



Banc Ceannais na hÉireann  
Central Bank of Ireland

Eurosystem

Economic Letter

# Irish Agriculture: Economic Impact and Current Challenges

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# Irish Agriculture: Economic Impact and Current Challenges

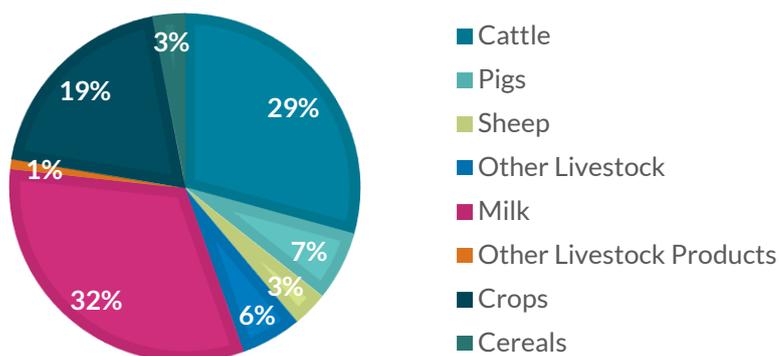
Thomas Conefrey<sup>1</sup>

Following a remarkably long period of stagnation from 1990 up to 2010, during which the value of agricultural output barely increased, Irish agriculture has experienced something of a resurgence over recent years. The sector has been boosted, in particular, by the abolition of milk quotas in 2015 which has led to an expansion in dairy output. Although primary agriculture accounts for a small share of overall national output, the broader agri-food sector (including food processing) makes a sizeable output and employment contribution, particularly when assessed on a regional basis. In the Border, Midland and West areas, around one-in-eight jobs is in the agri-food sector compared to around one-in-twelve nationally. As it aims to expand output in the years ahead, the agriculture sector faces a number of challenges. Low profitability of some farming activities leaves the sector exposed to potential negative shocks such as Brexit or possible future reductions in the CAP budget.

## 1. An Overview of Irish Agriculture

### i. Structure

Figure 1 | Irish Agriculture: Main Outputs



Source: CSO, *Output, Input and Income in Agriculture 2017*.

The main outputs of Irish agriculture are shown in Figure 1. In 2017, dairy accounted around one-third of output. Cattle (29 per cent) was the next biggest subsector while crops represented just under one fifth of overall output.

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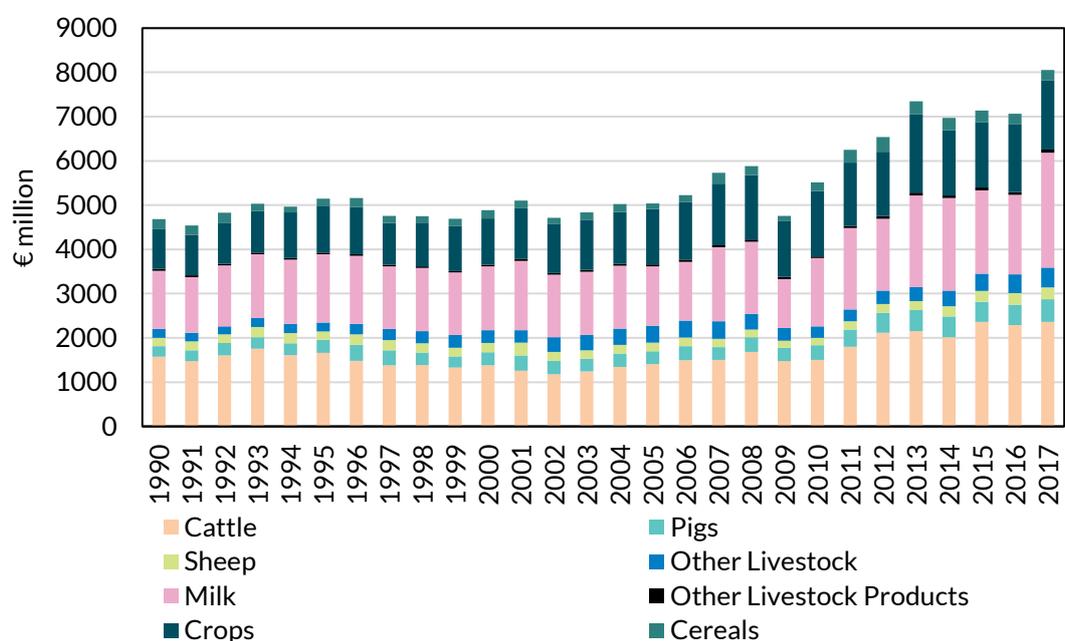
<sup>1</sup> Email: [Thomas.conefrey@centralbank.ie](mailto:Thomas.conefrey@centralbank.ie). The views expressed in this Letter are mine only and do not necessarily reflect those of the Central Bank of Ireland or the European System of Central Banks. I would like to thank Stephen Byrne, John Flynn, John FitzGerald (Trinity College), Reamonn Lydon, Gerard O'Reilly, Paul Reddan, David Staunton and Graeme Walsh for helpful comments.

## ii. Output

Figure 2 shows the trend in the value of gross output by sector since 1990. Agricultural output was static for a prolonged period from 1990 up to 2010: in 2010, the value of agricultural output was €5.5 billion, only marginally higher than the value of output achieved in 1995 (€5.2 billion), a decade and a half earlier.

Following this period of stagnation, the data indicate an increase in the value and volume of farming output in recent years. Since 2010, the overall value of gross output has increased by 46 per cent; in volume terms output has risen by 21 per cent. Much of the rise in agricultural output has been driven by the dairy sector as shown in Figure 2. The removal of milk quotas in 2015 has seen an expansion in milk output with the volume of output in the sector 29 per cent above its 2014 level in 2017. This is the largest increase in the volume of output recorded across all farming sectors over this period.

Figure 2 | Value of Gross Output by Sector, € Million



Source: CSO, *Output, Input and Income in Agriculture 2017*.

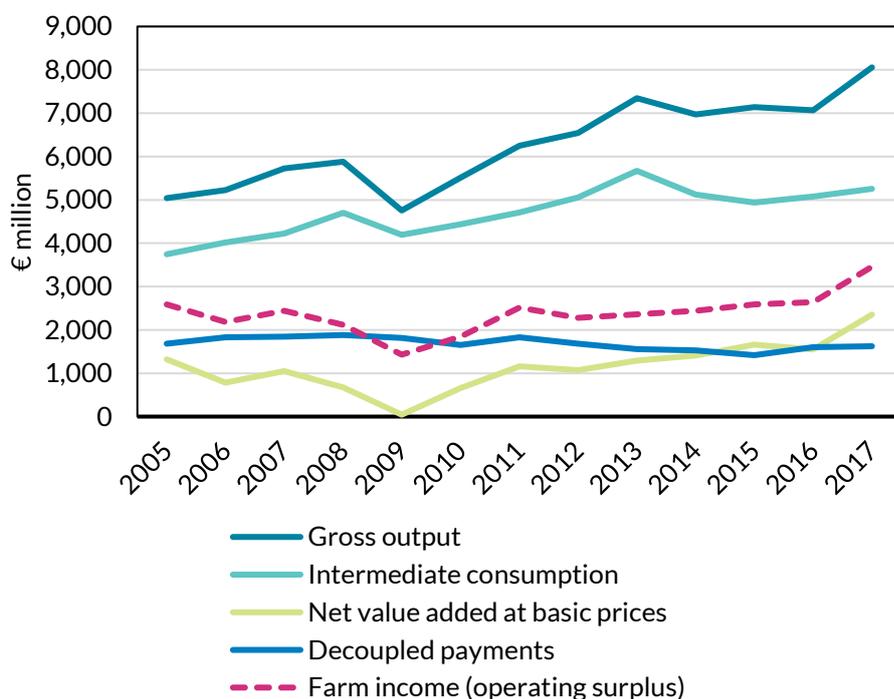
Figure 3 shows trends in the value of agricultural output, inputs, direct payments and farm income since 1990. While the value of gross output has risen in recent years (Figure 2 above and Figure 3, dashed line), expenditure on intermediate inputs has also increased. As a result, net value added at basic prices – that is, the prices farmers receive for their output, net of product specific subsidies and taxes – has increased by substantially less than gross output. Although there have been increases in farm income since 2010, Figure 3 shows that up to 2016, these gains were only sufficient to recover the income losses incurred during the 2008-2009 period.

The performance in 2017 stands out as an exceptionally strong with farm incomes increasing by almost 31 per cent, mainly due to a rise in the value and volume of milk output. However, according to Teagasc, a combination of weather-related

cost increases as well as lower milk prices mean that 2018 is likely to result in a reversal of the strong income gains experienced in 2017.<sup>2</sup>

Figure 3 also shows the importance of decoupled payments to farm income. Decoupled income payments were introduced as part of the EU's Common Agricultural Policy (CAP) in 2005. Since their introduction, these payments have, on average, accounted for 74.3 per cent of farm income (operating surplus). In particular during the years 2009-2012, the payments helped to compensate for weak market income received by farmers for their produce. The importance of direct payments to overall agricultural incomes highlights the competitiveness challenge faced by some farming enterprises, a theme discussed further in Section 3.<sup>3</sup>

Figure 3 | Output, Input and Income in Agriculture



Source: CSO, *Output, Input and Income in Agriculture 2017*.

### iii. Exports

When it comes to exports, it is important to look beyond primary agriculture to the wider agri-food sector, which includes both the export of primary products such as live animals, as well as processed food and beverages. Agri-food exports accounted for just over 10 per cent of overall merchandise exports from Ireland in 2017 (Table 1). The two largest commodity exports of the agri-food sector in 2017 were meat and dairy products.

Table 1 shows the share of agri-food exports which are sold into the Great Britain and Northern Ireland markets. The table demonstrates the importance of the UK

<sup>2</sup> According to Teagasc's *Situation and Outlook 2018* report, average net margins on dairy farms could fall by 60 per cent in 2018, with lower margins also projected in the beef sector compared to 2017.

<sup>3</sup> From 1973-2012 Ireland was a net recipient of funds from the EU budget. Over this period the majority of receipts from the EU budget were allocated to the agriculture area. Since 2013, Ireland has been a net contributor to the EU budget.

market for Irish agriculture. In 2017, just over 40 per cent of agri-food exports went to the UK. For particular sub-sectors, the importance of the UK is greater than suggested by the aggregate data. For example, in 2017, around 50 per cent of meat exports went to the UK. Almost 90 per cent of cereals and 84 per cent of fruit and vegetable exports were destined for the UK market. Table 1 also shows Ireland's agri-food exports to Northern Ireland. In 2017 the value of these exports amounted to €0.6 billion, 5.4 per cent of all food and live animal exports.

**Table 1 | Agri-Food Exports in 2017**

	All destinations, € billion	% of total goods exports	Great Britain (€ billion)	Northern Ireland (€ billion)	GB, % of exports	NI, % of exports
Total food and live animals (0)	11.38	9.3	4.00	0.61	35.2	5.4
Live animals except fish etc. (00)	0.45	0.4	0.25	0.08	55.3	18.4
Meat and meat preparations (01)	3.85	3.1	1.74	0.19	45.2	5.0
Dairy products and birds eggs (02)	2.39	2.0	0.75	0.09	31.2	3.7
Fish, crustaceans, molluscs and preparations thereof (03)	0.62	0.5	0.05	0.01	8.1	1.5
Cereals and cereal preparations (04)	0.42	0.3	0.30	0.08	70.6	19.2
Vegetables and fruit (05)	0.30	0.2	0.20	0.05	68.1	15.6
Sugar, sugar preparations and honey (06)	0.16	0.1	0.04	0.01	27.8	4.2
Coffee, tea, cocoa, spices and manufactures thereof (07)	0.37	0.3	0.23	0.02	62.4	4.4
Feeding stuffs for animals, excluding unmilled cereals (08)	0.32	0.3	0.16	0.07	50.8	21.9
Miscellaneous edible products and preparations (09)	2.50	2.0	0.28	0.02	11.3	0.8
Beverages (11)	1.36	1.1	0.21	0.08	15.6	5.7
Other agri-food products	0.36	0.3	0.07	0.02	18.5	4.7

Source: CSO External Trade Statistics.

Notes: The final two columns show the proportion of total exports of each product which go to GB and NI. Rounding may affect totals.

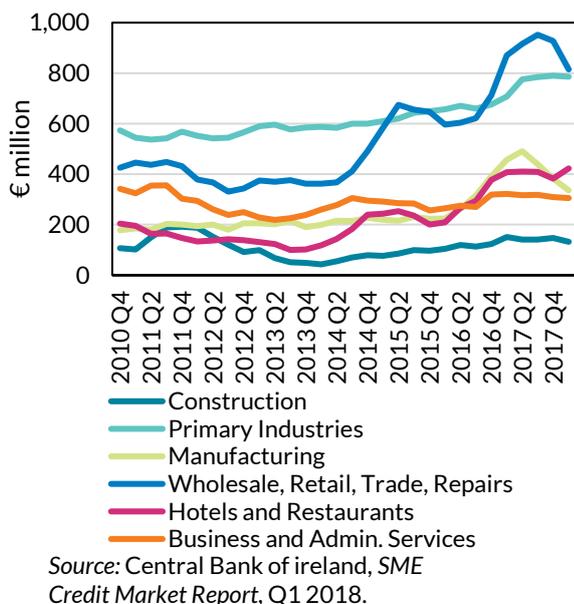
#### iv. New Lending and Credit Outstanding

The Central Bank's *SME Market Report* provides data on lending to non-financial SMEs. Figure 4a shows annual gross new lending by sector (left-hand chart). The Primary Industries<sup>4</sup> and Wholesale, Retail, Trade and Repairs sectors consistently

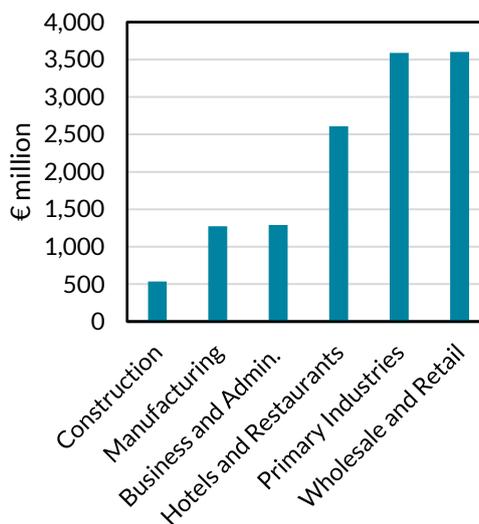
<sup>4</sup> Primary Industries is primarily composed of the sub sector agriculture but also forestry, logging, mining and quarrying and fishing and aquaculture.

show the highest levels of new lending over recent years. Annual new lending in Q1 2018 increased by 11 per cent in Primary Industries compared to the same period in 2017. The right-hand panel in Figure 4 shows the stock of total non-financial, non-real estate outstanding credit. As of Q1 2018, this stood at €16.2 billion, of which primary industries accounted for €3.6 billion, or 22 per cent of the total.

**Figure 4A | New SME lending by sector (4 quarter rolling summation, by quarter), Q4 2010 - Q1 2018**



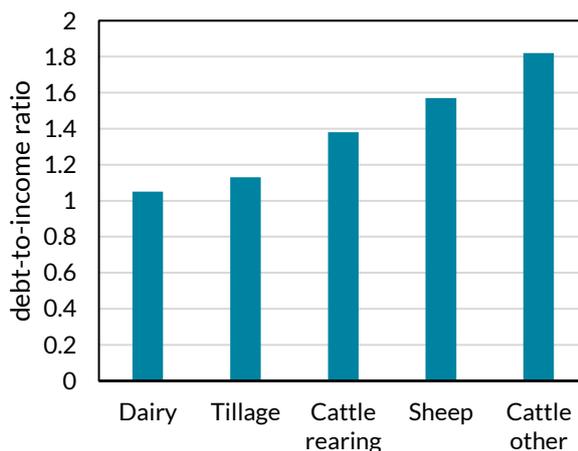
**Figure 4B | Credit outstanding to SMEs by sector, Q1 2018**



**Table 2 | Percentage of Farms with Borrowings and Average Debt, 2017**

	Farms with Borrowings (%)	Average Debt (€)
Dairy	62%	100,076
Cattle rearing	27%	25,563
Cattle other	34%	37,144
Sheep	29%	31,867
Tillage	34%	61,658
All	35%	57,827

**Figure 5 | Debt-to-Income Ratios for Farms with Debt, 2017**

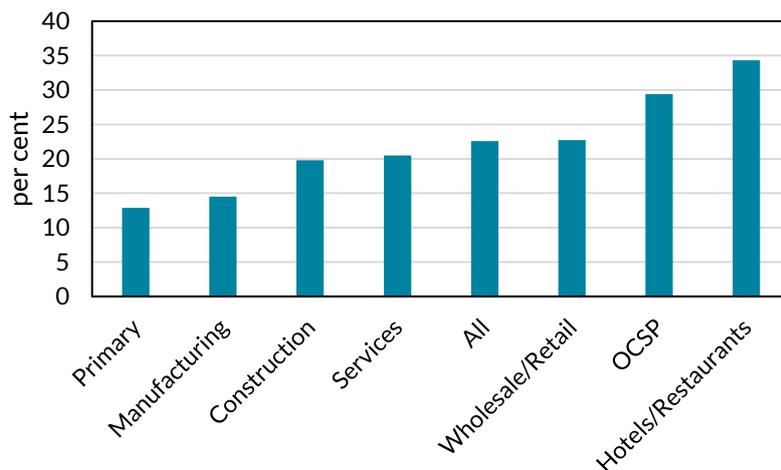


The Teagasc National Farm Survey (NFS) provides information on average debt by type of farming enterprise as well as the debt-to-income ratio. Around two-thirds of farms have no farm business related debt although the percentage of farms with debt varies by type of enterprise (Table 2). 60 per cent of dairy farms have debt, compared to one-third of cattle (other) farms. Figure 5 shows the debt-to-income

ratio by farm system for farms with debt. Although dairy farms have the highest level of borrowings, their debt-to-income ratio is lowest at 1.05. Cattle (other) farms<sup>5</sup> are the most highly leveraged with a ratio of 1.82.

Detailed loan-level data from Allied Irish Banks, Bank of Ireland, Permanent TSB and Ulster Bank can be used to describe loan performance.<sup>6</sup> Figure 6 shows the share of outstanding balances in default (22.6 per cent overall in default) across the main economic sectors as of December 2017. The Primary (12.9 per cent, dominated by Agriculture) and Manufacturing (14.5 per cent) sectors record the lowest default rates. Hotels/Restaurants (34.3 per cent) and Other Community, Social and Personal (OCSP) (29.4 per cent) sectors had the highest default rates.

**Figure 6: SME Default Rates by Sector, December 2017**



Source: Central Bank of Ireland, *SME Credit Market Report*, Q1 2018.

#### v. Overall Contribution to National Output

Data from the CSO indicate that Gross Value Added (GVA)<sup>7</sup> in the the agri-food sector (including agriculture, food, drinks and tobacco) accounts for just under 7 per cent of overall modified Gross National Income (GNI\*) with primary agriculture, forestry and fishing making up 1.9 per cent (Table 3).

<sup>5</sup> Cattle (other) refers to specialist cattle-rearing and fattening farms where less than 50 per cent of the standard output is from suckler cows.

<sup>6</sup> These data are collected every six months. The latest data are from December 2017. The finance types are predominantly comprised of loans, overdrafts, hire-purchasing and leasing. 'Default' is defined as loans greater than 90 days past due, or deemed unlikely to replay without giving up collateral.

<sup>7</sup> GVA is defined as the difference between the output at basic prices and intermediate consumption. It is a measure of gross income before depreciation, subsidies and taxes and compensation of employees.

**Table 3 | GVA in Agri-Food Sector in 2017**

	€ million
Modified gross national income at current market prices (GNI*)	181,182
GVA in Primary Agriculture, forestry and fishing (A)	3,444
GVA in Food products, beverages and tobacco (B)	8,755
Total (C=A+B)	12,199
Primary Agriculture, forestry and fishing, % of GNI*	1.9
Food products, beverages and tobacco, % of GNI*	4.8
Overall Agri-Food GVA, % of GNI*	6.7

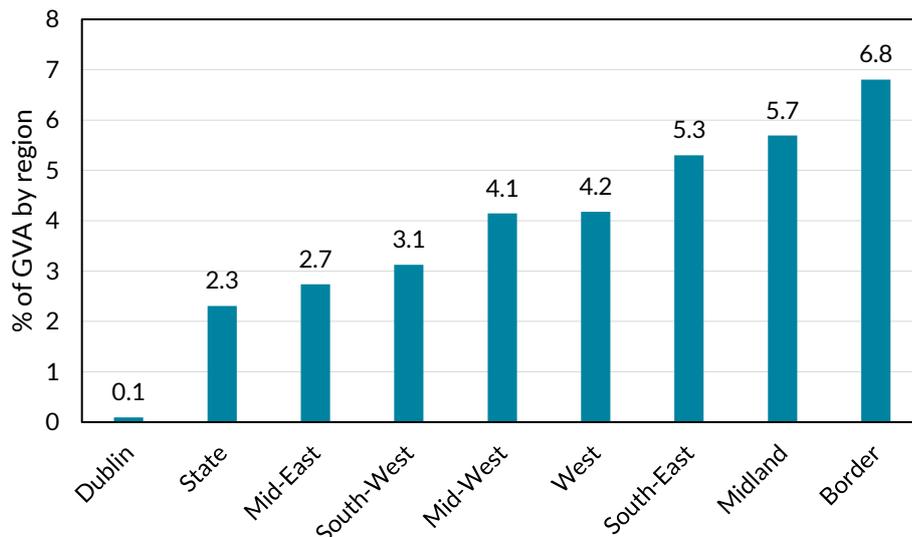
## 2. Impact of the Agri-Food Sector on Regional Economic Activity and Employment

While primary agriculture accounts for a relatively small share of overall national output, as shown in Table 3 above, the aggregate data mask important regional variation in the contribution of the sector to economic activity. Figure 7 shows the share of overall gross value added accounted for by primary agriculture for the 8 regions published by the CSO.<sup>8</sup> In the Border, Midlands and South East regions, the share of agriculture in the overall GVA is two to three times the national average. In the Border region, primary agriculture accounts for close to 7 per cent of overall gross value added.<sup>9</sup>

<sup>8</sup> The composition of the NUTS regions by county is shown in Appendix 1.

<sup>9</sup> The chart shows only primary agriculture and therefore this contribution can be viewed as a lower bound as it excludes the value added from activities such as food processing. Data on GVA by region for detailed agri-food subsectors are not publically available.

**Figure 7 | Gross Value Added in Primary Agriculture by Region, % of Total (2014)**

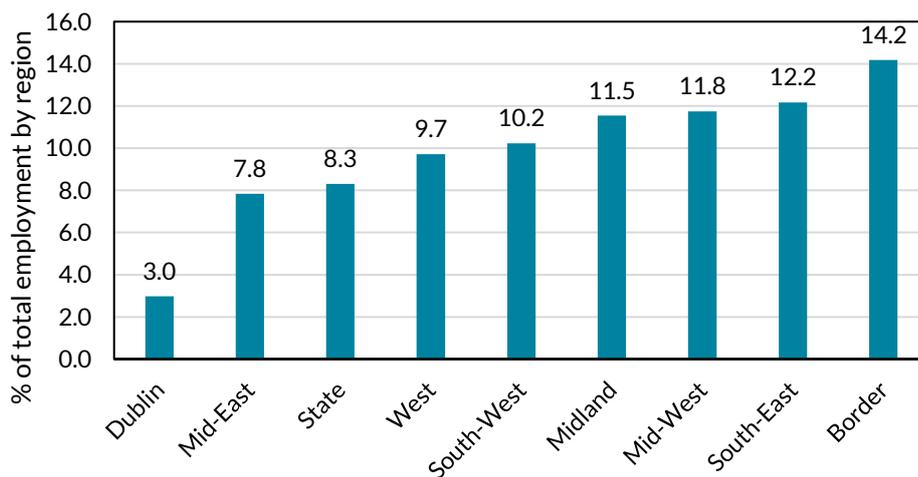


Source: CSO, County Incomes and Regional GDP.

Notes: Chart shows GVA in primary agriculture in each region as a proportion of overall GVA in the region in 2014.

From the Census of Population it is possible to obtain detailed data on employment by region and type of economic activity. From these data the sub-sectors which comprise the broad agri-food sector can be identified. Figure 8 shows the share of overall employment accounted for by the agri-food sector across different regions from Census 2016. In the Border region, more than one-in-seven workers is employed in the agri-food sector, almost twice the national average of one in twelve. In the Midlands, Mid-West and South-East, around one worker in every eight is employed in the sector.

**Figure 8 | Employment in Agri-Food Sector by Region**



Source: Census 2016, CSO.

Notes: Chart shows employment in the agri-food sector in each region as a proportion of overall employment in the region.

### 3. Challenges Facing Irish Agriculture

The Food Wise 2025 report from the Department of Agriculture sets out targets to increase agricultural output over the coming years. In this section, we review some of the main challenges facing the sector as it aims to expand. Some of these challenges have been evident for many years, while others, such as Brexit, have materialised more recently.

#### i. Profitability

Table 4 shows data on farm incomes from the most recent National Farm Survey (Teagasc, NFS 2017). The *National Farm Survey* has been published annually since 1972. The survey provides detailed information on average farm incomes by type of farm system (dairy, beef, tillage etc.), farm size, on-farm investment and the demographic structure of farming enterprises, among other data. The data for 2017 highlight two important characteristics of farm incomes that have been evident in the NFS for many years. The first is the degree of variation in average family farm income across different types of farming enterprise. In 2017, average family farm income across all farm enterprises was €31,411. On dairy farms, the average income was almost three times this figure at €86,069 while on cattle farms, income was half the national average.

**Table 4 | Average Family Farm Income and Direct Payments by Sector in 2017**

	Family Farm Income (FFI), €	Direct Payments, €	Direct Payments, % of Income	Hectares (ha)	Income per ha, €
Dairying	86,069	19,328	22%	56	1,529
Cattle Rearing	12,529	14,242	114%	35	354
Cattle Other	17,199	16,436	96%	37	461
Sheep	16,586	19,145	115%	51	323
Tillage	37,027	23,239	63%	60	617
All	31,411	17,659	56%	45	693

Source: Teagasc National Farm Survey 2017.

Notes: Direct payments include supports received under the Basic Payment Scheme, as well as payments relating to the Disadvantaged Area Scheme and various agri-environmental schemes. Rounding may affect totals.

The second important characteristic that is evident in Table 4 is the low market income on farms outside the dairy sector and the degree to which the incomes of Irish farmers are dependent on direct payments. According to Teagasc, the average total CAP payment received per farm in 2017 was €17,659, or 56 per cent of average farm income. Direct payments are paid for by the EU under the CAP and by the Exchequer. The degree of reliance on direct payments varied significantly across farming enterprises. On dairy farms, direct payments accounted for 22 per cent of farm income; on cattle and sheep farms CAP payments accounted for 114 per cent and 115 per cent of farm incomes respectively. Where the dependency on direct payments exceeds 100 per cent, this indicates that the market income on

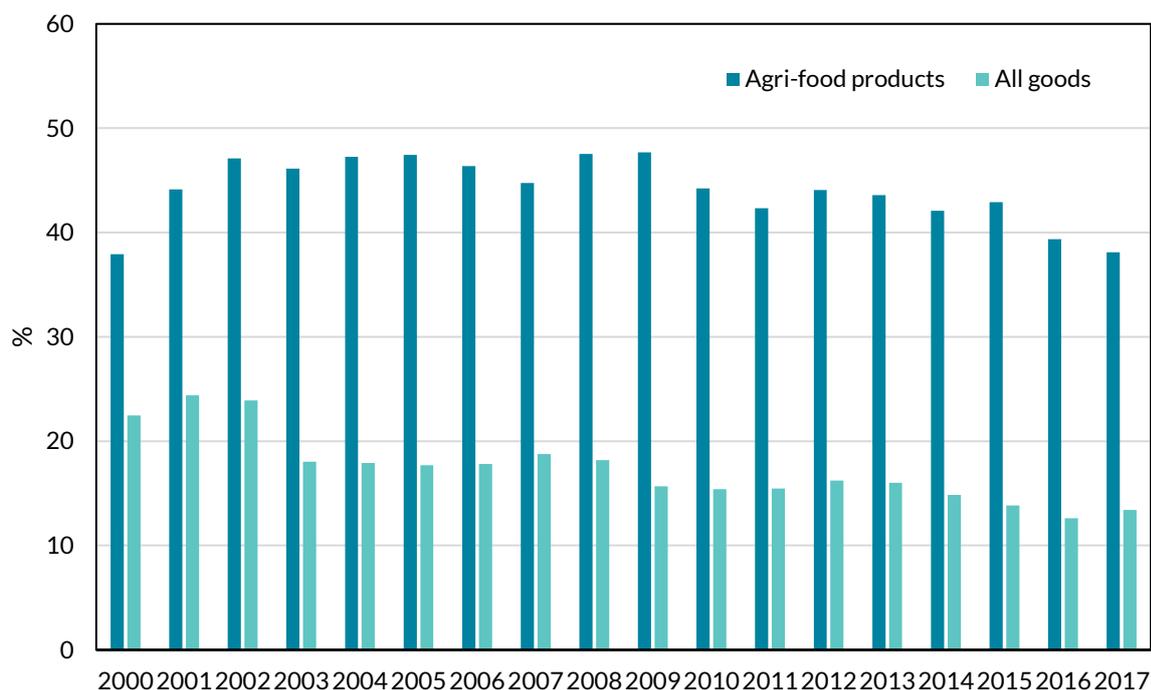
these farms was negative with the only income which farm families received from their enterprises coming from direct payments.

A viability analysis was published as part of Teagasc's 2017 NFS. According to this research, a farm business is defined as being economically viable if family farm income is sufficient to remunerate family labour at the minimum agricultural wage (which is assumed to be €19,167 per labour unit), and provide a 5 per cent return on the capital invested in non-land assets, i.e. machinery and livestock. Based on the 2017 data, Teagasc reported that 30 per cent of the farm population represented by the survey were classed as being economically vulnerable. Any significant negative shock would clearly deepen the serious viability challenges already facing these farming enterprises.

## ii. Brexit

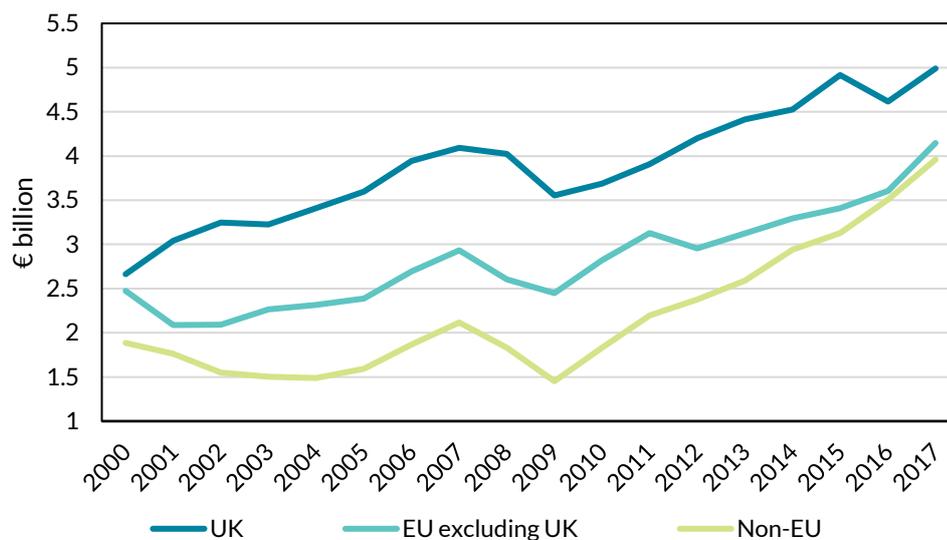
As noted in Section 2, the UK is a key market for the outputs of Irish agriculture. Despite a gradual decline over recent years, the share of Irish agri-food exports going to the UK is still close to 40 per cent, compared to around 13 per cent of all exports (Figure 9). A notable development evident in the data is the growth in non-EU exports over recent years (Figure 10). In 2005, exports destined for non-EU countries accounted for 21 per cent of the total; in 2017 the equivalent figure was 31 per cent. This points to a degree of greater diversification in market sales by Irish food exporters.

Figure 9 | UK Share of Irish Exports, Agri-Food and Total, %



Source: CSO, External Trade Statistics.

Figure 10 | Value of Agri-Food Exports by Destination



Source: CSO, External Trade Statistics.

The impact of Brexit on Irish agriculture will be influenced by three factors:

- The degree of reliance of specific sectors/products on the UK market,
- The reduction in UK market access for Irish exporters due to tariff and non-tariff barriers,
- The degree of resilience of different sectors based on their profitability and dependence on direct payments.

Notwithstanding some evidence of greater market diversification, Irish food exporters remain heavily dependent on the UK. This is especially true for specific subsectors such as beef. As shown in Table 1, around 50 per cent of Irish beef exports go to the UK. In a hard Brexit scenario – where the UK reverts to trading on WTO rules – Lawless and Morgenroth (2016) show that agriculture products would attract some of the highest tariffs. Indeed, the fifteen sectors with the highest tariffs all fall within the broad headings of food, clothes and tobacco products. Estimates from Teagasc show that the tariff on fresh boneless beef, which accounts for two-thirds of the value of beef exports to the UK, would be 69 per cent.<sup>10</sup>

The imposition of tariffs of this magnitude has the potential to significantly reduce Ireland-UK trade in agricultural goods. Research from Teagasc by Hanrahan et al. (2017) indicates that UK import demand for beef could be reduced by between 36 and 100 per cent. This is before the impact of non-tariff barriers is considered, which previous Central Bank research has shown could lower Ireland-UK bilateral trade flows (Byrne and Rice, 2018).

On the basis of the three considerations above, the beef sector appears particularly vulnerable to a Brexit shock. The sector is heavily reliant on the UK market, faces high tariffs in a hard Brexit scenario and has existing viability problems. As a result, Hanrahan et al. (2018) estimate that beef farms would

<sup>10</sup> See “Brexit Update: Possible impacts on the Irish Beef Industry”, <https://www.teagasc.ie/media/website/rural-economy/rural-economy/Beef-conference-Brexit-Update.pdf>

experience the largest percentage declines in family farm income in the event a hard Brexit, with a reduction of 37 per cent projected.

Taking into account the long-standing competitiveness challenges faced by the beef sector in particular, an unfavourable Brexit outcome which reduced market access for Irish exports would have a material negative effect on Irish agriculture. While in the long run, it is possible that alternative markets for Irish agri-food products could be developed, the short-run adjustment to a hard Brexit would present considerable challenges.

### iii. Reform of the CAP

The CAP was introduced in 1962 as a system of income and market support programmes for the agriculture and rural sectors. As described in Section 1, Irish farm incomes remain highly dependent on payments received under the CAP, accounting for over 50 per cent of family farm income in 2017. At present 80 per cent of the Irish CAP budget (€10.7 billion between 2014 and 2020) is allocated to direct payments and market supports compared to an EU average of 76 per cent.<sup>11</sup> The remainder (€2.2 billion) is allocated to rural development in tandem with national co-financing.

Since its introduction, CAP has undergone a series of reforms.<sup>12</sup> In 1984, numerous changes were introduced to better align production with market demand. One of the main measures was the introduction of milk quotas which established a cap on milk production and significantly affected countries with large dairy industries such as Ireland. In 1992, the “MacSharry” reform, focused on shifting from market support such as commodity price supports to direct payments. Environmental measures were also introduced at the time of this reform.

To reduce the link between direct payments and production, “decoupling” was introduced in 2003. Under the new framework, direct payments are made on a per hectare basis, conditional on compliance by farmers with a range of food safety, environmental and animal welfare measures. While some countries continued with partially decoupled payments, Ireland opted for full decoupling. Ireland removed all payments calculated on a headage basis (i.e. the number of cattle) introduced in the 1992 reform and replaced them with the Single Farm Payment (SFP). Another significant reform was the agreement to abolish milk quotas in 2015.

Further reforms in 2013 aimed to promote competitiveness, sustainable practices, innovation, growth of rural areas and to better link financial resources to the productive use of land. This reform provides the current framework for CAP which was agreed from 2014-2020. The main feature of the 2013 reform was the introduction of a mandatory “greening” payment to promote environmentally friendly farming practices.

As these reforms have been implemented, CAP expenditure as a share of the overall EU budget has declined sharply over time, from 73 per cent in 1985 to 41

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<sup>11</sup> See European Commission “CAP in your Country”

[https://ec.europa.eu/agriculture/sites/agriculture/files/cap-in-your-country/pdf/ie\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/cap-in-your-country/pdf/ie_en.pdf)

<sup>12</sup> The Parliamentary Budget Office provides a description of the CAP and its operation in Ireland here:

[https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2018/2018-08-17\\_an-overview-of-the-common-agricultural-policy-cap-in-ireland-and-potential-regional-and-sectoral-implications-of-future-reforms\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2018/2018-08-17_an-overview-of-the-common-agricultural-policy-cap-in-ireland-and-potential-regional-and-sectoral-implications-of-future-reforms_en.pdf)

per cent in 2016.<sup>13</sup> This reduction has taken place at the same time as successive enlargements of the EU and reflects the impact of the different CAP reforms and the growing share of the EU budget allocated to other EU policies.

In June 2018, the European Commission presented legislative proposals on the future of the CAP for the period after 2020.<sup>14</sup> As a part of the next EU 2021-2027 budget, the Commission proposes that funding for the CAP is reduced by at least 5 per cent. It is likely that the EU budget will be negatively affected by the UK's departure from the EU with the loss of the UK's net annual contribution. According to the European Parliament Agriculture Committee (2017), the estimated budgetary shortfall amounts to approximately €10 billion per year. This would reduce the CAP budget by around €3 billion. To make up the shortfall left by the UK's exit, other Member States would need to increase their contributions.

It is unclear what the final impact of future CAP reforms and Brexit will be on the level of direct payments paid to Irish farmers. Nevertheless, the overall size of the CAP budget has been on a declining trend over a long period and a reduction in the CAP budget has been proposed for the post-2021 period. Given the level of dependence of Irish farmers on such payments, possible further reductions in the CAP budget represent a risk to farm incomes in the coming years.

#### iv. Climate Change

The Food Wise 2025 Report published by the Department of Agriculture aims to increase the value of primary agricultural production by 65 per cent and agri-food exports by 85 per cent by 2025. Increasing agricultural output in line with these targets while at the same time complying with national and international obligations on climate change will be a challenge for the sector.

Ireland's target under the EU Effort Sharing Decision is to reduce Greenhouse Gas Emissions (GHG) by 20 per cent relative to 2005 levels by 2020. The agriculture sector currently accounts for around one third of Ireland's overall greenhouse gas emissions. According to the most recent report from the Climate Change Advisory Council (CCAC), Ireland is unlikely to meet this target. Greenhouse gas emissions increased by 3.6 per cent in 2016 compared to the previous year, the second successive year of rising emissions. In the agriculture sector, emissions increased by 2.7 per cent mainly linked to the expansion of the dairy industry. Reflecting the recent trend of rising emissions and projections for further increases in the coming years, the CCAC find that a reduction in emissions of less than 1 per cent on 2005 levels will be achieved by 2020, far short of the 20 per cent target. The main increases are projected to occur in agriculture and transport, which dominate the Effort Sharing Decision emissions and account for 75 per cent of these emissions.

As well as EU obligations, Ireland's national objective is to transition to a low-carbon, climate-resilient and environmentally sustainable economy by 2050.<sup>15</sup>

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<sup>13</sup> See [https://ec.europa.eu/agriculture/sites/agriculture/files/cap-post-2013/graphs/graph1\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/cap-post-2013/graphs/graph1_en.pdf)

<sup>14</sup> See [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap_en)

<sup>15</sup> The national objective is set out in the National Policy Position <http://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/National-Policy-Position.aspx> and Climate Action and Low Carbon Development Act 2015 <http://www.irishstatutebook.ie/eli/2015/act/46/enacted/en/pdf>

While complying with national and international greenhouse gas emissions targets will require progress in reducing emissions across many sectors, developments in GHG emissions in the agriculture area are indicative of the scale of the challenge ahead. In 2016, greenhouse gas emissions removals by sinks in the land use, land-use change and forestry sector decreased by 2.5 per cent relative to 2015. At the same time, greenhouse gas emissions in 2016 from agricultural sources increased by 2.7 per cent. Moreover, the CCAC (2018) has pointed out that while the National Policy Position addresses emissions sources from agriculture through an objective “towards an approach to carbon neutrality”, there is currently no definition of “an approach to carbon neutrality” or an indication of a pathway for achieving this element of the transition to a low-carbon economy.

Given this background, there is some uncertainty as to how the objective of increasing agricultural output in line with current plans will be reconciled with delivering on national and EU environmental targets. Matthews (2017) outlines a number of options for ensuring climate obligations are met. These include significant changes in land use and agriculture.<sup>16</sup>

## 4. Conclusion

Despite accounting for a small share of overall national output, primary agriculture and the broad agri-food sector make a sizable contribution to regional output and employment. Following a long period from the early 1990s up to 2010 when the value of agricultural output remained broadly flat, the removal of milk quotas has driven strong increases in output in recent years. Nevertheless, the sector faces a number of significant challenges if it is to expand further in the coming years.

Low profitability and a high reliance of farm incomes on direct payments represent an important weakness in the sector and provides the context in which all other risks facing Irish agriculture should be considered. Viewed in this light, risks such as Brexit or possible reductions in the CAP budget have the potential to further expose the existing viability challenges facing some Irish farmers. In addition, the sector will face challenges in expanding output while at the same time playing its role in delivering on national and EU environmental targets, especially given recent trends in greenhouse gas emissions.

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<sup>16</sup> See <https://www.citizensassembly.ie/en/Meetings/Alan-Matthews-Paper.pdf>

## References

Byrne, S. and Rice, J. 2018. "Non-Tariff Barriers and Goods Trade: a Brexit Impact Analysis", Central Bank of Ireland *Research Technical Paper*, Vol. 208, no. 7.

Available at: [https://www.centralbank.ie/docs/default-source/publications/research-technical-papers/06rt18-non-tariff-barriers-and-goods-trade-a-brex-it-impact-analysis-\(byrne-and-rice\).pdf?sfvrsn=4](https://www.centralbank.ie/docs/default-source/publications/research-technical-papers/06rt18-non-tariff-barriers-and-goods-trade-a-brex-it-impact-analysis-(byrne-and-rice).pdf?sfvrsn=4)

Central Bank of Ireland. 2018. "SME Market Report 2018". Available at:

<https://www.centralbank.ie/docs/default-source/publications/sme-market-reports/sme-market-report-2018.pdf?sfvrsn=6>

Climate Change Advisory Council. 2018. "Annual Review 2018". Available at:

[http://www.climatecouncil.ie/media/CCAC\\_AnnualReview2018.pdf](http://www.climatecouncil.ie/media/CCAC_AnnualReview2018.pdf)

Department of Agriculture, Food and Marine. 2015. "Food Wise 2025". Available at: <https://www.agriculture.gov.ie/foodwise2025/>

European Parliament Agriculture Committee. 2017. "Possible impact of Brexit on the EU budget and, in particular, CAP funding", Available at:

[http://www.europarl.europa.eu/RegData/etudes/STUD/2017/602007/IPOL\\_STU\(2017\)602007\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/602007/IPOL_STU(2017)602007_EN.pdf)

Hanrahan, K., Donnellan, T. and Thorne, F. 2018. "Impact of Brexit on the Irish Agricultural Sector". Available at:

[https://www.teagasc.ie/media/website/publications/2018/BSAS\\_Hanrahan\\_Brexit\\_Ireland.pdf](https://www.teagasc.ie/media/website/publications/2018/BSAS_Hanrahan_Brexit_Ireland.pdf)

Lawless, M. and Morgenroth, E. 2016. "The Product and Sector Level impact of a Hard Brexit across the EU", ESRI Working Paper No.550.

Matthews, A. 2017. "If Ireland was a leader in tackling climate change what would Agriculture / Land Use Policy look like in Ireland?" Submission to Citizens Assembly, November 2017. Available at:

<https://www.citizensassembly.ie/en/Meetings/Alan-Matthews-Paper.pdf>

Parliamentary Budget Office. 2018. "An Overview of the Common Agricultural Policy (CAP) in Ireland and potential regional and sectoral implications of future reforms", Briefing Paper No. 9, 2018. Available at:

[https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2018/2018-08-17\\_an-overview-of-the-common-agricultural-policy-cap-in-ireland-and-potential-regional-and-sectoral-implications-of-future-reforms\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2018/2018-08-17_an-overview-of-the-common-agricultural-policy-cap-in-ireland-and-potential-regional-and-sectoral-implications-of-future-reforms_en.pdf)

Teagasc. 2018. "National Farm Survey 2017". Available at:

<https://www.teagasc.ie/publications/2018/teagasc-national-farm-survey-results-2017.php>

Teagasc. 2018. "Situation and Outlook 2018". Available at:

[https://www.teagasc.ie/media/website/publications/2018/Situation-and-Outlook\\_July-2018.pdf](https://www.teagasc.ie/media/website/publications/2018/Situation-and-Outlook_July-2018.pdf)

## Appendix 1: NUTS Regions Pre-Q1 2018

The table below shows the composition of the NUTS regions used in the regional analysis in Section 2.

<b>Border, Midland and Western</b>	<b>Southern and Eastern</b>
<b>Border</b>	<b>Dublin</b>
Cavan	Dublin City
Donegal	Dun Laoghaire-Rathdown
Leitrim	Fingal
Louth	South Dublin
Monaghan	
Sligo	<b>Mid-East</b>
	Kildare
<b>Midland</b>	Meath
Laois	Wicklow
Longford	
Offaly	<b>Mid-West</b>
Westmeath	Clare
	Limerick City
<b>West</b>	Limerick County
Galway City	North Tipperary
Galway County	
Mayo	<b>South-East</b>
Roscommon	Carlow
	Kilkenny
	South Tipperary
	Waterford City
	Waterford County
	Wexford
	<b>South-West</b>
	Cork City
	Cork County
	Kerry

