotland						
<i>Area</i>						
Wheat	-0.3%	-0.5%	0.0%	0.0%	-0.4%	-0.8%
Barley	-1.2%	-2.4%	-1.5%	-3.0%	-1.4%	-2.8%
<i>Production</i>						
Wheat	-0.2%	-0.3%	0.1%	0.3%	-0.4%	-0.7%
Barley	-1.1%	-2.1%	-1.4%	-2.8%	-1.3%	-2.6%
Northern Ireland						
<i>Area</i>						
Wheat	-2.0%	-4.1%	-2.0%	-3.9%	-2.3%	-4.6%
Barley	-2.0%	-4.1%	-2.2%	-4.4%	-2.3%	-4.6%
<i>Production</i>						
Wheat	-1.9%	-3.7%	-1.8%	-3.5%	-2.1%	-4.3%
Barley	-1.9%	-3.8%	-2.1%	-4.2%	-2.2%	-4.4%

Table 20 Projected changes in crop sector due to changes in Pillar I direct payments: 100% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
<i>Wheat</i>						
Production	-1.4%	-2.7%	-1.1%	-2.2%	-1.8%	-3.7%
Domestic use	-0.8%	-1.5%	-1.0%	-2.0%	-0.5%	-1.0%
Exports	-8.1%	-16.2%	0.0%	0.0%	-4.8%	-9.9%
Imports	1.4%	2.8%	0.3%	1.2%	11.8%	24.3%
<i>Barley</i>						
Production	-1.6%	-3.1%	-1.8%	-3.6%	-2.0%	-4.1%
Domestic use	-0.7%	-1.4%	-0.2%	-0.4%	-0.5%	-1.0%
Exports	-6.4%	-12.7%	-11.3%	-23.2%	-11.1%	-22.6%
Imports	5.0%	10.0%	0.0%	0.0%	0.0%	0.0%
<i>Area</i>						
Wheat	-1.6%	-3.1%	-1.3%	-2.7%	-2.0%	-4.0%
Barley	-1.8%	-3.5%	-2.0%	-3.9%	-2.2%	-4.3%
<i>Prices</i>						
Wheat	2.6%	5.3%	4.1%	8.4%	0.8%	1.7%
Barley	2.5%	5.1%	0.6%	1.3%	0.6%	1.3%
England						
<i>Area</i>						
Wheat	-1.6%	-3.3%	-1.4%	-2.8%	-2.1%	-4.1%

Barley	-1.7%	-3.3%	-1.7%	-3.4%	-2.1%	-4.2%
<i>Production</i>						
Wheat	-1.4%	-2.9%	-1.2%	-2.3%	-1.9%	-3.8%
Barley	-1.5%	-2.9%	-1.6%	-3.2%	-1.9%	-3.9%
Rapeseed	-1.9%	-3.9%	-2.0%	-3.9%	-1.7%	-3.3%
Wales						
<i>Area</i>						
Wheat	-1.1%	-2.2%	-0.8%	-1.6%	-1.3%	-2.6%
Barley	-1.1%	-2.2%	-1.3%	-2.6%	-1.3%	-2.6%
<i>Production</i>						
Wheat	-0.9%	-1.8%	-0.6%	-1.2%	-1.1%	-2.3%
Barley	-1.0%	-1.9%	-1.2%	-2.5%	-1.2%	-2.5%
Scotland						
<i>Area</i>						
Wheat	-0.4%	-0.8%	0.0%	0.1%	-0.7%	-1.4%
Barley	-2.0%	-3.9%	-2.5%	-5.0%	-2.3%	-4.7%
<i>Production</i>						
Wheat	-0.3%	-0.6%	0.2%	0.4%	-0.6%	-1.2%
Barley	-1.8%	-3.6%	-2.4%	-4.7%	-2.2%	-4.4%
Northern Ireland						
<i>Area</i>						
Wheat	-3.4%	-6.8%	-3.3%	-6.6%	-3.8%	-7.7%
Barley	-3.4%	-6.8%	-3.7%	-7.3%	-3.9%	-7.7%
<i>Production</i>						
Wheat	-3.1%	-6.2%	-3.0%	-5.9%	-3.6%	-7.2%
Barley	-3.2%	-6.4%	-3.5%	-7.0%	-3.7%	-7.4%

Table 21 Projected changes in value of output due to changes in Pillar I direct payments: 30% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Wheat	0.4%	0.7%	0.9%	1.9%	-0.3%	-0.5%
Barley	0.3%	0.6%	-0.3%	-0.6%	-0.4%	-0.7%
Oats	0.2%	0.3%	-0.3%	-0.6%	-0.3%	-0.7%
Rapeseed	-0.6%	-1.2%	-0.6%	-1.2%	-0.5%	-1.0%
<i>Total Crops</i>	0.2%	0.4%	0.3%	0.7%	-0.3%	-0.7%
 Cattle	-1.1%	-2.1%	-1.2%	-2.2%	-0.9%	-1.7%
Pig	0.0%	0.1%	0.0%	-0.1%	0.1%	0.1%
Sheep	-2.4%	-4.6%	1.7%	2.6%	0.9%	1.3%
Poultry	0.1%	0.2%	0.4%	0.6%	0.1%	0.1%
<i>Total Livestock</i>	-0.8%	-1.5%	-0.1%	-0.4%	-0.2%	-0.4%
 <i>Milk</i>	-0.2%	-0.4%	-0.2%	-0.5%	-0.3%	-0.5%
 Total UK Agric. Value of Output	-0.4%	-0.8%	-0.1%	-0.2%	-0.2%	-0.5%
 Individual Country Total Agric. Value of Output						
England	-0.2%	-0.3%	0.1%	0.2%	-0.1%	-0.2%
Wales	-0.6%	-1.3%	0.4%	0.5%	0.1%	0.0%
Scotland	-1.5%	-2.5%	-0.9%	-1.5%	-1.0%	-1.6%
Northern Ireland	-0.9%	-1.9%	-0.7%	-1.6%	-0.6%	-1.3%
 Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)						
England	-6.9%	-13.8%	-6.6%	-13.3%	-6.8%	-13.7%
Wales	-6.8%	-13.7%	-6.0%	-12.3%	-6.3%	-12.7%
Scotland	-9.8%	-19.2%	-9.4%	-18.5%	-9.4%	-18.6%
Northern Ireland	-8.0%	-16.1%	-7.9%	-15.8%	-7.8%	-15.6%

Table 22 Projected changes in value of output due to changes in Pillar I direct payments:
60% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Wheat	0.7%	1.5%	1.8%	3.7%	-0.5%	-1.0%
Barley	0.6%	1.1%	-0.7%	-1.3%	-0.7%	-1.4%
Oats	0.3%	0.7%	-0.6%	-1.3%	-0.7%	-1.4%
Rapeseed	-1.2%	-2.4%	-1.2%	-2.4%	-1.0%	-2.1%
<i>Total Crops</i>	0.4%	0.7%	0.7%	1.4%	-0.7%	-1.3%
 Cattle	-2.1%	-4.1%	-2.2%	-4.1%	-1.6%	-3.1%
Pig	0.1%	0.1%	-0.1%	-0.2%	0.3%	0.3%
Sheep	-4.3%	-8.7%	4.1%	5.7%	2.8%	3.6%
Poultry	0.2%	0.5%	0.4%	0.9%	0.1%	0.2%
<i>Total Livestock</i>	-1.5%	-2.9%	-0.2%	-0.6%	-0.1%	-0.6%
 <i>Milk</i>	-0.4%	-0.9%	-0.5%	-1.0%	-0.5%	-1.1%
 Total UK Agric. Value of Output	-0.8%	-1.6%	-0.1%	-0.3%	-0.4%	-0.9%
 Individual Country Total Agric. Value of Output						
England	-0.3%	-0.7%	0.2%	0.3%	-0.2%	-0.5%
Wales	-1.3%	-2.6%	0.9%	1.0%	0.5%	0.3%
Scotland	-2.3%	-4.1%	-1.1%	-2.2%	-1.2%	-2.4%
Northern Ireland	-1.9%	-3.8%	-1.5%	-3.2%	-1.3%	-2.7%
 Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)						
England	-7.0%	-14.1%	-6.6%	-13.2%	-6.9%	-13.9%
Wales	-7.4%	-14.8%	-5.6%	-11.9%	-5.9%	-12.5%
Scotland	-10.4%	-20.5%	-9.5%	-19.0%	-9.6%	-19.2%
Northern Ireland	-8.8%	-17.7%	-8.6%	-17.2%	-8.3%	-16.8%

Table 23 Projected changes in value of output due to changes in Pillar I direct payments: 100% decoupling assumption

	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK						
Wheat	1.2%	2.4%	2.9%	6.1%	-0.9%	-1.8%
Barley	0.9%	1.8%	-1.1%	-2.2%	-1.2%	-2.4%
Oats	0.6%	1.1%	-1.1%	-2.1%	-1.2%	-2.3%
Rapeseed	-2.0%	-4.0%	-2.0%	-4.1%	-1.7%	-3.5%
<i>Total Crops</i>	0.6%	1.2%	1.1%	2.3%	-1.1%	-2.2%
 Cattle	-3.4%	-6.8%	-3.4%	-6.7%	-2.6%	-5.0%
Pig	0.2%	0.3%	-0.2%	-0.4%	0.6%	0.6%
Sheep	-5.0%	-12.4%	3.1%	5.3%	6.2%	7.1%
Poultry	0.4%	0.8%	0.6%	1.4%	0.2%	0.4%
<i>Total Livestock</i>	-2.1%	-4.5%	-0.8%	-1.7%	0.0%	-0.8%
 <i>Milk</i>	-0.7%	-1.5%	-0.8%	-1.6%	-0.9%	-1.8%
 Total UK Agric. Value of Output	-1.1%	-2.5%	-0.4%	-0.8%	-0.4%	-1.3%
 Individual Country Total Agric. Value of Output						
England	-0.5%	-1.1%	0.1%	0.3%	-0.3%	-0.8%
Wales	-1.7%	-4.0%	0.5%	0.4%	1.3%	0.6%
Scotland	-3.0%	-6.0%	-1.9%	-3.6%	-1.3%	-3.2%
Northern Ireland	-3.1%	-6.3%	-2.8%	-5.7%	-2.1%	-4.5%
 Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)						
England	-7.2%	-14.5%	-6.7%	-13.3%	-7.0%	-14.2%
Wales	-7.8%	-16.0%	-6.0%	-12.4%	-5.4%	-12.3%
Scotland	-11.0%	-21.9%	-10.1%	-20.1%	-9.6%	-19.8%
Northern Ireland	-9.9%	-19.9%	-9.6%	-19.3%	-9.0%	-18.3%

Provision of Coupled Payments

Beef Sector

The impact on the beef sector of allocating 20% of the Pillar I budget to coupled payments is shown in Table 24. This set of scenarios is implemented on a country-by-country basis (except for Wales). In England, beef cow numbers increase by 6% to 7.3% under the different trade arrangements following the provision of 20% coupled payments. This compares with 2.2% to 2.6% in Scotland and 3.5% in Northern Ireland. The impact is greatest in England as the coupled beef payment is particularly high in this area as more money is transferred to the beef sector from other sectors following the reallocation of payments. The limited increase in Scotland is due to the existing coupled payments (10% of the Pillar I budget), which results in a smaller increase in the coupled beef payment under this scenario.

The projected impact of the provision of 20% coupled payments on UK beef production is greatest under the England specific scenario. However, the positive impact is still small (plus 1%). This partly reflects the negligible change in dairy cow numbers. Across all scenarios the impact on the UK beef price is insignificant and hence, the provision of coupled payments in individual countries has little knock-on impact on other countries in the UK.

In contrast to the 20% coupled scenario, Scotland experiences the largest increase in beef cow numbers under the 100% coupled scenario (Table 25). In contrast to England and Northern Ireland, the proportion of coupled payments that is allocated to the beef sector remains the same as the 20% scenario (*i.e.* remains at 85%). The range of increase in beef cow numbers in Scotland under the alternative trade arrangements is 16.9% to 19.5% under this 100% coupled scenario. The WTO based scenario results in the largest number of Scottish cows in absolute terms, which reach just below peak 1998 levels.

The more modest increases in beef cow numbers in England and Northern Ireland are attributable to the spreading of the coupled budget across a wider range of sectors. Despite this, the increase in UK-level beef production is comparable under the 100% England scenario to the 100% Scotland coupled scenario. This not only reflects the fact that a significant proportion of the beef herd is English (approximately 45%), but also the increase in dairy cow numbers in England. As described below, the latter increase under this scenario is due to the provision of a coupled milk payment. Note that under the 100% coupled payments scenarios the Pillar I decoupled payments are simultaneously eliminated. This has a significant offsetting impact, particularly in the beef and sheep sectors, which are particularly dependent on these decoupled payments.

It is projected that the beef price falls slightly under the 100% England and 100% Scotland FTA coupled scenarios (-1.8% and -1.9% respectively). The relatively modest price impact reflects the fact that imports and exports are able to readjust easily due to the non-application of tariffs on trade between the UK and EU under FTA trade arrangements. The price impact is even lower under the WTO and No Deal trade arrangements as beef imports from the rest of the world are competitive due to the change in trade arrangements under these versions of the scenarios and hence imports readjust quickly following the changes in the level of production which occurs in response to the provision of coupled payments.

Sheep Sector

Increasing the coupled budget to 20% leads to variable increases in ewe numbers in England, Wales (indirect effects only as analysis of the introduction of coupled support excluded Wales) and Scotland (Table 26). The impact on ewe numbers in individual countries is again least in Scotland due to the existing provision of coupled payments. At the

UK-level, production increases the most under the English coupling scenario as just under half of the UK herd is based in England. The impact on the sheepmeat price is negligible under the FTA trade arrangements as UK exports to the EU are able to readjust. In contrast, it is not possible for UK exports to the EU to increase under the WTO and No Deal trade arrangements due to the presence of high tariffs and hence sheepmeat prices fall in response to the higher levels of production.

Similar to the beef sector, the increase in ewe numbers is greatest in Scotland under the 100% coupling scenario (Table 27). This reflects the non-allocation of coupled payments to the dairy and cereal sectors in Scotland. The provision of 100% coupled payments in Northern Ireland has little impact on ewe numbers. Decoupled payments represent a substantial proportion of sheep farmers' income in Northern Ireland. As a result, the provision of sheep coupled payments, comprising 9% of the coupled budget, is offset by the full elimination of decoupled direct payments. The negative price impact is again greatest under the WTO and No Deal trade arrangements as exports to the EU are prohibitive and consequently available supplies on the domestic market increase due to the expansion in production.

Pigs and Poultry Sectors

There is no provision of coupled payments for the pig and poultry sectors in both 20% and 100% coupled scenarios and hence the projected changes are negligible (Table 28 and Table 29).

Dairy Sector

No coupled payments are provided for the dairy sector under the 20% coupled scenario; coupled payments for the dairy sector are only implemented in England and Northern Ireland under the 100% coupled scenario. Under the latter scenario, milk production in England and Northern Ireland increases by 4% to 5% (Table 32). The increase in milk production at the UK-level is evident for the England 100% coupled scenarios. Under the WTO and No Deal trade arrangements, imports adjust quickly to price changes and hence the commodity and producer prices exhibit little change under these conditions.

Crop Sector

Similar to the dairy sector, coupled crop payments are only provided under the 100% coupled scenarios and specifically, just in England and Northern Ireland. The provision of coupled payments has a positive impact on crop areas in England and Northern Ireland (Table 33). The impact is most marked in the latter but it should be borne in mind that the base level is much lower in Northern Ireland. At the UK-level, the production impacts are only notable under the 100% England scenarios. The projected impact on wheat and barley prices under the 100% England scenarios vary depending on the underlying trade arrangements. The wheat price declines are notable under the FTA and WTO scenarios, but less so under the No Deal scenario. Under the No Deal scenario wheat imports decline sharply as there are no tariffs applied to imports and consequently imports are sensitive to changes in price. The barley price, on the other hand, exhibits a notable decline under the FTA scenario, but not the WTO and No Deal scenarios. The lack of a price response under WTO and No Deal is attributable to exports increasing under these trade arrangements.

Value of Output

The projected impact of the provision of coupled payments on value of output is shown in Table 34 and Table 35. The simulated impacts of the 20% coupled scenarios on individual country total agricultural value of output are insubstantial (all below 1%). The impacts are more noticeable under the 100% coupled scenarios. Specifically, it is apparent that there are knock-on impacts on value of output exceeding 1% on other territories in the UK when

England introduces 100% coupled payments, but not when this policy change is applied elsewhere. This reflects the relative size of England within the UK context.

The projected changes in 'Value of output plus direct payments' are comparable to 'Value of output' on a stand-alone basis as the total value of direct payments remains the same under these scenarios; *i.e.* direct payments are reallocated between decoupled and coupled payments, but there are no changes in the overall budget.

Table 24 Projected changes in beef sector due to provision of coupled payments: 20% coupled payments

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
UK									
Beef cows	2.5%	0.5%	0.5%	2.7%	0.6%	0.6%	3.3%	0.7%	0.7%
Dairy cows	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Total Cattle	1.2%	0.2%	0.3%	1.3%	0.3%	0.3%	1.5%	0.3%	0.3%
Production	1.1%	0.3%	0.2%	1.0%	0.3%	0.2%	1.2%	0.3%	0.3%
Domestic use	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.0%	0.0%
Exports	3.3%	0.9%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	-1.0%	-0.2%	-0.2%	-1.5%	-0.5%	-0.4%	-1.9%	-0.6%	-0.5%
Cattle price	-0.2%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
England									
Beef cows	6.0%	-0.1%	-0.1%	6.0%	0.0%	0.0%	7.3%	0.0%	0.0%
Dairy cows	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Total Cattle	2.4%	0.0%	0.0%	2.3%	0.0%	0.0%	2.7%	0.0%	0.0%
Production	2.0%	0.0%	0.0%	1.9%	0.0%	0.0%	2.2%	0.0%	0.0%
Wales									
Beef cows	-0.4%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Cattle	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Production	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scotland									
Beef cows	-0.4%	2.2%	-0.1%	0.0%	2.2%	0.0%	0.0%	2.6%	0.0%
Dairy cows	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%
Total Cattle	-0.2%	1.6%	0.0%	0.0%	1.5%	0.0%	0.0%	1.8%	0.0%
Production	0.0%	1.6%	0.0%	0.0%	1.5%	0.0%	0.0%	1.7%	0.0%
Northern Ireland									
Beef cows	-0.4%	-0.1%	3.6%	0.0%	0.0%	3.5%	0.0%	0.0%	4.2%
Dairy cows	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Total Cattle	-0.1%	0.0%	1.7%	0.0%	0.0%	1.7%	0.0%	0.0%	1.9%
Production	0.0%	0.0%	1.7%	0.0%	0.0%	1.6%	0.0%	0.0%	1.8%

Table 25 Projected changes in beef sector due to provision of coupled payments: 100% coupled payments

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK									
Beef cows	1.9%	3.6%	0.9%	2.8%	4.4%	1.3%	3.6%	5.1%	1.6%
Dairy cows	2.4%	0.0%	0.7%	2.6%	-0.1%	0.7%	2.9%	-0.1%	0.8%
Total Cattle	2.3%	1.9%	0.8%	2.7%	2.1%	0.9%	3.2%	2.3%	1.1%
Production	2.2%	2.3%	0.9%	2.3%	2.2%	0.9%	2.7%	2.4%	1.1%
Domestic use	0.4%	0.5%	0.0%	0.2%	0.2%	0.0%	0.2%	0.1%	0.0%
Exports	3.8%	3.8%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	-2.0%	-2.1%	-0.8%	-4.1%	-3.9%	-1.8%	-4.9%	-4.5%	-2.1%
Cattle price	-1.8%	-1.9%	-0.1%	-0.3%	-0.3%	-0.1%	-0.2%	-0.2%	-0.1%
England									
Beef cows	5.4%	-1.2%	-0.5%	6.2%	-0.1%	-0.1%	7.8%	-0.1%	0.0%
Dairy cows	4.3%	0.0%	0.0%	4.3%	0.0%	-0.1%	4.8%	0.0%	0.0%
Total Cattle	4.8%	-0.3%	-0.2%	5.0%	0.0%	0.0%	5.8%	0.0%	0.0%
Production	4.3%	0.0%	-0.1%	4.3%	0.0%	0.0%	4.9%	0.0%	0.0%
Wales									
Beef cows	-1.1%	-1.0%	-0.4%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%
Dairy cows	-0.6%	0.0%	0.0%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.0%
Total Cattle	-0.6%	-0.3%	-0.2%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Production	-0.4%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Scotland									
Beef cows	-1.2%	16.9%	-0.4%	-0.1%	17.0%	-0.1%	-0.1%	19.5%	0.0%
Dairy cows	-0.6%	-0.5%	0.0%	-0.2%	-0.5%	-0.1%	-0.1%	-0.6%	0.0%
Total Cattle	-0.8%	12.2%	-0.3%	-0.1%	12.1%	-0.1%	0.0%	13.7%	0.0%
Production	-0.4%	12.7%	-0.2%	-0.1%	12.3%	0.0%	0.0%	13.5%	0.0%
Northern Ireland									
Beef cows	-1.2%	-1.0%	7.9%	-0.1%	-0.1%	7.8%	-0.1%	-0.1%	9.8%
Dairy cows	-0.3%	0.0%	4.7%	-0.1%	0.0%	4.5%	0.0%	0.0%	4.8%
Total Cattle	-0.6%	-0.3%	6.3%	-0.1%	0.0%	6.1%	0.0%	0.0%	7.1%
Production	-0.3%	0.0%	6.6%	-0.1%	0.0%	6.4%	0.0%	0.0%	7.3%

Table 26 Projected changes in sheep sector due to provision of coupled payments: 20% coupled payments

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
UK									
Ewes	1.7%	0.1%	0.1%	1.1%	0.1%	0.0%	0.5%	0.1%	0.0%
Total Sheep	1.7%	0.1%	0.1%	1.4%	0.1%	0.0%	0.7%	0.1%	0.0%
Production	1.8%	0.1%	0.1%	2.8%	0.2%	0.1%	1.7%	0.1%	0.1%
Domestic use	0.1%	0.0%	0.0%	2.0%	0.1%	0.1%	1.2%	0.1%	0.1%
Exports	4.7%	0.4%	0.3%	0.6%	0.0%	0.0%	0.4%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	-1.0%	-0.1%	-0.1%	-0.6%	0.0%	0.0%
Sheepmeat price	-0.2%	0.0%	0.0%	-5.0%	-0.3%	-0.3%	-3.2%	-0.2%	-0.2%
England									
Ewes	3.9%	0.0%	0.0%	3.6%	-0.1%	-0.1%	2.8%	-0.2%	-0.1%
Total Sheep	3.8%	0.0%	0.0%	3.7%	-0.1%	-0.1%	2.9%	-0.1%	-0.1%
Production	4.1%	0.0%	0.0%	5.9%	0.0%	0.0%	4.5%	-0.1%	-0.1%
Wales									
Ewes	-0.2%	0.0%	0.0%	-1.0%	-0.1%	-0.1%	-1.5%	-0.1%	-0.1%
Total Sheep	-0.2%	0.0%	0.0%	-1.0%	-0.1%	-0.1%	-1.6%	-0.1%	-0.1%
Production	-0.3%	0.0%	0.0%	-0.3%	0.0%	0.0%	-1.1%	-0.1%	-0.1%
Scotland									
Ewes	-0.2%	0.7%	0.0%	-1.0%	0.8%	-0.1%	-1.5%	0.8%	-0.1%
Total Sheep	-0.2%	0.7%	0.0%	-0.8%	0.8%	-0.1%	-1.3%	0.7%	-0.1%
Production	-0.4%	0.7%	0.0%	0.3%	0.9%	0.0%	-0.5%	0.8%	0.0%
Northern Ireland									
Ewes	-0.2%	0.0%	1.9%	-1.2%	-0.1%	2.0%	-1.8%	-0.1%	2.2%
Total Sheep	-0.3%	0.0%	1.8%	-1.0%	-0.1%	2.0%	-1.7%	-0.1%	2.2%
Production	-0.5%	0.0%	2.0%	0.3%	0.0%	2.3%	-0.8%	-0.1%	2.4%

Table 27 Projected changes in sheep sector due to provision of coupled payments: 100% coupled payments

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK									
Ewes	1.2%	1.1%	0.0%	0.8%	0.7%	0.0%	0.4%	0.4%	0.0%
Total Sheep	1.2%	1.1%	0.0%	1.0%	0.8%	0.0%	0.6%	0.5%	0.0%
Production	1.4%	1.0%	0.0%	2.2%	1.4%	0.0%	1.4%	0.9%	0.0%
Domestic use	0.2%	0.2%	0.0%	1.6%	1.1%	0.0%	1.0%	0.7%	0.0%
Exports	3.2%	2.2%	0.0%	0.4%	0.3%	0.0%	0.3%	0.2%	0.0%
Imports	0.0%	0.0%	0.0%	-0.8%	-0.5%	0.0%	-0.5%	-0.3%	0.0%
Sheepmeat price	-0.2%	-0.1%	0.0%	-3.9%	-2.6%	0.0%	-2.5%	-1.7%	-0.1%
England									
Ewes	2.7%	-0.1%	0.0%	2.8%	-0.9%	0.0%	2.3%	-1.2%	0.0%
Total Sheep	2.6%	-0.1%	0.0%	2.9%	-0.8%	0.0%	2.3%	-1.1%	0.0%
Production	3.0%	-0.3%	0.0%	4.6%	0.0%	0.0%	3.6%	-0.6%	0.0%
Wales									
Ewes	-0.1%	-0.1%	0.0%	-0.9%	-0.7%	0.0%	-1.2%	-0.9%	0.0%
Total Sheep	-0.1%	-0.1%	0.0%	-0.9%	-0.7%	0.0%	-1.2%	-0.9%	0.0%
Production	-0.1%	-0.2%	0.0%	-0.3%	-0.2%	0.0%	-0.8%	-0.6%	0.0%
Scotland									
Ewes	-0.1%	5.9%	0.0%	-0.9%	6.5%	0.0%	-1.1%	6.3%	0.0%
Total Sheep	-0.1%	5.3%	0.0%	-0.7%	5.9%	0.0%	-1.0%	5.8%	0.0%
Production	-0.1%	5.8%	0.0%	0.2%	7.0%	0.0%	-0.4%	6.7%	0.0%
Northern Ireland									
Ewes	-0.1%	-0.1%	0.0%	-1.1%	-0.8%	0.4%	-1.4%	-1.0%	0.9%
Total Sheep	-0.1%	-0.1%	0.1%	-0.9%	-0.7%	0.4%	-1.3%	-1.0%	0.9%
Production	-0.2%	-0.2%	0.1%	0.2%	0.1%	0.4%	-0.6%	-0.5%	1.0%

Table 28 Projected changes in pig and poultry sectors due to provision of coupled payments: 20% coupled payments (UK-level results)

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
Pigs									
Sows	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Total pigs	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Production	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Pigmeat price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry									
Production	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry price	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 29 Projected changes in pig and poultry sectors due to provision of coupled payments: 100% coupled payments (UK-level results)

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
Pigs									
Sows	0.2%	0.0%	0.0%	0.4%	-0.1%	0.0%	0.0%	0.0%	0.0%
Total pigs	0.3%	0.0%	0.0%	0.5%	-0.1%	0.0%	0.0%	-0.1%	0.0%
Production	0.3%	0.1%	0.0%	0.4%	-0.1%	0.0%	0.0%	-0.1%	0.0%
Domestic use	0.1%	0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	-0.1%	0.0%	0.0%	-0.6%	0.0%	0.1%	0.0%	0.0%	0.0%
Pigmeat price	-0.2%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Poultry									
Production	0.1%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Domestic use	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	-1.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry price	-0.5%	0.1%	0.0%	-0.4%	0.1%	0.1%	-0.2%	0.0%	0.0%

Table 30 Projected changes in dairy sector due to provision of coupled payments: 20% coupled payments

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
UK									
Cow's milk Production	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Manufacturing use	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	-0.1%
<i>Prices</i>									
Producer milk price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cheese price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Butter price	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Cheese</i>									
Production	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
Imports	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
<i>Butter</i>									
Production	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	-0.2%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
England									
Milk production	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Dairy cows	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Milk price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wales									
Milk production	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Milk price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scotland									
Milk production	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%
Dairy cows	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%
Milk price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Northern Ireland									
Milk production	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Dairy cows	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Milk price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 31 Projected changes in dairy sector due to provision of coupled payments: 100% coupled payments

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK									
Cow's milk Production	2.4%	-0.1%	0.7%	2.6%	-0.1%	0.6%	2.9%	-0.1%	0.7%
Manufacturing use	4.3%	-0.1%	1.3%	4.9%	-0.1%	1.2%	5.6%	-0.1%	1.4%
<i>Prices</i>									
Producer milk price	-2.0%	0.0%	-0.1%	-0.8%	0.0%	-0.3%	-0.2%	0.0%	0.0%
Cheese price	-1.7%	0.0%	0.0%	-0.4%	0.0%	0.0%	-0.2%	0.0%	0.0%
Butter price	-1.0%	0.0%	-0.2%	-3.4%	0.0%	-1.9%	-0.2%	0.0%	-0.1%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Cheese</i>									
Production	4.7%	-0.1%	0.3%	5.6%	-0.1%	0.6%	6.1%	-0.1%	0.7%
Domestic use	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	0.7%	-0.1%	0.2%	0.0%	0.0%	0.0%	4.2%	-0.1%	0.5%
Imports	-3.1%	0.1%	-0.2%	-4.4%	0.1%	-0.5%	-3.5%	0.1%	-0.4%
<i>Butter</i>									
Production	2.1%	0.0%	0.8%	1.2%	0.0%	0.6%	2.8%	0.0%	1.4%
Domestic use	0.3%	0.0%	0.1%	0.9%	0.0%	0.5%	0.1%	0.0%	0.0%
Exports	2.4%	-0.1%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	-1.4%	0.0%	-0.3%	0.0%	0.0%	0.0%	-4.5%	0.1%	-2.2%
England									
Milk production	4.2%	0.0%	0.0%	4.3%	0.0%	-0.1%	4.8%	0.0%	0.0%
Dairy cows	4.3%	0.0%	0.0%	4.3%	0.0%	-0.1%	4.8%	0.0%	0.0%
Milk price	-2.0%	0.0%	-0.1%	-0.8%	0.0%	-0.3%	-0.2%	0.0%	0.0%
Wales									
Milk production	-0.7%	0.0%	0.0%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.0%
Dairy cows	-0.6%	0.0%	0.0%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.0%
Milk price	-1.9%	0.0%	-0.1%	-0.9%	0.0%	-0.3%	-0.2%	0.0%	0.0%
Scotland									
Milk production	-0.7%	-0.5%	0.0%	-0.2%	-0.5%	-0.1%	-0.1%	-0.6%	0.0%
Dairy cows	-0.6%	-0.5%	0.0%	-0.2%	-0.5%	-0.1%	-0.1%	-0.6%	0.0%
Milk price	-1.9%	0.0%	-0.1%	-0.9%	0.0%	-0.3%	-0.2%	0.0%	0.0%
Northern Ireland									
Milk production	-0.3%	0.0%	4.7%	-0.1%	0.0%	4.5%	0.0%	0.0%	4.8%
Dairy cows	-0.3%	0.0%	4.7%	-0.1%	0.0%	4.5%	0.0%	0.0%	4.8%
Milk price	-1.2%	0.0%	0.0%	-0.5%	0.0%	-0.2%	-0.1%	0.0%	0.0%

Table 32 Projected changes in crop sector due to provision of coupled payments: 20% coupled payments

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
UK									
<i>Wheat</i>									
Production	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports	-1.5%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.8%	-0.1%	0.0%
Imports	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	2.1%	0.1%	0.1%
<i>Barley</i>									
Production	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
Domestic use	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
Exports	-0.9%	-0.2%	0.0%	-1.7%	-0.3%	-0.1%	-1.5%	-0.3%	-0.1%
Imports	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Area</i>									
Wheat	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
Barley	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
<i>Prices</i>									
Wheat	0.5%	0.0%	0.0%	0.8%	0.0%	0.0%	0.2%	0.0%	0.0%
Barley	0.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
England									
<i>Area</i>									
Wheat	-0.2%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
Barley	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%
<i>Production</i>									
Wheat	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%
Barley	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%
Rapeseed	-0.3%	0.0%	0.0%	-0.3%	0.0%	0.0%	-0.2%	0.0%	0.0%
Wales									
<i>Area</i>									
Wheat	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Barley	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Production</i>									
Wheat	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Barley	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scotland									
<i>Area</i>									
Wheat	0.1%	-0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	-0.1%	0.0%
Barley	0.1%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%
<i>Production</i>									
Wheat	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	-0.1%	0.0%
Barley	0.1%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.1%	0.0%

Northern Ireland									
<i>Area</i>									
Wheat	0.1%	-0.2%	-0.1%	0.1%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%
Barley	0.1%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%
<i>Production</i>									
Wheat	0.1%	-0.2%	-0.1%	0.2%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%
Barley	0.1%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%

Table 33 Projected changes in crop sector due to provision of coupled payments: 100% coupled payments

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK									
<i>Wheat</i>									
Production	1.8%	0.0%	0.1%	1.4%	0.1%	0.1%	2.3%	0.0%	0.1%
Domestic use	1.0%	0.1%	0.1%	1.3%	0.1%	0.1%	0.8%	0.1%	0.2%
Exports	9.7%	-0.8%	-0.7%	0.0%	0.0%	0.0%	5.5%	-0.4%	-0.5%
Imports	-1.8%	0.1%	0.1%	-0.4%	0.0%	0.0%	-14.0%	1.1%	1.2%
<i>Barley</i>									
Production	1.5%	-0.2%	0.2%	1.6%	-0.3%	0.2%	1.9%	-0.3%	0.2%
Domestic use	0.7%	0.1%	0.2%	0.4%	0.1%	0.2%	0.8%	0.1%	0.2%
Exports	5.2%	-1.7%	0.0%	8.6%	-2.9%	0.1%	8.1%	-2.9%	0.0%
Imports	-9.8%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Area</i>									
Wheat	2.0%	0.0%	0.1%	1.7%	0.0%	0.1%	2.5%	0.0%	0.1%
Barley	1.6%	-0.3%	0.2%	1.7%	-0.3%	0.2%	2.0%	-0.4%	0.2%
<i>Prices</i>									
Wheat	-3.3%	0.3%	0.2%	-4.7%	0.4%	0.3%	-1.0%	0.1%	0.1%
Barley	-2.0%	0.7%	0.0%	-0.5%	0.2%	0.0%	-0.5%	0.2%	0.0%
England									
<i>Area</i>									
Wheat	2.2%	0.1%	0.0%	1.9%	0.1%	0.1%	2.8%	0.0%	0.0%
Barley	2.4%	0.1%	0.0%	2.4%	0.1%	0.0%	2.8%	0.0%	0.0%
<i>Production</i>									
Wheat	1.9%	0.1%	0.1%	1.6%	0.1%	0.1%	2.5%	0.0%	0.0%
Barley	2.2%	0.1%	0.0%	2.2%	0.1%	0.0%	2.6%	0.0%	0.0%
Rapeseed	2.7%	-0.1%	0.0%	2.8%	0.0%	0.0%	2.5%	0.0%	0.0%
Wales									
<i>Area</i>									
Wheat	-0.4%	0.0%	0.0%	-0.7%	0.0%	0.0%	-0.1%	0.0%	0.0%
Barley	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Production</i>									

Wheat	-0.5%	0.0%	0.0%	-0.8%	0.1%	0.1%	-0.2%	0.0%	0.0%
Barley	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
Scotland									
<i>Area</i>									
Wheat	-0.6%	-0.5%	0.0%	-1.0%	-0.4%	0.1%	-0.2%	-0.5%	0.0%
Barley	-0.2%	-1.3%	0.0%	0.1%	-1.4%	0.0%	-0.1%	-1.4%	0.0%
<i>Production</i>									
Wheat	-0.7%	-0.4%	0.1%	-1.1%	-0.4%	0.1%	-0.2%	-0.5%	0.0%
Barley	-0.3%	-1.2%	0.0%	0.1%	-1.4%	0.0%	-0.1%	-1.3%	0.0%
Northern Ireland									
<i>Area</i>									
Wheat	-0.6%	-1.7%	11.8%	-0.9%	-1.8%	11.9%	-0.2%	-1.8%	12.1%
Barley	-0.5%	-1.7%	11.8%	-0.3%	-1.8%	11.8%	-0.1%	-1.8%	12.1%
<i>Production</i>									
Wheat	-0.7%	-1.6%	11.1%	-1.0%	-1.6%	11.2%	-0.2%	-1.7%	11.3%
Barley	-0.5%	-1.6%	11.3%	-0.3%	-1.7%	11.3%	-0.1%	-1.7%	11.5%

Table 34 Projected changes in value of output due to provision of coupled payments: 20% coupled payments

	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI
UK									
Wheat									
Barley	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
Oats	0.2%	0.1%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Rapeseed	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.2%	0.0%	0.0%
<i>Total Crops</i>	0.3%	0.0%	0.0%	0.4%	0.0%	0.0%	-0.1%	0.0%	0.0%
Cattle	0.8%	0.3%	0.2%	1.0%	0.2%	0.2%	0.8%	0.2%	0.2%
Pig	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
Sheep	1.5%	0.1%	0.1%	-2.0%	-0.1%	-0.1%	-1.3%	-0.1%	-0.1%
Poultry	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Total Livestock</i>	0.6%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
<i>Milk</i>	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
<i>Total UK Agric. Value of Output</i>	0.4%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Individual Country Total Agric. Value of Output									
England	0.6%	0.0%	0.0%	0.5%	0.0%	0.0%	0.3%	0.0%	0.0%
Wales	-0.2%	0.0%	0.0%	-1.1%	-0.1%	-0.1%	-0.9%	-0.1%	-0.1%
Scotland	-0.1%	0.6%	0.0%	-0.6%	0.5%	0.0%	-0.5%	0.5%	0.0%
Northern Ireland	-0.1%	0.0%	0.6%	-0.2%	0.0%	0.6%	-0.2%	0.0%	0.5%
Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)									
England	0.5%	0.0%	0.0%	0.4%	0.0%	0.0%	0.2%	0.0%	0.0%
Wales	-0.1%	0.0%	0.0%	-0.9%	-0.1%	-0.1%	-0.7%	-0.1%	0.0%
Scotland	-0.1%	0.4%	0.0%	-0.4%	0.4%	0.0%	-0.4%	0.3%	0.0%
Northern Ireland	-0.1%	0.0%	0.5%	-0.2%	0.0%	0.5%	-0.2%	0.0%	0.4%

Table 35 Projected changes in value of output due to provision of coupled payments: 100% coupled payments

	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK									
Wheat									
Barley	-0.5%	0.5%	0.2%	1.0%	-0.1%	0.2%	1.2%	-0.1%	0.2%
Oats	0.1%	0.5%	0.2%	1.3%	0.0%	0.2%	1.5%	0.0%	0.2%
Rapeseed	2.6%	-0.2%	0.0%	2.6%	-0.2%	0.0%	2.3%	-0.1%	0.0%
<i>Total Crops</i>	-0.6%	0.3%	0.2%	-1.2%	0.2%	0.3%	1.4%	0.0%	0.1%
Cattle	0.4%	0.3%	0.8%	2.2%	2.0%	0.8%	1.9%	1.6%	0.7%
Pig	0.0%	0.1%	0.0%	0.3%	-0.1%	0.0%	-0.1%	-0.1%	0.0%
Sheep	1.1%	0.9%	0.0%	-1.6%	-1.0%	0.0%	-1.0%	-0.7%	0.0%
Poultry	-0.4%	0.1%	0.0%	0.1%	0.1%	0.1%	-0.2%	0.0%	0.0%
<i>Total Livestock</i>	0.2%	0.3%	0.4%	0.7%	0.7%	0.4%	0.5%	0.6%	0.3%
<i>Milk</i>	0.6%	0.0%	0.5%	2.4%	0.0%	0.3%	2.4%	0.0%	0.6%
<i>Total UK Agric. Value of Output</i>	0.2%	0.2%	0.4%	0.7%	0.4%	0.3%	1.2%	0.3%	0.3%
Individual Country Total Agric. Value of Output									
England	1.0%	-0.2%	0.0%	1.5%	-0.1%	0.0%	2.1%	-0.1%	0.0%
Wales	-1.7%	-0.6%	-0.1%	-1.5%	-0.6%	-0.2%	-0.9%	-0.5%	-0.1%
Scotland	-1.8%	4.0%	-0.1%	-1.2%	4.3%	-0.1%	-0.6%	3.6%	0.0%
Northern Ireland	-1.3%	-0.6%	3.9%	-0.5%	-0.2%	4.1%	-0.3%	-0.2%	3.5%
Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)									
England	0.8%	-0.2%	0.0%	1.3%	-0.1%	0.0%	1.7%	-0.1%	0.0%
Wales	-1.4%	-0.5%	-0.1%	-1.2%	-0.5%	-0.2%	-0.7%	-0.4%	0.0%
Scotland	-1.3%	3.0%	-0.1%	-0.9%	3.3%	-0.1%	-0.5%	2.7%	0.0%
Northern Ireland	-1.1%	-0.5%	3.3%	-0.5%	-0.2%	3.4%	-0.3%	-0.1%	2.9%

Discussion

This study analyses the market impacts of changes in Pillar I supports as part of potential major reforms to agricultural policy following UK exit from the EU. The analysis captures different potential post-Brexit trade arrangements to determine the extent to which these arrangements impact the market response of changes in Pillar I support. Three different trade arrangements are considered, namely FTA trade arrangements with zero tariffs between the UK & the EU and two hard Brexit scenarios, covering WTO default tariffs and 2019 No Deal Tariff schedule trade arrangements.

The results highlight that the market impact of changes in Pillar I support varies across individual sectors. In particular, following the reduction of Pillar I payments the price response is variable across different trade arrangements in the sheep sector but less so in the beef sector. In the sheep sector, the projected increase in the sheepmeat price is substantially lower under the FTA version of the scenario compared to the WTO and No Deal Tariff versions. This reflects differences in the potential of sheepmeat exports to adjust under the different trade arrangements. Under the FTA version of this scenario, UK sheepmeat exports decline, thereby offsetting the decline in production, which limits the price increase. Under WTO and No Deal trade arrangements, UK exports are already minimal and hence have little room to fall further. As a result, price increases in response to the decline in production under the WTO and No Deal trade arrangements.

In contrast, the beef price responses to reductions in Pillar I payments are small regardless of trade arrangements. Under the FTA version of this scenario, imports from the EU increase and thereby limit the price increase. Under the WTO version of this scenario, when the trade arrangements are applied on a stand-alone basis the UK price reaches the 'World Price + MFN Tariff level', which acts to curb further price rises following the reduction/elimination of direct payments. Similarly, under the 2019 No Deal tariff schedule, there is a large inflow of imports from the RoW when the trade arrangements are changed on a stand-alone basis. Following the further reduction/elimination of direct payments imports from the RoW adjust and hence there is little change in price. It is important to bear in mind that the above price responses are in addition to the changes that occur due to the changes in trade arrangements. Following the implementation of No Deal Tariff trade arrangements on a stand-alone basis it is projected that the beef price falls significantly (although this price impact is dependent upon assumptions regarding the underlying world price).

Overall, the analysis shows that the beef and sheep sectors are the most likely sectors to experience declines in activity levels and production in response to reductions and removal of Pillar I direct payments. As demonstrated by the sensitivity analysis, the projected impact depends on the assumptions regarding the extent to which the decoupled payments have a production stimulating impact. This is an area of considerable uncertainty.

Recent empirical analysis by Olagunju *et al.* (2019) in Northern Ireland suggests that the production stimulating impact of decoupled payments in the livestock sectors may be greater than the 'weak' 30% assumption traditionally employed within the FAPRI-UK model and other modelling systems. In particular, using Farm Business Survey data in Northern Ireland the authors found that the impact of decoupled payments on the number of beef cows is about 66% compared to the impact of market revenue. This implies that the results pertaining to the 'medium' 60% decoupling assumption are the most relevant for the beef sector. With regards to the dairy sector, Olagunju *et al.* (2019) found that the impact of decoupled payments on milk output is 24% compared to market revenue. This implies that the 'weak' 30% production stimulating assumption is a reasonable approximation for the dairy sector. However, in contrast to the beef and dairy sectors, the empirical evidence for

the sheep sector is questionable. The authors estimated that the impact of decoupled payments on the number of ewes is greater compared to market revenue. This is partly attributed to the limited profitability in the sheep sector, which affects the magnitude of the revenue term. Nonetheless, given the observed fall in UK ewe numbers following the replacement of the coupled ewe premium with the decoupled Single Farm Payment in 2005 it is apparent that sheep farmers have responded to some extent to decoupling. Due to concerns of the empirical evidence for the sheep sector, it is judged most appropriate to assume that decoupled payments in this sector have the same impact as in the beef sector. The analysis by Olagunju *et al.* (2019) did not cover the crop sector. However, the empirical evidence elsewhere suggests that production stimulating impact of decoupled payments in this sector is modest.

It is important to stress that the removal of direct payments (and even the 50% reduction scenarios) entail significant departures from existing policies upon which the models have been calibrated. The coefficients within the supply functions capture the production responses of changes in returns (market receipts and direct payments) observed during the historic period. This includes changes in Pillar I direct payments that occurred due to modulation and exchange rate fluctuations. The coefficients for supply responses are reasonably robust for changes in direct payments within these bounds. However, there is uncertainty regarding the linearity of production responses following substantial changes in direct payments, such as those considered within the above scenario analysis.

Farm-level analysis undertaken by Shrestha and Moxey as part of the study by Hubbard *et al.* (2019) indicate that the viability of many livestock farms is questionable if Pillar I support is abolished and that they may cease to exist. If farms exit the livestock sector at a magnitude well beyond the historic pattern, this could have a 'tipping-point' impact, when farms cease production, rather than reduce supply, that would not be captured within the modelling work carried out in this report. However, over time, the shocks to agricultural factor markets will be re-distributed across agriculture and the wider economy. For example, sector productivity could improve over time if the least productive land (in respect to generating a market return) is moved into public good provision, or if the change leads to an increase in the average farm scale of those farms relatively more competitive in terms of marketed goods. This would be reflected within the FAPRI-UK modelling system as an increase in the aggregate productivity of the agricultural production systems modelled – or a weighted average of all the individual farms producing that commodity.

In addition, the FAPRI-UK modelling system does not capture changes in factor markets. In particular, due to the capitalisation of direct payments within land rental prices it is anticipated that the reduction of direct payments would have a depressing impact on land rents. In terms of farm income, a decline in land rental costs would partially offset the impact of a reduction in direct payments. Factor markets are taken into account within the Computable General Equilibrium (CGE) modelling framework employed by Philippidis in Hubbard *et al.* (2019). In a CGE modelling system, factor prices and quantities can change in response to a policy scenario. Comparing the impact of eliminating all Pillar I payments using the CGE model, there are no marked differences. This indicates that the results presented in this report are not limited by fixed factor markets, given comparable results have been obtained using a more flexible modelling system in this respect.

The FAPRI sectoral modelling framework used in the analysis in this study provides estimates of the sector-wide implications of changes in direct payments. The distributional impacts of such policy changes at the farm-level are potentially significant as large proportions of farms are dependent on direct payments to make a profit, particularly in the beef and sheep sectors. It is also important to acknowledge that lower farm incomes due to

reductions in Pillar I type payments will be offset to some extent by new outcome-based schemes involving the delivery of public goods. The extent to which different farm types will be able to access these schemes remains to be ascertained.

Our analysis on the provision of coupled payments indicates that this reallocation of payments may lead to changes within the administrations in which they are implemented. In particular, it is projected that the provision of 100% coupled payments in Scotland leads to a significant increase in Scottish beef cow numbers (16.9% to 19.5%). This reflects the assumption that coupled payments are just provided to the beef and sheep sectors in this territory. Moreover, the results demonstrate that the impact of coupled payments partly depends on the underlying trade arrangements and the extent to which imports/exports can readjust. The price impact is even lower under the WTO and No Deal trade arrangements as following the change in trade arrangements beef imports from the rest of the world readjust quickly in response to the changes in the level of production which occurs due to the provision of coupled payments.

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Appendix 1: Impact of Changes in Trade Arrangements

The following tables contain the results for changes in trade arrangements on a stand-alone basis, *i.e.* they refer to change under trade arrangement compared to the Baseline, with no changes to direct payments. The changes presented in the main section of the report are additional to these stand-alone results.

With regards to the FTA and WTO trade arrangements similar analyses were undertaken using the FAPRI models in 2017 (Davis *et al.*, 2017). The results for the FTA and WTO analyses undertaken in this study are broadly similar to before, although there are some differences reflecting different baseline prices. In contrast, the FAPRI 2017 analysis considered a more extreme version of trade liberalisation in which import tariffs for all commodities were reduced to zero, whereas the results in this report are based on the application of the UK Government's No Deal tariff schedule. As a result, the discussion below mostly focuses on the latter.

Free Trade Agreement with the EU

Similar to the 2017 analysis, additional trade facilitation cost due to the UK's exit from the single market causes some disruption to trade flows but the estimated market impacts are relatively small.

WTO Default

The default WTO MFN tariffs are in the main very high and hence the imposition of these tariffs leads to significant adjustments in trade between the UK and EU. In general, the projected changes in trade have significant impacts on domestic markets, with the direction of the impact on price varying according to whether the UK is a net importer or a net exporter of the relevant commodity. For example, in the case of beef, in which the UK is a net importer, the imposition of tariffs reduces the competitiveness of the imported product, resulting in a higher UK beef producer price. As indicated in Appendix 2, the rise in beef price is sufficient for non-EU countries to export beef to the UK paying the full high tariff and consequently, the 'World Price +WTO Tariff' limits the extent to which the UK producer price rises.¹⁰ In contrast, in the sheep sector, wherein the UK is a net exporter to the EU, the imposition of tariffs substantially diminishes the volumes of UK exports to the EU. The resulting increased supplies within the domestic market exerts a downward impact on the producer sheepmeat price.

The projected changes in producer prices have a knock-on impact on consumer prices (Table A1.8). The FAPRI-UK model does not explicitly capture consumer price changes. However, the information generated from the model on producer prices has been combined with some assumptions to consider the potential impact on consumer prices under each scenario. The direction of impact on consumer prices follows the change in producer prices but the magnitude of the impact is smaller. In the most extreme case, it is projected that beef (+4%), pigmeat (+4%), cheese (+8%) and butter (+9%) consumer prices rise under the WTO Default scenario, while the projected aggregate retail price of sheepmeat decreases (-10%). Underlying these consumer price projections it is assumed that existing producer-retail price spreads remain the same as the recent historical period. Brexit is likely to have far reaching impacts on the food supply chain that are not captured in this analysis (*e.g.* availability of migrant labour) which may impact this price spread and hence, consumer price

¹⁰ Note that the projected impact is partly determined by the baseline reference price. In particular, the Brazilian beef producer price is used as a reference price and the highly competitive nature of this price curbs the extent to which the UK price can rise in the scenario.

impacts. Therefore, these consumer price estimates should be treated as indicative only, as a more robust estimate requires explicit modelling of key relationships along the entire supply chain.

2019 No Deal Tariff Schedule

Within the beef sector it is projected that there is a large inflow of beef imports from the Rest of the World. These displace to some extent imports from the EU. The total level of imports exceeds the tariff rate quota as overseas' suppliers such as Brazil are very competitive and it is projected that they are able to pay the No Deal out-of-quota tariff, which is considerably lower than the MFN tariffs currently applied by the EU. As a result, the UK producer beef price falls close to 'World Price + Tariff' levels (-22% compared to the baseline at the end of the projection period (2027)).¹¹

The UK sheep sector also experiences a large decline in the producer price under the No Deal Tariff schedule scenario (-18%). This reflects the application of the large MFN tariffs on UK sheepmeat exports to the EU, which leads to increased available supplies in the UK market. Imports from the Rest of the World continue as before via the tariff rate quota.

In the pig sector, the rechanneling to the domestic market of produce that would have previously been exported to the EU market also exerts a negative impact on price (-9%). The relatively low tariffs imposed on pigmeat imports to the UK under the No Deal tariff arrangements results in modest disruption to trade from the EU.

The No Deal tariffs for poultry imports are also fairly modest and hence it is projected imports are still competitive after paying the full tariff. As a result, produce is imported beyond the new No Deal tariff rate quota and the overall fall in poultry meat imports is small. Within this analysis it is assumed that it is feasible to find alternative markets for the lower value cuts that would have previously been exported to the EU and hence there is no change in the total level of UK exports. These exports help to support the domestic poultry price, which exhibits little change under this scenario. It is important to highlight that the data within the FAPRI-UK model excludes processed produce. Processed produce is considerable in the poultry sector and thus the model results do not capture of market impacts of disruption to this trade.¹²

In the dairy sector it is projected that cheese exports to the EU fall sharply due to the application of high MFN tariffs. In contrast, the disruption to UK cheese imports from the EU is modest due to the relatively low No Deal tariffs. As a result, increased available supplies exerts a downward impact on the domestic cheese price (-13%). While the No Deal butter tariff is a third lower than the default MFN tariff, it is still quite large and reduces the competitiveness of imports from the EU. As a result, the volume of imports fall significantly but do not collapse completely. In contrast, the application of the full MFN tariff on UK exports to the EU, results in UK butter exports falling to zero. As a result of these changes the domestic butter price falls by 5%. Underlying this analysis it is assumed that there is sufficient processing capacity in Northern Ireland to absorb the substantial volumes of raw milk that were previously exported to Ireland.

Within the crops sector, it is projected that wheat and barley prices both decline. The price decline for wheat reflects the collapse of exports to the EU. Barley exports to the EU also fall sharply but not completely as it is assumed that there is still a demand for barley for

¹¹ Within the baseline the UK beef price rises relative to the EU and world prices during the projection period due to an underlying growth in UK population that has an upward impact on beef consumption. As a result, the UK beef price has further to fall in the scenario analysis than would otherwise be the case.

¹² This issue will be addressed in future updates of the FAPRI-UK model providing a robust market demand and supply balance dataset is available.

brewing purposes. Some of the produce that was previously exported to the EU is rechannelled to the rest of the world.

In terms of consumer prices, under the No Deal tariff schedule scenario, all consumer prices are projected to decline, with aggregate sheepmeat and beef retail prices experiencing the largest price impacts (Table A1.8).

*Table A1-1 Projected changes in beef sector due to changes in trade arrangements only
(Percentage changes in 2027)*

	FTA	WTO	ND Tariffs
UK			
Beef cows	0.6%	6.6%	-12.6%
Dairy cows	0.4%	4.4%	-3.0%
Total Cattle	0.5%	5.7%	-7.0%
Production	0.6%	5.6%	-5.6%
Domestic use	0.1%	-1.2%	7.2%
Exports	-3.3%	-100.0%	-100.0%
Imports	-2.0%	-46.3%	-0.5%
Cattle price	0.0%	8.0%	-22.5%
England			
Beef cows	0.6%	7.3%	-13.8%
Dairy cows	0.3%	4.1%	-2.8%
Total Cattle	0.5%	5.5%	-6.6%
Production	0.5%	5.1%	-4.9%
Wales			
Beef cows	0.5%	5.9%	-11.0%
Dairy cows	0.5%	6.1%	-4.1%
Total Cattle	0.6%	6.2%	-6.7%
Production	0.6%	5.6%	-5.0%
Scotland			
Beef cows	0.5%	6.2%	-11.8%
Dairy cows	0.5%	6.1%	-4.1%
Total Cattle	0.6%	6.6%	-9.1%
Production	0.8%	7.5%	-8.1%
Northern Ireland			
Beef cows	0.5%	6.1%	-11.6%
Dairy cows	0.3%	3.4%	-2.3%
Total Cattle	0.5%	5.0%	-6.4%
Production	0.6%	5.6%	-5.8%

*Table A1-2 Projected changes in sheep sector due to changes in trade arrangements only
(Percentage changes in 2027)*

	FTA	WTO	ND Tariffs
UK			
Ewes	-1.7%	-15.0%	-12.6%
Total Sheep	-1.7%	-15.0%	-12.7%
Production	-1.5%	-17.5%	-16.2%
Domestic use	0.9%	6.8%	8.5%
Exports	-8.2%	-98.8%	-99.3%
Imports	-0.8%	-21.9%	-21.2%
Sheepmeat price	-3.2%	-22.1%	-18.2%
England			
Ewes	-2.1%	-17.9%	-15.0%
Total Sheep	-1.9%	-17.5%	-15.0%
Production	-1.8%	-21.6%	-20.2%
Wales			
Ewes	-1.4%	-12.5%	-10.5%
Total Sheep	-1.5%	-13.3%	-11.2%
Production	-1.3%	-13.6%	-12.2%
Scotland			
Ewes	-1.4%	-12.0%	-10.0%
Total Sheep	-1.2%	-11.1%	-9.4%
Production	-1.0%	-12.9%	-12.1%
Northern Ireland			
Ewes	-1.7%	-14.9%	-12.6%
Total Sheep	-1.7%	-15.0%	-12.7%
Production	-1.4%	-17.3%	-16.2%

*Table A1-3 Projected changes in pig sector due to changes in trade arrangements only
(Percentage changes in 2027)*

	FTA	WTO	ND Tariffs
UK			
Sows	0.6%	9.8%	-8.3%
Total pigs	0.6%	10.3%	-8.8%
Production	0.6%	10.4%	-8.9%
Domestic use	-0.2%	-3.5%	3.6%
Exports	-0.4%	-68.7%	-68.1%
Imports	-1.1%	-37.1%	-3.3%
Pigmeat price	0.5%	10.2%	-9.4%
England			
Sows	0.6%	10.1%	-8.6%
Total pigs	0.6%	10.6%	-9.0%
Production	0.6%	10.9%	-9.4%
Wales			
Sows	0.4%	7.6%	-6.4%
Total pigs	0.5%	9.2%	-7.9%
Production	0.6%	11.2%	-9.6%
Scotland			
Sows	0.6%	9.9%	-8.4%
Total pigs	0.7%	12.5%	-10.6%
Production	0.6%	10.5%	-8.9%
Northern Ireland			
Sows	0.4%	7.2%	-6.1%
Total pigs	0.4%	7.5%	-6.4%
Production	0.4%	6.6%	-5.6%

*Table A1-4 Projected changes in poultry sector due to changes in trade arrangements only
(Percentage changes in 2027)*

	FTA	WTO	ND Tariffs
UK			
Production	0.2%	1.9%	1.7%
Domestic use	0.0%	-0.6%	0.0%
Exports	-1.3%	0.0%	0.0%
Imports	-1.3%	-8.3%	-5.5%
Poultry price	0.1%	4.2%	0.7%
England and Wales			
Production	0.2%	1.9%	1.7%
Scotland			
Production	0.2%	2.8%	2.5%
Northern Ireland			
Production	0.1%	1.3%	1.1%

Table A1-5 Projected changes in dairy sector due to changes in trade arrangements only
(Percentage changes in 2027)

	FTA	WTO	ND Tariffs
UK			
Cow's milk			
Production	0.4%	5.3%	-3.6%
Manufacturing use	1.0%	12.6%	-8.8%
<i>Prices</i>			
Producer milk price	1.4%	19.3%	-13.4%
Cheese price	1.2%	17.5%	-12.9%
Butter price	0.7%	12.8%	-4.8%
WMP price	0.0%	0.0%	0.0%
SMP price	0.0%	-0.1%	-0.1%
<i>Cheese</i>			
Production	1.0%	17.3%	-4.3%
Domestic use	-0.2%	-2.7%	2.4%
Exports	-1.5%	-81.4%	-36.8%
Imports	-1.6%	-43.4%	-4.6%
<i>Butter</i>			
Production	0.6%	22.3%	4.5%
Domestic use	-0.2%	-3.7%	1.5%
Exports	-5.8%	-100.0%	-95.3%
Imports	-4.7%	-98.4%	-56.0%
England			
Milk production	0.4%	5.1%	-3.4%
Dairy cows	0.3%	4.1%	-2.8%
Milk price	1.4%	19.3%	-13.4%
Wales			
Milk production	0.5%	7.0%	-4.6%
Dairy cows	0.5%	6.1%	-4.1%
Milk price	1.3%	18.5%	-12.8%
Scotland			
Milk production	0.5%	6.9%	-4.6%
Dairy cows	0.5%	6.1%	-4.1%
Milk price	1.3%	18.7%	-13.0%
Northern Ireland			
Milk production	0.3%	3.8%	-2.6%
Dairy cows	0.3%	3.4%	-2.3%
Milk price	0.8%	11.9%	-8.4%

Table A1- 6 Projected changes in crop sector due to changes in trade arrangements only
(Percentage changes in 2027)

	FTA	WTO	ND Tariffs
UK			
<i>Wheat</i>			
Production	-0.1%	1.4%	-1.9%
Domestic use	0.2%	1.4%	-1.0%
Exports	-6.7%	-100.0%	-87.9%
Imports	-1.0%	-69.6%	-49.8%
<i>Barley</i>			
Production	-0.3%	-0.4%	-2.4%
Domestic use	0.4%	4.2%	-1.3%
Exports	-4.1%	-37.6%	-18.9%
Imports	-2.6%	-100.0%	-100.0%
<i>Area</i>			
Wheat	-0.1%	1.2%	-1.7%
Barley	-0.2%	-0.3%	-2.1%
<i>Prices</i>			
Wheat	-0.5%	5.6%	-8.0%
Barley	-1.3%	-4.4%	-11.1%
England			
<i>Area</i>			
Wheat	-0.1%	1.2%	-1.8%
Barley	-0.2%	0.1%	-2.2%
<i>Production</i>			
Wheat	-0.1%	1.4%	-2.0%
Barley	-0.2%	-0.1%	-2.5%
Rapeseed	0.1%	-0.4%	1.3%
Wales			
<i>Area</i>			
Wheat	0.0%	1.1%	-0.6%
Barley	-0.1%	-0.5%	-1.2%
<i>Production</i>			
Wheat	0.0%	1.3%	-0.9%
Barley	-0.2%	-0.7%	-1.5%
Scotland			
<i>Area</i>			
Wheat	0.0%	1.7%	-0.9%
Barley	-0.3%	-1.3%	-2.0%
<i>Production</i>			
Wheat	0.0%	1.9%	-1.2%

Barley	-0.3%	-1.4%	-2.4%
Northern Ireland			
<i>Area</i>			
Wheat	-0.1%	0.9%	-1.8%
Barley	-0.2%	-0.5%	-2.3%
<i>Production</i>			
Wheat	-0.1%	1.2%	-2.0%
Barley	-0.3%	-0.7%	-2.6%

Table A1-7 Projected changes in value of output due to changes in trade arrangements only (Percentage changes in 2027)

	FTA	WTO	ND Tariffs
UK			
Wheat	-0.6%	7.1%	-9.8%
Barley	-1.5%	-4.7%	-13.2%
Oats	-1.2%	-3.7%	-10.4%
Rapeseed	0.1%	-0.3%	1.3%
<i>Total Crops</i>	-0.7%	2.8%	-8.7%
Cattle	0.6%	14.1%	-26.8%
Pig	1.1%	21.6%	-17.5%
Sheep	-4.6%	-35.7%	-31.4%
Poultry	0.3%	6.2%	2.4%
<i>Total Livestock</i>	-0.3%	5.1%	-18.4%
<i>Milk</i>	1.7%	24.4%	-15.7%
Total UK Agric. Value of Output	0.2%	9.6%	-15.6%
Individual Country Total Agric. Value of Output			
England	0.2%	10.1%	-14.2%
Wales	-0.2%	7.0%	-21.0%
Scotland	-0.1%	7.7%	-19.8%
Northern Ireland	0.5%	11.2%	-15.4%

Table A1-8 Projected changes in consumer prices due to changes in trade arrangements only (Percentage changes in 2027)

	FTA	WTO	ND Tariffs
Beef Price	0.0%	3.8%	-10.8%
Sheepmeat Price	-1.5%	-10.4%	-8.5%
Pigmeat Price	0.2%	3.9%	-3.6%
Cheese Price	0.6%	8.5%	-6.3%
Butter Price	0.5%	8.7%	-3.2%
Wheat Price	-0.1%	0.8%	-1.1%

Appendix 2: Combined impact of changes in trade arrangements and Pillar1 support payments

The following tables provide projections of *the combined impacts of changes in trade arrangements and Pillar I support*. This contrasts with the previous appendix, which presented estimates of changes in trade arrangements on a stand-alone basis, and the analysis presented in the main report, which isolated the impact of changes in direct support in the context of different trade arrangements. Tables A2.1 to A2.7 provide estimates of the combined impact of changes in trade arrangements and reductions in Pillar I support payments, while Tables A2.8 to A2.14 provide estimates of the combined impact of changes in trade arrangements and provision of coupled payments. The combined impacts depends on the extent to which the changes in terms of trade and agricultural support complement or offset each other.

Table A2- 1 Projected changes in beef sector due to changes in trade arrangements and reduction in Pillar I direct payments (Percentage changes in 2027)

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.
UK																		
Beef cows	-2.0%	-4.1%	3.9%	1.8%	-15.5%	-17.6%	-4.1%	-8.4%	1.8%	-2.5%	-17.4%	-21.6%	-7.1%	-14.2%	-1.1%	-8.1%	-19.9%	-27.0%
Dairy cows	0.1%	-0.2%	4.2%	3.9%	-3.3%	-3.6%	-0.2%	-0.9%	3.8%	3.2%	-3.6%	-4.3%	-0.7%	-1.7%	3.4%	2.4%	-4.0%	-5.1%
Total Cattle	-0.8%	-2.0%	4.3%	3.1%	-8.5%	-9.6%	-2.0%	-4.3%	3.1%	0.8%	-9.9%	-12.2%	-3.5%	-7.4%	1.5%	-2.3%	-10.9%	-14.8%
Production	-0.6%	-1.7%	4.4%	3.3%	-6.9%	-8.0%	-1.6%	-3.7%	3.3%	1.2%	-8.7%	-10.8%	-3.0%	-6.5%	1.8%	-1.6%	-9.2%	-12.7%
Domestic use	0.0%	0.0%	-1.4%	-1.6%	7.1%	7.0%	-0.1%	-0.1%	-1.6%	-1.8%	6.5%	6.3%	-0.2%	-0.3%	-1.8%	-2.1%	6.3%	6.1%
Exports	-3.9%	-3.7%	-100.0%	-100.0%	-100.0%	-100.0%	-3.0%	-2.7%	-100.0%	-100.0%	-100.0%	-100.0%	-2.0%	-1.5%	-100.0%	-100.0%	-100.0%	-100.0%
Imports	0.2%	2.3%	-44.3%	-42.4%	1.8%	3.7%	2.1%	6.4%	-42.2%	-38.6%	4.0%	7.8%	4.9%	11.9%	-39.4%	-33.4%	4.7%	11.2%
Cattle price	0.1%	0.2%	8.1%	8.3%	-22.4%	-22.3%	0.2%	0.3%	8.3%	8.6%	-21.1%	-20.9%	0.3%	0.5%	8.5%	9.0%	-21.0%	-20.7%
England																		
Beef cows	-0.8%	-2.3%	5.7%	4.1%	-15.4%	-16.9%	-2.3%	-5.6%	4.1%	0.9%	-16.7%	-19.9%	-4.6%	-10.0%	1.9%	-3.4%	-18.5%	-23.8%
Dairy cows	0.1%	-0.2%	3.8%	3.6%	-3.1%	-3.4%	-0.2%	-0.8%	3.5%	2.9%	-3.4%	-4.0%	-0.7%	-1.6%	3.1%	2.1%	-3.8%	-4.8%
Total Cattle	-0.2%	-1.0%	4.7%	3.9%	-7.4%	-8.1%	-1.0%	-2.6%	3.9%	2.3%	-8.4%	-10.0%	-2.1%	-4.8%	2.7%	0.1%	-9.0%	-11.7%
Production	-0.1%	-0.7%	4.4%	3.8%	-5.5%	-6.2%	-0.7%	-2.0%	3.7%	2.4%	-6.8%	-8.2%	-1.6%	-3.9%	2.7%	0.5%	-7.0%	-9.2%
Wales																		
Beef cows	-1.3%	-3.2%	4.0%	2.0%	-13.0%	-15.0%	-3.3%	-7.3%	1.9%	-2.0%	-14.8%	-18.7%	-6.1%	-12.8%	-0.8%	-7.4%	-17.2%	-23.8%
Dairy cows	0.2%	0.0%	5.8%	5.6%	-4.4%	-4.6%	0.0%	-0.5%	5.6%	5.1%	-4.6%	-5.2%	-0.4%	-1.2%	5.2%	4.4%	-4.9%	-5.9%
Total Cattle	-0.4%	-1.4%	5.2%	4.2%	-7.7%	-8.7%	-1.4%	-3.5%	4.1%	2.1%	-9.0%	-11.1%	-2.8%	-6.3%	2.7%	-0.7%	-9.9%	-13.4%
Production	-0.2%	-1.0%	4.8%	3.9%	-5.8%	-6.6%	-1.0%	-2.7%	3.9%	2.2%	-7.2%	-8.9%	-2.1%	-4.9%	2.7%	0.0%	-7.6%	-10.4%
Scotland																		
Beef cows	-3.7%	-5.6%	2.0%	0.1%	-16.5%	-18.4%	-5.5%	-9.2%	0.1%	-3.6%	-18.1%	-21.9%	-8.0%	-14.2%	-2.3%	-8.4%	-20.3%	-26.5%
Dairy cows	0.2%	0.0%	5.9%	5.6%	-4.4%	-4.6%	0.0%	-0.6%	5.6%	5.1%	-4.7%	-5.2%	-0.4%	-1.3%	5.2%	4.4%	-5.0%	-6.0%
Total Cattle	-2.4%	-3.8%	3.6%	2.1%	-12.3%	-13.8%	-3.7%	-6.6%	2.2%	-0.6%	-14.0%	-16.9%	-5.6%	-10.3%	0.3%	-4.3%	-15.2%	-19.9%
Production	-2.0%	-3.6%	4.7%	3.1%	-11.1%	-12.8%	-3.3%	-6.3%	3.3%	0.3%	-13.5%	-16.6%	-5.1%	-10.0%	1.4%	-3.3%	-14.1%	-18.9%
Northern Ireland																		
Beef cows	-3.4%	-7.4%	2.1%	-2.0%	-15.7%	-19.8%	-7.4%	-15.6%	-2.1%	-10.2%	-19.6%	-27.7%	-13.0%	-26.7%	-7.6%	-21.2%	-24.8%	-38.4%
Dairy cows	-0.1%	-0.6%	3.0%	2.6%	-2.7%	-3.1%	-0.6%	-1.4%	2.6%	1.8%	-3.1%	-4.0%	-1.1%	-2.5%	2.0%	0.6%	-3.7%	-5.1%
Total Cattle	-1.6%	-3.8%	2.8%	0.6%	-8.6%	-10.8%	-3.8%	-8.2%	0.6%	-3.7%	-11.0%	-15.4%	-6.8%	-14.0%	-2.4%	-9.6%	-13.5%	-20.8%
Production	-1.5%	-3.6%	3.5%	1.3%	-8.0%	-10.1%	-3.6%	-7.9%	1.3%	-3.0%	-10.8%	-15.1%	-6.5%	-13.6%	-1.7%	-8.7%	-12.8%	-19.9%

Table A2- 2 Projected changes in sheep sector due to changes in trade arrangements and reduction in Pillar I direct payments (Percentage changes in 2027)

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.
UK																		
Ewes	-4.4%	-6.9%	-15.8%	-16.4%	-13.5%	-14.2%	-5.9%	-10.6%	-17.0%	-18.2%	-14.7%	-16.1%	-7.7%	-15.3%	-18.5%	-20.3%	-16.2%	-18.3%
Total Sheep	-4.3%	-6.7%	-15.9%	-16.5%	-13.6%	-14.2%	-5.8%	-10.4%	-17.1%	-18.3%	-15.0%	-16.2%	-7.6%	-15.1%	-18.7%	-20.4%	-16.5%	-18.2%
Production	-4.3%	-6.9%	-19.7%	-21.0%	-17.4%	-18.0%	-6.4%	-11.5%	-21.3%	-23.4%	-19.6%	-20.6%	-8.7%	-16.8%	-23.0%	-25.8%	-21.4%	-22.5%
Domestic use	0.8%	0.7%	5.2%	4.3%	7.6%	7.2%	-0.2%	-0.4%	4.0%	2.5%	5.9%	5.2%	-1.3%	-1.7%	2.7%	0.7%	4.5%	3.7%
Exports	-15.9%	-23.2%	-99.3%	-99.6%	-99.5%	-99.7%	-18.1%	-32.0%	-99.4%	-99.9%	-99.7%	-99.9%	-20.6%	-43.2%	-99.4%	-100.0%	-99.8%	-100.0%
Imports	-0.7%	-0.7%	-21.1%	-20.6%	-20.7%	-20.5%	0.0%	0.2%	-20.4%	-19.6%	-19.9%	-19.5%	0.8%	1.1%	-19.7%	-18.5%	-19.1%	-18.7%
Sheepmeat price	-2.8%	-2.4%	-17.8%	-15.2%	-15.9%	-14.8%	0.8%	1.5%	-14.4%	-10.0%	-11.6%	-9.6%	4.8%	6.1%	-10.5%	-4.1%	-7.4%	-5.0%
England																		
Ewes	-4.0%	-6.0%	-17.5%	-17.3%	-14.7%	-14.7%	-4.9%	-8.8%	-18.3%	-17.9%	-15.6%	-15.4%	-6.1%	-12.6%	-19.3%	-18.6%	-16.5%	-16.2%
Total Sheep	-3.8%	-5.7%	-17.4%	-17.3%	-14.7%	-14.6%	-4.8%	-8.6%	-18.3%	-18.0%	-15.7%	-15.4%	-6.1%	-12.3%	-19.3%	-18.6%	-16.7%	-16.0%
Production	-3.9%	-6.2%	-23.1%	-23.7%	-20.3%	-20.0%	-5.7%	-10.0%	-24.4%	-25.1%	-22.3%	-21.6%	-7.6%	-14.6%	-25.6%	-26.0%	-23.7%	-21.9%
Wales																		
Ewes	-3.3%	-5.2%	-12.8%	-13.1%	-10.8%	-11.3%	-4.4%	-8.2%	-13.7%	-14.5%	-11.8%	-12.7%	-5.9%	-12.0%	-15.0%	-16.2%	-13.0%	-14.5%
Total Sheep	-3.5%	-5.6%	-13.7%	-14.1%	-11.6%	-12.1%	-4.8%	-8.8%	-14.8%	-15.7%	-13.0%	-14.0%	-6.5%	-13.1%	-16.3%	-17.7%	-14.2%	-15.8%
Production	-3.3%	-5.4%	-14.7%	-15.5%	-12.8%	-13.3%	-4.9%	-9.0%	-16.0%	-17.4%	-14.4%	-15.3%	-6.8%	-13.4%	-17.5%	-19.4%	-15.9%	-17.1%
Scotland																		
Ewes	-6.5%	-10.1%	-15.7%	-17.8%	-13.8%	-16.1%	-8.8%	-15.6%	-17.5%	-21.6%	-15.7%	-19.9%	-11.6%	-22.2%	-19.7%	-25.9%	-18.0%	-24.4%
Total Sheep	-5.9%	-9.2%	-14.5%	-16.5%	-12.8%	-14.9%	-8.1%	-14.3%	-16.3%	-20.0%	-14.7%	-18.5%	-10.7%	-20.4%	-18.3%	-24.0%	-16.8%	-22.6%
Production	-5.9%	-9.6%	-17.7%	-20.5%	-16.1%	-18.2%	-8.8%	-15.5%	-19.7%	-24.5%	-18.6%	-22.4%	-11.8%	-22.2%	-21.8%	-28.7%	-20.8%	-26.4%
Northern Ireland																		
Ewes	-5.7%	-9.6%	-17.0%	-19.1%	-14.6%	-16.9%	-8.9%	-16.8%	-20.2%	-24.6%	-17.9%	-22.5%	-13.2%	-26.7%	-24.7%	-32.0%	-22.2%	-29.9%
Total Sheep	-5.6%	-9.5%	-17.1%	-19.2%	-14.8%	-17.0%	-8.8%	-16.7%	-20.4%	-24.8%	-18.2%	-22.6%	-13.2%	-26.5%	-24.9%	-32.1%	-22.5%	-29.8%
Production	-5.6%	-9.8%	-21.1%	-24.1%	-18.8%	-20.9%	-9.7%	-18.2%	-25.0%	-30.6%	-23.3%	-27.6%	-14.8%	-29.1%	-30.0%	-38.7%	-28.4%	-35.1%

*Table A2-3 Projected changes in pig and poultry sectors due to changes in trade arrangements and reduction in Pillar I direct payments
(Percentage changes in 2027)*

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.
Pigs (UK)																		
Sows	0.5%	0.5%	9.7%	9.6%	-8.3%	-8.3%	0.5%	0.5%	9.6%	9.4%	-8.2%	-8.2%	0.5%	0.4%	9.4%	9.1%	-8.1%	-8.2%
Total pigs	0.5%	0.5%	10.3%	10.2%	-8.7%	-8.7%	0.5%	0.4%	10.1%	9.9%	-8.7%	-8.7%	0.5%	0.4%	9.9%	9.6%	-8.7%	-8.6%
Production	0.5%	0.5%	10.3%	10.2%	-8.8%	-8.7%	0.5%	0.4%	10.1%	9.9%	-8.8%	-8.7%	0.5%	0.3%	9.9%	9.6%	-8.7%	-8.5%
Domestic use	-0.2%	-0.2%	-3.4%	-3.4%	3.6%	3.6%	-0.2%	-0.2%	-3.4%	-3.3%	3.6%	3.7%	-0.2%	-0.2%	-3.3%	-3.3%	3.7%	3.8%
Exports	-0.4%	-0.4%	-68.7%	-68.7%	-68.1%	-68.1%	-0.5%	-0.5%	-68.7%	-68.7%	-68.1%	-68.1%	-0.5%	-0.5%	-68.7%	-68.7%	-68.1%	-68.1%
Imports	-1.1%	-1.1%	-36.8%	-36.7%	-3.3%	-3.4%	-1.0%	-1.0%	-36.6%	-36.2%	-3.3%	-3.3%	-1.0%	-0.9%	-36.3%	-35.8%	-3.3%	-3.3%
Pigmeat price	0.6%	0.7%	10.2%	10.3%	-9.4%	-9.4%	0.7%	0.9%	10.3%	10.4%	-9.4%	-9.4%	0.9%	1.2%	10.5%	10.6%	-9.3%	-9.4%
Poultry (UK)																		
Production	0.1%	0.1%	1.9%	1.9%	1.7%	1.7%	0.1%	0.0%	1.9%	1.8%	1.7%	1.7%	0.1%	-0.1%	1.8%	1.7%	1.7%	1.7%
Domestic use	0.0%	-0.1%	-0.6%	-0.6%	0.0%	0.0%	-0.1%	-0.1%	-0.6%	-0.7%	0.0%	0.0%	-0.1%	-0.1%	-0.7%	-0.8%	0.0%	-0.1%
Exports	-1.4%	-1.4%	0.0%	0.0%	0.0%	0.0%	-1.4%	-1.5%	0.0%	0.0%	0.0%	0.0%	-1.5%	-1.7%	0.0%	0.0%	0.0%	0.0%
Imports	-1.3%	-1.3%	-8.3%	-8.3%	-5.6%	-5.6%	-1.3%	-1.3%	-8.3%	-8.3%	-5.6%	-5.6%	-1.3%	-1.3%	-8.3%	-8.3%	-5.6%	-5.6%
Poultry price	0.3%	0.4%	4.6%	4.8%	0.8%	0.8%	0.4%	0.7%	4.8%	5.3%	0.8%	0.9%	0.6%	1.2%	5.2%	6.0%	0.8%	1.0%

Table A2-4 Projected changes in dairy sector due to changes in trade arrangements and reduction in Pillar I direct payments (Percentage changes in 2027)

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK																		
Cow's milk Production	0.1%	-0.2%	5.1%	4.8%	-3.9%	-4.2%	-0.2%	-0.8%	4.7%	4.1%	-4.2%	-4.8%	-0.6%	-1.6%	4.3%	3.3%	-4.6%	-5.7%
Manufacturing use	0.4%	-0.1%	12.0%	11.5%	-9.4%	-10.0%	-0.1%	-1.3%	11.4%	10.3%	-10.0%	-11.2%	-0.9%	-2.9%	10.6%	8.7%	-10.7%	-12.8%
<i>Prices</i>																		
Producer milk price	1.5%	1.6%	19.4%	19.5%	-13.4%	-13.3%	1.6%	1.7%	19.4%	19.6%	-13.4%	-13.3%	1.7%	1.9%	19.5%	19.9%	-13.4%	-13.3%
Cheese price	1.3%	1.4%	17.5%	17.6%	-12.8%	-12.8%	1.3%	1.5%	17.5%	17.6%	-12.9%	-12.8%	1.4%	1.6%	17.6%	17.7%	-12.9%	-12.8%
Butter price	0.7%	0.8%	13.3%	13.8%	-4.7%	-4.7%	0.8%	0.8%	13.9%	14.9%	-4.7%	-4.7%	0.8%	0.9%	14.7%	16.3%	-4.7%	-4.6%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%
<i>Cheese</i>																		
Production	0.5%	0.0%	16.7%	16.1%	-4.9%	-5.5%	0.0%	-1.1%	16.0%	14.9%	-5.5%	-6.7%	-0.8%	-2.6%	15.2%	13.2%	-6.2%	-8.3%
Domestic use	-0.2%	-0.2%	-2.7%	-2.7%	2.4%	2.4%	-0.2%	-0.2%	-2.7%	-2.7%	2.4%	2.4%	-0.2%	-0.3%	-2.7%	-2.7%	2.4%	2.4%
Exports	-1.7%	-2.0%	-81.4%	-81.4%	-37.3%	-37.7%	-2.1%	-2.6%	-81.4%	-81.4%	-37.7%	-38.5%	-2.5%	-3.4%	-81.4%	-81.4%	-38.3%	-39.7%
Imports	-1.3%	-0.9%	-43.0%	-42.5%	-4.3%	-4.0%	-0.9%	-0.3%	-42.4%	-41.5%	-4.0%	-3.3%	-0.5%	0.6%	-41.7%	-40.2%	-3.6%	-2.4%
<i>Butter</i>																		
Production	0.4%	0.1%	22.2%	22.0%	4.2%	3.8%	0.0%	-0.6%	22.0%	21.7%	3.8%	3.1%	-0.4%	-1.4%	21.8%	21.2%	3.4%	2.2%
Domestic use	-0.2%	-0.2%	-3.8%	-3.9%	1.5%	1.5%	-0.2%	-0.3%	-3.9%	-4.2%	1.5%	1.5%	-0.2%	-0.3%	-4.1%	-4.6%	1.5%	1.5%
Exports	-6.6%	-7.3%	-100.0%	-100.0%	-95.3%	-95.3%	-7.4%	-9.0%	-100.0%	-100.0%	-95.3%	-95.3%	-8.6%	-11.1%	-100.0%	-100.0%	-95.3%	-95.3%
Imports	-4.6%	-4.6%	-98.4%	-98.4%	-55.4%	-54.9%	-4.6%	-4.5%	-98.4%	-98.4%	-54.8%	-53.7%	-4.6%	-4.4%	-98.4%	-98.4%	-54.1%	-52.2%
England																		
Milk production	0.1%	-0.2%	4.8%	4.6%	-3.7%	-4.0%	-0.2%	-0.8%	4.5%	3.9%	-4.0%	-4.6%	-0.6%	-1.6%	4.1%	3.1%	-4.4%	-5.4%
Dairy cows	0.1%	-0.2%	3.8%	3.6%	-3.1%	-3.4%	-0.2%	-0.8%	3.5%	2.9%	-3.4%	-4.0%	-0.7%	-1.6%	3.1%	2.1%	-3.8%	-4.8%
Milk price	1.5%	1.6%	19.4%	19.5%	-13.4%	-13.3%	1.6%	1.7%	19.4%	19.6%	-13.4%	-13.3%	1.7%	1.9%	19.5%	19.9%	-13.4%	-13.3%
Wales																		
Milk production	0.3%	0.1%	6.7%	6.5%	-4.9%	-5.2%	0.1%	-0.4%	6.5%	6.0%	-5.2%	-5.7%	-0.3%	-1.1%	6.1%	5.3%	-5.5%	-6.4%
Dairy cows	0.2%	0.0%	5.8%	5.6%	-4.4%	-4.6%	0.0%	-0.5%	5.6%	5.1%	-4.6%	-5.2%	-0.4%	-1.2%	5.2%	4.4%	-4.9%	-5.9%
Milk price	1.4%	1.5%	18.6%	18.7%	-12.8%	-12.7%	1.5%	1.6%	18.7%	18.9%	-12.8%	-12.7%	1.5%	1.8%	18.8%	19.2%	-12.8%	-12.7%
Scotland																		
Milk production	0.3%	0.0%	6.7%	6.5%	-4.9%	-5.2%	0.0%	-0.5%	6.4%	5.9%	-5.2%	-5.7%	-0.3%	-1.2%	6.0%	5.2%	-5.5%	-6.5%
Dairy cows	0.2%	0.0%	5.9%	5.6%	-4.4%	-4.7%	0.0%	-0.6%	5.6%	5.1%	-4.7%	-5.2%	-0.4%	-1.3%	5.2%	4.4%	-5.0%	-6.0%
Milk price	1.4%	1.5%	18.8%	18.9%	-12.9%	-12.9%	1.5%	1.6%	18.9%	19.2%	-13.0%	-12.9%	1.6%	1.8%	19.1%	19.4%	-13.0%	-12.9%
Northern Ireland																		
Milk production	-0.1%	-0.5%	3.4%	3.0%	-3.0%	-3.4%	-0.5%	-1.4%	3.0%	2.2%	-3.4%	-4.3%	-1.1%	-2.5%	2.4%	1.1%	-3.9%	-5.4%
Dairy cows	-0.1%	-0.6%	3.0%	2.6%	-2.7%	-3.1%	-0.6%	-1.4%	2.6%	1.8%	-3.1%	-4.0%	-1.1%	-2.5%	2.0%	0.6%	-3.7%	-5.1%
Milk price	0.9%	0.9%	12.0%	12.1%	-8.4%	-8.4%	0.9%	1.0%	12.1%	12.2%	-8.4%	-8.4%	0.9%	1.1%	12.1%	12.4%	-8.4%	-8.4%

Table A2-5 Projected changes in crop sector due to changes in trade arrangements and reduction in Pillar I direct payments (Percentage changes in 2027)

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.	FTA 50% red.	FTA 100% red.	WTO 50% red.	WTO 100% red.	ND Tariffs 50% red.	ND Tariffs 100% red.
UK																		
Wheat																		
Production	-0.5%	-0.9%	1.1%	0.8%	-2.5%	-3.0%	-0.9%	-1.8%	0.8%	0.2%	-3.1%	-4.2%	-1.5%	-2.9%	0.4%	-0.6%	-3.9%	-5.8%
Domestic use	-0.1%	-0.3%	1.0%	0.7%	-1.1%	-1.3%	-0.3%	-0.7%	0.7%	0.1%	-1.3%	-1.6%	-0.6%	-1.4%	0.2%	-0.8%	-1.4%	-1.9%
Exports	-9.0%	-11.3%	-100.0%	-100.0%	-89.4%	-90.8%	-11.5%	-16.3%	-100.0%	-100.0%	-91.3%	-94.3%	-15.1%	-23.2%	-100.0%	-100.0%	-94.2%	-99.3%
Imports	-0.6%	-0.1%	-69.5%	-69.4%	-46.2%	-42.5%	-0.1%	0.7%	-69.4%	-69.2%	-41.0%	-33.5%	0.4%	1.9%	-69.3%	-68.4%	-33.7%	-21.2%
Barley																		
Production	-0.7%	-1.2%	-1.0%	-1.5%	-3.0%	-3.6%	-1.2%	-2.1%	-1.4%	-2.4%	-3.7%	-4.9%	-1.8%	-3.4%	-2.2%	-4.0%	-4.6%	-6.6%
Domestic use	0.1%	-0.1%	4.1%	4.1%	-1.4%	-1.6%	-0.1%	-0.5%	4.0%	3.9%	-1.6%	-1.9%	-0.3%	-1.0%	4.0%	3.9%	-1.7%	-2.2%
Exports	-6.0%	-7.8%	-40.9%	-44.4%	-22.1%	-25.5%	-8.0%	-11.7%	-43.3%	-50.3%	-26.1%	-32.9%	-10.7%	-17.0%	-49.9%	-61.8%	-31.9%	-43.5%
Imports	-1.1%	0.4%	-100.0%	-100.0%	-100.0%	-100.0%	0.4%	3.5%	-100.0%	-100.0%	-100.0%	-100.0%	2.5%	7.4%	-100.0%	-100.0%	-100.0%	-100.0%
Area																		
Wheat	-0.6%	-1.1%	0.8%	0.4%	-2.3%	-2.9%	-1.1%	-2.0%	0.5%	-0.3%	-3.0%	-4.2%	-1.7%	-3.3%	0.0%	-1.3%	-3.9%	-5.9%
Barley	-0.7%	-1.3%	-0.9%	-1.4%	-2.8%	-3.4%	-1.3%	-2.3%	-1.3%	-2.5%	-3.5%	-4.8%	-2.0%	-3.7%	-2.2%	-4.1%	-4.4%	-6.6%
Prices																		
Wheat	0.3%	1.1%	6.8%	8.1%	-7.7%	-7.5%	1.1%	2.7%	8.3%	11.0%	-7.8%	-7.3%	2.2%	4.8%	10.5%	14.9%	-7.8%	-7.0%
Barley	-0.5%	0.2%	-4.2%	-4.0%	-10.9%	-10.7%	0.2%	1.8%	-3.3%	-2.9%	-11.0%	-10.6%	1.3%	3.8%	-3.4%	-2.7%	-11.1%	-10.4%
England																		
Area																		
Wheat	-0.6%	-1.1%	0.8%	0.4%	-2.4%	-3.1%	-1.1%	-2.1%	0.4%	-0.4%	-3.1%	-4.4%	-1.8%	-3.4%	-0.1%	-1.5%	-4.0%	-6.1%
Barley	-0.7%	-1.2%	-0.4%	-1.0%	-2.8%	-3.4%	-1.2%	-2.2%	-0.8%	-1.9%	-3.5%	-4.8%	-1.9%	-3.5%	-1.6%	-3.3%	-4.4%	-6.5%
Production																		
Wheat	-0.6%	-1.0%	1.1%	0.7%	-2.6%	-3.1%	-1.0%	-1.9%	0.8%	0.1%	-3.2%	-4.4%	-1.6%	-3.0%	0.3%	-0.8%	-4.1%	-6.0%
Barley	-0.7%	-1.1%	-0.6%	-1.0%	-3.0%	-3.6%	-1.1%	-2.0%	-0.9%	-1.9%	-3.7%	-4.9%	-1.7%	-3.2%	-1.6%	-3.2%	-4.6%	-6.5%
Rapeseed	-0.5%	-1.0%	-1.0%	-1.5%	0.8%	0.3%	-1.0%	-2.2%	-1.6%	-2.8%	0.4%	-0.6%	-1.8%	-3.8%	-2.4%	-4.3%	-0.2%	-1.9%
Wales																		
Area																		
Wheat	-0.3%	-0.7%	0.9%	0.6%	-1.0%	-1.4%	-0.7%	-1.3%	0.6%	0.1%	-1.5%	-2.2%	-1.1%	-2.2%	0.4%	-0.5%	-2.0%	-3.3%
Barley	-0.5%	-0.8%	-0.9%	-1.3%	-1.6%	-1.9%	-0.8%	-1.5%	-1.3%	-2.0%	-2.0%	-2.8%	-1.3%	-2.4%	-1.9%	-3.2%	-2.5%	-3.9%
Production																		
Wheat	-0.3%	-0.6%	1.1%	0.9%	-1.2%	-1.6%	-0.6%	-1.1%	0.9%	0.6%	-1.6%	-2.3%	-0.9%	-1.8%	0.8%	0.2%	-2.1%	-3.2%
Barley	-0.5%	-0.8%	-1.0%	-1.4%	-1.9%	-2.3%	-0.8%	-1.3%	-1.3%	-2.1%	-2.3%	-3.1%	-1.2%	-2.1%	-1.9%	-3.1%	-2.9%	-4.1%
Scotland																		
Area																		
Wheat	-0.1%	-0.3%	1.7%	1.7%	-1.1%	-1.3%	-0.3%	-0.5%	1.7%	1.7%	-1.4%	-1.8%	-0.4%	-0.9%	1.8%	1.8%	-1.7%	-2.4%
Barley	-0.8%	-1.4%	-2.0%	-2.8%	-2.7%	-3.4%	-1.4%	-2.6%	-2.6%	-4.1%	-3.5%	-4.9%	-2.2%	-4.2%	-3.7%	-6.2%	-4.4%	-6.8%
Production																		
Wheat	-0.1%	-0.2%	1.9%	2.0%	-1.4%	-1.6%	-0.2%	-0.4%	2.0%	2.1%	-1.6%	-2.0%	-0.3%	-0.6%	2.1%	2.4%	-1.9%	-2.5%
Barley	-0.8%	-1.4%	-2.1%	-2.8%	-3.0%	-3.7%	-1.4%	-2.4%	-2.7%	-4.1%	-3.8%	-5.1%	-2.1%	-3.9%	-3.7%	-6.1%	-4.7%	-6.9%
Northern Ireland																		
Area																		
Wheat	-1.1%	-2.1%	0.0%	-1.0%	-2.9%	-4.0%	-2.2%	-4.2%	-1.0%	-2.9%	-4.1%	-6.4%	-3.5%	-6.9%	-2.2%	-5.5%	-5.7%	-9.6%
Barley	-1.3%	-2.3%	-1.6%	-2.7%	-3.5%	-4.6%	-2.3%	-4.3%	-2.6%	-4.8%	-4.7%	-7.0%	-3.6%	-7.0%	-4.1%	-7.8%	-6.3%	-10.1%
Production																		
Wheat	-1.1%	-2.0%	0.3%	-0.6%	-3.1%	-4.1%	-2.0%	-3.8%	-0.5%	-2.3%	-4.2%	-6.4%	-3.2%	-6.4%	-1.7%	-4.6%	-5.7%	-9.3%
Barley	-1.2%	-2.2%	-1.7%	-2.7%	-3.7%	-4.8%	-2.2%	-4.1%	-2.6%	-4.7%	-4.9%	-7.1%	-3.5%	-6.6%	-4.1%	-7.6%	-6.5%	-10.2%

Table A2- 6 Projected changes in value of output due to changes in trade arrangements and reduction in Pillar I direct payments
(Percentage changes in 2027)

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.
UK																		
Wheat	-0.2%	0.2%	8.0%	9.0%	-10.0%	-10.3%	0.2%	0.9%	9.2%	11.2%	-10.7%	-11.2%	0.7%	1.8%	11.0%	14.2%	-11.5%	-12.3%
Barley	-1.3%	-1.0%	-5.1%	-5.4%	-13.6%	-13.9%	-1.0%	-0.4%	-4.6%	-5.2%	-14.3%	-15.0%	-0.6%	0.3%	-5.5%	-6.6%	-15.2%	-16.4%
Oats	-1.0%	-0.9%	-4.1%	-4.4%	-10.7%	-11.1%	-0.9%	-0.5%	-3.7%	-4.4%	-11.4%	-12.1%	-0.6%	-0.1%	-4.5%	-5.6%	-12.2%	-13.3%
Rapeseed	-0.5%	-1.1%	-0.9%	-1.5%	0.8%	0.3%	-1.1%	-2.3%	-1.6%	-2.8%	0.3%	-0.7%	-1.9%	-3.9%	-2.4%	-4.4%	-0.3%	-2.1%
<i>Total Crops</i>	-0.5%	-0.3%	3.2%	3.6%	-9.0%	-9.4%	-0.3%	0.0%	3.9%	4.7%	-9.7%	-10.3%	-0.1%	0.5%	4.6%	5.8%	-10.5%	-11.6%
Livestock																		
Cattle	-0.5%	-1.5%	12.9%	11.9%	-27.8%	-28.5%	-1.4%	-3.4%	11.9%	9.9%	-28.0%	-29.4%	-2.8%	-6.1%	10.5%	7.3%	-28.3%	-30.7%
Pig	1.1%	1.1%	21.5%	21.5%	-17.4%	-17.3%	1.2%	1.3%	21.5%	21.4%	-17.3%	-17.3%	1.4%	1.5%	21.4%	21.2%	-17.2%	-17.1%
Sheep	-7.0%	-9.2%	-34.0%	-33.0%	-30.5%	-30.1%	-5.7%	-10.1%	-32.6%	-31.0%	-28.9%	-28.2%	-4.3%	-11.7%	-31.0%	-28.7%	-27.2%	-26.3%
Poultry	0.4%	0.5%	6.6%	6.8%	2.5%	2.5%	0.5%	0.8%	6.8%	7.2%	2.5%	2.6%	0.7%	1.1%	7.2%	7.9%	2.5%	2.7%
<i>Total Livestock</i>	-1.1%	-1.8%	5.0%	4.7%	-18.7%	-18.9%	-1.2%	-2.6%	4.9%	4.4%	-18.4%	-18.9%	-1.4%	-3.9%	4.8%	4.0%	-18.2%	-19.0%
<i>Milk</i>	1.5%	1.3%	24.2%	24.0%	-16.0%	-16.2%	1.3%	0.8%	23.9%	23.4%	-16.2%	-16.8%	0.9%	0.1%	23.5%	22.7%	-16.6%	-17.5%
Total UK Agric. Value of Output	-0.3%	-0.7%	9.6%	9.5%	-15.8%	-16.1%	-0.4%	-1.2%	9.6%	9.4%	-15.9%	-16.5%	-0.5%	-1.9%	9.6%	9.2%	-16.1%	-17.0%
Individual Country Total Agric. Value of Output																		
England	0.0%	-0.1%	10.2%	10.3%	-14.3%	-14.4%	0.1%	-0.3%	10.4%	10.6%	-14.4%	-14.7%	0.1%	-0.6%	10.6%	10.8%	-14.5%	-15.0%
Wales	-0.8%	-1.5%	7.4%	7.5%	-20.9%	-21.1%	-0.6%	-2.0%	7.7%	7.7%	-20.4%	-20.7%	-0.6%	-2.8%	7.9%	7.8%	-20.1%	-20.7%
Scotland	-1.6%	-2.5%	6.8%	6.2%	-20.8%	-21.4%	-1.9%	-3.7%	6.6%	5.5%	-21.0%	-22.1%	-2.3%	-5.3%	6.1%	4.3%	-21.1%	-23.0%
Northern Ireland	-0.4%	-1.4%	10.4%	9.6%	-16.0%	-16.7%	-1.2%	-3.2%	9.7%	8.0%	-16.5%	-17.9%	-2.3%	-5.6%	8.6%	5.7%	-17.2%	-19.6%
Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)																		
England	-6.7%	-13.6%	1.8%	-4.9%	-18.7%	-25.6%	-6.7%	-13.8%	2.0%	-4.7%	-18.8%	-25.8%	-6.7%	-14.0%	2.1%	-4.5%	-18.9%	-26.2%
Wales	-7.0%	-13.9%	-0.4%	-6.6%	-23.3%	-29.7%	-6.9%	-14.3%	-0.2%	-6.5%	-22.9%	-29.5%	-6.8%	-15.1%	0.0%	-6.5%	-22.6%	-29.5%
Scotland	-9.9%	-19.3%	-3.5%	-12.7%	-24.4%	-33.6%	-10.1%	-20.1%	-3.7%	-13.2%	-24.6%	-34.2%	-10.4%	-21.3%	-4.1%	-14.1%	-24.7%	-34.8%
Northern Ireland	-7.6%	-15.7%	1.5%	-6.5%	-20.7%	-28.5%	-8.3%	-17.2%	0.8%	-7.9%	-21.1%	-29.5%	-9.2%	-19.2%	-0.1%	-9.8%	-21.7%	-31.0%

*Table A2-7 Projected changes in consumer prices due to changes in trade arrangements and reduction in Pillar I direct payments
(Percentage changes in 2027)*

	30% Decoupling Assumption						60% Decoupling Assumption						100% Decoupling Assumption					
	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs	FTA	FTA	WTO	WTO	ND Tariffs	ND Tariffs
	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.	50% red.	100% red.
Beef Price	0.1%	0.1%	3.9%	4.0%	-10.7%	-10.7%	0.1%	0.2%	4.0%	4.1%	-10.2%	-10.0%	0.1%	0.2%	4.1%	4.3%	-10.1%	-9.9%
Sheepmeat Price	-1.3%	-1.2%	-8.4%	-7.2%	-7.5%	-6.9%	0.4%	0.7%	-6.8%	-4.7%	-5.5%	-4.5%	2.3%	2.9%	-5.0%	-1.9%	-3.5%	-2.4%
Pigmeat Price	0.2%	0.2%	3.9%	3.9%	-3.6%	-3.6%	0.3%	0.3%	3.9%	4.0%	-3.6%	-3.6%	0.4%	0.5%	4.0%	4.0%	-3.5%	-3.6%
Cheese Price	0.6%	0.7%	8.5%	8.6%	-6.3%	-6.3%	0.7%	0.7%	8.6%	8.6%	-6.3%	-6.3%	0.7%	0.8%	8.6%	8.6%	-6.3%	-6.3%
Butter Price	0.5%	0.5%	9.0%	9.3%	-3.2%	-3.2%	0.5%	0.6%	9.4%	10.0%	-3.2%	-3.2%	0.5%	0.6%	9.9%	11.0%	-3.2%	-3.1%
Wheat Price	0.0%	0.2%	1.0%	1.1%	-1.1%	-1.1%	0.2%	0.4%	1.2%	1.5%	-1.1%	-1.0%	0.3%	0.7%	1.5%	2.1%	-1.1%	-1.0%

Table A2-8 Projected changes in beef sector due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK																		
Beef cows	3.1%	1.1%	1.1%	9.4%	7.2%	7.2%	-9.3%	-11.9%	-11.9%	2.4%	4.2%	1.5%	9.4%	11.0%	7.9%	-9.0%	-7.5%	-11.0%
Dairy cows	0.3%	0.3%	0.3%	4.4%	4.4%	4.4%	-3.1%	-3.0%	-3.0%	2.8%	0.3%	1.1%	7.0%	4.4%	5.1%	-0.1%	-3.0%	-2.2%
Total Cattle	1.7%	0.8%	0.8%	6.9%	5.9%	5.9%	-5.5%	-6.7%	-6.7%	2.8%	2.4%	1.4%	8.3%	7.7%	6.6%	-3.8%	-4.6%	-5.8%
Production	1.7%	0.9%	0.8%	6.7%	5.9%	5.9%	-4.4%	-5.3%	-5.3%	2.8%	2.8%	1.5%	8.0%	7.8%	6.6%	-2.9%	-3.2%	-4.5%
Domestic use	0.2%	0.1%	0.1%	-1.0%	-1.2%	-1.2%	7.4%	7.2%	7.2%	0.5%	0.6%	0.1%	-1.0%	-1.1%	-1.2%	7.4%	7.4%	7.3%
Exports	0.0%	-2.4%	-2.5%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	0.4%	0.5%	-0.3%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
Imports	-3.0%	-2.3%	-2.2%	-47.8%	-46.7%	-46.7%	-2.4%	-1.1%	-1.0%	-4.0%	-4.1%	-2.8%	-50.4%	-50.2%	-48.1%	-5.4%	-5.0%	-2.6%
Cattle price	-0.2%	0.0%	0.0%	7.9%	7.9%	7.9%	-22.6%	-22.5%	-22.5%	-1.7%	-1.9%	0.0%	7.7%	7.7%	7.8%	-22.7%	-22.7%	-22.6%
England																		
Beef cows	6.6%	0.5%	0.5%	13.3%	7.3%	7.3%	-6.5%	-13.8%	-13.8%	6.1%	-0.6%	0.1%	13.4%	7.1%	7.2%	-5.9%	-13.8%	-13.8%
Dairy cows	0.2%	0.3%	0.3%	4.0%	4.1%	4.1%	-2.9%	-2.8%	-2.8%	4.6%	0.3%	0.3%	8.4%	4.1%	4.1%	2.1%	-2.8%	-2.8%
Total Cattle	2.9%	0.5%	0.5%	7.8%	5.5%	5.5%	-3.8%	-6.6%	-6.6%	5.3%	0.2%	0.3%	10.4%	5.5%	5.4%	-0.7%	-6.6%	-6.6%
Production	2.5%	0.5%	0.5%	7.0%	5.1%	5.1%	-2.7%	-4.9%	-4.9%	4.8%	0.5%	0.4%	9.4%	5.1%	5.0%	0.1%	-4.9%	-4.9%
Wales																		
Beef cows	0.2%	0.5%	0.5%	5.9%	5.9%	5.9%	-11.0%	-11.0%	-11.0%	-0.5%	-0.5%	0.1%	5.9%	5.8%	5.9%	-11.1%	-11.1%	-11.0%
Dairy cows	0.5%	0.5%	0.5%	6.1%	6.1%	6.1%	-4.1%	-4.1%	-4.1%	-0.1%	0.5%	0.4%	5.9%	6.1%	6.0%	-4.1%	-4.1%	-4.1%
Total Cattle	0.5%	0.5%	0.5%	6.2%	6.2%	6.2%	-6.7%	-6.7%	-6.7%	-0.1%	0.3%	0.4%	6.1%	6.2%	6.1%	-6.7%	-6.7%	-6.7%
Production	0.6%	0.6%	0.6%	5.6%	5.6%	5.6%	-5.0%	-5.0%	-5.0%	0.2%	0.6%	0.5%	5.5%	5.6%	5.5%	-5.0%	-5.0%	-5.0%
Scotland																		
Beef cows	0.1%	2.7%	0.5%	6.2%	8.4%	6.2%	-11.8%	-9.2%	-11.8%	-0.7%	17.4%	0.1%	6.1%	23.2%	6.2%	-11.9%	7.7%	-11.8%
Dairy cows	0.5%	0.4%	0.5%	6.1%	6.1%	6.1%	-4.1%	-4.2%	-4.1%	-0.1%	-0.1%	0.4%	5.9%	5.6%	6.0%	-4.2%	-4.7%	-4.1%
Total Cattle	0.4%	2.2%	0.6%	6.6%	8.1%	6.6%	-9.1%	-7.3%	-9.1%	-0.2%	12.8%	0.3%	6.5%	18.6%	6.5%	-9.1%	4.6%	-9.1%
Production	0.8%	2.4%	0.8%	7.5%	9.0%	7.5%	-8.1%	-6.5%	-8.1%	0.4%	13.5%	0.6%	7.5%	19.8%	7.5%	-8.2%	5.4%	-8.2%
Northern Ireland																		
Beef cows	0.1%	0.4%	4.1%	6.1%	6.1%	9.6%	-11.6%	-11.6%	-7.4%	-0.7%	-0.5%	8.5%	6.0%	6.0%	13.9%	-11.7%	-11.7%	-1.8%
Dairy cows	0.3%	0.3%	0.1%	3.4%	3.4%	3.2%	-2.3%	-2.3%	-2.5%	0.0%	0.3%	4.9%	3.3%	3.4%	7.8%	-2.3%	-2.3%	2.6%
Total Cattle	0.3%	0.4%	2.1%	4.9%	5.0%	6.6%	-6.4%	-6.4%	-4.5%	-0.1%	0.1%	6.7%	4.9%	4.9%	11.1%	-6.5%	-6.4%	0.7%
Production	0.6%	0.6%	2.2%	5.6%	5.6%	7.2%	-5.8%	-5.8%	-4.0%	0.2%	0.6%	7.2%	5.5%	5.6%	12.0%	-5.8%	-5.8%	1.4%

Table A2-9 Projected changes in sheep sector due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK																		
Ewes	0.0%	-1.6%	-1.6%	-13.9%	-14.9%	-15.0%	-12.2%	-12.6%	-12.6%	-0.5%	-0.6%	-1.7%	-14.2%	-14.3%	-15.0%	-12.2%	-12.2%	-12.6%
Total Sheep	0.1%	-1.5%	-1.6%	-13.6%	-14.9%	-14.9%	-12.1%	-12.7%	-12.7%	-0.4%	-0.6%	-1.7%	-14.0%	-14.2%	-15.0%	-12.2%	-12.3%	-12.7%
Production	0.3%	-1.3%	-1.3%	-14.7%	-17.3%	-17.3%	-14.5%	-16.1%	-16.1%	-0.1%	-0.4%	-1.4%	-15.3%	-16.0%	-17.5%	-14.8%	-15.3%	-16.2%
Domestic use	1.0%	0.9%	0.9%	8.9%	7.0%	6.9%	9.7%	8.5%	8.5%	1.1%	1.2%	1.0%	8.4%	7.9%	6.9%	9.5%	9.1%	8.5%
Exports	-3.5%	-7.8%	-7.8%	-98.3%	-98.8%	-98.8%	-98.9%	-99.3%	-99.3%	-4.9%	-6.0%	-8.2%	-98.4%	-98.6%	-98.8%	-99.0%	-99.1%	-99.3%
Imports	-0.9%	-0.8%	-0.8%	-22.9%	-22.0%	-22.0%	-21.8%	-21.2%	-21.2%	-0.9%	-0.9%	-0.8%	-22.7%	-22.4%	-21.9%	-21.7%	-21.5%	-21.2%
Sheepmeat price	-3.5%	-3.2%	-3.2%	-27.0%	-22.4%	-22.3%	-21.3%	-18.4%	-18.3%	-3.4%	-3.3%	-3.2%	-25.9%	-24.6%	-22.1%	-20.7%	-19.8%	-18.2%
England																		
Ewes	1.9%	-2.1%	-2.1%	-14.3%	-18.0%	-18.0%	-12.2%	-15.2%	-15.2%	0.7%	-2.2%	-2.1%	-15.1%	-18.8%	-17.9%	-12.8%	-16.2%	-15.1%
Total Sheep	1.8%	-2.0%	-1.9%	-13.8%	-17.6%	-17.6%	-12.1%	-15.1%	-15.1%	0.7%	-2.1%	-1.9%	-14.7%	-18.3%	-17.5%	-12.7%	-16.1%	-15.0%
Production	2.4%	-1.8%	-1.8%	-15.8%	-21.6%	-21.6%	-15.6%	-20.2%	-20.2%	1.2%	-2.1%	-1.7%	-17.0%	-21.6%	-21.6%	-16.6%	-20.8%	-20.2%
Wales																		
Ewes	-1.6%	-1.4%	-1.4%	-13.5%	-12.6%	-12.6%	-12.0%	-10.6%	-10.6%	-1.5%	-1.5%	-1.4%	-13.4%	-13.2%	-12.5%	-11.7%	-11.3%	-10.5%
Total Sheep	-1.7%	-1.5%	-1.5%	-14.3%	-13.4%	-13.4%	-12.8%	-11.4%	-11.3%	-1.6%	-1.6%	-1.5%	-14.2%	-14.0%	-13.3%	-12.5%	-12.1%	-11.3%
Production	-1.6%	-1.3%	-1.3%	-13.9%	-13.6%	-13.6%	-13.2%	-12.2%	-12.2%	-1.4%	-1.4%	-1.3%	-13.9%	-13.8%	-13.6%	-13.0%	-12.8%	-12.2%
Scotland																		
Ewes	-1.6%	-0.7%	-1.4%	-13.0%	-11.2%	-12.1%	-11.5%	-9.2%	-10.1%	-1.5%	4.5%	-1.4%	-12.8%	-5.5%	-12.0%	-11.2%	-3.7%	-10.1%
Total Sheep	-1.4%	-0.6%	-1.2%	-11.8%	-10.3%	-11.1%	-10.7%	-8.7%	-9.5%	-1.3%	4.1%	-1.2%	-11.7%	-5.1%	-11.1%	-10.4%	-3.6%	-9.4%
Production	-1.4%	-0.3%	-1.0%	-12.6%	-12.0%	-12.9%	-12.7%	-11.3%	-12.2%	-1.1%	4.8%	-1.0%	-12.6%	-5.8%	-12.9%	-12.5%	-5.4%	-12.1%
Northern Ireland																		
Ewes	-2.0%	-1.7%	0.1%	-16.2%	-15.0%	-12.9%	-14.4%	-12.7%	-10.4%	-1.8%	-1.8%	-1.7%	-16.0%	-15.7%	-14.6%	-14.0%	-13.6%	-11.7%
Total Sheep	-1.9%	-1.7%	0.2%	-16.0%	-15.0%	-12.9%	-14.4%	-12.8%	-10.6%	-1.8%	-1.8%	-1.6%	-15.9%	-15.6%	-14.6%	-14.0%	-13.7%	-11.8%
Production	-1.9%	-1.4%	0.6%	-17.0%	-17.3%	-15.1%	-17.0%	-16.3%	-13.8%	-1.6%	-1.6%	-1.3%	-17.1%	-17.2%	-16.9%	-16.8%	-16.7%	-15.2%

*Table A2-10 Projected changes in pig and poultry sectors due to changes in trade arrangements and provision of coupled payments
(Percentage changes in 2027)*

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
Pigs (UK)																		
Sows	0.5%	0.6%	0.6%	9.7%	9.8%	9.8%	-8.4%	-8.3%	-8.3%	0.8%	0.6%	0.6%	10.2%	9.7%	9.8%	-8.3%	-8.3%	-8.3%
Total pigs	0.6%	0.6%	0.6%	10.2%	10.3%	10.3%	-8.9%	-8.8%	-8.8%	0.9%	0.6%	0.6%	10.8%	10.3%	10.3%	-8.8%	-8.9%	-8.8%
Production	0.6%	0.6%	0.6%	10.3%	10.3%	10.4%	-9.0%	-8.9%	-8.9%	0.9%	0.6%	0.6%	10.8%	10.3%	10.3%	-8.9%	-8.9%	-8.9%
Domestic use	-0.2%	-0.2%	-0.2%	-3.6%	-3.5%	-3.5%	3.5%	3.6%	3.6%	-0.1%	-0.2%	-0.2%	-3.6%	-3.6%	-3.5%	3.5%	3.5%	3.6%
Exports	-0.4%	-0.4%	-0.4%	-68.7%	-68.7%	-68.7%	-68.1%	-68.1%	-68.1%	-0.4%	-0.5%	-0.4%	-68.7%	-68.7%	-68.7%	-68.1%	-68.1%	-68.1%
Imports	-1.1%	-1.1%	-1.1%	-37.2%	-37.1%	-37.1%	-3.3%	-3.3%	-3.3%	-1.2%	-1.1%	-1.1%	-37.7%	-37.1%	-37.0%	-3.4%	-3.3%	-3.3%
Pigmeat price	0.5%	0.5%	0.5%	10.1%	10.1%	10.1%	-9.5%	-9.4%	-9.4%	0.2%	0.5%	0.5%	10.0%	10.1%	10.2%	-9.5%	-9.4%	-9.4%
Poultry (UK)																		
Production	0.1%	0.1%	0.1%	1.9%	1.9%	1.9%	1.7%	1.7%	1.7%	0.3%	0.1%	0.1%	2.4%	1.9%	1.9%	1.7%	1.7%	1.7%
Domestic use	0.0%	0.0%	0.0%	-0.6%	-0.6%	-0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.5%	-0.6%	-0.6%	0.0%	0.0%	0.0%
Exports	-1.4%	-1.3%	-1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.1%	-1.4%	-1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Imports	-1.3%	-1.3%	-1.3%	-8.3%	-8.3%	-8.3%	-5.5%	-5.5%	-5.5%	-1.4%	-1.3%	-1.3%	-9.6%	-8.3%	-8.3%	-5.5%	-5.5%	-5.5%
Poultry price	0.2%	0.1%	0.1%	4.4%	4.2%	4.2%	0.7%	0.7%	0.7%	-0.4%	0.2%	0.1%	3.8%	4.3%	4.3%	0.5%	0.7%	0.7%

Table A2- 11 Projected changes in dairy sector due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK																		
Cow's milk Production	0.3%	0.4%	0.4%	5.3%	5.3%	5.3%	-3.6%	-3.6%	-3.6%	2.8%	0.4%	1.1%	8.0%	5.3%	6.0%	-0.6%	-3.6%	-2.8%
Manufacturing use	0.9%	1.0%	0.9%	12.4%	12.6%	12.6%	-8.9%	-8.8%	-8.8%	5.3%	0.9%	2.3%	17.5%	12.5%	13.8%	-3.1%	-8.9%	-7.3%
<i>Prices</i>																		
Producer milk price	1.4%	1.4%	1.4%	19.3%	19.3%	19.3%	-13.4%	-13.4%	-13.4%	-0.6%	1.4%	1.3%	18.5%	19.3%	19.0%	-13.6%	-13.4%	-13.4%
Cheese price	1.2%	1.2%	1.2%	17.5%	17.5%	17.5%	-12.9%	-12.9%	-12.9%	-0.5%	1.2%	1.2%	17.1%	17.5%	17.4%	-13.0%	-12.9%	-12.9%
Butter price	0.7%	0.7%	0.7%	12.9%	12.8%	12.9%	-4.8%	-4.8%	-4.8%	-0.3%	0.7%	0.5%	9.5%	12.9%	10.9%	-5.0%	-4.8%	-4.9%
WMP price	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
SMP price	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
<i>Cheese</i>																		
Production	0.9%	1.0%	1.0%	17.1%	17.2%	17.2%	-4.5%	-4.3%	-4.3%	5.7%	0.9%	1.3%	22.9%	17.1%	17.9%	1.8%	-4.4%	-3.6%
Domestic use	-0.2%	-0.2%	-0.2%	-2.7%	-2.7%	-2.7%	2.4%	2.4%	2.4%	0.1%	-0.2%	-0.2%	-2.6%	-2.7%	-2.7%	2.4%	2.4%	2.4%
Exports	-1.5%	-1.5%	-1.5%	-81.4%	-81.4%	-81.4%	-37.0%	-36.9%	-36.9%	-0.7%	-1.5%	-1.3%	-81.4%	-81.4%	-81.4%	-32.7%	-36.9%	-36.4%
Imports	-1.5%	-1.6%	-1.6%	-43.3%	-43.4%	-43.4%	-4.6%	-4.6%	-4.6%	-4.7%	-1.5%	-1.8%	-47.8%	-43.3%	-43.9%	-8.1%	-4.6%	-5.0%
<i>Butter</i>																		
Production	0.6%	0.6%	0.6%	22.3%	22.3%	22.3%	4.4%	4.5%	4.5%	2.7%	0.6%	1.5%	23.5%	22.3%	23.0%	7.4%	4.5%	5.9%
Domestic use	-0.2%	-0.2%	-0.2%	-3.7%	-3.7%	-3.7%	1.5%	1.5%	1.5%	0.1%	-0.2%	-0.1%	-2.8%	-3.7%	-3.2%	1.6%	1.5%	1.5%
Exports	-6.0%	-5.8%	-5.9%	-100.0%	-100.0%	-100.0%	-95.3%	-95.3%	-95.3%	-3.5%	-5.9%	-4.2%	-100.0%	-100.0%	-100.0%	-95.2%	-95.3%	-95.2%
Imports	-4.7%	-4.7%	-4.7%	-98.4%	-98.4%	-98.4%	-55.9%	-56.0%	-55.9%	-6.1%	-4.7%	-5.0%	-98.4%	-98.4%	-98.4%	-60.5%	-55.9%	-58.2%
England																		
Milk production	0.3%	0.4%	0.4%	5.0%	5.1%	5.1%	-3.5%	-3.4%	-3.4%	4.6%	0.4%	0.4%	9.5%	5.1%	5.1%	1.4%	-3.4%	-3.4%
Dairy cows	0.2%	0.3%	0.3%	4.0%	4.1%	4.1%	-2.9%	-2.8%	-2.8%	4.6%	0.3%	0.3%	8.4%	4.1%	4.1%	2.1%	-2.8%	-2.8%
Milk price	1.4%	1.4%	1.4%	19.3%	19.3%	19.3%	-13.4%	-13.4%	-13.4%	-0.6%	1.4%	1.3%	18.5%	19.3%	19.0%	-13.6%	-13.4%	-13.4%
Wales																		
Milk production	0.5%	0.5%	0.5%	7.0%	7.0%	7.0%	-4.6%	-4.6%	-4.6%	-0.1%	0.5%	0.5%	6.7%	7.0%	6.8%	-4.7%	-4.6%	-4.7%
Dairy cows	0.5%	0.5%	0.5%	6.1%	6.1%	6.1%	-4.1%	-4.1%	-4.1%	-0.1%	0.5%	0.4%	5.9%	6.1%	6.0%	-4.1%	-4.1%	-4.1%
Milk price	1.4%	1.3%	1.3%	18.5%	18.5%	18.5%	-12.8%	-12.8%	-12.8%	-0.5%	1.3%	1.2%	17.6%	18.5%	18.2%	-13.0%	-12.8%	-12.8%
Scotland																		
Milk production	0.5%	0.5%	0.5%	6.9%	6.9%	6.9%	-4.6%	-4.7%	-4.6%	-0.1%	0.0%	0.5%	6.7%	6.4%	6.8%	-4.7%	-5.2%	-4.6%
Dairy cows	0.5%	0.4%	0.5%	6.1%	6.1%	6.1%	-4.1%	-4.2%	-4.1%	-0.1%	-0.1%	0.4%	5.9%	5.6%	6.0%	-4.2%	-4.7%	-4.1%
Milk price	1.4%	1.3%	1.3%	18.8%	18.7%	18.7%	-13.0%	-13.0%	-13.0%	-0.5%	1.4%	1.2%	17.9%	18.7%	18.4%	-13.2%	-13.0%	-13.0%
Northern Ireland																		
Milk production	0.3%	0.3%	0.1%	3.8%	3.8%	3.7%	-2.6%	-2.6%	-2.8%	0.0%	0.3%	5.0%	3.7%	3.8%	8.3%	-2.6%	-2.6%	2.2%
Dairy cows	0.3%	0.3%	0.1%	3.4%	3.4%	3.2%	-2.3%	-2.3%	-2.5%	0.0%	0.3%	4.9%	3.3%	3.4%	7.8%	-2.3%	-2.3%	2.6%
Milk price	0.8%	0.8%	0.8%	11.9%	11.9%	11.9%	-8.4%	-8.4%	-8.4%	-0.3%	0.8%	0.8%	11.4%	11.9%	11.7%	-8.6%	-8.4%	-8.5%

Table A2-12 Projected changes in crop sector due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
UK																		
Wheat																		
Production	-0.2%	-0.1%	-0.1%	1.4%	1.4%	1.4%	-2.1%	-1.9%	-1.9%	1.6%	-0.1%	0.0%	2.8%	1.5%	1.5%	0.4%	-2.0%	-1.9%
Domestic use	0.2%	0.2%	0.2%	1.3%	1.4%	1.4%	-1.0%	-1.0%	-1.0%	1.2%	0.3%	0.3%	2.7%	1.4%	1.5%	-0.2%	-0.9%	-0.8%
Exports	-8.2%	-6.8%	-6.7%	-100.0%	-100.0%	-100.0%	-88.8%	-88.0%	-88.0%	3.0%	-7.5%	-7.4%	-100.0%	-100.0%	-100.0%	-82.5%	-88.4%	-88.4%
Imports	-0.7%	-1.0%	-1.0%	-69.5%	-69.6%	-69.6%	-47.6%	-49.6%	-49.7%	-2.7%	-0.8%	-0.9%	-69.9%	-69.5%	-69.6%	-63.7%	-48.7%	-48.6%
Barley																		
Production	-0.3%	-0.3%	-0.3%	-0.5%	-0.4%	-0.4%	-2.6%	-2.5%	-2.4%	1.2%	-0.5%	-0.1%	1.2%	-0.7%	-0.2%	-0.6%	-2.8%	-2.2%
Domestic use	0.4%	0.4%	0.4%	4.3%	4.2%	4.2%	-1.2%	-1.3%	-1.3%	1.0%	0.4%	0.6%	4.6%	4.3%	4.4%	-0.5%	-1.2%	-1.0%
Exports	-5.0%	-4.3%	-4.2%	-39.2%	-37.9%	-37.6%	-20.3%	-19.2%	-18.9%	1.0%	-5.8%	-4.1%	-29.0%	-40.5%	-37.5%	-10.7%	-21.7%	-18.9%
Imports	-1.8%	-2.4%	-2.5%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-12.3%	-1.2%	-2.6%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
Area																		
Wheat	-0.3%	-0.1%	-0.1%	1.2%	1.3%	1.3%	-2.0%	-1.8%	-1.7%	1.9%	-0.1%	0.0%	3.0%	1.3%	1.4%	0.8%	-1.8%	-1.7%
Barley	-0.3%	-0.2%	-0.2%	-0.4%	-0.3%	-0.3%	-2.3%	-2.2%	-2.1%	1.4%	-0.5%	0.0%	1.5%	-0.6%	0.0%	-0.1%	-2.5%	-1.9%
Prices																		
Wheat	0.1%	-0.4%	-0.5%	6.4%	5.6%	5.6%	-7.8%	-8.0%	-8.0%	-3.8%	-0.2%	-0.2%	0.9%	6.0%	5.9%	-8.9%	-7.9%	-7.9%
Barley	-0.9%	-1.2%	-1.3%	-4.3%	-4.3%	-4.3%	-11.0%	-11.0%	-11.1%	-3.2%	-0.6%	-1.3%	-4.9%	-4.2%	-4.4%	-11.5%	-10.9%	-11.1%
England																		
Area																		
Wheat	-0.3%	-0.1%	-0.1%	1.1%	1.2%	1.2%	-2.1%	-1.8%	-1.8%	2.1%	0.0%	-0.1%	3.1%	1.3%	1.3%	0.9%	-1.8%	-1.8%
Barley	-0.4%	-0.2%	-0.2%	-0.1%	0.1%	0.1%	-2.4%	-2.2%	-2.2%	2.2%	-0.1%	-0.2%	2.5%	0.1%	0.1%	0.6%	-2.1%	-2.2%
Production																		
Wheat	-0.3%	-0.1%	-0.1%	1.3%	1.4%	1.4%	-2.2%	-2.0%	-2.0%	1.8%	-0.1%	-0.1%	3.0%	1.5%	1.5%	0.5%	-2.0%	-2.0%
Barley	-0.4%	-0.2%	-0.2%	-0.2%	-0.1%	-0.1%	-2.7%	-2.5%	-2.5%	1.9%	-0.1%	-0.2%	2.1%	0.0%	0.0%	0.2%	-2.4%	-2.5%
Rapeseed	-0.1%	0.1%	0.1%	-0.6%	-0.4%	-0.4%	1.1%	1.3%	1.3%	2.9%	0.0%	0.1%	2.4%	-0.4%	-0.4%	3.8%	1.3%	1.3%
Wales																		
Area																		
Wheat	0.1%	0.0%	0.0%	1.2%	1.1%	1.1%	-0.6%	-0.6%	-0.6%	-0.4%	0.0%	0.0%	0.4%	1.2%	1.2%	-0.8%	-0.6%	-0.6%
Barley	-0.1%	-0.1%	-0.1%	-0.5%	-0.5%	-0.5%	-1.1%	-1.2%	-1.2%	-0.3%	-0.1%	-0.1%	-0.5%	-0.5%	-0.5%	-1.2%	-1.1%	-1.2%
Production																		
Wheat	0.0%	0.0%	0.0%	1.4%	1.3%	1.3%	-0.9%	-0.9%	-0.9%	-0.5%	0.0%	0.0%	0.4%	1.3%	1.3%	-1.0%	-0.9%	-0.9%
Barley	-0.1%	-0.2%	-0.2%	-0.7%	-0.7%	-0.7%	-1.5%	-1.5%	-1.5%	-0.4%	-0.1%	-0.2%	-0.7%	-0.6%	-0.7%	-1.6%	-1.5%	-1.5%
Scotland																		
Area																		
Wheat	0.1%	-0.1%	0.0%	1.9%	1.7%	1.7%	-0.9%	-1.0%	-0.9%	-0.6%	-0.5%	0.0%	0.7%	1.3%	1.8%	-1.1%	-1.4%	-0.9%
Barley	-0.2%	-0.4%	-0.3%	-1.3%	-1.5%	-1.3%	-2.0%	-2.2%	-2.0%	-0.5%	-1.5%	-0.3%	-1.2%	-2.7%	-1.3%	-2.1%	-3.4%	-2.0%
Production																		
Wheat	0.1%	-0.1%	0.0%	2.0%	1.8%	1.9%	-1.2%	-1.3%	-1.2%	-0.7%	-0.5%	0.0%	0.7%	1.5%	1.9%	-1.4%	-1.7%	-1.2%
Barley	-0.2%	-0.4%	-0.3%	-1.4%	-1.6%	-1.4%	-2.4%	-2.5%	-2.4%	-0.6%	-1.5%	-0.3%	-1.3%	-2.8%	-1.4%	-2.4%	-3.7%	-2.4%
Northern Ireland																		
Area																		
Wheat	0.0%	-0.3%	-0.2%	1.1%	0.7%	0.8%	-1.7%	-2.0%	-1.9%	-0.8%	-1.9%	11.7%	0.1%	-0.8%	12.9%	-2.0%	-3.6%	10.3%
Barley	-0.2%	-0.4%	-0.4%	-0.5%	-0.7%	-0.6%	-2.3%	-2.5%	-2.4%	-0.7%	-1.9%	11.6%	-0.8%	-2.3%	11.2%	-2.4%	-4.1%	9.7%
Production																		
Wheat	0.0%	-0.3%	-0.2%	1.3%	1.0%	1.1%	-1.9%	-2.2%	-2.1%	-0.9%	-1.8%	11.0%	0.1%	-0.5%	12.4%	-2.2%	-3.7%	9.4%
Barley	-0.2%	-0.5%	-0.4%	-0.6%	-0.8%	-0.8%	-2.6%	-2.8%	-2.7%	-0.8%	-1.9%	11.0%	-0.9%	-2.3%	10.6%	-2.8%	-4.4%	8.9%

Table A2-13 Projected changes in value of output due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA	FTA	FTA	WTO	WTO	WTO	ND	ND	ND	FTA	FTA	FTA	WTO	WTO	WTO	ND	ND	ND
	20% Eng	20% Scot	20% NI	20% Eng	20% Scot	20% NI	20% Eng	20% Scot	20% NI	100% Eng	100% Scot	100% NI	100% Eng	100% Scot	100% NI	100% Eng	100% Scot	100% NI
UK																		
Wheat	-0.2%	-0.5%	-0.6%	7.9%	7.1%	7.1%	-9.8%	-9.8%	-9.8%	-2.2%	-0.3%	-0.3%	3.7%	7.5%	7.5%	-8.6%	-9.7%	-9.6%
Barley	-1.2%	-1.5%	-1.5%	-4.8%	-4.8%	-4.7%	-13.3%	-13.2%	-13.2%	-2.1%	-1.1%	-1.3%	-3.7%	-4.9%	-4.6%	-12.0%	-13.4%	-13.0%
Oats	-1.0%	-1.2%	-1.2%	-3.8%	-3.7%	-3.7%	-10.5%	-10.4%	-10.4%	-1.1%	-0.7%	-1.0%	-2.4%	-3.7%	-3.6%	-9.0%	-10.4%	-10.3%
Rapeseed	-0.1%	0.1%	0.1%	-0.6%	-0.3%	-0.3%	1.1%	1.3%	1.3%	2.7%	-0.1%	0.1%	2.3%	-0.5%	-0.3%	3.6%	1.2%	1.3%
<i>Total Crops</i>	-0.4%	-0.7%	-0.7%	3.2%	2.9%	2.9%	-8.8%	-8.7%	-8.7%	-1.3%	-0.4%	-0.5%	1.6%	3.0%	3.2%	-7.3%	-8.7%	-8.6%
Cattle	1.5%	0.9%	0.9%	15.1%	14.3%	14.3%	-26.0%	-26.6%	-26.7%	1.0%	0.9%	1.5%	16.2%	16.1%	14.9%	-25.0%	-25.2%	-26.1%
Pig	1.1%	1.1%	1.1%	21.4%	21.5%	21.6%	-17.6%	-17.5%	-17.5%	1.1%	1.2%	1.1%	21.9%	21.4%	21.5%	-17.6%	-17.5%	-17.5%
Sheep	-3.2%	-4.5%	-4.5%	-37.7%	-35.8%	-35.8%	-32.7%	-31.5%	-31.5%	-3.5%	-3.8%	-4.6%	-37.3%	-36.7%	-35.7%	-32.4%	-32.1%	-31.4%
Poultry	0.3%	0.3%	0.3%	6.4%	6.2%	6.2%	2.4%	2.4%	2.4%	-0.2%	0.3%	0.3%	6.3%	6.3%	6.3%	2.2%	2.4%	2.4%
<i>Total Livestock</i>	0.4%	-0.1%	-0.1%	5.2%	5.2%	5.2%	-18.3%	-18.4%	-18.4%	0.0%	0.0%	0.1%	5.8%	5.8%	5.5%	-17.9%	-17.9%	-18.1%
Milk	1.7%	1.7%	1.7%	24.4%	24.4%	24.4%	-15.8%	-15.7%	-15.7%	2.3%	1.7%	2.3%	26.8%	24.4%	24.8%	-13.3%	-15.7%	-15.1%
<i>Total UK Agric. Value of Output</i>	0.5%	0.2%	0.2%	9.8%	9.7%	9.7%	-15.6%	-15.6%	-15.6%	0.3%	0.4%	0.5%	10.4%	10.0%	10.0%	-14.4%	-15.3%	-15.3%
Individual Country Total Agric. Value of Output																		
England	0.8%	0.2%	0.2%	10.5%	10.1%	10.1%	-13.9%	-14.2%	-14.2%	1.2%	0.0%	0.2%	11.6%	10.0%	10.1%	-12.1%	-14.3%	-14.2%
Wales	-0.4%	-0.2%	-0.2%	5.9%	6.9%	6.9%	-21.9%	-21.1%	-21.1%	-1.9%	-0.8%	-0.3%	5.5%	6.3%	6.8%	-21.9%	-21.6%	-21.1%
Scotland	-0.1%	0.5%	-0.1%	7.1%	8.2%	7.7%	-20.3%	-19.3%	-19.8%	-1.8%	3.9%	-0.2%	6.5%	12.0%	7.6%	-20.4%	-16.2%	-19.8%
Northern Ireland	0.4%	0.5%	1.0%	11.0%	11.1%	11.7%	-15.6%	-15.4%	-14.9%	-0.9%	-0.2%	4.4%	10.6%	10.9%	15.2%	-15.7%	-15.6%	-11.9%
Individual Country Value of Output + Direct Payments (Pillar 1 + Pillar 2)																		
England	0.7%	0.2%	0.2%	8.8%	8.5%	8.5%	-11.7%	-11.9%	-11.9%	1.0%	0.0%	0.2%	9.8%	8.4%	8.4%	-10.2%	-12.0%	-11.9%
Wales	-0.3%	-0.2%	-0.2%	4.8%	5.6%	5.6%	-17.7%	-17.1%	-17.1%	-1.6%	-0.6%	-0.2%	4.4%	5.1%	5.5%	-17.7%	-17.4%	-17.1%
Scotland	-0.1%	0.4%	-0.1%	5.4%	6.3%	5.8%	-15.4%	-14.7%	-15.0%	-1.4%	3.0%	-0.1%	4.9%	9.1%	5.7%	-15.5%	-12.3%	-15.0%
Northern Ireland	0.3%	0.4%	0.9%	9.2%	9.3%	9.8%	-13.0%	-12.9%	-12.5%	-0.7%	-0.1%	3.7%	8.9%	9.2%	12.7%	-13.1%	-13.0%	-9.9%

Table A2-14 Projected changes in consumer prices due to changes in trade arrangements and provision of coupled payments (Percentage changes in 2027)

	20% Coupled Payments									100% Coupled Payments								
	FTA 20% Eng	FTA 20% Scot	FTA 20% NI	WTO 20% Eng	WTO 20% Scot	WTO 20% NI	ND 20% Eng	ND 20% Scot	ND 20% NI	FTA 100% Eng	FTA 100% Scot	FTA 100% NI	WTO 100% Eng	WTO 100% Scot	WTO 100% NI	ND 100% Eng	ND 100% Scot	ND 100% NI
Beef Price	-0.1%	0.0%	0.0%	3.8%	3.8%	3.8%	-10.8%	-10.8%	-10.8%	-0.8%	-0.9%	0.0%	3.7%	3.7%	3.8%	-10.9%	-10.9%	-10.8%
Sheepmeat Price	-1.6%	-1.5%	-1.5%	-12.7%	-10.5%	-10.5%	-10.0%	-8.6%	-8.6%	-1.6%	-1.6%	-1.5%	-12.2%	-11.6%	-10.4%	-9.7%	-9.3%	-8.6%
Pigmeat Price	0.2%	0.2%	0.2%	3.8%	3.9%	3.9%	-3.6%	-3.6%	-3.6%	0.1%	0.2%	0.2%	3.8%	3.8%	3.9%	-3.6%	-3.6%	-3.6%
Cheese Price	0.6%	0.6%	0.6%	8.5%	8.5%	8.5%	-6.3%	-6.3%	-6.3%	-0.2%	0.6%	0.6%	8.3%	8.5%	8.5%	-6.4%	-6.3%	-6.3%
Butter Price	0.5%	0.5%	0.5%	8.7%	8.7%	8.7%	-3.2%	-3.2%	-3.2%	-0.2%	0.5%	0.3%	6.4%	8.7%	7.4%	-3.4%	-3.2%	-3.3%
Wheat Price	0.0%	-0.1%	-0.1%	0.9%	0.8%	0.8%	-1.1%	-1.1%	-1.1%	-0.5%	0.0%	0.0%	0.1%	0.8%	0.8%	-1.3%	-1.1%	-1.1%

Appendix 3: Sensitivity analysis using alternative rest of the world beef price

The precise level of the world beef price is an important area of uncertainty in the post-Brexit era. Within the preceding analyses (both the main report and Appendices 1 & 2), the Brazilian producer beef price is used as the reference world price. Currently, this reference price is substantially lower than the existing Brazilian beef export price. This partly reflects transport costs from farm-to-port, tariff quota rent extraction and the existing emphasis by Brazil on exporting higher value cuts. The future differential between the Brazilian producer and export price is unclear. The hard Brexit scenarios considered in this study (WTO and ND Tariffs) are non-discriminatory in nature, *i.e.* the same tariffs are applied to all trading partners. Hence, depending on the competitiveness of other exporters, Brazil may not be able to extract the same level of rents. Moreover, following the change in trade arrangements these scenarios entail imports from the rest of the world displacing to some extent existing imports from the EU. Given this displacement, the higher level of imports to the UK from the rest of the world are likely to include a greater variety of cuts, including lower value cuts. In addition, internal Brazilian transport costs may diminish overtime with improved infrastructure.

Within the sensitivity analysis in this appendix, the Brazilian export price for beef is used as a reference price for the rest of the world. Given the uncertainty noted above, this may be interpreted as an upper bound for the rest of the world price, whereas the Brazilian producer price used in the main analysis (and appendices 1 & 2) provides a lower bound. In order to approximate the export price, the Brazilian producer price within the modelling system is multiplied by 1.6 (differential between the Brazilian producer and export prices), while the UK producer price is multiplied by 1.11 (adjustment for differences in types of cuts). The model is simulated for specific scenarios in order to demonstrate the implications of this alternative world beef price.

Table A3.1 shows the results for changes in trade arrangements and full elimination of direct payments using the 30% decoupling assumption (right hand-side). The original results are presented on the left hand-side for comparison purposes. Unsurprisingly, employing the alternative beef price for the rest of the world lifts the domestic price impact for the WTO scenarios (Figure A3.1, left-hand side). The UK beef price is 24.9% higher compared to the Baseline based on changes in trade arrangements on a stand-alone basis (WTO - No Change in direct payments). This compares with plus 8.0% under the main analysis. However, the differential between the combined scenario (WTO – 100% reduction in direct payments) and the change in trade arrangements (WTO No Change) is similar to before (+0.7%, compared to +0.3%). As before, the ‘World Beef Price + Tariff level’ curbs further price increases. With regards to the No deal Tariff Arrangements scenario, the price reduction due to the change in trade arrangements is much less substantial than before, - 1.0% (compared to -22.5% under the main analysis - see illustration in Figure A3.1, right-hand side). However, the differential between the combined trade/full elimination in direct payment scenario and the trade scenario is minimal as before. A similar story applies when the 100% decoupling assumption is employed (Table A3.2), with different projected price impacts for the combined scenario compared to the baseline, but limited price differences between the combined hard Brexit trade scenarios and the change in trade arrangements. Likewise, the price differential between the combined scenario and the corresponding trade scenario is similar regardless of the world price (see 100% coupled payment scenario in Table A3.3).

Figure A3-1 Illustration of different price impacts under alternative trade arrangements and world beef prices

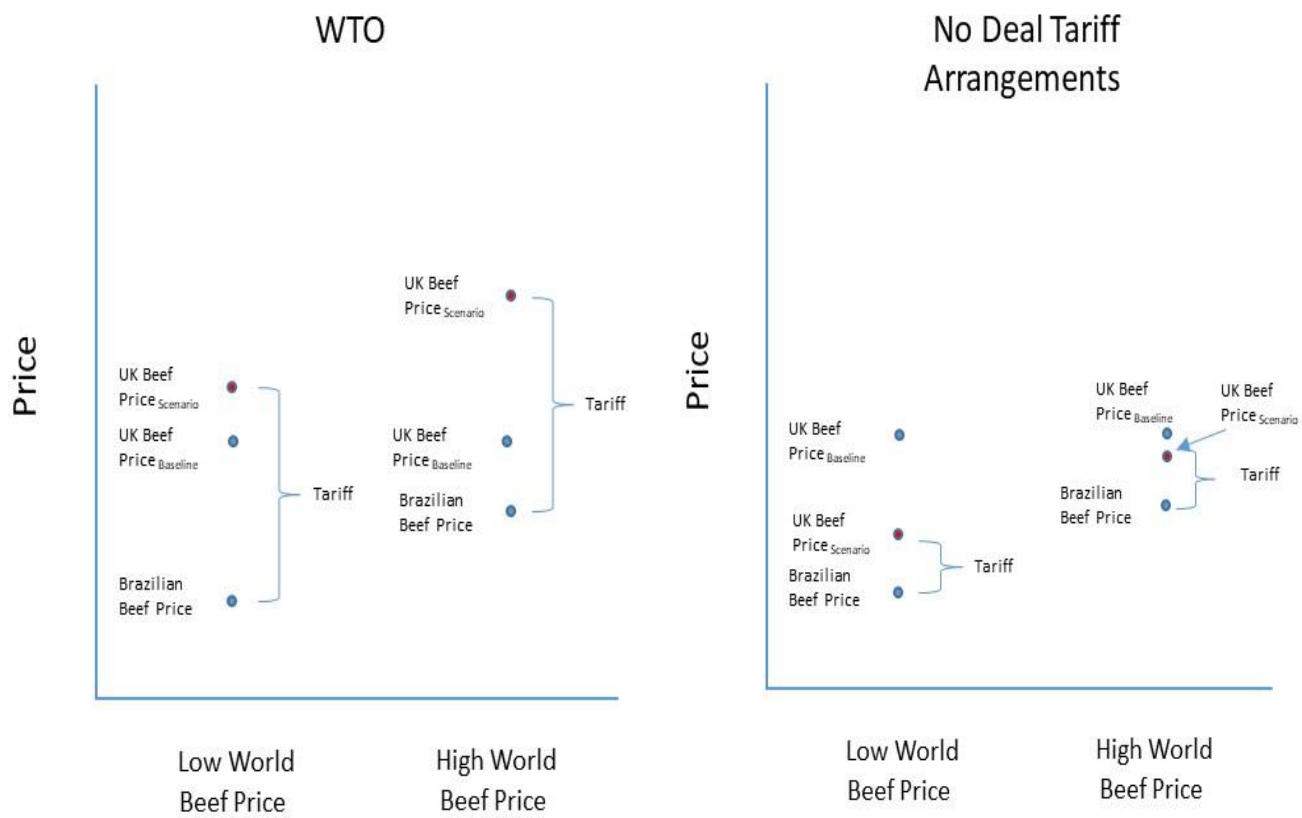


Table A3-1 Projected changes in beef sector due to changes in Pillar I Payments using alternative world beef prices (30% decoupling assumption)

Trade Arrangements	Original World Beef Price						Sensitivity Analysis World Beef Price					
	FTA No change	FTA 100% red.	WTO No change	WTO 100% red.	ND Tariffs No change	ND Tariffs 100% red.	FTA No change	FTA 100% red.	WTO No change	WTO 100% red.	ND Tariffs No change	ND Tariffs 100% red.
Direct Payments												
UK												
Beef cows	0.6%	-4.1%	6.6%	1.8%	-12.6%	-17.6%	0.5%	-3.2%	17.8%	13.1%	1.0%	-4.1%
Dairy cows	0.4%	-0.2%	4.4%	3.9%	-3.0%	-3.6%	0.4%	-0.2%	5.0%	4.4%	-2.3%	-2.9%
Production	0.6%	-1.7%	5.6%	3.3%	-5.6%	-8.0%	0.5%	-1.9%	10.4%	8.1%	-0.2%	-2.6%
Cattle price	0.0%	0.2%	8.0%	8.3%	-22.5%	-22.3%	0.4%	4.3%	24.9%	25.6%	-1.0%	-0.7%
England												
Beef cows	0.6%	-2.3%	7.3%	4.1%	-13.8%	-16.9%	0.6%	-1.2%	19.5%	16.5%	1.0%	-2.2%
Dairy cows	0.3%	-0.2%	4.1%	3.6%	-2.8%	-3.4%	0.4%	-0.2%	4.7%	4.1%	-2.1%	-2.8%
Production	0.5%	-0.7%	5.1%	3.8%	-4.9%	-6.2%	0.5%	-0.9%	9.1%	7.8%	-0.3%	-1.6%
Wales												
Beef cows	0.5%	-3.2%	5.9%	2.0%	-11.0%	-15.0%	0.5%	-2.4%	15.8%	11.9%	1.0%	-3.0%
Dairy cows	0.5%	0.0%	6.1%	5.6%	-4.1%	-4.6%	0.5%	0.1%	6.8%	6.4%	-3.1%	-3.7%
Production	0.6%	-1.0%	5.6%	3.9%	-5.0%	-6.6%	0.5%	-1.2%	9.4%	7.7%	-0.7%	-2.3%
Scotland												
Beef cows	0.5%	-5.6%	6.2%	0.1%	-11.8%	-18.4%	0.5%	-4.8%	16.7%	10.7%	0.9%	-5.7%
Dairy cows	0.5%	0.0%	6.1%	5.6%	-4.1%	-4.6%	0.5%	0.1%	6.9%	6.4%	-3.1%	-3.7%
Production	0.8%	-3.6%	7.5%	3.1%	-8.1%	-12.8%	0.7%	-4.0%	15.1%	10.7%	0.4%	-4.3%
Northern Ireland												
Beef cows	0.5%	-7.4%	6.1%	-2.0%	-11.6%	-19.8%	0.5%	-6.7%	16.4%	8.2%	0.8%	-7.5%
Dairy cows	0.3%	-0.6%	3.4%	2.6%	-2.3%	-3.1%	0.3%	-0.5%	3.8%	3.0%	-1.7%	-2.6%
Production	0.6%	-3.6%	5.6%	1.3%	-5.8%	-10.1%	0.5%	-3.8%	10.6%	6.3%	-0.1%	-4.4%

Table A3-2 Projected changes in beef sector due to changes in Pillar I Payments using alternative world beef prices (100% decoupling assumption)

Trade Arrangements	Original World Beef Price						Sensitivity Analysis World Beef Price					
	FTA No change	FTA 100% red.	WTO No change	WTO 100% red.	ND Tariffs No change	ND Tariffs 100% red.	FTA No change	FTA 100% red.	WTO No change	WTO 100% red.	ND Tariffs No change	ND Tariffs 100% red.
Direct Payments												
UK												
Beef cows	0.5%	-14.2%	6.5%	-8.1%	-12.1%	-27.0%	0.5%	-12.7%	17.7%	3.1%	1.3%	-13.8%
Dairy cows	0.3%	-1.7%	4.4%	2.4%	-2.9%	-5.1%	0.4%	-1.5%	4.9%	3.0%	-2.2%	-4.4%
Production	0.6%	-6.5%	5.5%	-1.6%	-5.5%	-12.7%	0.5%	-6.5%	10.3%	3.1%	-0.1%	-7.4%
Cattle price	0.1%	0.5%	8.1%	9.0%	-21.4%	-20.7%	0.5%	4.1%	24.1%	26.4%	-0.7%	0.3%
England												
Beef cows	0.6%	-10.0%	7.1%	-3.4%	-13.3%	-23.8%	0.6%	-8.1%	19.3%	9.0%	1.4%	-9.4%
Dairy cows	0.3%	-1.6%	4.0%	2.1%	-2.7%	-4.8%	0.4%	-1.5%	4.6%	2.7%	-2.1%	-4.2%
Production	0.5%	-3.9%	4.9%	0.5%	-4.8%	-9.2%	0.5%	-3.8%	9.0%	4.5%	-0.2%	-4.7%
Wales												
Beef cows	0.5%	-12.8%	5.8%	-7.4%	-10.5%	-23.8%	0.5%	-11.4%	15.6%	2.5%	1.3%	-12.2%
Dairy cows	0.5%	-1.2%	6.0%	4.4%	-4.0%	-5.9%	0.5%	-0.9%	6.7%	5.2%	-3.1%	-4.9%
Production	0.6%	-4.9%	5.4%	0.0%	-4.9%	-10.4%	0.5%	-4.9%	9.2%	3.7%	-0.6%	-6.2%
Scotland												
Beef cows	0.5%	-14.2%	6.1%	-8.4%	-11.4%	-26.5%	0.5%	-12.8%	16.6%	2.3%	1.1%	-13.9%
Dairy cows	0.5%	-1.3%	6.0%	4.4%	-4.1%	-6.0%	0.5%	-1.0%	6.8%	5.2%	-3.1%	-5.0%
Production	0.8%	-10.0%	7.3%	-3.3%	-8.0%	-18.9%	0.7%	-10.0%	15.0%	4.2%	0.5%	-10.5%
Northern Ireland												
Beef cows	0.5%	-26.7%	6.0%	-21.2%	-11.2%	-38.4%	0.5%	-25.6%	16.2%	-11.2%	1.1%	-26.7%
Dairy cows	0.3%	-2.5%	3.3%	0.6%	-2.2%	-5.1%	0.3%	-2.3%	3.7%	1.1%	-1.7%	-4.6%
Production	0.6%	-13.6%	5.4%	-8.7%	-5.7%	-19.9%	0.5%	-13.6%	10.4%	-3.9%	0.0%	-14.4%

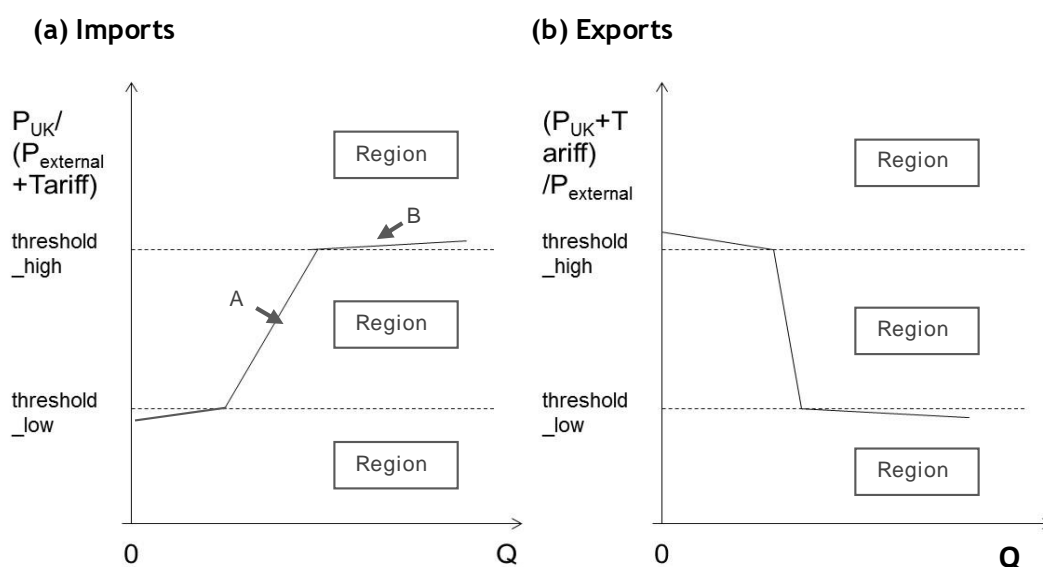
Table A3-3 Projected changes in beef sector due to provision of 100% coupled payments using alternative world beef prices (30% decoupling assumption)

Trade Arrangements	Original Beef Price												Alternative World Beef Price											
	FTA Same	FTA 100%_EN	FTA 100%_SC	FTA 100%_NI	WTO No Move	WTO 100%_EN	WTO 100%_SC	WTO 100%_NI	ND Tariffs No move	ND Tariffs 100%_EN	ND Tariffs 100%_SC	ND Tariffs 100%_NI	FTA Same	FTA 100%_EN	FTA 100%_SC	FTA 100%_NI	WTO No Move	WTO 100%_EN	WTO 100%_SC	WTO 100%_NI	ND Tariffs No move	ND Tariffs 100%_EN	ND Tariffs 100%_SC	ND Tariffs 100%_NI
UK																								
Beef cows	0.6%	2.4%	4.2%	1.5%	6.6%	9.4%	11.0%	7.9%	-12.6%	-9.0%	-7.5%	-11.0%	0.5%	2.4%	4.1%	1.3%	17.8%	20.2%	21.9%	18.9%	1.0%	4.1%	5.8%	2.4%
Dairy cows	0.4%	2.8%	0.3%	1.1%	4.4%	7.0%	4.4%	5.1%	-3.0%	-0.1%	-3.0%	-2.2%	0.4%	2.8%	0.3%	1.1%	5.0%	7.6%	5.0%	5.7%	-2.3%	0.7%	-2.3%	-1.5%
Production	0.6%	2.8%	2.8%	1.5%	5.6%	8.0%	7.8%	6.6%	-5.6%	-2.9%	-3.2%	-4.5%	0.5%	2.9%	2.9%	1.5%	10.4%	12.7%	12.5%	11.3%	-0.2%	2.4%	2.1%	0.8%
Cattle price	0.0%	-1.7%	-1.9%	0.0%	8.0%	7.7%	7.7%	7.8%	-22.5%	-22.7%	-22.7%	-22.6%	0.4%	-3.2%	-3.3%	-1.1%	24.9%	24.0%	24.1%	24.5%	-1.0%	-1.2%	-1.2%	-1.1%
England																								
Beef cows	0.6%	6.1%	-0.6%	0.1%	7.3%	13.4%	7.1%	7.2%	-13.8%	-5.9%	-13.8%	-13.8%	0.6%	6.2%	-0.9%	-0.2%	19.5%	25.1%	19.2%	19.4%	1.0%	8.1%	1.0%	1.0%
Dairy cows	0.3%	4.6%	0.3%	0.3%	4.1%	8.4%	4.1%	4.1%	-2.8%	2.1%	-2.8%	-2.8%	0.4%	4.7%	0.4%	0.3%	4.7%	9.0%	4.7%	4.6%	-2.1%	2.8%	-2.1%	-2.1%
Production	0.5%	4.8%	0.5%	0.4%	5.1%	9.4%	5.1%	5.0%	-4.9%	0.1%	-4.9%	-4.9%	0.5%	5.0%	0.6%	0.4%	9.1%	13.4%	9.1%	9.1%	-0.3%	4.5%	-0.3%	-0.3%
Wales																								
Beef cows	0.5%	-0.5%	-0.5%	0.1%	5.9%	5.9%	5.8%	5.9%	-11.0%	-11.1%	-11.1%	-11.0%	0.5%	-0.8%	-0.7%	-0.1%	15.8%	15.6%	15.5%	15.7%	1.0%	1.0%	0.9%	1.0%
Dairy cows	0.5%	-0.1%	0.5%	0.4%	6.1%	5.9%	6.1%	6.0%	-4.1%	-4.1%	-4.1%	-4.1%	0.5%	-0.1%	0.5%	0.5%	6.8%	6.6%	6.8%	6.7%	-3.1%	-3.2%	-3.1%	-3.1%
Production	0.6%	0.2%	0.6%	0.5%	5.6%	5.5%	5.6%	5.5%	-5.0%	-5.0%	-5.0%	-5.0%	0.5%	0.2%	0.6%	0.5%	9.4%	9.3%	9.4%	9.3%	-0.7%	-0.7%	-0.7%	-0.7%
Scotland																								
Beef cows	0.5%	-0.7%	17.4%	0.1%	6.2%	6.1%	23.2%	6.2%	-11.8%	-11.9%	7.7%	-11.8%	0.5%	-0.9%	18.0%	-0.1%	16.7%	16.4%	33.0%	16.6%	0.9%	0.8%	19.4%	0.8%
Dairy cows	0.5%	-0.1%	-0.1%	0.4%	6.1%	5.9%	5.6%	6.0%	-4.1%	-4.2%	-4.7%	-4.1%	0.5%	-0.1%	0.0%	0.5%	6.9%	6.7%	6.4%	6.8%	-3.1%	-3.2%	-3.7%	-3.1%
Production	0.8%	0.4%	13.5%	0.6%	7.5%	7.5%	19.8%	7.5%	-8.1%	-8.2%	5.4%	-8.2%	0.7%	0.5%	14.0%	0.7%	15.1%	15.1%	27.2%	15.1%	0.4%	0.3%	13.4%	0.4%
Northern Ireland																								
Beef cows	0.5%	-0.7%	-0.5%	8.5%	6.1%	6.0%	6.0%	13.9%	-11.6%	-11.7%	-11.7%	-1.8%	0.5%	-0.9%	-0.8%	8.7%	16.4%	16.1%	16.1%	23.5%	0.8%	0.7%	0.8%	9.7%
Dairy cows	0.3%	0.0%	0.3%	4.9%	3.4%	3.3%	3.4%	7.8%	-2.3%	-2.3%	-2.3%	2.6%	0.3%	-0.1%	0.3%	5.0%	3.8%	3.7%	3.8%	8.3%	-1.7%	-1.7%	-1.7%	3.2%
Production	0.6%	0.2%	0.6%	7.2%	5.6%	5.5%	5.6%	12.0%	-5.8%	-5.8%	-5.8%	1.4%	0.5%	0.3%	0.6%	7.4%	10.6%	10.5%	10.6%	16.8%	-0.1%	-0.1%	-0.1%	6.9%

Appendix 4: Import/Export Supply Curves

The EU-27 and rest of the world import/export supply equations are specified as a function of relative price changes ($P_{UK}/(P_{External} + \text{Tariff})$ in the case of imports; and $(P_{UK} + \text{Tariff})/P_{External}$ in the case of exports). Relevant tariffs and transaction costs associated with cross-border trade are incorporated within the relative price terms. This procedure captures the impact of trade policy arrangements on the domestic market. Changes in trade policy arrangements are implemented using specified relative price thresholds, wherein the elasticity of imports/exports with respect to the relative price term is amplified if the value of this term goes beyond these thresholds. For example, take the hypothetical example in import diagram in Figure A4.1 below. Prior to changes in the tariff regime, the equilibrium position is A, which lies within Region 2. The supply curve within this region is relatively inelastic (relatively low response to price changes). However, a significant reduction in the tariff moves the equilibrium position to B, which triggers the threshold point in which the demand for imports becomes relatively elastic (relatively high response to price changes – Region 1) and prevents the UK price from diverging too far from the external price. The thresholds are specified using historical relative price ratios.

Figure A4-1 Threshold regions within import / export supply curves



Using beef as a specific example, following the application of WTO default tariffs the UK beef price rises due to reduced imports from the EU. As a result, the $P_{UK}/(P_{RoW} + \text{Tariff})$ ratio increases and triggers the threshold point in which imports from the Rest of the World are competitive after paying the tariff (Region 1 in diagram (a)). This leads to a sharp increase in imports from the Rest of the World, which curbs the extent to which beef price can rise. Thus, when direct payments are reduced/abolished when WTO trade arrangements apply, the fall in UK production does not lead to significantly higher domestic prices.

In the case of No Deal trade arrangements, the cut in tariffs to imports from the Rest of the World also increases the $P_{UK}/(P_{RoW} + \text{Tariff})$ ratio and hence the trigger point within Region 1

is again triggered. As a result, UK price increases are also curbed under these trade arrangements.

In contrast to the beef sector, within the sheep sector the equilibrium position lies within Region 2 of the import supply curve for the Rest of the World following changes in trade arrangements under both the WTO and NO Deal scenarios. As a result, there is some flexibility for prices to adjust in response to changes in direct payments when these trade conditions apply. This analysis is sensitive to the level of world prices in the Baseline. Lower world sheepmeat prices could result in a shift to Region 1 and thereby limit the price responsiveness.