Grant Thornton

An instinct for growth™

FDF Economic contribution and growth opportunities

June 2017

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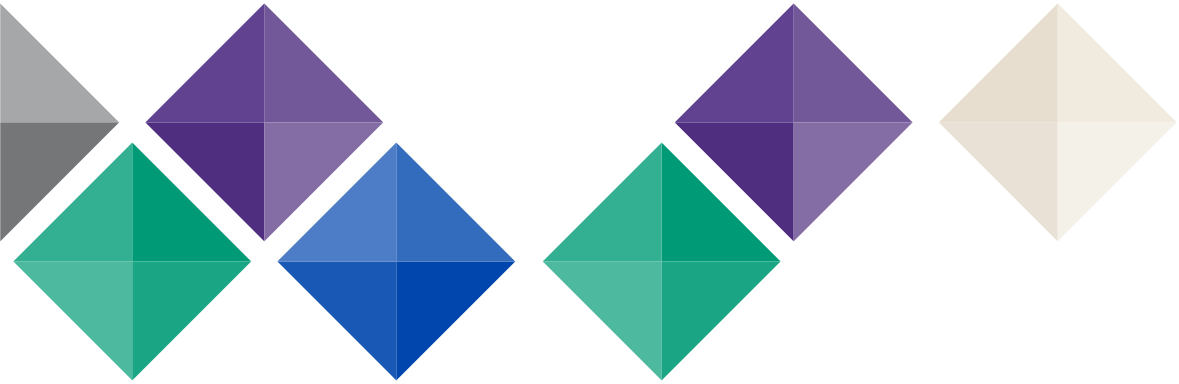


Foreword

Foreword

Gavin Darby, Chief Executive of Premier Foods and Food and Drink Federation President

The food and drink industry is the UK's largest manufacturing sector, contributing £28.2 billion to the economy annually and employing 400,000 people. We are a key part of the nation's £110 billion 'farm to fork' food chain.

Our industry is critical to national security and the prosperity of our wider economy. We have a well-earned global reputation for provenance, quality and innovation.

The challenges we face in the next few years are unparalleled. The market environment in which we operate remains uncertain. We are a resilient and adaptable industry - we know there are huge opportunities available to our sector so we can sell more great British food. Therefore, it is key that we identify how best to harness our own growth potential and improve productivity.

With this in mind, FDF commissioned Grant Thornton to undertake this independent research project identifying both the opportunities available to manufacturers and the barriers to growth. This was done through the collation of the latest quantitative data and by speaking at length with FDF members to add a qualitative perspective.

This research focuses on three core areas: innovation, trade and skills. All are framed against the backdrop of the UK leaving the European Union. The findings highlight the diversity of our industry, and in particular, how risks and opportunities can vary from business to business and across regions.

The findings also highlight the work we need to do to increase growth and how we can achieve this. The report makes a compelling case for Government to invest in the food and drink industry, identifying clear actions and areas of support. Our sector has long been a manufacturing success story but it is clear there is still much untapped growth potential.

In partnership with Government, the food and drink industry will seize upon these opportunities, maximising growth and boosting productivity. We believe the food and drink industry can be an engine for economic growth in the UK, while continuing to provide safe, innovative and nutritious food and drink to the nation.

Key findings

Key findings

Economic contribution

- The sector is hugely diverse both in terms of company size and the subsectors within it; ranging from the processing of fish to the manufacture of chocolate
- A large employer that covers the length and breadth of the UK and has the ability to create jobs that outstrips all other UK manufacturing sub-sectors
- Compared to the automotive sector, FDM has a greater geographic reach and a larger number of scale-up businesses
- A significant economic contributor with evidence of improving productivity

Skills

- A sector that combines national reach with local importance with a diverse range of skills and a strong reliance on migrant workers
- Very exposed to potential changes in immigration as a result of the EU Exit, whilst an ageing workforce means a loss of highly skilled workers over the next decade
- The sector is already struggling to fill a number of roles, especially those that are highly technical, as a result of the misperception of the sector
- Increased automation in the sector is leading to an upskilling of the existing workforce but there remains a disconnect between education and the industry to provide skills for the future
- The Apprenticeship Levy may provide a strong pipeline of experienced workers

Innovation

- There has been growth in the level of expenditure on R&D within the sector, this is in line with other industries
- When compared to other countries there is however more variation
- As with other parts of the industry, R&D occurs across Great Britain but there is a need to look beyond tax-credits if Government is to best support innovation in the industry
- The sector is constantly innovating and there is a willingness to work with others in relation to innovation, as seen through the number of pre-competitive initiatives

Trade

- The UK is not self-sufficient in food, running the largest trade deficit among comparator countries
- The UK has increased its reliance on imports with almost half of raw materials coming from abroad, a third of which are from the EU
- Lack of local supply and cost advantages drive FDM's international sourcing strategy
- The UK has maintained its market share of global food exports, albeit displaying slower growth than its competitors
- FDMs have accelerated exports although, for the majority, it is seen as a secondary priority
- Some industry members see opportunities in the EU Exit but for most it represents increased costs and lost opportunities

Introduction

Introduction

The security of food supply is of critical importance to the UK and it cuts to the very foundations of society. As such, the food and drink manufacturing (FDM) sector will always have an important role to play in society, the economy and policy. However, to simply view the FDM sector as one that underpins and facilitates others is a significant misrepresentation of the sector. It underplays both the current positive economic contribution that the sector makes and it ignores the potential it has to drive economic growth both now and over the next decade and beyond.

In order to realise these growth opportunities there are however, a number of significant external and internal factors that need to be worked through. These factors pose both risks and opportunities for the sector – with the potential for risk or opportunity often varying from business to business. Therefore, if the opportunities are to be maximised and the risks mitigated there is the need for clear action both by the sector itself but also by Government through the range of different policy, regulation and support levers that it is able to pull.

The purpose of this report is simple. It is to provide a robust evidence base to support the sector and Government in identifying these growth opportunities and the barriers that need to be navigated if they are to be realised; not just for the benefit of the sector but for the UK as a whole.

Structure of this report

This report looks at the range of evidence through four different lenses, each of which form a stand alone section:

- The economic contribution of the sector
- Skills
- Innovation
- Trade

In looking through each of these lenses the report focuses on the key findings that emerge through the evidence. Each section ends with a series of recommendations based on the evidence.

Before looking in detail at the evidence, the next chapter of the report sets out the approach that was taken to constructing the evidence base.

Approach

Methodology

Primary and secondary research approach

This report has been prepared based on extensive primary research supported by secondary research to build a robust picture of the FDM industry in the UK. The methodology comprised three strand an **Online Survey, Semi-structured interviews with industry leaders and Desk Based Research and Data Analysis.**

- Following consultations with FDF, Grant Thornton developed a questionnaire that was sent out to members of the UK FDM industry via an online survey. The questions asked were directly linked to skills, innovation and trade
- The survey was addressed primarily to executives and other senior members of FDM (SME's and Corporates) in the UK. The survey was sent out to
  - FDF members;
  - The Regional Food Group Alliance members; and
  - Grant Thornton's FDM contacts
- The online survey ran from March to May 2017
- Parallel to the survey, Grant Thornton conducted 17 semi-structured telephone interviews with executives and senior staff of UK FDM businesses. The interviews were designed to gain in-depth views around some of the topics addressed by the survey questionnaire and included some additional questions
- The study was also supported by detailed desktop research and analysis drawing on a broad range of national statistics
- There were some limitations in relation to the desktop research. Wherever food and soft drinks specific data was not available, it was substituted for food, beverage and tobacco data. However, wherever this is the case, it has been clearly indicated
- The key findings from the analysis were presented, discussed and tested with various FDM businesses and senior members of the FDF team

Survey Population

Survey population

The survey and interview sample represents 11% of the FDM sector (including alcohol manufacturers) by turnover value.

In terms of subsector representation in the survey, the largest subsector by response was the manufacture of Other food products (42.7%) within which the largest subsector was tea and coffee, followed by sugars and syrups, chocolates and herbs seasoning and spices.

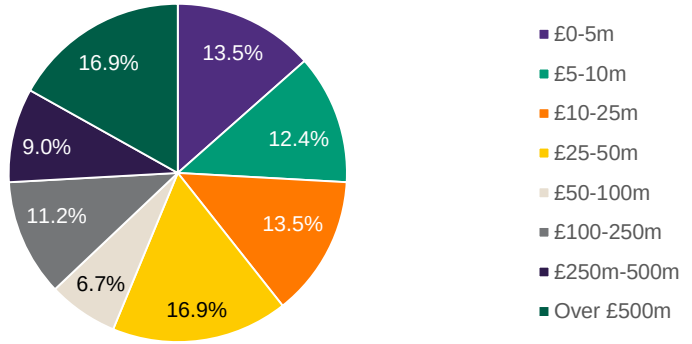
Outside of the Other food products subsector the largest number of responses came from the Bakery subsector (11.2%), followed by Grain and starch products, Fruit and vegetables and Meat and meat products, all of which had 7.9% of responses.

With regards to company size, the survey captures a broad mix of companies within FDM (see graphs opposite).

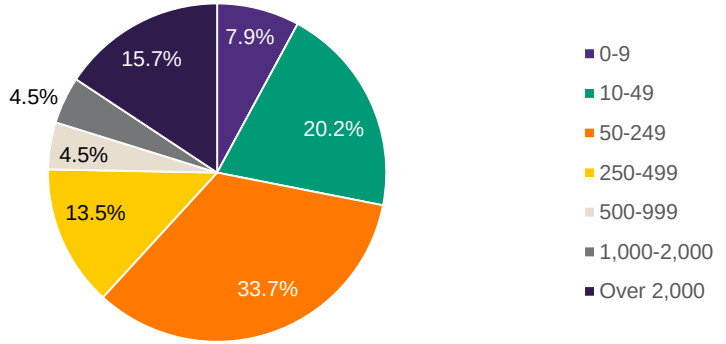
Just over half of the companies surveyed (56.3%) can be classed as SMEs, with an annual turnover of up to £50 million.

Survey respondents by size

Turnover



Number of employees



Notes: Based on 89 respondents
Source: Grant Thornton survey

Economic contribution of the sector

Chapter introduction

This chapter looks at the economic contribution of the food and drink manufacturing sector, looking at the size and diversity of the sector, from a financial, economic and geographic perspective, as well as highlighting its strengths against other UK manufacturing sectors.

A growing sector comprising both large and small businesses

The Business Base

In 2017 there were just over 6,815 active food and drink manufacturing (FDM) companies in the UK. Nine in ten (96%) of these businesses were small and medium sized enterprises. This was a smaller proportion than UK business base (99%). This highlights the important role played by both smaller and larger businesses in the FDM sector.

Between 2010 and 2015, both the small and medium sized enterprises and larger businesses experienced growth in turnover. Although the information available for small and medium sized enterprises is limited because of their size and filing regulations, the data available showed a 15% increase in turnover over this five-year period and a 28% increase in profit before tax. Meanwhile the larger businesses experienced a 29% increase in turnover and a 9% increase in profits before tax, over the same period. Taking the sector as a whole this equates to 28% turnover growth and 10% growth in profits.

Source: Business population estimates, 2016

Size of FDF manufacturers

Source: Business Population Estimates, 2016, Food and Beverage manufacturers

Change in turnover of FDM companies 2010 - 2015

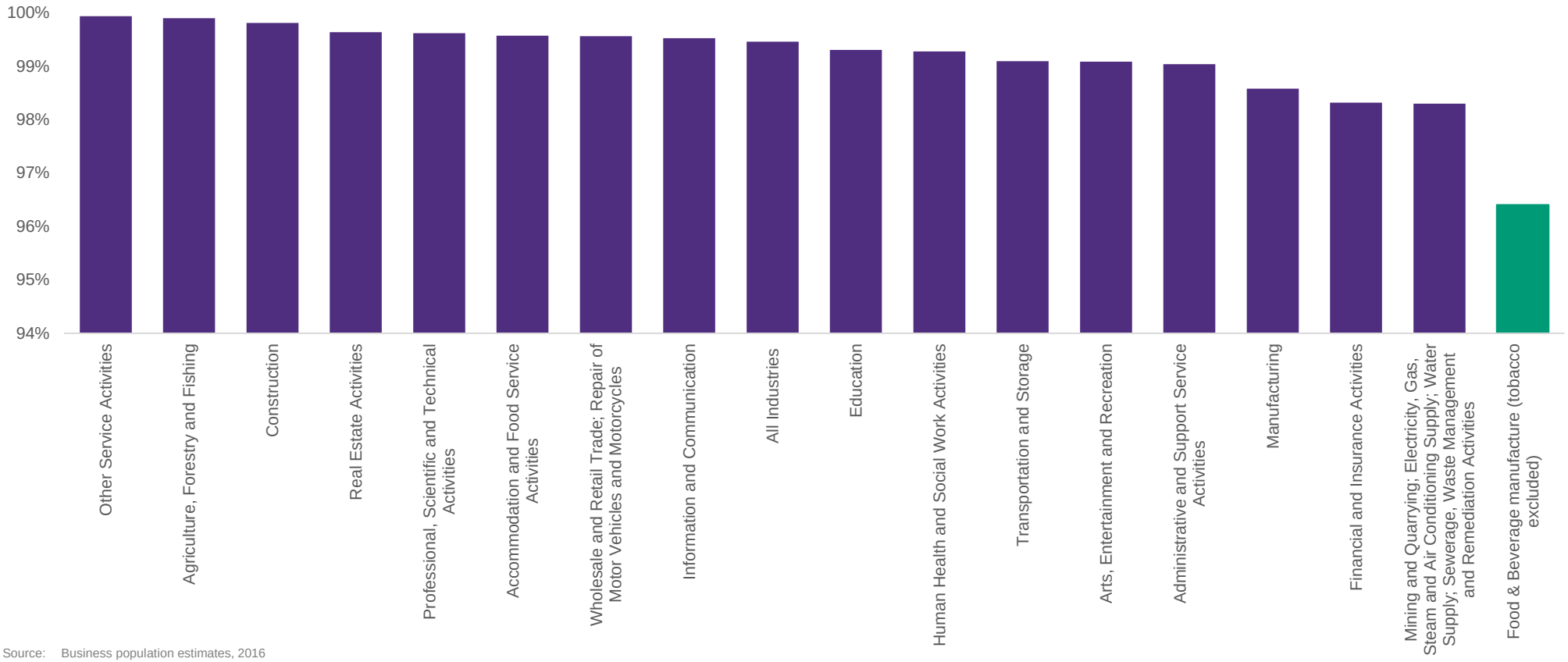
	2010 £,000	2015 £,000	YoY change between 2010 and 2015
SMEs	10,028,554	11,572,770	15%
Large Corporate	118,490,247	153,189,735	29%
Total	**128,518,801**	**164,762,505**	**28%**

Notes: Approximately 300 companies which had turnover figures available in 2015 did not have figures available for 2010, which could lead to lower figures for 2010 due to lack of data. Tobacco excluded.
Source: Grant Thornton analysis using BVD Fame, based on 1,649 companies with annual accounts available

A growing sector comprising both large and small businesses

The Business Base

% of all businesses which are SMEs (between 1-249 employees)



Source: Business population estimates, 2016

A diverse sector

The Business Base

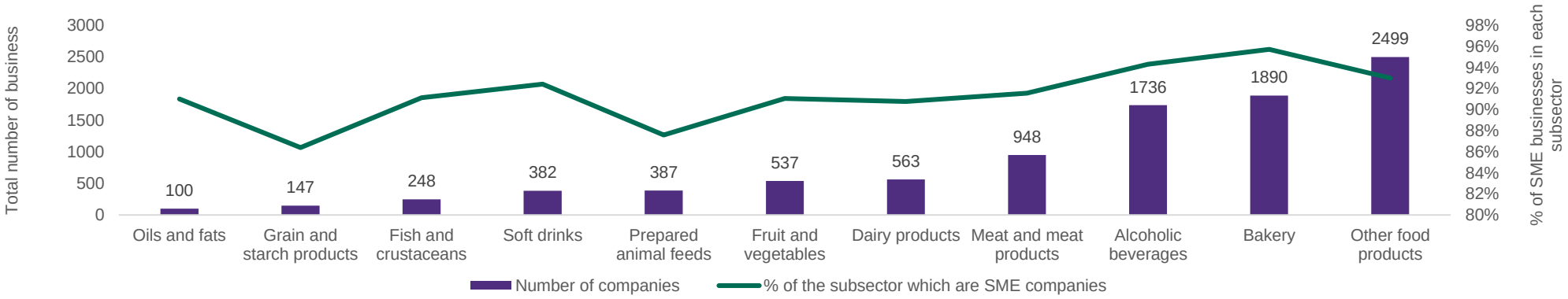
Looking within the sector it is instantly apparent how diverse it is, with businesses ranging from the processing of fish to the manufacture of chocolate. However, despite its diversity the sector plays a vital role in not only creating a link between raw products and the end consumer but also as a world leading sector, renowned for its high quality products, procedures and safety standards.

The largest number of companies in the FDM sector are classified as Other food products - which by definition includes the manufacture of sugar, cocoa, chocolate and sugar confectionery, processing of tea and coffee, manufacture of condiments and seasonings, manufacture of prepared meals and dishes, manufacture of homogenised food preparations and dietetic food - (2,499 companies), followed by Bakery (1,890) and then Alcoholic beverages (1,736). Together these three sub-sectors accounts for 68% of all businesses in the sector.

Across the sub-sectors the proportion of small and medium sized enterprise does vary quite significantly from 86.4% in Grain and starch products to Bakery with 95.7% .

The largest sub-sector by turnover is Other food products with 26%. Meat and meat products (15%), followed by Alcoholic beverages (14%) At the other end of the spectrum Bakery contributes less overall turnover compared to the number of businesses.

Proportion of SME businesses by FDF subsector



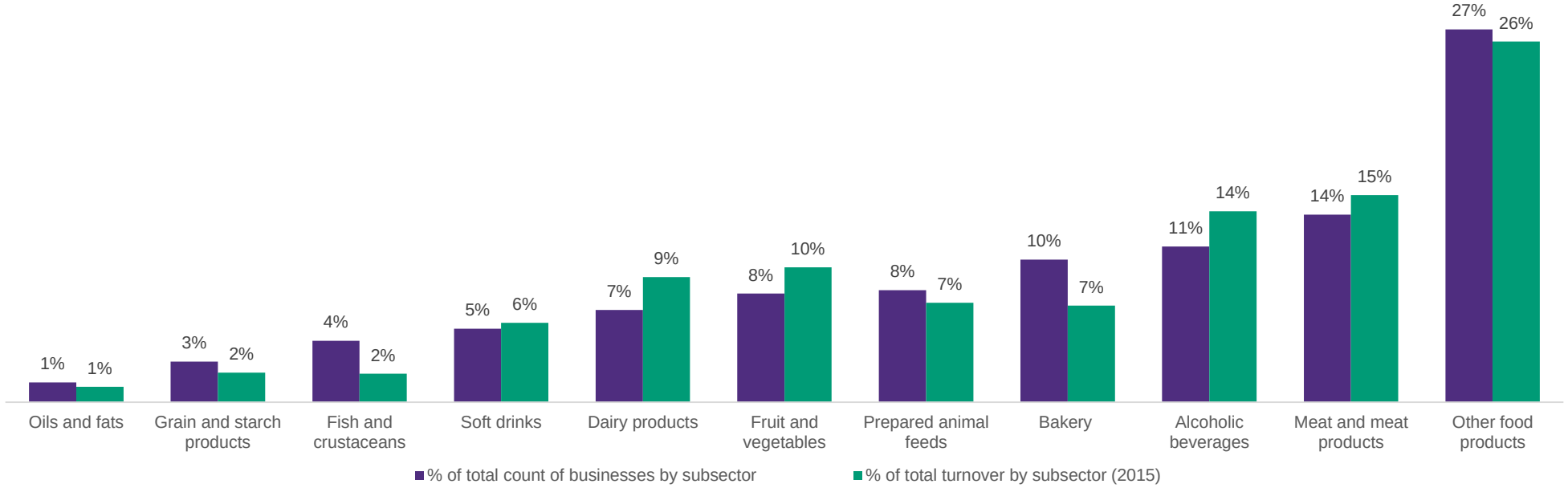
Source: Grant Thornton analysis using BVD Fame

A diverse sector

Turnover and profitability

Looking at turnover and profitability over time at the sub-sector level also provides some valuable insight. In terms of Alcoholic beverages there has been a continual reduction in turnover year on year between 2013, 2014 and 2015. However, over this same period profit has actually increased year on year. A different picture emerges for Other food products with turnover remaining relatively stable but profits falling.

Percentage of businesses and turnover by subsector

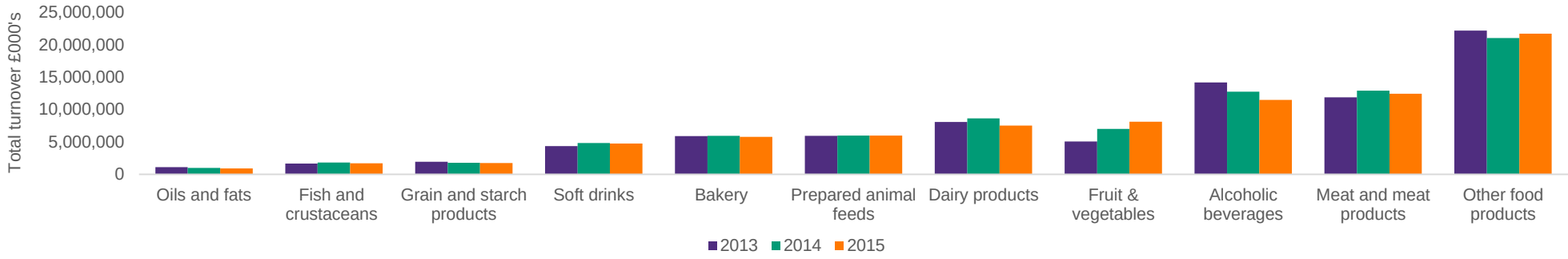


Source: Grant Thornton analysis using BVD Fame

A diverse sector

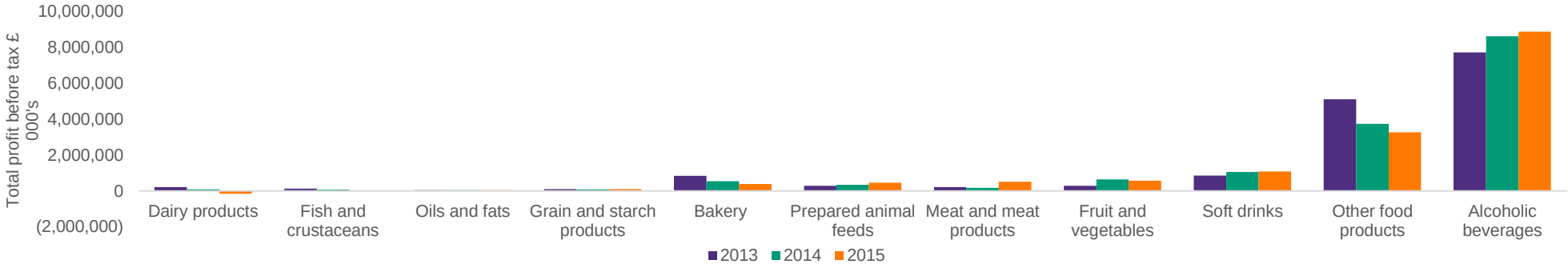
Turnover and profitability

Turnover by subsector



Source: Grant Thornton analysis using BVD Fame data

Profit by subsector



Source: Grant Thornton analysis of companies filing full annual accounts using BVD Fame data (1,500 companies)

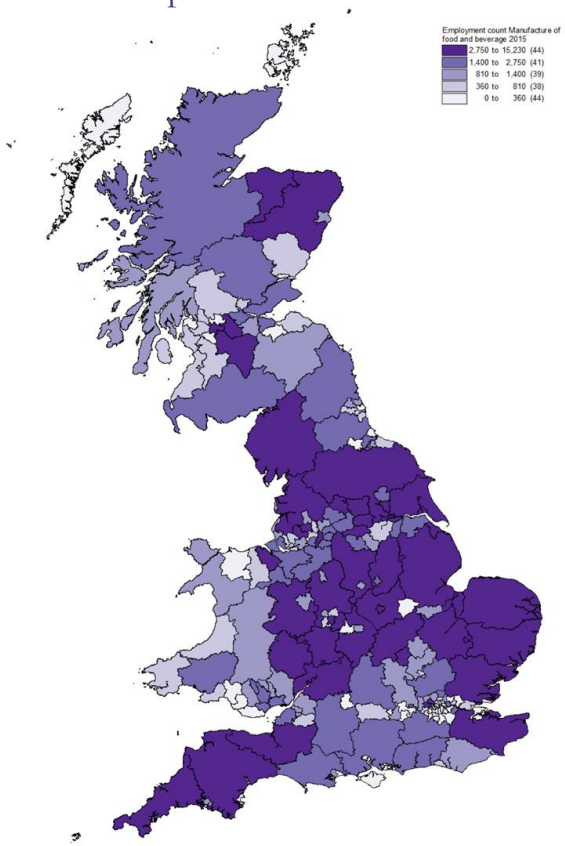
A large employer

Employment

Alongside turnover and profit another important aspect to consider is the numbers employed by the sector. In 2015, the sector employed 392,750 people. The largest employment sub-sector was the Bakery (24.9%), followed by the Other food products (22.6%) and Meat and meat products' (19%).

In terms of growth in employee numbers, between 2010 and 2015, the FDM sector is outperforming other manufactures and keeping pace with national employee growth figures. As a benchmark, the average growth in employee numbers across all FDM subsectors between 2010 and 2015 was 6%. For all manufacturing sector this figure is only 1% and across all sectors the figure is 7%.

FDM employment heatmap



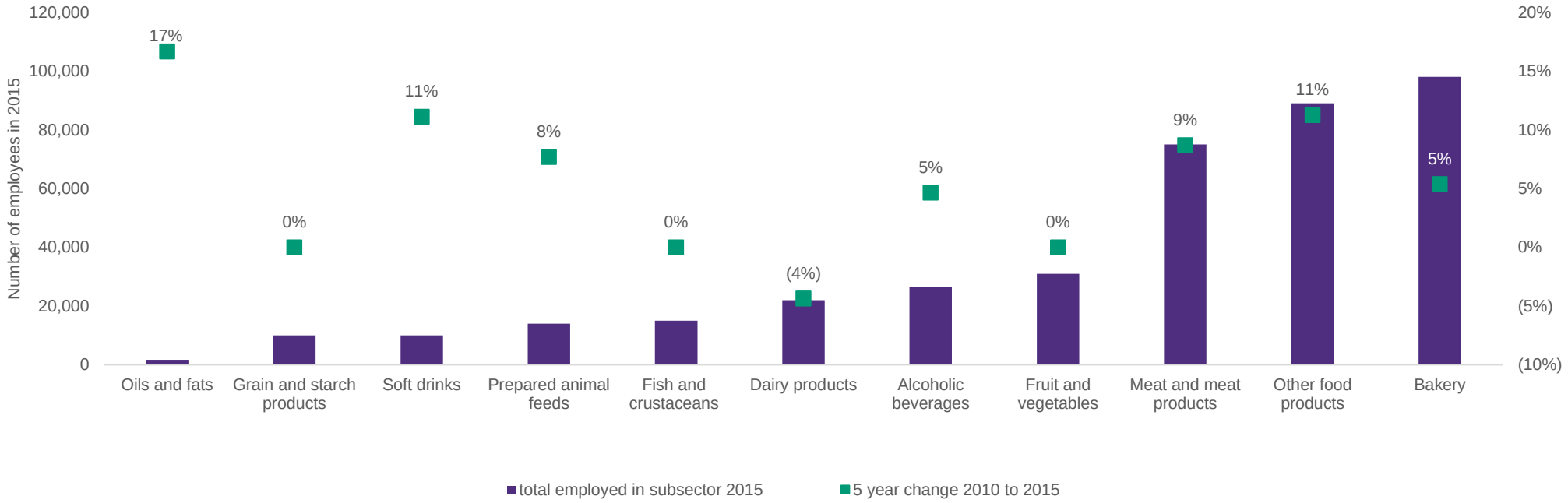
Notes: Northern Ireland data not available
Source: Grant Thornton Place Analytics

A sector that is creating jobs

Employment

Within this overall context, there is variation between the FDM sub-sectors. For example, the largest growth, between 2010 and 2015, has been in the smallest employment sector: the 'manufacture oils and fat' (16.7%). Although given the small base, this can largely be considered as an outlier. In terms of the three largest employment sectors, Bakery saw employee growth of 5.4%, Other food products saw growth of 11.3% and Meat and meat products saw growth of 8.7%.

5 year changes of employee numbers by subsector



Source: BRES data from ONS (N Ireland data not included)

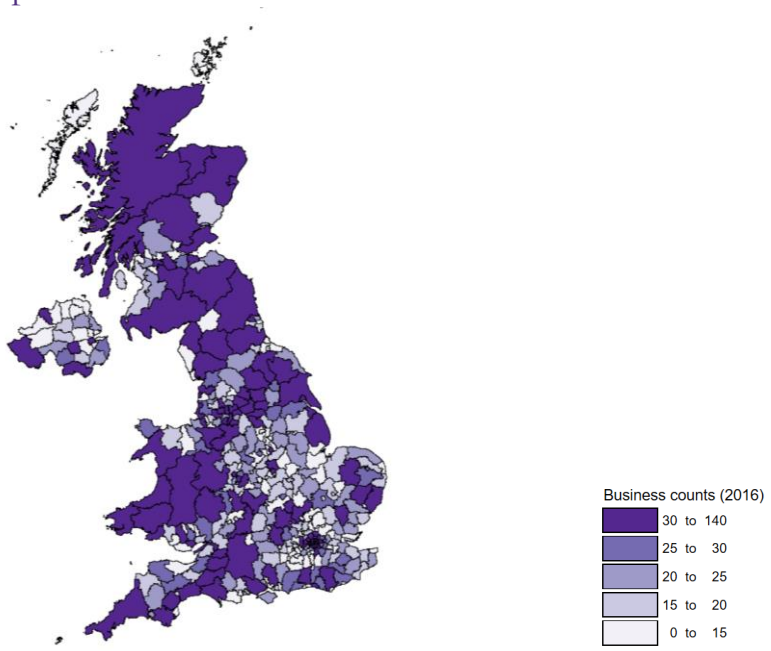
A sector that creates businesses and jobs across the United Kingdom

Geographic spread

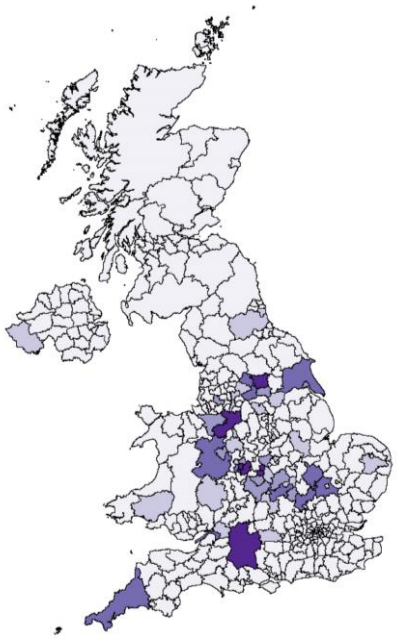
One of the FDM sector's defining characteristics is its national presence. Unlike many other manufacturing industries – such as automotive where a strong regional bias can be seen – the FDM sector spans the length and breadth of the UK. Consequently, the sector plays a crucial role at both a local, sub-regional and national level in terms of skills, employment and economic contribution.

In general, employment in the sector mirrors the geographic location of FDM businesses with high levels of employment found throughout the country.

FDM business heat map



Automotive business heat map



Source: Grant Thornton Place Analytics

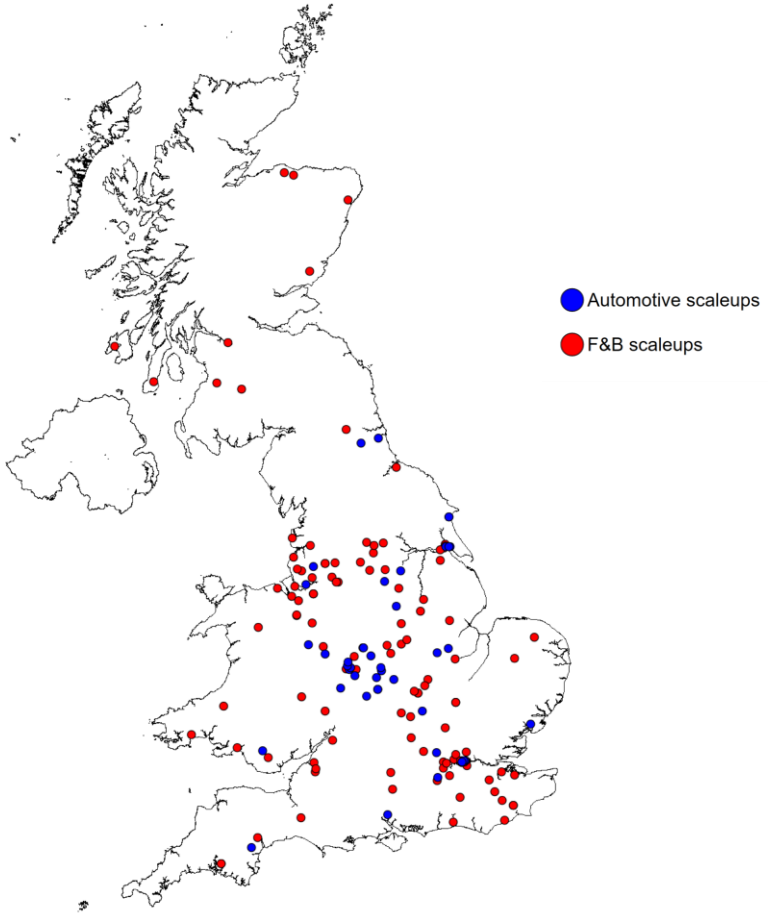
With a number of scale-up businesses

Geographic spread

The value of the national strength of the sector is further underlined when looking at the presence of 'scale-up' businesses within the sector. Scale-up businesses are those that have experienced significant levels of growth. These businesses are increasingly being viewed by policy makers as key in driving economic growth and prosperity in the UK. The FDM sector has 146 scale up businesses against 54 in the automotive sector. These are businesses that meet the scale up definition of:

- Over 3 years old
- More than 10 employees at start up
- And growth rate of 20% year on year from either turnover or employees

These businesses are spread across the UK with businesses located in every region and do not just locate in cities – as is the case with other sectors.



Source: Scale Up Institute

A significant economic contributor with particular strengths in certain regions

Economic contribution – GVA

There are two key measures of GVA, both of which show the sector in a favourable light.

The first, GVA(I), places the sector against its manufacturing peers and shows that the food and beverage sector (including tobacco) accounts for 16% of UK manufacturing GVA. This makes it the largest manufacturing sub-sector in terms of GVA contribution. By comparison transport equipment contributes 14% and metals contributes 12%. In national terms it is the 14th largest sector, contributing 1.6% to total UK GVA.

Between 1997 and 2015 the sector's GVA grew by 27% making it the fourth fastest growing UK manufacturing sector by GVA over that time period, ahead of total manufacturing growth of 13% over the same period.

The second GVA measure, aGVA, places the GVA contribution at a slightly higher level of £28.2 billion, but allows for a greater drilldown of food and drink subsectors. This shows that within the sector, the biggest contributor by sub-sector to GVA[a] is Other food products (21%), followed by Bakery (14.3%) and Meat and meat products (12.6%). Together, these top three sub-sectors accounted for nearly 50% of food and beverage GVA in the UK in 2015.

Looking at GVA contribution on a regional basis, Scotland, East Midlands and Yorkshire and the Humber and the North West account for nearly 50% of all food and beverage GVA. In the past 20 years the sector has experienced some regional rebalancing with a notable increase in the number of companies in Scotland, the East Midlands and Wales and a decline in the West Midlands, South East, North West and, despite its obvious strengths in the sector, Yorkshire.

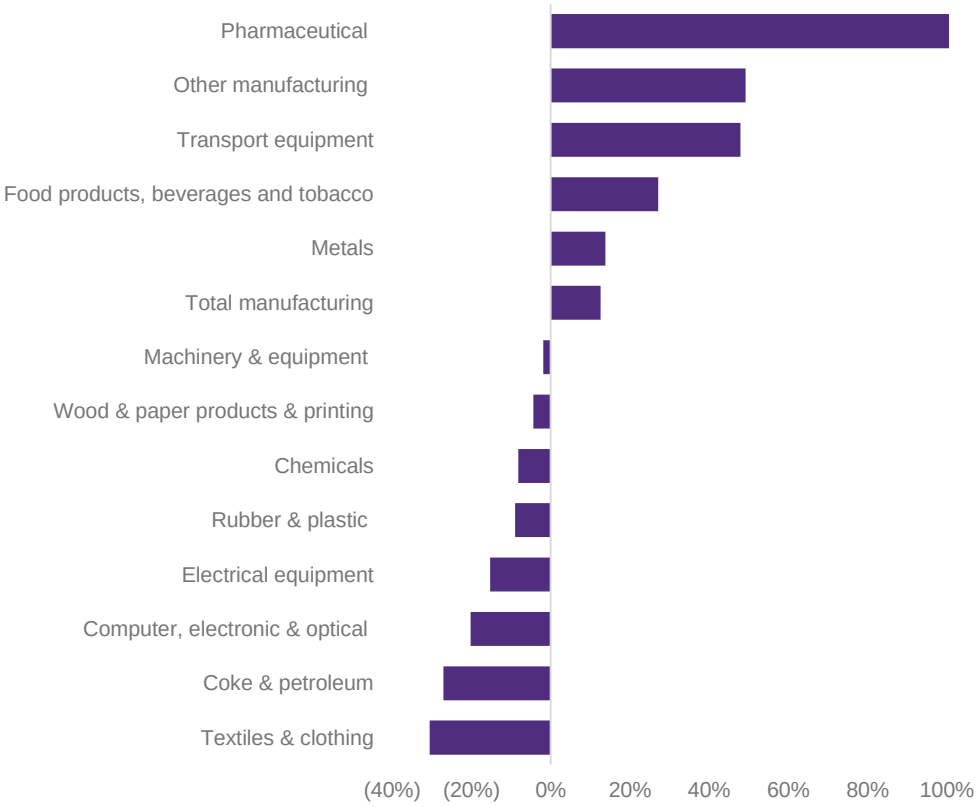
Sector	Ranking for 2015 by contribution overall UK GDP	GVA £m 2015[b]	% contribution to overall UK GVA (total =£1,666,342m)
Food products, beverages and tobacco	1	26,109	1.57%
Transport equipment	2	23,546	1.41%
Basic metals and metal products	3	19,729	1.18%
Other manufacturing and repair	4	15,791	0.95%
Basic pharmaceutical products and preparations	5	12,716	0.76%
Rubber and plastic products	6	11,995	0.72%
Wood and paper products and printing	7	11,401	0.68%
Machinery and equipment not elsewhere classified	8	10,882	0.65%
Chemicals and chemical products	9	10,004	0.60%
Computer, electronic and optical products	10	8,569	0.51%
Textiles, wearing apparel and leather products	11	5,875	0.35%
Electrical equipment	12	4,643	0.28%
Coke and refined petroleum products	13	1,569	0.09%

Notes: a. Subsector GVA derived from Annual Business Survey aGVA
b. Sector GVA derived from GVA(I)

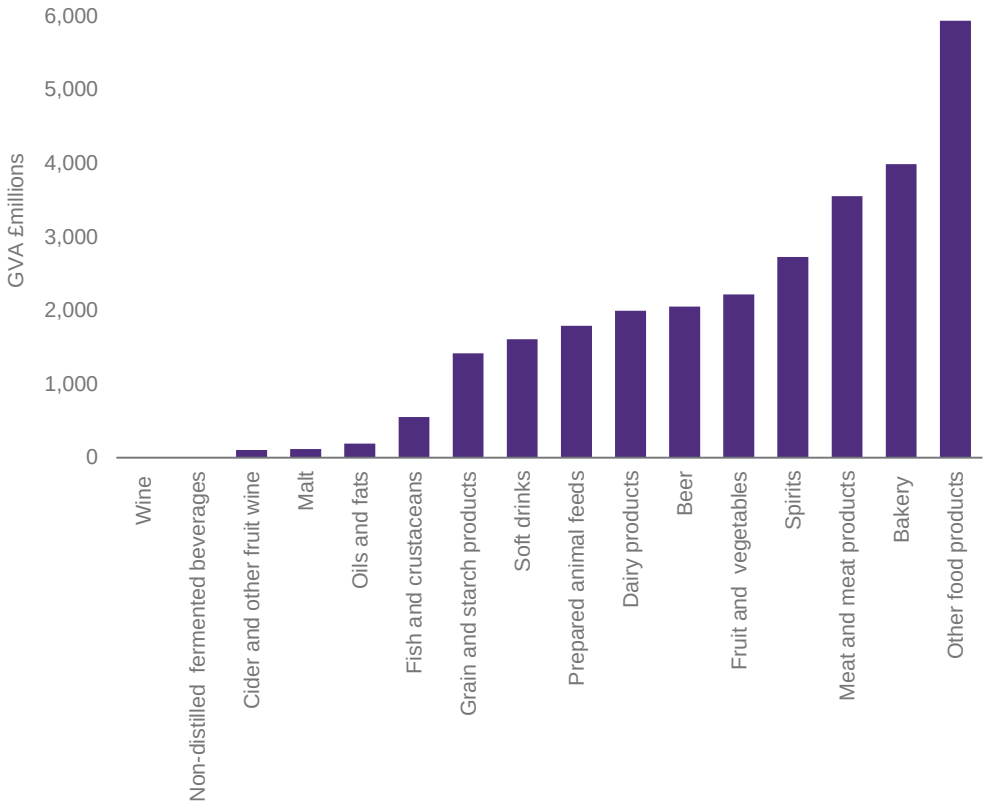
A significant economic contributor…

Economic contribution – GVA

Growth in GVA 1997-2015



GVA by subsector 2015

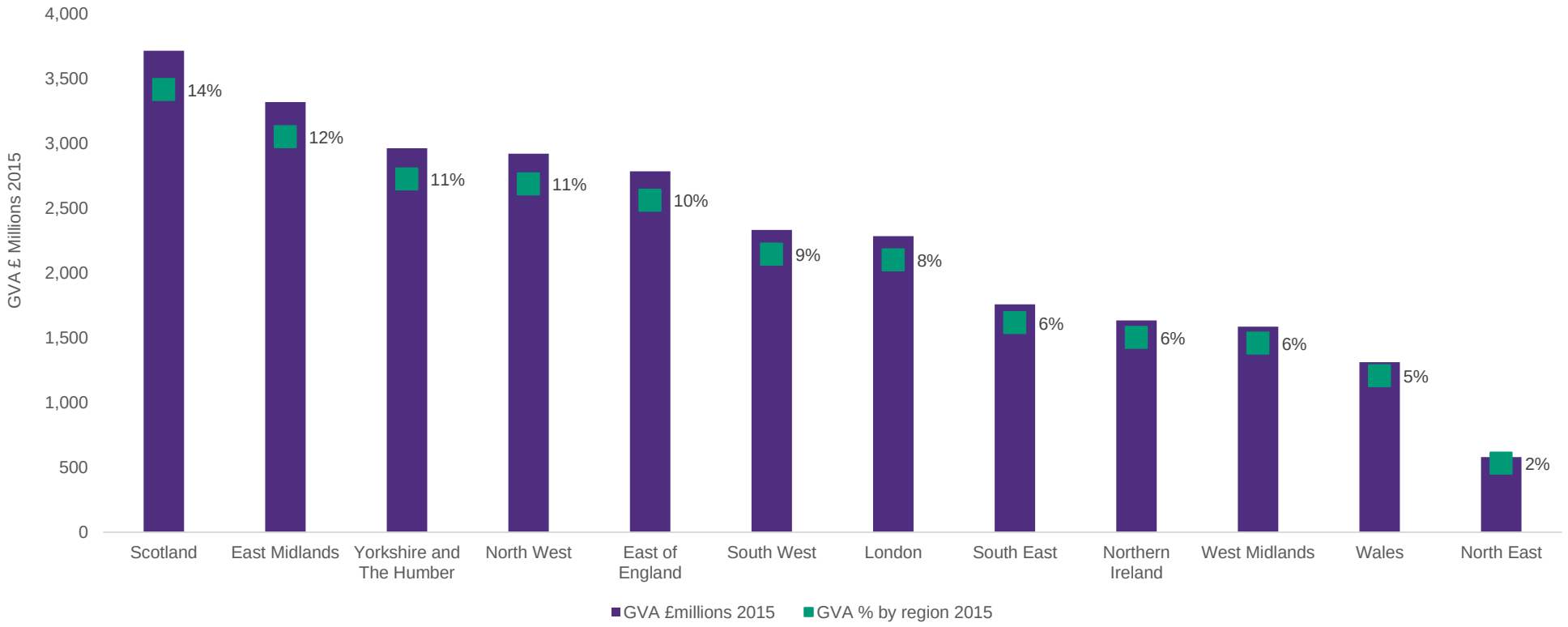


Source: Annual Business Survey 2015, ONS

…Across the United Kingdom

Economic contribution – GVA

Total Food & Beverage GVA contribution by region (2015)

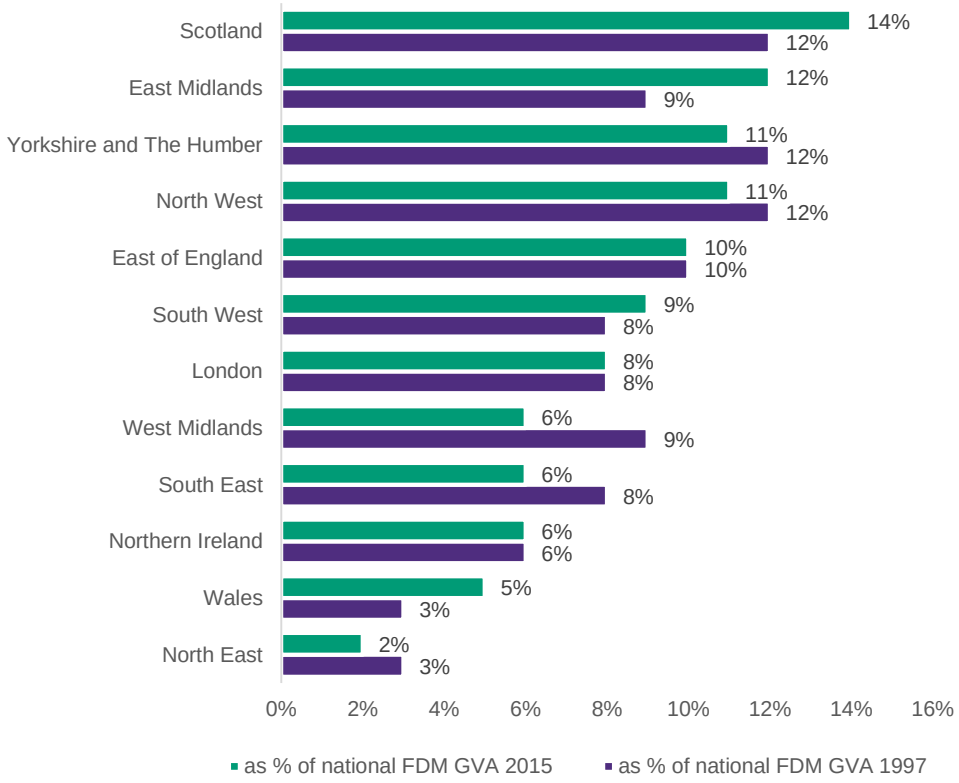


Source: Regional GVA (income approach), ONS

…Across the United Kingdom

Economic contribution – GVA

GVA change 1997 – 2015 by region



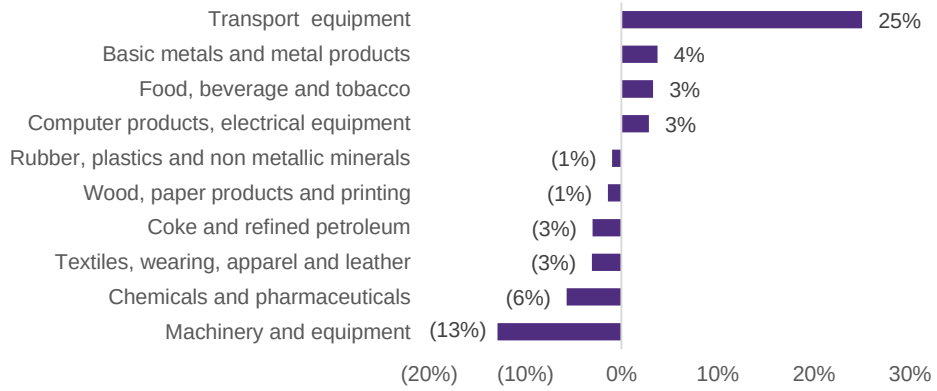
Source: Regional gross value added (income approach) reference tables, ONS, December 2016

With evidence of improving productivity

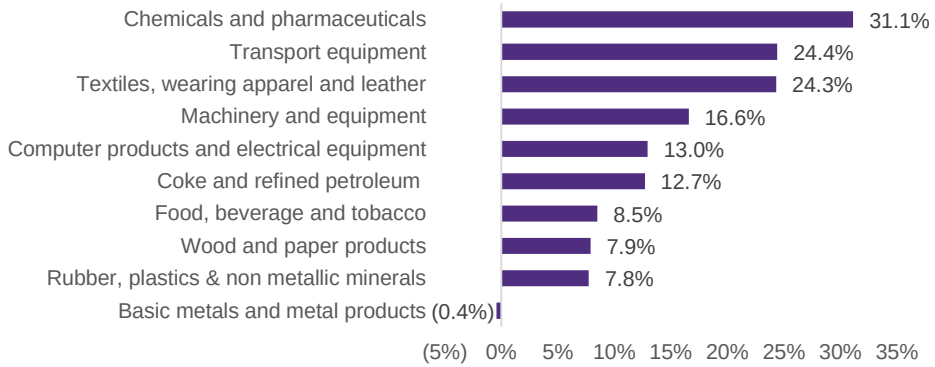
Economic contribution – productivity

Productivity (GVA per job) in the sector between 2010-15 was positive with 3% growth. Though the Transport Equipment sector reported growth of 25% over the same period, likely a result of high levels of automation. The Food, Beverage and Tobacco sector is one of only four sectors to record positive productivity growth over that time period. Although this is a decline on the previous five years, where the sector saw productivity growth of 8.5%. It is however one of only two sectors to have shown consistent GVA growth over the past decade. The other sector to do so, is the Transport equipment sector.

% change between 2010 and 2015



% change between 2005 and 2010



Source: ONS Labour Productivity, Q3 2016

Although this varies across the sector

In an industry as varied as FDM it is perhaps not surprising that productivity throughout FDM is mixed, with measures varying between subsectors, as well as between different categories within the same company.

When asked if they measure productivity in their company, 75.6% of survey respondents said that they did measure productivity. The most popular measure of productivity is output per hour (55.2% of respondents) , followed by GVA per employee (20.7%). Other measures provided by respondents included cost per unit of production and ingredient yield, labour cost per tonne produced and value of bottles per hour.

Highlighting the industry's competitive nature, 50% of survey respondents said that they benchmarked their productivity against other UK FDMs in their subsector.

The majority (92.9%) of respondents who answered the question of whether their company had made productivity gains in the past three years said that they had. The biggest driver of productivity was capital investment (40%), followed by training your employees (20%).

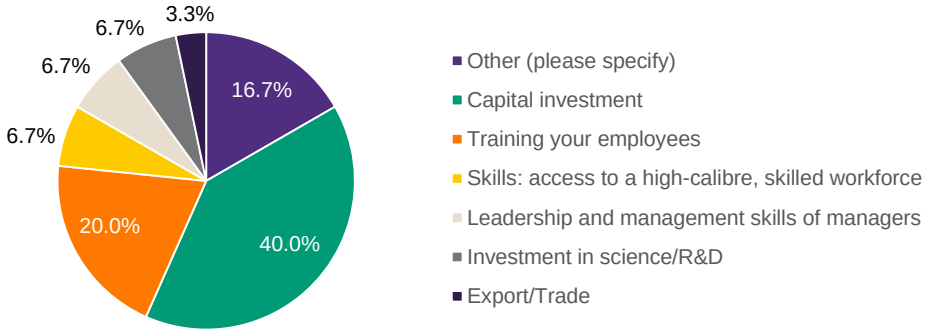
Evidence from the series of interviews held with industry leaders gave further insight into these productivity gains. Many highlighted how investment in new machinery had helped with productivity gains, though one noted that the level of capital investment needed could also be considered a barrier to productivity. Not only is the machinery required very specialist, there are also a limited number of suppliers and, more often than not, the machinery is sourced from other European countries such as Spain and Italy.

Several industry leaders also commented on how the changing nature of manufacturing, with increased levels of mechanisation and automation, had affected the workforce. This was especially true of companies with a heavy reliance on agricultural crops, many of which have reduced manufacturing lines from 80 people down to a handful operating the machinery. This sectoral shift has also resulted in the upskilling of the workforce.

Who do you benchmark your productivity against?

Notes: Based on 28 responses
Source: Grant Thornton survey

What are the key drivers of productivity in your company?



Notes: Based on 28 responses
Source: Grant Thornton survey

Chapter conclusion

This section of the report has presented a range of evidence around the positive economic contribution that the sector has made. In order to better understand how strong the levers and opportunities are for companies in the sector, the remainder of this report will look in detail at three key drivers: skills, innovation and trade.

Skills

Chapter introduction

The FDM sector is often characterised as being low-skilled and, consequently, low in pay but the reality is very different. There is a broad range of opportunities available to build a career within the sector and, unlike other manufacturing industries, these careers are not focused on a particular geographic area but can be found the length and breadth of the country.

Nevertheless, the sector does face considerable challenges. An ageing workforce, coupled with the, as yet unknown, implications for the EU Exit and the impact it may have on EU nationals working in the sector, alongside the increased use of automation and robotics mean employment and skill levels in the sector are in a state of flux.

A sector that combines national reach with local importance

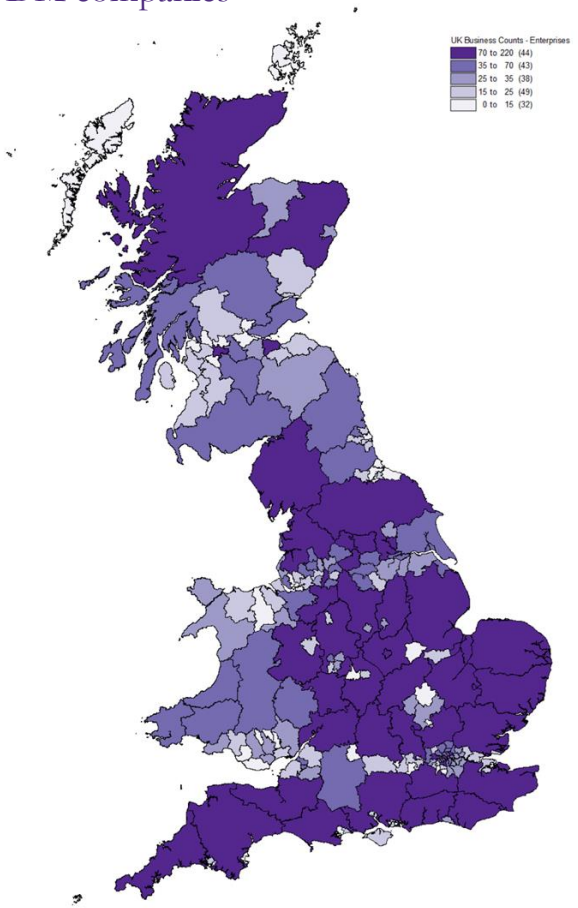
Geographic spread

As noted in the previous chapter, with 392,750 employees in the sector in 2015 and businesses running the length and breadth of the country, the UK FDM sector plays a significant role in providing employment opportunities across the country.

Employment in the sector is varied, with different subsectors requiring different skill sets, however the mix of skills needed within the sector range from low skilled to vey high level, niche roles.

In a series of interviews with industry leaders in the sector it became clear that though it is an internationally facing sector whose prosperity has a very real impact upon the UK as a whole, some of its biggest impacts will be at a local level. The presence of having an FDM company locally can have a hugely beneficial impact on local community whether that is purely through employment opportunities or companies becoming involved with local education and community initiatives.

Heat map of FDM companies



Source: Grant Thornton Place Analytics

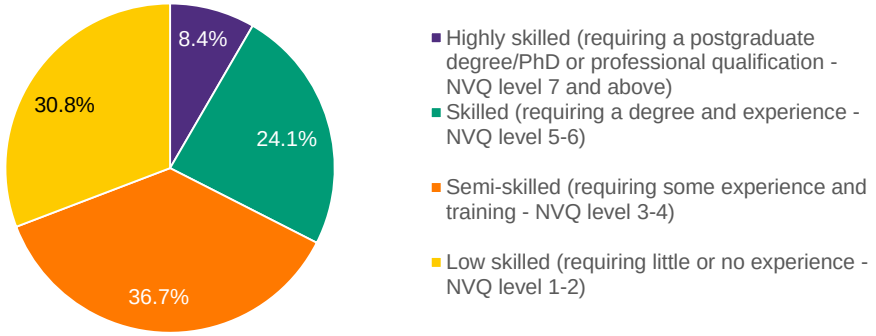
Has a diverse range of skills

Workforce composition – skills

The subsector with the highest number of employees is Bakery, with around 100,000 employees. This subsector, combined with the Other food products and Meat and meat products account for two thirds of employees within the sector.

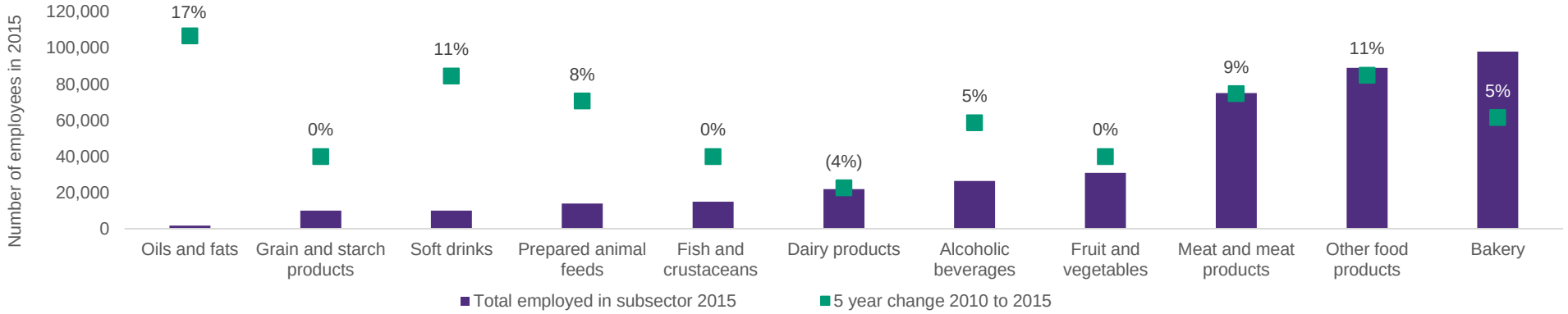
Results from the Grant Thornton survey found that in terms of employees, there is a fairly even mix of skills across the workforce. Just under a third (30.8%) of employees are low skilled (requiring little or no experience) and just over a third (36.7%) are semi-skilled (requiring some experience and training) end of the spectrum. The remaining third of employees are in the skilled (requiring a degree and experience) or highly skilled (requiring a postgraduate degree/PhD or professional qualification).

What proportion of your UK workforce is classified as: Highly Skilled, Skilled, Semi-Skilled, Low Skilled



Notes: Based on 49 respondents
Source: Grant Thornton survey

5 year changes employee numbers by subsector



Source: BRES data from ONS (Nomis) N. Ireland data not included

Strong reliance on migrant workers

Workforce composition – skill level by nationality

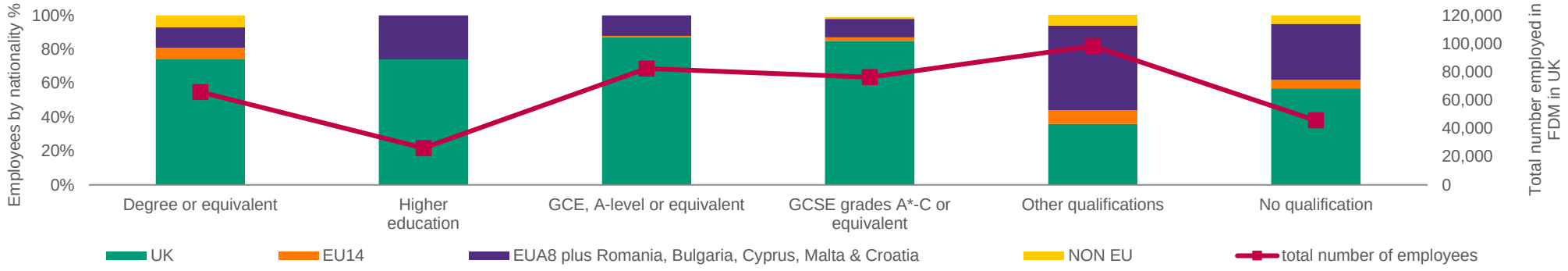
Using education levels as a proxy for skill levels within the FDM sector it is possible to better understand more about the composition of the workforce. From this analysis, several things are clear. The first is that the workforce is diverse, not only across skill level but also by nationality, in fact, migrant workers make up 38% of total employment in the FDM sector, 2.5 times the rate across the wider economy.

The second is that the common perception that migrant workers in the sector are unskilled, is false. Though EU workers make up 38% of employees in roles which require no qualifications, there is a significant proportion of workers who have different qualifications, such as an International Baccalaureate, working in the sector. Looking at the other end of the spectrum, around 19% of those working in higher skilled jobs (with a higher education or degree) are from the EU.

Interviews with industry leaders in the sector underlined this polarity with one saying: "We don't need skilled labour. The most important thing is a desire to work, not to be fluent in English with a degree" whilst another said: " In the UK we have an R&D facility staffed by 12 people… of the 12, six have come from Spain". What is clear from this is that the sector is hugely exposed in the event of an EU Exit negotiation that limits the rights of EU workers currently in the UK, or restricts the free movement of people. These employees are educated, capable and, as one industry leader noted, increasingly long serving: "We employ a lot of Polish workers and many of them have service of ten years or more these days."

The other key point to note in relation to this graph is that UK workers within the sector are largely within the semi-skilled centre of the workforce. For reasons that this chapter will go on to explain, this will also have potential repercussions for the future of the workforce and UK's ability to provide home-grown talent.

Skill level in FDM by nationality



Source: Annual Population Survey, ONS, ad hoc report

EU Exit has potentially significant implications

Implications of the EU Exit

Responses to the Grant Thornton survey found that the mean percentage of UK nationals within the FDM workforce was 79.3%, with 16.3% EEA nationals (EU plus Iceland, Liechtenstein and Norway) and 2.3% non-EEA nationals. However, statistics from DEFRA suggest there is a much greater proportion of EU workers in the sector that the survey responses suggest, with EU27 workers making up 29% of the FDM workforce in 2015.

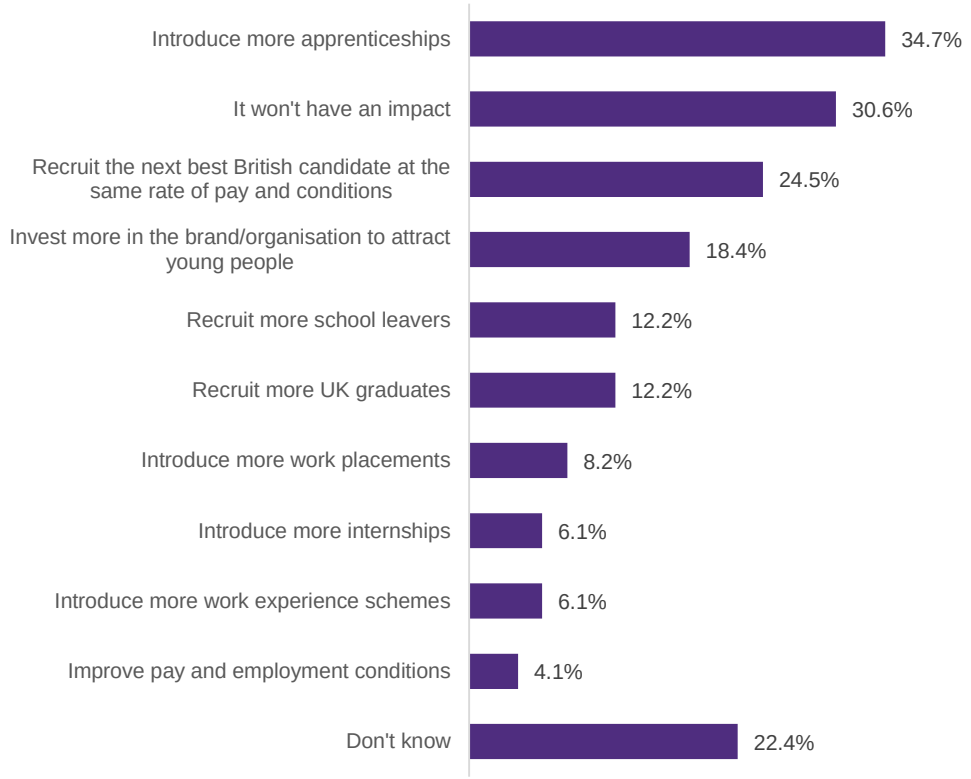
For several companies, though they felt they weren't directly exposed to the impact the EU Exit might have on the availability of migrant workers in the sector, they did raise concerns around their supply chain being impacted, especially if they are heavily reliant on the agricultural sector.

Despite the potentially significant implications EU Exit negotiations could have on the sector only 18.4% of respondents had made workforce projections in the context of the EU Exit, whilst 81.6% had not, with several citing the need for greater clarity around the implications of the EU before making any decisions.

When asked for their thoughts on what the company might do to plan for the impact of the EU Exit on their workforce: 34.7% of survey respondents thought that they would introduce more apprenticeships to futureproof the workforce; 30.6% said that the EU Exit would not have an impact; and 24.5% said that they would seek to recruit the next best British candidate at the same rate of pay and conditions. The solutions that proved least attractive were improving pay and employment conditions (4.1%) and introducing more work experience or internships (6.1% respectively). Respondents were also asked to provide comments on other solutions if none of the options provided were applicable. The most popular responses to this were that they were waiting for greater clarity in relation to the EU Exit and that increased automation would lessen the need for additional recruitment.

Together these findings suggest that the industry is not yet sufficiently prepared. There is a need to ensure that further clarity emerges so that the industry is best placed to respond depending on the direction the EU Exit negotiations take.

How does your company plan to respond to potential changes/restrictions to EU immigration policy?



Notes: Based on 49 responses
Source: Grant Thornton Survey

Some parts of the sector more exposed to changes in migrant worker numbers than others

Implications of the EU Exit

Across the FDM subsectors, some subsectors would appear to be more exposed to these risks than others. The table opposite highlights the responses to the Grant Thornton survey, broken down by subsector. From this, it seems that those least exposed to potential changes in workforce would be the distilling, rectifying and blending of spirits (0% EEA nationals) and the processing and preserving of meat and production of meat products (5% EEA nationals). However, anecdotal evidence would suggest that the meat industry has a high number of EEA workers, this is supported by the British Meat Processors Association who estimate that EU nationals make up around 63% of the subsector workforce, rising even higher to between 70-80% in smaller factories.

According to the Grant Thornton survey, those most exposed are Soft drinks (21%), Other food products (19.6%) and Grain and starch products (17.8%).

There are also some areas of the country which may be disproportionately affected by changes to immigration and free movement. An industry leader stated that when it comes to immigration: *"You can get an industry average but some factories will be more exposed than others…due to demographics"*. Analysis undertaken by Grant Thornton into the number of FDM businesses in a region versus the number of EU immigrants in a region highlights this point, with Corby and Boston the parts of the country most likely to face difficulties if there is an exodus of EU migrants. Surprisingly, a number of London boroughs feature on the list of areas with high levels of both EU migrants and FDM companies, highlighting again the broad geographic reach of the sector.

What is clear from this is that although companies within FDM may be struggling to understand the exact ways in which their own workforce may be affected by the EU Exit it is clear that migrant workers are a hugely valued part of the UK's FDM workforce with one industry leader noting that: *"You need a diverse workforce from around the world to be a world class success… To make sure we are world class we need to recruit from a global talent pool without restrictions."*

	Average of UK nationals	Average of EEA nationals	Average of Non-EEA nationals
Spirits (1 response)	100.0%	0.0%	0.0%
Meat and meat products (2 responses)	94.0%	5.0%	1.0%
Dairy products (1 response)	90.0%	10.0%	0.0%
Malt (1 response)	90.0%	2.0%	8.0%
Fruit and vegetables (2 responses)	85.0%	13.5%	1.5%
Bakery (4 responses)	82.7%	14.3%	1.0%
Grain and starch products (6 responses)	79.2%	17.8%	2.5%
Other food products (25 responses)	76.3%	19.6%	2.8%
Soft drinks (1 response)	73.0%	21.0%	6.0%
Cider and other fruit wines (2 responses)	66.0%	17.0%	0.0%

Notes: Based on 49 responses
Source: Grant Thornton Survey

Top 10: Nationally

	Area	Region
1	Corby	East Midlands
2	Boston	East Midlands
3	Haringey	London
4	Newham	London
5	Brent	London
6	Ealing	London
7	Kensington and Chelsea	London
8	Breckland	East of England
9	North East Lincolnshire	Yorkshire and Humber
10	Merton	London

Top 10: Outside of London

	Area	Region
1	Corby	East Midlands
2	Boston	East Midlands
3	Breckland	East of England
4	North East Lincolnshire	Yorkshire and Humber
5	Leicester	East Midlands
6	Slough	South East
7	Peterborough	East of England
8	Blackpool	North West
9	Blackburn with Darwen	North West
10	Kingston upon Hull	Yorkshire and Humber

Source: Nomis and ONS

The workforce is ageing meaning a decline in highly experienced workers over the next 10 years

Demographic shift

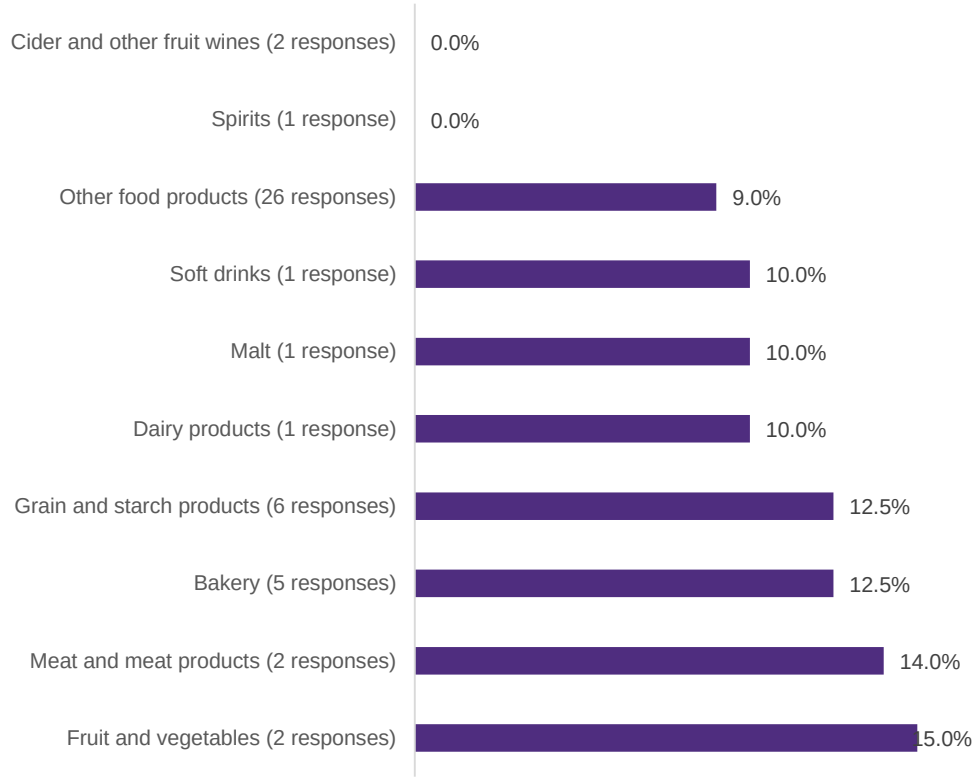
Another factor affecting the FDM workforce is that it is likely to see significant changes over the next ten years as a high proportion of employees will reach retirement age. Respondents to the Grant Thornton survey said that on average, they expected 10.5% of their workforce to retire within the next 10 years. However, from interviews conducted with industry leaders in the sector the reality may be much greater with one saying that 20% will retire in the next ten years.

On a subsector level, there are some which are particularly exposed to this change with Fruit and vegetable (15%), Meat (14%), Bakery (12.5%) and Grain and starches (12.5%) subsectors reporting the biggest changes. One industry leader noted that although their company wouldn't be as exposed to this demographic change, their supply chain would be: *"the average age of a farmer [in this sector] is 57. It's hard to get people into agriculture."* Some of these subsectors will also be doubly exposed to changes in workforce as a result of changing demographics and the EU Exit.

Interviews with industry leaders also highlighted the key role these older employees play with one noting that the average length of service in their company is 27 years, something which isn't unusual in the sector.

Although these employees are valued for their long service and experience, the increasing level of automation and technology in FDM, which is often viewed as being both the cause of and solution to a potential decline in employee numbers, has posed some challenges in terms of ability to adapt to these changes. One industry leader said *"we've got a very loyal, long serving workforce. Many joined after they left school and 30 years later they're still here. Age isn't an issue… the hard part of longer service is adaptation to change, that can be quite scary."* Another industry leader noted that, skills and experience play a greater part than being technologically minded when it comes to newer technologies: *"if you've got a piece of machinery worth £100,000 you wouldn't give it to a 21 year old, you need someone with expertise and experience."*

What proportion of your workforce is scheduled to retire in the next 10 years?



Notes: Based on 49 responses
Source: Grant Thornton Survey

Some existing roles are already very hard to fill

Difficult roles to fill

Aside from the problems facing the FDM sector in terms of the implications of the EU Exit and an ageing workforce, the other employment pressure facing FDM companies is the ability to attract the right talent to the business.

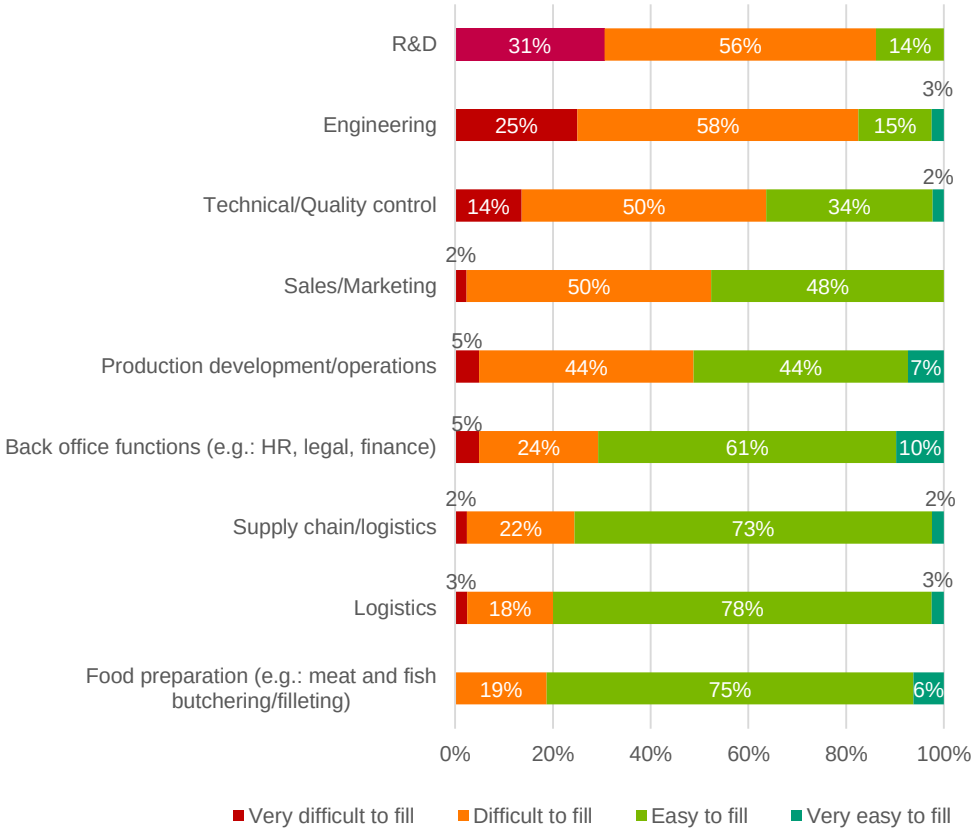
Respondents to the Grant Thornton survey were asked to state any roles that they found difficulty in filling. Across all respondents the easiest roles to fill (Easy to fill & Very easy to fill) are Food Preparation (81.3%) – presumably as a result of large numbers of immigrant workers in these roles - , Logistics (80%) and Supply Chain/Logistics (75.6%). The most difficult roles to fill (Very difficult to fill & Difficult to fill) are R&D (86.2%), Engineering (82.5%) and Technical/Quality Control (63.6%).

With regards to the roles that are difficult to fill both the largest and smallest companies that responded to the survey struggle to fill some back office roles such as HR, legal and finance (see overleaf).

Across the board, the most difficult roles to fill are the very technically skilled Engineering, R&D and Technical/Quality control (see overleaf). Given that the sector is already finding it difficult to fill these roles, coupled with the potential loss of 19% of highly skilled workers from the EU, it is clear that the sector must ensure a strong pipeline of highly skilled workers if it is to retain its world leading edge.

Looking at companies by size, both employee numbers and turnover, it's clear that the size of the company may impact its ability to attract talent. However, interviews with industry leaders suggested that SMEs in the sector may need more support to attract and upskill their employees. One industry leader said that: "*we have to continue to invest in upskilling… we are sophisticated in our approach but it's more difficult for SMEs*" whilst another highlighted the difficulties of Tier 2 visa scheme for SMEs: "*We need the government to do something to help SMEs… it took five months to hire a South African through a Tier 2 visa scheme.*"

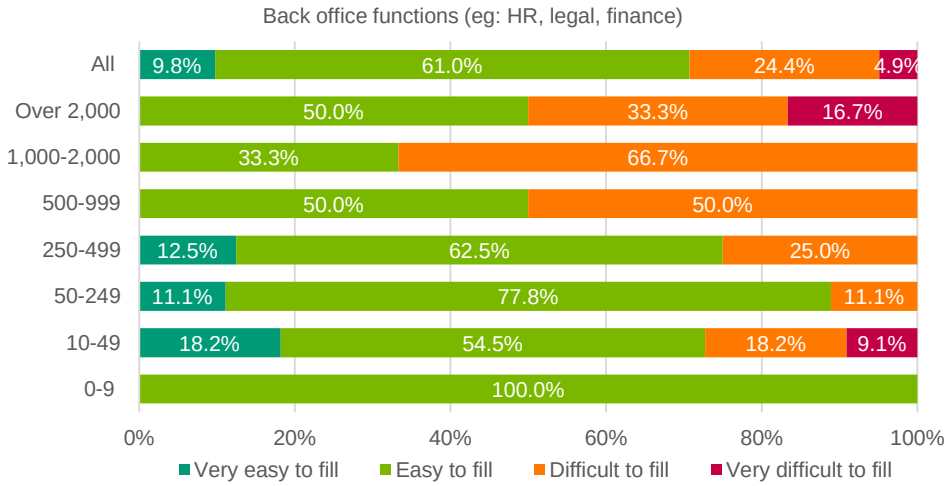
Do you have any roles that are difficult to fill?



Notes: Based on 47 responses
Source: Grant Thornton survey.

Larger companies find it harder to recruit for back office functions than smaller companies

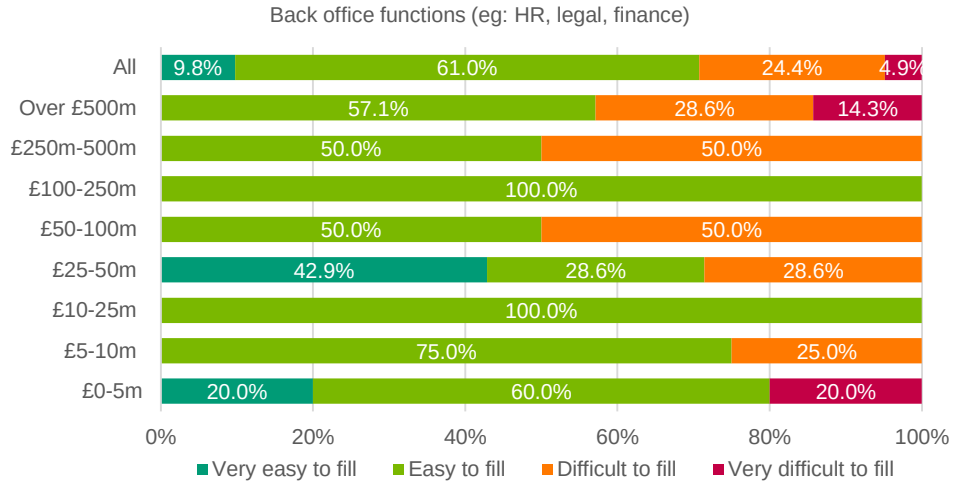
Analysis by number of employees



Notes: Based on 41 responses
Source: Grant Thornton survey.

Based on the responses to this question, it appears that the larger organisations find it more difficult to fill back office functions. Those groups of organisations with over 2,000 employees, 1,000 to 2,000 employees and 500 to 999 employees, had a greater proportion of respondents that found it more difficult (difficult or very difficult) to fill these roles than then the average proportion across all respondents. In part this will be because smaller organisations require small back office teams.

Analysis by turnover

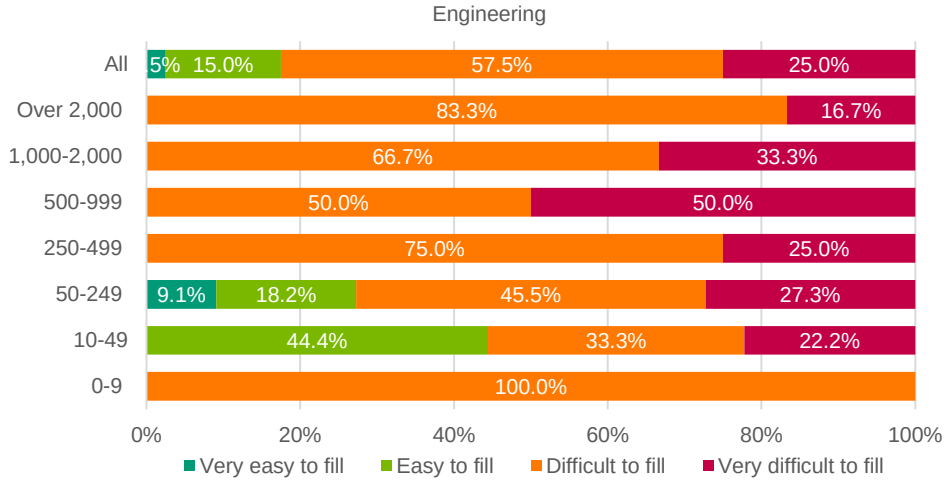


Notes: Based on 41 responses
Source: Grant Thornton survey

Those organisations with £250 million to £500 million and £50 million to £100 million have the greatest difficulty in filling back office functions with 50% of respondents in those group stating that they have difficulty. Organisation with £100 million to £250 million and £5 million to £10 million appear to have the greatest ease in recruiting these roles with 100% stating they find these roles easy to fill.

Companies of all sizes struggle with recruiting engineers

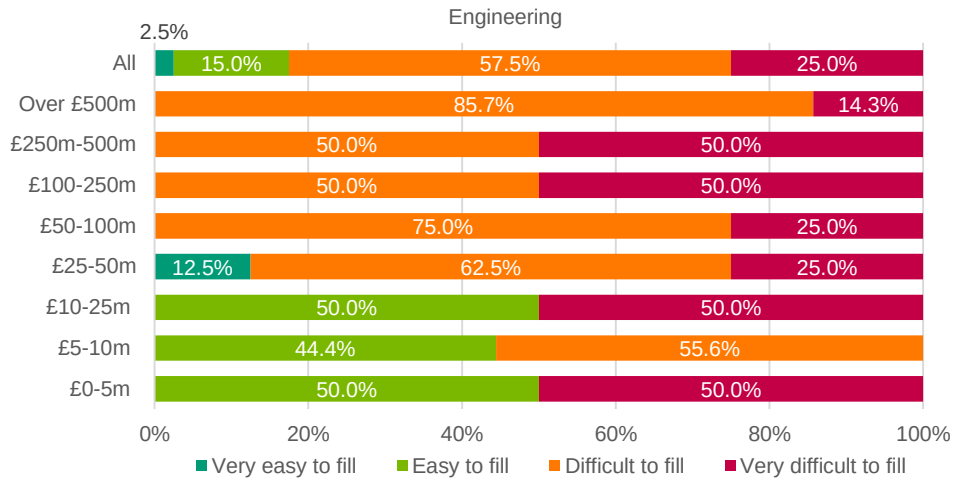
Analysis by number of employees



Notes: Based on 41 responses
Source: Grant Thornton survey.

Organisations of all sizes find it difficult to fill engineering roles. Only respondents in the 10 to 49 employee and 250 to 499 employee groups had any respondents that found it easy or very easy to fill engineering roles.

Analysis by turnover

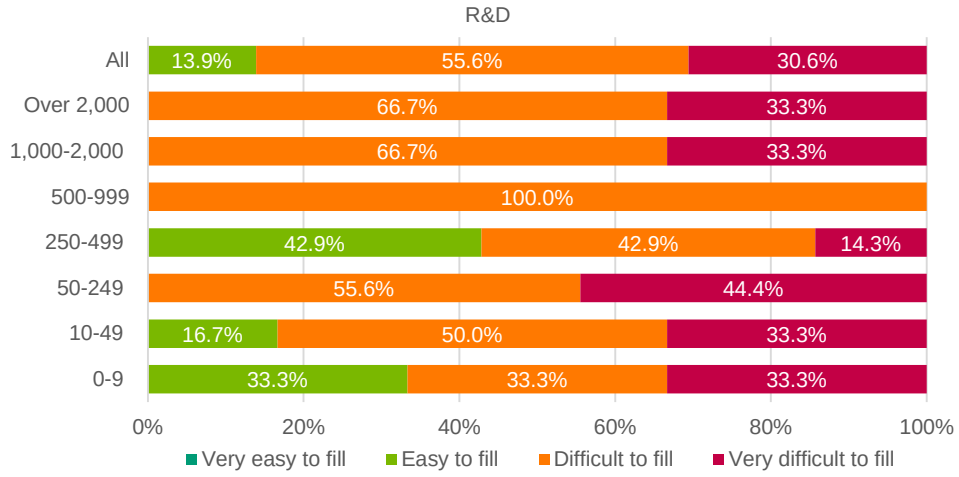


Notes: Based on 40 responses
Source: Grant Thornton survey

Larger organisations appear to have greater difficulty in filling engineering roles with all organisations with a turnover greater than £50 million stating that they have difficulty in filling these roles (difficult or very difficult to fill).

Smaller companies find it harder to recruit R&D employees than larger companies

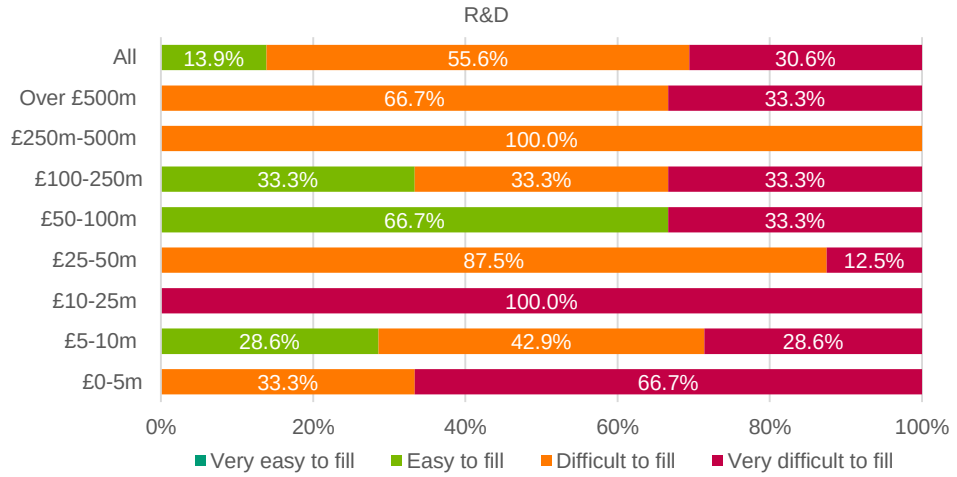
Analysis by number of employees



Notes: Based on 36 responses
Source: Grant Thornton survey.

All organisations with over 500 employees find it difficult or very difficult to fill R&D roles. This was also the case for organisations with 50 to 249 employees. The group of organisations with 250 to 499 employees had the greatest proportion of respondents who found these roles easy to fill at 42.9%. No organisation stated that R&D roles are very easy to fill.

Analysis by turnover

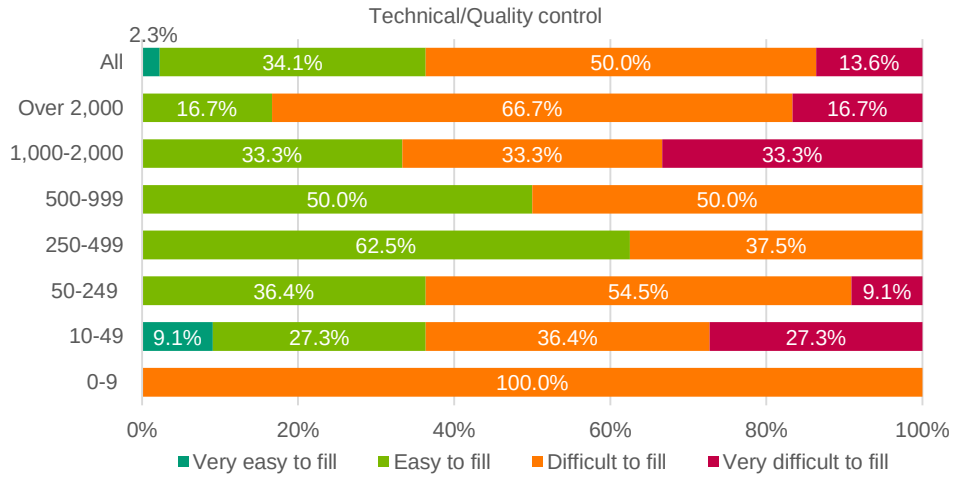


Notes: Based on 36 responses
Source: Grant Thornton survey.

R&D roles appear to be difficult to fill with organisations of all sizes. Those in the £50 million to £100 million turnover bracket appear to have the greatest ease with 66.7% of respondents stating that these roles are easy to fill.

The largest and smallest companies struggle to recruit Technical/Quality Control employees

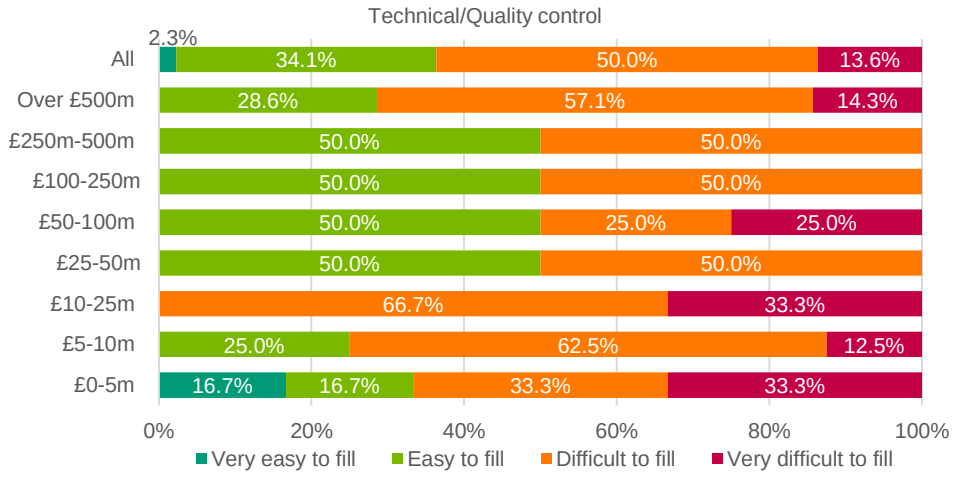
Analysis by number of employees



Notes: Based on 44 responses
Source: Grant Thornton survey.

There appears to be difficulty in the largest and smallest organisations in recruiting technical and quality control roles. 100% of those organisations with 0 to 9 employees found these roles difficult to fill. The next greatest difficulty was reported in those organisations with over 2,000 employees with 66.7% stating these roles are difficult to fill and a further 16.7% are very difficult to fill.

Analysis by turnover



Notes: Based on 44 responses
Source Grant Thornton survey.

It appears that smaller organisation have greater difficulty in filling technical or quality roles. Just four of the nineteen respondents with less than £50 million turnover found technical or quality roles easy or very easy to fill.

The perception of the sector impacts its attractiveness

Retention difficulties

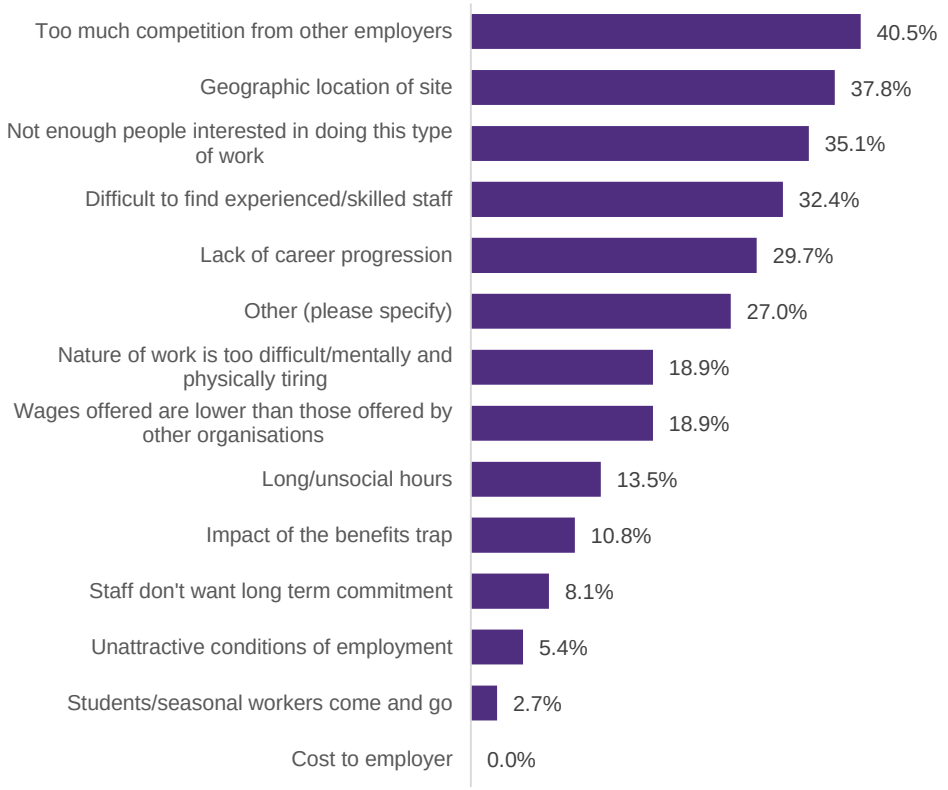
The two main concerns around maintaining employment levels across the sector are attracting and retaining talent

In terms of attracting talent the sector is expected to need 140,000 new recruits by 2024. In hoping to attract this talent the general consensus from the sector is that it suffers from an image problem, especially when compared to other manufacturing sectors such as automotive or pharmaceutical which are often perceived to be more exciting, innovative and better paid sectors. However, to those in FDM, this perception isn't one which accurately reflects the reality of the industry today and industry leaders who were interviewed suggested that there needs to be greater communication and awareness of this from the very top, with politicians visiting food factories as opposed to "cleaner" automotive factories when campaigning, down to the consumer.

Once people become more engaged with the sector, industry leaders noted that there are really strong opportunities to build a career within it, not only because of the changing and upskilling new technologies are bringing about, but also because there is an enduring demand for the goods it produces. Nevertheless, it's inevitable that there may be some retention difficulties as part and parcel of any modern workforce. Amongst respondents to the Grant Thornton survey, the main reasons for retention difficulties was that there was too much competition from other employers (40.5%), the geographic location of the site (37.8%) and the belief that there weren't enough people interested in doing this type of work (35.1%). The view of industry leaders was that these issues are exacerbated when sites are located in or on the periphery of cities as competition is dramatically increased not just within the sector but also between other sectors.

Another interesting point to note on the survey responses in relation to this is that only 2.7% of respondents said that seasonal workers coming and going was a cause of retention difficulties. Arguably, this highlights another misconception about the role migrant workers play within the sector.

If you experience employee retention difficulties, what is the reason for this?



Notes: Based on 37 responses
Source: Grant Thornton survey

New types of jobs require new types of skills

Skills of the future

Thinking more about the skills a future FDM workforce may require highlights a need for greater awareness of the sector and the growth of certain skills, and a decline in others.

According to the UK CES Working Futures 2012-2022 report employment across FDM is set to see a net decline of 6% (approximately 27,000 jobs) as a result of increased automation. This is broadly in line with the UK manufacturing sector which is expected to see a decline in jobs of 1% per annum between now and 2022; a total loss of around 230,000 jobs in the period 2012-2022.

However, whilst the FDM sector as a whole will experience some decline in job numbers, there are specific roles where an increase is expected. The table opposite highlights the change in job roles between 2012-2022 for the FDM (including tobacco) sector and broader manufacturing sector against the top three predicted growth sectors. From this it is clear that there is a change in emphasis towards growth in higher skilled roles within the sector.

This hollowing out of mid-tier jobs becomes all the more significant when compared to the skill levels by nationality graph (see start of chapter) as these roles would appear to have a greater proportion of UK workers when compared to roles at either end of the spectrum. As a consequence of this further work is required to ensure that the UK has a workforce that is fit for purpose for the sector.

Sub-Major Groups	Food drink and tobacco	Rest of manufacturing	Electricity and gas	Construction	Information technology
Corporate managers and directors	▲		▲	▲	▲
Other managers and proprietors	▲		▲	▲	▲
Science, research, engineering and technology professionals			▲	▲	▲
Health professionals	▲	▲	▲	▲	▲
Teaching and educational professionals	▲	▲	▲	▲	▲
Business, media and public service professionals			▲	▲	▲
Science, engineering and technology associate professionals			▲	▲	▲
Health and social care associate professionals	▲	▲	▲	▲	▲
Protective service occupations				▲	
Culture, media and sports occupations	▲			▲	▲
Business and public service associate professionals			▲	▲	▲
Administrative occupations					▲
Secretarial and related occupations		▼	▼	▼	
Skilled agricultural and related trades			▲	▲	
Skilled metal, electrical and electronic trades					
Skilled construction and building trades					▲
Textiles, printing and other skilled trades	▼	▼	▼		
Caring personal service occupations	▲	▲	▲	▲	▲
Leisure, travel and related personal service occupations				▲	▲
Sales occupations					
Customer service occupations				▲	▲
Process, plant and machine operatives	▼	▼			
Transport and mobile machine drivers and operatives				▲	▲
Elementary trades and related occupations					
Elementary administration and service occupations					▲

Source: Working Futures 2012-2022, UKCES

Greater connection between the sector and education providers can change the perception of FDM

Local education

Responses to the Grant Thornton survey showed that only 32% of survey respondents felt that there was a good availability of relevant education in their local area

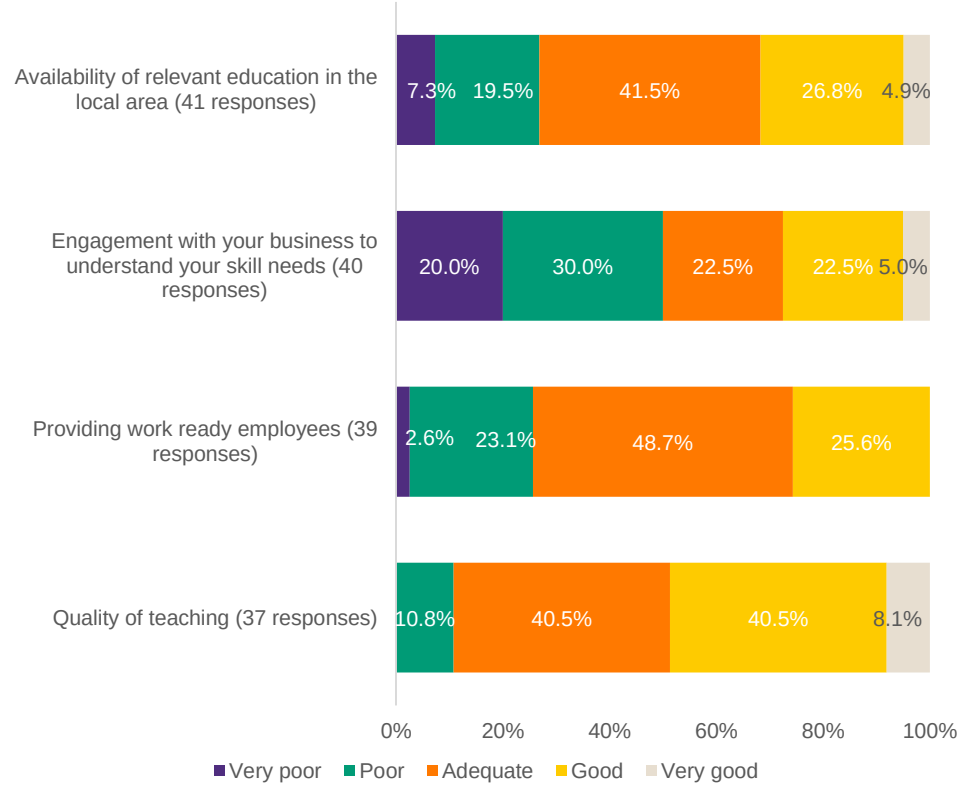
Nevertheless, it appears that there could be a greater connection between education providers and businesses within the sector, with half of the survey respondents saying that they felt the level of engagement with their business to understand skill needs was poor (30%) or very poor (20%). This belief was something that industry leaders within the sector also highlighted with one noting the outdated belief that *"if you don't do your studies, you'll end up in the food factory"* still held sway, whilst another said that *"[teachers] have no idea about what a food industry involves, what a range of opportunities it involves."* In order to try to rectify this situation several of the industry leaders said that they had engaged with local schools either through investment or going into the schools and talking to pupils about the sector.

Looking at skills on a more local level, nearly three-quarters (74.4%) believed that technical education provided in the local area created work ready employees, with 48.7% stating it was adequate and 25.6% stating it was good. A greater focus on local action was also something that was mentioned by the industry leaders with one suggesting that *"we've got to act at local level to solve the problem of attracting people to work in the sector."*

Nearly nine out of ten (89.2%) were content with the quality of teaching in their local area, stating that it was either adequate (40.5%), good (40.5%) or very good (8.1%).

All of which suggests that there isn't much discernible variation in employee skill level across the UK regionally and the survey findings would appear to support this with. 70.8% of respondents to the Grant Thornton survey said that they didn't, whilst 29.2% said they felt there was.

Based on your company's experience, how do you rate the quality of technical education provision in the local area?



Notes: Based on 41 responses
Source: Grant Thornton survey.

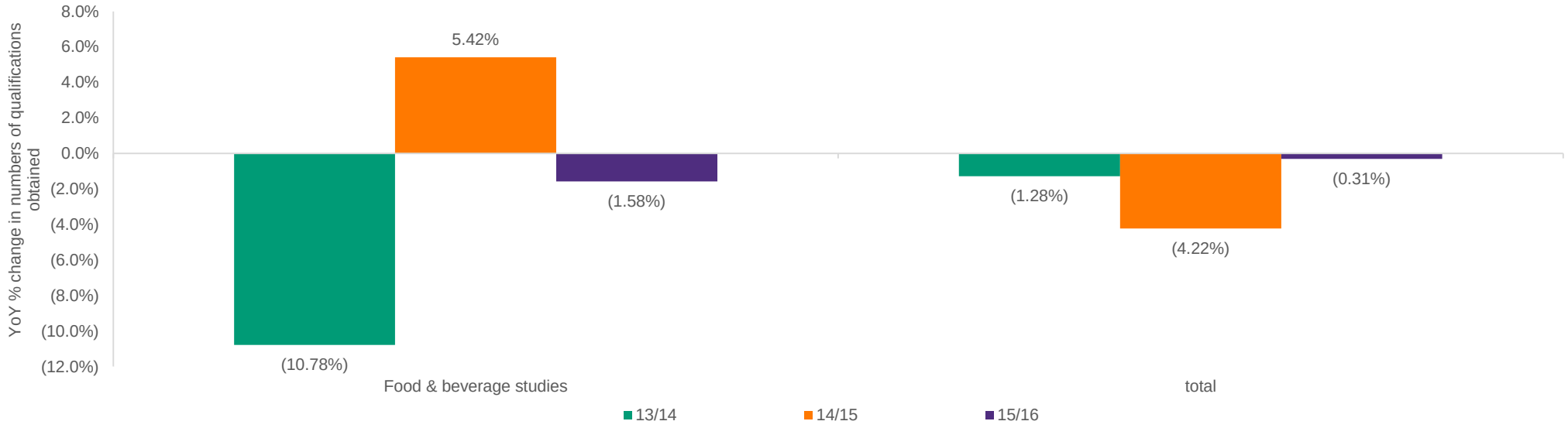
Low pipeline of skilled workers coming through higher education…

Higher education qualifications

Looking at education beyond schools, again industry leaders have demonstrated that they have engaged with their local education providers with some sponsoring students through agricultural college, sponsoring PhD students and partnering with universities, either through the Food and Drink Federation or via universities local to each business.

When compared to all other higher education subjects, there is a noticeable volatility in the number of students undertaking food and beverage studies. However, this may in part be attributable to the lower numbers of students enrolling on the courses, 1,245 in 2015/16 for food and beverage related courses compared to 742,730 for all subjects. As a consequence of this, even minor changes to intake numbers would register as having a significant impact.

Number of food and beverage students vs. all other sectors



Source: HESA figures

…But those that qualify in sector related subjects tend to have higher qualifications than those in other subjects

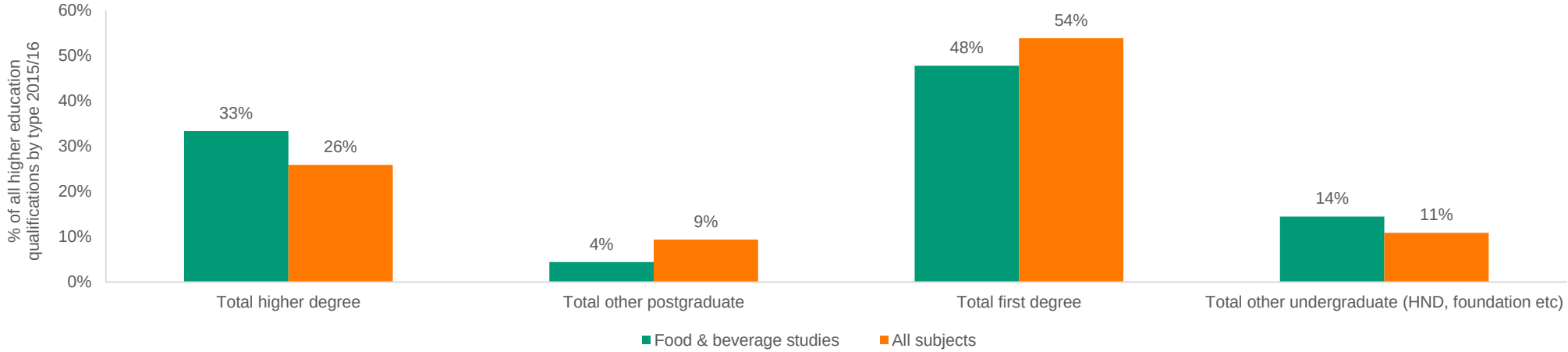
Higher education qualifications

Looking at the numbers of students who qualify with a degree in food and beverage studies it seems that although the number of students studying those subjects is low, generally they perform better than students studying all other subjects, arguably highlighting the specialism of the sector. They also, on average, engage for much longer than students in other subjects, with a higher proportion obtaining a higher degree qualification.

Nevertheless, the supply of these highly qualified graduates is not enough to meet the current, let alone the future, demands of the sector. In the interviews with industry leaders, several suggested that courses offered by higher education institutions in other countries were more relevant to their needs with France and Spain being highlighted as having either very niche courses, or a greater pool of talent with relevant skills.

The skills that were most often perceived to be lacking in the UK school leaver and higher education system were STEM qualifications. One industry leader said that *"young people aren't coming out of schools with the skills they need…at a very basic level people leave schools and colleges without science and maths… [we] have to do more from a company side to fill in the gaps from education."*

Qualification levels of food and beverage students vs all other sectors



Source: HESA figures

Apprenticeship Levy has received mixed reactions but could help futureproof the sector's workforce

Apprenticeship Levy

One of the biggest changes to ensuring a pipeline of talent in the FDM sector is the introduction of the Apprenticeship Levy, a subject that industry leaders would appear to have fairly mixed feelings about. From those interviewed, several companies had long standing apprenticeship schemes which they were very proud of, others were looking to become more proactive in attracting apprenticeships, not only in light of the Levy but in order to futureproof their business, whilst others were more hesitant citing lack of clarity as to how it will be implemented and scepticism as to how successful it might be given past schemes that have been similar.

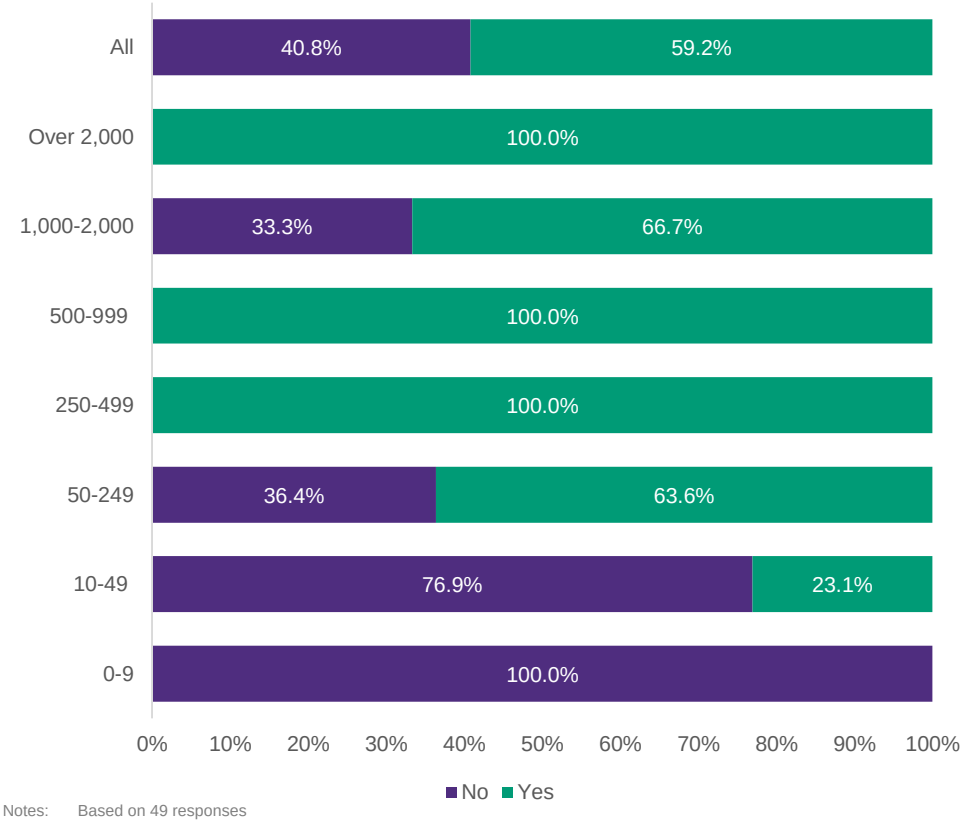
However, with 34.7% of respondents to the Grant Thornton survey saying that they felt the introduction of apprenticeships would be a way of filling a potential gap left by EU workers in light of the EU Exit, it is clear the Levy could play a significant role in the future of the workforce.

The sector already seems well placed to adapt to the introduction of the Levy with a number of apprenticeship schemes already underway across the sector. The Grant Thornton survey found that 59.2% of companies had taken on apprentices in the last three years, with an annual average of between 6 – 8 apprentices per company. There is some correlation between size of company and whether they have been able to take on apprentices with smaller companies less likely to do so. At the other end of the spectrum, the larger companies are 100% likely to take on apprentices, with one respondent to the Grant Thornton survey taking on around 60 apprentices annually between 2014-16.

For those companies who hadn't taken on any apprentices the reasons for this vary, with the most common response being that there was no need for them. Other reasons included: 'too much red tape', 'the organisation takes on students, but not apprentices', 'they require too much time management' and 'the low quality of applicants'.

Have you taken on any apprentices in the last three years?

(Responses by company size – number of employees)



Notes: Based on 49 responses
Source: Grant Thornton survey.

Apprentices already in the sector have more experience than those in other sectors

Apprenticeship Levy

Despite these perceptions, the sector would appear to have a stronger supply of experienced apprentices than other sectors. Statistics from the Department of Education show that in the academic year 2015/16 the Food Manufacturing sector had a total of 3,500 apprentices, of which 67% (2,330) were aged 25+, compared to 44% of apprentices in all sectors.

As noted in this chapter, there are a wealth of roles available within FDM however, the statistics from the Department of Education suggests that apprenticeships in the sector tend to be classed under Food Manufacturing, rather than more specific roles, such as Food and Drink Advanced Process Operator. Anecdotal evidence from the sector suggests that more specialist food engineering qualifications are often classed in broader engineering figures.

Much like the education levels this shows that greater engagement in the sector at a later stage and perhaps highlights either a change of career or people joining the firm at a lower level and then progressing. One industry leader noted that in his company they had run an apprentice scheme for a number of years and that some of the apprentices were now going to university to further their studies.

Household finances have far reaching consequences for consumer food purchases

Impact of consumer behaviour and skills

One of the concerns to arise from the industry leader interviews was the lack of awareness of UK consumers as to where their food came from and the impact that had on the sector. One industry leader said: *"there is a disconnect in people's minds when they go to shop and buy food. They don't want to work in the industry, they just expect the food to be good quality but not pay much for it."* This disconnect is potentially very harmful to the sector as, not only does it perpetuate the misconceptions about work within the sector being of low value it also highlights a broader educational need in society.

Recent political events in the UK have highlighted how polarised the country can be both politically and economically. The recession in 2008 resulted in vast numbers of middle class shoppers buying their groceries in the discount stores, Aldi and Lidl, as household budgets got even tighter. For those lower down the socio-economic scale the impact on household budgets has arguably been more keenly felt, whether as a result of wage stagnation or the impact of benefit cuts. Though there is a change in the behaviour of consumers with greater disposable income to shop for local produce and seek out organically produced food, there will remain a significant proportion of the population for which those options are, economically, out of reach. The consequence of this is that, when it comes to the purchasing and consumption of food there is an emergence of a nation of "haves" and "have nots."

For the FDM sector the impact of this is threefold. Firstly, if, as shown in this chapter, the existing UK workforce is at risk of even greater polarity then this will have a very real impact on wages and household disposable income. Though the introduction of the National Living Wage will go some way to ensuring workers receive a fair wage, and many of those companies interviewed were already paying their employees above the National Living Wage, the present state of food inflation will put real pressure on consumers and their spending priorities.

The second is around education and making consumers aware that they can eat well for less money. One industry leader suggested that: *"[For the industry] there's a huge piece on education… Educating kids at school on diet and that a balanced diet is affordable…If people feel they're paid well, they make better choices in the supermarket. [Consumers] have an unhealthy relationship with food."*

The third point is that consumer shopping behaviours have changed. Where ten years ago a family may have done a large, weekly shop at one of the big four supermarkets, today that shop may be replaced by a big online shop to get the basics, followed by top-up shops throughout the week, either at a supermarket, discounter, local corner shop or a combination of all three. For FDM companies, ensuring that you stay front of mind for the consumer, across all of those touchpoints, in order to remain a relevant part of the education process, is difficult as it may require different sizes or configurations of products.

Conclusions and recommendations

The food and drink industry needs talent. A looming skills gap left by an aging workforce means the sector needs to attract 140,000 new recruits by 2024. The ageing workforce and skills gap facing the sector is not new, but the need to address this has never been more urgent. Perceptions of the industry mean the sector struggles to attract people and potential employees fail to recognise the industry as high-tech and with a wide range of fulfilling careers on offer, instead choosing careers in other manufacturing industries. Simultaneously, there is uncertainty regarding future access to EU workers, who are highly-valued and make up 30% of the industry's skilled and high-skilled workforce.

The idea that jobs in food and drink manufacturing are low-skilled and poorly paid is untrue. As this section shows, there are a variety of different roles on offer in the industry at all skill levels, with low skilled work making up only a small fraction of roles. In reality to ensure the industry remains competitive, the sector is moving towards greater automated production, investing both in new technologies and its people to ensure they have the new skills required to support future growth.

With just 34.7% of respondents to the survey saying they felt apprenticeships would fill the gap left behind by EU workers, the sector need further support from Government to increase the apprentice workforce in food and drink. Similarly, a new EU immigration policy is needed which prioritises food and drink as the UK's largest manufacturing industry and allows new workers from the EU to enter the sector.

The food and drink industry has developed a number of industry specific apprenticeships up to degree level in order to fill the skills gap. Due to the geographical spread of the industry, a number of educational providers across the country are required and investment is needed to ensure these providers have the equipment and capacity to provide these specific skills. Government must support industry in order to bridge this gap.

Innovation

Chapter introduction

Innovation whether it be in products or processes is a significant growth opportunity for the FDM sector and one that will also have an equally positive impact on improving productivity.

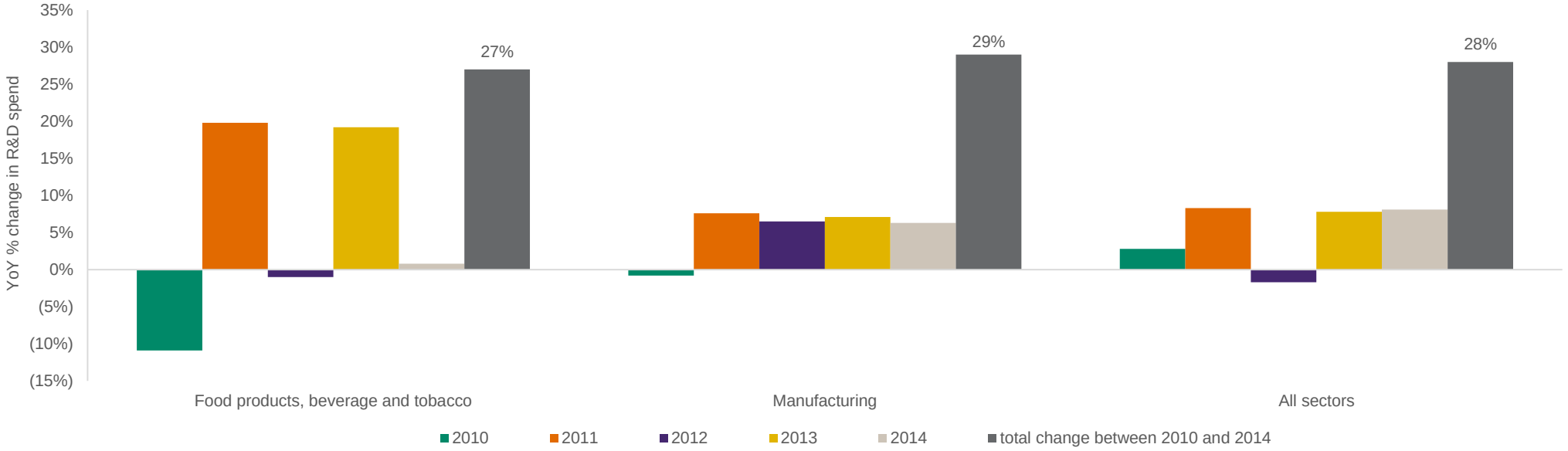
Through this study it is apparent that businesses in the sector are embracing innovation in a range of different ways and doing so in partnership with different organisations. This evidence not only shows the positive contribution the sector is making to the economy but it highlights some important lessons around how to better support and encourage innovation.

There has been growth in the level of expenditure on R&D within the sector, this is in line with other industries

Research & Development expenditure trends over time

In 2016 the OECD classified food products, beverages and tobacco as "medium-low R&D intensity" industry (at 4th place on a scale of 1-5 in terms of intensity). The medium-low category ranks at 4th place on a scale of 1-5 in terms of intensity). This compares to subsectors such as vehicle manufacturing which is classed as a "medium- high R&D intensity" industry and pharmaceuticals, computer and electronic manufacturing which are classed as High R&D intensity industries.

Looking more specifically at overall R&D expenditure in the sector the graph below shows that it has grown by 27% between 2010 and 2014. This is comparable to expenditure growth in both all manufacturing sectors (29% growth) and indeed all sectors in the economy (28%). Although it is interesting to note how expenditure growth has fluctuated significantly year on year within the sector. The relatively stable levels shown by both manufacturing and all sectors are most likely a reflection of the 'smoothing' that results from combining multiple industries.



Source: OECD R&D statistics

When compared to other countries there is however more variation

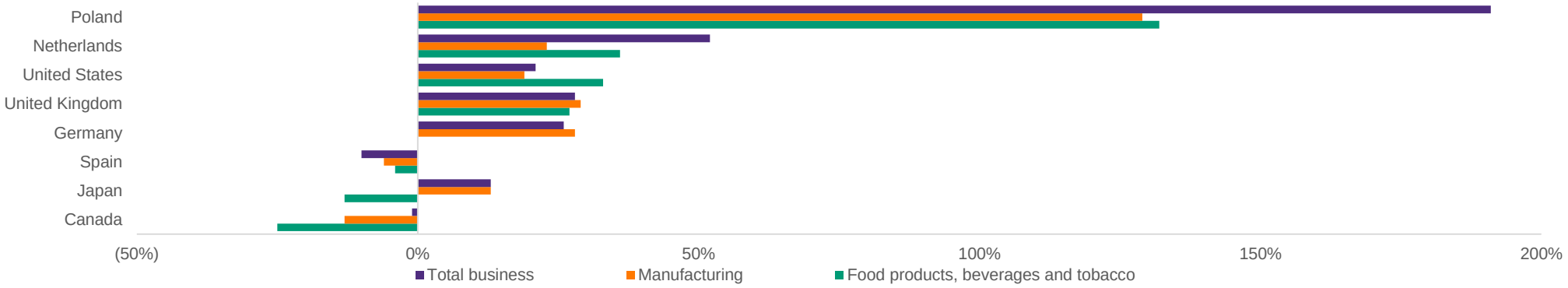
Research & Development expenditure trends over time

When comparing the change in R&D expenditure with a range of international comparators a number of interesting findings emerge:

- Most notably is Poland's significant investment in R&D across all businesses with significant growth in expenditure in the food products, beverages and tobacco sector – way beyond any of the comparator areas analysed. This increase saw investment rise by 132% in food products, beverages and tobacco from PLN 176.5 million (GBP £36.5 million) in 2009 to 409.7 million (GBP 85 million) in 2014. In the UK investment stood at GBP £260 million in 2009, increasing by 27% to GBP £330 million in 2014
- The Netherlands has seen the next largest investment with food products, beverages and tobacco seeing higher levels of expenditure than the country's manufacturing sector as a whole
- The USA has also seen a significant increase in R&D expenditure on food products, beverages and tobacco, and of particular note is how this expenditure growth is tracking above the average for the economy as a whole and the wider manufacturing sector
- Spain, Japan and Canada have all seen negative growth in R&D expenditure on food products, beverages and tobacco, and in the case of Japan this has been in contrast to positive growth in the wider economy and the manufacturing sector

The biggest implication of these findings is in relation to the ongoing competitiveness of the UK, particular with the emergence of new competitors such as Poland and the continuing higher levels of R&D expenditure in the sector in the Netherlands and the United States.

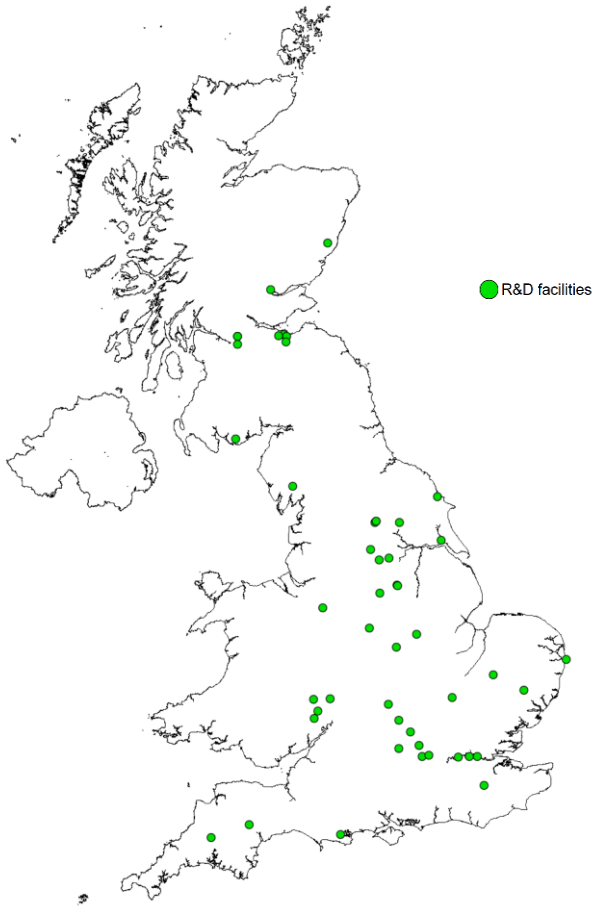
Change in R&D expenditure between 2009 and 2014 (local currency)



Note: France and Ireland have been excluded from the table as data was not available in 2015.
Source: OECD R&D statistics

As with other parts of the industry, R&D occurs across Great Britain

Of the 89 respondents to the Grant Thornton Survey, 69.7% had a UK R&D facility. The map to the right shows the location of these facilities and in doing so further reinforces findings from earlier in the study around the geographical spread across Great Britain.



Note. 89 survey responses
Source: Grant Thornton survey and interviews

It is a sector that is continually innovating

The Grant Thornton Survey asked respondents what types of innovation their company engaged in with the three most common being: new product development/reformulation (89.2%), manufacturing process automation (73%) and efficient resource use (67.6%). The fact that nine in ten of the businesses surveyed are involved in new product development/reformulation underlines the critical role that this plays in the sector. It was a fact that was backed up in the interviews with industry leaders talking repeatedly about the importance of new product development, with one noting that it was "crucial for the success of the business". This dynamic nature of the sector underlines its importance to the economy as it is continually investing and evolving and is future evidence that the sector is insulating itself against changing consumer trends or economic cycles.

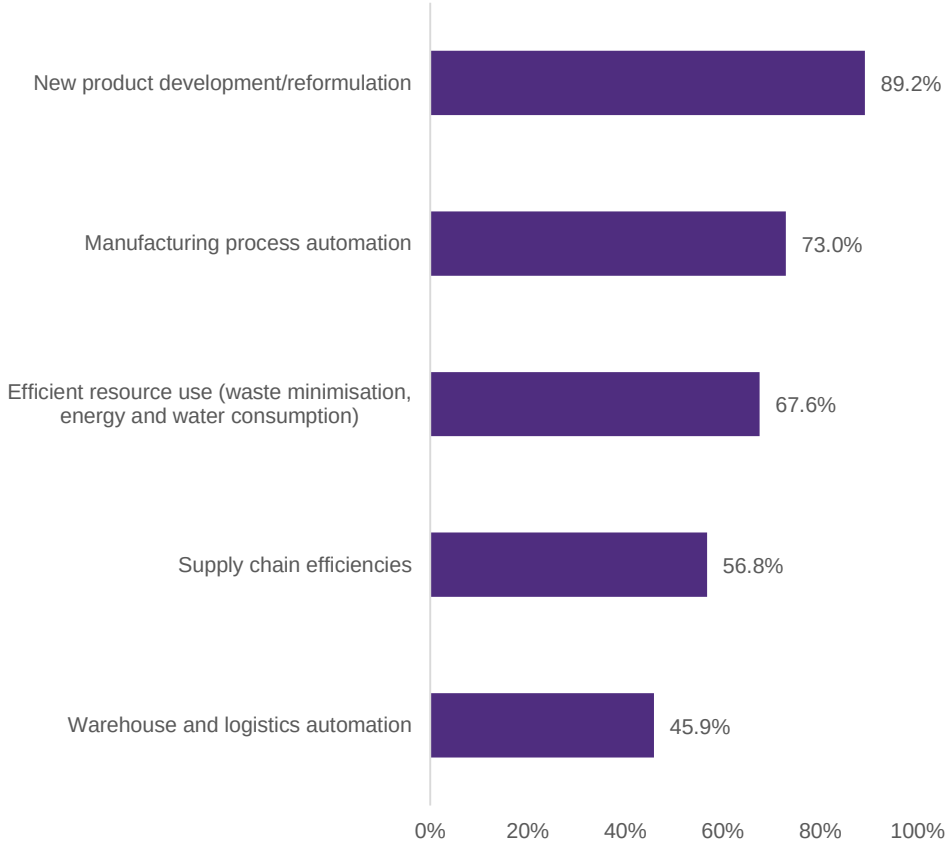
Alongside the investment in new products the industry leaders also backed up the findings of the survey. This included references to investment and innovation in automation, particularly the role that robotics has played and will continue to play in transforming the sector. With one industry leader noting: "*robotics, that is where the new investment is going.*"

To support the investment in improving the supply chain and associated logistics, industry leaders noted the work they had done in aligning, farmers, manufacturers and retailers in order to get scale and drive efficiency.

New product development originates with a consumer need or response to consumer choices and preferences, therefore companies are constantly thinking about how consumer choice will impact on their businesses, with one industry leader explicitly identifying the "*trends towards wellness, convenience and wastage*". This translated for one company in vacuum packing innovation to enable greater ease of convenience for the consumer, while for others innovation was focused on radically changing the product to reduce levels of sugar, with one industry leader noting that 70% of their products are now in a reduced sugar format.

This is an important findings as it highlights the adaptability of the sector both in relation to wanting to provide the most suitable products for the consumer, but also in the role the sector can play in helping Government to deal with particular policy issues such as obesity.

What type of innovation does your company engage in?

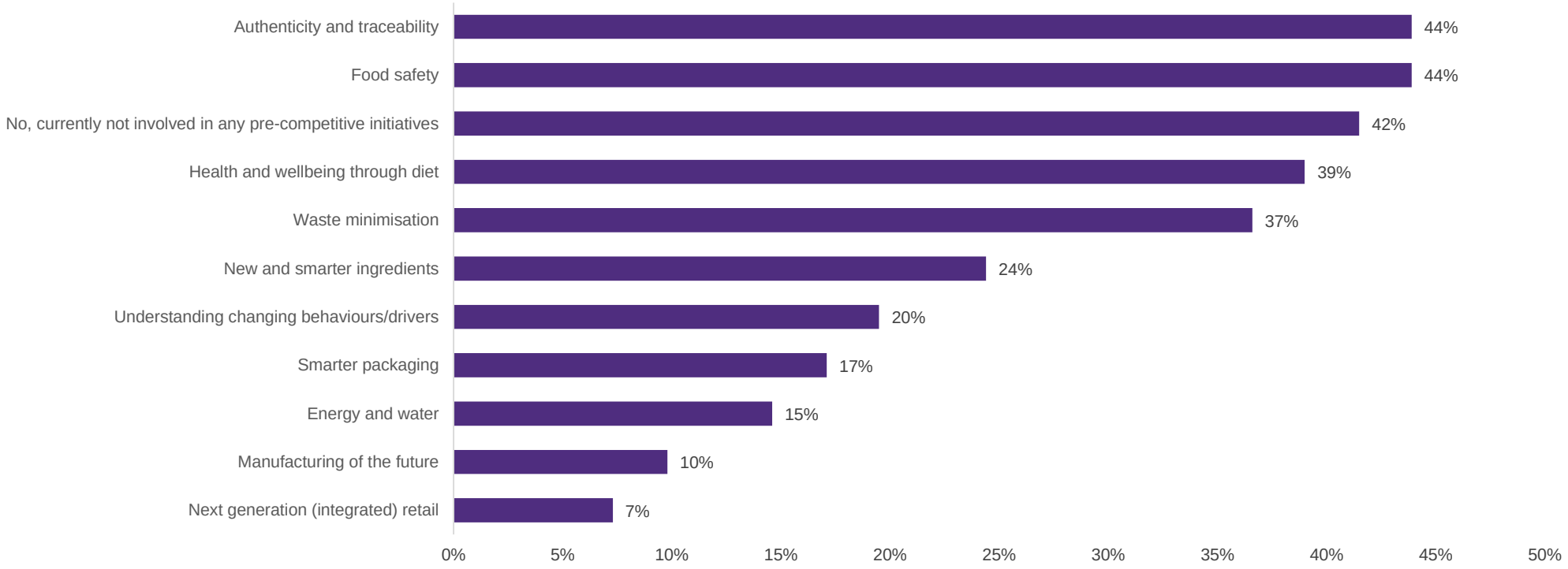


Note. 37 survey responses
Source: Grant Thornton survey and interviews

There is also engagement in a wide range of pre-competitive initiatives

Through the Grant Thornton survey it was apparent that 59% of respondents were involved in pre-competitive initiatives. The most common of which were in relation to food safety (43.9%), authenticity and traceability (43.9%) and health and wellbeing through diet (39%). These findings further support the point that the important role that the sector can play in addressing a number of key health policy priorities. As such it is vital that Government and industry continue to explore how best they can work with each other for mutual benefit.

Is your company involved in any pre-competitive initiatives?



Note: 41 survey responses
Source Grant Thornton survey and interviews

There is however a need to look beyond tax-credits if Government is to best support innovation in the industry

The Grant Thornton Survey found that just over half (54%) of respondents had accessed R&D tax credits in order to support innovation. The view from industry leaders was that while these tax credits were a positive, they were not the whole answer in terms of how industry can be best supported to innovate. The perception was that Government needs to better understand the range of factors that effect business investment decisions so that suitable support can be designed and implemented. This was felt to be particularly important because the perception amongst some industry leaders was that other EU nations are better at supporting innovation in the sector – although limited examples were given – with clear national strategies to guide activity.

Note: 41 survey responses
Source: Grant Thornton survey and interviews

There is a willingness to work with others on innovation

In seeking to innovate, the survey also found that nearly half (46%) of the respondents have an on-going collaboration with higher education or research initiatives. This is encouraging although there remain some barriers to knowledge transfer between higher education and research institutes and industry with the following challenges citied: academic language and misalignment of cultures; a lack of capacity in the business to absorb and implement the recommendations; intellectual property rights; a lack of knowledge about what research is being undertaken; and a preference amongst research bodies to only work with large organisations. Given the importance of innovation to the sector and the general willingness to work together there is an opportunity to support the industry in addressing these different barriers.

Thorough the interviews with the industry leaders it was also clear that collaboration does not just take place with higher education or research initiatives. A range of different examples were cited of industry working with different organisations throughout the supply chain. This includes collaboration with those responsible for packaging; other industry bodies (eg Age UK); closely working across the agri-supply chain to help better manage yields; technical companies looking at specific technical processes that don't currently exist in the market; and other FDM companies that can bring new flavours to existing products.

How best to support and facilitate this collaboration between the supply chain is another area that may warrant further investigation.

Note: 41 survey responses
Source: Grant Thornton survey and interviews

Understanding consumer behaviour is vital when it comes to innovation

Consumers have rarely been more influential. Where once companies and Governments set the agenda on consumption, across the consumer sector the rise of smartphones and social media have meant that consumers have reclaimed a huge amount of power. These days products can become overnight successes at the press of a "Like" button. This trend is perpetuated by an increasing shift towards consumers demonstrating their lifestyle choices, whether that's a once-in-a-lifetime holiday or a meal the hottest new restaurant, and what those choices say about them. This prioritisation of having less, but doing more is an interesting new development in the age of fast food and fast fashion and demonstrates a desire on behalf of consumers to not only regain their leisure time and reassess their lifestyle priorities, but also to allow them to create a sense of individuality in an increasingly globalised world.

For the FDM sector, this behaviour has several implications. The first is that they must keep track of what's hot, and what's not. Recent years have seen massive surges in the popularity of certain food types, such as kale and avocado, which has lead to some innovations such as one leading supermarket now stocking peeled, frozen avocado halves.

Consumer perception and what buying a particular brand says about them is a growing issue. For example, sustainability is a big issue across the consumer sector with many fashion retailers now highlighting products which have been made using sustainable fabrics. For the food and beverage sector there has long been an association with fair trade but recent legislation, such as the Modern Slavery Act, as well as growing consumer awareness of food miles, environmental sustainability and waste has forced the issue even more.

Another implication is the growing market for out of home dining which places pressure on the sector, not only from the perspective of trying to maintain its share of wallet for customer spending, but also in ensuring that their products can compete with the out of home dining experience.

When consumers do eat at home, convenience and changing dietary habits have changed. The palate of the British consumer has changed over the past century, with global influences playing an increasingly fundamental role in modern British cuisine. This, coupled with the need for the consumer to be able to cook their food quickly has forced innovation onto FDMs. One senior industry leader highlighted how the changing of consumer tastes was impacting the sector: *"People have moved away from meat and two veg, its more a question of ingredients now…Sunday roasts used to be traditional but that's not a given any more… how do we fit the modern lifestyle? [We] look at new cooking methods."*

Another said that; *"It [innovation] starts with the customer and the product as that drives everything, but as soon as you start innovation with customers that drives a need for innovation in the supply chain."*

This investment in the supply chain can be incredibly costly for FDMs, as one senior influencer noted: *"We will invest heavily in product innovation and customer, if that means we enter more complex supply chains, for example, cafes and restaurants with smaller pack runs, if we have to have more sophisticated warehousing and distribution we will. It is needed to enter more valuable markets."*

For the FDM sector, understanding consumer behaviour in a fast-moving consumer world, is more vital than ever before.

Source: Grant Thornton research and analysis. Grant Thornton interviews

Conclusions and recommendations

The FDM industry possesses a global reputation for being at the forefront of product innovation. When surveyed about innovation type, 90% of respondents said they were engaged in new product development, while more than 70% were engaged in manufacturing process automation and almost 70% engaged in efficient resource use, including the reduction of water and energy use. Almost half of survey respondents are currently engaged in an on-going collaboration with higher education or research initiatives. There is close work being undertaken with businesses in the agri-supply chain but further support on how to facilitate cross-supply chain working remains a priority for industry.

With consumer demand driving product innovation, the industry is dedicated to providing consumers with a wide range of quality, safe and nutritious products. The industry is committed to reducing sugar levels and working with Government on key policy issues, such as obesity.

Food and drink manufacturers are identifying opportunities for precompetitive innovation, particularly around automation. In order to build best practise, businesses within the sector are also looking to innovations in other industries.

With many manufacturers engaged in long-term calorie reduction programmes, the sector is looking to work with Government on a holistic calorie reduction programme alongside manufacturers. The ask of Government is to help facilitate further innovation through support for fundamental and applied research, which could encourage understanding of how healthier foods can become the foods of choice for consumers. Any further nutrient taxes on food will cause uncertainty for the sector.

Trade

Chapter introduction

Trade, both imports and exports, plays a critical role in the success and economic contribution that the sector can make. It is an area that is likely to change significantly over the next decade and as such it is critical that the industry understands its current position and is clear on its priorities for the future. In this context, there is an important role for Government and industry to work together.

The UK is not self-sufficient in food, running the largest trade deficit among comparator countries

Trade deficit & self-sufficiency

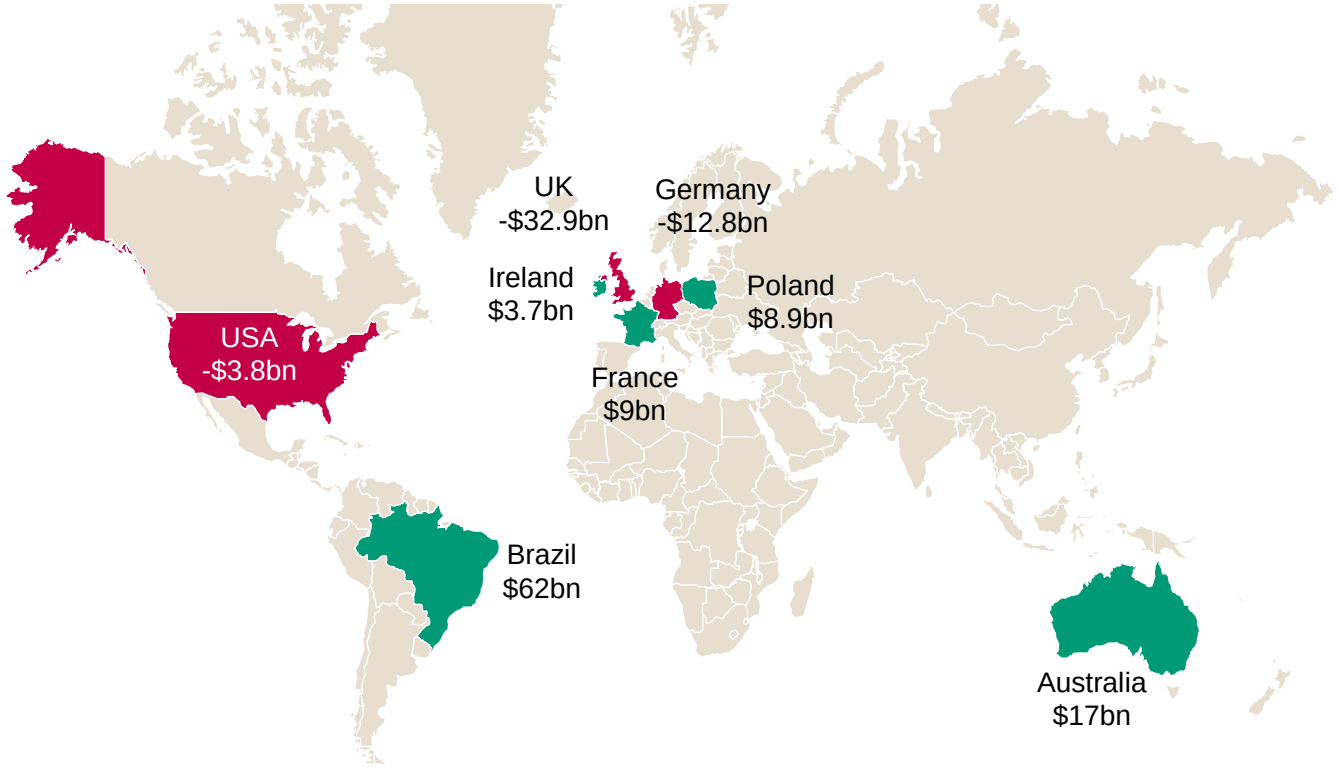
By nature of its geographical position and size, the UK is not self-sufficient in food and drink.

"The UK is not self-sufficient. The idea that food and drink manufacturers can buy everything from the UK is not possible."

The UK and Germany are the only countries among the comparator group to run a trade deficit in food and agricultural products.

During the past decades (1996-2016), the UK has increased its dependence on imports, as shown by the increase in imports outstripping exports in real terms.

Trade balance UK vs key comparators, 2015 ($bn)



Note: Food exports includes sections 0 (food & live animals), 1 (beverages & tobacco), and 4 (animal and vegetables oils, fats and waxes) of the standard trade classification; $bn in current prices

Source: World Trade Organisation, Statistics Database

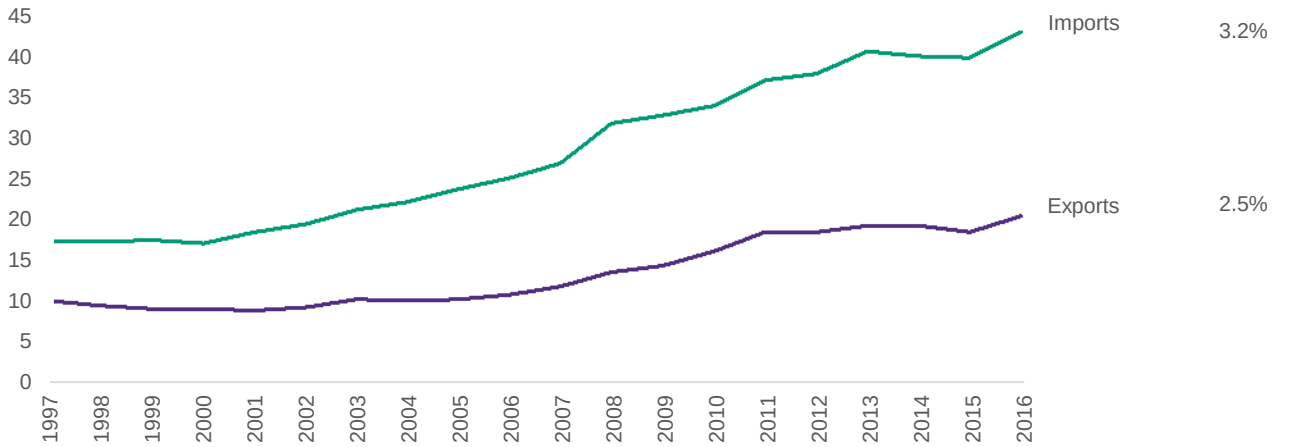
The UK has increased its dependence on imports…

UK trade balance

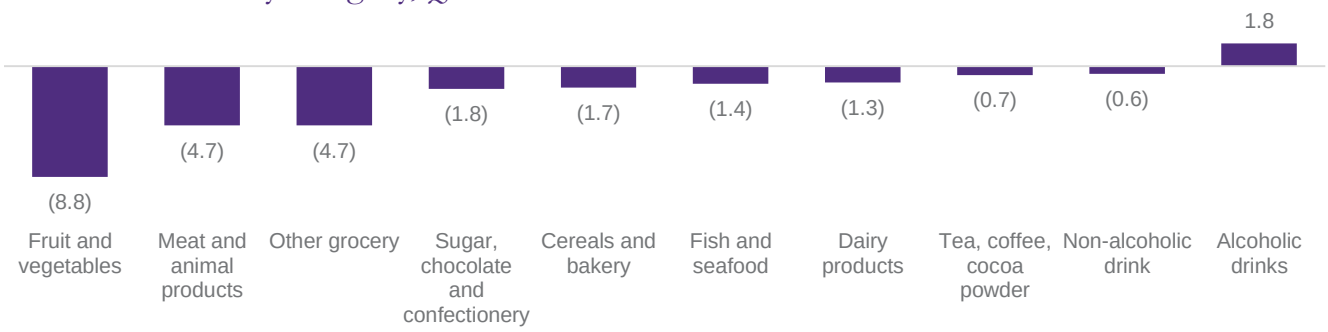
Given the constraints of its size and geographic position, it is expected the UK will run a trade deficit in food products. The largest deficit is run in fruits and vegetables (as the UK doesn't have the climate to ensure plentiful production) and in meat as consumption outstrips domestic supply. The only food and drink category where the UK has a trade surplus is alcoholic drinks, sustained in particular by whisky exports.

However, in recent years, the UK has increased its dependence on imports, as shown by the increase in imports outstripping exports in real terms.

UK trade balance, £m



UK trade deficit by category, £m



Source: HMRC Trade Statistics

Almost half of raw materials are sourced abroad, with 1/3 coming from the EU…

Raw materials sourcing

52% of the food consumed in the UK originates here, an increase in UK food sourcing since 2008 when 49% of food was from the UK. The sample of FDMs surveyed is in line with the national statistics sourcing 54% of its raw materials (ingredients and packaging) from the UK.

29% of UK food is sourced from the EU, a figure that has remained consistent over the past decades and is also reflected by our FDM sample.

FDMs have a complex sourcing supply chain dictated by supply availability, organisational structure and cost.

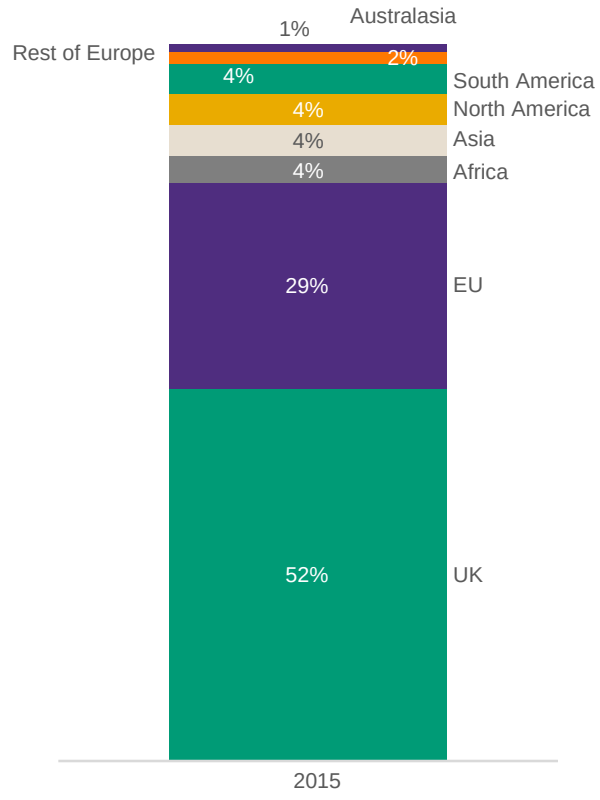
"*We are organised as global procurement with cost towers on a global basis: from packaging, raw materials through to services like marketing & sales. We have centrally led procurement which has helped in rationalising supply base, for example, we have reduced the sugar specs from 50+ to 4-5 and source it globally to keep cost down. Exception: where it makes sense for quality & cost & brand process we source locally e.g.: 100% of milk is UK.*"

"*95% of our products are made in the UK using local ingredients and suppliers.*"

"Our raw materials are primarily sourced from the EU."

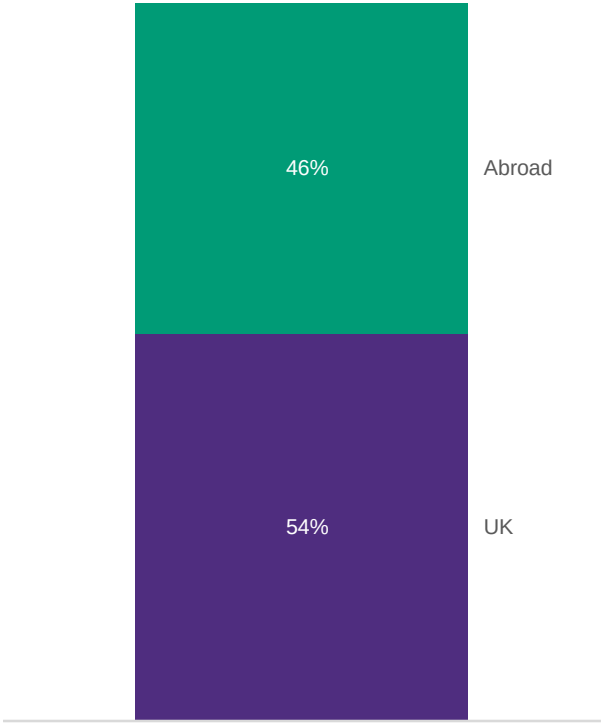
"The majority of our raw materials come from outside UK, sugar – South America and mainland Europe; milk – the majority comes from New Zealand and a little bit from mainland Europe, packaging: 90% comes from Europe."

Source of food consumed in the UK



Note: Based on the farm-gate value of raw food. Consumption of UK origin consists of UK domestic production minus UK exports
Source: Defra, Food Statistics Pocketbook, 2016

What percentage of your raw materials, by value, are sourced in the UK vs. sourced from abroad?



Note: 45 survey responses
Source: Grant Thornton survey and interviews

Lack of local supply and cost advantages drive FDMs international sourcing strategy

Rationale for raw material imports

The major reasons quoted for importing raw materials were: no UK supply (e.g. tea, coffee, palm oil, cane sugar), no UK growing conditions to guarantee supply & taste (e.g. vegetable and fruit juices, dried fruits, herbs & spices) no UK manufacturing or limited supply in the UK (e.g. flavourings, emulsifiers, dairy powders, enzymes, dehydrated meat), price/ lower cost available abroad due to global trading commodities or processing close to crop location (e.g. packaging, edible oils, sugar); UK demand outstrips supply (e.g. chicken) and centres of excellence for specific ingredients outside the UK (e.g. saffron in Spain, coffee whiteners in Northern Europe).

FDMs surveyed have a global supply chain, with 42 countries quoted as a source of supply and many respondents sourcing from across regions. The top 10 countries where raw materials originate are: Germany (13% mentions), France, Spain, USA, China and India (each with 6% mentions), Netherlands (5% mentions), Belgium (3% mentions), Canada (3% mentions), Turkey (3% mentions).

"The UK produces 60% of what we consume in chicken and the idea that everyone can buy from the local market is not possible. In the case of chicken, most fresh chicken comes from the UK, but most frozen and cooked chicken comes from the import market."

"For the flavouring industry there is no supply chain in the UK, much of it is US and China based and comes through brokers and traders and some direct sourcing in the UK. 85% of raw materials come from outside the UK."

"There is a narrow supply in the UK for some ingredients."

What are the top 5 raw materials you source from abroad?

Raw material	% mentions
Packaging	9%
Herbs & spices	9%
Edible oils	8%
Dried fruit	6%
Honey	4%
Tea	4%
Coffee	4%
Chocolate	2%
Corn & sweetcorn	2%
Wheat	2%
Flavours	2%
Rice	2%
Lemon, lime, bergamot oil	2%
Sugar	2%
Glucose, sucralose	2%
Potato dehydrates, derivates and potato seed	2%
Cocoa	2%
Egg & egg powders	2%
Onions & kibble onions	2%
Starch & modified starch	2%
Organic Beetroot concentrate	2%
Rice Flour & starch	2%
Other	26%

Note: 37 survey responses
Source: Grant Thornton survey and interviews

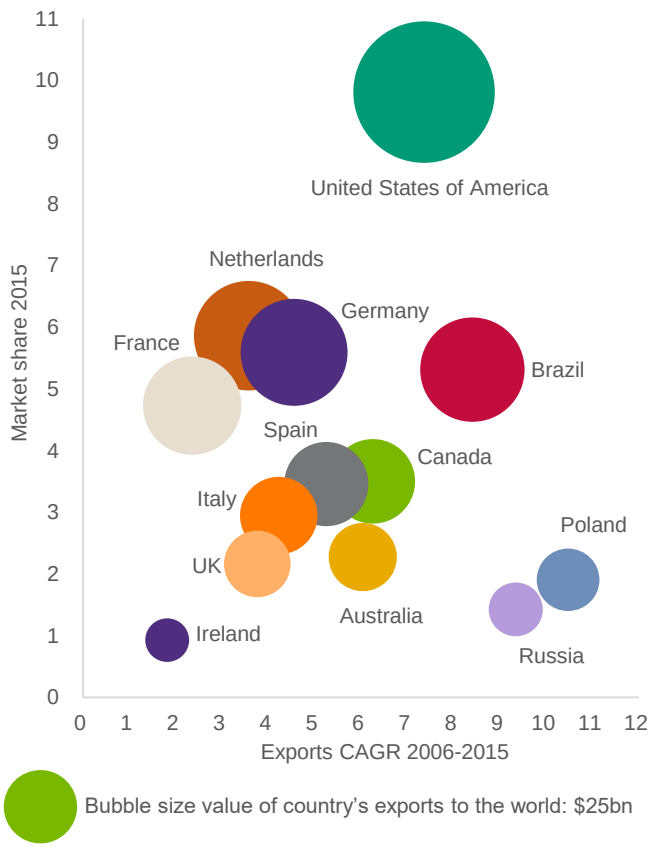
The UK maintained its market share of global food exports, albeit displaying slower growth vs most competitors

UK share of world exports

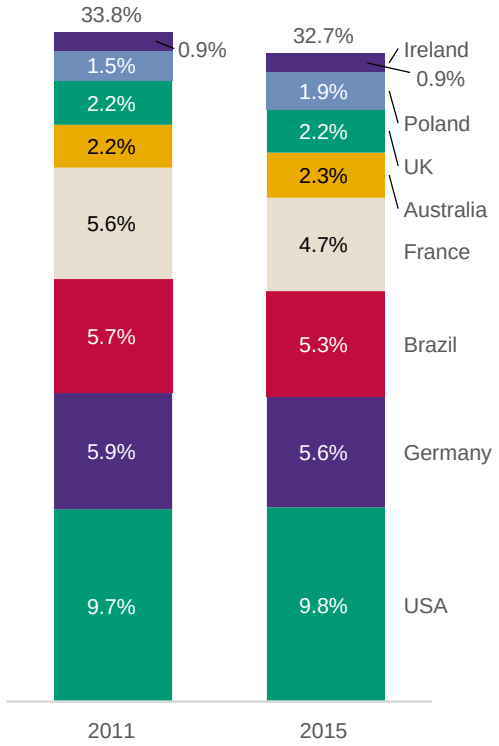
The value of global food exports has grown 7% CAGR during the 2006-2015 period (albeit growth declined in recent years, with a flat global exports food market of $1,335 billion). According to the World Trade Organisation, UK food exports have grown at 4% CAGR in the period.

The UK maintained its global food export market share at 2.2%. Global market shares have been relatively flat in the last five years for most UK comparators, except France who experienced a -0.9% loss in market share down to 4.7% and Poland which increased its share to by 0.4% to 1.9%. Poland experienced the highest growth in exports in the past five years and although its export mix may be less value added, its growth trajectory indicates it is fast becoming a key competitor on the global market.

UK world exports vs key competitors, $bn



Market share of world exports, %



Source: World Trade Organisation, Statistics Database
Note: Food exports includes sections 0 (food & live animals), 1 (beverages & tobacco), and 4 (animal and vegetables oils, fats and waxes) of the standard trade classification; $bn in current prices

FDMs appear to have accelerated exports, although for the majority exports are a secondary priority

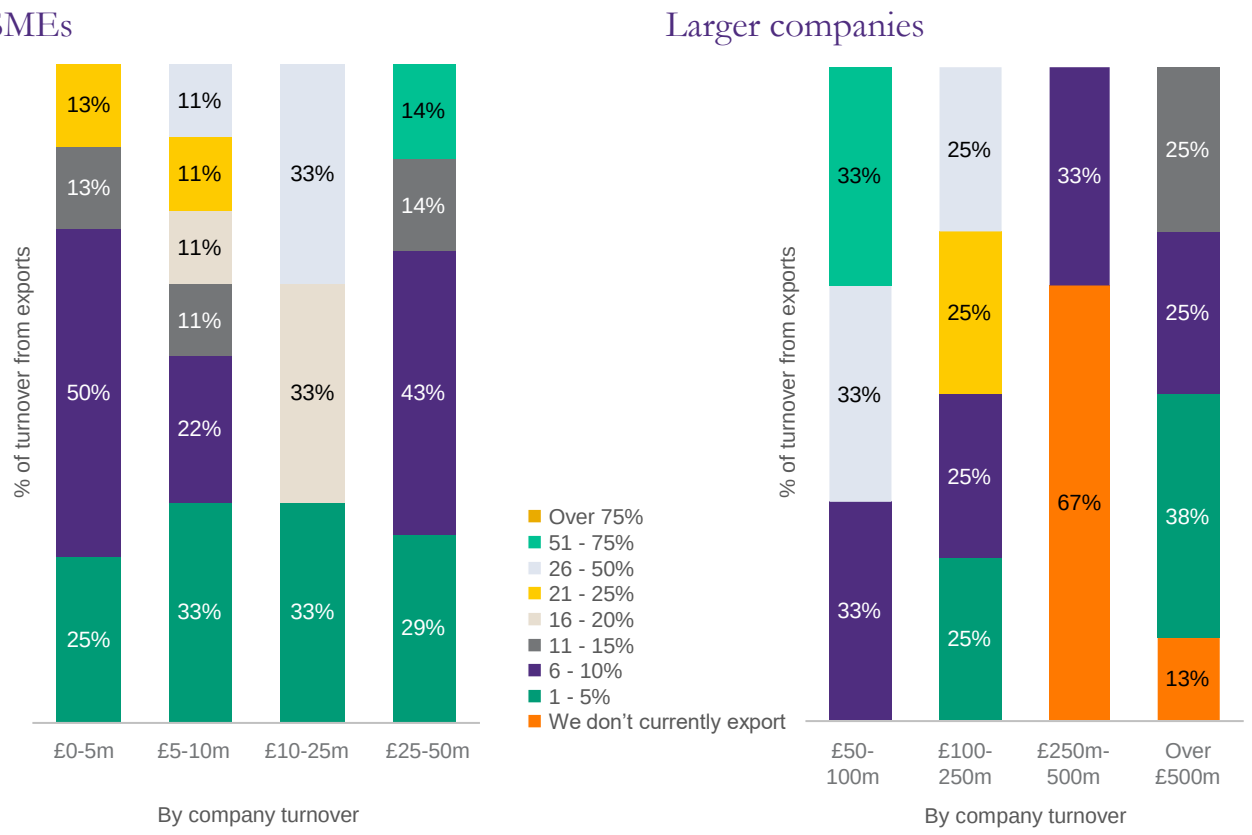
Exports as share of turnover

93% of the FDMs surveyed currently engage in export activities. This represents an increase vs Grant Thornton's 2011 study for FDF when 21% of companies surveyed did not export. The majority of manufacturers are focused on meeting local UK demand, with exports accounting for under 10% of their UK turnover for 58% of the sample.

7% of the sample surveyed does not currently export, mainly because these are multinationals with local operations in other EU and non-EU markets. The most active exporters in the sample are SMEs.

We had intended to understand what, if anything, stops UK FDMs from exporting, however only three companies have answered this question in our survey, all stating that there was no particular barrier, but they are focused on UK demand. Other reasons stated included shelf life and the fragile nature of their products and because they have a sister organisation abroad that served that market.

What percentage of turnover do you export?



Note: 45 survey responses
Source: Grant Thornton survey and interviews

Europe and USA remain key export markets, although there is a shifting focus towards Asia and Middle East

Top export countries

Ireland is the main EEA trading partner of the companies surveyed (in line with the industry overall as per the UK export statistics), followed by France, Netherlands and Germany.

Outside the EEA, the main export destinations for FDMs surveyed are North America, Australia, UAE, Japan and Russia.

"It is not economically viable to export our products beyond EU."

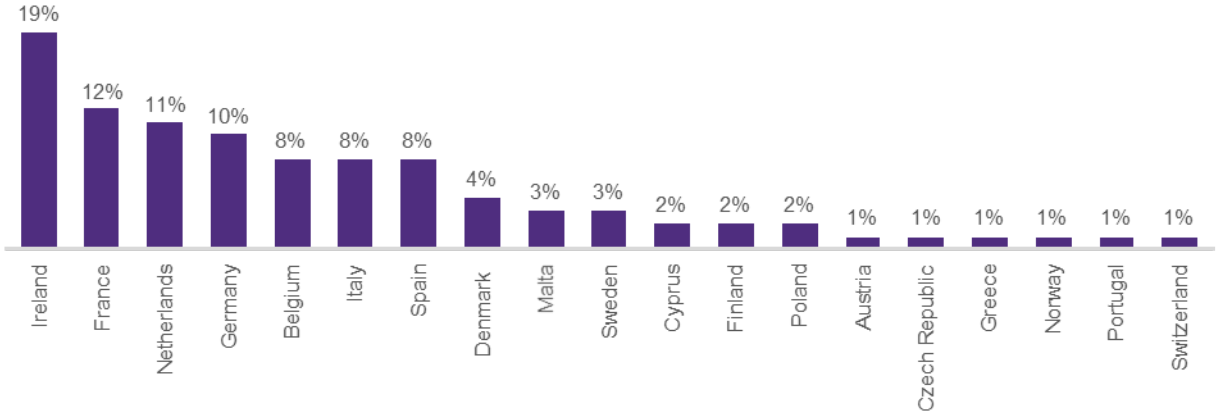
"*Exports start with innovation particularly in our sector as there is someone in the local market cheaper and the advantage vs local producer is lost because of cost of transport.*"

"We are targeting ASEAN countries - Indonesia, Thailand as supported by GDP growth, demographics and local Government support for our product categories which make this our biggest opportunity and we have invested behind it."

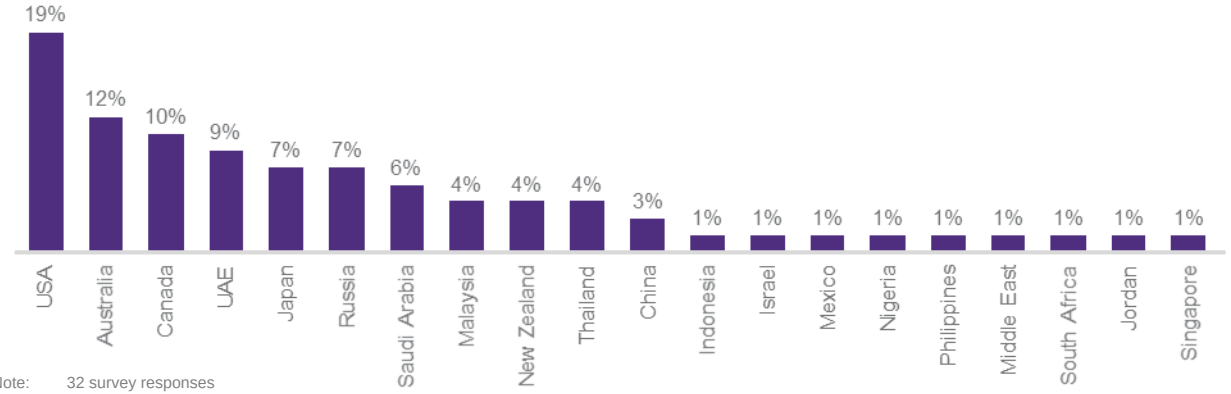
"Our company is a good example of the export opportunity for British food. We've grown 18% yoy in the last two years. The strategy to build an international business was to set up an international business unit with dedicated group of people: marketing, selling and operations and financial support. We have focused on very few countries and put sales people on the ground: focusing on Australia and the US and now Middle East."

"The growth strategy is based on following certain products categories we are heavily invested in and overlaying a country approach eg. Thailand based on market research as Government wanted to become the kitchen of the world and we setup a factory of 35-40FTEs, targeting Indonesia organic growth model and did the same in Brazil."

What are the top 5 EEA markets by value that you currently export to?



What are the top 5 non-EEA markets by value that you currently export to?



Note: 32 survey responses
Source: Grant Thornton survey and interviews

China, India and the UAE represent the main non-EU markets FDMs would like to tap into

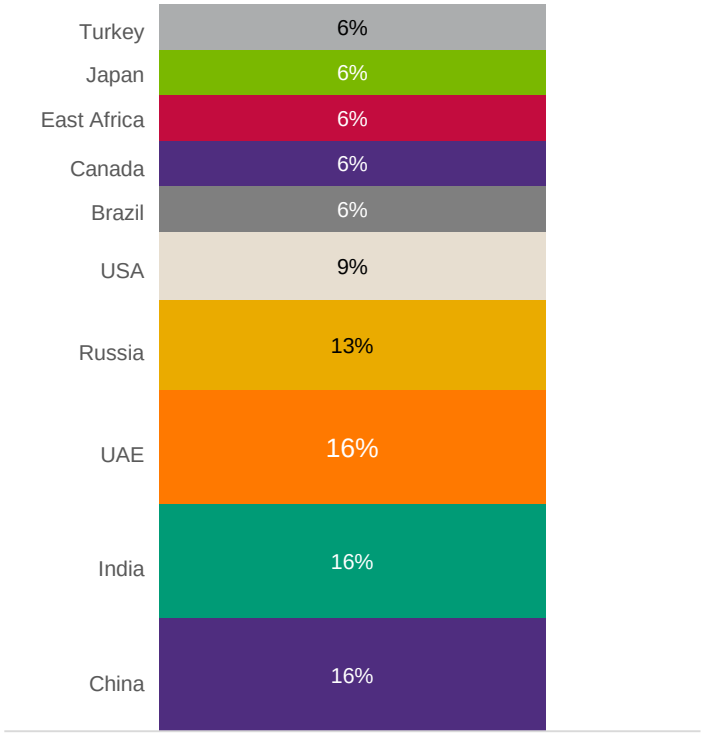
Export target countries

China, India and the UAE represent the top 3 markets where FDMs surveyed do not currently export, but would like to target.

These countries were prioritised by the companies surveyed based on their scale which affords a sizeable middle class target customer base with demand for Western products.

The main barriers companies associate with exporting to these untapped markets were: the complexity and costs associated with investing in a market the company is not familiar with, the need to identify a distributor in the local market, the high import tariffs applied (in India specifically) as well as uncertainty on consumer demand and affordability of UK products for local consumers. In contrast, for the USA, the main developed market identified as a future export target, the main barriers identified were around divergent legislation vs EU and complex FDA approval requirements.

What are the top 5 non-EEA markets you would like to export to but do not currently export to and why?



Note: 19 survey responses; Multiple options question, therefore total number of country mentions higher than number of companies responding to this survey questions
Source: Grant Thornton survey and interviews

Food and drink exports reached a historic high of £20.2 billion, with the devaluation of the pound set to boost exports in 2017

UK food and drink exports

Food and drink exports have grown to a record £20.2 billion in 2016, showing a 2% CAGR over 2011-2016. This trend was accelerated in 2017 when exports benefited from the devalued pound.

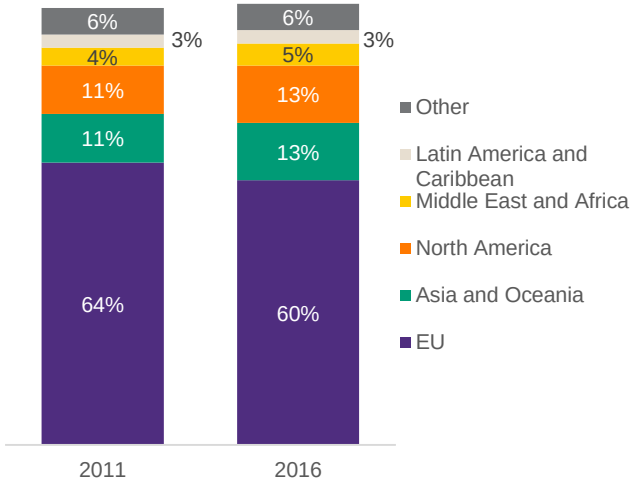
The EU remains the largest export destination, although its share has declined from to 64% to 60% as exports to other regions grew at a faster rate and growth remained relatively flat with a CAGR of 0.8% over the period.

Asia and Oceania remained the second largest export region, closely followed by North America each accounting for c. 13% of total exports.

Middle East & North Africa have experienced the fastest growth (8% CAGR) and account for 4% of exports. Growth was driven by Qatar, Saudi Arabia and UAE (13%) and Tunisia (100% CAGR, but from a much smaller base).

Eastern Europe (1% of exports) declined the fastest, mainly as a result of sanctions imposed on EU food and drink imports by Russia (-15% CAGR), but also a decline in Ukraine (-7% CAGR).

UK food and drinks exports, £bn



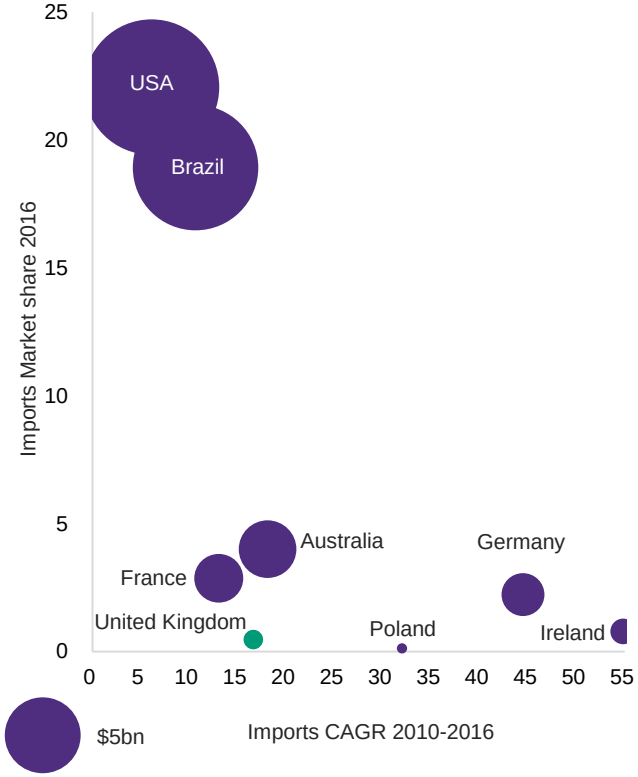
	CAGR 2011 – 2016
EU	0.8%
Asia and Oceania	5.3%
North America	5.7%
Middle East and Africa	8.0%
Latin America and Caribbean	(3.4%)
Other	(1.0%)

Exports Q1 2016 –Q1 2017, £bn

Note: Includes food, non-alcoholic and alcoholic beverages
Source: HMRC Trade Statistics

The UK lags behind EU competitors in targeting China as shown by its lower market share and growth in exports

UK's share of China imports (food & drink imports $99bn)



Note: Bubble size represents value of exports by UK & its competitors into the host country. Total food & drink imports into host country in brackets of chart title; SPS-sanitary & phytosanitary measure; TBT- technical trade barriers (e.g. standards, technical requirements, testing, labelling, certification)

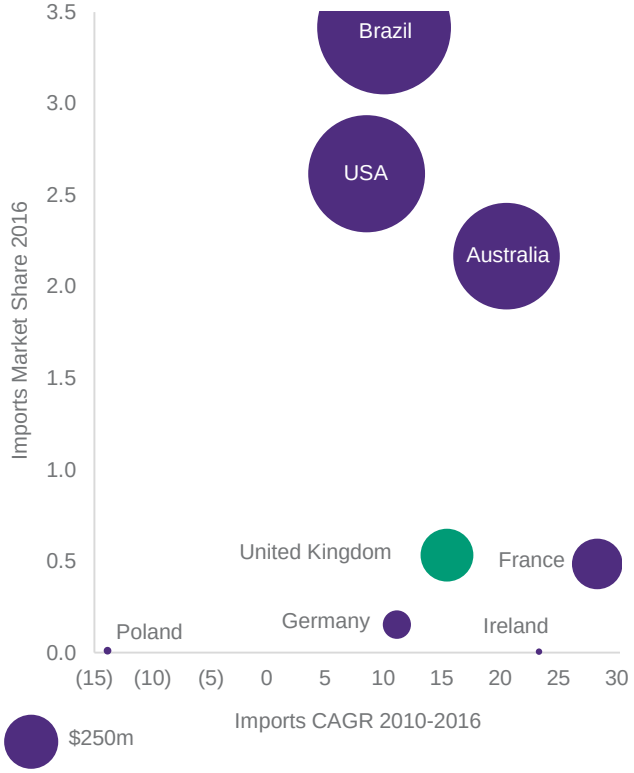
Source: UNCTAD Comtrade; European Union Market Access Database

Trade barriers in China reported by EU members (applicable to FDMs)

Measure imposed by China	Type
Non-recognition of EU regionalisation due to avian influenza	SPS - Avian Influenza (AI)- Animal health reasons
Chinese import ban imposed on bovine/ovine genetic material due to Schmallenberg virus	SPS - Schmallenberg virus
Overly strict Chinese microbiological standard on listeria which is not in line with international standards	SPS - Micro-organisms (public health)
Import conditions related to milk and dairy products	SPS - Other SPS import restrictions
Non recognition of EUs regionalisation measures strictly implemented due to African swine fever.	SPS - African swine fever
Longstanding and unjustified import ban on EU Bovine/Ovine and products thereof due to BSE.	SPS - Bovine Spongiform Encephalopaty (BSE)- Animal health reasons
Burdensome application process for approval of meat establishments for exports to China	SPS - Long approval procedures- Other SPS import restrictions
Intellectual Property Rights & Enforcement	TBT - Enforcement on IPR
Compulsory certification system	TBT - Standards and Other Technical Requirements

Historical ties appear to benefit UK's exports to India, but its tariffs remain prohibitive

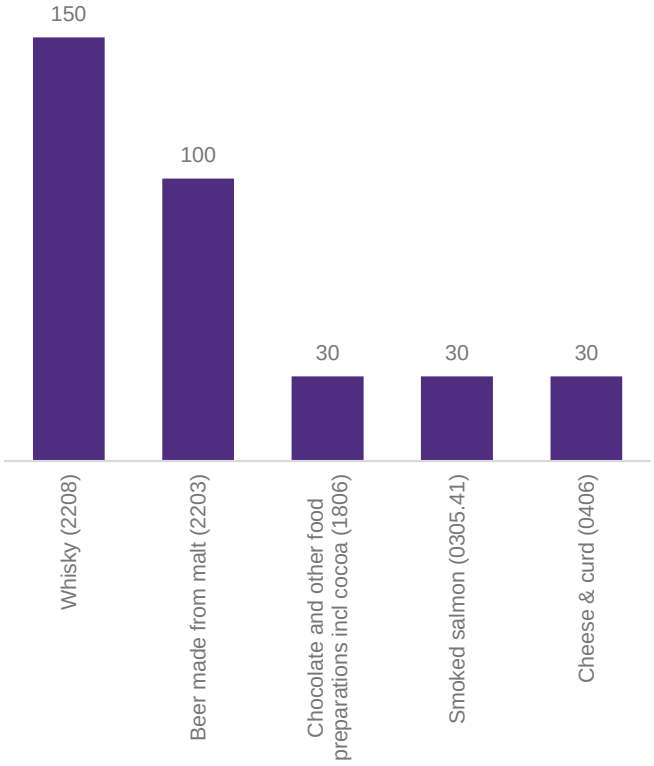
UK share of India imports (food & drink imports $44bn)



Source: UNCTAD Comtrade; European Union Market Access Database
Note: Bubble size represents value of exports by UK & its competitors into the host country. Total food & drink imports into host country in brackets of chart title; SPS-sanitary & phytosanitary measure; TBT- technical trade barriers (e.g. standards, technical requirements, testing, labelling, certification)

Tariffs applied by India on EU products

These 5 products represent the 5 largest food & drink UK exports to the world

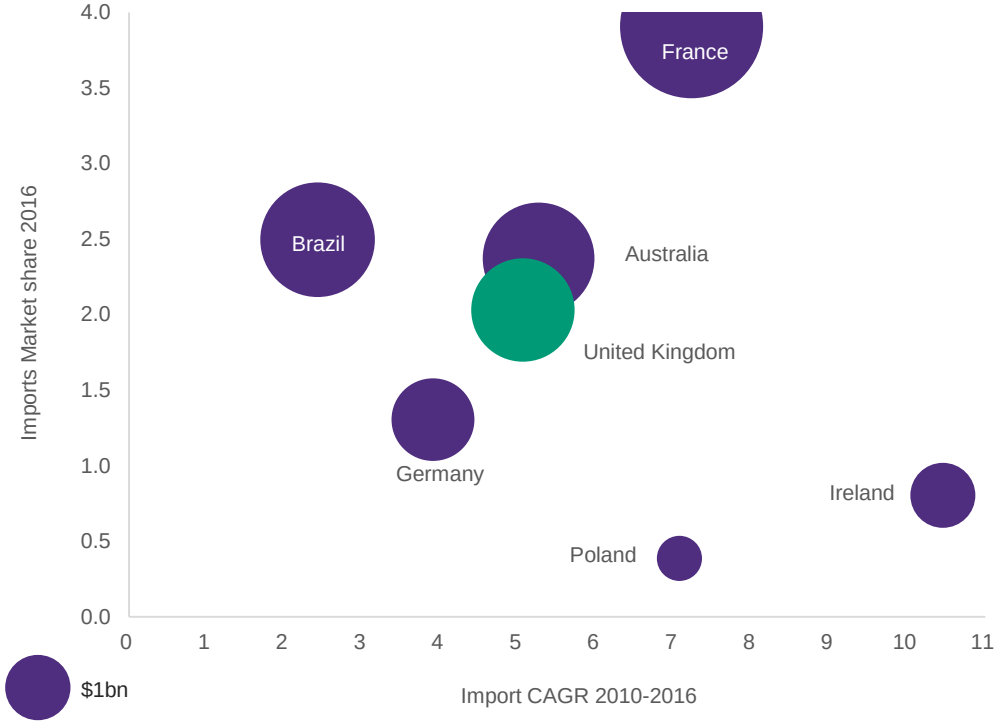


Trade barriers in China reported by EU members (applicable to FDMs)

Measure imposed by India	Type
Standards for food additives for alcoholic beverages	TBT - Standards and Other Technical Requirements
Tax measures and other import measures applied at State level on imported wines and spirits	Tariffs - Internal taxation
Labelling requirements for maximum retail price	TBT - Labelling requirements
Restrictions on imports of live bovines, bovine embryos and bovine semen	SPS - Non compliance with international standards- Other SPS import restrictions
Restrictions on imports of plants and plant products relating to fumigation treatment (methyl bromide which is forbidden in the EU)	SPS - Treatments (e.g. methyl bromide, cold treatment) - Plant health reasons
Live standards (slat content)	SPS - other SPS import restrictions
Intellectual property rights	TBT - Enforcement problems on IPR

UK exports command a good position in the US, but the divergence on regulatory framework acts as a barriers

UK share of imports in USA (food & drink imports $136bn)



Trade barriers in USA reported by EU members (applicable to FDMs)

Measure imposed by USA	Type
Restriction/ban on sturgeon imports	Quantitative Restrictions and Related Measures
IPR: Inadequate protection of Geographic Origin	TBT - Legislation on Appelations of Origin and Geographic Indications
Rules of import for dairy products	SPS- Public health
Slow procedures formal import authorisation and pest risk assessments for all food crops, including edible fruit and vegetables	SPS - Long approval procedures Other SPS import restrictions
Sanitary measures applied by USA for imports of live bivalve molluscs	SPS – Other SPS import restrictions
Following removal of bovine animals and products import ban, establishments must be approved and Member States re-instated by FSIS for compliance with hygiene rules	SPS - Bovine Spongiform Encephalopaty (BSE) Animal health reasons

Note: Bubble size represents value of exports by UK & its competitors into the host country. Total food & drink imports into host country in brackets of chart title; SPS-sanitary & phytosanitary measure; TBT- technical trade barriers (e.g. standards, technical requirements, testing, labelling, certification)
Source: UNCTAD Comtrade; European Union Market Access Database

FDMs surveyed perceive the EEA as the largest export potential for the industry as a whole

Countries with greatest UK export potential

FDMs see the greatest export potential in EEA markets given their proximity, historical ties and legislation harmonisation. Rich markets with similar language and consumer dynamics (USA, Canada, Australia, New Zealand) could also provide an opportunity for export despite some specific challenges.

"Once Britain is out of EU we feel that with a lower GBP-Sterling, in the short term we could see exports to EEA could increase"

"The further you go from the EU the more complex it is to export because of non-harmonised regulatory measures."

"EEA is currently the top UK export market. Geography suggests it should remain so. US - Local preference for domestic production. Difficult entry procedures and the need for additional product liability insurance. Canada - More open to UK products than US and less onerous insurance requirements. Australia & NZ - Open to UK exports, but very small markets. China - Very difficult to penetrate for smaller businesses. India - High tariffs and fragmented local distribution. Japan - Miscellaneous non-tariff barriers. Middle East- Some recognition of UK brands, especially confectionery"

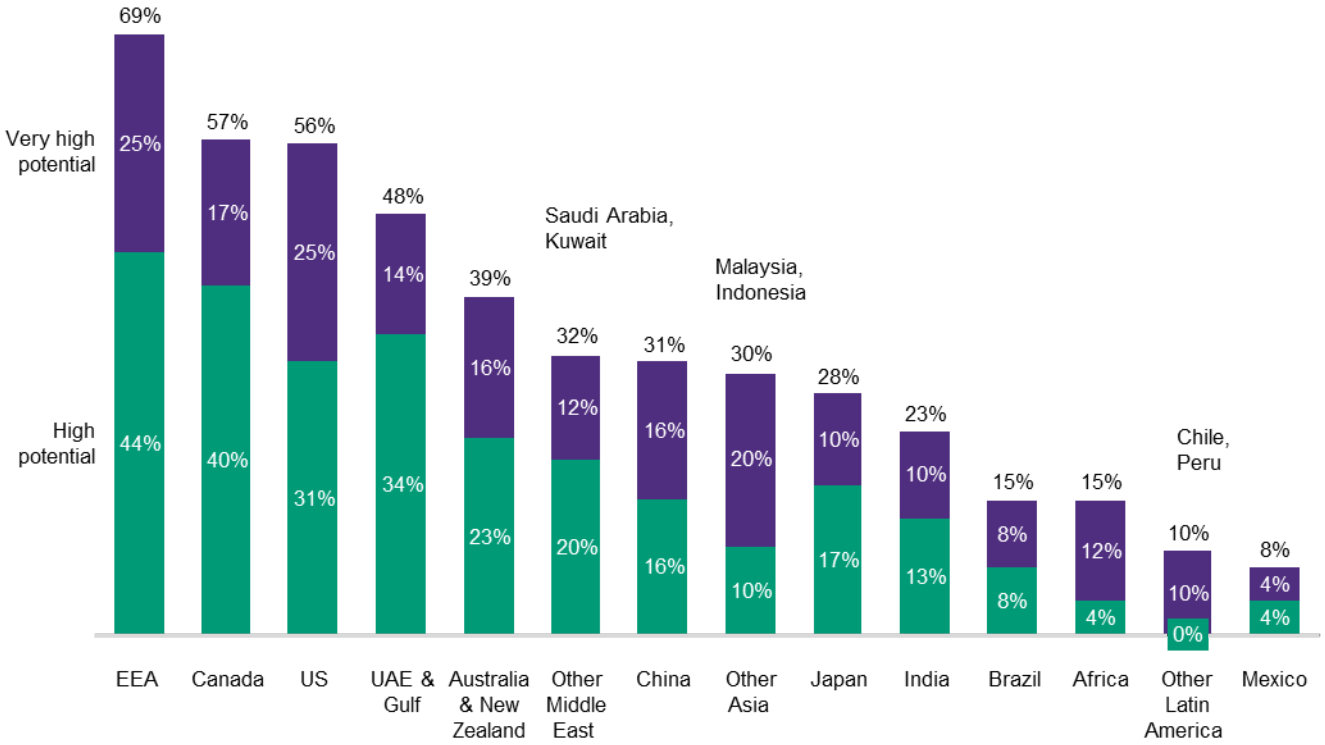
"US and Australia have the highest potential due to product alignment and similar taste profile. Also value proposition could work due to market value at the checkout making global network affordable."

"India - huge premium on "Made in UK" and UK companies should look to leverage this by JV with Indian partner who can provide market access and assistance."

"One of the big opportunities we have is in Asia: India and China, the growth is coming from the socio-ec growth in certain classes of consumers that want to buy EU products."

"The UK has a bigger advantage in India because of the language and history vs other EU countries."

Where do you think the export potential lies for UK food and drink manufacturing (ie both in terms of market demand and in terms of the ability for UK manufacturers to enter the market)?



Note: 42 survey responses
Source: Grant Thornton survey and interviews

Non-tariff measures impact ability to export, though the effect may be increased if UK diverges from EU framework

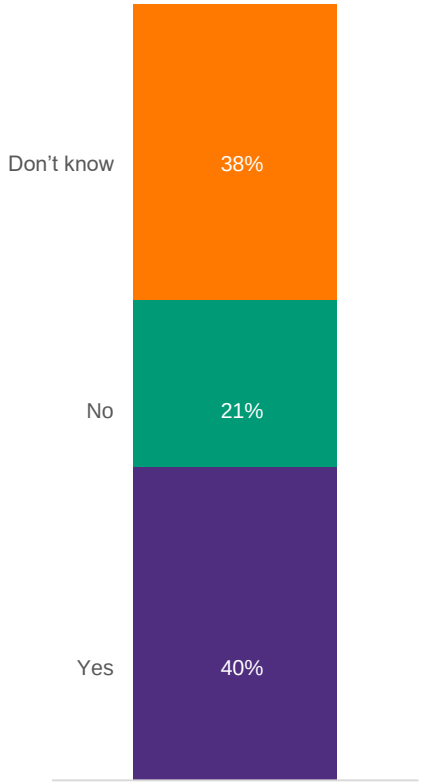
Non-tariff measures

Non-tariff measures appear in the form of regulations and can take many guises which make them difficult to tackle by Governments or exporters. Some of them touch on sensitive cultural and social issues. Although in some cases, there may be intentional trade barriers favouring domestic products against imports, sometimes they are put in place to address legitimate concerns such as consumer information through labelling, food safety, abuse of intellectual property rights or environmental protection.

38% of respondents did not know if non-tariff measures and legislations were acting as a barrier to exports, confirming the complexity of the topic.

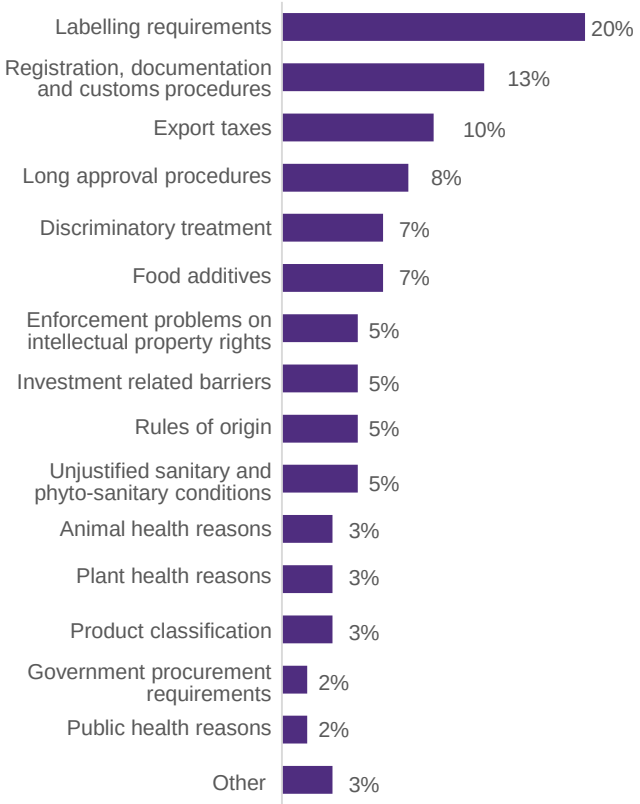
40% of companies surveyed stated non-tariff barriers were affecting their ability to export to their full potential. 20% of these, identified labelling requirements as the main non-tariff barriers, followed by registration and customs procedures.

Do non-tariff measures affect your ability to export?



Note: 42 survey responses
Source: Grant Thornton survey and interviews

Which non-tariff measures stop you from exporting?



Note: 17 survey responses, excludes "legislation" as it can be argued all non –tariff barriers arise from legislation
Source: Grant Thornton survey and interviews

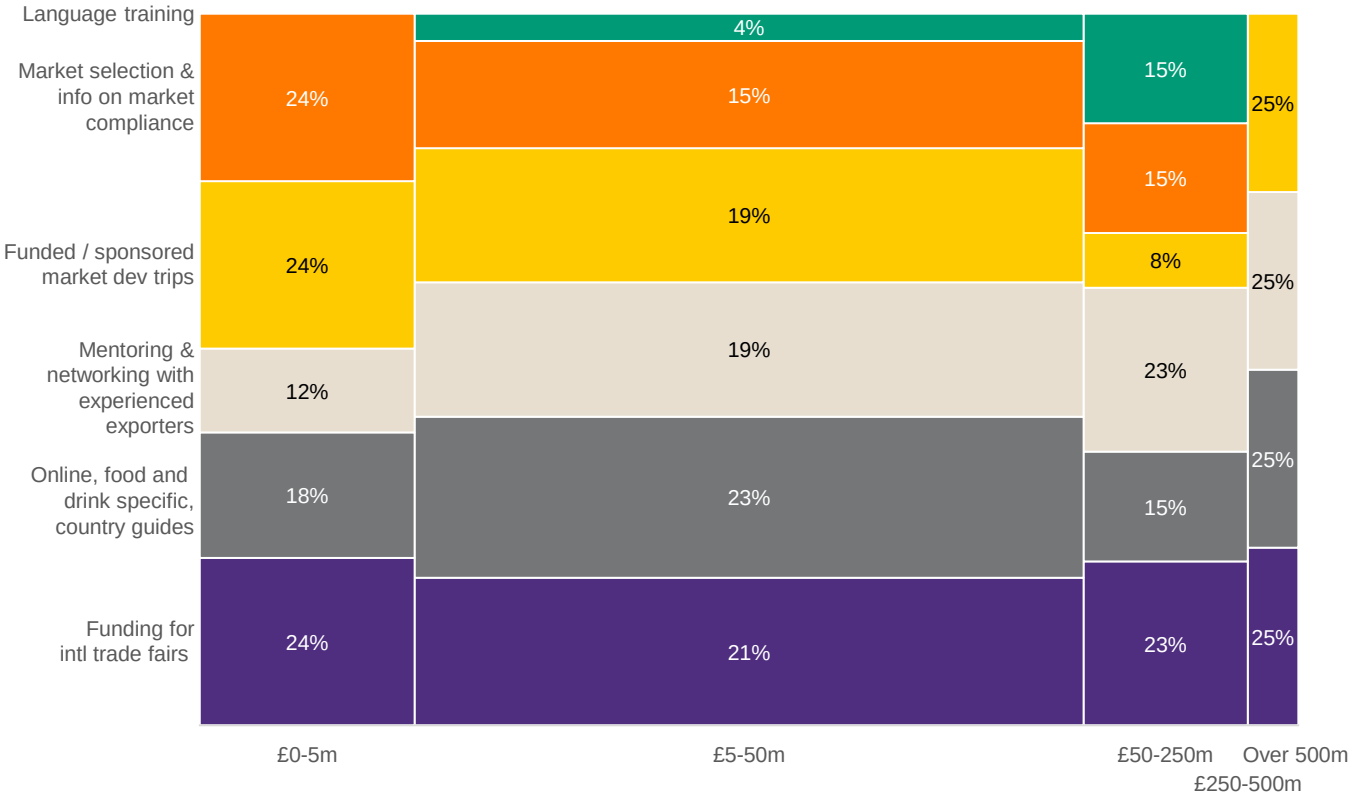
The industry perception is that Government's ambition to grow exports requires more structured/interventionist support

Government export support measures

As non-EU markets are likely to become more important following UK's exit from the EU, FDM require targeted Government support to compete on an equal footing with other export-oriented countries. From the menu of support measures provided in the survey, the main measures that FDMs would like to benefit from are funding towards international trade fair participation and market development trips, alongside targeted market research and mentoring/networking opportunities with experienced exporters.

SMEs ranked funding for international trade fair participation, food and drink specific market guides on the target markets and funded market development trips as the main Government support measures that would help them to develop exports. Large companies also ranked funding for international trade fairs as a preferred measured jointly with mentoring and networking with experienced exporters. Some FDMs remarked on the paramount importance of trade deals negotiations to secure access to non-EU export markets. Scottish companies remarked they were getting export support in the form of funding and networking from the Scottish Government providing some evidence for the hypothesis that the level of export support among the devolved administrations differs.

What type of Government support would you require to start/grow exports to non-EEA markets?



Note: 42 survey responses; Note: multiple options question, therefore total number of support options higher than number of companies
Source: Grant Thornton survey and interviews

Government support for exports (continued)

Government export support measures

"The Government has got this ambition to be an exporting nation – does is understand the resource this needs? It needs ministers to go and speak to foreign companies and regulators."

"Embassy or consular staff need to be trained by exporters to help facilitate trade. The lack of food industry knowledge among officials across all elements of the supply chain hampers exporting."

"One to one hand-holding introductions/ relevant networking/just doing something more than drinks receptions."

"Help in breaking down trade barriers and countering free trade deals secured by other countries eg. Australia."

"We have access to the above through Scottish enterprise and SDI."

"Look at exports from positive perspective. Good thing we spend on international aid to support global society. We should try and get similar agreed investment aimed at exporting companies. Government committed to similar budget as international aid for export."

"As an SME you need help to get started on exports. If you shake on a deal with Tesco, all is clear, while for exports you have to protect the trademark, understand the legislation on gluten free which may different in that market, labelling rule, documentation to accompany the product."

Source: Grant Thornton survey and interviews

Some industry members see opportunities in UK's EU exit…

Impact on trade

For a minority of companies that have been negatively impacted by the EU's import restrictions and tariffs on imports of raw materials for decades, leaving the EU represents an opportunity to import raw materials from non-EU markets at a lower cost, thus improving margins.

"*In the industry change is a threat, therefore companies would prefer to operate in an environment where the costs are artificially inflated by the EU because they are worried by disruption. For us status quo is a threat as the majority of trade (imports of raw materials) we do is outside the EU and the EU limits the amount of trade you can do tariff-free with the rest of the world."*

The UK's decision to leave the European Union is likely to have far reaching implications accessing EU and non-EU markets. In the short-term, with a devalued currency and full access to the EU markets for the next two years (until the UK leaves the single market), food and drink manufacturers have an opportunity to maximise exports to the EU. Similarly, with a devalued currency, the UK products can compete with EU products in accessing US and Asian markets.

Clearly after the referendum, although we were importing more inflation costs, those of us who are focusing on building international businesses based on export, has a like-for-like 15-20% advantage over the very same plans."

Leaving the EU affects not only the UK's trading relationship with it, but also the rest of the world, as at present all the UK's trade deals with third countries are EU agreements. The countries the UK currently enjoys trade deals with and the terms of those deals will change. However, as the UK gains the ability to negotiate trade agreements independently of the EU, there will be new markets for UK businesses to explore. Prior to the June 2017elections, the Government has already stated its eagerness to agree quick deals with China, Brazil, the Gulf States, Australia, New Zealand, India and the United States, which are among the countries where food and drink manufacturers see the largest export opportunities.

The UK's decision to leave the EU and consequent pound devaluation has resurfaced calls for import substitution, as the cost of sourcing ingredients from overseas markets negatively impacted margins. Although, the issue appears to be a divisive one for the industry, some of the industry leaders interviewed pointed out that the new world order after UK's EU exit could also spell out opportunity on the supply side on issues such as import substitution. The task of substituting imports for local produce is difficult and not a quick win, yet some perceive it as a "low hanging fruit" vs increasing exports. Import substitution may offer some opportunity in the raw ingredients/crops area, as given limited arable land, there will at some point be an inevitable choice to make between increasing cultivation of one at the expense of another. However, there may be more significant opportunities to widen the supply for some specialist processed ingredients by investment in processing plants.

"There needs to be work by the FDF on import substitution opportunity as some import substitution is easier to do than exports. The industry needs to define areas of ingredients or input cost/materials that could be substituted because there is a change in exchange rate of 15% vs the dollar."

"The industry is mainly talking about exports, but the biggest opportunity for the company is in import substitution."

Source: Grant Thornton survey and interviews

However, for the majority UK's EU exit represents increased costs and lost opportunities…

Impact on trade

However, for many of food and drink manufacturers we spoke to, the UK's decision to leave the EU means a change to the status quo which brings volatility and uncertainty. Food and drink manufacturers who are sourcing ingredients from abroad have already experienced a negative effect through the devaluation of the pound which resulted in increased raw materials cost and, therefore, higher cost of goods, which have to be passed on to consumers. This negative impact was also felt by companies who import finished goods. As inflation returns, food manufacturers are forced to think strategically to avoid the threat of retailers demanding price cuts (as retailers operate in a competitive environment and serve consumers who in turn are anxious about the impact of UK leaving the EU on their finances).

"We are seeing some cost inflation this year which is putting pressure on system as our customers (retailers) don't want to increase prices due to competition with discount stores."

"Weakening in the £ already had a negative effect on purchasing, which needs to be to offset through price increases, making for difficult negotiations with retail. We hedge currency and that covers us for the short-term. If Brexit results in additional taxes and tariffs, the cost of importing will become significantly higher and needs to be reflected in the price paid by the end consumer. The alternative is looking at import substitution and for how much of the raw materials we can we develop suppliers in the UK to neutralise the tax and tariffs effect."

"When the currency started to drop last year we were hedged until November/December on euro and a bit longer on dollar, but we are facing significant impact. Overall exposure forecast is maximum15% increase on raw materials and 7-8% increase on cost of the business and passing on the price increase."

Although the shape of UK's future relationship with the EU is not yet known, food and drink manufacturers acknowledge the risks and increased costs of leaving the single market ranging from potential tariffs they may need to pay to access EU markets to the more complex non-tariff measures.

"*Main issues: after Brexit tariffs issues and value of the£, will both impact the industry. If the pound goes down British produce becomes more attractive to other markets, more attractive to export, but that also means the price of food in the UK may go up as the price will be set by the export market where you divert the product."*

"Brexit may make it more difficult to export to closest market if there is any form of tariffs and also the practicalities of bringing truck from Portugal, Spain, France, if there is added complexity of border controls because of shelf-life of product."

"Export opportunities are few and far between in our industry – some costs could be taken out of the system as a consequence of reducing European Regulations . Maybe some opportunities to go it alone with some countries such as the emerging markets. Europe traditionally imposes tariffs and get nervous around these sort of opportunities, Mexico and Russia for example. But for every opportunity there are five problems."

Source: Grant Thornton survey and interviews

However, for the majority UK's EU exit represents increased costs and lost opportunities (continued)…

Impact on trade

If the UK has to pay tariffs on trade with the EU, the costs associated represent a major risk on margins for food and drink manufacturers given that almost /3 of ingredients are sourced from the EU and EU accounts for c. 49% of UK exports. This risk is exacerbated for those with a cross-country integrated supply chains in the industry, with some products crossing the border into the EU several times before the finished product reaches the consumer are creating another potential risk in case the UK is not negotiating an all encompassing free trade agreement with the EU. This is mainly the case with factories across the supply chain based in Northern Ireland and the Republic of Ireland, but also other EU countries, which may be forced to pay tariffs or other import duties during the manufacturing process of transforming raw materials into intermediate and finished products.

"*Integrated and harmonised supply chains are efficient as they allow for common standards to be applied and multilingual packaging in a single site serving a lot of Europe. If Brexit and subsequent regulation unravels these efficiencies it will go against the Government's desire to bring productivity to the UK.*"

"The complication of our supply chain is that the raw material is purchased from Ireland, then it is sent to Northern Ireland to be turned in finished good and 2/3 shipped back into the Republic for consumption. After Brexit we may face an import tax of some kind or restriction to bring the raw materials in Northern Ireland and then in Ireland import control to send the finished product back over the border. We need to run the numbers to decide the best supply chain and manufacturing set-up in this context."

""Balancing the carcass" – using the whole product for consumers – is an important consideration for the industry. Brexit has considerable impact on the sector as the meat industry is not a straightforward single transaction to produce the end product. Ultimately there are many cross border transactions in the industry as the product is processed and then packed. What if we don't have access to these markets directly? For example there are lots of packing lines which are often done in the Republic of Ireland and then back to the UK via Northern Ireland. Currently this is a straightforward transfer within the process but could, following Brexit, incur an import/export charge"

Divergence in regulatory framework (e.g. administrative approvals, compliance processes, rights of establishment and recognition of standards) is also a major risk for the industry.

"Food labelling control, public control of public procurement, health claims- getting a sensible approach to all these issue will be key. It is important we remain aligned on these issues to EU"

"Marketing regulation and particularly labelling: as we have traffic sign labelling in the UK. Uncertainty on labelling, traffic light is not a European legislation, but we think it is the direction of travel for the EU and if the UK takes a different approach it adds uncertainty."

"The real barriers are in regulatory framework. In the flavour industry we work with authorities 15years to develop a flavouring framework and come to terms with what we have to do, if it changes it becomes massive issue for us, the debate about equivalency on regulation is the most important for flavouring businesses in the context of Brexit. If I want to ship outside the EU to Turkey or Egypt or other Muslim markets, the regulatory barriers are incredibly high, halal authorising bodies charge money to approve individual product."

Source: Grant Thornton survey and interviews

Detailed policy development and a clear plan post 2019 could minimise negative impact on trade

Impact on trade

Some companies have engaged in detailed scenario planning, however within our sample this exercise was limited to a few companies, mainly multinationals. The majority of companies interviewed mainly contemplated the uncertainty of the situation and complexity of the task.

"We've done the work on Brexit and if you take a hard Brexit scenario and break down potential impact, major risk around trade and tariffs, skills around people, financial risk on currency and further down the track we have to look for other risks changes in taxation could be material in the future, regulatory change and agricultural subsidies"

Given the EU's share of UK food and drink exports, continued full access to the EU market is paramount to the industry's success. Therefore, industry leaders are calling for detailed policy development and a clear Government plan, as lack of clarity on the structure of future regulatory framework and base from which the UK can trade with the world makes scenario planning costly and prone to errors. However, for this to happen, the FDM industry also ahs to come together to define priorities and educate the Government on the impact that particular scenarios would have on the industry post-UK leaving the EU.

"*A clear plan is our ask from Government and a slower transition [following the two year exit negotiation] if possible."*

"*The sector will have to live with uncertainty now, certainty around Brexit is a false hope. … With no idea as to the regulatory regime in place in the future it is hard to do scenario planning of trade barriers."*

"We need as an industry to engage with Government to influence the Brexit negotiations, we need to get below the very high level and obvious of continuation of free trade and as an industry we don't have the policy skill set you get to that level of detail, a high level set of asks will not move us very far."

"A single market is very different to a Free Trade agreement – such an agreement would still involve import and an export arrangements and consequently costs."

"Cut & paste EU regulations, tariffs into new law and then simplify from there, taking things our rather than adding complexity is a sensible approach."

Source: Grant Thornton survey and interviews

Made in Britain – on trend or outdated?

Made in Britain has long been seen as a marque of quality, in recent years however, there appears to have been a resurgence and growing awareness of British manufactured goods, there are numerous reasons for this.

From an international perspective Made in Britain represents quality and heritage, both of which were buoyed by the summer of 2012 with the Queen's Diamond Jubilee and the London Olympics, events which demonstrated both the UK's heritage and its modern capabilities. British cultural exports, such as the huge international success of Downton Abbey, have also had a significant impact on the international perception of British manufactured products. From an economic perspective, a weaker sterling may have also played a part, although that can have negative consequences for domestic consumers, as one industry leader noted: *"If the Pound goes down British produce becomes more attractive to other markets, more attractive to export, but that also means the price of food in the UK may go up as the price will be set by the export market where you divert the product."*

For the food and drink sector specifically, although certain crises like BSE continue to cast shadows, Made in Britain represents a hallmark of safety to the international marketplace both in terms of manufacturing processes and end product.

On a national level there are two contributing factors to the trend. The first is a greater awareness of food miles and sustainability. Many consumers are seeking to lessen their environmental impact and buying locally sourced and produced food is a key aspect of that. Many of the UK's leading supermarkets have generated positive PR stories in recent years on account of drawing more awareness to their British-made products.

It's hard to ignore the impact of politics on the sector. As the move towards greater autonomy for devolved power starts to take shape it will have likely give consumers greater awareness of their region and, arguably, will see a shift away from national to regional politics.

UK's EU exit will also play its part in shaping consumer engagement. With the 2016 referendum drawing attention to more nationalist thinking amongst a significant proportion of consumers. As this chapter and the Skills chapter have highlighted, UK's EU exit presents the FDM sector with a number of challenges and opportunities but it's also a sector that can provide a steady supply of employment opportunities and, as we have seen, it can, and does, make a huge impact to the UK on both a local and regional level.

A survey of 2,000 UK consumers from Mintel in relation to food sourced and produced in Britain (see graphs overleaf) found that when asked to agree or disagree with the statement of : *I try to buy British food whenever I can,* older consumers were more likely to agree with 73% of those aged 65+ either agreeing or strongly agreeing with the statement versus 55% of 20-24 year olds and 54% of 35-44 year olds. The regions where consumers were most likely to buy British food correlates strongly with areas with the areas that contribute the higher proportions of sector GVA; In the North West, 63% of consumers agreed or strongly agreed that they bought British food wherever they could, in Yorkshire and Humberside it was 62% and in the South East/East Anglia it was 61%. From an economic perspective, though all household income brackets showed a willingness to buy British food, there was a definite upswing in those willing to as household incomes rose with 64% of consumers with a household income of between £25,000 and £49,999 agreeing or strongly agreeing with the statement versus 50% of those with a household income of less than £9,500.

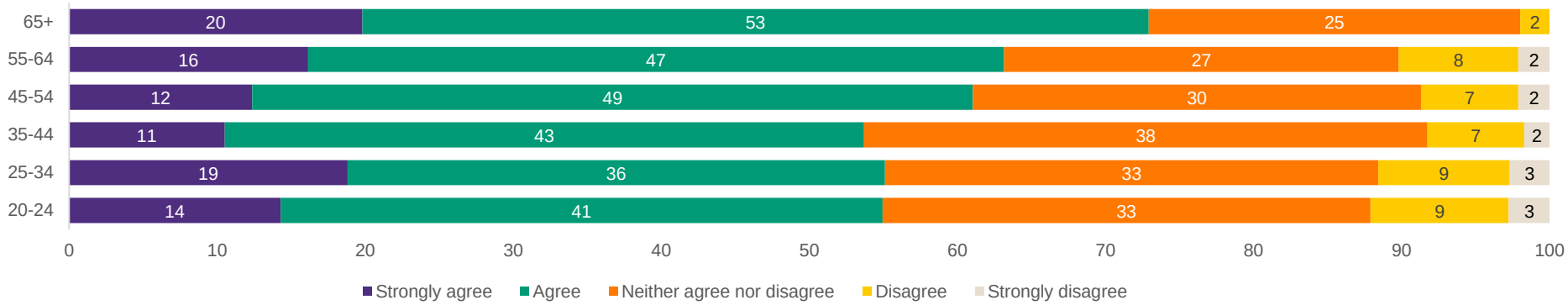
Nevertheless, Made in Britain does have some limitations. One industry leader remarked that; *"The sector has rested on its laurels with Britishness and Made in Britain products… Consumers want experiences, they don't care so much if it is a British product."* He then went on to say that although his company manufactures products that are often perceived as being quintessentially British, they are actually made from 100% imported raw products.

Source: Grant Thornton research & analysis; Grant Thornton interviews

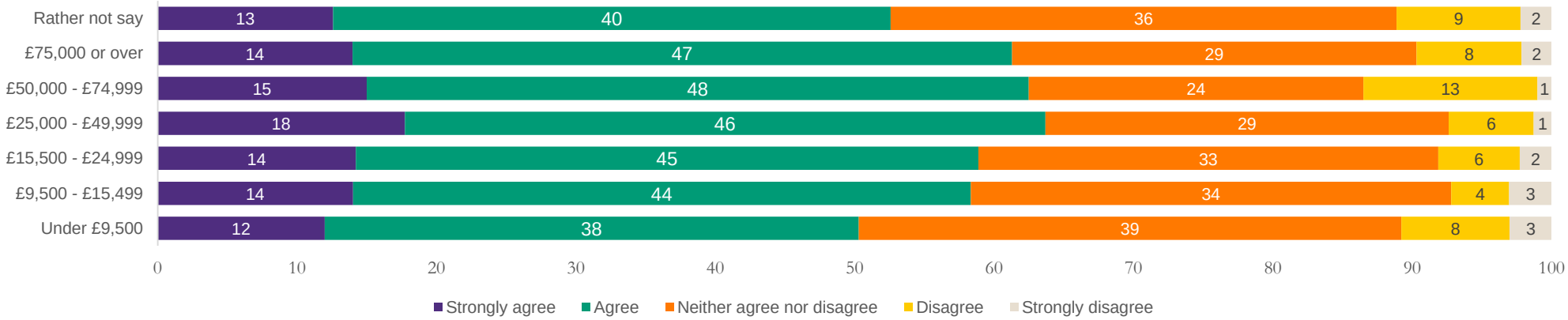
Made in Britain – on trend or outdated?

Responses to the statement: "I try to buy British food whenever I can"

By age (%)



By household income (%)

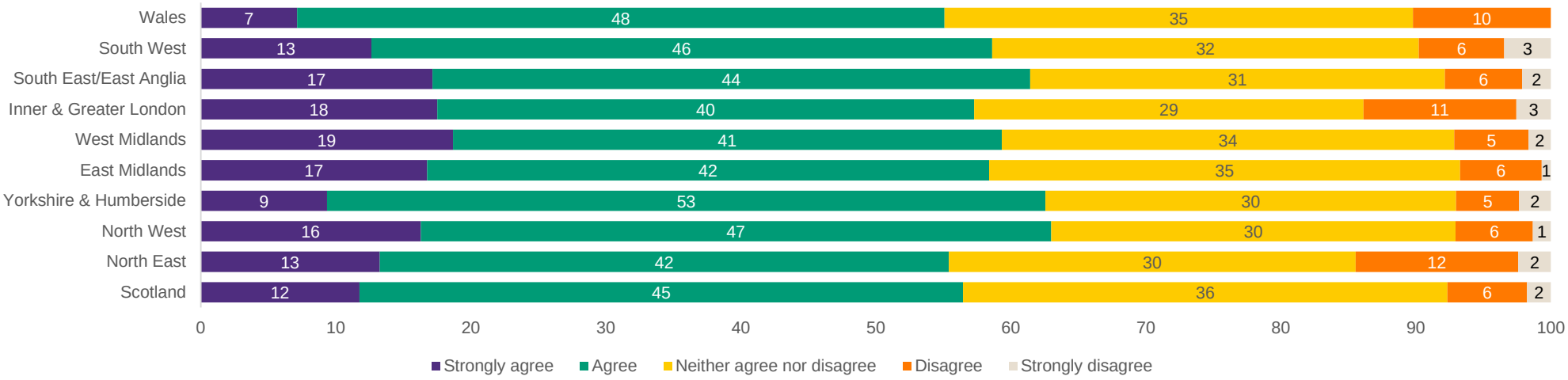


Source: Mintel –UK Food tracker November 2016

Made in Britain – on trend or outdated?

Responses to the statement: "I try to buy British food whenever I can"

By region (%)



Source: Mintel –UK Food tracker November 2016

Conclusions and recommendations

UK food and drink exports reached £20 billion for the first time in 2016. Food and drink exports are a UK success story and a sign of how highly UK products are thought of overseas, but just one in five food and drink manufacturers currently export. The UK has 2.2% of the global food and drink export market but that share is considerably behind international rivals such as France (4.7%) and Germany (5.6%). Currently, more than half of the UK's exports head to EU nations, and the EEA remains the UK's most important export market, but many of those manufacturers surveyed are already identifying new markets. Manufacturers highlighted China, India and the UAE as the top three untapped markets they're looking to prioritise based on their scale, with all three nations possessing a sizeable middle class with an appetite for quality Western products.

One of the main obstacles highlighted by those manufacturers looking to export to untapped markets was the need to identify a distributor in the local market. This and other specialist export support is more readily available to food and drink manufacturers in rival European nations, with Ireland's Bord Bia a driving force in promoting and supporting Irish exports.

As the UK heads for a future outside the Common Agricultural Policy, it is clear from the evidence presented in this report that food and drink manufacturers are increasingly focused on expanding into new markets. There is rising demand for UK food and drink in non-EU countries and now is the time for Government to work in partnership with industry to scale-up its provision of specialist export support for food and drink. To take advantage of new opportunities created as the UK leaves the EU, Government should look to Bord Bia as inspiration in creating a specialist export organisation that will turbocharge sales of UK food and drink globally and fulfil the industry's export potential.

Conclusions

Conclusion

The findings from this report provide a robust evidence base from which the FDM sector can build its economic contribution, helping the industry to identify growth opportunities for UK food and drink manufacturing sector, as well as the obstacles that must be traversed in order to achieve this growth.

This report confirms that the food and drink industry is a truly national sector, spread throughout the country and providing jobs in every region. The sector produces a diverse range of products, many of which are enshrined in the UK's national identity. The result is that the UK is known throughout the world for producing delicious, high quality products. There is huge diversity within the industry, not just in the food and drink it produces but also in terms of the skills and people required to deliver them.

The industry's geographical spread is a key theme that runs through the report, highlighting the importance to every corner of the nation. Unlike other industries there's no focal point where larger manufacturers are clustered together and where educational institutes can align to the needs of a sector.

With the help of Government the sector can navigate this unique obstacle and ensure that there is the educational provisions needed to train the future workforce.

Although the industry is widely celebrated at a regional and global level, it is not an obvious destination for potential employees. The sector should look to work with Government to enhance the image of the industry, raising awareness of the range of exciting careers on offer for all skills levels.

The proactive work industry is undertaking around innovation, particularly with regards to reformulation, is indicative of the sector's willingness to work with Government. The industry continues to act ahead of the curve when it comes to public health initiatives. This bodes well for future partnerships with Government, as it looks to harness the industry's growth potential.

With such a small proportion of food and drink manufacturers currently selling abroad, addressing the clear need for specialist export support for the industry is one of the most obvious ways in which it can be supported to achieve growth in the short-term. This will help to drive productivity improvements in many SMEs, who represent 96 per cent of the food and drink manufacturing sector, while developing trade relationships outside the EU in advance of leaving the EU.

Most importantly this report allows the sector to identify the huge opportunities available to it at a time of great economic uncertainty, allowing it to enhance the positive economic contribution it makes to the UK economy. It outlines the external and internal factors to be considered and identifies the risks to growth facing the industry. The issues facing the food and drink industry are complex but by working in partnership with Government, clear and simple solutions can be identified allowing the industry to achieve its full potential.

Harnessing the growth of the UK's largest manufacturing sector has the capability to increase prosperity both now, over the next decade and beyond.