

Determination of Food Safety and Technical Skills Shortage Challenging the Food and Drink Industry in Wales, UK.

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Introduction

The food and drink manufacturing and processing (FDMP) industry is a significant contributor to the UK economy, the Food and Drink Federation reported that the UK FDMP industry contributes £28 billion annually. It is also a major employer, employing over 430,000 people (Food and Drink Federation, 2021).

In Wales, the FDMP sector contributes £15.5 billion to the economy (Food and Drink Wales, 2015), employing 23,750 workers (Food and Drink Federation, 2021). The sector is considered to be part of the 'foundational economy' and is therefore one of the three priority sectors in Wales (Food and Drink Wales, 2017).

Research has indicated that 75,000 more workers are required to support the FDMP industry (Food and Drink Wales, 2017), with technical-skills gaps and workforce shortages reported by 40% of businesses (Warren-Thomas and Henderson, 2017). Further investigations show that 15,000 workers will have training requirements 2015-2022 (Warren-Thomas and Henderson, 2017).

It is suggested that the FDMP industry requires investment in Research and Development (R&D), skills, new capacity, and marketing (Food Research Partnership Skills Sub-Group (2010). to create up to 7,000 jobs (Welsh Government, 2018).

There is a need for the FDMP industry to attract technical people and upskill the existing workforce to support and progress sector innovation and automation. Facilitating and maintaining a technically skilled workforce is required to accelerate business growth and sustainability.

The Welsh FDMP industry has a shortfall of circa 7000 people, fewer than 500 graduate per year coming from FST courses in UK (UCAS, 2018), less than 20 undergraduates coming from Food Science and Technology (FST) degrees in Wales per year (Cardiff Metropolitan University, 2020).

Currently a composite analysis of food sector specific skills shortage data, is limited, and such data is required to inform targeted future FDMP employment and to direct the training and development provisions to the industry.

Purpose

This study aims to consolidate and evaluate approaches implemented to technically upskill and increase food-sector employment in Wales UK.

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Methods

- A cumulation of quantitative and qualitative data was collated across four projects (conducted between 2016-2018). The purpose of the surveys was to determine the general and specific skills shortages and gaps in the FDMP industry in Wales.
- FDMP microbusinesses (defined as less than 10 employees) and small to medium enterprises (SMEs), defined as 10-249 employees (European Commission, 2020) were targeted.
- All participating businesses were recruited via an email campaign targeting food and drink manufacturers from the Food Innovation Wales industry FDMP directory (Food Innovation Wales, 2016-18). There are approximately 600 FDMP businesses (Food and Drink Federation, 2021) in Wales.
- The data was collected via electronic questionnaires and telephone surveys. The questions included open, closed and multiple-choice responses.

Results

General skills shortages and gaps

- Qualitative data (unprompted responses) identified **recruitment needs** in four main areas: technical, operations, manufacturing/production and management ($n=22$).
- Quantitative data (prompted – multiple choice questions) where FDMPs ($n=34$), were asked to state areas in which they had **difficulty in recruiting** appropriate skills. Results highlighted three main areas: production 31% ($n=21$), skilled trade 25% ($n=17$), management 20% ($n=14$).
- This was again reflected in further collated quantitative data (prompted – multiple choice) indicates that the sector **reported skills gaps and workforce shortages** in three main areas: in technical (61%), production (35%) and management (58%) ($n=34$).

"We seem to struggle when recruiting for engineering, technical and quality control staff"

Company E

"Geographically, it is very difficult to get anything technically appropriate taught out here in the sticks"

Company F

"The issue I have with recruiting is the type of business, there is a UK wide shortage of skilled slaughtermen and butchers, these gaps are currently being filled with eastern European workers, some of which are employed direct, some via agencies".

Company G

Figure 1: Showing comments from FDMP MDs regarding the recruitment of skilled people

Specific skills shortage and gaps

To gain a better understanding of the specific skills needs of FDMPs with certification, a selection of FDMPs ($n=10$), with third-party accreditation (BRC or SALSA) were asked to state **where skills gaps are evident** (unprompted and open telephone question).

- Responses from this investigation included food science and technology, quality assurance, HACCP training, internal auditing, SPC data use, sensory analysis, lean manufacturing techniques, Health and Safety planning, VACCP and BRC systems.

These same companies were then cross-examined more specifically, **where skills gaps are evident in respect to third-party accreditation**, giving the top three skills gaps, the results were: supplier approval and raw-material handling, traceability and allergens ($n=10$).

- Further challenges are seen in the non-UK/EU national workforce, a third of the Welsh workforce, "language barriers in the training process" this is reported to 'create issues where other staff are then required to translate'. Such issues may be further impacted by Brexit as businesses reportedly anticipate losses in non-UK/EU national workers and expect recruitment to become increasingly difficult following Brexit (57%, $n=130$).

"Skills can be taught where time and trainer skills are permitted and resource to train. Language barriers in the training process can create issues where other staff are then required to translate. This adds pressure on production and therefore we have difficulty in obtaining staff to train. I feel that the level of English should be there as a base however, English lessons for keen staff should be available through the Government to assist small businesses in retaining keen staff"

Company C

Figure 2: Showing comments from FDMP MDs regarding the recruitment of skilled people

Discussion

Skills challenges are caused not only by disparities in the skills and knowledge of the current workforce (skills gaps - qualitative) available to a business but also by too few people available in those areas (skills shortages - quantitative) (Schwalje, 2011).

There are clear skills gaps and workforce shortages in FDMP businesses across all areas including food safety and technical. The industry-reported that the current situation limits business, leaving shortages in technical skills including essential food safety aspects such as Food Science and Technology, HACCP/VACCP, BRC, quality assurance, raw material handling, traceability and allergens. The food safety and technical skills are fundamental to business as failure in these areas can lead to the production of food that is unsafe.

To address all skills gaps FDMP businesses require investment in their current workforce and rather than being focused on the fundamental aspects of running the business, for example upskilling in areas such as technical production and management skills, and FDMP businesses could be focused on innovation.

A Welsh Government report highlights the actions that are required to develop the FDMP industry in Wales, by creating: a diverse workforce, addressed skills and gaps shortages, improved the industry image for young people, better quality training provision and addressing the industry attitude towards investment in skills and training (Food and Drink Wales, 2017).

"I think that the emphasis in the food industry is upon catering rather than manufacturing. I think that technical managers roles are undersubscribed".

Company D

Figure 3: Showing comments from FDMP MDs regarding the recruitment of skilled people

Conclusions

Data from this composite study illustrates the critical need for the sector to attract more technical employees and upskill the existing workforce.

Further information is required to determine why more employees are not entering the FDMP sector for careers, questioning whether reinvention or raising awareness of the FDMP industry is needed to better communicate the career progression and exciting future development that can be achieved by young people at the start of their careers.

More in-depth research is required to address the specific aspects of food safety and technical needs, and how it can be achieved. By having a better understanding of FDMP businesses, it can be determined how the challenges can be overcome and what can be done to support the development of the industry.