Food for thought

The Food and Drink industry, an inclusive sector at the heart of Northern Ireland

Economic Impact Assessment

Reliance Restricted

7 May 2021

Reliance Restricted

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Economic Impact Assessment of the NI Food and Drink sector **7 May 2021**

Dear Michael,

In accordance with the terms or our engagement agreement (the 'Agreement') dated 8 February 2021, we have assisted the Northern Ireland Food and Drink Association (NIFDA) with an Economic Impact Assessment (EIA) of the NI Food and Drink sector.

Our role is to provide you with our analysis and findings. We have not performed any management functions or made any management decisions.

Limitations of scope

Except to the extent that we have agreed to perform specified verification procedures, we will not verify the accuracy, reliability or completeness of the information provided to us. In addition, to the extent that, as part of the engagement, we use publicly available information or other third-party sources, we will not verify the accuracy, reliability or completeness of such information or sources. However, we will consider whether such information is, in general terms, consistent with other information that we use.

Use and distribution of this report

It may be necessary to publicly release this report as per the conditions in the Engagement Letter.

We appreciate having been given the opportunity to provide EY's valuation services to NIFDA. If you have any questions or require additional information, please contact me at +353 86 830 4580.

Yours sincerely,

SMacAllister

Simon MacAllister
Partner

Dashboard

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1 Executive summary

The overall impact of the Food and Drink sector in NI is far-reaching

Balanced regional development

£4.9bn

Direct, indirect and induced GVA contribution of the industry to the NI economy

Composed of £2.3bn in direct GVA and a further £2.6bn in GVA contributed to the NI economy through its supply chain and wages, the sector plays a vital role in rural NI, as 86% of NIFDA, NIMEA, NIGTA[1], NI Pork and Bacon Forum and Dairy Council NI members are based outside Belfast City Council.

Employment for all

113,000

Total workforce jobs supported by the Food and Drink industry in NI

This figure is composed of 54,000 direct jobs and a further 59,000 jobs supported in the supply chain. The skills required in the sector are aligned with those already available in NI which can help to reduce unemployment and inactivity.

Resilient knock-on effect

Top 5

Agriculture and food products Type 2 GVA multipliers rank in the top five in NI

The Food and Drink sector supports a range of industries in the NI economy in both GVA and employment terms. The NI economy is 3 times more reliant on the Food and Drink industry in GVA terms than the UK is on its Food and Drink industry. The industry has been particularly resilient during COVID-19.

Balance of trade

Top 2

Food and Drink is the second largest goods export sector in NI in value terms

The Food and Drink industry is export-intensive, as 77% of total produce is consumed outside of NI. In terms of goods exports outside of the UK, the sector has a commercial balance of +£248m, which is the second largest in the NI economy.

Innovation driver

Top 2

The Food and Drink industry ranks among the most innovative sectors in the UK relative to its size

The Food and Drink industry ranks among the top two sectors in the UK in the uptake of patent relief relative to its size (number of firms claiming patent relief / GVA of sector). In terms of Research and Development (R&D) grants, the industry ranks among the top five sectors in the UK relative to its size.

[1] Northern Ireland Food and Drink Association, Northern Ireland Meat Exporters Association and Northern Ireland Grain Trade Association

1 Executive summary

This reports outlines the direct, indirect and induced socio-economic impact of the Food and Drink industry in Northern Ireland

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The Food and Drink industry and its wider impact on the NI economy

The Food and Drink sector is a core part of the NI economic model due to its scale, contribution to other sectors, resilience during economic crises, regional impact, role in health by providing fresh local produce and its capacity to innovate. This sector is aligned with the outcomes listed in the Programme for Government (PfG) aiming to build an inclusive society supported by a competitive and sustainable economic model.

The core Food and Drink sector analysed in this study is composed of the Agriculture, Forestry and Fishing sectors along with the Food and Drink Manufacturing sector.

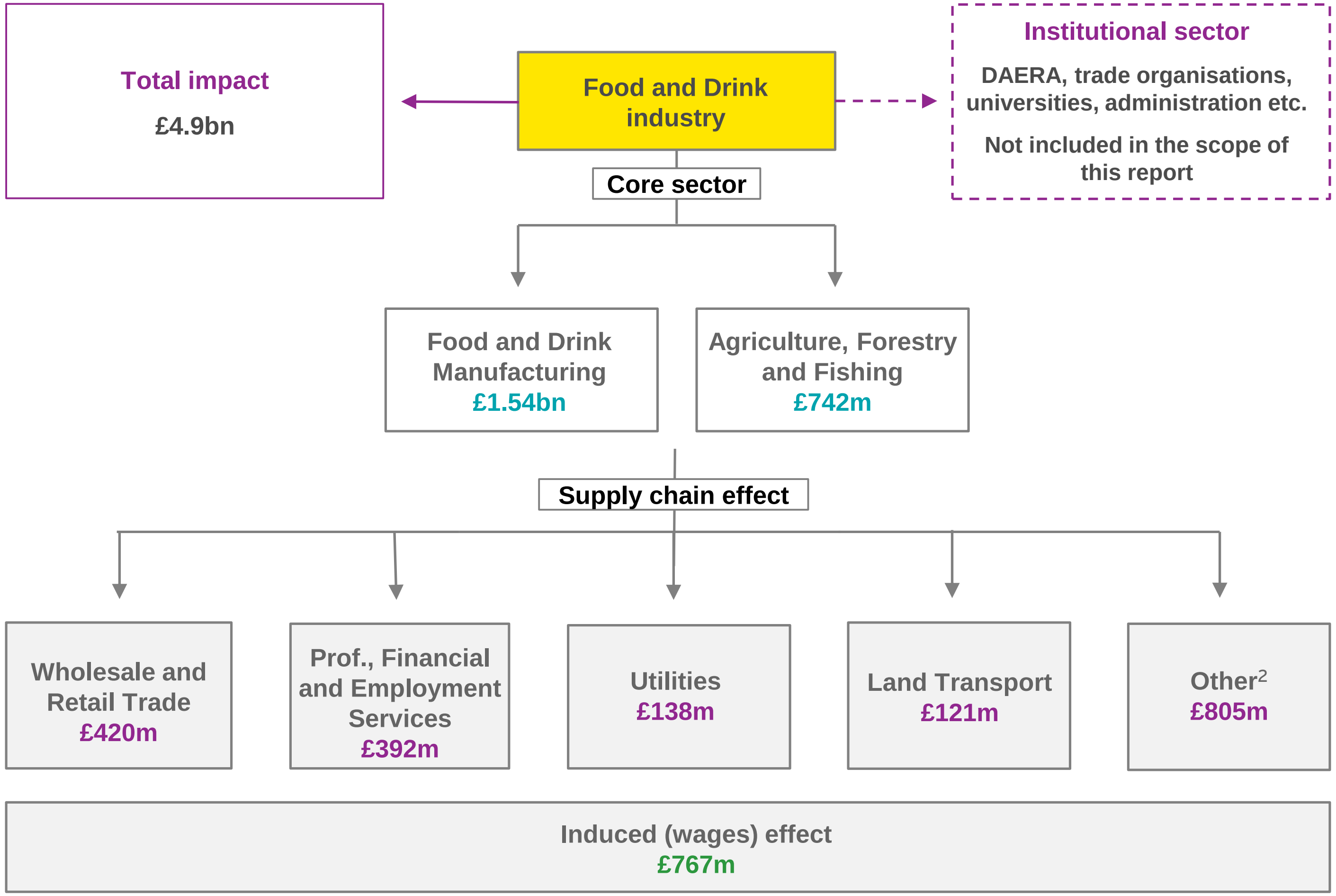
The Food and Drink sector indirectly contributes to a wide variety of sectors including construction and hospitality. These sectors combine to play an important role in the NI economy, and have **a ripple effect across almost every other sector in the NI economy,** with a supply chain effect Gross Value Added (GVA) contribution of £2.6bn and a total impact of c.£4.9bn[1]. Administration and research bodies operating within the sector are excluded as they do not produce goods.

[1] NISRA, EY Input-Output analysis

[2] The supply chain effect graphs aggregates different lines of the NISRA input output tables for clarity purposes. A further breakdown of the sectors indirectly benefiting from the Food and Drink industry can be found in Appendix A

Throughout this report, the supply chain effect refers to the indirect and induced (wages) effect

GVA of the Food and Drink industry in NI, along with the top four local sectors which benefit indirectly



2 Economic impact

The sector has been resilient during the Covid-19 outbreak, however it has been on a downward trajectory over the past decade

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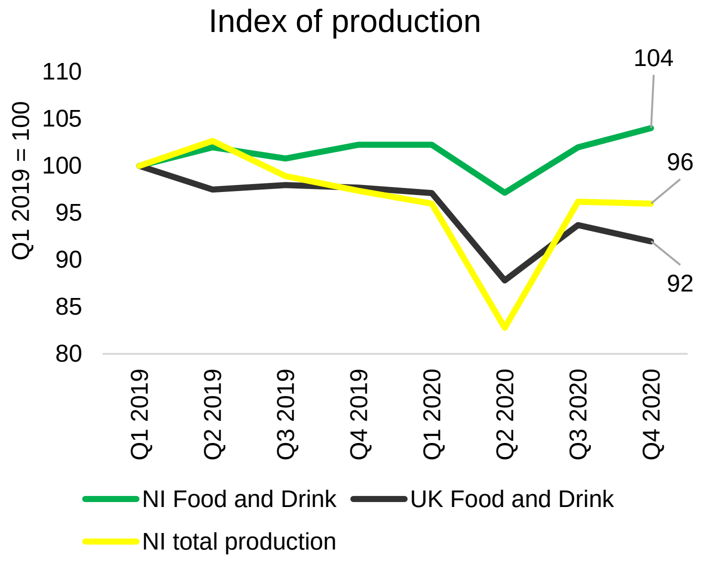
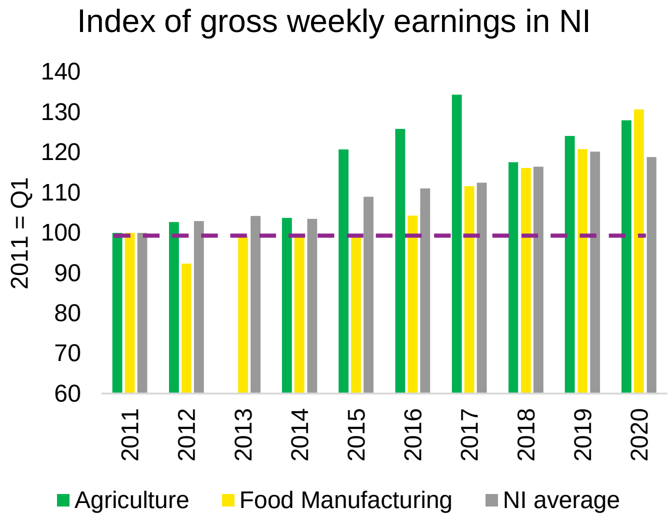
The sector is an outperformer in terms of the impact of COVID-19 …



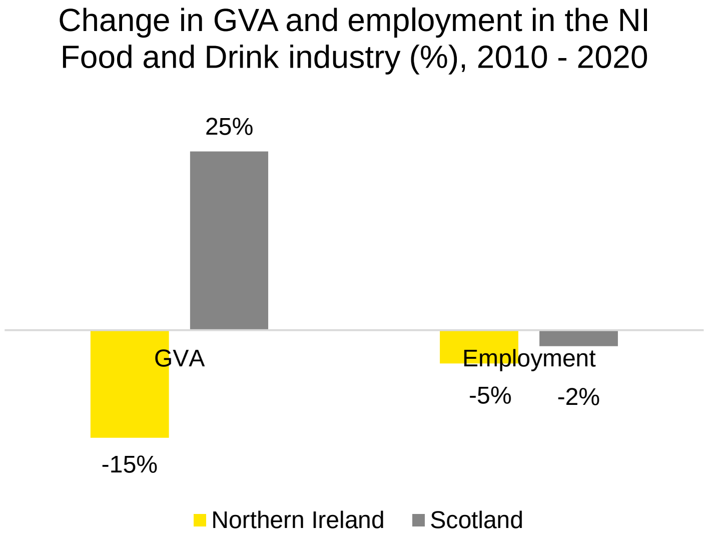
Economies across the globe were severely disrupted by Covid-19 in 2020, however **Food and Drink output in NI remained relatively stable**. Output fell by 3% from 2019 base levels in Q2 2020, followed by a rebound in the following quarter. Much steeper declines were evident in the UK Food and Drink sector and in the overall NI output[1].

…and growth in earnings in the sector exceeds the NI all industries average…



Earnings in the Food and Drink industry have grown steadily over the past ten years, and have increased at a more rapid pace than the NI average in recent years. However, the median gross annual earnings for full-time employees in the Food Manufacturing industry in NI was £22,658 in 2020, which was lower than the NI economy median gross annual earnings of £28,324[2].

…however GVA and employment in the industry have declined since 2010



While the Food and Drink industry is performing very well in terms of exports, it has been struggling over the last ten years in terms of GVA and employment. Both indicators declined from 2010 to 2020, and NI's performance was poorer than Scotland, particularly in terms of GVA. **The Food and Drink industry makes up 6% of NI's GVA, compared to 2% across the UK as a whole[3].**

[1] NISRA *Index of Production* - 2020
[2] NISRA *Annual Survey of Hours and Earnings (ASHE)* – 2011 - 2020
[3] Oxford Economics
Weekly earnings in the Agriculture industry in 2013 are unavailable due to a wide confidence interval

2 Economic impact
The Food and Drink sector has strong GVA impacts across NI

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The food products industry ranks among the strongest Type 2 GVA multipliers in NI…

Food and Drink Manufacturing directly generates £1.54bn of GVA in NI, and the Agriculture sector generates a further £742m. Additionally, the sector indirectly benefits firms operating in a wide range of industries in the local NI economy, such as construction and hospitality services.

Type 2 GVA multipliers are used to assess the overall GVA impact (i.e. direct, indirect and induced) of a particular industry in the local economy. **The Food and Drink industry generates a total of £4.9bn[1] directly and through supply chain effects in the NI economy.**

Ranking of Type 2 GVA multipliers in NI[2]

Rank	Sector	Multiplier
1	Film and TV production	3.9
2	Gambling and betting services	3.4
3	Food products	3.1
4	Pharmaceutical products and preparations	2.6
5	Products of agriculture and related services	2.5
…		…
62	Beverages	1.1

… and plays an important role in the local NI economy

3rd

Food products Type 2 GVA multiplier is the third highest performer in the NI economy

£1.54bn

Direct GVA of Food and Drink Manufacturing in NI

£742m

Direct GVA of the Agriculture industry in NI

£2.6bn

Estimated GVA contribution of the Food and Drink industry in NI through supply chain effects

[1] NISRA, EY Input-Output analysis
[2] EY estimate of Type 2 multipliers
Supply chain disruption from Brexit (and to a lesser extent from COVID-19) will potentially change multipliers and impact as new markets open up, substitution effects change etc.

2 Economic impact

The Food and Drink sector is export-intensive and is a key driver of a significant amount of inward investment into the local NI economy

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Destinations and values of subsector sales, Food and Drink processing industry (£m), 2018[1]

	NI	GB	ROI	Rest of EU	Rest of world	Total
Animal by-products	*	*	*	13	*	47
Bakeries	179	88	103	1	4	376
Beef and sheepmeat	169	1,035	89	131	12	1,436
Drinks	195	37	156	9	19	415
Eggs	62	106	14	*	*	182
Fish	15	40	7	24	3	90
Fruit and vegetables	120	170	71	1	1	363
Milk and milk products	254	412	191	237	49	1,143
Pigmeat	114	145	74	*	*	365
Poultrymeat	*	*	85	*	*	745
Total	**1,174**	**2,618**	**792**	**443**	**134**	**5,162**

Just over one fifth of the Food and Drink produced in NI is consumed locally, with the remaining 77% sold to GB or exported around the world. **NI's key client in the sector is GB, as over 50% of produce is sold to the region[2].**

Food and Drink is the second largest goods export sector of the NI economy, behind only machinery and transport equipment. Of the £9.1 bn exports from NI to regions outside the UK in 2019, almost 21% (£1.9 bn) came from the food, live animals and beverages sector[3].

The Food and Drink industry has the second largest goods commercial balance, reflecting how the value of the sector's exports substantially exceeds its imports. Therefore the Food and Drink industry acts as a key driver of a significant amount of inward investment into the local NI economy.

[1] DAERA *Northern Ireland Food and Drink Processing Report 2018*
[2] In this report exports refer to sales outside NI, and include external sales within the UK
[3] NISRA *Northern Ireland Exports of Goods 2019*
* Data not disclosed due to commercial sensitivity, figures do not sum exactly due to this. Food and Drink processing firms with turnover less than £250,000.

The Food and Drink industry in NI is export driven

77%

Of Food and Drink industry produce is exported from NI

2nd

Food and Drink is the second largest goods export sector in NI

Brexit

The Northern Ireland Protocol and NI's effective position in the EU Single Market may result in new opportunities being available to NI producers

2 Economic impact

The Food and Drink industry is among the most innovative in the UK

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In absolute terms the Agriculture industry accounts for a low proportion of total R&D and patent claims…

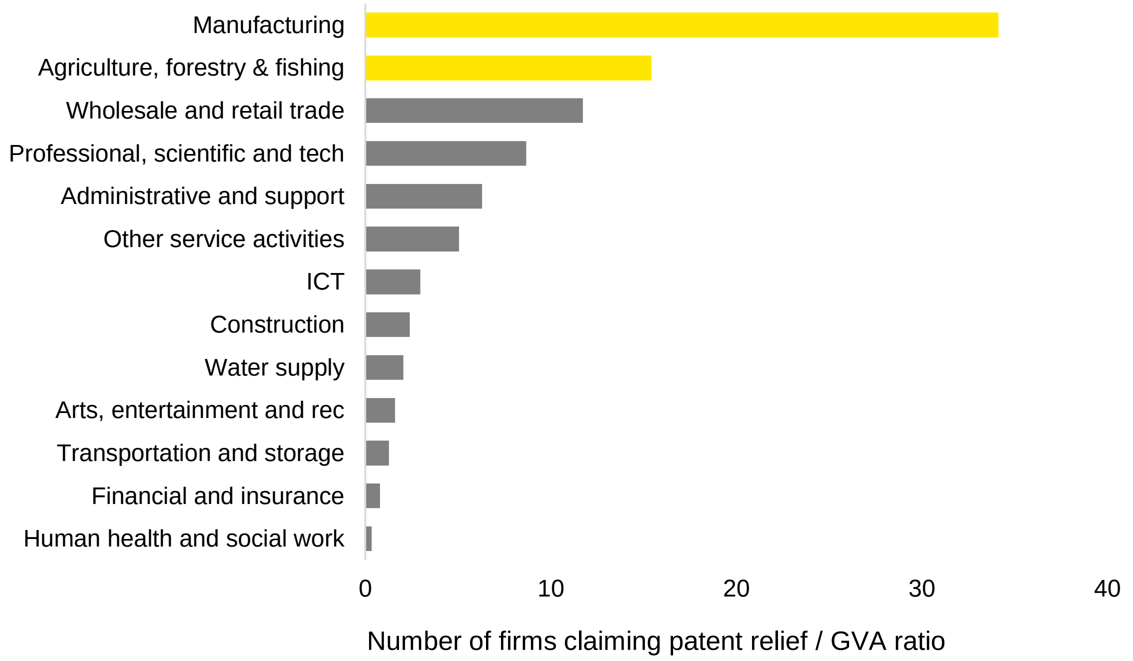
In terms of the innovation performance of the Food and Drink sector, it may be time to revisit how we assess the uptake of Research and Development (R&D) grants and schemes available to firms in each sector. In absolute terms, the Agriculture sector accounts for just 1% of total claims in the UK[1]. However, a more insightful indicator can be calculated by dividing the total number of R&D claims by the GVA of each sector, thereby accounting for the relative size of each industry. When this is done, **the Food and Drink sector is a high performer, and among the most innovative industries relative to its size**[2]**.**

While an exact figure for the number of Food and Drink manufacturers who have availed of these grants is unavailable, both the Manufacturing and Agriculture sectors have high uptake rates relative to their size, which indicates that Food and Drink manufacturers are also very innovative and engaged.

…however when examined in relation to GVA contribution, the Food and Drink industry is among the top performers

Firms in the Food and Drink industry have the highest uptake rate of the Patent Box scheme in the UK, when the size of each sector is taken into account.

Number of firms claiming patent relief / GVA ratio by sector 2019, UK[4]



[1] NI specific data is unavailable so UK data has been examined as part of this analysis
[2] Oxford Economics
[3] Gov.uk *Corporate Tax: Research and Development Tax Credits*
[4] Gov.uk *Patent Box Relief Statistics*

3 Social impact

The skills required in the Food and Drink sector are aligned with those available in the NI workforce

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The Food and Drink industry is aligned with the NI workforce…

There is a broadly even split between the skill levels required in the Food and Drink industry. This is particularly relevant in NI, which faces high economic inactivity and unemployment rates, exacerbated by the COVID-19 crisis. In the UK, 24% of the unemployed worked in elementary occupations prior to unemployment[1]. The Food and Drinks industry could be used as a valuable means to re-engage these people, as it typically has openings for all skill levels.

The Food and Drink Manufacturing industry directly employs 22,700 people, while the Agriculture industry directly employs a further 31,300[2]. An additional 59,000 jobs are supported in the supply chain. **In total, 113,000 jobs are supported by the Food and Drink industry in NI[3].** This is likely to be underestimated, due to part time workers, seasonal workers, spouses etc. The Agricultural Census 2019 records a further 18,100 members of the labour force[4]. Administration and research bodies such as DAERA, the five organisations commissioning this report and the College of Agriculture, Food and Rural Enterprise are also excluded as they do not produce goods.

[1] ONS *Unemployment by previous occupation* - Q1 2018
[2] Oxford Economics
[3] NISRA EY Input-Output Tables
[4] DAERA *Agricultural Census in NI* - 2020
[5] Food and Drink Federation
[6] NISRA *Labour Force Survey* - 2019

… as the sector is open to employees of all skill levels…

32%

Of those working in the UK Food and Drink industry are skilled or highly skilled[5]

37%

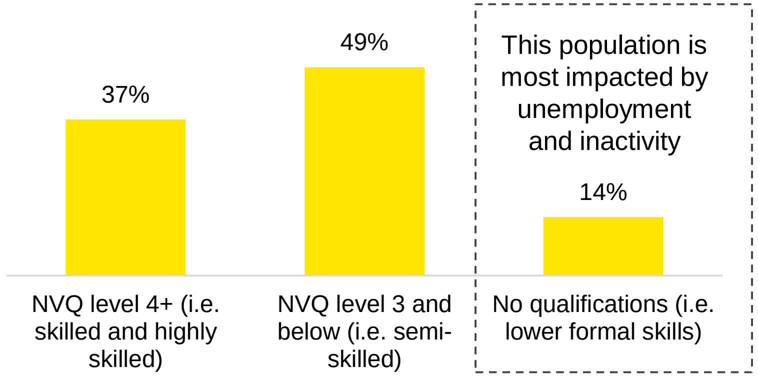
Of those working in the UK Food and Drink industry are semi-skilled

31%

Of those working in the UK Food and Drink industry have lower formal skills

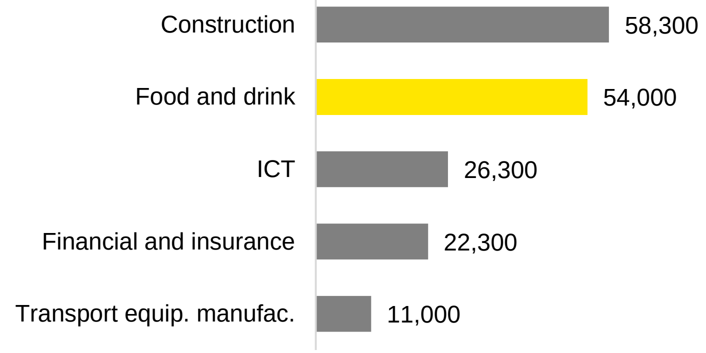
… which mirrors the skills on offer in NI and could help ease unemployment…

NI working age pop. by education level[6]



… and has an impressive employment record compared to other key sectors

Workforce jobs in NI, 2020



3 Social impact
The Food and Drink industry plays a crucial role in maintaining regional balance in NI

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The Food and Drink sector plays an important role across all NI regions…

The Food and Drink industry is the key sector for many rural communities. Over 70% of land in NI is farmed, and the sector plays an important role particularly in helping to achieve balanced regional development in NI[1]. **86% of the members of the five representative organisations are based outside of Belfast City**[2]. The median gross annual earnings for full-time employees in the Food Manufacturing industry in NI is below average, at £22,658[3]. One driver of this may be due to many jobs being in rural areas with a lower cost of living.

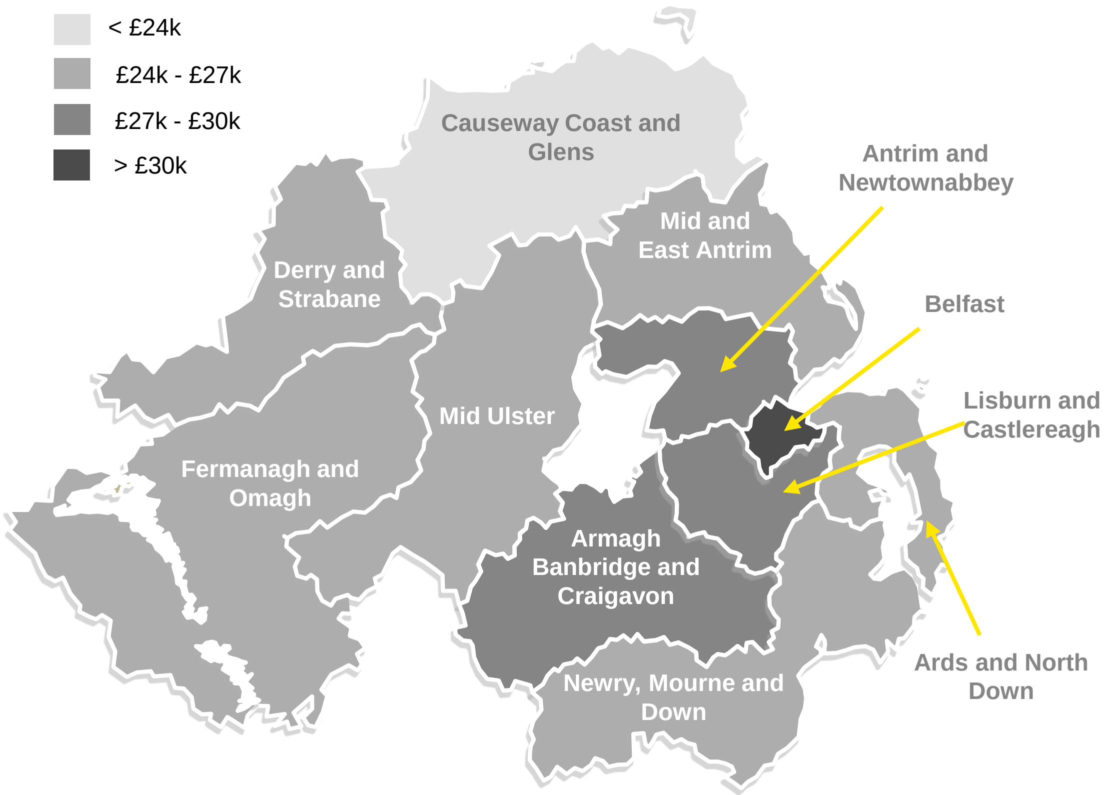
Members by location

NIFDA, NIGTA, NIMEA, NI Pork and Bacon Forum and Dairy Council for NI [2]

NI council area	%
Armagh City, Banbridge and Craigavon	32%
Mid Ulster	30%
Belfast City	14%
Mid and East Antrim	8%
Fermanagh and Omagh	5%
Newry, Mourne and Down	3%
Causeway Coast and Glens	2%
Derry City and Strabane	2%
Ards and North Down	1%
Lisburn and Castlereagh	1%
Antrim and Newtownabbey	1%
Total	100%

… including those which are lower paid

Median gross annual earnings for full-time employees by place of work



[1] DAERA *Agricultural Census in Northern Ireland* - 2020
[2] Northern Ireland Food and Drink Association, Northern Ireland Grain Trade Association, Northern Ireland Meat Exporters Association, NI Pork and Bacon Forum and Dairy Council for NI – 2020
[3] NISRA *Annual Survey of Hours and Earnings (ASHE) - 2020*

4 Contribution to the PfG

The Food and Drink industry aligns with the Programme for Government framework

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We live and work sustainably – protecting the environment

The Food and Drink industry in NI continues to explore more sustainable products and processes. Ranging from recyclable packaging to greener farming processes, combined with legislation such as the Agriculture Bill, the sector is committed to reducing its carbon footprint and becoming more sustainable.

We have an equal and inclusive society where everyone is valued and treated with respect

The Food and Drink industry in NI is open to people of all backgrounds, nations and skill sets. Employees are often provided with in-house training and undergo continuous on-the-job learning, giving everyone the opportunity to reach their potential. Roles in the sector span a range of disciplines, including diagnostics, engineering and finance.

We all enjoy long, healthy, active lives

Food and Drink producers in NI are committed to offering consumers products of the highest quality. NI is home to one of the longest running meat quality assurance schemes, and the sector is monitored by the NI Food Standards Agency. In addition to this, producers are committed to offering products for all consumer preferences and requirements, including gluten-free, low-fat and plant-based alternatives. For example NI company Naked Bacon has developed nitrite-free bacon using only natural ingredients.

Our economy is globally competitive, regionally balanced and carbon-neutral

The Food and Drink industry plays a crucial role in helping to reach the goal of regional balance in NI. 86% of members of the five representative groups are based outside Belfast City Council. The sector also plays a significant role in the economy in terms of commercial balance. 77% of Food and Drink produced in NI is consumed outside the region, which demonstrates its globally competitive nature.

People want to live, work and visit here

NI is a renowned tourist destination, owing to its many visitor centres and areas of natural beauty. The Food and Drink on offer in the region underpins that attractiveness for both locals and tourists. It is estimated that tourists spend £350m on Food and Drink alone in NI each year. The region boasts Michelin star restaurants and global dining awards.

4 Contribution to the PfG

The industry has undertaken tangible initiatives to ensure integrity and sustainability

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Maintaining the integrity of the Food and Drink industry is a key priority for all stakeholders

In order to ensure a sustainable future, it is essential to know what is consumed, its efficiency, standards and how much it costs in CO2 terms from production to shipping to the consumers’ plate. Even if this requires further examination, these examples highlight the capacity of the sector to adapt to imperatives in terms of integrity and sustainability.

Sustainability and integrity

Animal welfare

Natural light is provided in 100% of windowed poultry houses, along with perches and bales in farms. The 5 freedoms of animal welfare[1] are upheld in all operations. *Moy Park*

Water recycling

Rainwater capture is used onsite, and by early 2022, up to 70% of water used will be recycled back into the factory, which will reduce demand on the water table. *Mash Direct*

Heat recovery

Pump installed to existing refrigeration system, to generate enough hot water for the main processing facility, avoiding 643 tonnes of CO_2 per annum. *Finnebrogue*

Emission reduction

Improving genetics and optimising feed conversion rates of the beef herd, reducing methane emissions by up to 40%. *ABP Food Group and Dale Farm, Horizon Project*

Solar panels

Largest private solar farm in use in the dairy and food sector in Europe has been established, composed of 15,000 solar panels across 25 acres. *Dale Farm and CES Energy*

Emission reduction

Dietary manipulation used in Evolution pig feeds delivering reductions of up to 49% in ammonia emissions, 38% in slurry output and 25% in water usage in finishing pigs. *John Thompson and Sons*

[1] The five freedoms of animal welfare are: freedom from hunger and thirst, freedom from fear and distress, freedom to express normal behaviour, freedom from discomfort and freedom from pain, injury and distress.

4 Contribution to the PfG

Food and Drink plays an integral role in NI society, and produce is subject to stringent food safety checks and regulations

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Food and Drink plays a crucial role in attracting visitors to NI…

1st

NI named as the 'Best Food Destination' at the International Travel and Tourism Awards 2018

172

The number of NI food products which won a Great Taste international food award in 2020

One aim of the PfG is for people to desire to live in, work in, and visit NI. Food plays a crucial role in this regard, indeed it features in UNESCO's Cultural Heritage list. The region is widely regarded as a top destination for "foodies", with 8 Michelin status restaurants and an annual spend on Food and Drink by tourists in NI of £350m[1].

…while ensuring that high-quality produce is top of the agenda…

Ensuring that NI citizens enjoy long, healthy, active lives is another goal of the PfG. The Food and Drink industry in NI places the utmost importance on food safety and the quality assurance of its produce, and one such example of this is in the meat industry. The Northern Ireland Beef and Lamb Farm Quality Assurance Scheme (NIBL FQAS) is one of the longest running schemes of its type in the world. Over 99% of the prime beef farmed in NI comes from quality assured farms, of which there are over 12,000 members[2]. The FQAS scheme assures consumers about the quality of care for animals and the farm environment, and above all ensures that meat is wholesome, safe and free from unnatural substances. Stringent industry standards such as the British Retail Consortium Global Standards (BRCGS) and the Safe and Local Supplier Approval (SALSA) ensure that premium goods are provided to consumers in NI and further afield.

…and the NI Food and Drink sector is at the forefront of cutting edge research

NI animal feed producers are dedicated to improving the safety and security of animal feed and the food chain, and local businesses have collaborated to establish the Food Fortress network. Surveillance is conducted in feed manufacturers to detect the presence of heavy metals, dioxins and mycotoxins, which pose a threat to animal health and performance. The network is the first of its kind to share information with authorities, in order to reach the common goal of stability in the food chain. Food Fortress is the most advanced programme of its kind in the world, and has expanded its sampling programs into ROI and Great Britain.

The Institute for Global Food Security (IGFS) based in Queen's University Belfast was established to address the integrity of international food systems. It explores key challenges such as feeding the world's growing population, food fraud and climate change.

[1] Tourism NI *Food Tourism*
[2] Livestock and Meat Commission Northern Ireland

Appendix

Appendix

Economic impact methodology

Overview of approach – the economic impacts are considered at three levels

Direct

These consist of the direct economic activity generated by the operational and capital spending made by the Food and Drink industry, the number of direct employees, the wages they are paid and the Exchequer revenue this generates.

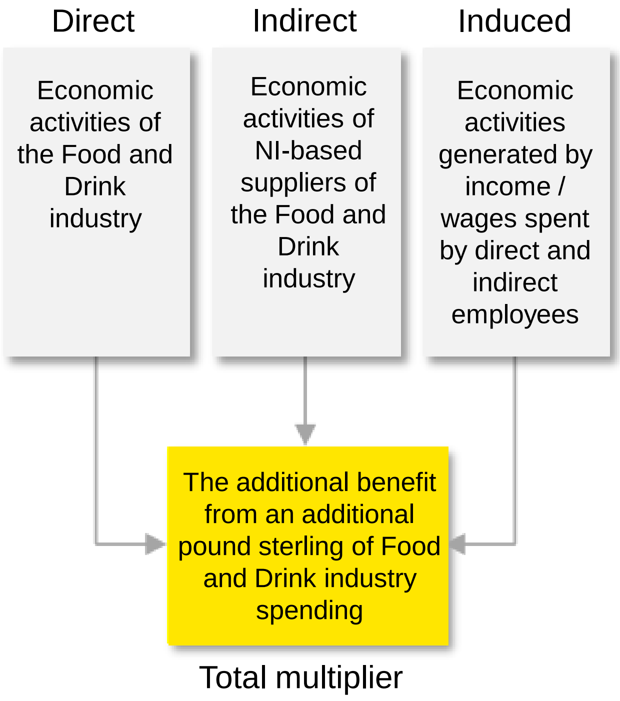
Indirect

These consist of the impacts of the purchases made by the Food and Drink industry, the people employed in these firms, the wages they earn and the Exchequer revenue they contribute. For example the purchase of NI-based machinery and professional services, back through the NI supply chain.

Induced

These impacts arise when those employed directly by the Food and Drink industry, those undertaking capital works and NI suppliers of the Food and Drink industry spend their wages in the wider economy. This creates demand for consumer goods and services, which generates further economic activity, employment, wages and Exchequer revenue.

Further details regarding double counting can be found overleaf.



Appendix

Indirect impact of the Food and Drink industry in NI (2020)

Avoiding double counting

When applying multipliers to evaluate a sectors impact care must be taken to avoid double counting. In the case of the Food and Drink sector the Food and Drink Manufacturing industry buys a significant amount of product from the Agriculture sector. If this were included in the indirect (supply chain) impact this would double count as it is also within the direct impact of the agriculture sector. For the sectors used in the definition of the Food and Drink sector, approximately 52% of their purchases are from within the sector itself. The GVA from within the sector is approximately 37% of supply chain GVA. In summary, of a total indirect impact of £2.9bn GVA, £1.9bn is purchased from outside of the sector (and used within this report).

Top 10 supply chain GVA (outside own sectors)	£ million
Wholesale trade services, except of motor vehicles and motorcycles	367
Rental and leasing and employment services	174
Land transport	121
Other professional, scientific and technical services and veterinary services	116
Financial and insurance services	102
Electricity transmission and distribution, gas distribution, steam and air conditioning distribution and supply	79
Construction	75
Rubber and plastic products	62
Water supply; sewerage and waste management	59
Wholesale and retail trade and repair services of motor vehicles and motorcycles	53
Other sectors	668
Total indirect	1,876
Total induced	767
Total supply chain effect	**2,643**

[1] NISRA *The Analytical Input-Output Tables* – 2016

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