European Agency for Safety and Health at Work

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Accommodation and food service activities - Evidence from the European Survey of Enterprises on New and Emerging Risks (ESENER)

Report

European Agency for Safety and Health at Work

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Executive Summary

The Accommodation and Food and Beverage Services (AFBS) sector covers a wide range of different sectors including hotels, pubs, cafés, restaurants, contract caterers in various industrial and commercial premises, fast-food takeaways and bistros. The AFBS sector plays an important role within the European Union (EU) economy not only as a source of wealth and jobs but also as a creator of growth opportunities in other sectors. According to Structural Business Statistics (Eurostat),[1] in 2019 the sector generated more than €593,309 million in turnover and €252,367 million value added. Despite the increasing presence of big hotel chains and franchises and the success of fast-food restaurants, more than 98% of enterprises are microenterprises employing 10 employees or fewer, where many enterprises are family run and self-employed.

The AFBS sector had in 2021 a total of 7.8 million jobs in the EU-27, with a significant loss of 1.6 million jobs due to the COVID-19 pandemic and related restrictions to social activity (European Labour Force Survey).[2] The AFBS sector is characterised by a high presence of women, young workers and migrants, as well as atypical employment (temporary/seasonal and part-time work), no written employment contracts, non-standard, irregular long/short working time and the presence of low levels of employer-paid training (CEHAT, 2011; EFFAT, 2020; ELA, 2021; Eurofound, 2014, 2016; Hassard et al, 2020; Warshaw, 2011).

The main occupational safety and health (OSH) risks in the AFBS sector include repetitive hand or arm movements, risk of accidents with machines, exposure to heat/cold/draught and, finally, risk of slips/trips/falls. AFBS sector workers are also confronted with important psychosocial risks that superpose to other OSH risks, including continuous contact with customers and clients and high workload and time pressure (stress) to meet tight deadlines at peak times. However, only 15% of AFBS sector establishments suggest that psychosocial risks are more difficult to address than other risks. The AFBS sector can be characterised as a relatively dangerous sector due to the high number of accidents, although the majority of these accidents are non-fatal. Most common health outcomes refer to a high presence of musculoskeletal disorders (MSDs), skin and respiratory problems, cuts and lacerations, and burns and scalds. Work-related stress and 'burnout syndrome' are also relatively present.

Approximately 71% of the EU-27 AFBS sector establishments regularly carry out workplace risk assessments, where this share is slightly below the EU-27 average for all sectors (75%). This share increases with establishment size and it shows remarkable disparities among Member States. Approximately half of AFBS establishments suggest that these risk assessments are contracted to external providers, and 88% suggest having documented their risk assessments in written form. By way of contrast, three out of 10 sector establishments do not regularly carry out risk assessments, where the most frequent reason for not conducting such risk assessments is that risks are already known. The smallest AFBS establishments are particularly sensitive to the lack of necessary expertise for doing these risk assessments. Several interviewed experts warn about the risk that these risk assessments are conducted by 'obligation', where follow-up measures are not implemented.

The most recurrent practice taken by AFBS establishments to deal with OSH risks is the provision of equipment to lift and move heavy work, followed by the reduction of working hours for people with health problems, regular breaks for people in uncomfortable positions and the rotation of tasks to reduce repetitive movements. The most extended measure taken to prevent psychosocial risks refers to allowing employees to take more decisions on how to do their job, followed by other measures such as the possibility of reorganising their work in order to reduce job demands/work pressure or the provision of confidential counselling for employees. These preventive measures are more present among larger establishments.

Two out of three AFBS establishments regularly arrange medical examinations to monitor the health of employees, where this percentage is one of the lowest in comparison to other sectors. Fifty-seven per cent of AFBS establishments used the services of an external provider to support them in their health and safety tasks in the last three years, again one of the lowest in comparison to other sectors. Employers are not clear in many cases about the type of external services they really need to hire to comply with OSH legislation, and how much it is reasonable to spend on these. The most popular types

[1] See https://ec.europa.eu/eurostat/web/structural-business-statistics/overview
[2] See https://ec.europa.eu/eurostat/web/lfs/overview

of organisations AFBS establishments resort to for obtaining health and safety-related information are contracted health and safety experts, the labour inspectorate and insurance providers.

Establishments where health and safety issues are regularly discussed at top level are more likely to have formal procedures in place to prevent psychosocial risks and take more measures to prevent such risks. Larger establishments and enterprises, especially those belonging to international groups such as international hotel chains, are particularly committed to OSH issues (for instance, in terms of regular discussion of OSH issues in staff or team meetings or at the top level of management). In this last case, 56% of AFBS establishments suggest that OSH issues are regularly discussed at the top level of management (seven out of 10 in the case of the larger establishments), where this average percentage is one of the lowest in comparison to the rest of sectors.

OSH training activities are often difficult to be organised among AFBS establishments for several reasons, including the difficulties derived from managers/workers taken out of work during training, the lack of resources or the knowledge to hire quality external OSH training experts, and high labour turnover and seasonality of work (all these problems are more acute among smaller enterprises). Approximately three out of four AFBS establishments with 20 or more employees provide training on how to manage health and safety in their teams to team leaders and line managers, where a similar percentage provide training during work time to help health and safety representatives to perform their health and safety duties. Up to 81% of the AFBS establishments exposed to chemical or biological substances have offered training on the use of dangerous substances to their employees and 79% of all establishments on emergency procedures. Meanwhile, 70% of AFBS establishments exposed to lifting or moving heavy loads have offered training on how to lift and move heavy loads, the same percentage for those total establishments that have offered training on the proper use and adjustment of working equipment.

The evolution in time of OSH management practices in the AFBS sector shows an increase in the share of AFBS establishments that have introduced general health promotion measures intended to raise awareness about healthy nutrition or preventing addiction practices, as well as an increase in the share of establishments with 20 or more employees that have introduced different measures to prevent psychosocial risks, particularly in relation to reorganisation of work to reduce job demands and work pressure. The share of AFBS establishments with more than 50 employees that have procedures in place to support employees returning to work after a long-term sickness absence has experienced an upward trend from 2009 onwards.

The main drivers for addressing health and safety in AFBS establishments are two, namely the fulfilment of existing legal obligations and the wish to avoid fines from labour inspectorate authorities. Labour inspectorates play a key role not only in driving compliance and fulfilment of existing OSH legislation but also in providing useful advice about how to successfully deal with and improve existing OSH management practices within AFBS establishments.

Fifty-eight per cent of the EU-27 AFBS establishments have been visited by the labour inspectorate in the last three years (64% according to the ESENER 2014 results), where this percentage is the highest among the different sectors considered and probably explained by the fact that, for instance, the hotel, restaurant and catering (HORECA) sector (along with construction and cleaning) is among the sectors with the highest rates of undeclared work.[3]

The most important difficulties AFBS establishments are confronted with in addressing health and safety issues are the complexity of existing legal obligations, the lack of time/staff to deal with these issues and existing paperwork. Some of the consulted experts underline that the AFBS sector is often more concerned with HACCP rules[4] and food safety chain inspections than OSH regulations and inspections.[5] Smaller AFBS establishments are particularly sensitive to the difficulties generated by paperwork and the complexity of legal obligations in comparison to larger establishments.

[3] See https://www.ela.europa.eu/en/undeclared-work

[4] HACCP (Hazard Analysis and Critical Control Points) is a management system in which food safety is addressed through the analysis and control of biological, chemical and physical hazards from raw material production, procurement and handling to manufacturing, distribution and consumption of the finished product.).

[5] Previous research indicates that HACCP contributes not only to internal improvement in the prevention of occupational risks but also that, through some control and prevention measures taken by OSH services, food safety is improved as well (https://doi.org/10.1016/j.foodcont.2012.06.030).

Additional elements influencing OSH management practices include the impact of the COVID-19 pandemic, the digitalisation of activities, the increasing presence of long-term subcontracting/outsourcing practices, the increasing presence of platform workers (particularly in food delivery services), the increasing presence of green practices, several improvements related to technical and organisational changes, an increasing presence of violence from clients and increasing difficulties in finding suitable personnel, exacerbated by the COVID-19 pandemic.

The AFBS sector has a lower presence of formal forms of employee participation in comparison to other sectors. Interviewed experts point out several elements explaining this situation, including frequent changes of staff due to seasonal operation and characteristics of its workforce that render very difficult the possibility to choose a stable person who may act as an employee/OSH representative within the establishment, very small average size of the existing sector enterprises (which are less likely to have formal workers' representation structures and employers are more reluctant to have these formal structures), and a rather limited engagement of workers in OSH management practices (particularly in very small enterprises), well reflected in employees' reluctance to volunteer as health and safety representatives or participate in OSH management issues. Other reasons pointed out include the limited OSH knowledge that some employees' representatives may have (particularly in very small enterprises) and, finally, the reluctance of many AFBS employees to contact trade unions to assist and help them.

Approximately half of the AFBS sector establishments that have formal employee representation structures are characterised by holding regular discussions on OSH issues between employee representatives and the management, with important national differences among Member States. The AFBS sector is characterised by a high degree of informal communication flows between employees and managers on OSH issues.

A number of key policy pointers emerge from this study:

- Place a special policy focus on SMEs and introduce specific ad hoc measures for them, since they are not only less conscious about the existing OSH risks and their consequences but also less inclined to make use of OSH services or introduce remedial activities to deal with these risks.
- Introduce specific awareness-raising activities among AFBS managers and employers to properly value the importance and negative impacts that existing sector-related OSH risks can have on employees and their health. Employers need to understand that health is not an expense but rather an investment.
- Employers have to make sure that everyone in the company has relevant information on existing and new OSH risks as well as on existing measures in place to deal with these risks. Particular groups of workers deserve particular attention, including new recruits (especially if they are young or have no experience), workers changing jobs or taking on extra responsibilities within the company, and migrant workers.
- Increase employee participation in the management of OSH within establishments. For this purpose, trade unions and employer organisations would need to increase their activities among AFBS employees and managers, particularly those in the smallest enterprises.
- Reinforce the key role that sectoral collective agreements have as a key tool to ensure common-level-ground working conditions and OSH standards for the whole AFBS workforce, including those in the smaller establishments.
- Ensure that risk assessments become a real instrument to identify existing workplace-related risk factors but also to prioritise remedial actions to eliminate or control these risks in an iterative process of continuous improvement.
- Increase the role that labour inspectorate services can play, not only in driving compliance and fulfilment of existing OSH legislation but also in providing useful information and advice about how to successfully deal with and improve existing OSH management practices to build up a sound safety culture within AFBS establishments. It is essential that these labour inspectorate services can effectively develop their activities and are appropriately resourced, both in financial and human resources terms.

- Ensure that existing OSH rules and regulations are well disseminated among enterprises, particularly for SMEs. Public authorities, together with trade unions and employers' organisations, can play a very significant role in this respect.
- Link HACCP rules and food safety chain inspections with OSH regulations and inspections as a possible boost to OSH practices within the sector (it is not clear if this solution is feasible and easy to be implemented in (many) Member States and different establishment sizes). This could include a more general integration of OSH management with HACCP and ISO management systems.
- Continue in-depth discussions between governments and social partners to identify emerging changes affecting OSH sector issues (technical changes, digitalisation of activities, new organisational models) and introduce, if needed, remedial solutions. Existing and (likely) future labour shortages within the sector deserve special attention.
- Continue mainstreaming OSH issues into HORECA vocational and tertiary education curricula, so future sector professionals are well acquainted with OSH from the onset of their careers.

1. General introduction to the report

1.1 Objectives and goals of this report

The Accommodation and Food and Beverage Service (AFBS) sector (NACE Rev. 2 Section I) is an important economic, social and cultural activity sector in Europe. On the one hand, it is at the heart of the tourism industry. On the other hand, it caters to local people and businesses in the European Union (EU). The sector covers a wide range of different businesses including Accommodation services (NACE Rev. 2 55) and Food and beverage service activities (NACE Rev. 2 56).

Table 1 Main sectors comprising AFBS Activities (NACE Rev. 2 Section I)

Division	Class	Description
55		**Accommodation**
	55.1	Hotels and similar accommodation
	55.2	Holiday and other short-stay accommodation
	55.3	Camping grounds, recreational vehicle parks and trailer parks
	55.9	Other accommodation
56		**Food and beverage service activities**
	56.1	Restaurants and mobile food service activities
	56.2	Event catering and other food service activities
	56.3	Beverage serving activities

Source: Eurostat's NACE classification

Work in the sector is characterised by a high share of seasonal, temporary and part-time employment, as well as a high proportion of female workers, young workers and migrant workers. Meanwhile, the sector encompasses an array of different tasks and jobs that pose different types of risks to the health and safety of its workers. In general, working conditions are characterised by high exposure to occupational safety and health (OSH) risks, including emotional demands and work-related stress. Night and weekend work, shift work, air temperature and quality, contact with sharp objects, dermal exposure to dangerous substances (including tobacco), tiring or painful positions, employment status and dealing with difficult customers (violence) are a few characteristics of work in the sector.

Also, working hours in the AFBS sector are often long and at the time of leisure of the rest of the population, consequently impacting negatively on the stress levels and work-life balance of its workers. Main work-related diseases include musculoskeletal disorders (MSDs) — particularly lower limb disorders — and skin diseases, as well as high stress levels. Further to these issues, the COVID-19 pandemic has had a major impact on the sector, and this is reflected in employment temporary/permanent cuts and the introduction of ad hoc protection measures (i.e. financial support measures, temporary tax reliefs, capacity limitations, vaccination checking, etc.), among others.

With these elements in mind, the main general goal of this study is to **provide relevant information to understand OSH management practices amongst European workplaces in the AFBS sector**. Other key goals of this study include the identification of the main factors that influence these OSH management practices, the evolution of these practices over the last decade, and, finally, the identification and definition of different typologies of sector establishments in their approach to managing OSH at the workplace. The detailed objectives of this study are presented in Box 1.

Box 1 Specific goals pursued by this study

- Characterise the workforce of the European AFBS sector, as well as the existing business structure of the AFBS sector.
- Identify the main working conditions and associated OSH risks particularly present in the AFBS sector, as well as the main health problems characteristic of the sector's workers.
- Identify the main OSH management practices among European AFBS workplaces.
- Characterise different elements within OSH management practices, including compliance with legal requirements, management commitment, worker involvement and participation, existence of risk assessments and preventive work design measures, availability of (external) expertise and support, integration with other areas of management, lines of responsibility and so on.
- Identify existing differences in these OSH management practices between different establishment sizes and countries.
- Compare OSH management practices within AFBS workplaces in comparison to the rest of the sectors.
- Identify and capture the main drivers and barriers that influence the management of OSH issues among European workplaces in the AFBS sector.
- Identify recent technical, economic, social, organisational and regulatory evolutions in the AFBS sector that may influence the management of OSH.
- Linked to the previous point, pay special attention to the new sections included in the Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019) questionnaire, such as digitalisation and its impact on OSH or the quality of external preventive services.
- Analyse the specific impact of the COVID-19 pandemic on the recent management of OSH in the AFBS sector, identifying main challenges faced by enterprises and their response.
- Provide a comparative analysis of the OSH management practices within the AFBS sector in the last decade, using for this purpose information collected from the different waves of ESENER.
- Identify and define different typologies of sector establishments in their approach to managing OSH at the workplace.

1.2 Key research questions

In order to achieve the above-mentioned objectives, a list of research questions has been elaborated with the goal of developing the contents of this report, as well as the different methodological tools elaborated within the framework of this report.

Table 2 Main research questions proposed in this study

Research questions
What are the main traits of the workforce of the European AFBS sector? What are the main traits of the existing business structure of the AFBS sector?
What are the main working conditions and associated physical, psychosocial and organisational risks particularly present in the AFBS sector? To what extent is digitalisation extended/influential?
What are the main health outcomes related to the AFBS sector?
To what extent do European AFBS workplaces carry out risk assessments and preventive (work design) measures? To what extent do they comply with existing legal OSH requirements?

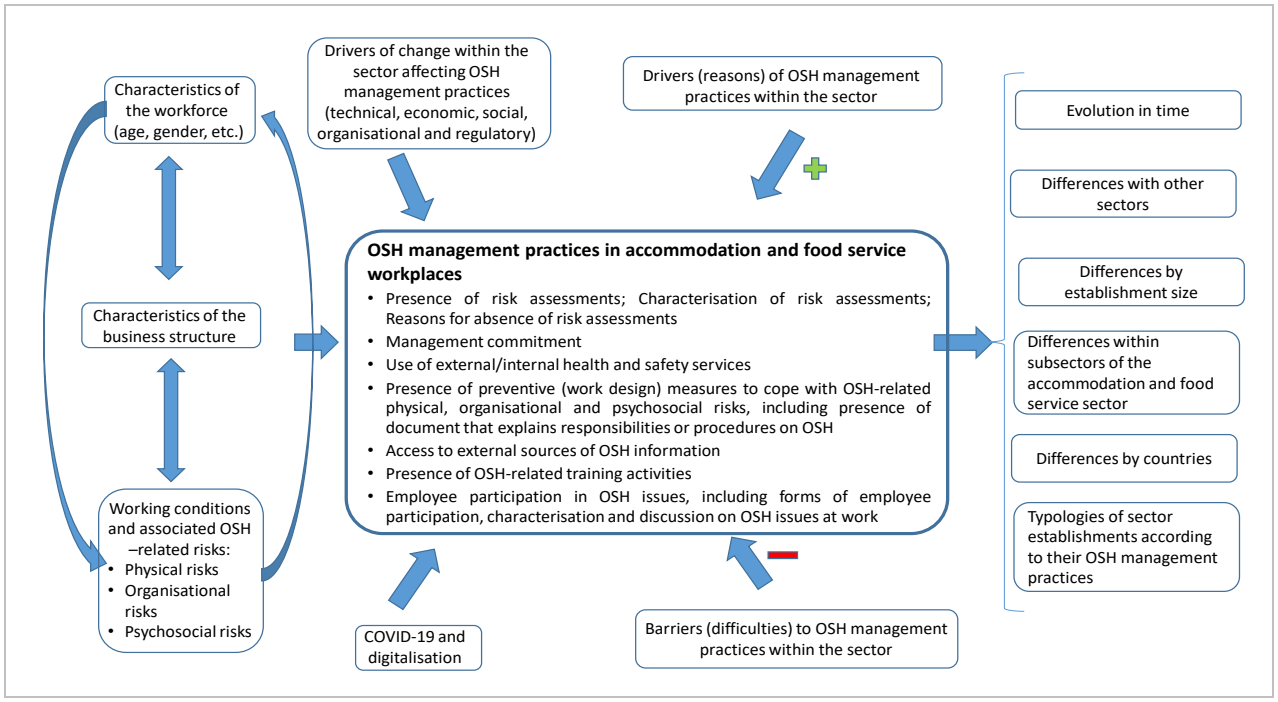
Research questions
To what extent do European AFBS workplaces resort to (external) expertise, information and support when managing OSH issues? What is the quality of these external preventive services?
To what extent are managers of AFBS workplaces committed to the management of OSH issues? Who is responsible for OSH management within European AFBS workplaces?
How is this commitment to OSH management in general linked with the management of psychosocial risks in particular?
To what extent are OSH training practices common among AFBS workplaces?
To what extent are documents available that explain responsibilities or procedures on OSH in the AFBS sector?
To what extent do AFBS workers participate in OSH management practices?
To what extent do these OSH management practices vary between Member States/establishment sizes?
To what extent are OSH management practices within the AFBS sector different in comparison to the rest of the sectors?
What has been the evolution in the last decade of these OSH management practices?
What are the most relevant drivers of change in the AFBS sector (technical, economic, social, organisational and regulatory evolutions) that are affecting the management of OSH within sector workplaces?
Is it possible to identify different typologies of sector establishments in their approach to managing OSH at the workplace? What are the main characteristics of these different typologies?
What are the specific challenges of the COVID-19 pandemic on the recent management of OSH in the AFBS sector? What has been the enterprises' response?

Source: IKEI/Panteia

1.3 Conceptual framework used in the context of this research

The conceptual framework for analysis is intended at identifying and defining the core issues analysed in the study, and it supports the interpretation of the results and formulation of policy-relevant conclusions. Figure 1 presents the conceptual framework used for the study.

Figure 1 Conceptual framework for analysis of the AFBS sector



Source: IKEI/Panteia

At the heart of this conceptual framework are the existing OSH management practices within European AFBS workplaces. These practices are affected by a number of elements, including:

- the characteristics of the workforce (gender, age, level of education);
- the characteristics of the existing business structure (size of establishments); and
- the working conditions faced by AFBS workers and associated OSH risk factors, including physical, psychosocial and organisational ones, where special attention could be paid to digitalisation and psychosocial risks due to the nature of work in the sector's workplaces.

In addition to this, existing OSH management practices within the AFBS sector are affected by other elements influencing them. They include:

- drivers of change within the AFBS sector (technical, economic, social, organisational, regulatory ones) affecting OSH management practices within workplaces;
- the drivers (reasons) why AFBS workplaces develop OSH management practices (e.g. legal obligations, meeting expectations from employees, avoiding fines and labour inspections, productivity or reputational reasons, quality of (external) preventive services, etc.);
- the main barriers (difficulties) in addressing OSH issues within AFBS workplaces (e.g. lack of time/staff, complexity and paperwork, lack of awareness, etc.); and
- last, but not least, the recent effects derived from the COVID-19 pandemic may also influence the OSH management practices developed by European AFBS workplaces.

All these elements influence the existing OSH management practices within European AFBS workplaces in a number of domains, including:

- presence of risk assessments; characterisation of risks assessments; reasons for absence of risk assessments;
- management commitment;
- use of (external/internal) health and safety services;
- presence of documents that explain responsibilities or procedures on OSH;

- presence of preventive (work design) measures to cope with work-related physical, organisational and psychosocial risks;
- access to external sources of OSH information;
- presence of OSH training activities; and
- employee participation in OSH issues, including forms of employee participation, characterisation and discussion on OSH issues at work.

Finally, the study further qualifies the existing OSH management practices and employee participation practices within AFBS workplaces, providing information on elements related to:

- the evolution in time of these OSH management practices;
- the existing differences with other main economic sectors;
- the existing differences by the size of the establishments; and
- the existing differences among European countries.

With all this information, the study has tried to elaborate a typology of AFBS establishments, based on the different approach to OSH management practices followed, and including the main characteristics of these different typologies. For this purpose, a two-step cluster analysis was run, based on data from all establishments from the AFBS sector from EU-27 Member States that participated in the ESENER 2019 survey (this subsample includes 2,566 observations). Unfortunately enough, this procedure did not find a meaningful cluster solution for the group of variables on different OSH management practices. The conclusion is therefore that it is not possible to come up with a meaningful clustering of EU-27 establishments from the AFBS sector regarding OSH management practices (see Annex 3 for an in-depth discussion on the methodology used).

1.4 Methodology used

In order to answer the research questions outlined above and meet the main and specific goals of the study, a mixed methodological approach has been used, comprising the following three main methods.

- **Review of studies and literature**

The research team has conducted desk research to identify and compile existing relevant information on OSH issues in the AFBS sector published since 2012, including scientific and academic publications as well as relevant policy documents dealing with the issue. Subsequently in time, the research team analysed the selected literature, reporting on the main results obtained. These results have been used to enrich the results obtained by other methodological tools, and brought to this final report when appropriate to illustrate/complement/challenge information presented (see bibliography included in Chapter 7 of this report).

- **ESENER data processing and analysis**

All of the variables of interest from the ESENER surveys are either dummy variables, nominal or ordinal. Relevant descriptive statistics for these types of variables are frequency tables (to examine the distribution of a variable) and cross-tabulations (to compare the distribution of a variable across different groups of establishments: by country, establishment size and sector). In case of cross-tabulations (by country, sector or establishment size class), it is important to know whether differences between groups that are present in the survey reflect group differences in the population, or whether they may be caused by the sample selection. For each cross-tabulation, Pearson's chi-square test has been used to test the hypothesis that the distribution of a variable is independent from the grouping variable included in the cross-tabulation. This report only includes tables and figures where the differences between country, sector and/or establishment size class are significant (at a 5% significance level).

The report mainly focuses on findings from the ESENER 2019 survey, however comparisons of the ESENER 2019 results with the ESENER 2014 and ESENER 2009 results have also been made whenever possible.

- The last two surveys (ESENER 2014 and ESENER 2019) are very similar, not only in terms of topics but also in terms of the wording of the individual questions, the enterprise population covered by the survey and the target respondents of the surveys. The datasets of these two surveys have been merged into a single dataset (for the relevant questions on OSH management), after which cross-tabulations have been prepared with the survey year (2014 or 2019) as the grouping variable. Also for these tables, statistical tests have been used to test the hypothesis that the distribution of these variables is the same for the two consecutive surveys.
- The first survey (ESENER 2009) differs from the second and third surveys in several aspects, in particular in the wording of individual questions, the establishment population covered[6] and the target respondents of the survey.[7] As a result, there are only 12 questions on OSH management practices where a comparison between ESENER 2009 and ESENER 2019 is relevant. Even for these questions, a direct comparison of the answers is difficult because of the differences in exact wording and establishment population covered. The ESENER 2009 dataset has therefore not been merged with the (merged) dataset with the results from ESENER 2014 and ESENER 2019. Instead, frequency tables for the 12 relevant questions from ESENER 2009 have been prepared, which have been compared in a more qualitative way with the associated tables from ESENER 2014 and ESENER 2019.[8]

Most of the main research questions of this study are answered using descriptive statistics as discussed above. For three research questions, descriptive statistics alone are not sufficient. For these research questions, multivariate analyses have been performed.

- For two research questions, (1) how commitment to OSH management in general is linked with the management of psychosocial risks in particular, and (2) the main drivers and barriers that influence OSH management practices, regression analysis has been used. The details of these analysis are presented in Annex 1 and Annex 2. The main conclusions of these analyses are discussed in Chapters 3 and 5, where relevant.
- For one research question, a cluster analysis has been applied (this concerns the research question whether it is possible to identify different typologies of establishments in their approach to managing OSH at the workplace). The details of this analysis are presented in Annex 3. The outcome of this cluster analysis is that no meaningful typology can be identified. Although several typologies can be identified, none of them meet the minimum requirements for a cluster solution to be meaningful.[9] The answer to this research question is therefore negative. For this reason, this report does not include a specific chapter or section on typologies of establishments.

[6] In particular, the ESENER 2009 management survey covers establishments with at least 10 employees, while the ESENER 2014 and ESENER 2019 surveys cover establishments with at least five employees.

[7] In ESENER 2014 and ESENER 2019, the target respondent was 'the person who knows best about the way safety and health risks are managed at their workplace'. This is different from ESENER 2009 where 'the most senior manager who coordinates safety and health activities in this establishment' was targeted. Additionally, in ESENER 2009, an interview with the workers' health and safety representative was aimed in those establishments where: (1) a management interview was completed; (2) a formally designated representative with specific responsibility for the safety and health of workers existed; and (3) the management respondent had granted permission for the interview. The main reason for the change was to get to the person who has the best knowledge about all health and safety issues, including details on risk assessment and other particular measures, regardless of their function or role in the establishment — which is asked anyway in a follow-up question.

[8] In those cases where the questions are only aimed at establishments with a higher number of employees (20 or 50 and more), the results presented for the relevant ESENER 2009 variables are restricted to the proper establishment size classes (to make them more comparable to the results from ESENER 2014 and ESENER 2019).

[9] In the context of the applied two-step cluster analysis, a cluster solution is interpreted as fair or good when the silhouette measure of the solution meets the lower threshold of 0.25. None of the identified cluster solutions meet this threshold.

- **Fieldwork research: key informant interviews**

The research team has carried out a total of 12 in-depth qualitative interviews with selected stakeholders, both at EU level and in the three EU Member States of Spain (as a representative of a Mediterranean/southern EU Member State), the Netherlands (as a representative of northern/central EU Member State) and Hungary (as a representative of an eastern EU Member State). The list of interviewed experts is presented in Table 3.

Table 3 Stakeholder organisations interviewed

Geographical level	Interviewed stakeholders
European level	VISITA Sweden, on behalf of HOTREC Hospitality Europe
	European Federation of Food, Agriculture and Tourism Trade Union (EFFAT)
	ENSHPO, European Network of Safety and Health Professional Organisations
Hungary	MÉDOSZ (Mezőgazdasági, Erdészeti, Élelmiszeripari, Vízügyi és Vendéglátó Dolgozók Szakszervezete)
	Senior occupational health specialist in canteen catering, hotels
	OSH inspection
The Netherlands	FNV Horeca
	Koninklijke Horeca Nederland (KHN, Royal Horeca Netherlands)
	SVH (Stichting Vakbekwaamheid Horeca, Foundation for Professionalism in the Hotel and Catering Industry)
Spain	Confederación Española de Hoteles y Alojamientos Turísticos (CEHAT) (Spanish Confederation of Hotels and Tourist Accommodations)
	CCOO - SERVICIOS
	Asociación Española de Especialistas en Medicina del Trabajo (AEEMT) (Spanish Association of Specialists in Occupational Medicine)

Source: IKEI/Panteia

For this purpose, an ad hoc topic guide/questionnaire was developed and intended at guiding the interviewing process in a coherent manner among the different stakeholders and Member States covered.

These in-depth qualitative interviews have allowed obtaining primary qualitative data on OSH risks/health outcomes and OSH management practices within the AFBS sector. These primary data have been carefully analysed by the research team, identifying themes for research and common/diverging patterns among interviewed stakeholders/workers and among countries. The outputs of the analysis of the results of this subtask have been used to enrich the results of the final report, basically complementing or additionally justifying the results obtained in previous methodological approaches (literature review and ESENER statistical data analysis). For this purpose, specific ad hoc qualitative remarks/results obtained from these interviews have been introduced in the final report illustrating some of the results presented.

2. Characterisation of the AFBS sector

2.1 Introduction

This chapter provides a general characterisation of the AFBS sector, as well as a brief description of the main characteristics of the AFBS enterprises and employment (number of enterprises, turnover levels, number of people employed by gender and age considerations, presence of temporary and part-time employment, etc.). Subsequently, the chapter analyses the main OSH risk factors in the AFBS sector, including psychosocial risks. Last, the chapter provides information on health outcomes within the AFBS sector, including information on accidents at work.

2.2 Enterprises and employment

As already mentioned, the AFBS sector covers a wide range of different sectors, including hotels, pubs, cafés, restaurants, contract caterers in various industrial and commercial premises, fast-food takeaways and bistros. The sector plays an important role within the EU economy not only as a source of wealth and jobs but also as a creator of growth opportunities in other sectors, where the AFBS sector is strongly influenced by the general evolution of the economy and the consumers' economic expectations.

According to Structural Business Statistics (Eurostat),[10] in 2019 there were 1.88 million enterprises active in the AFBS sector, generating more than €593,309 million in turnover and €252,367 million value added. In the accommodation sector there were 361.9 thousand enterprises active that generated €88,679.8 million value added, whereas in the food and beverage service activities there were 1.53 million enterprises that generated €163,689 million value added. In spite of the increasing presence of big hotel chains and franchises and the success of fast-food restaurants, more than 98% of enterprises are microenterprises employing 10 employees or fewer, where many enterprises are family run and self-employed (Eurofound, 2016). Indeed, the average size per AFBS enterprise is six persons employed, ranging from 14 and 11 persons in the 'Hotels' and 'Event catering sectors' to three persons in the 'Beverage serving activities' to two in the 'Holiday and other short-stay accommodation'.

Table 4 Key economic indicators for the HORECA sector, EU-27, 2019

Sectors	NACE Rev. 2	Number of enterprises	Turnover (million euro)	Value added (million euro)	Average employment size
Accommodation	**55**	**361,903**	**189,093.1**	**88,679.8**	**7**
Hotels and similar accommodation	55.1	146,757	154,117.3	74,329.8	14
Holiday and other short-stay accommodation	55.2	186,053	25,081.7	9,752.4	2
Camping grounds, recreational vehicle parks and trailer parks	55.3	14,900	7,463.6	3,544.3	5
Other accommodation	55.9	14,100	2,430.5	1,053.3	3
Food and beverage service activities	**56**	**1,526,239**	**404,216.0**	**163,688.8**	**6**

[10] See https://ec.europa.eu/eurostat/web/structural-business-statistics/overview

Sectors	NACE Rev. 2	Number of enterprises	Turnover (million euro)	Value added (million euro)	Average employment size
Restaurants and mobile food service activities	56.1	908,180	275,846.9	113,018.5	6
Event catering and other food service activities	56.2	93,778	58,427.2	25,281	11
Beverage serving activities	56.3	524,281	69,941.9	25,389.3	3
AFBS sector		**1,888,142**	**593,309.1**	**252,368.6**	**6**

Data for employment in 'Camping grounds, recreational vehicle parks and trailer parks' and 'Other accommodation' refer to 2018

Source: Eurostat, Structural Business Statistics

Looking at employment data, and focusing on information from the European Labour Force Survey,[11] the AFBS employment did experience an upward trend since 2011 to 2019, going from 8.1 to 9.3 million people. However, the COVID-19 pandemic and related restrictions to social activity have negatively impacted the sector employment. In 2021, the sector lost 1.6 million jobs, resulting in a reduction of the share that the AFBS sector represents in total employment from 4.8% in 2019 to 4.0% in 2021. In any case, there are important differences in the importance of the AFBS sector in relation to total employment among Member States. In this sense, employment in the AFBS sector represents 8.3% and 7.4% over total employment in Greece and Spain, respectively, in clear comparison to other Member States such as Poland, Lithuania, Romania and Sweden (representing less than 2.6% of total employment, data for 2021).

Table 5 Employment in the AFBS sector in the EU-27, 2012-2021 (thousand people)

Year	Accommodation	Food and beverage service activities	Total AFBS sector	% Total EU-27 employment
2012	2,001.7	6,066.3	8,068.0	4.4%
2013	2,009.4	5,985.4	7,994.8	4.4%
2014	2,040.7	6,163.6	8,204.3	4.5%
2015	2,112.8	6,445.1	8,557.9	4.6%
2016	2,279.0	6,606.8	8,885.8	4.7%
2017	2,290.9	6,767.8	9,058.7	4.7%
2018	2,334.8	6,917.4	9,252.2	4.8%
2019	2,342.2	6,975.2	9,317.4	4.8%
2020	1,929.2	6,189.2	8,118.4	4.2%
2021	1,817.1	5,941.4	7,758.5	4.0%

Source: Eurostat, Labour Force Survey

[11] See https://ec.europa.eu/eurostat/web/lfs/overview

In addition to this, it must be noted that the AFBS sector is characterised by a relatively high presence of women, young workers and migrants, reflecting the presence of low skill barriers for access to the sector. In this regard, the AFBS sector plays an important role in accompanying young people into the labour market (first jobs) and the integration of migrant workers in the labour market, and it contributes to gender equality (EFFAT, 2020).

According to the Labour Force Survey data for 2021, 53.4% of workers in the AFBS sector are women, compared to 46.3% among the total EU-27 employed workforce. Also, there is higher presence of women in the accommodation sector in comparison to the food and beverage service sector (60.3% in comparison to 51.3%, respectively). Indeed, many core jobs in the AFBS sector are female-dominated (i.e. housekeeping, food preparation workers, canteen workers, etc.), although management and senior level positions together with cooks and chefs are predominately occupied by men (Hassard et al, 2020).

Table 6 **Presence of women and age structure in employment, AFBS sector versus all total economy, 2021 (%)**

Variables	AFBS sector	Total economy
Sex structure		
% women in employment	53.4	46.3
Age structure		
% employment 15–24 years old	17.8	7.8
% employment 25–49 years old	57.6	59.9
% employment 50 years or older	24.7	32.3

Source: Eurostat, Labour Force Survey

Meanwhile, and also according to the Labour Force Survey data[12] for 2021, the share of young workers in the AFBS sector is higher compared with the whole economy in general. People under 24 years of age account for 17.8% of total employment in the AFBS sector in comparison to 7.8% for the whole economy. On the other hand, people of 50 years and older represent 24.7% of total employment, below the EU average for the whole EU-27 economy (32.3%). Young workers are particularly present in 'Food and beverage service activities' in comparison to 'Accommodation' (19.7% and 11.5% of the total sector workforce is younger than 24, respectively).

The AFBS employment is characterised by a high presence of migrant workers, with an estimated percentage between 6% and 14% of total employment as well as a high presence of multicultural workforce made up of second- or third-generation migrants with different cultural backgrounds (European Agency for Safety and Health at Work, 2008c). This high presence of migrant workers may lead to working environment challenges due to language difficulties or the presence of different work cultures within establishments.

Box 2 **Main reasons explaining the high percentage of young people and migrants in the AFBS sector**

There are several reasons underpinning this higher presence of young and migrant people in the AFBS sector. AFBS jobs are often tough and require good physical fitness, and their associated working conditions are not attractive to older or national workers given the low wages and irregular work hours.

[12] See https://ec.europa.eu/eurostat/web/lfs/data/database

Also, a large part of the jobs offered demand unskilled or low-skilled labour, allowing many young people with low education levels and migrant people with unrecognised qualifications/inadequate language skills to enter the job market. Finally, the AFBS sector jobs are often temporary or seasonal, so students can easily find work during holidays or outside of their classroom hours (European Agency for Safety and Health at Work, 2008a, 2008b).

4Additional characteristics of the AFBS sector employment are (experts' interviews, CEHAT, 2011; ELA, 2021; Eurofound, 2014, 2016; Hassard et al, 2020; Warshaw, 2011):

- The sector is characterised by a high presence of atypical employment (temporary/seasonal and part-time work), especially in certain tourist destinations (for instance, summer/winter resorts). Around 17.8% of the workers are in temporary employment, which is above the EU-27 average (11.5%), and the percentage of workers working part-time is higher compared to the whole EU-27 workforce (29.5% and 19%, respectively), where women account for a higher share of part-time contracts than men.
- The sector is characterised by a high incidence of undeclared work, well reflected in a higher presence of no written employment contracts in comparison to the EU average (12% and 5%, respectively). Indeed, the HORECA sector (along with construction and cleaning) is among the sectors with the highest rates of undeclared work.[13] Meanwhile, the presence of bogus self-employment in the sector is lower in comparison to the EU average (2% vs 4.3%, respectively), and 6% of the AFBS sector employees receive envelope wages (relatively similar to the EU average of 5%).

Table 7 Some characteristics of AFBS sector employment

Variables	EU average	AFBS sector
% Temporary employment	11.5%	17.8%
% Part-time work	19.0%	29.5%
No written contract of employment	5% for the workforce	14% of employees in the AFBS sector are in unregistered employment 12% of all employees with no written contract in the EU are in the AFBS sector
Bogus self-employment	4.3% of all employment	2% of all employment in the AFBS sector is bogus self-employment
Receive envelope wages	5% is the EU average	6% (1 in 17) of employees in the AFBS sector receive envelope wages

Source: Eurostat, Labour Force Survey, European Working Conditions Survey (EWCS) 2015 and Eurobarometer 2007, quoted partially in ELA, 2021

- Working hours in the AFBS sector are often non-standard, irregular (sometimes even dependant on weather conditions). Most work is done in periods that other people do not work (non-standard working hours), ranging from shift work to split shifts (where the normal working day is split up into two or more segments) to working on weekends, evenings or holidays, usually having to work different numbers of hours every day and different numbers of days every week.

[13] See https://www.ela.europa.eu/en/undeclared-work

The extent to which these non-standard, irregular working patterns become a burden for people is highly connected to their individual circumstances, particularly age considerations.

- Also, the average number of usual weekly hours of work is slightly lower among AFBS workers (with an average number of 36.2 hours per week in 2020 versus 37 hours on average in the EU-27), due to very high presence of part-time work practices. Men work more hours than women (39 weekly hours versus 33.7 hours, respectively) (Eurostat data, 2020).
- A large number of jobs in the AFBS sector require low/intermediate skill levels, so up to 40% of AFBS workers are relatively unskilled.
- Finally, there are low levels of employer-paid training, in the sense that sector establishments are less likely to provide training than the EU as a whole.

2.3 The main OSH risk factors in the AFBS sector

AFBS workers are exposed to a number of OSH risks derived from the particular activities of the sector. This section analyses what these specific OSH risks are, including psychosocial risks.

2.3.1 General OSH risks and hazards

The existing literature on the topic (European Agency for Safety and Health at Work, 2008b, 2011a; Lee et al, 2013; Warshaw, 2011), together with the information collected from interviews with relevant experts, identifies a number of noteworthy general risks and hazards for AFBS workers (for a summary of these risks, see Table 8).

Table 8 Main work environment risks in the AFBS sector

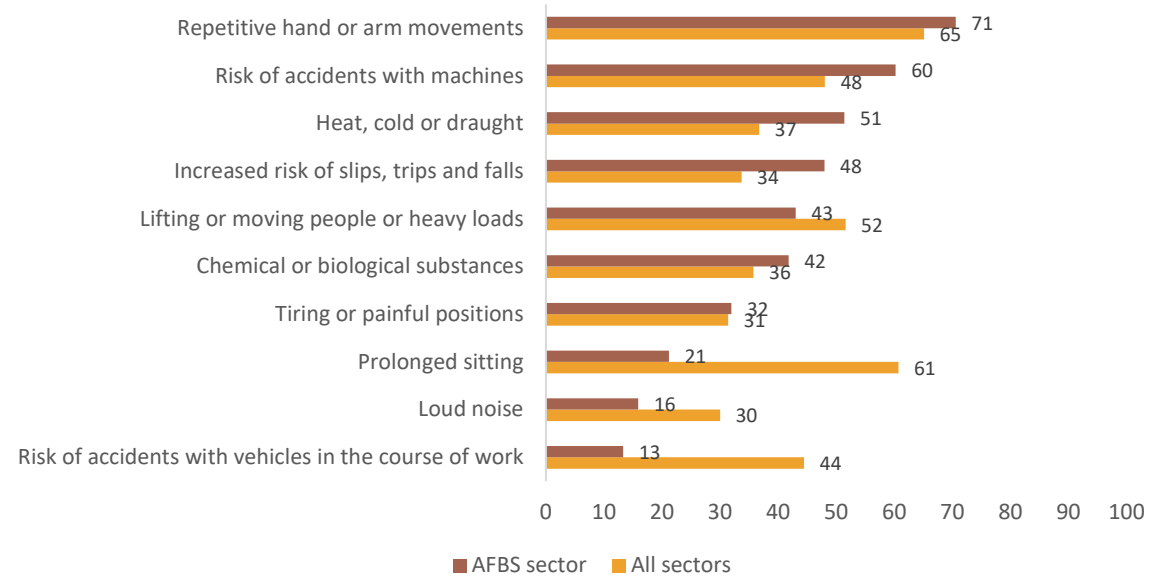
Risk	Description
Ergonomic	Long periods of standing in kitchens; Prolonged standing in reception jobs; Repetitive activities in kitchens (chopping, washing dishes, stirring); Awkward postural demands of the tasks (bending the trunk, bending the legs, hyperextension of the upper limbs, sustained neck flexion postures); Climbing and descending stairs; Carrying heavy loads (pulling trolleys, moving furniture and beds for maid personnel, bulk food packages for kitchen personnel)
Temperature and air pollutants	High temperatures (hot steam) in kitchens and laundries; Draughts due to open doors and air conditioning; Warm and humid environments; Alternating between cold and hot surroundings; Poor air quality and bad smells; Annoying, harmful and toxic substances in the air (dirt, grease, oil, vapour, smoke and gases); Exposure to sudden changes in temperature, due to the entry to and exit from cold rooms
Slips, trips and falls	Food spills on walkways, objects, slippery mats and coatings, insufficiently illuminated walkways, changes in floor levels, missing signs; Presence of wet/damp or otherwise dangerous floors; Differences in floor levels, stairs, and deficiencies regarding canopy roofing over loading bays and goods entrances
Contact with dangerous substances, biological risks	Exposure to potentially dangerous chemicals among kitchen workers, cleaning staff and maintenance workers (disinfectants, soaps and detergents, pesticides); Contact with food, excessive water, cleaning agents and disinfectant materials
Safety conditions of work equipment and tools	Presence of sharp objects and hot substances and materials among kitchen personnel; Injuries among chambermaids cleaning up broken glass; Employees who have to return home late at night after work may face additional safety risks; Incorrect or clumsy handling of equipment, repetitive movements
Noise, hearing and high sound levels	Kitchens (noise of pots and pans); Discotheques, cafés and nightclubs (sound equipment); In restaurants the noise levels tend to be high due to customers talking, staff shouting orders, clashing dishes, glasses, cutlery, etc.; Noise can cause hearing loss as well as muscle tension and contribute to fatigue

Risk	Description
Low light conditions	Cosy low light environment for guests (restaurants, bars and casinos)
Substance abuse, Alcohol consumption	Easy access to alcohol and drugs, particularly in nightlife specialised premises

Source: European Agency for Safety and Health at Work, 2008b, 2011a; Lee et al, 2013; Warshaw, 2011, interviews with experts

The previous results can be complemented with data from ESENER. In this regard, AFBS sector workers are exposed to a number of OSH risks and hazards that may cause wear and tear on the body and can cause injury. According to the ESENER 2019 survey results for the EU-27, AFBS workers are particularly exposed to four main risks, namely, repetitive hand or arm movements, risk of accidents with machines, exposure to heat/cold/draught and, finally, risk of slips/trips/falls (71%, 60%, 51% and 48% of EU-27 sector establishments reckon exposure to these risks, respectively).

Figure 2 Main OSH risks, AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27

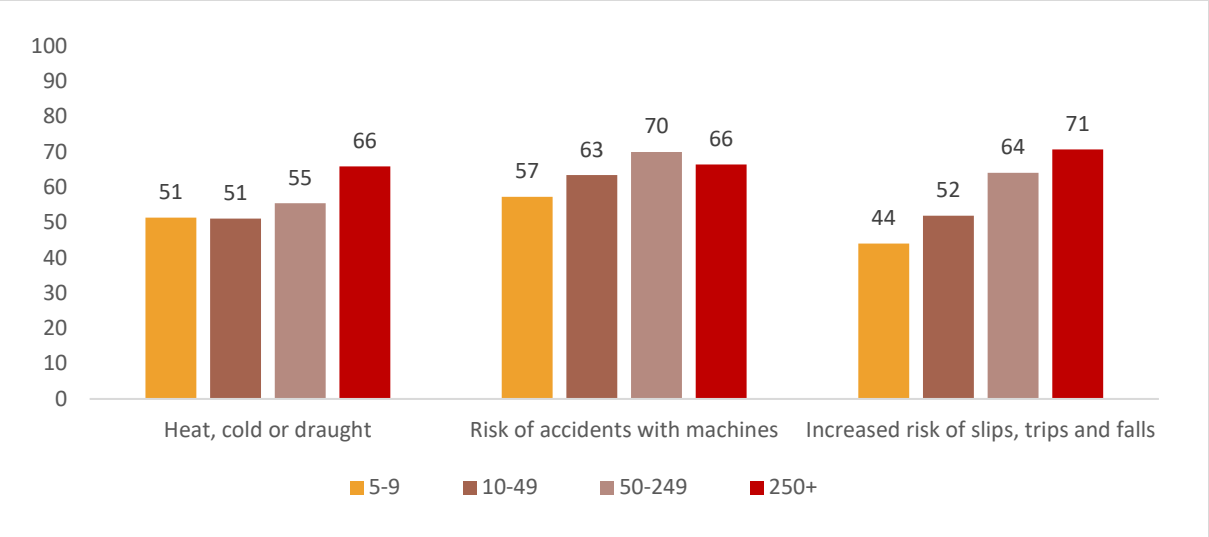
Source: IKEI/Panteia based on ESENER 2019

Meanwhile, risks related to lifting heavy loads, exposure to chemical/biological substances in the form of liquids/fumes/dust or tiring/painful positions at work are respectively mentioned by 43%, 42% and 32% of the EU-27 sector establishments. Finally, other OSH risks related to prolonged sitting, loud noise and risk of accidents with vehicles in the course of work are much less relevant for the sector (21%, 16% and 13% of EU-27 sector establishments, respectively). Obviously enough, the importance of these risks is dependent on the different AFBS sector occupations.

The comparison with all sectors shows that the AFBS sector is less exposed to certain OSH risks such as lifting heavy loads, prolonged sitting, exposure to loud noise and risk of accidents with vehicles in the course of work. By way of contrast, the remaining OSH risks are much more present among AFBS workplaces in comparison to the EU-27 average for all sectors, particularly those related to exposure to heat/cold/draught and risk of slips/trips/falls.

The ESENER 2019 survey results also show that large establishments identify the presence of OSH risks to a larger extent than smaller establishments, at least for some of them. This result is important, since it may show that these larger establishments are more sensitive to OSH risks and their consequences on the workforce than their smaller counterparts, a first step for taking action at company/establishment level.

Figure 3 Main selected OSH risks in the AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

According to the information obtained from interviewed experts, there are great differences between concrete occupations in relation to existing OSH risks. For instance, in housekeeping activities (i.e. hotel room cleaning), MSDs (metacarpal tunnel problems, ailments of the upper and lower extremities, and dorso-lumbar ailments) are very significant[14] due to the high presence of constant repetitive movements in their work. Meanwhile, and in the case of cooks, they are particularly exposed to several risks such as cuts, accidents due to slips and falls, problems when lifting heavy weights and exposure to strong temperature changes during their work shift (moving from cookers at very high temperatures to fridges where food is stored).

Box 3 Specific physical risk factors faced by AFBS professionals: The example of cooks

Cooks face different physical risk factors, including heavy lifting and repetitive movements, slippery floors, sharp objects, and hot equipment and substances. An increased occurrence of MSDs has been observed among cooks. The most frequently stated health-related reason for leaving the occupation was musculoskeletal complaints. Known risk factors for MSDs such as repetitive movements, lifting and stress are common among professional cooks. Cooks are also exposed to chemicals in cooking fumes such as polycyclic aromatic hydrocarbons (PAH), heterocyclic amines and aldehydes . Such exposures may be associated with rhinitis, respiratory disorders and impaired lung function (Svedahl et al, 2016).

[14] According to a recent study conducted in Spain CCOO, 2019), up to 71.5% of hotel maids uses some type of medications (anti-inflammatories, muscle relaxants) to cope with work-related pain

Several interviewed experts suggest that young and migrant workers (particularly present in the AFBS sector) are not particularly conscious of their exposure to OSH risks, in the sense that they are particularly interested in their salary conditions and do not pay attention to OSH risks in their jobs.

The comparison between the results provided by ESENER 2014 and ESENER 2019 shows a remarkable increase in the reported presence of repetitive hand/arm movements in 2019 in relation to 2014 (71% of responses in comparison to 57%, respectively), as well as a lower increase in the presence of lifting/moving heavy loads (43% in 2019 and 40% in 2014). By way of contrast, it is worth stressing the apparent decline in the presence of risks associated with slips, trips and falls (48% in 2019 in comparison to 54% in 2014).

Table 9 Main OSH risks, AFBS sector, EU-27, ESENER 2014 – ESENER 2019

	ESENER 2014	ESENER 2019
Lifting or moving heavy loads	40	43
Repetitive hand or arm movements	57	71
Loud noise	17	16
Heat, cold or draught	49	51
Risk of accidents with machines	60	60
Risk of accidents with vehicles in the course of work	13	13
Chemical or biological substances	40	42
Increased risk of slips, trips and falls	54	48

Base: All AFBS establishments in the EU-27

2.3.2 Psychosocial risks

AFBS sector workers are also confronted with important psychosocial risks. In this regard, the available literature (European Agency for Safety and Health at Work, 2008b, 2008c; Hassard et al, 2020; Svedahl et al, 2016; Warshaw, 2011) plus the interviews conducted with experts allow the identification of a number of them. Examples often quoted include:

- Continuous contact with customers and clients, which can be a source of emotional demands and stress or, in the worst cases, lead to violence and unwanted sexual attention. This is particularly relevant for waiters working in night jobs (pubs, discotheques, nightclubs and bars), staff working in food takeaway outlets, doormen and receptionists. The consumption of alcohol by clients is likely to cause or escalate problems in these personal interactions.
- High workload and time pressure (stress) to meet tight deadlines at peak times, coupled with low control over work, multitasking and complexity of certain tasks requiring high concentration levels.
- Difficulties maintaining work-life balance (especially given the unpredictability of working time, the length of working days and the lack of control over the work or the presence of non-standard working hours).
- Long and non-standard working hours, in the sense that the sector is characterised by long shifts, irregular, non-continuous and unusual working hours (a lot of the work is done when other people are not at work or at night/weekends), including uncertainty about the finishing time of the work.

- Lack of training and education, in the sense that some workers might not be well trained to do their job, which can lead to more stress.
- Precarious work, lack of job stability, high presence of part-time, irregular or seasonal work, and presence of undeclared work, often coupled with low salary levels for a large part of the workforce.

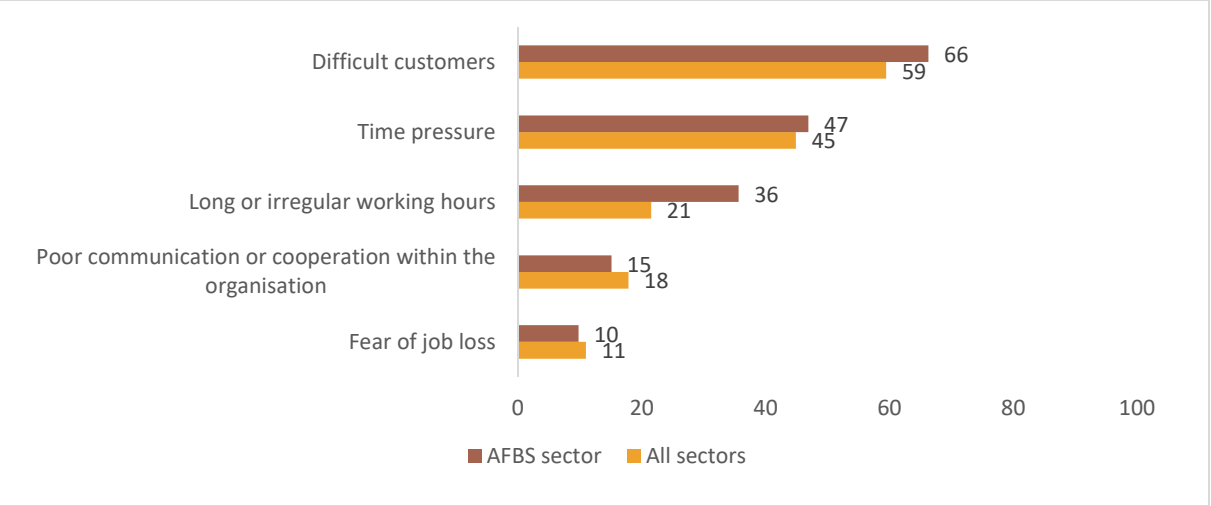
Psychosocial risks are not equally present among the different subsectors and professions/jobs that comprise the AFBS sector. Whereas hotel housekeepers and cooks are particularly exposed to general OSH risks (see previous section), they are not exposed to much personal interaction with clients. By way of contrast, and as for receptionists, the problems are more of a psychological nature and associated with the stress that can be generated by, for example, a check-in process with a large group.

Box 4 Occupational risk specificities of the fast-food sector

The sector is characterised by a high level of standardisation and presence of franchises. There is a widespread view that jobs in fast-food chains are low-quality jobs. This predisposes the worker to accept worse working conditions, and thus employers are more likely to relax OSH practices. Linked to this, fast-food sector workers often have short-time contracts and they keep their jobs for a short period of time. Accidents and safety issues in fast-food stores are very much related to stress, lack of training and poor design of machines. A particular problem in the sector is the slippery oil mist created by deep-fryers, which may cause accidents. (Source: interview with a trade union representative)

The ESENER 2019 survey complements the previous results. In this regard, the most relevant psychosocial risks identified by the AFBS establishments include, in this order, the need to deal with difficult customers, existing time pressures to do the work and, finally, the presence of long/irregular working hours (66%, 47% and 36% of the sector establishments identify these risks, respectively). Meanwhile, other risks such as poor communication/cooperation within the organisation and fear of job loss are much less present (15% and 11% sector establishments mention these elements, respectively).

Figure 4 Main psychosocial risks, AFBS sector and all sectors, EU-27, 2019

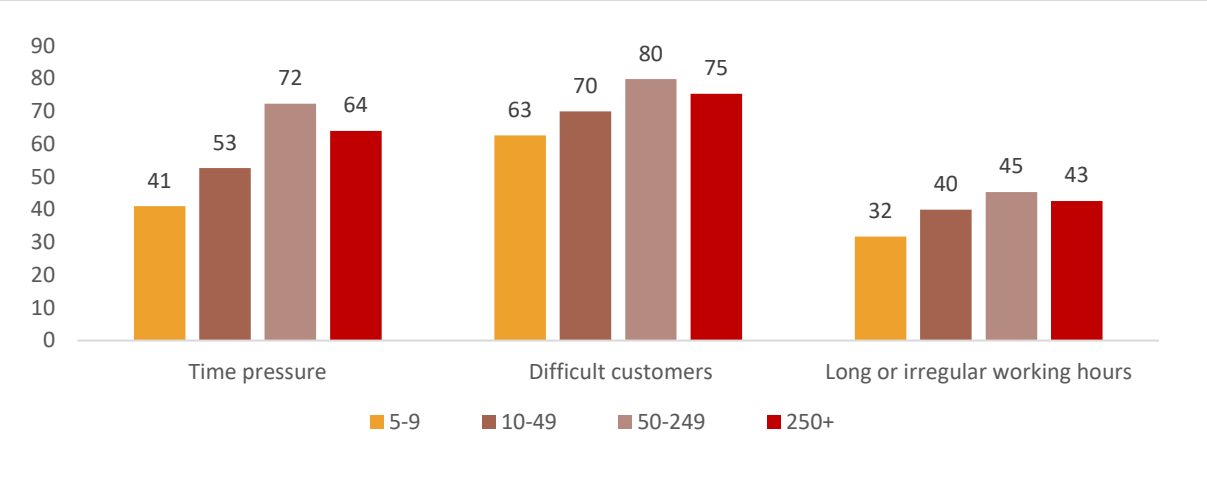


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

The comparison with all sectors shows that AFBS sector workers are particularly exposed to the presence of difficult customers (66% versus 55% for all sectors) and the presence of long/irregular working hours (36% versus 21% for all sectors). Meanwhile, the ESENER 2019 survey also shows that large establishments are more sensitive to these types of risks, in the sense that they are able to identify the presence of psychosocial risks to a larger extent than smaller establishments. Several of the interviewed experts also reckon that larger establishments/enterprises (particularly those belonging to international groups such as international hotel chains) are particularly sensitive to OSH risks, including psychosocial risks, and have the resources and expertise to effectively comply with the OSH management regulations set by the group.

Figure 5 Selected psychosocial risks in the AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

The comparison between the results provided by ESENER 2014 and ESENER 2019 shows an increase in nearly all the identified psychosocial risks in the time period 2014-2019 (time pressure, difficult customers, poor communication/cooperation), with the only exception of job insecurity (15% in 2014 and 10% in 2019, just before the COVID-19 pandemic).

Table 10 Main psychosocial risks, AFBS sector, EU-27, ESENER 2014 – ESENER 2019

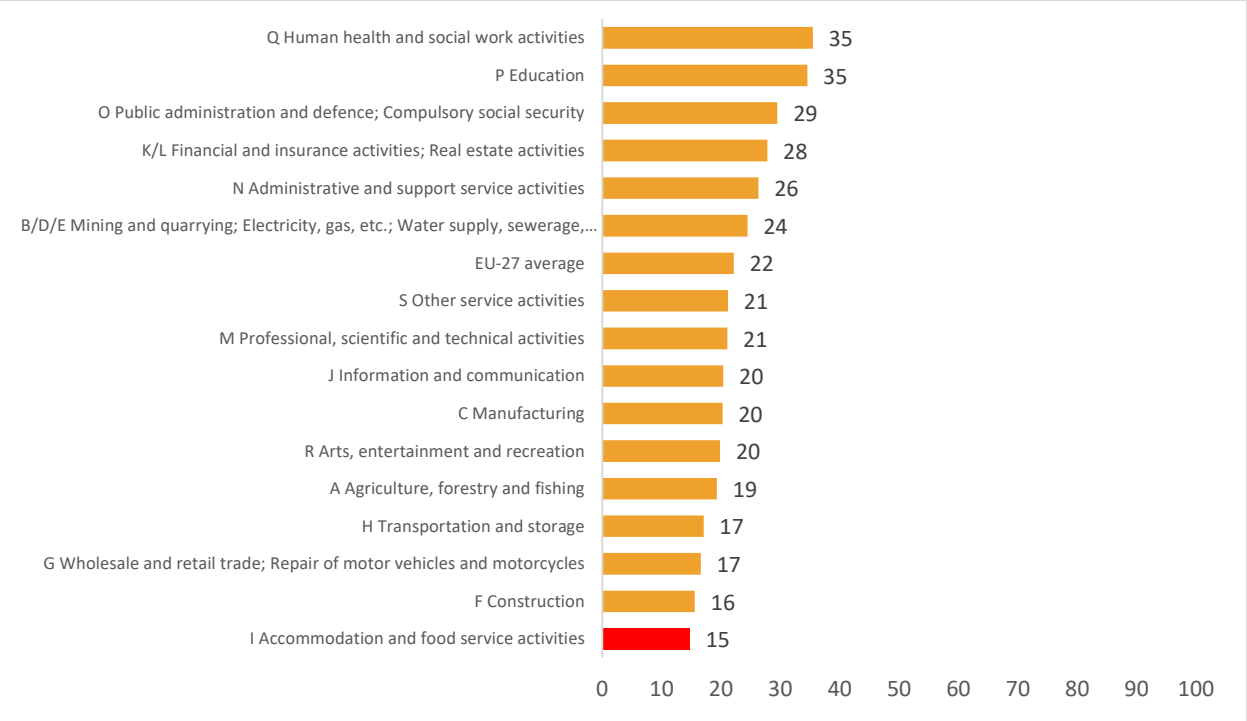
	ESENER 2014	ESENER 2019
Time pressure	44	47
Poor communication or cooperation	13	15
Job insecurity	15	10
Difficult customers	62	66
Long or irregular working hours	35	36

Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2014 and ESENER 2019

These psychosocial risks are regarded as easier to be addressed than other risks by AFBS establishments, where this result might be explained by the high importance attributed to other general OSH risks by the sector. Only 15% of AFBS sector establishments suggest that psychosocial risks are more difficult to address than other risks, whereas 18% suggest that they are easier and for 63% are equally difficult to address than other risks. Interestingly, this perception of difficulty is the smallest in comparison to all other sectors (and particularly lower in comparison to other tertiary sectors such as health and social work activities, education or public administration), but it is higher the larger the establishments are, where some EU Member States are particularly sensitive to this higher difficulty, such as Sweden, Estonia, Finland, Spain or Denmark. Some of the interviewed experts confirm that many AFBS employers, particularly in smaller enterprises, still do not realise the importance of staff wellbeing and tend to underestimate existing psychosocial risks in the sector, which can have big impacts on employees' mental health.

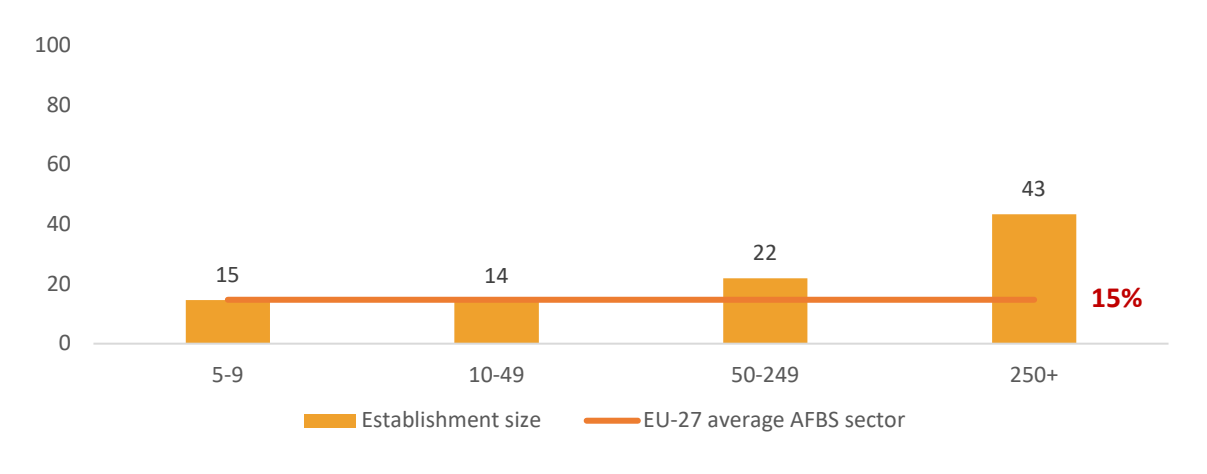
Figure 6 Share of establishments that suggest that psychosocial risks are more difficult to address than other risks, by economic sector, 2019



Base: Responses only of those establishments that have identified one or more psychosocial risks

Source: IKEI/Panteia based on ESENER 2019

Figure 7 **Share of establishments that suggest that psychosocial risks are more difficult to address than other risks, by establishment size, AFBS sector, EU-27, 2019**



Base: Responses only of those AFBS establishments that have identified one or more psychosocial risks

Source: IKEI/Panteia based on ESENER 2019

2.4 Health outcomes within the AFBS sector

The exposure of the AFBS sector workers to a number of OSH risks (including psychosocial ones) results in a series of health outcomes. In this regard, some of the most common health outcomes refer to a high presence of MSDs (back injuries and other sprains and strains). These MSDs arise from physical workload and forced postures (prolonged standing, constant movements, manual handling, and lifting of heavy and/or bulky objects, working in awkward postures, etc.) as well as from the high presence of slips, trips and falls due to the presence of wet or otherwise dangerous floors. It is often the case that symptoms are underestimated until they become chronic and permanent damage appears.

Other common health outcomes identified among AFBS sector workers include skin and respiratory problems (due to exposure to soap and hot water, chemicals in detergents and other cleaning/polishing materials), cuts and lacerations (particularly common among restaurant workers and dishwashers who handle or clean sharp knives and slicing machines), and burns and scalds (common among chefs, dishwashers and other kitchen workers and laundry workers). Meanwhile, work-related stress and 'burnout syndrome' are two of the most frequent manifestations of health damage associated with exposure to psychosocial risk factors, particularly among aged workers. In this regard, some of the most common health outcomes present in the AFBS sector are presented in Table 11.

Table 11 **Main OSH risks and associated health outcomes in the AFBS sector**

Risk	Health outcomes
Physically demanding work	MSDs such as carpal tunnel syndrome, tendonitis, back problems, spinal disorders; Tendonitis, peritendinitis, tenosynovitis, myalgia and distal nerve entrapment
Temperature and air pollutants	Discomfort, heat stress, inability to concentrate, muscle cramps, heat exhaustion; Headaches, heat stroke, breathing problems, burns, infections

Risk	Health outcomes
Slips, trips and falls	Sprains, broken limbs, injured necks and backs, cuts and bruises from falling, and injuries from falling onto or in machinery, or into deep fat fryers
Exposure to dangerous substances, biological risks	Eczema, infections, skin, eye and nose irritation, allergies, respiratory diseases, dermatitis
Safety conditions of work equipment and tools	Cuts and entrapments, limbs caught in moving parts, electric shocks, lacerations and needle stick injuries, punctures
Noise and high sound levels	Hearing loss, mental fatigue, lack of concentration and fatigue can lead to accidents, muscle tension
Low light conditions	Higher accident risk (falling, burning and eyestrain)
Violence, harassment and discrimination	Violence at work, job-related stress
High workload and stress	Headaches, job-related stress and fear; Burnout; Depression, increased absenteeism

Source: European Agency for Safety and Health at Work, 2008b, 2008c, 2011a; Hassard et al, 2020; Lee et al, 2013; Svedahl et al, 2016; Warshaw, 2011)

One expert stressed that the AFBS sector can be very intense at certain times of the year (tourist seasons) in seasonal tourist destinations, where this is reflected in increases in occupational health problems and accidents at work.

The previous results can be complemented with information stemming from the European Statistics on Accidents at Work (ESAW)[15] elaborated by Eurostat, which allows the quantification of the impacts of these OSH risks in terms of accidents at work.

In this sense, the AFBS sector can be characterised as a relatively dangerous sector, in the sense that the number of accidents is higher than the average for all sectors, although the majority of these accidents are non-fatal. In this regard, the AFBS sector incidence rate per 100,000 workers was 1,757.4 non-fatal accidents per 100,000 workers in 2019 in comparison to 1,603.1 in the total economy. Meanwhile, the presence of fatal accidents was lower than for the rest of the economy, so in 2019, the incidence rate of fatal accidents per 100,000 workers in the AFBS sector was 0.8 in 2019 versus 1.7 on average for the whole economy.

Table 12 Incidence rate of accidents at work, AFBS sector vs all sectors, EU-27, 2014-2019

Year	Non-fatal accidents		Fatal accidents	
	AFBS sector	EU total	AFBS sector	EU total
2014	1,785.9	1,706.5	0.9	2.0
2015	1,813.8	1,668.0	0.8	2.0
2016	1,862.6	1,718.3	0.7	1.8
2017	1,789.1	1,703.8	0.9	1.8

[15] See https://ec.europa.eu/eurostat/web/health/data

Year	Non-fatal accidents		Fatal accidents	
	AFBS sector	EU total	AFBS sector	EU total
2018	1,762.5	1,659.1	0.6	1.8
2019	1,757.4	1,603.1	0.8	1.7

Source: Eurostat, ESAW

In total numbers, the AFBS sector experienced in 2019 a total of 166,162 accidents at work, where 78 of them were fatal. All in all, the accidents in the AFBS sector represented 5.3% of the total accidents at work registered in the EU as a whole in 2019, whereas fatal accidents represented 2.3% of the total. It is also interesting to stress that the number of non-fatal accidents has experienced a steady increase in the time period 2014-2019, going from 144,441 non-fatal accidents in 2014 to 166,162 accidents in 2019, and this is better reflected in an increasing share of the AFBS sector non-fatal accidents over all sectors (from 4.8% in 2014 to 5.3% in 2019).

Table 13 Number of accidents at work in the AFBS sector and percentage over the total number of accidents at work, EU-27, 2014-2019

	Number of accidents in AFBS sector			% Over total number of accidents		
	Non-fatal	Fatal	Total	Non-fatal	Fatal	Total
2014	144,441	70	144,511	4.8	2.0	4.8
2015	150,605	68	150,673	5.0	1.9	5.0
2016	158,810	56	158,866	5.1	1.7	5.1
2017	159,483	77	159,560	5.1	2.4	5.1
2018	163,164	53	163,217	5.2	1.6	5.2
2019	166,162	78	166,240	5.3	2.3	5.3

Source: Eurostat, ESAW

Meanwhile, and concerning the distribution of accidents at work according to type of injury, most accidents in the AFBS sector result in wounds and superficial injuries, followed by dislocations, sprains and strains, and concussions and internal injuries. It is worth noting the relatively high number of wounds and superficial injuries as well as burns. Thus, almost 7% of accidents in the AFBS sector are burns, while in all sectors the percentage is only 2%. Meanwhile, 38.6% of AFBS accidents correspond to wounds and superficial injuries in comparison to 28.9% for all sectors.

Table 14 Accidents at work according to type of injury, all NACE activities and AFBS sector in the EU-27, 2019

Number of accidents	AFBS sector		Total – all NACE activities	
	Total	%/AFBS Total	Total	%/Total
Wounds and superficial injuries	64,117	38.6	907,619	28.9
Bone fractures	13,308	8.0	332,656	10.6
Dislocations, sprains and strains	37,820	22.8	824,801	26.2
Traumatic amputations (loss of	329	0.2	13,082	0.4
Concussions and internal injuries	23,377	14.1	591,371	18.8
Burns, scalds and frostbites	10,925	6.6	52,933	1.7
Poisonings and infections	202	0.1	11,537	0.4
Drownings and asphyxiations	40	0.0	1,022	0.0
Effects of sound, vibration and	31	0.0	3,759	0.1
Effects of temperature extremes,	1,636	1.0	17,994	0.6
Shocks	5,200	3.1	125,371	4.0
Multiple injuries	1,666	1.0	26,321	0.8
Other not elsewhere mentioned	2,211	1.3	67,331	2.1
Unspecified	5,378	3.2	168,561	5.4
TOTAL	166,240	100.0	3,144,358	100.0

Source: Eurostat, ESAW

3. OSH management in the AFBS sector

3.1 Introduction

This chapter provides an in-depth analysis of the OSH management practices existing within the AFBS sector. Specifically, the chapter describes the extent and characterisation of workplace risk assessments as well as the reasons behind those establishments that do not regularly carry out risk assessments. Subsequently, the chapter describes the presence of preventive measures to cope with OSH risks, including general health promotion measures, and specific measures for preventing OSH risks.

The chapter also identifies the use by AFBS establishments of health and safety services and external providers, including the arrangement of regular medical examinations to monitor the health of employees, the use of health and safety services, and the use of OSH information from external organisations. Later on, the chapter provides information on the extent of existing discussions on OSH issues at different levels, both at the top level of management and in staff or team meetings, as well as information on the extent of training activities on OSH issues, for management staff, OSH representatives and employees in general. Last, the chapter provides information on the evolution of these OSH management practices over the last decade.

3.2 Presence and characterisation of workplace risk assessments

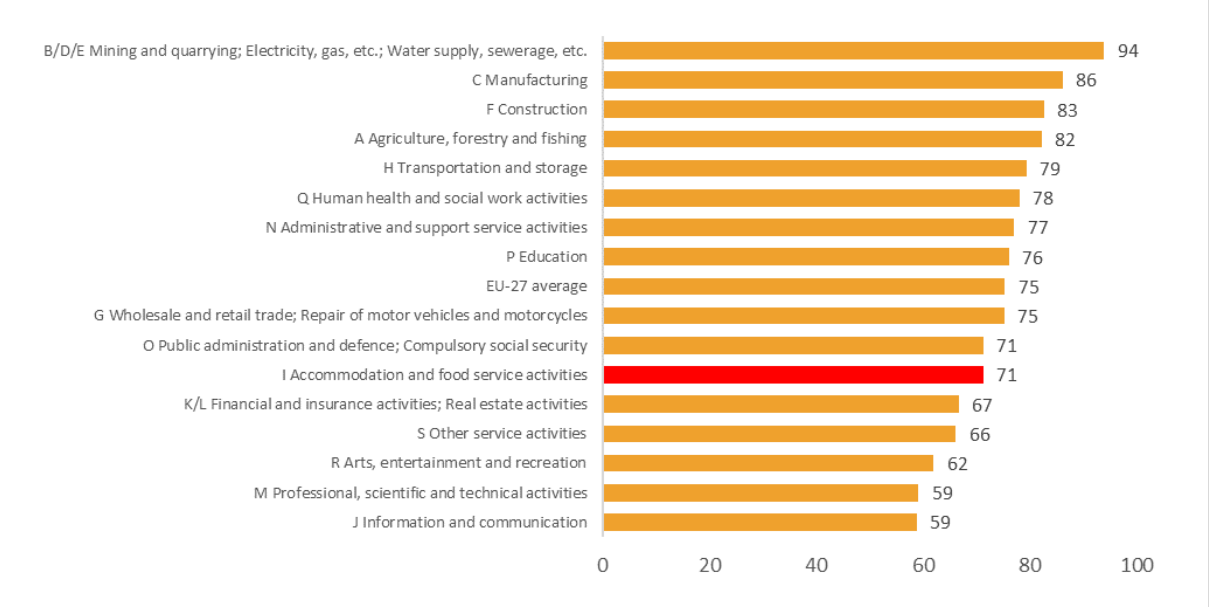
3.2.1 Presence of workplace risk assessment

OSH workplace risk assessments are a comprehensive method for identifying workplace-related risk factors that have the potential to cause harm, analysing, evaluating and prioritising the importance of these risks and the occupational groups affected by them, and, finally, upgrading/prioritising/proposing new appropriate ways to eliminate or control these risks. Risk assessments are a key element within any OSH management plan, and they are the cornerstone of the European approach to OSH, as specified in the EU Framework Directive on Safety and Health at Work (Directive 89/391/EEC).[16]

According to the available information provided by ESENER 2019, approximately 71% of the EU-27 AFBS sector establishments regularly carry out workplace risk assessments. This share is slightly below the EU-27 average (75%), but considerably above other sectors such as information and communication, professional activities and arts and entertainment (59%, 59% and 62%, respectively), but well below the shares corresponding to sectors such as mining, manufacturing and construction (94%, 86% and 83%, respectively).

[16] See https://osha.europa.eu/en/legislation/directives/the-osh-framework-directive/the-osh-framework-directive-introduction

Figure 8 **Share of establishments that regularly carry out workplace risk assessments by sector, EU-27, 2019**

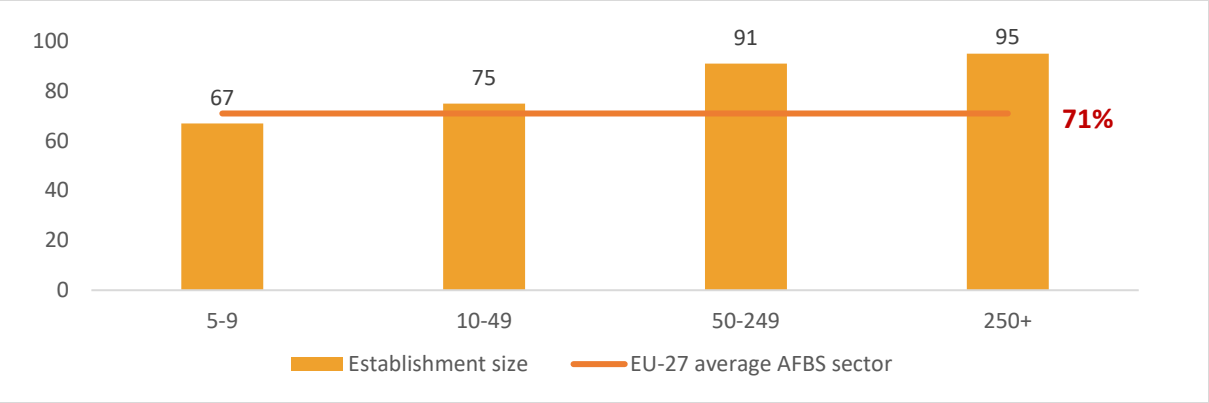


Base: All establishments in the EU-27 / Source: IKEI/Panteia based on ESENER 2019

Related to this, some interviewed experts indicate that, in some cases, risk assessments are conducted by legal obligation, that is, to fulfil the law, but it happens that they are not consequently applied in practice. In some cases, they are just 'a paper' to present when visited by the health and safety inspection, filled in by OSH external services with no proper customisation to the real situation of the workplace, while employers are not provided with enough information on its contents. According to one of the interviewed experts, it is not unusual that risk assessments are prepared schematically and contain generalities, and are not specific to the workplace.

The share of AFBS establishments regularly carrying out workplace risk assessments increases with establishment size, so larger establishments are more likely to regularly carry out this type of assessment. Around 67% of AFBS micro-establishments carry out workplace risk assessments, where this share progressively increases up to 75% among small establishments, 91% among medium-sized establishments, and 95% among large establishments (250 and more employees).

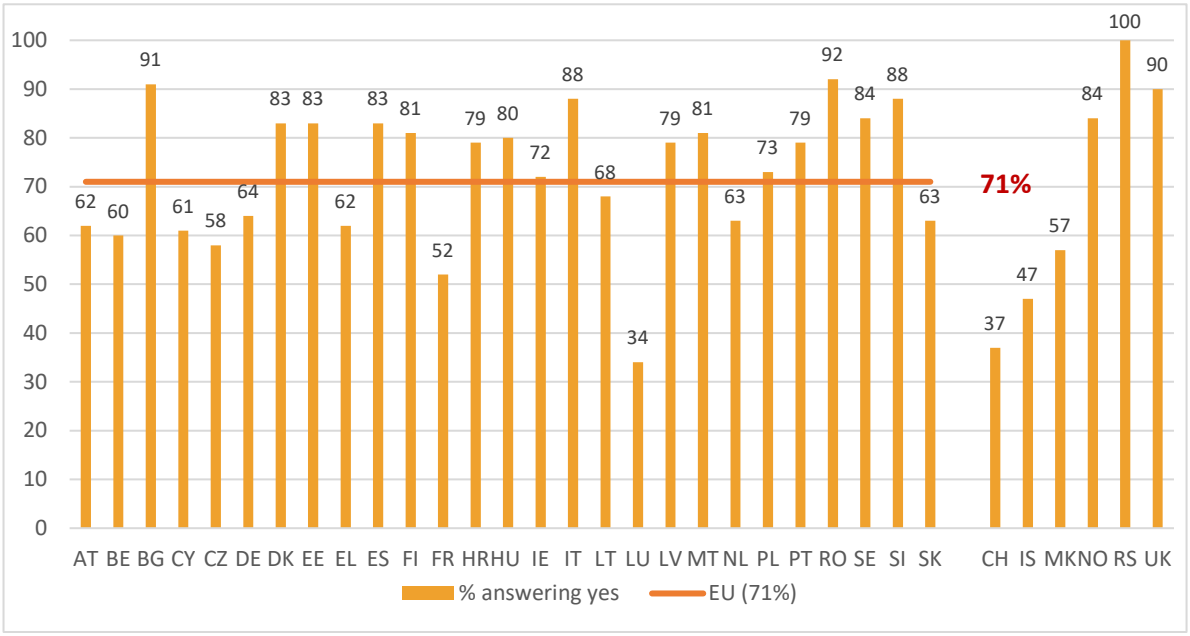
Figure 9 **Share of establishments that regularly carry out workplace risk assessments, by establishment size, AFBS sector, EU-27, 2019**



Base: All AFBS establishments in the EU-27 / Source: IKEI/Panteia based on ESENER 2019

The available data show remarkable disparities among Member States. The largest shares of establishments reporting regular workplace risk assessments correspond to Romania (92%) and Bulgaria (91%), whereas the lowest correspond to Luxembourg (34%) and France (52%). Many different contextual factors, including national rules, are behind these differences (see next box with the example of the Netherlands).

Figure 10 Share of establishments in the AFBS sector that regularly carry out workplace risk assessments, by country, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Box 5 Risk assessment in practice: The Dutch Risk Inventarisation and Evaluation

Dutch employers with employees are obliged to carry out a written Risk Inventarisation and Evaluation (RI&E). The RI&E maps out the situation and risks in the field of working conditions, followed by a plan of approach. Enterprises with more than 25 employees need to have their RI&E assessed by a certified OSH service or health and safety expert. The latter is not needed if employers use a certified RI&E tool developed by their trade organisation. A typical RI&E for the AFBS sector covers different elements, including: the hotel and catering premises and the layout of the premises; the in-house emergency service (including an emergency plan); the environmental factors and hazardous substances (cleaning agents, etc.); the physical load and workplace layout; the equipment and machines; and job content, work pressure, aggression and violence, working and rest times. With the RI&E, the most common management practices are first and foremost secured, which means that all employers have to have their protocols in order.

Source: Fieldwork interview and https://www.rie.nl/

3.2.2 Characterisation of risk assessment practices

This subsection provides more details on these risks assessments that are carried out regularly, including elements related to who carries out the assessments, elements routinely assessed, type of workplaces assessed and type of employees included, the frequency of these risks assessments and whether written documentation is stored.

Concerning the main actors involved in conducting these risk assessments, ESENER 2019 data show that 47% of AFBS establishments indicate that these risk assessments are contracted to external providers, whereas 42% are conducted by internal staff and 11% by both equally, where this result is fully in line with the EU-27 average for all sectors. There are no important differences by establishment size, with the only exception that larger establishments do tend to involve both internal staff and external providers in the elaboration of these risk assessment practices more than their smaller counterparts. Also, important differences can be appreciated among Member States, in the sense that whereas in countries such as Denmark and Sweden more than 80% of establishments conduct their risk assessments by internal staff, in other Member States such as Hungary, Italy and Portugal more than 80% of establishments contract their risk assessments to external providers.

Meanwhile, and looking at the topics that are routinely evaluated by the AFBS sector establishments in these workplace risk assessments, available data show that the most common topics are the safety of machines and the presence of dangerous chemical/biological substances, both selected by 90% of the AFBS establishments. Other elements routinely evaluated include organisational aspects (such as work schedules, breaks and work shifts) (74%), as well as work postures and physical working demands, including repetitive movements (suggested by 68% of the AFBS establishments). Compared to the EU-27 general data for all sectors, the AFBS establishments are slightly more concerned about elements related to the safety of machines, the presence of dangerous chemical/biological substances and organisational aspects, whereas the issue of work postures and physical working demands is more habitual among EU-27 establishments than among AFBS establishments (75% and 68%, respectively). This result is a bit strange, having in mind the importance of these risks among AFBS establishments (see section 2.3). Furthermore, one of the interviewed experts suggested that, from their vast experience on the topic, most of the existing AFBS-related risk assessments pay no attention to some specific issues such as biological risks or the assessment of specific vulnerable groups (for instance, elderly workers).

Table 15 Characterisation of risk assessment practices, AFBS sector and all sectors, EU-27, 2019 (%)

	AFBS sector	Total
Main actors involved in their elaboration		
Conducted mainly by internal staff	42	42
Contracted mainly to external providers	47	47
Both about equally	11	11
Topics routinely evaluated		
Safety of machines	90	83
Dangerous chemical or biological substances (*)	90	86
Work postures, physical working demands	68	75
Exposure to noise, vibrations, heat or cold	55	62
Supervisor-employee relationships	58	55
Organisational aspects such as work schedules	74	66
Cover workplaces at home (**)	39	31

	AFBS sector	Total
Cover workplaces outside the premises of the establishment (***)	46	65
Cover only people on the payroll (****)	48	47
Carried out in the last two years	81	81
Documented in written form (*****)	88	92

Base: Information from AFBS establishments that carry out regularly risk assessments

(*) Only AFBS establishments reporting the presence of chemical or biological substances as a risk

(**) AFBS establishment where any of the employees regularly work from home

(***) AFBS establishments where any of the employees work anywhere else outside the premises of the establishment

(****) AFBS establishments where additional persons besides employees on the payroll work in the establishment (subcontractors, temporary agency workers, volunteers)

(*****) AFBS establishments that regularly conduct workplace risk assessments

Source: IKEI/Panteia based on ESENER 2019

The ESENER 2019 survey also shows that 39% of the AFBS sector establishments that have employees working from home[17] cover workplaces at home within their risk assessments, where this percentage is a bit higher than the EU-27 average (31%). Meanwhile, 46% of AFBS establishments where any of the employees work anywhere else outside the premises of the establishment[18] include these external workplaces outside the premises of their establishments within their risk assessments, which is lower than the 65% of the EU-27 average. The share of establishments with additional persons besides employees on the payroll who cover exclusively people on the payroll within their risk assessments are similar among AFBS sector establishments and EU-27 establishments (48% and 47%, respectively), and 81% of the AFBS establishments confirm that they have conducted their risk assessments in the last two years (similar percentage for the EU-27 establishments). Finally, 88% of AFBS establishments suggest having documented their risk assessments in written form, slightly lower than 92% of EU-27 establishments.

Looking at establishment size considerations, it is possible to identify an increasing share of establishments that routinely evaluate different topics according to size. Just to give an example, 69% of AFBS micro-establishments that regularly carry out risk assessments routinely evaluate work postures and physical work demands, whereas this percentage goes up to 83% among medium-sized AFBS establishments and 95% among large AFBS establishments.

Table 16 Type of aspects that are routinely evaluated in workplace risk assessments in the AFBS sector by establishment size, EU-27, 2019 (%)

Enterprise size	Safety of machines	Dangerous chemical or biological substances (*)	Work postures, physical working demands	Exposure to noise, vibrations, heat or cold	Supervisor-employee relationships	Organisational aspects such as work schedules
5-9	87	89	69	56	56	72
10-49	92	90	67	52	59	75

[17] Four per cent of all AFBS sector establishments.
[18] Fifteen per cent of total AFBS sector establishments.

Enterprise size	Safety of machines	Dangerous chemical or biological substances (*)	Work postures, physical working demands	Exposure to noise, vibrations, heat or cold	Supervisor-employee relationships	Organisational aspects such as work schedules
50-249	92	94	83	66	65	83
250+	95	99	95	87	79	81
Total AFBS sector	**90**	**90**	**68**	**55**	**58**	**74**

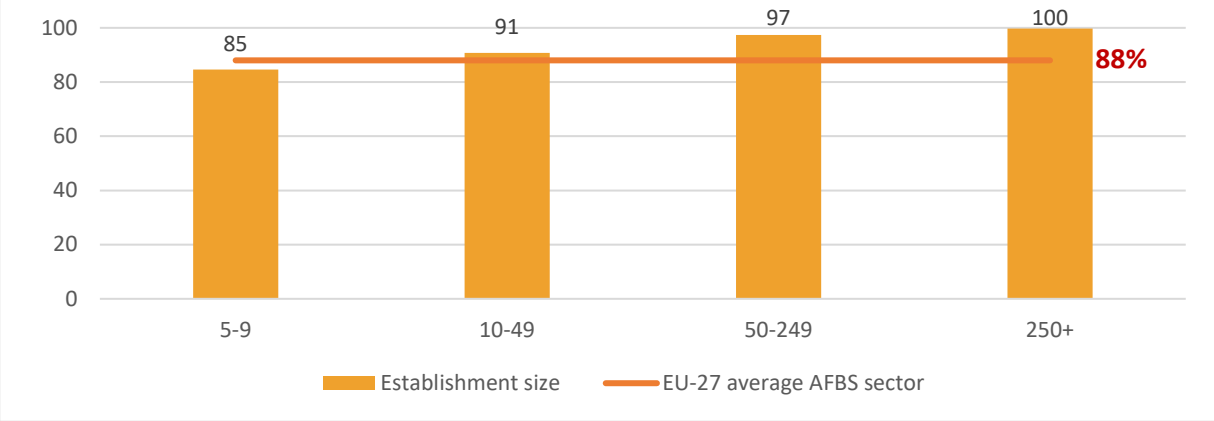
Base: Information from AFBS establishments that regularly carry out risk assessments

(*) Only AFBS establishments that identify chemical or biological substances as a risk

Source: IKEI/Panteia based on ESENER 2019

The differences between establishment sizes are also reflected in the presence of AFBS establishments that document their risks assessments in written form. Thus, the share of AFBS establishments documenting their risk assessments in written form range from 85% of the establishments with five to nine employees up to 100% of the establishments of 250 and more employees.

Figure 11 Share of establishments where the latest risk assessment has been documented in written form, in the AFBS sector, by establishment size, EU-27, 2019

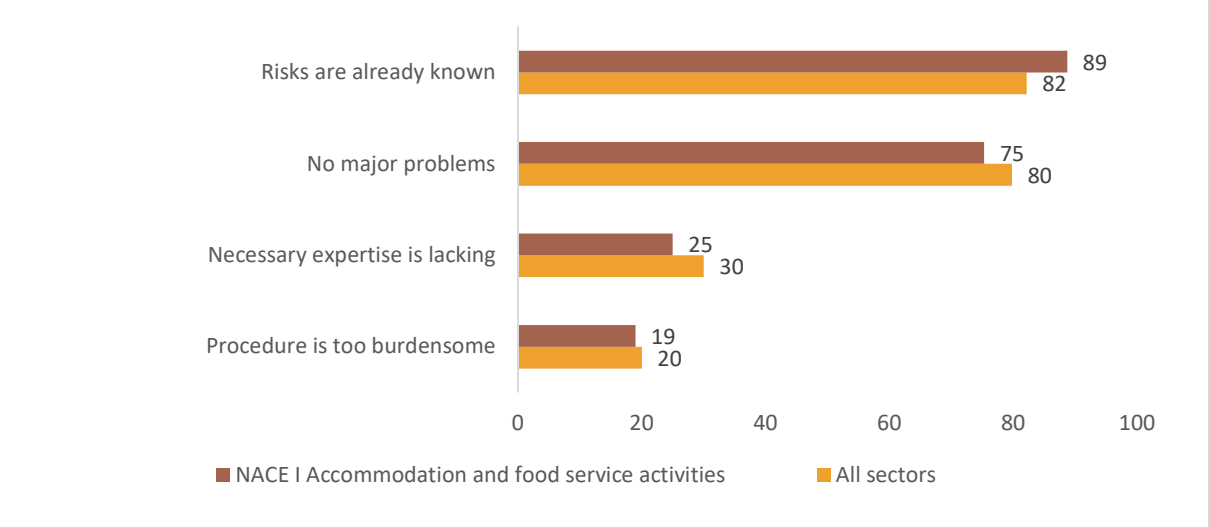


Base: AFBS establishments that regularly carry out risk assessments / Source: IKEI/Panteia based on ESENER 2019

3.2.3 Reasons for not carrying out risk assessments regularly

This subsection includes information on why some AFBS establishments (approximately three out of 10) do not regularly carry out risk assessments. In this sense, the ESENER 2019 data show that the most extensive reason for not conducting such assessments is that risks are already known (argument selected by 89% of AFBS establishments), followed by the fact that they do not identify major problems (75%). Other responses given, although much less relevant, include a lack of necessary expertise for doing these risk assessments (25%) and the fact that the associated procedures are perceived as too burdensome (19%). There are no important differences in comparison to EU-27 average results for all sectors.

Figure 12 Main reasons why workplace risk assessments are not carried out regularly, AFBS sector and all sectors, EU-27, 2019

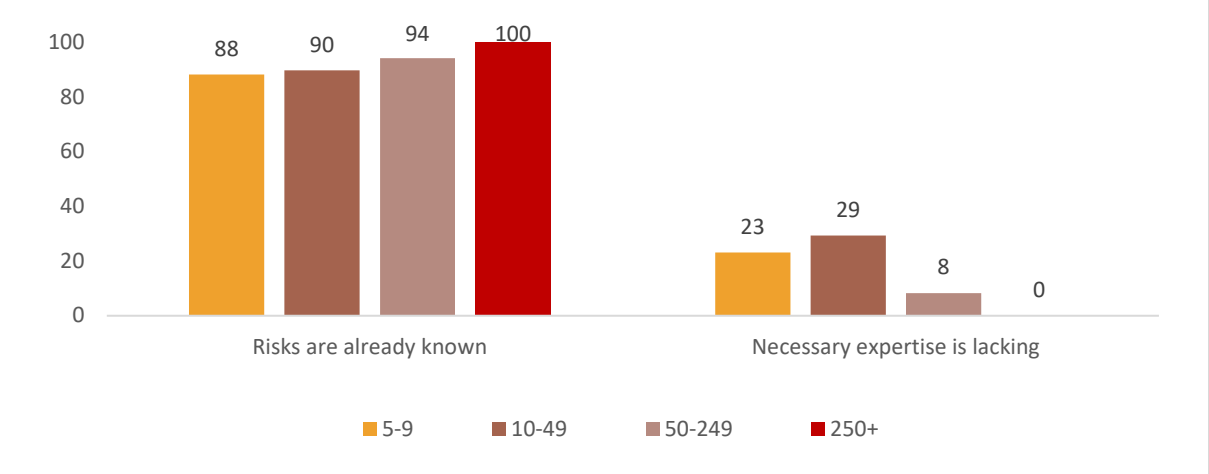


Base: Responses only of those AFBS establishments that do not regularly carry out workplace risk assessments

Source: IKEI/Panteia based on ESENER 2019

The ESENER 2019 data show that suggested reasons are perceived differently by different establishment sizes.[19] Thus, and whereas the justification that risks are already known increases with the size of the AFBS establishments, the lack of necessary expertise for doing these risk assessments is particularly perceived by the small AFBS establishments (23% of those with 5-9 employees and 29% of those with 10-49 employees), whereas none of the larger establishments identify this reason. This last result is important from a policymaking perspective.

Figure 13 Main reasons why workplace risk assessments are not carried out regularly in the AFBS sector, by establishment size, EU-27, 2019



Base: Responses only of those AFBS establishments that do not regularly carry out workplace risk assessments

Source: IKEI/Panteia based on ESENER 2019

[19] Remember that up to 9% and 5% of medium and large AFBS sector establishments do not regularly carry out workplace risk assessments.

Some literature complements the previous results, in the sense that some of the most critical shortcomings to comply with risk assessment obligations among SMEs include lack of information, poor capacity and skills to deal with these risk assessments, and, finally, poor access to effective, specific and specialised technical assistance (European Agency for Safety and Health at Work, 2008b). In this regard, EU-OSHA has developed the Online interactive Risk Assessment (OiRA) tool to enable micro and small organisations to assess their risks themselves (see next box).

Box 6 OiRA: Online interactive Risk Assessment tool by EU-OSHA

OiRA, the Online interactive Risk Assessment tool, provides the resources and know-how required to enable micro and small organisations to assess their risks themselves. It is a web platform that enables the creation of sectoral risk assessment tools in any language in an easy and standardised way. The aim of OiRA is to provide easy-to-use tools that guide micro and small organisations through the risk assessment process. The OiRA application is hosted and maintained by EU-OSHA while the majority of tools have been developed by the national partners as well as EU sectoral social dialogue partners. OiRA tools are easily accessible and they are available for free on the web. There are plenty of tools available for the HORECA sector, among them one at EU level (see https://oiraproject.eu/en/oira-tools?f%5B0%5D=sector%3AHotels%20restaurants%20catering).

Source: OiRA project website (https://oiraproject.eu/en)

3.2.4 Evolution in time of the reporting and characteristics of workplace risk assessments

Reporting of workplace risk assessments

The share of AFBS establishments that report carrying out regular workplace risk assessments has remained practically the same in the time period 2014-2019 (72% and 71%, respectively). Meanwhile, comparison with the ESENER 2009 results shows that this share was higher (85%), although responses are not comparable since respondents were asked whether workplaces in their establishment were regularly checked for safety and health issues as part of a risk assessment or similar measure.

Characteristics of risk assessment practices

AFBS establishments that carry out risk assessments on a regular basis were further surveyed about the characteristics of these risk assessments in the 2014 and 2019 surveys. According to the available data, the share of EU-27 establishments in which the risk assessments are mainly conducted by internal staff seems to have slightly increased (from 37% in 2014 to 42% in 2019), whereas the share in which the assessments are mainly carried out by external providers slightly decreased (from 50% in 2014 to 47% in 2019). Meanwhile, comparison with the ESENER 2009 results shows a higher percentage of establishments where both internal staff and external providers were equally involved in the elaboration of these workplace risk assessments.

Table 17 Presence and characterisation of risk assessment practices, AFBS sector, ESENER 2014 and ESENER 2019, EU-27 (%)

	ESENER 2014	ESENER 2019
Share of establishments that regularly carry out workplace risk assessments	72	71
Main actors involved in their elaboration (*)		
Conducted mainly by internal staff	37	42
Contracted mainly to external providers	50	47
Both about equally	12	11
Topics routinely evaluated (*)		
Safety of machines	90	90

	ESENER 2014	ESENER 2019
Dangerous chemical or biological substances (**)	88	90
Work postures, physical working demands	68	68
Exposure to noise, vibrations, heat or cold	55	55
Supervisor-employee relationships	52	58
Organisational aspects such as work schedules	72	74
Cover workplaces at home (*) (***)	29	39
Cover only people on the payroll (****)	45	48
Carried out in the last two years (*)	85	81
Documented in written form (*)	86	88

Base: All AFBS establishments in the EU-27

(*) AFBS establishments that regularly carry out risk assessments

(***) AFBS establishments reporting the presence of chemical or biological substances as a risk

(***) AFBS establishments where any of the employees regularly work from home

(****) AFBS establishments where additional persons besides employees on the payroll work in the establishment (subcontractors, temporary agency workers, volunteers)

Source: IKEI/Panteia based on ESENER 2014 and ESENER 2019

The topics routinely evaluated have remained similar in 2014 and 2019, with the only minor exception of supervisor-employee relationships, slightly more suggested in 2019 in comparison to 2014 (52% and 58%, respectively). In the ESENER 2009 survey, this element was mentioned by 60% of establishments.[20] The share of establishments with employees regularly working from home that cover such workplaces outside the establishment in their risk assessments has increased from 29% to 39%, probably explained by an increase in telework practices in the last years even when only 4% of workplaces in the sector report having a worker or workers working from home. Meanwhile, the share of establishments that cover only people on the payroll has slightly increased from 45% in 2014 to 48% in 2019. Finally, the share of establishments that did carry out the assessment in the last two years has remained practically similar (85% and 81% in 2014 and 2019, respectively), where the share of AFBS establishments that have documented this risk assessment in written form has slightly increased from 85% to 88%.

3.3 Presence of preventive measures to cope with OSH risks

3.3.1 General health promotion measures

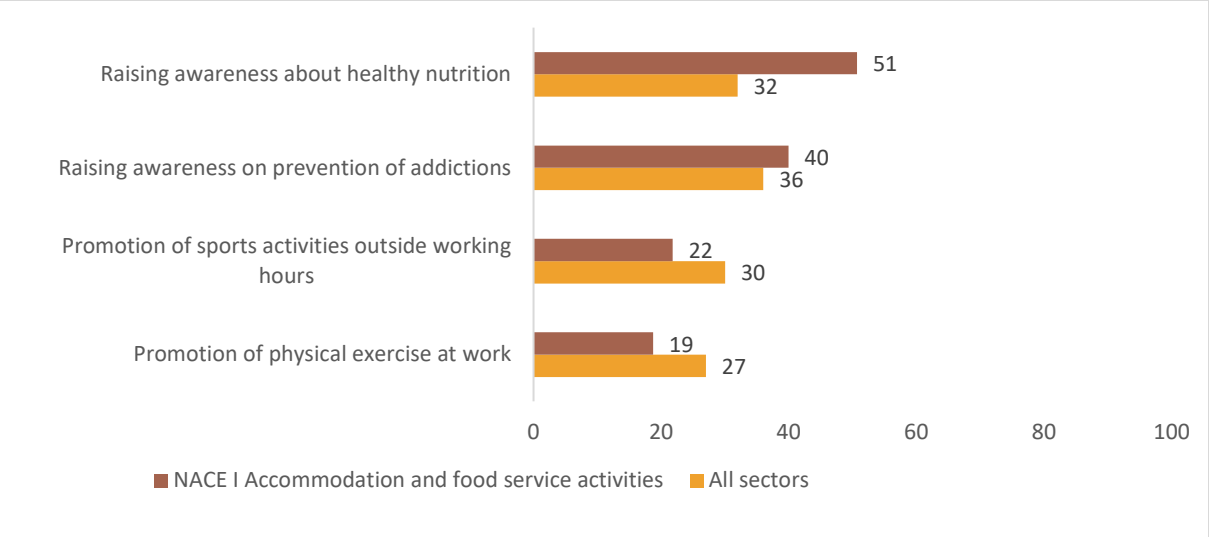
Establishments in general and AFBS establishments may take a number of preventive measures to cope with OSH risks, some of them related to general health promotion measures but also other measures specifically designed to cope with identified OSH risks.

In this regard, AFBS establishments may take some general measures intended at health promotion among employees. The ESENER 2019 survey results show that 51% of AFBS establishments raise awareness on healthy nutrition, followed by 40% that raise awareness for the prevention of addiction (smoking, alcohol, drugs). Meanwhile, 22% of sector establishments promote sports activities outside working hours and 19% promote physical exercise at work (including back exercises, stretching and other). These results are somewhat different from EU average results, where prevention of addiction is the most common measure taken for health promotion (applied by 36% of EU-27 establishments), closely followed by healthy nutrition promotion measures (32%), sports activities (30%) and back

[20] This result can be a result of not surveying micro establishments and no limitation to risk assessments only, but also other measures included.

exercises (27%). In this regard, promotion of healthy nutrition is particularly well developed in the AFBS sector.

Figure 14 Measures taken for health promotion among employees, AFBS sector and all sectors, EU-27, 2019

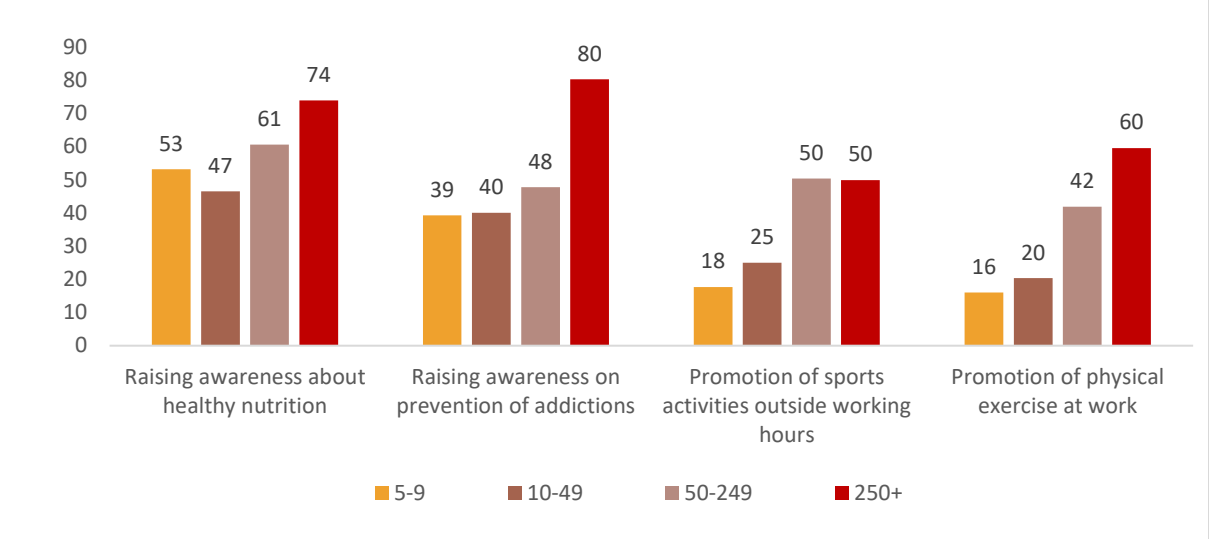


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

A close look at available ESENER 2019 data per establishment size indicates a positive relation between establishment size and the use of general health promotion measures. For example, measures related to the promotion of physical exercise at work are only taken by 16% of micro establishments (5-9 employees), compared to 60% of large-scale establishments, where this pattern is also visible among other measures.

Figure 15 Measures taken for health promotion among employees, AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

a) Measures for reducing/coping with general OSH risks and hazards

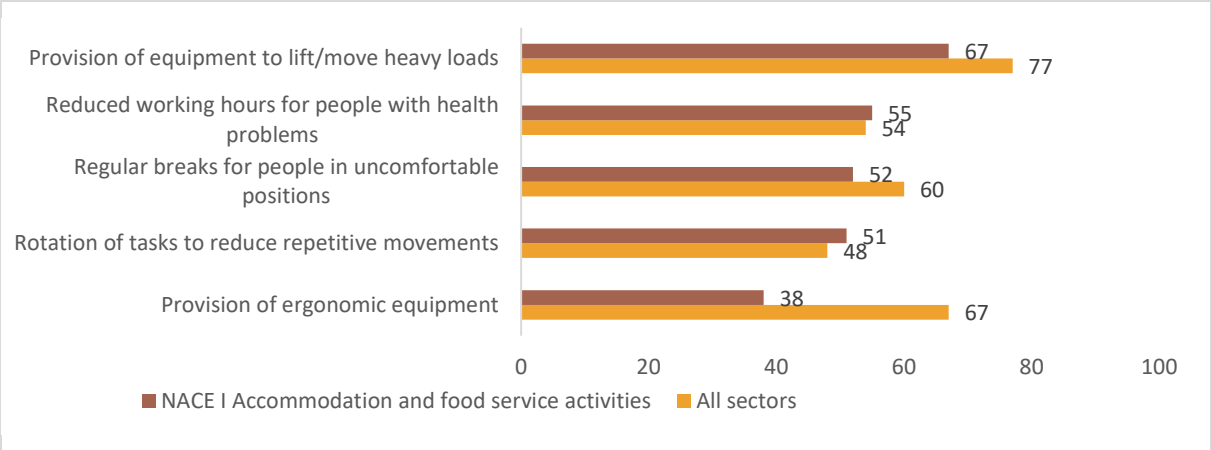
With regard to measures taken by AFBS establishments in the last three years to deal with OSH risks, the ESENER 2019 survey data show that the most recurrent practice is the provision of equipment to lift and move heavy loads, reported by 67% of the AFBS establishments, followed by the reduction of working hours for people with health problems (55%), regular breaks for people in uncomfortable positions (52%) and the rotation of tasks to reduce repetitive movements (51%). By way of contrast, the provision of ergonomic equipment is the least widespread measure, and taken by 38% of AFBS establishments. Compared with all EU-27 establishments on average, there are some noticeable differences, where the most outstanding disparity is the provision of ergonomic equipment, which is a measure taken by 67% of EU establishments as a whole (compared to only 38% of AFBS establishments). The provision of equipment to lift and move heavy loads is also higher for the EU average (77% versus 67%), as is the presence of regular breaks for people in uncomfortable positions (60% versus 52%).

The above underrepresentation of measures tackling ergonomic risk can have two sources. On the one hand the subchapter on risk assessment identified a decreased attention to work postures and physical working demands, which is constant in time and dependent on establishment size. On the other hand, certain characteristics of the sector can be the reason for fewer measures. The majority of the tasks in AFBS establishments are traditional and human workforce-intensive (like cooking, cleaning, housekeeping). These are difficult to be mechanised or automated and the variety for ergonomic equipment is lower. Furthermore, customers want to be treated in person and get individual service: there can be a strong reluctance towards automation, as was mentioned by an interviewee. A self-evident solution comes for manual handling of loads (e.g. carrying in raw ingredients) that explains the provision of equipment to lift and move heavy objects being the most common practice.

The pace of 'production' within the sector is dictated by the customer and thus it can be difficult to provide breaks in peak periods, high season. This uneven distribution of workload was mentioned by several interviewees. Furthermore, according to the ESENER answers, the specificities of vulnerable groups and the organisational aspects, such as work schedules, are evaluated less frequently. Despite all these difficulties, sector establishments seem to be able to rotate tasks and reduce working hours for people with health problems on the same average level in comparison to other sectors. Intervention if excessively long or irregular hours are worked is even higher (see below). This may point to a sort of natural self-organisation, which is not risk assessment-driven.

Finally, the sector may feature low return on investment, fluctuating utilisation rate and substantial staff turnover. These economics characteristics can hinder any indirect investment, like development of OSH measures beyond the legal minimum. Many interviewees highlighted that the drivers among most establishments in the sector are customer demand and HACCP conformity.

Figure 16 Measures taken in the last 3 years related to OSH risks, AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27

Measures related to 'provision of equipment to help with the lifting or moving of loads or other physically heavy work' only refer to establishments that reported the presence of 'lifting or moving heavy loads'. Similarly, measures related to 'rotation of tasks to reduce repetitive movements' only refer to establishments reporting the presence of 'repetitive hand or arm movements'.

Source: IKEI/Panteia based on ESENER 2019

When ESENER 2019 data are analysed from an establishment size perspective, significant differences arise again between small and large enterprises. Available results show that larger establishments are more likely to report the different risk-related measures. For instance, only 26% of micro AFBS establishments provide ergonomic equipment, well below 92% among AFBS establishments with 250 and more employees. This positive size effect is present in other sectors and reflects the broader human and material resources a larger enterprise can have in general (from expertise via flexibility to budget).

Table 18 Measures taken in the last 3 years related to OSH risks in the AFBS sector, by establishment size, EU-27, 2019 (%)

Size	Provision of equipment to help with the lifting or moving of heavy loads (*)	Rotation of tasks to reduce repetitive movements (**)	Encouraging regular breaks for people in uncomfortable working positions	Provision of ergonomic equipment	The possibility for people with health problems to reduce working hours
5-9	60	49	47	26	48
10-49	70	53	56	50	63
50-249	91	56	78	86	73
250+	93	74	82	92	78
Total AFBS sector	**67**	**51**	**52**	**38**	**55**

Base: All AFBS establishments in the EU-27

(*) Only referring to AFBS establishments reporting the presence of 'lifting or moving heavy loads'

(**) Only referring to AFBS establishments reporting the presence of 'repetitive hand or arm movements'

Source: IKEI/Panteia based on ESENER 2019

b) Measures for reducing/coping with psychosocial risks

Regarding those measures applied by AFBS establishments in the last three years to prevent psychosocial risks, the most frequent measure includes allowing employees to take more decisions on how to do their job (72% of responses), followed by other measures such as the possibility of reorganising their work in order to reduce job demands/work pressure and the provision of confidential counselling for employees (48% and 41% of AFBS establishments, respectively). Lastly, 37% of sector establishments intervene if excessively long or irregular hours are worked and 36% provide training on conflict resolution. Compared to establishments from all the EU-27 average, the shares of establishments that apply the above-mentioned measures are rather similar to those of the AFBS sector, with the only exception of intervention if excessively long or irregular hours are worked (more relevant for the AFBS sector).

Table 19 Measures taken to prevent psychosocial risks in the last 3 years, AFBS sector, EU-27, 2019 (%)

	AFBS sector	All sectors
Reorganisation of work in order to reduce job demands/work pressure	48	43
Confidential counselling for employees	41	42
Training on conflict resolution	36	34
Intervention if excessively long or irregular hours are worked	37	29
Allowing employees to take more decisions on how to do their job	72	68

Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Other formal procedures implemented by AFBS establishments with 20 or more employees to deal with and prevent psychosocial risks have been assessed by the ESENER 2019 survey. Thus, 52% of the AFBS establishments have a procedure to deal with cases of threats, abuse or assaults by clients, whereas 42% of AFBS establishments have a procedure to deal with cases of bullying or harassment and 40% of establishments have an employee survey including questions on work-related stress. Meanwhile, only 28% of AFBS establishments suggest having an action plan to prevent work-related stress. Generally speaking, there are no important differences with the EU-27 average for all sectors.

Table 20 Formal procedures taken by establishments to prevent psychosocial risks, AFBS sector, EU-27, 2019 (%) (*)

	AFBS sector	All sectors
Presence of an action plan to prevent work-related stress	28	33
Procedure to deal with cases of bullying or harassment	42	45
Procedure to deal with cases of threats, abuse or assaults by clients	52	51
Employee survey including questions on work-related stress	40	44

(*) Base: AFBS establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

Box 7 Variables influencing the management of psychosocial risks

Regression analyses (see Annex 1) show that besides commitment of the top level of management (see section 3.5.1 of this report), other variables are found to be significantly related to the management of psychosocial risks:

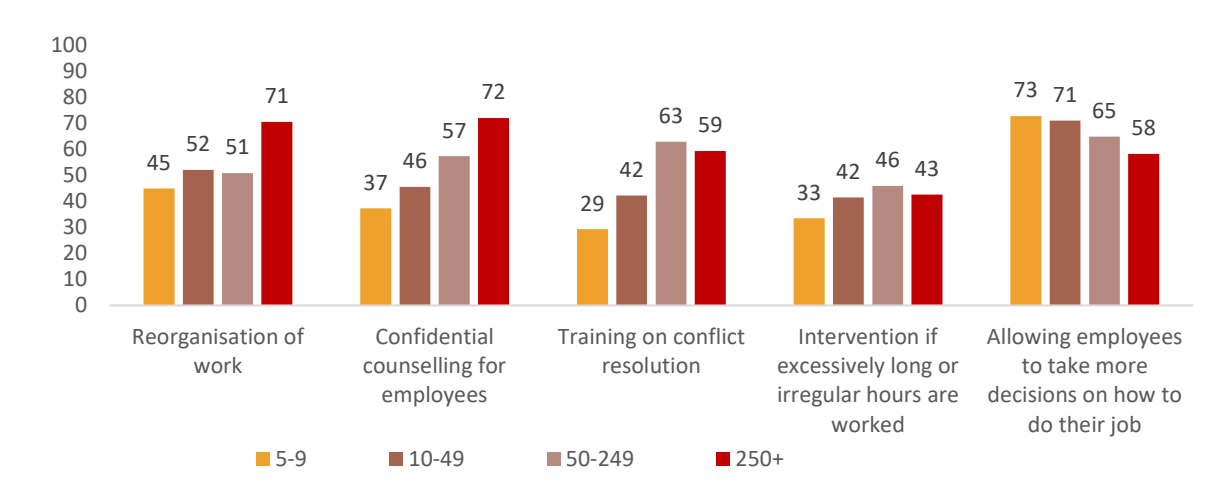
- Establishments are more likely to have formal procedures in place to prevent psychosocial risks, if they allow people with health problems to reduce working hours (as a way of preventing MSDs); if a health and safety-specific employee representation is in place; and if employees work anywhere else outside the premises of the establishment (including from home).
- Establishments take more measures to prevent psychosocial risks, if they also take measures to prevent MSDs.
- If workplace risk assessments are carried out regularly but employees are not involved in the implementation of any resulting measures, establishments take fewer measures to prevent psychosocial risks.

- Establishments that employ people aged 55 years or more take fewer measures to prevent psychosocial risks than establishments without employees from this age group.

Source: IKEI/Panteia based on ESENER 2019

Regarding differences according to establishment size, most of the measures taken in the last three years dealing with psychosocial risks are usually more extensive among larger establishments (for instance, reorganisation of work, provision of confidential counselling for employees and provision of training on conflict resolution). Around 71% of larger establishments reorganise in order to reduce job demands/work pressure versus 45% of micro-establishments, whereas confidential counselling is offered by 72% of larger establishments compared to 37% of micro-establishments. By way of contrast, the share of establishments that allow employees to take decisions on how to do their job slightly decreases with establishment size, so 73% of micro-establishments allow this possibility in comparison to 58% among the largest establishments. This result could suggest that larger establishments may have more clear and well-defined job-related procedures in comparison to smaller establishments.

Figure 17 Measures taken in the last 3 years related to dealing with psychosocial risks, AFBS sector, by establishment size, EU-27, 2019

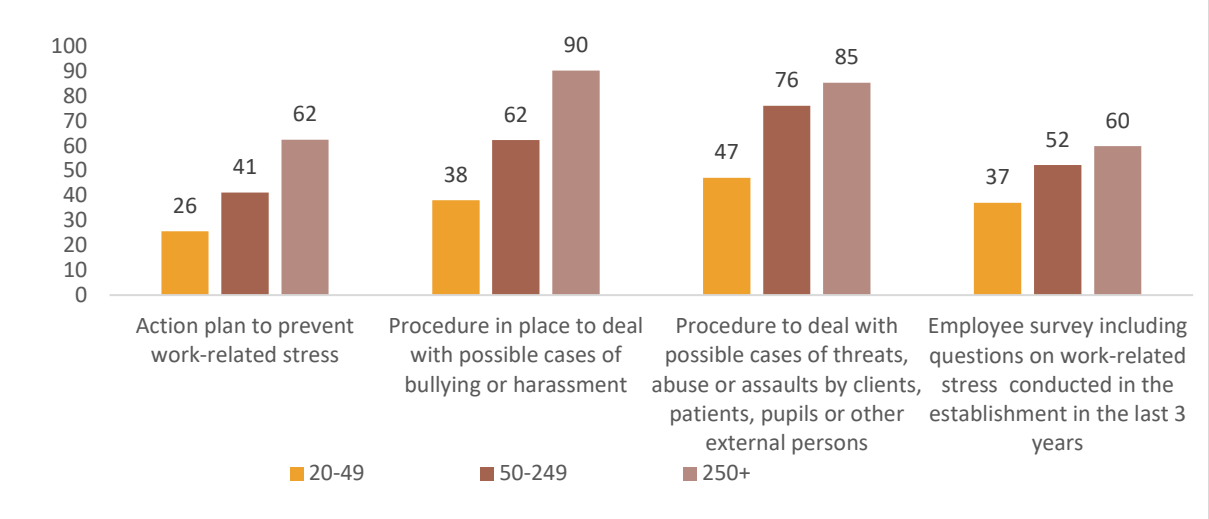


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Finally, regarding formal procedures taken to deal with psychosocial risks by AFBS establishments with 20 or more employees, the results show again a positive establishment size effect. Just to give an example, 38% of AFBS establishments with 20-49 employees have a procedure in place to deal with possible cases of bullying or harassment, whereas this percentage increases up to 90% for large establishments with 250 employees or more.

Figure 18 Other measures taken to deal with psychosocial risks, AFBS sector, by establishment size, EU-27, 2019

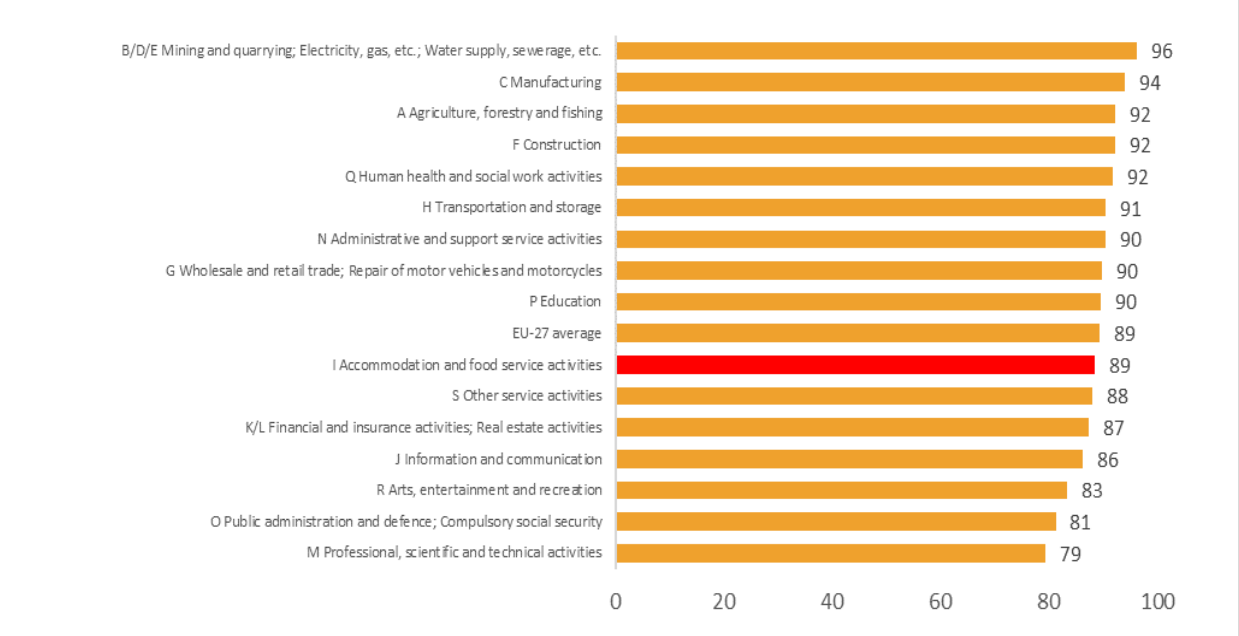


Base: Only AFBS establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

Last, and concerning the presence of documents that explain responsibilities or procedures on health and safety, ESENER 2019 data show that up to 89% of AFBS establishments have a document in place that explains the responsibilities and procedures in place regarding health and safety, where this percentage is similar to the EU-27 average for all sectors. In general, there are no large differences among sectors, although the professional, scientific and technical activities sector shows a relatively low percentage (79%).

Figure 19 Share of establishments that have a document in place that explains responsibilities or procedures on health and safety, by sector, EU-27, 2019



Base: All establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

By establishment size, larger AFBS sector establishments are more likely to have such a document in place in comparison to smaller establishments, although generally speaking the differences are not that big among establishment sizes.

3.3.2 Evolution in time of the presence of preventive measures to cope with OSH risks

The comparison with previous ESENER results shows that the share of AFBS establishments that have introduced some general health promotion measures aimed at raising awareness about healthy nutrition or preventing addiction practices (smoking, alcohol, drugs) has increased in the time period 2014-2019 (particularly the first one), whereas the promotion of sports activities outside working hours or the promotion of different physical exercise at work has been developed by relatively similar shares of establishments during the time period analysed.

Meanwhile, and referring to specific measures to manage OSH, the available data show that the share of AFBS establishments has decreased in 2019 in comparison to 2014, particularly in relation to the provision of ergonomic equipment (from 43% in 2014 to 38% in 2019) and in the encouragement of regular breaks for people in uncomfortable working positions (from 60% in 2014 to 52% in 2019). The decreasing trend in provision of equipment can be within the margin of error. Longer trends may draw a clearer picture. The substantial change in regular breaks may be linked to the general intensification of work, which is experienced in every sector.

Table 21 Main OSH management practices-1, AFBS sector, ESENER 2014 and 2019, EU-27 (%)

	ESENER 2014	ESENER 2019
General health promotion measures		
Raising awareness about healthy nutrition	41	51
Raising awareness on the prevention of addiction (smoking, alcohol, drugs)	37	40
Promotion of sports activities outside working hours	25	22
Promotion of back exercises, stretching, other physical exercise at work	19	19
Measures for reducing/coping with OSH risks		
Provision of equipment to help with the lifting or moving of heavy loads	69	67
Rotation of tasks to reduce repetitive movements	56	51
Encouraging regular breaks for people in uncomfortable working positions	60	52
Provision of ergonomic equipment	43	38
Measures taken to prevent psychosocial risks (*)		
Reorganisation of work to reduce job demands and work pressure	39	48
Confidential counselling for employees	36	41
Intervention if excessively long or irregular hours are worked	32	37
Presence of an action plan to prevent work-related stress	33	28
Procedure to deal with cases of bullying or harassment	41	42
Procedure to deal with cases of threats, abuse or assaults by clients	60	52
Share of establishments that have a document in place that explains responsibilities or procedures on health and safety	90	89
Share of establishments with a procedure to support employees returning to work after a long-term sickness absence (**)	50	59

Base: All AFBS establishments in the EU-27 (*) Base: AFBS establishments with 20 or more employees

(**) Base: AFBS establishments with 50 or more employees / Source: IKEI/Panteia based on ESENER 2014 and ESENER 2019

By way of contrast, the share of establishments with 20 or more employees that have introduced different measures to prevent psychosocial risks has increased in the time period 2014-2019, particularly in relation to reorganisation of work in order to reduce job demands and work pressure (from 39% in 2014 to 48% in 2019). The ESENER 2009 survey also identified that around 39% of AFBS establishments indicated to have changed the way work is organised in order to deal with psychosocial risks. The proportion of establishments that have introduced confidential counselling for employees or ad hoc interventions in case of excessively long or irregular working hours has also experienced an increase in 2019 in comparison to 2014 (36% versus 41% and 32% versus 37%, respectively). The share of establishments with 20 or more employees that introduced confidential counselling for employees in 2009 was 32%.

Meanwhile, the share of AFBS establishments with 20 or more employees that have an action plan to prevent work-related stress or procedures to deal with cases of threats, abuse or assaults by clients has experienced a decline in 2019 in comparison to 2014. The share of establishments that have a procedure in place to deal with possible cases of bullying or harassment remained similar from 2014 to 2019. In the ESENER 2009 survey, the share of establishments with 20 or more employees having procedures to deal with bullying/harassment or work-related violence[21] was much lower (24% and 20%, respectively).

Last, the share of AFBS establishments that have a document in place explaining responsibilities or procedures on health and safety has remained the same in 2019 compared with 2014 (approximately 90% in both cases). In 2009, 72% of the AFBS establishments surveyed indicated that there existed a documented policy, established management system, or action plan on health and safety in their establishment (this result is likely also influenced by the different establishment sizes included in ESENER 2009 in comparison to the subsequent ESENER editions). Meanwhile, 59% of the AFBS establishments with more than 50 employees had procedures in place to support employees returning to work after a long-term sickness absence, where this percentage is higher than in 2014 but smaller than the share in 2009 (79%, data also referred to establishments with 50 or more employees).[22]

3.4 Use of health and safety services and other external providers, access to external sources of OSH information

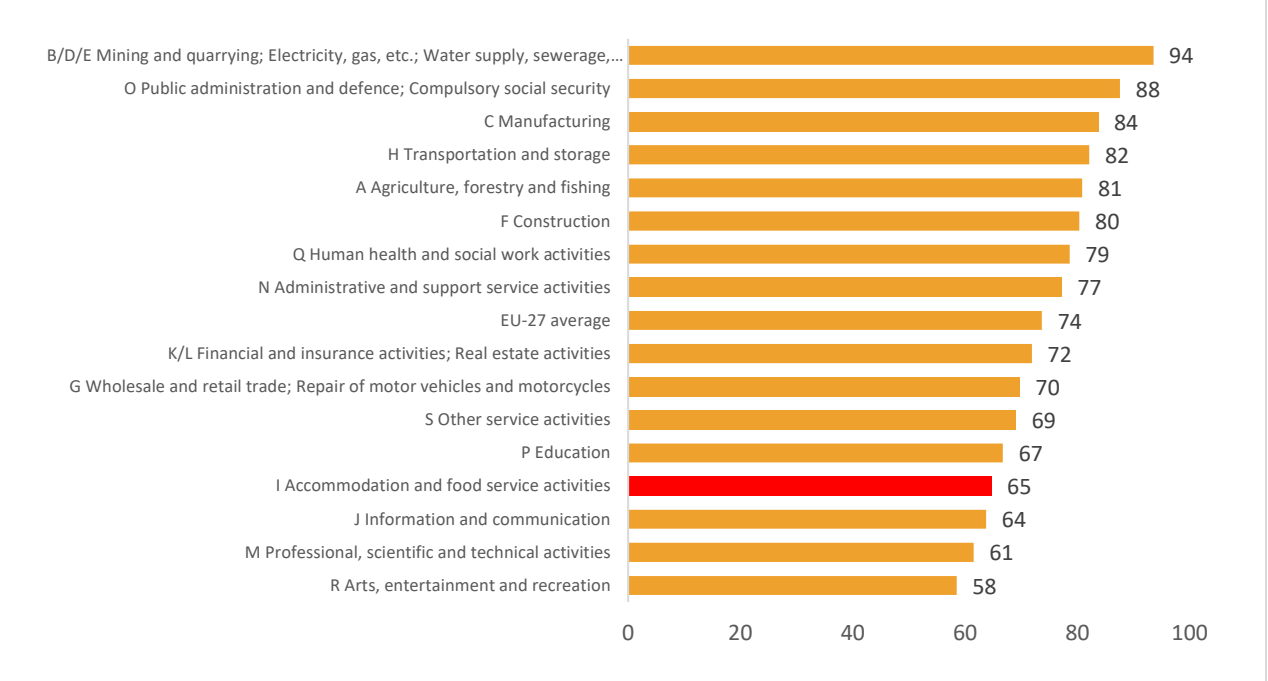
3.4.1 Arrangement of regular medical examinations to monitor the health of employees

With regard to the arrangement of regular medical examinations to monitor the health of employees, ESENER 2019 data indicate that 65% of the AFBS establishments regularly arrange these types of medical examinations. This percentage is lower than the share of the total EU-27 economy on average (74%), and it is one of the lowest in comparison to other sectors, exceptions are arts and entertainment (58%), professional activities (61%), and information and communication activities (64%).

[21] In ESENER 2009, the percentage refers to establishments that have a procedure to deal with work-related violence.

[22] ESENER 2009 did not ask for the presence of procedures, but rather whether establishments had taken measures to support employees' return to work following a long-term sickness absence. Taking measures suggests a more informal approach than having procedures. This difference in wording may explain the existing differences in results.

Figure 20 Share of establishments that arrange regular medical examinations to monitor the health of employees by economic sector, 2019

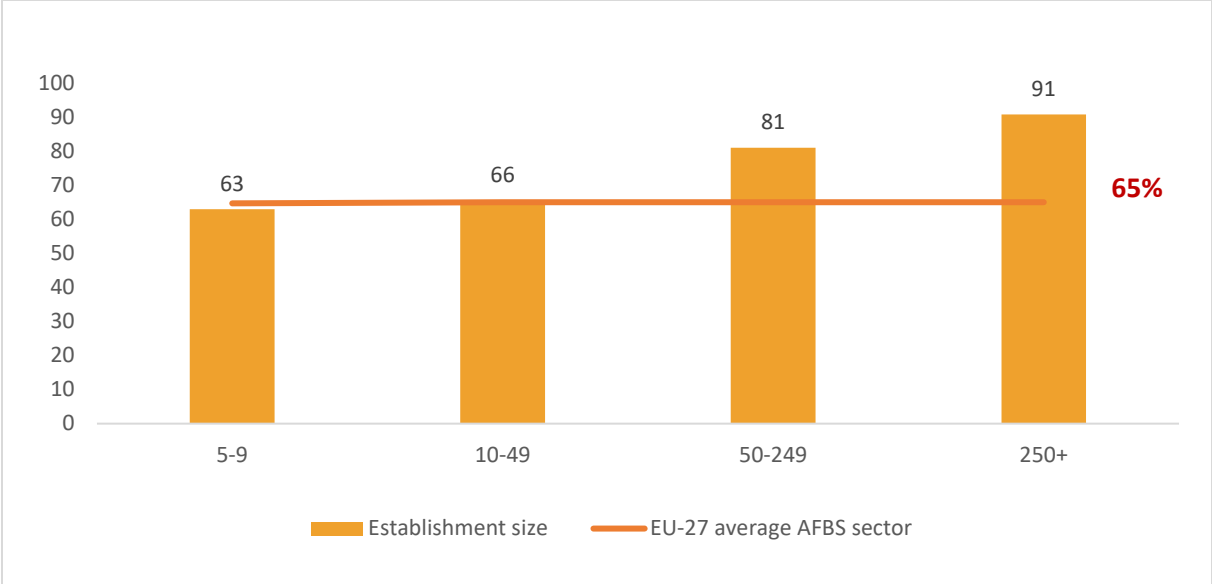


Base: All establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Looking at differences per establishment size, ESENER 2019 data reveal a positive relationship with size, in the sense that 63% of AFBS micro-establishments arrange regular medical examinations for their employees in comparison to 81% and 91% among the medium and largest AFBS establishments.

Figure 21 Share of establishments in the AFBS sector that arrange regular medical examinations to monitor the health of employees, by establishment size, AFBS sector, EU-27, 2019

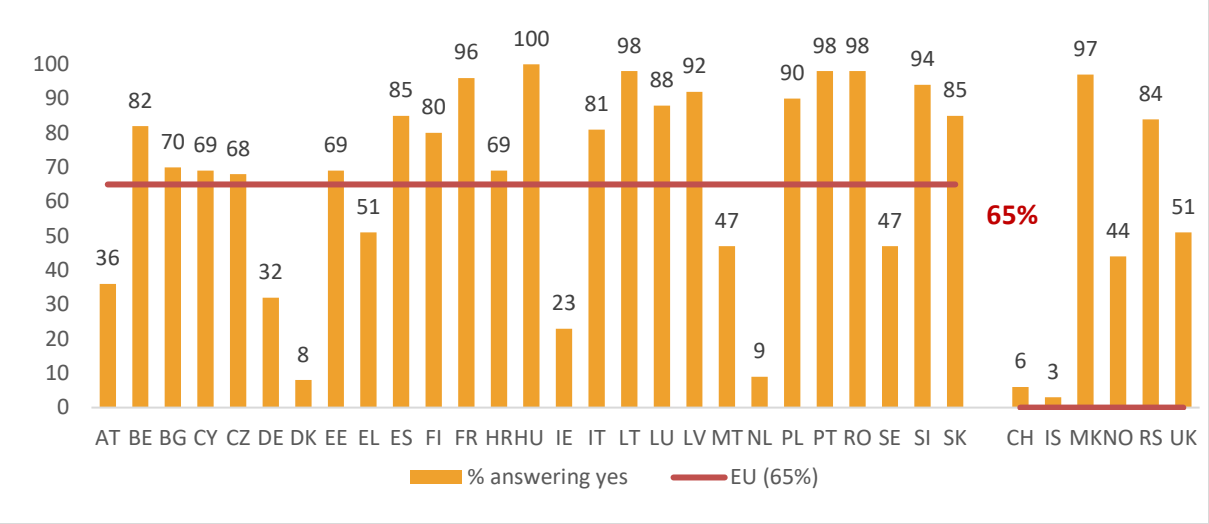


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

On the other hand, there are important differences between Member States. Thus, and whereas in Denmark and the Netherlands less than 10% of AFBS establishments arrange regular examinations, in other Member States all establishments (Hungary) or almost all of them (Lithuania, Portugal and Romania, 98% in the three cases) regularly organise medical examinations for their employees. These differences can be explained to a large extent by existing OSH regulations in each country. For instance, in Hungary, employers must provide regular occupational medicine services to their employees, irrespective of size considerations. Furthermore, national public health requirements may also influence the figures as jobs, for example, in catering, may be subject to mandatory health surveillance in order to prevent the spread of certain infectious diseases (like tuberculosis or typhus). Such product safety-oriented examinations may be linked with OSH-oriented examinations.

Figure 22 Share of establishments in the AFBS sector that arrange regular medical examinations to monitor the health of employees, by country, EU-27, 2019



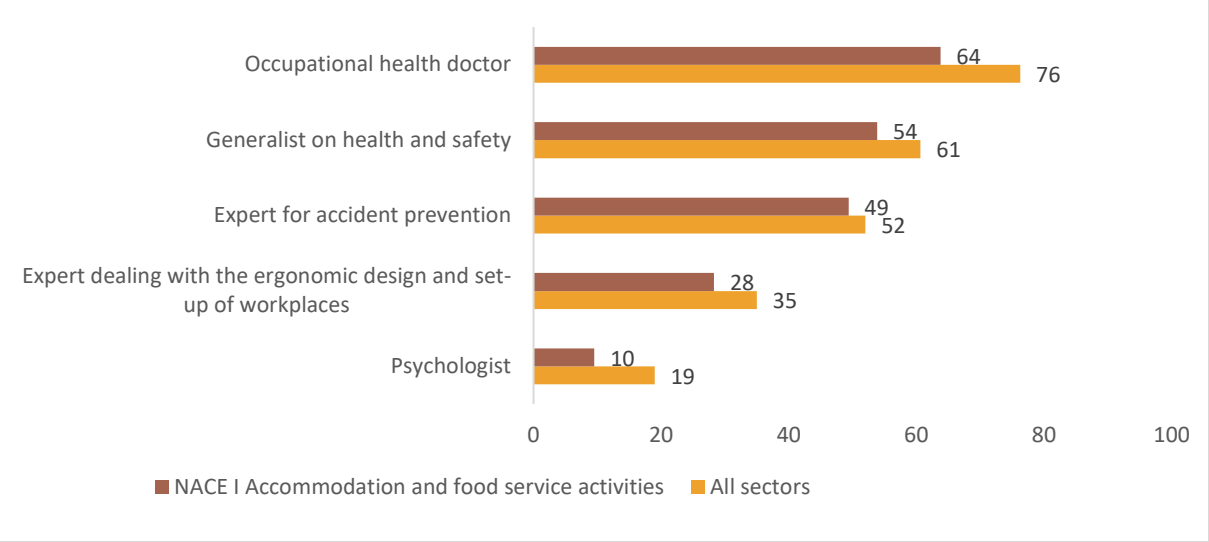
Base: All AFBS establishments in the EU-27 / Source: IKEI/Panteia based on ESENER 2019

3.4.2 Use of health and safety services

With regard to the use of different health and safety services (either in-house or contracted externally), the ESENER 2019 survey results show that around two-thirds (64%) of all AFBS establishments use the services of an occupational health physician, and approximately half of AFBS establishments use the services of a generalist in health and safety or an expert for accident prevention (54% and 49%, respectively). By way of contrast, 28% of AFBS establishments use the services of an expert dealing with the ergonomic design and set-up of workplaces, and only 10% use the services of a psychologist.

In all cases, the use of these different health and safety services is lower among AFBS establishments than among the EU-27 average. For instance, 76% of all EU-27 establishments use the services of an occupational health physician (in comparison to 64% in the AFBS sector), whereas 61% use the services of a generalist in health and safety (54% in the AFBS sector). According to one of the consulted experts, workers in other sectors are more likely to be exposed to risks that require mandatory health surveillance by EU/national legislation.

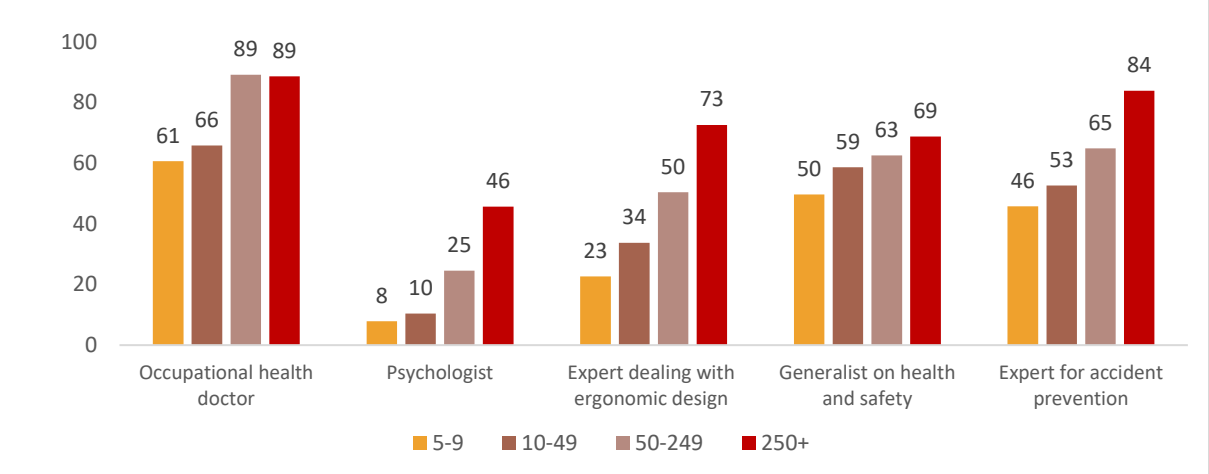
Figure 23 Type of health and safety services used (in-house or contracted externally), AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27 / Source: IKEI/Panteia based on ESENER 2019

Once again, larger establishments make a greater use of different types of health and safety services. For instance, 73% of the largest establishments use the services of an expert dealing with ergonomic design and set-up of workplaces, compared to 23% of micro-establishments. Similarly, 84% of the largest establishments count on the services of an expert for accident prevention, where this share is lower for micro-establishments (46%).

Figure 24 Type of health and safety services used (in-house or contracted externally), AFBS sector, by establishment size, EU-27, 2019

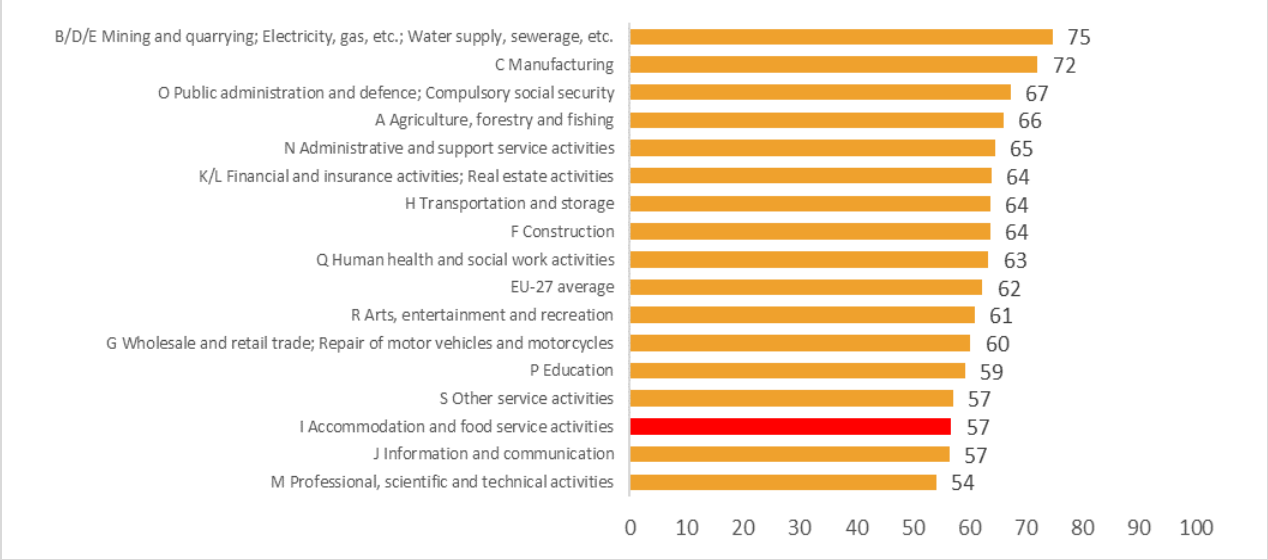


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

ESENER 2019 data also reveal that more than half of AFBS establishments (57%) did use the services of an external provider to support them in their health and safety tasks in the last three years. This percentage is slightly lower than the EU-27 average (62%), one of the lowest among all the different sectors and much lower than in other sectors such as mining and manufacturing (above 70% in both cases). There are also important differences between Member States (for instance, 90% of Portuguese establishments have used these services in comparison to 23% in France).

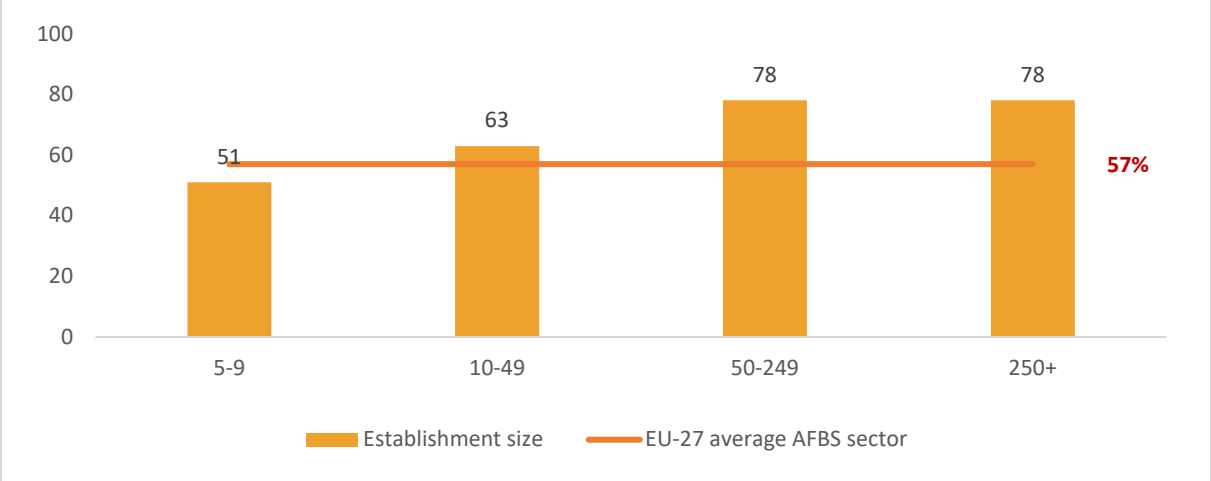
Figure 25 Share of establishments that have used the services of any external provider to support them in their health and safety tasks, by economic sector, 2019



Base: All establishments in the EU-27 / Source: IKEI/Panteia based on ESENER 2019

Despite the fact that large establishments may have a well-established OSH department/expert/internal safety officer, the available data show that large establishments are also more likely to use the services of an external provider to support them in their health and safety tasks.[23] More precisely, around three-quarters (78%) of the medium and large-scale AFBS establishments have used an external provider in the last three years, whereas this percentage is considerably lower among micro-establishments (approximately half of them, or 51%).

Figure 26 Share of establishments that have used the services of any external provider to support them in their health and safety tasks, by establishment size, AFBS sector, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

[23] This could be due to having access to greater resources than their smaller counterparts, increased awareness about OSH risks, and/or the need for more effective and targeted interventions, among others.

In this regard, one of the interviewed medical experts suggested that it is typical for the AFBS sector as a whole that OSH tasks are provided by external services (regardless of enterprise size). This makes the documentation professional, however stereotyped. Meanwhile, and according to an interviewed employers' association, employers are not clear in many cases about the type of external services they really need to hire to comply with OSH legislation, and how much it is reasonable to spend on it. Moreover, these costs may represent an important financial barrier for many businesses in the AFBS sector, particularly smaller ones.

All in all, the ESENER 2019 survey results show that 85% of AFBS establishments rate the services obtained from these external providers as 'very good' or 'quite good' (45% as very good and 39% as quite good), a result relatively similar to the EU-27 average for all sectors (40% very good and 46% quite good). Also, this positive perception is slightly more extensive amongst smaller establishments, so 73% of large establishments rate these external services as 'very good' or 'good', versus 84-85% for the rest of the establishment sizes.

3.4.3 Use of OSH information from external organisations

The use of OSH information from external organisations is also a key point to consider in the context of OSH management. Actually, using other organisations to obtain relevant health and safety information can be a convenient low-effort method to collect relevant information for the business.

In this regard, the ESENER 2019 survey data show that AFBS establishments resort to different types of organisations for obtaining health and safety-related information, although some are more popular than others. More than half of the AFBS establishments (57%) have contracted health and safety experts to provide them with OSH-related information, 43% of AFBS establishments contacted the labour inspectorate and 42% insurance providers. By way of contrast, 28% of AFBS establishments obtained information from employers' organisations, 23% from official institutes for health and safety at work, and only 15% of AFBS establishments from trade unions. The comparison with the EU-27 average for all sectors does not show great differences, where both percentages and order of importance of each type of organisation are rather similar.

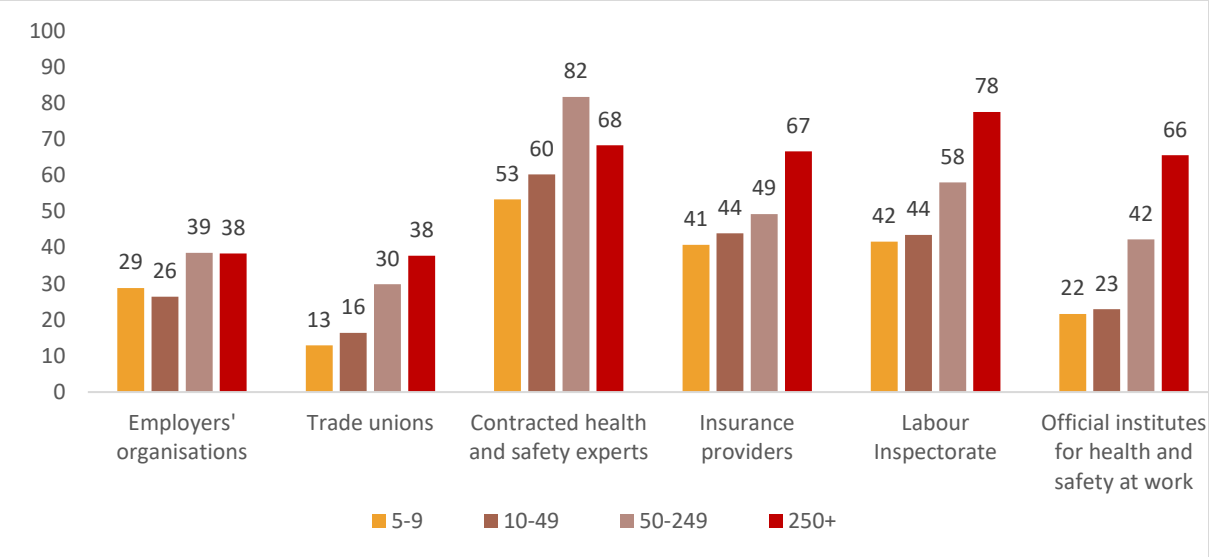
Figure 27 Sources of health and safety information (organisations), AFBS sector and all sectors, EU-27, 2019

Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Once again, larger establishments are more likely to contact external organisations to obtain OSH information, irrespective of the type of organisation in general, where this pattern seems to be particularly clear for labour inspectorate, insurance providers, and official institutes for health and safety at work.

Figure 28 Sources of health and safety information (organisations), AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

3.4.4 Evolution in time of the use of health and safety services and external providers, access to external sources of OSH information

According to the available information, the share of AFBS establishments that use different OSH services and external providers has remained in similar terms during the time period 2014-2019 (although some exceptions can be also identified). Thus, and on the one hand, the percentage of AFBS establishments that arrange regular medical examinations to monitor the health of employees was 65% in 2019 (63% in 2014). In any case, this percentage seems to be lower than in the ESENER 2009 results, where 80% of the AFBS establishments indicated that the health of employees was monitored through regular medical examinations (this result is likely also influenced by the different establishment sizes included in ESENER 2009 in comparison to the subsequent ESENER editions).

Table 22 Main OSH management practices-2, AFBS sector, ESENER 2014 and 2019, EU-27 (%)

	ESENER 2014	ESENER 2019
Share of establishments that arrange regular medical examinations to monitor the health of employees	63	65
Share of establishments that have used health and safety services (in-house or contracted externally)		
An occupational health doctor	64	64
A psychologist	10	10

	ESENER 2014	ESENER 2019
An expert dealing with the ergonomic design and set-up of workplaces	28	28
A generalist in health and safety	56	54
An expert for accident prevention	53	49
Share of establishments that use health and safety information from different organisations		
Employers' organisations	31	28
Trade unions	13	15
Contracted health and safety experts	n.a.	57
Insurance providers	47	42
The labour inspectorate	52	43
Other official institutes for health and safety at work	37	23

Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2014 and ESENER 2019

The type of health and safety services (either in-house or contracted externally) that have been used by AFBS establishments has remained again relatively similar from 2014 to 2019, perhaps with the only exception of experts for accident prevention, which saw a small reduction from 53% in 2014 to 49% in 2019. The comparison with ESENER 2009 results shows a generally higher percentage of establishments using the different types of services (as pointed out above, this result is likely also influenced by the different establishment sizes included in ESENER 2009 in comparison to the subsequent ESENER editions).

It is possible to identify a lower share of AFBS establishments that use health and safety information from different organisations in 2019 in comparison to 2014, where this reduction is particularly relevant in the case of labour inspectorate or other official institutes for health and safety at work (for instance, and in the first case, the share of AFBS establishments that use health and safety information provided by these labour inspection services has decreased from 52% in 2014 to 43% in 2019). This result is likely to be explained by a higher knowledge of OSH issues among existing establishments as well as by the decreasing role played by public/official bodies as providers of information in comparison to other agents. The Senior Labour Inspectors Committee (SLIC) Campaign in 2013-2014 on 'falls on the same level'[24] targeted HORECA too and it might have boosted contacts to labour inspectorates in that period. This draws attention to campaign strategies: besides a relevant topic, targeted channels and sector-specific subtopics are key factors to reach the target audience. Furthermore, many interviewees mentioned that OSH inspections take place only in case of serious accidents, which are rare, and this contradicts the ESENER figures presented later.[25] The low chance of spontaneous inspections makes in the employers' and employees' eyes the OSH inspectorate a less relevant player than the food safety authority. The labour inspector interviewee confirmed that establishments are more afraid of food safety chain and tax authority inspections than of OSH inspections.

[24] SLIC Annual report 2014: https://circabc.europa.eu/ui/group/fea534f4-2590-4490-bca6-504782b47c79/library/1583042e-9ed1-40a3-a2cc-076e163a0ff1/details

[25] The share of establishments in the AFBS sector reporting a visit by the labour inspectorate dropped between 2014 and 2019: 64% and 58%, respectively. However, it was still the highest among all activity sectors (EU-27 average: 41%). See section 4.2.2.

3.5 Discussion on OSH issues at different levels

3.5.1 Management commitment: Discussion on OSH issues by top management

Management commitment is one of the key elements explaining differences in the extent and importance of the existing OSH practices within enterprises. Several interviewed experts confirmed this perspective, in the sense that the existing company/entrepreneur culture towards OSH issues (and particularly the attitude of individual employers or entrepreneurs, given the large presence of SMEs in the sector) explains to a large extent the active involvement of enterprises in these OSH-related activities.

Box 8 Commitment by the management in managing psychosocial risks

One of the hypotheses tested by the research team is that commitment of top-level and team leaders will have a positive effect on the management of psychosocial risks. Additional statistical analysis (see Annex 1) indicates that establishments where health and safety issues are regularly discussed at the top level are more likely to have formal procedures in place to prevent psychosocial risks and take more measures to prevent such risks. In addition, establishments where team leaders and line managers receive training on how to manage health and safety also take more measures to prevent psychosocial risks. There are no clear indications that the position of the person who knows best about OSH is related to the management of psychosocial risks.[26]

Source: IKEI/Panteia based on ESENER 2019

In addition to this, several of the interviewed experts reckon that larger establishments and enterprises, especially those belonging to international groups such as international hotel chains, are particularly committed to OSH issues, where they comply with the regulations set by the group, which often go beyond existing national standards.

Box 9 OSH management practices at an international hotel group

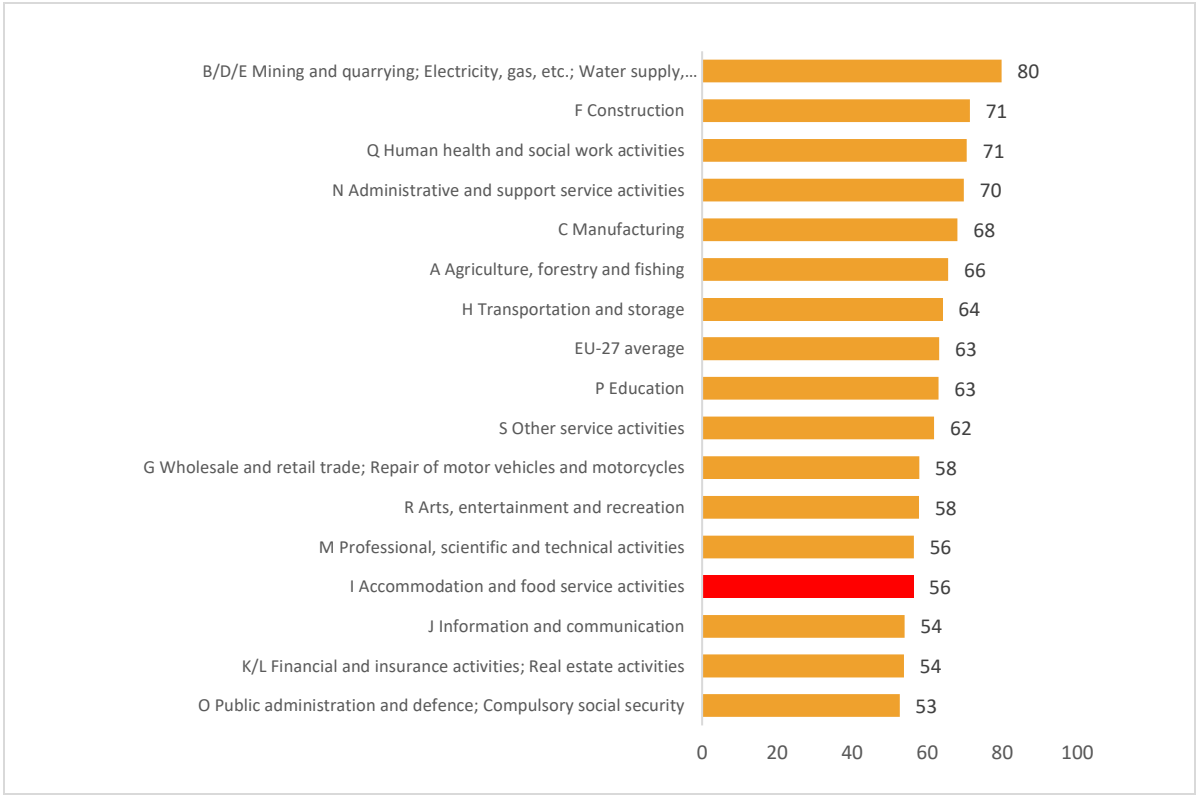
- **Occupational Health and Safety Policy**: The policy is signed by the Board of Directors and communicated throughout the organisation to the whole workforce.
- **Leadership and Participation**: There is a distribution of roles and responsibilities. In most of the centres there are Prevention Delegates or workers' representatives in health and safety matters.
- **Risk Identification**: There is a correct identification of risks, through risk assessments and their control measures. Periodic reviews are established.
- **Planning of Health and Safety at Work**: There is OSH planning, which is a fundamental point for the adequate development of the system.
- **Staff Training**: Staff are trained on OSH issues in a planned manner, both at the start of a new job and periodically for all employees; training contents are adapted to each of the jobs.
- **Performance Evaluation**: Internal and external audits of the system are carried out to evaluate the organisation's performance.
- **Improvement**: Incident management is in place, through accident investigations and resolution of non-conformities.
- **SH Operations**: There are numerous activities coordinated with external enterprises. Personal protection equipment is provided and medical check-ups are carried out. Different processes are implemented to act in emergency situations.

Source: Meliá Hotels International

[26] This refers to both the likelihood of having formal procedures in place to prevent psychosocial risks and the number of actual measures taken to prevent such risks. See Annex 2 for more details.

In this regard, the ESENER 2019 survey provides a proxy indicator of management commitment to OSH issues, and this is reflected in the regular discussion of OSH issues at the top level of management. In this sense, the available data show that 56% of AFBS establishments[27] suggest that OSH issues are regularly discussed at the top level of management, where this percentage is lower than the EU-27 average for all sectors (63%) and only three sectors show a lower share than the AFBS sector, namely, public administration (53%), financial activities (54%), and information and communication (54%).

Figure 29 Share of establishments in which health and safety issues are discussed regularly at the top level of management, by sector, EU-27, 2019



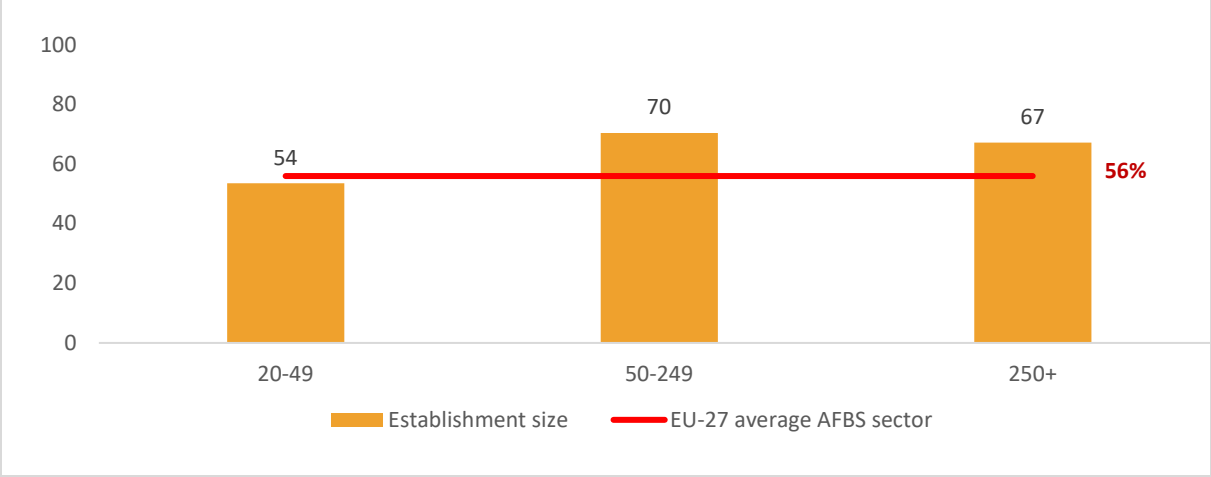
Base: Only establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

Looking at differences by establishment size, there are some differences. Thus, OSH issues are discussed in 54% of AFBS small establishments (between 20 and 49 employees), whereas the shares corresponding to larger establishments are higher (70% and 67% for medium and large establishments, respectively).

[27] Only establishments with 20 or more employees are included.

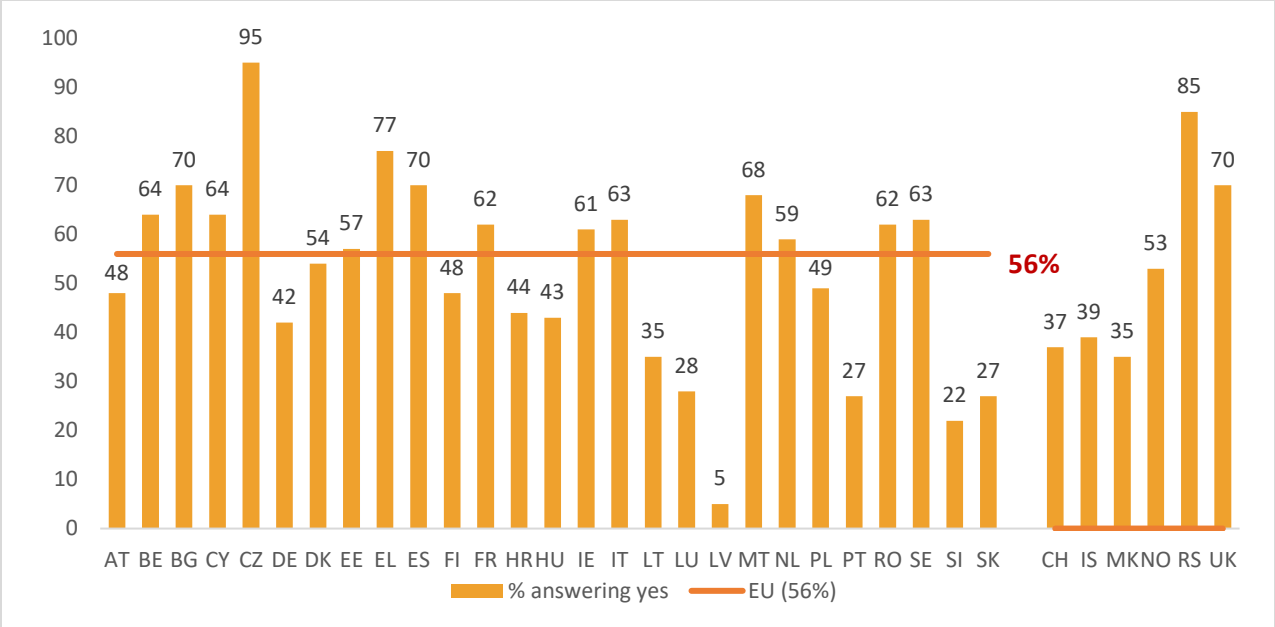
Figure 30 Share of establishments in which health and safety issues are discussed regularly at the top level of management, by establishment size, AFBS sector, EU-27, 2019



Base: Only AFBS establishments with 20 or more employees Source: IKEI/Panteia based on ESENER 2019

From a geographical perspective, there are relatively similar figures in the different Member States, although some important disparities can be found in some specific countries (from 5% of AFBS establishments in Latvia and 22% in Slovenia to 77% in Greece and 95% in Czech Republic).

Figure 31 Share of establishments in which health and safety issues are discussed regularly at the top level of management, by establishment size, AFBS sector, EU-27, 2019



Base: Only AFBS establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

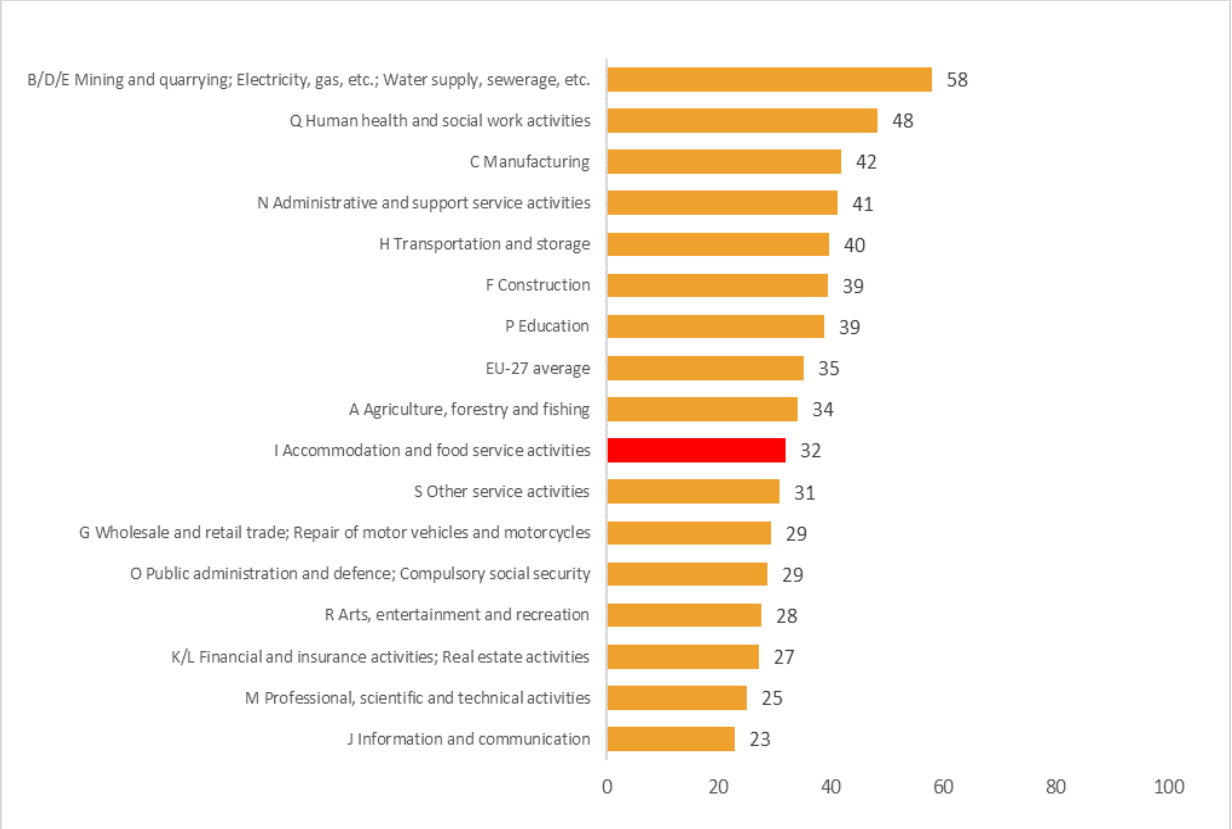
Finally, the share of AFBS establishments with 20 or more employees where health and safety issues are discussed regularly at the top level of management has experienced an upward trend since 2009, ranging from 49% in 2009 to 52% and 56% in 2014 and 2019, respectively.[28]

3.5.2 Discussion of OSH in staff or team meetings

The discussion of OSH issues at different levels in the establishment is another aspect related to OSH management. According to one of the interviewed experts, it is important to bring different groups of workers to the discussion (in terms of age, experience, qualification levels, etc.), so as to reflect as much as possible the existing diversity within the workforce and bring in possible different perspectives about OSH issues.

According to the ESENER 2019 survey results, OSH issues are regularly discussed in staff or team meetings in around one-third of AFBS establishments (32%), a percentage relatively similar to the EU-27 average for all sectors (35%).

Figure 32 Share of establishments in which health and safety issues are discussed regularly in staff or team meetings, by sector, EU-27, 2019



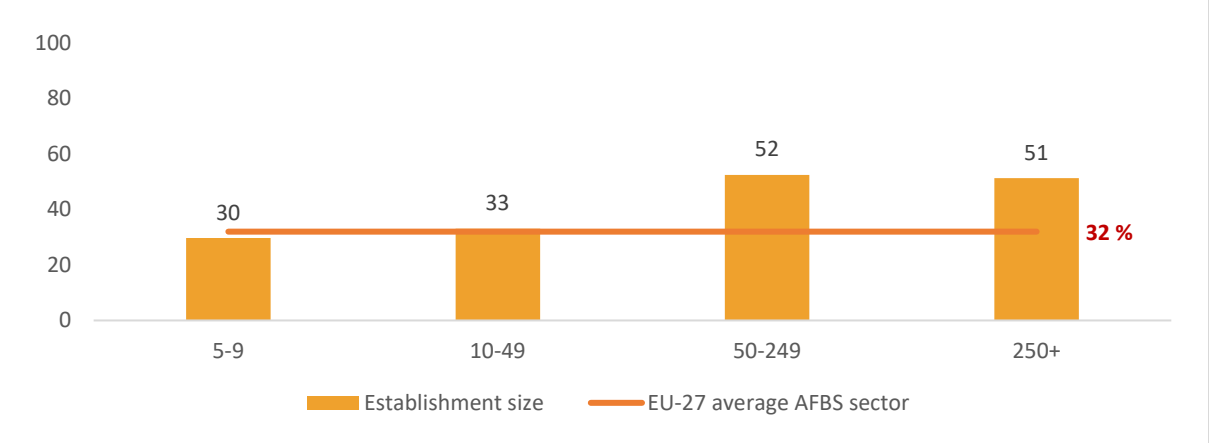
Base: All establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Meanwhile, differences per establishment size show two distinct groups of AFBS establishments. On the one hand, in approximately a third of AFBS micro and small establishments are OSH issues regularly discussed in staff or team meetings, whereas this is the case in one out of two AFBS medium and large establishments.

[28] In the ESENER 2009 survey, the question was whether health and safety issues are raised in high-level management meetings regularly.

Figure 33 Share of establishments in which health and safety issues are discussed regularly in staff or team meetings, by establishment size, AFBS sector, EU-27, 2019

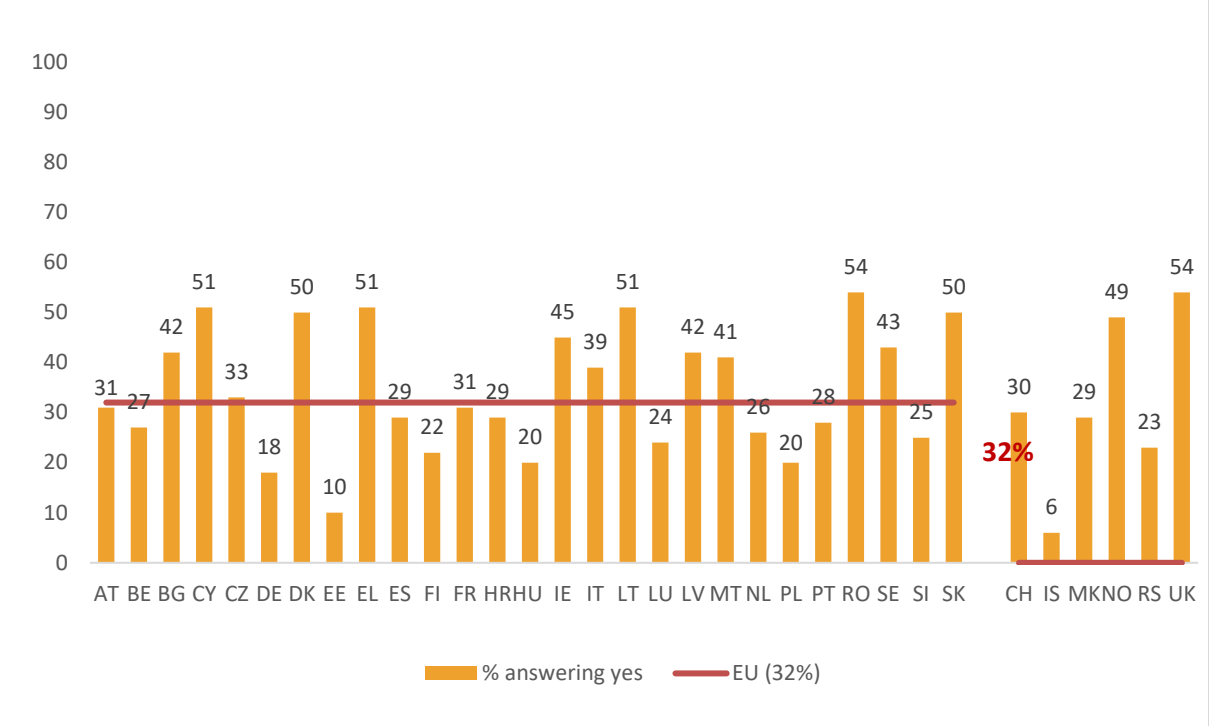


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

If geographical considerations are taken into account, it can be seen that results vary noticeably among countries. Romania shows the highest share of AFBS establishments in which OSH issues are discussed regularly (54%), whereas Estonia has the lowest (10%).

Figure 34 Share of establishments in which health and safety issues are discussed regularly in staff or team meetings, by country, AFBS sector, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

3.6 Training on health and safety issues

The successful implementation of different OSH management practices often requires the development of training activities to inform/train different layers of the company (managers, OSH company representatives, workers) on how to work safely and without risks to health.

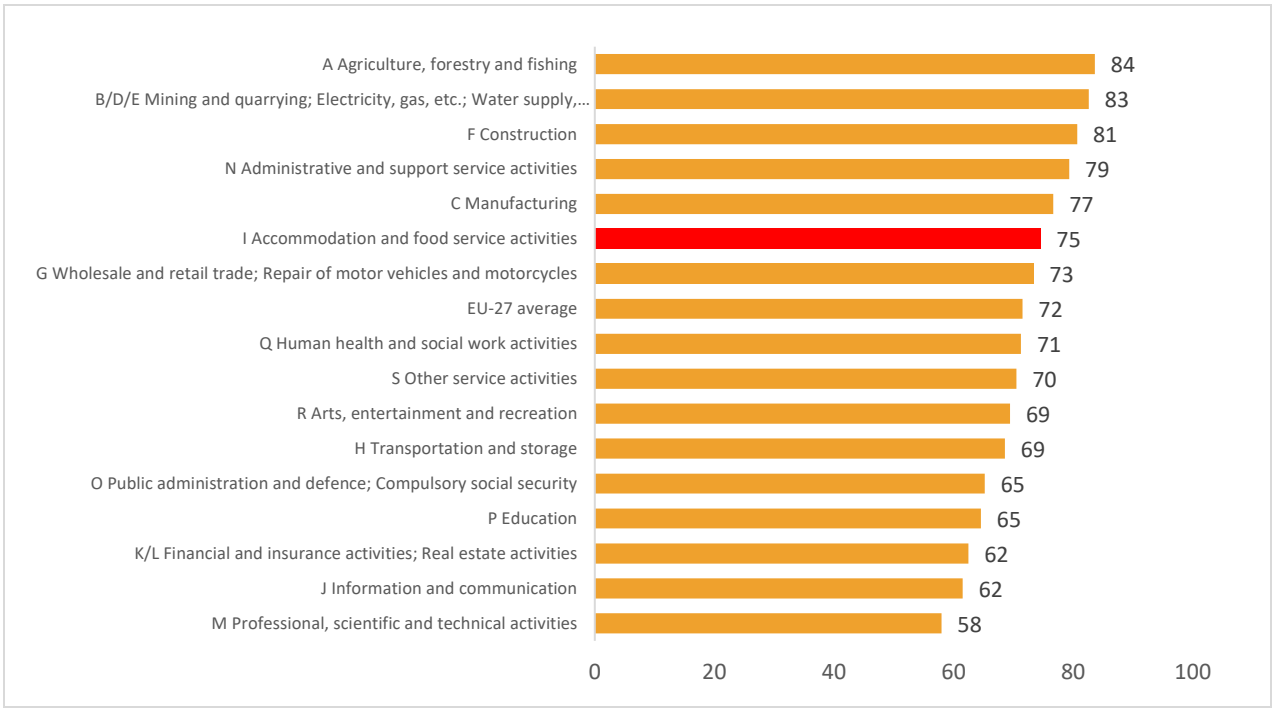
3.6.1 Management training

In this regard, employers have to make sure that everyone in the company has relevant information on existing and new OSH risks, measures in place to deal with these risks and instructions to follow any emergency procedures. Some particular groups of workers have particular training needs, including new recruits (especially if they are young or have no experience), workers changing jobs or taking on extra responsibilities within the company, and migrant workers coming from a third country. Also, managers and OSH representatives need to keep themselves constantly updated with changes and new developments (legislative, operational, etc.) in the OSH field and affecting the daily activities of the company.

Linked to this, interviewed experts stress that OSH training activities are often difficult to be organised, because managers/workers have to be taken out of work during training, so it can be complicated to organise training groups with an optimal size. Also, experts suggest that often enterprises have neither the resources nor the knowledge to hire quality external OSH training experts. All these problems are more acute among smaller enterprises.

Concerning participation in training activities among team leaders and line managers on how to manage health and safety in their teams, the ESENER 2019 data indicate that in 75% of AFBS establishments with 20 or more employees these groups receive this type of training, practically in line with the EU-27 average result (72%), and well above other sectors such as professional activities, information and communication, and financial activities (58%, 62% and 62%, respectively).

Figure 35 Share of establishments in which team leaders and line managers receive any training on how to manage health and safety in their teams, by sector, EU-27, 2019

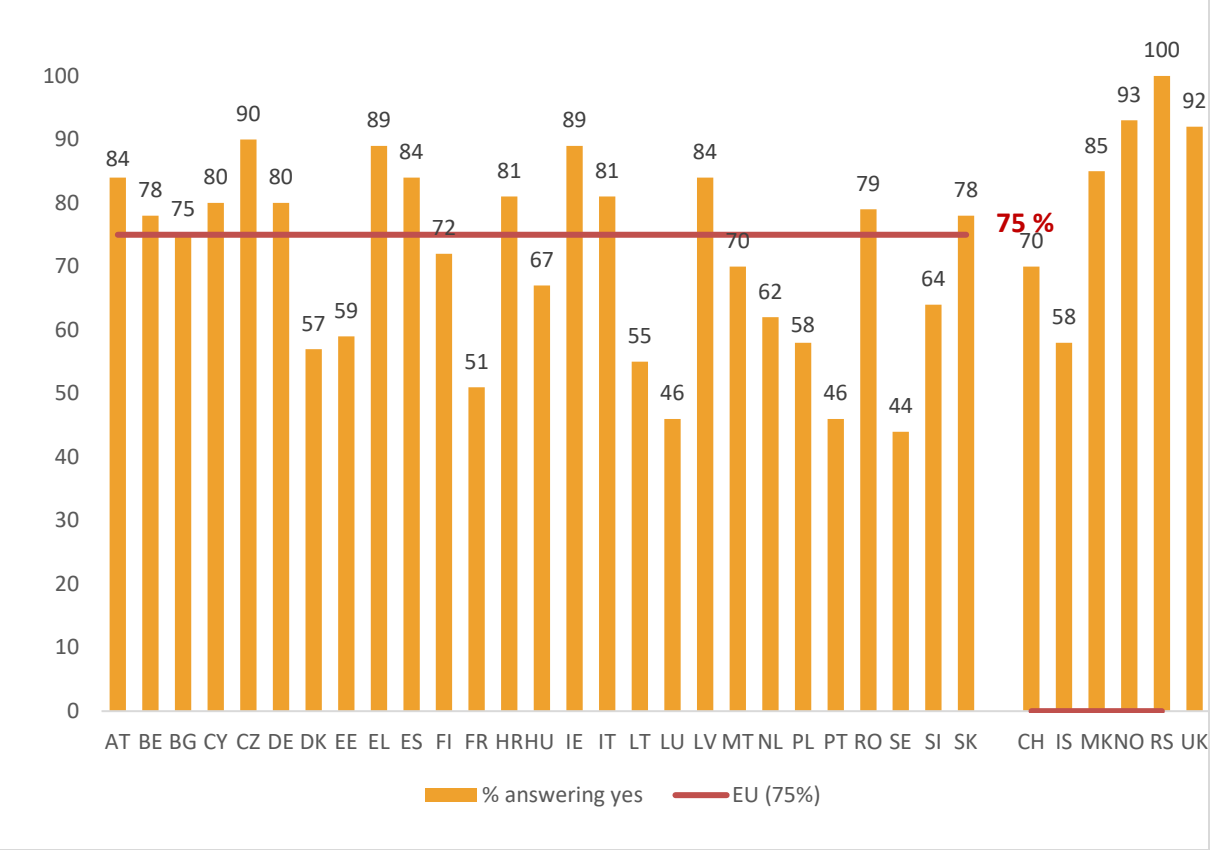


Base: Establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

Available results do not reveal significant differences by establishment size. However, data per Member States show considerable differences. Thus, and whereas in 44% of Swedish AFBS establishments team leaders and line managers receive any training on how to manage health and safety in their teams, this percentage goes up to 90% in the case of Czechia. Again, it is difficult to provide specific explanations for these country differences.

Figure 36 **Share of establishments in which team leaders and line managers receive any training on how to manage health and safety in their teams, by country, AFBS sector, EU-27, 2019**



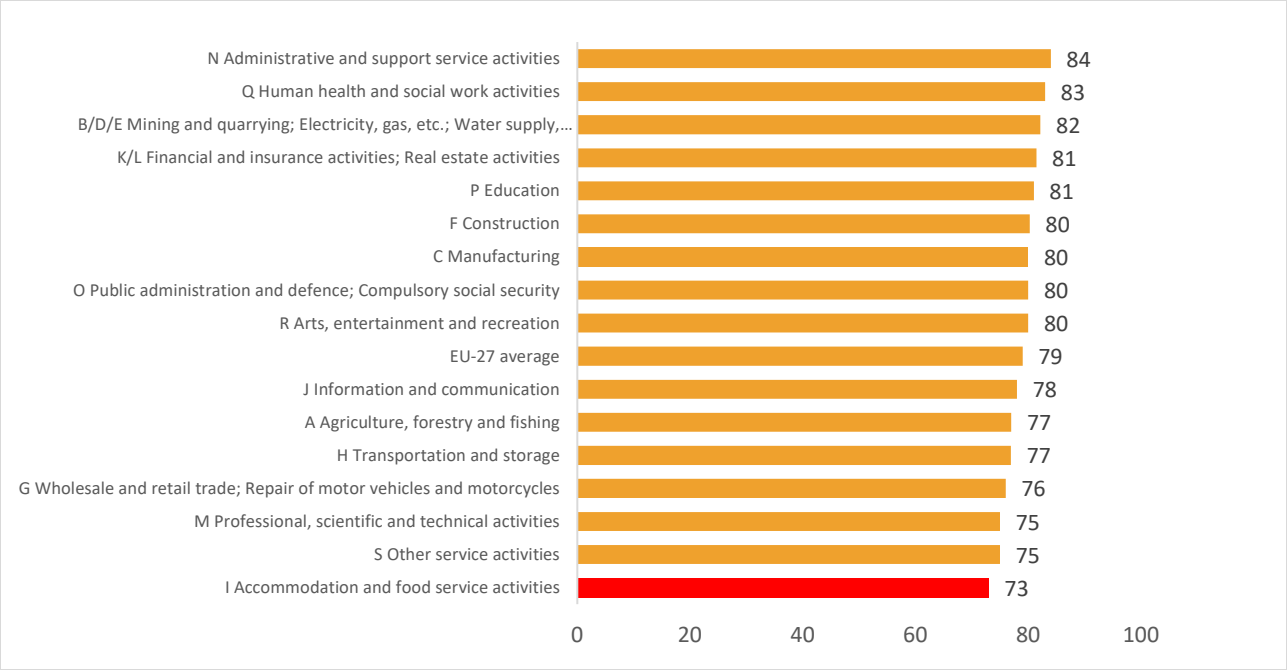
Base: Only AFBS establishments with 20 or more employees

Source: IKEI/Panteia based on ESENER 2019

3.6.2 OSH representatives training

OSH representatives are a key group to consider when analysing training on health and safety issues in establishments. In this regard, data available from the ESENER 2019 survey show that 73% of the AFBS establishments provide training to health and safety representatives during work time to help them perform their health and safety duties (data only referred to establishments with health and safety representatives). Compared to the rest of the sectors, the AFBS sector shows the lowest share, although differences among sectors are not so big, where the largest share corresponds to administrative and support services activities (84%).

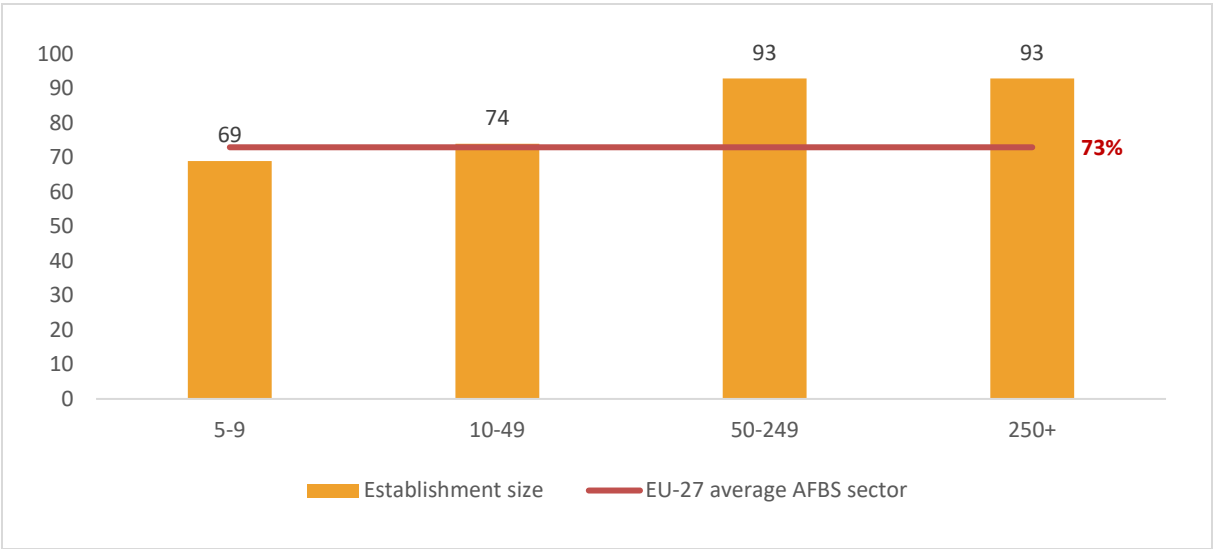
Figure 37 Share of establishments where the health and safety representatives were provided with any training during work time to help them perform their health and safety duties, by sector, EU-27, 2019



Base: Only establishments with health and safety representatives - Source: IKEI/Panteia based on ESENER 2019

From an establishment size perspective, nearly nine out of 10 medium-sized and largest establishments are more likely to provide health and safety representatives with any training during work time to help them perform their health and safety duties, whereas this percentage is 74% in small enterprises (with 10-49 employees) and 69% in microenterprises (with 5-9 employees).

Figure 38 Share of establishments where the health and safety representatives were provided with any training during work time to help them perform their health and safety duties, by establishment size, AFBS sector, EU-27, 2019

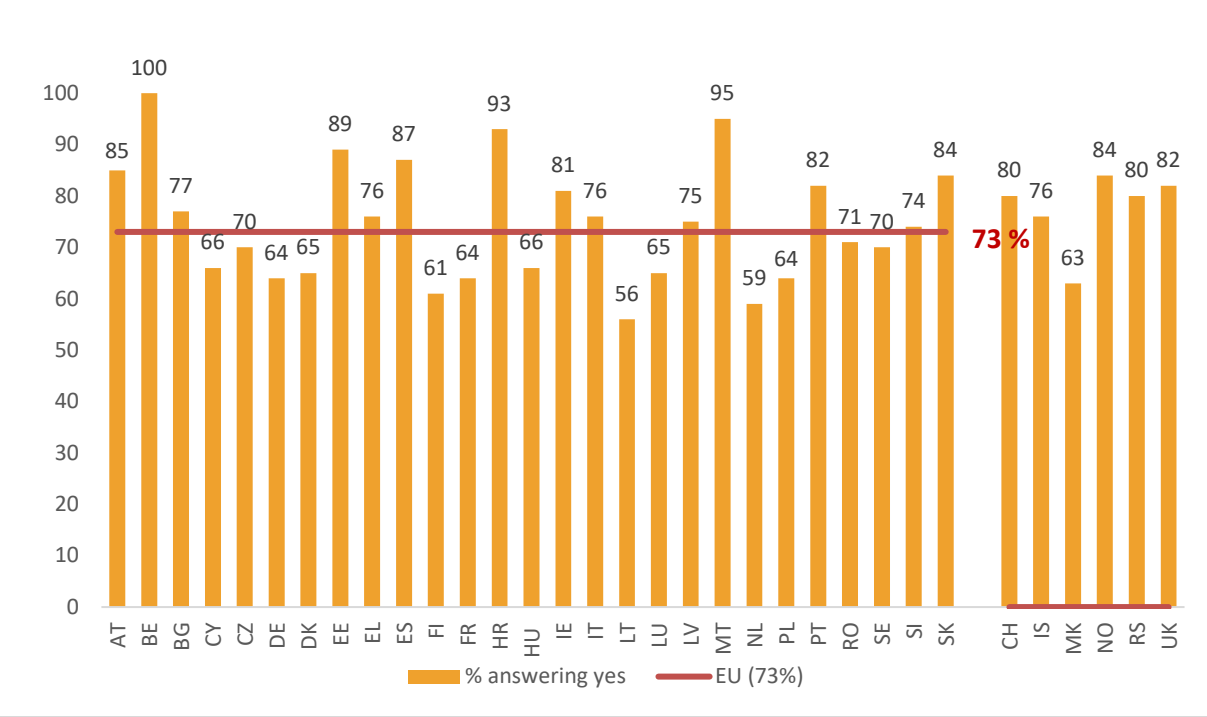


Base: Only AFBS establishments with health and safety representatives

Source: IKEI/Panteia based on ESENER 2019

Finally, there are important differences in the presence of AFBS establishments that provide health and safety representatives with training during work time to help them perform their health and safety duties. In this regard, there are Member States where more than 90% of AFBS establishments provide this type of training (e.g. Belgium, Croatia and Malta), whereas in other Member States this percentage is below 60% (e.g. Latvia and the Netherlands).

Figure 39 Share of establishments where the health and safety representatives were provided with any training during work time to help them perform their health and safety duties, by country, AFBS sector, 2019

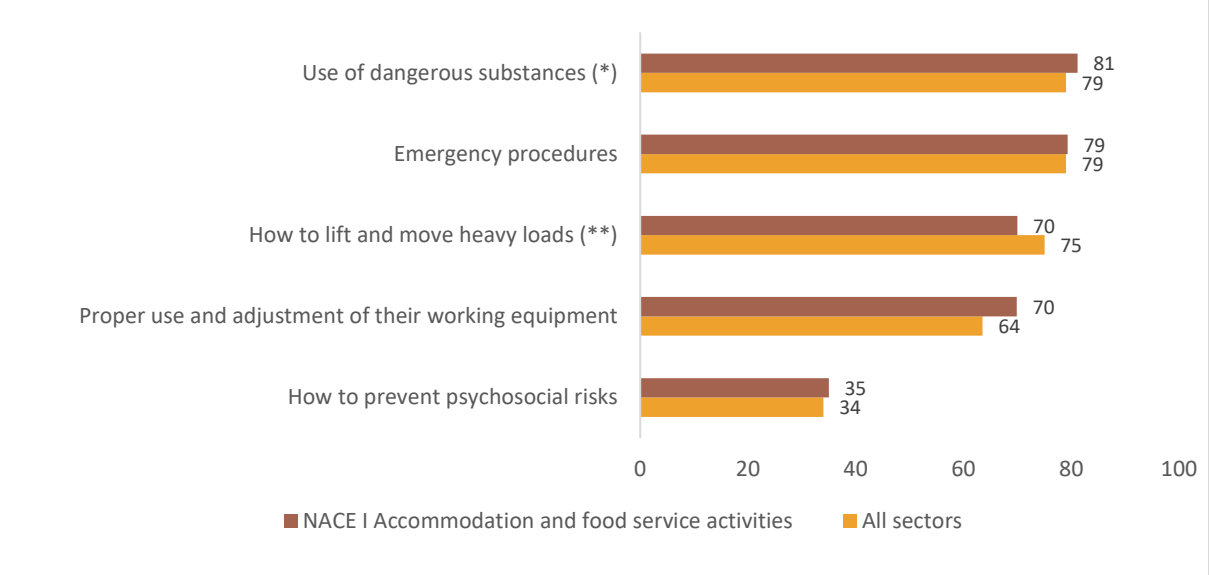


Base: Only AFBS establishments with health and safety representatives - Source: IKEI/Panteia based on ESENER 2019

3.6.3 Employees' training on OSH issues

With regard to employees' training, the ESENER 2019 survey identifies the main OSH topics on which employees are trained. In this respect, up to 81% of the AFBS establishments exposed to 'chemical or biological substances' have offered training on the use of dangerous substances to their employees, and 79% of all establishments on emergency procedures. Meanwhile, 70% of AFBS establishments exposed to 'lifting or moving heavy loads' have offered training on how to lift and move heavy loads, the same percentage among all establishments that have offered training on the proper use and adjustment of working equipment. By way of contrast, only 35% of the AFBS establishments provide training on psychosocial risks prevention. Generally speaking, there are no important differences with the average EU-27 for all sectors, neither in the order nor in the importance of the different issues.

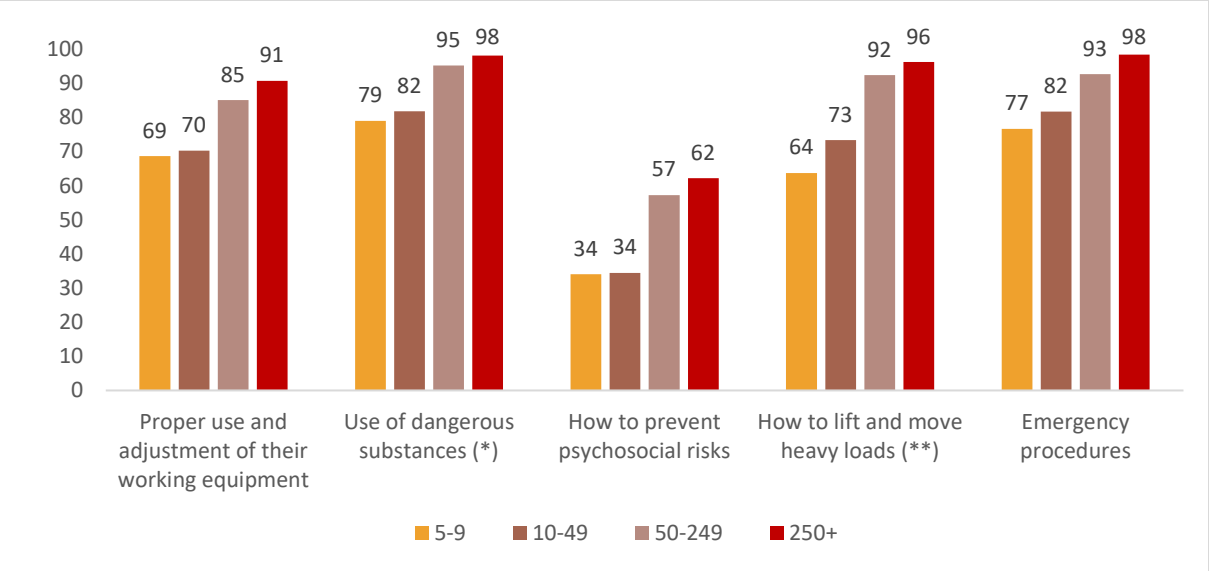
Figure 40 OSH topics on which training has been provided to employees, AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27 (*) Base: Only AFBS establishments exposed to 'chemical or biological substances' (**) Base: Only AFBS establishments exposed to 'lifting or moving heavy loads' - Source: IKEI/Panteia based on ESENER 2019

Concerning differences between enterprise sizes, the share of AFBS establishments that provide training to employees on different OSH issues is higher among larger establishments than among smaller ones. For instance, training on proper use and adjustment of working equipment is provided by 69% of micro-establishments and 70% of small establishments, whereas these percentages are higher among medium-sized and large establishments (85% and 91%, respectively).

Figure 41 OSH topics on which training has been provided to employees, AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

(*) Base: Only AFBS establishments exposed to 'chemical or biological substances'

(**) Base: Only AFBS establishments exposed to 'lifting or moving heavy loads'Source: IKEI/Panteia based on ESENER 2019

In this regard, interviewed trade union representatives highlight that larger establishments provide OSH training to their workers in a more systematic and regular manner, and even with a more job/department-related character (kitchen activities, reception activities, etc.), whereas in smaller establishments training is managed more informally and more on an ad hoc basis. Similarly, a Spanish study based on interviews with medical professionals specialised in occupational medicine shows large differences between small and large enterprises, due to the fact that in large enterprises there are specialised occupational health structures in charge of training/informing workers, while in small enterprises there is little training and information available, due to lack of resources (CEHAT, 2007). Finally, AFBS enterprises usually face a very high labour turnover and seasonality of work, which is an added obstacle to training (CEHAT, 2007; European Agency for Safety and Health at Work, 2008b).

3.6.4 Evolution in time of OSH training activities

In relation to the extent to which management, health and safety representatives and employees are trained in health and safety issues, the available comparisons between 2014 and 2019 show slightly decreasing trends. Thus, and on the one hand, the share of AFBS establishments with 20 or more employees where team leaders and line managers receive any training on how to manage health and safety in their teams has slightly decreased from 82% in 2014 to 75% in 2019. On the other hand, the proportion of establishments that provide any training to health and safety representatives (if available) provided during work time has also slightly decreased from 76% to 73%. Lastly, the OSH topics on which training has been provided to employees have not changed significantly overtime.

Table 23 Main OSH management practices-3, AFBS sector, ESENER 2014 and ESENER 2019, EU-27 (%)

	ESENER 2014	ESENER 2019
Share of establishments in which team leaders and line managers receive any training on how to manage health and safety in their teams (*)	82	75
Share of establishments where the health and safety representatives were provided with any training during work time to help them perform their health and safety duties (**)	76	73
OSH topics on which training has been provided to employees		
Proper use and adjustment of their working equipment and furniture	67	70
Use of dangerous substances (***)	80	81
How to prevent psychosocial risks such as stress or bullying	33	35
How to lift and move heavy loads or people (****)	69	70
Emergency procedures	82	79

(*) Base: AFBS establishments with 20 or more employees

(**) Base: Only AFBS establishments with health and safety representatives

(***) Base: Only AFBS establishments exposed to 'chemical or biological substances'

(****) Base: Only AFBS establishments exposed to 'lifting or moving heavy loads'

Source: IKEI/Panteia based on ESENER 2014 and ESENER 2019

4. Main drivers and barriers for OSH management in the AFBS sector

4.1 Introduction

This chapter identifies the main drivers and barriers underpinning OSH management practices within the AFBS sector. Specifically, the chapter identifies the main reasons that motivate sector enterprises to engage in OSH practices within establishments, including visits by the labour inspectorate. Subsequently, the chapter identifies the main difficulties that enterprises report in addressing health and safety issues in general as well as the main difficulties to dealing with psychosocial risks in their establishments. Finally, the chapter provides detailed information on additional elements influencing OSH management practices, including the impact of the COVID-19 pandemic, the increasing digitalisation of the sector and other emerging factors influencing OSH management practices.

Box 10 Main drivers and barriers determined through regression analysis

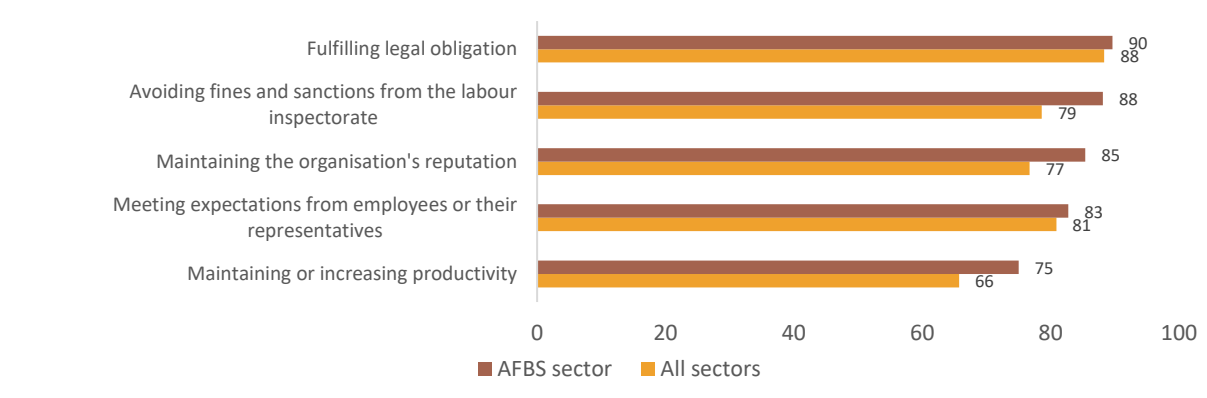
The findings regarding the main drivers and barriers that are presented in this chapter are, among others, based on the results from several regression models. The dependent variable in these regression models is an indicator that represents the attention establishments have for OSH management practices. This indicator is based on 38 different variables included in the ESENER 2019 dataset that reflect the application of different OSH management processes by establishment. The regression models examine to which extent the scores on this indicator can be explained by various drivers and barriers, as well as the presence of different types of employee representation, several workforce characteristics (for example, whether employees work from home and/or anywhere else outside the premises of the establishment), and control variables (establishment size, founding year of the establishment and country). Annex 2 contains a detailed discussion of the estimated regression models and the outcomes of these models.

4.2 Drivers for OSH management

4.2.1 Reasons that motivate enterprises to address OSH issues

According to the results obtained from ESENER 2019, the two most often mentioned drivers for addressing health and safety in AFBS establishments are the fulfilment of existing legal obligations and the wish to avoid fines from labour inspectorate authorities (90% and 88% of the responses, respectively). Meanwhile, other reasons are mentioned less often, including maintaining the organisation's reputation, meeting the expectations from employees or their representatives and, finally, maintaining or increasing productivity (85%, 83% and 75% of responses, respectively).

Figure 42 Main reasons for addressing health and safety in the establishment, AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27 - Source: IKEI/Panteia based on ESENER 2019

Meanwhile, and in comparison with the rest of sectors, the AFBS sector is particularly more sensitive to the different reasons suggested than the average for all sectors. Notwithstanding this, the AFBS sector seems to be particularly sensitive to elements related to avoiding fines and sanctions from labour inspectorate authorities (88% versus 79% for all sectors), the wish to maintain the organisation's reputation (85% versus 77% for all sectors), and, finally, the wish to maintain/increase productivity levels (75% versus 66% for all sectors).

The regression analyses confirm that all but one of these reasons for addressing health and safety are positively related with the attention to OSH management practices. The only exception is the motivation of establishments to avoid fines and sanctions from the labour inspectorate: wanting to avoid fines and sanctions is not significantly related to the extent of attention to OSH management practices (see Annex 2).

The previously suggested reasons underpinning the involvement of enterprises in OSH issues are confirmed by interviewed experts and literature. In this regard, the need to fulfil existing legislation and administrative rules obliging employers to care for workers' safety and conduct risk assessment/prevention activities are perceived by interviewed experts as key drivers underpinning the involvement of enterprises in OSH issues, irrespective of size considerations.[29]

Box 11 Example of innovative legislation: Decree Law 3/2022, of 11 February, on Urgent Measures for the Sustainability and Circularity of Leisure industry in the Balearic Islands, Spain

The Autonomous Community of the Balearic Islands has recently introduced, through Decree Law 3/2022 on urgent measures for the sustainability and circularity of tourism in the Balearic Islands, amendments to Law 8/2012 on Tourism in the Balearic Islands. Article 37 bis expressly states that hotels (whether city hotels, rural hotels or aparthotels) and other establishments that have voluntarily obtained a star rating are required to ensure that all beds in the establishment (except extra beds) are mechanically or electronically lift-up. The cleaning staff in the rooms will have to be able to operate the elevation of the bed in such a way as to facilitate the cleaning of the room, which will also have an impact on the protection of the occupational health of the cleaning staff.

The Decree Law establishes the percentages of lift-up beds and the timetable depending on the size and category of the hotels, where the goal is that all hotels and establishments should have 100% lift-up beds by 2028 at the latest. Failure to comply with these deadlines will be sanctioned with a fine of €500 for each elevating bed not installed on time.

It is expected that this legislative change implies the renovation of 300,000 beds in the islands and will benefit more than 20,000 chambermaids. It is worth remembering that 35% of accidents at work suffered by this group are related to posture overexertion.

Furthermore, the Fourth Additional Provision establishes that, within one year, the Balearic Institute of Occupational Health and Safety must prepare and promote a guide of measures and good practices in occupational health. These good practices will refer, among others, to ergonomics or to the workload of all departments. These good practices may have an impact on improving the quality and sustainability of the services provided by hotel accommodation tourist establishments and may also be adaptable and applicable to other sectors of the activity. (Source: https://www.boe.es/buscar/doc.php?id=BOE-A-2022-9388)

Other elements underpinning the involvement of enterprises in OSH issues and mentioned by interviewed experts include the growing importance attributed by enterprises to their socially responsible behaviour vis-à-vis the society in general and their employees in particular (where active OSH practices are seen as part of these social responsibility activities), the full involvement of top managers in OSH issues (already discussed in section 3.5 of this report), the active participation of workers and their representatives in the definition and implementation of OSH practices (to be discussed in detail in

[29] A good example of this is given by the smoking ban in EU Member States, which did greatly help improving the healthy work environment for personnel

chapter 5 of this report), and, interestingly also, the role played by some successful TV reality shows in attracting the attention of the general public to OSH issues in the AFBS sector. In the case of some subsectors (e.g. hotels), clients such as big tourist operators often require specific safety audits before sending their customers.

Finally, some researchers confirm the importance of reputation issues for enterprises that interact directly with customers (as those belonging to the AFBS sector), particularly in terms of eliminating those risk factors that may undermine the perceived image of the establishment among clients (including OSH issues) (Dospinescu et al, 2020).

Box 12 Existing relationship between drivers for addressing health and safety issues and effective involvement in OSH issues

ESENER 2019 identified five main drivers for addressing health and safety in AFBS establishments, namely, the fulfilment of existing legal obligations, the wish to avoid fines from labour inspectorate authorities, maintaining the organisation's reputation, meeting the expectations from employees or their representatives, and, finally, maintaining or increasing productivity. All these reasons are mentioned by at least three out of four of the AFBS establishments.

Do establishments that mention these reasons actually pay more attention to health and safety than establishments that do not mention these reasons? Additional statistical analysis (see Annex 2) shows that this is the case for four of the five main reasons. Establishments that address health and safety to fulfil legal obligations, to maintain the organisation's reputation, to meet expectations from employees or to increase productivity generally have more attention for OSH management practices than establishments that do not mention these reasons.[30,31] For the remaining main reason (avoiding fines), no relationship to the attention for OSH management practices was found.

Source: IKEI/Panteia based on ESENER 2019

4.2.2 Visits of labour inspectorates

Labour inspectorates play a key role not only in supporting compliance and fulfilment of existing OSH legislation but also in providing useful advice about how to successfully deal with and improve existing OSH management practices within AFBS establishments. In this regard, and according to one of the interviewed health professionals, the activities of labour inspections in relation to the AFBS sector are basically three main ones, namely, the development of routine inspection activities (including informative and sanction activities), the investigation of specific serious cases (e.g. accidents and deaths), and, finally, raising awareness on concrete occupational groups (e.g. chambermaids) through specific campaigns.

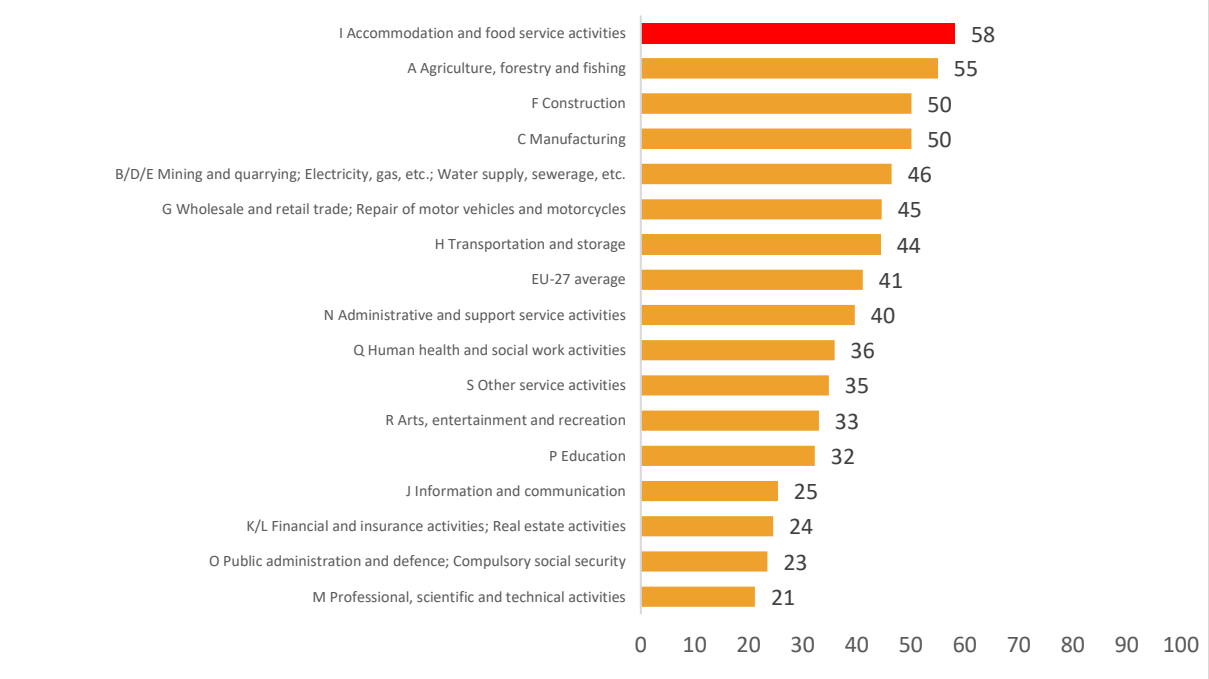
In this regard, data from ESENER 2019 show that up to 58% of the EU-27 AFBS establishments have been visited the labour inspectorate in the last three years in order to check health and safety conditions (64% according to the ESENER 2014 results), where this percentage is the highest among the different sectors considered and well above other difficult sectors such as agriculture, manufacturing and construction activities. In this regard, one of the interviewed trade union representatives suggested that the AFBS sector receives a higher number of labour inspections in comparison to its economic importance, which reflects a higher problematic image of the sector in comparison to others. Indeed, the HORECA sector (along with construction and cleaning) is among the sectors with the highest rates of undeclared work.[32]

[30] We have constructed an indicator that represents the attention establishments have for OSH management practices. This indicator is based on the answers of enterprises to several questions from the ESENER 2019 survey on the presence of various OSH management practices. See Annex 1 for more details.

[31] The relations are, however, not very strong.

[32] See https://www.ela.europa.eu/en/undeclared-work

Figure 43 Share of establishments that have been visited by the labour inspectorate in the last 3 years in order to check health and safety conditions, by economic sector, 2019

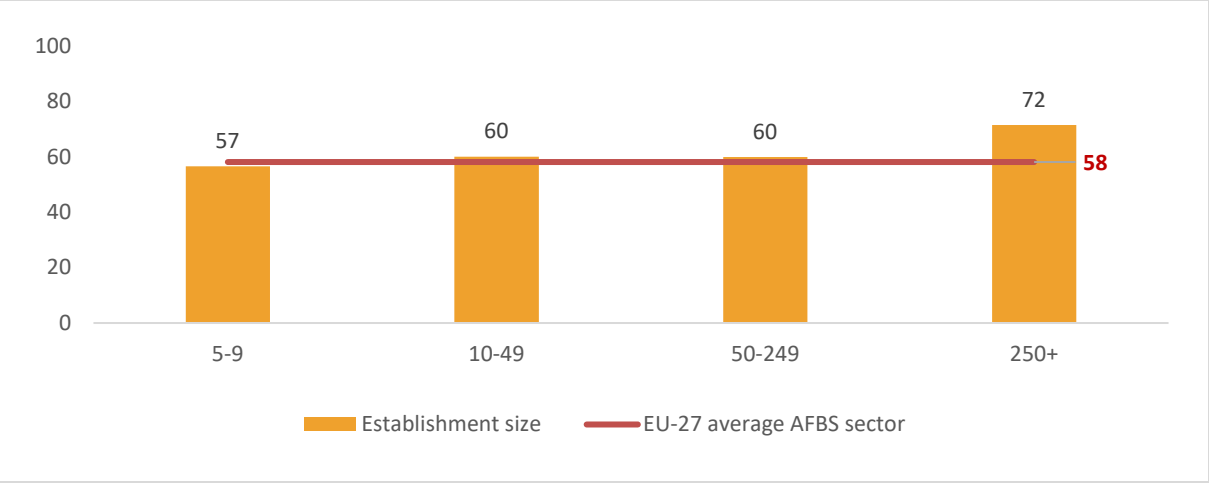


Base: All establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Interestingly also, the available data show that this percentage is particularly higher among the larger establishments with more than 250 employees (72% of them have been visited in the last three years), where there are no important differences in terms of establishment size in comparison to the ESENER 2014 results.

Figure 44 Share of establishments that have been visited by the labour inspectorate in the last 3 years in order to check health and safety conditions, by establishment size, AFBS sector, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

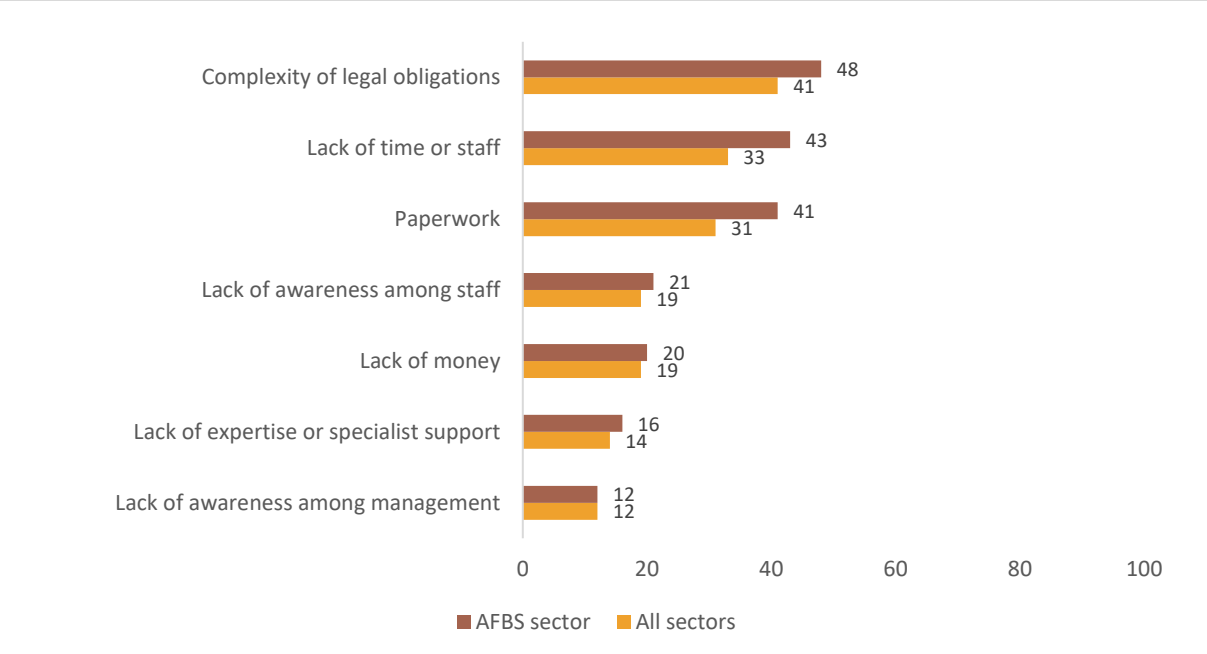
According to the interviewed experts, the labour inspection workload in the AFBS sector is also highly dependent on the importance of the activity in the national/regional context, in the sense that this workload is higher in tourist regions/countries than in industrial ones. Several interviewed experts also stressed that labour inspections usually take place reactively (for instance, an accident or a complaint), whereas the chances of spontaneous inspections are usually very low. Several consulted experts underlined that, unfortunately enough, some of these inspection activities are not as quick as they should be, mainly due to existing workloads and lack of means (particularly human resources) in labour inspection.

4.3 Barriers to OSH management

4.3.1 Difficulties for engaging in OSH management practices

AFBS establishments are confronted with a number of difficulties in addressing health and safety issues. In this regard, and according to the results stemming from ESENER 2019, the most important difficulties are the complexity of existing legal obligations (signalled as a major difficulty by 48% of AFBS establishments), followed by lack of time/staff to deal with these issues and existing paperwork (43% and 41% of establishments, respectively). Meanwhile, other less relevant difficulties include the lack of awareness among staff, the lack of money and resources, and the lack of expertise/specialist support on the topic (21%, 20% and 16%, respectively). Finally, the lack of awareness among management is the least important reason (only suggested by 12% of establishments), probably explained by the high share of respondents who are actually managers/employers.

Figure 45 Main difficulties in addressing health and safety in the establishment, AFBS sector and all sectors, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

The comparison with the general situation among all sectors shows that AFBS establishments are particularly sensitive about these three most important reasons, in the sense that complexity of existing legal obligations, lack of time/staff to deal with these issues and existing paperwork are mentioned more frequently as major difficulties in comparison to all sectors. Also, ESENER 2019 survey data show important national differences in the perception of these difficulties. For instance, and focusing on the

complexity of existing legal obligations, this difficulty is particularly felt in Member States such as Belgium, France, Italy, Germany and the Netherlands (above 50% of national establishments view it as a major difficulty) in comparison to Member States such as Romania, Finland or Lithuania (less than 15% of establishments).

Interestingly, although the complexity of existing legal obligations is mentioned most often, further analysis indicates that this does not have a negative effect on the attention to OSH management practices. This follows from the results of the regression analyses in Annex 2, where the complexity of existing legal obligations is not significantly related to the indicator for attention to OSH management practices. Two other main difficulties are also not significantly related to the attention to OSH management practices: paperwork and lack of money.

Consulted experts' views complement the previous results. In this regard, interviewed trade union representatives stressed that one of the key difficulties in addressing OSH issues within AFBS establishments relates to the effective implementation and enforcement of existing OSH legislation/regulations (which are regarded as sufficient in all countries). In the same line of reasoning, several interviewed OSH physicians suggested that legal obligations among AFBS establishments are met theoretically on paper but little implemented in practice (one of the interviewed experts suggested that OSH risk assessments are 'made for to be put away in the drawer').

Linked to this, some consulted employer representative organisations suggested that it is often the case that existing rules and regulations are complicated and not easy to be implemented, where this situation is often coupled with a lack of affordable/quality practical support for enterprises for the hands-on application of these rules. In this sense, employers in small and family-run businesses often lack the knowledge/expertise, time and resources to understand and follow the legislative issues that are applicable to the sector, which generates problems in implementing the legislation at company level. In this regard, interviewed experts stress that enterprise size itself is a major barrier for enterprises to engage themselves in OSH-related activities.

In this respect, employers in small enterprises (which are the majority) are required to know about and manage everything, including OSH issues, so they have to be their own OSH management implementation manager. By way of contrast, large organisations have their own internal team of experienced OSH personnel and more resources to properly deal with OSH issues, although they are also more likely to use services of an external provider to support them in their health and safety tasks (see results in section 3.4.2 of this report). According to one interviewed trade union representative, smaller AFBS enterprises have a reactive rather than a proactive approach to OSH issues, in the sense that they only realise the importance of OSH when there is a problem, so prevention activities do not come to their minds as this is perceived as a costly and complicated activity. Linked to the previous point, reviewed literature shows that major shortcomings have been detected in complying with EU health and safety legislation among SMEs, in particular as regards risk assessment and workers' participation. These shortcomings stem primarily from: lack of information and specific (targeted) guidelines; poor capacity and skills in terms of health and safety; lack of resources to ensure appropriate basic training of the workforce and managers; and poor access to effective, specific and specialised technical assistance (European Agency for Safety and Health at Work, 2008b).

Other barriers mentioned include the lack of human and material resources (including specific expertise) to engage in OSH activities, the lack of an OSH preventive culture at all levels of the company, the perception that the sector is not particularly hazardous (for instance, in terms of serious and/or fatal accidents), the low health literacy of the workforce (including low interest on the topic), and, finally, the perception among enterprises themselves that these OSH activities are time-consuming and do not add value to the business (so they are kept to the bare minimum). One trade union representative stressed that owners with a different cultural background often apply this cultural background to their businesses (Asian all-you-can-eat restaurants, shisha lounges, döner-kebab venues, etc.), so they tend to follow the rules of their home countries rather than existing national regulations.

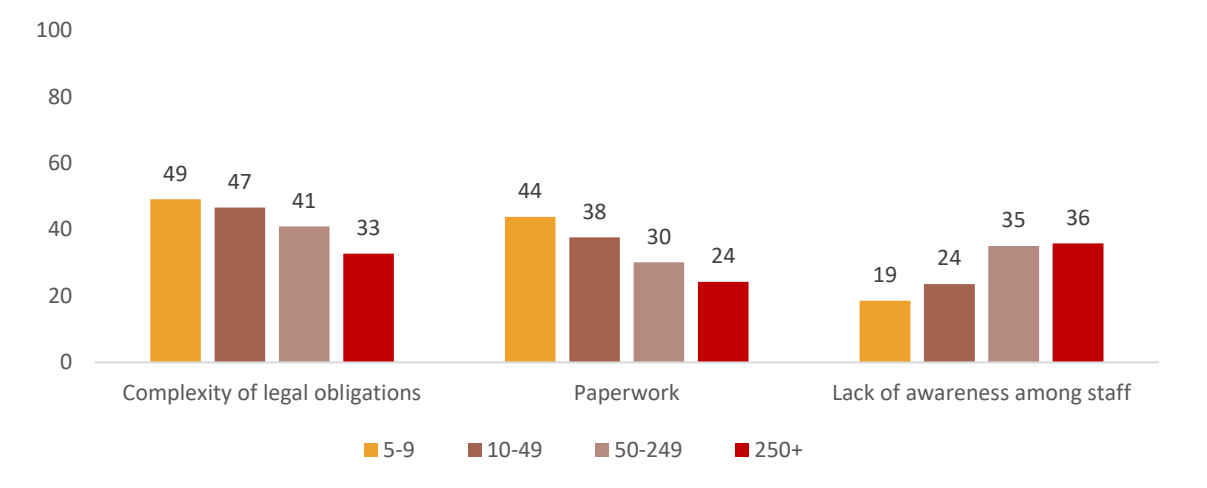
Consulted experts also reported some additional barriers. To start with, the high employee turnover in the sector, coupled with the seasonal nature of the activity in some geographical areas, makes it more difficult to maintain continuity of OSH practices over time. Meanwhile, some of the consulted experts

underlined that the AFBS sector is often more concerned with HACCP rules[33] and food safety chain inspections than OSH regulations and inspections, so they pay more attention to the former than to the latter one. Trade union representatives reported that it is also the case that employee representatives are often poorly skilled to successfully audit and control the company's OSH management at work.

The ESENER 2019 survey results complement this perspective, in the sense that it shows that establishment size considerations also play a role in the identification of some of the main difficulties in addressing health and safety within the AFBS sector. In this regard, data confirm that smaller AFBS establishments are particularly sensitive to the difficulties generated by paperwork and complexity of legal obligations in comparison to larger establishments (for instance, 49% and 47% of those establishments with 5-9 and 10-49 employees identify the complexity of legal obligations as a major difficulty in comparison to 33% among those establishments with 250 or more employees[34]). Meanwhile, larger establishments are more conscious about the difficulties derived from the lack of awareness among staff in comparison to their smaller counterparts.

As mentioned before, the regression analyses (see Annex 2) indicate that lack of awareness among staff is significantly related to the attention to OSH management practices, while the other two difficulties (complexity of legal obligations, paperwork) are not. This might give the impression that larger establishments will have less attention for OSH management practices than smaller establishments (because the lack of awareness among staff is mentioned more often among larger establishments). The opposite is, however, the case: smaller establishments have on average less attention for OSH management practices than larger establishments. The relation between establishment size and the attention to OSH management practices is further discussed in section 4.4.3.

Figure 46 Selected difficulties in addressing health and safety in the establishment, AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

In this regard, reviewed literature shows that AFBS SMEs are particularly confronted with several shortcomings to comply with EU health and safety legislation, including: lack of information and specific (targeted) guidelines; poor capacity and skills in terms of health and safety; lack of resources to ensure appropriate basic training of the workforce and managers; and poor access to effective, specific and specialised technical assistance (European Agency for Safety and Health at Work, 2008b; Hassard et al, 2020).

[33] As pointed out above, HACCP (Hazard Analysis and Critical Control Points) is a management system in which food safety is addressed through the analysis and control of biological, chemical and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.

[34] Bear country differences in mind, as reported above.

Box 13 Relationship between barriers to addressing health and safety issues and establishment involvement in OSH management practices

ESENER 2019 identifies seven main barriers for addressing health and safety issues, namely the complexity of existing legal obligations, lack of time/staff to deal with these issues, existing paperwork, lack of awareness among staff, lack of money and resources, lack of expertise/specialist support on the topic and, finally, lack of awareness among management.

Each of these barriers may cause establishments to pay less attention to OSH management practices than they would have wanted. This suggests that firms with more attention to OSH management practices are less likely to report difficulties in addressing health and safety issues than firms with less attention to OSH management practices. However, a reverse causality is also possible: only enterprises that want to pay much (or more) attention to OSH management practices are likely to run into any difficulties. Hence, firms with more attention to OSH management practices are more likely to report some difficulties in addressing health and safety issues than firms with less attention to OSH management practices.

Both effects may occur simultaneously. This may explain why additional statistical analysis (see Annex 2) finds no relation between three of the main difficulties and the attention to OSH management practices. For 'lack of time or staff' and 'lack of expertise or specialist support', a negative relation is found with the constructed indicator for attention to OSH management. For 'lack of awareness among staff' and 'lack of awareness among management', the relation with the attention to OSH management practices is interrelated: mentioning 'lack of awareness among management' as a main difficulty is associated with a lower attention to OSH management practices, but only if 'lack of awareness among staff' is not mentioned as a main difficulty as well (mentioning both 'lack of awareness among management' and 'lack of awareness among staff' as a main difficulty is not associated with an attention to OSH management practices).

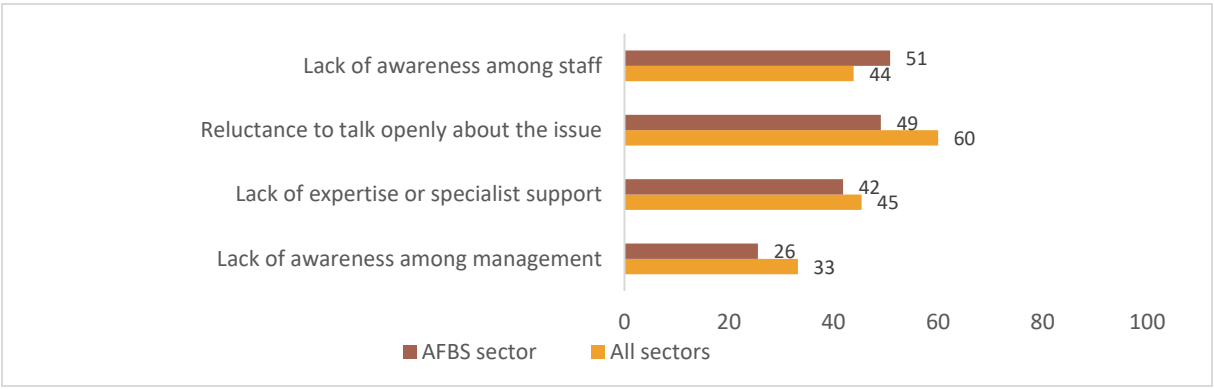
Source: IKEI/Panteia based on ESENER 2019

4.3.2 Main obstacles to dealing with psychosocial risks

Section 2.3.2 has shown the importance of psychosocial risks for the AFBS sector. In this regard, the ESENER 2019 survey identifies the main difficulties experienced among those establishments that have identified one or more psychosocial risk and report that psychosocial risks are more difficult to address than other risks.

The most relevant difficulties include a lack of awareness among staff, the reluctance to talk openly about these risks and the lack of expertise/specialist support (51%, 49% and 42% of the responses, respectively), whereas the lack of awareness among management is only suggested by 26% of responses (this result is likely explained by the high share of respondents who are actually managers/employers).

Figure 47 Main obstacles to dealing with psychosocial risks in the establishment, AFBS sector and all sectors, EU-27, 2019



Base: Responses only of those AFBS establishments that have identified one or more psychosocial risks and report that psychosocial risks are more difficult to address than other risks- Source: IKEI/Panteia based on ESENER 2019

Meanwhile, the comparison with the main obstacles for all sectors shows that the perception of these obstacles is generally speaking lower among the AFBS sector than among all sectors, exception made for the lack of awareness among staff (slightly more felt in the AFBS sector, 51% versus 44%). By way of contrast, it is interesting to underline the lower importance attributed to the reluctance to talk openly about the issue in the AFBS sector in comparison to all sectors (49% and 60%, respectively), where the AFBS sector is precisely the sector where this reluctance is lower. In this sense, it seems that AFBS management is more open to talk about and discuss sector-related psychosocial risks, perhaps because the sector does not identify these risks as more difficult to address than other risks (see results in section 2.3).

Last but not least, the ESENER 2019 survey results show that up to 59% of the AFBS sector establishments carrying out risk assessments report that they have sufficient information on how to include psychosocial risks in risk assessments, where this result is similar to the EU-27 average.

4.4 Additional elements influencing OSH management practices

4.4.1 Impact of the COVID-19 pandemic on OSH management practices

The COVID-19 pandemic that started in early 2020 has had a massive impact on the AFBS sector in general and on AFBS OSH management practices in particular.[35] To start with, restrictions and closures were approved in most EU Member States with very short notice, with a big question for employers about what to do with their employees if the business was required to close. In those Member States where no official lockdown was declared (e.g. Sweden), it was up to the enterprises to decide on how to interpret and apply the 'recommended' restrictions (for instance, the 'recommendation' to wear masks), which in practice also turned out to be confusing for enterprises and clients.

Subsequently in time, enterprises had to find ways to be safely open, often operating with partial opening hours. For this, AFBS enterprises have carried out important efforts to comply with existing rules and protocols so as to guarantee a hygienic environment, both for guests and customers as well as for workers themselves. Examples of these efforts include strict controls of physical distance and limitations of capacity thresholds, more thorough cleaning and disinfection practices, introduction of COVID-check phone applications and QR codes for reading the menus, setting up of methacrylate screens to separate spaces, the obligation to wear masks and other protective equipment, the extension of cashless payments and online reservations in bars and restaurants, and the introduction of telework practices for some specific jobs.

As a result, and according to the interviewees, the COVID-19 pandemic-related restrictions have resulted in higher stress levels and difficulties in dealing with these changes, especially given the intrinsic sector need to interact with other people on a continuous basis. Not surprisingly, some interviewed experts stressed that the situation caused by the pandemic has had very negative economic and social consequences for the AFBS sector, resulting in a large percentage of enterprises going bankrupt, associated job losses, reduction of income or the important exodus of many sector staff to other sectors (for a discussion on this, see section 4.4.3).

Other side effects derived from the pandemic and suggested by experts include a decline in undeclared cash tips for waiting staff (as a result of the greater use of cashless payments in bars and restaurants) and a likely increase of unregistered establishments that avoid existing regulations (for instance, the so-called dark kitchens or kitchen ghosts[36]), with obvious negative consequences on the working conditions of both the kitchen staff and the delivery workers (European Labour Authority, 2021).

Some interviewed experts also reckon positive developments were derived from the pandemic. Thus, some experts suggested that the pandemic has increased the importance of hygiene for many enterprises and establishments, not only in the AFBS sector but in others too. Also, the initial stages of the pandemic and the associated slowed down work pace have been an opportunity for enterprises to reflect and implement company-related improvements, for instance, to re- and upskill workers, also in

[35] For an extensive discussion on COVID-19 and OSH practices in European workplaces please refer to the activities conducted by EU-OSHA (see https://osha.europa.eu/en/themes/covid-19-resources-workplace).

[36] Commercial kitchens which sell meals exclusively for delivery through an app or an online ordering system, or in some cases by letting customers collect the food themselves

the OSH field. Finally, one of the interviewed occupational physicians suggested that the pandemic has strengthened the position of external occupational health services due to their key role in supporting AFBS enterprises in doing business safely (e.g. emergency plans, development of epidemiological procedures, COVID-19 screening, advice, etc.).

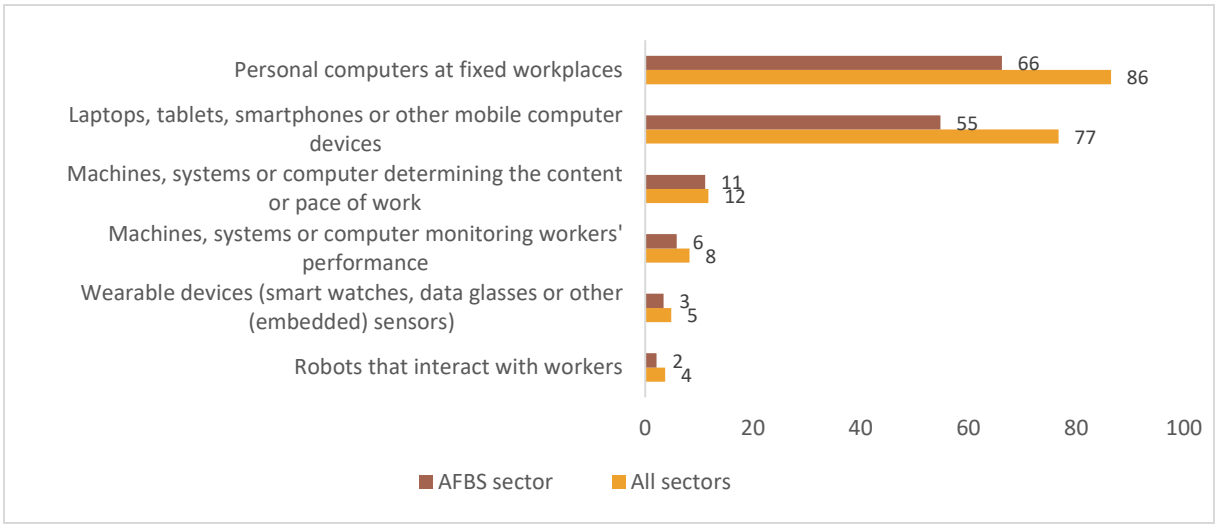
Looking at the future, some of the interviewed experts stressed that some of the changes introduced by the COVID-19 pandemic are very likely to remain, including the presence of QR codes for reading the menus or the use of cashless payments, whereas other measures will disappear (for instance, the use of methacrylate screens to differentiate spaces).

4.4.2 Digitalisation and OSH management practices

It is a well-known fact that digitalisation is playing an increasing role in the organisation of work in general[37] and in the AFBS sector in particular, with significant impacts on OSH issues. Examples of new developments include the use of paperless solutions based on tablets and screens (for instance, for waiting staff to write down orders that communicate directly with kitchen services or for chambermaids to report conducted activities/incidents), the use of QR codes instead of written menus, the increasing use of mobile and digital payment systems, new digitalisation tools for better control of food stocks, (semi)automatic check-in procedures and so on (Ürem, 2020).

Despite this increasing role, the ESENER 2019 survey shows that the use of digital technologies for work is relatively less extended in the AFBS sector in comparison to the general situation in other sectors, although some interviewed experts suggested that such use has increased during the pandemic. In this sense, up to 66% and 55% of AFBS establishments use personal computers at fixed workplaces and mobile computer devices (laptops, tablets, smartphones), respectively, where these figures are clearly below the corresponding percentages for all sectors (86% and 77%, also respectively). Meanwhile, other digital technologies such as machines/systems or computer monitoring the content/pace of work/workers' performance, wearable devices (smart watches, data glasses or other (embedded) sensors), and robots that interact with workers are much less extensively used in the AFBS sector (less than 11% in all cases).

Figure 48 Use of digital technologies, AFBS sector and all sectors, EU-27, 2019



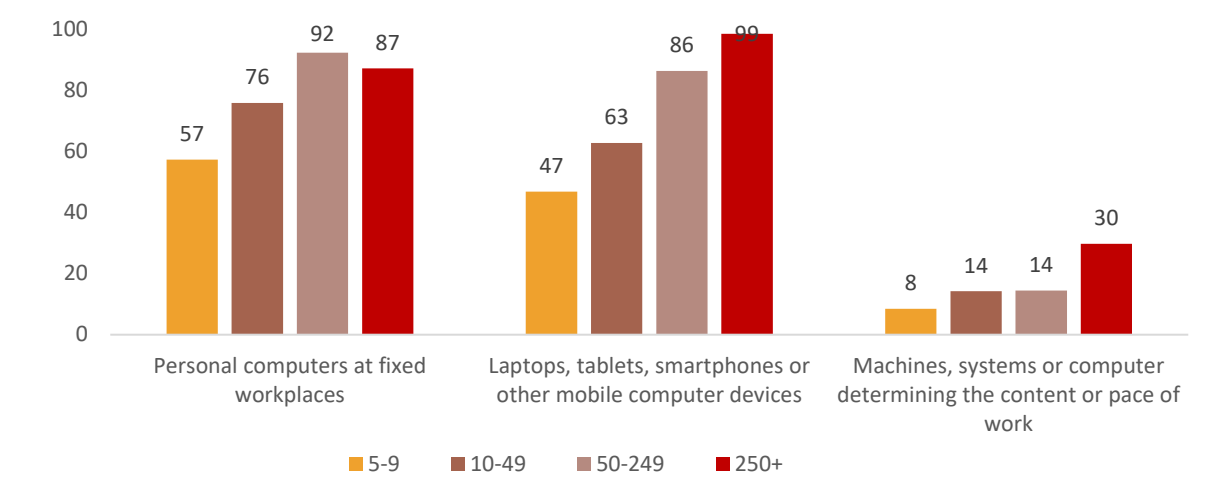
Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

[37] EU-OSHA's Healthy Workplaces Campaign Safe and Healthy Work in the Digital Age, running from 2023 to 2025, raises awareness of digitalisation and OSH and provides many practical resources for enterprises (see https://osha.europa.eu/en/campaigns-and-awards/healthy-workplaces-campaigns). In addition to this, EU-OSHA has produced in the last years a significant number of studies on the issue (see https://osha.europa.eu/en/themes/digitalisation-work).

Once again, this use of some digital technologies is strongly influenced by the size of the establishments, in the sense that larger sector establishments use these devices more than their smaller counterparts, as could be expected. Thus, and focusing on the use of mobile computer devices (laptops, tablets, smartphones) as an example, these devices are present in 47% of those AFBS sector establishments with fewer than 10 employees, whereas nearly all establishments with 250 or more employees use them (63% and 86% among establishments with 10-49 and 50-249 employees, respectively).

Figure 49 Use of selected digital technologies, AFBS sector, by establishment size, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

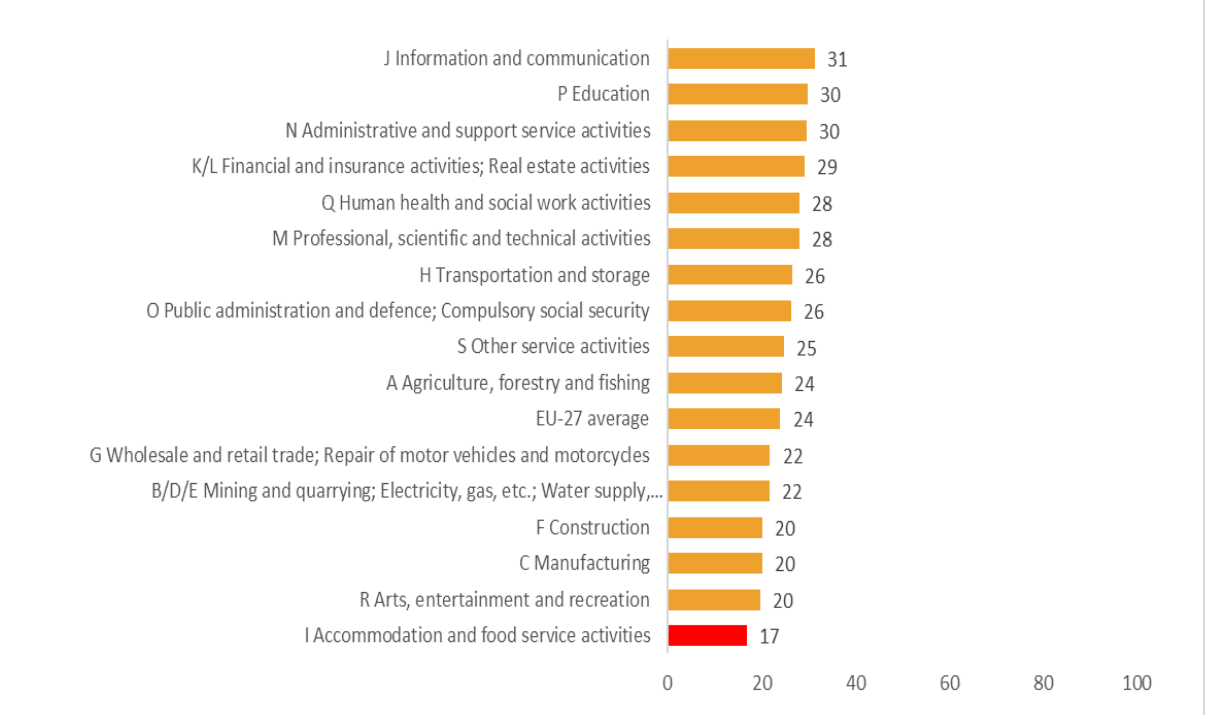
According to the interviewed experts, the use of digital technologies is likely to have important consequences in the AFBS sector. To start with, digital technologies may have an impact on employment, in the sense that these technologies often substitute workers (for instance, less use of receptionists in hotels) and require the adaptation of existing workers to the new means (for instance, via training activities). Also, these digital technologies usually lead to more efficiency, reducing the workload of workers and some specific OSH risk factors affecting their jobs (e.g. the possibility of being robbed due to the increasing presence of digital payment tools, better coordination between workers and services, etc.),[38] although interviewed experts do not agree whether these digital technologies reduce per se the work pressure for employees. In this regard, a recent EU-OSHA study shows that digital technologies and artificial intelligence used for worker management can introduce a number of new and emerging risks, including increased work intensity and speed of work, reduction of worker autonomy and control over work, increased performance pressures and dehumanisation of workers, among others (EU-OSHA, 2022d). Last but not least, some interviewed experts stressed the importance of the human aspect for the AFBS sector, where some clients still want to be served and attended to on a personal basis.

[38] EU-OSHA has conducted some recent research regarding the use of technology for automations that can reduce risks/workloads. Examples include:

- European Agency for Safety and Health at Work, *Advanced robotics and automation: implications for occupational safety and health, 2022*. Available at: https://osha.europa.eu/en/publications/advanced-robotics-and-automation-implications-occupational-safety-and-health
- European Agency for Safety and Health at Work, *Cognitive automation: implications for occupational safety and health*, 2022. Available at: https://osha.europa.eu/en/publications/cognitive-automation-implications-occupational-safety-and-health
- European Agency for Safety and Health at Work, *Advanced robotics, artificial intelligence and the automation of tasks: definitions, uses, policies and strategies and occupational safety and health*, 2022. Available at: https://osha.europa.eu/en/publications/advanced-robotics-artificial-intelligence-and-automation-tasks-definitions-uses-policies-and-strategies-and-occupational-safety-and-health

According to the ESENER 2019 survey results, only 17% of the EU-27 AFBS sector establishments have discussed the possible impacts of the use of digitalisation technologies on the health and safety of employees, the lowest level in comparison to the rest of the sectors and below the EU-27 average (24%). This result reflects that, perhaps, digitalisation issues and their impact have not yet been fully discussed within the sector.

Figure 50 Share of establishments that have discussed the possible impacts of the use of digitalisation technologies on the health and safety of employees, by economic sector, 2019

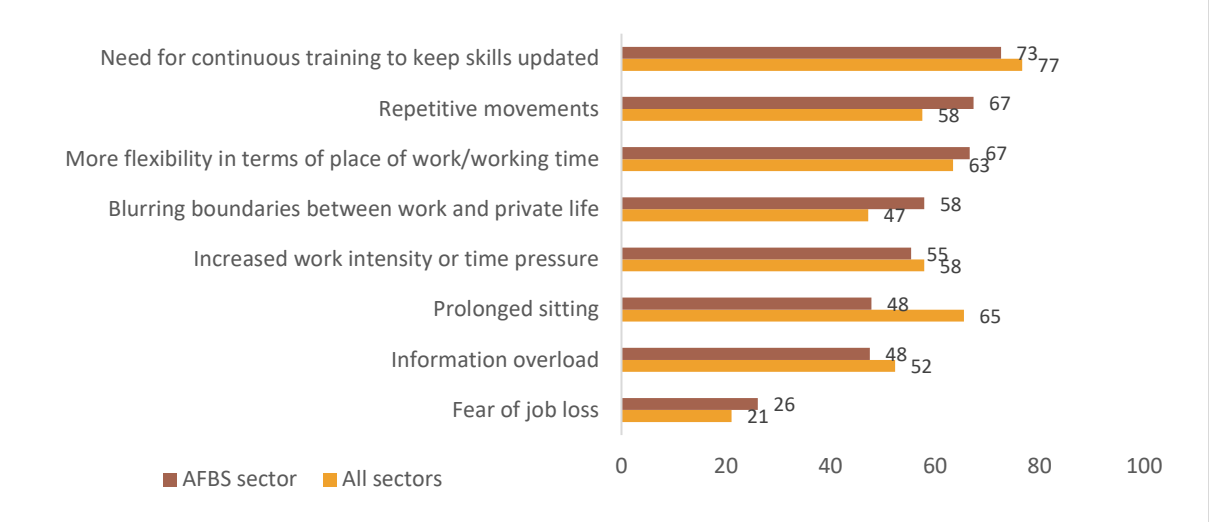


Base: Responses only of those establishments that have used digital technologies for work

Source: IKEI/Panteia based on ESENER 2019

Meanwhile, and as for the types of impacts discussed, the ESENER 2019 results complement the perspective of interviewed experts and show that the most discussed topics include the need for continuous training to keep skills updated, the presence of repetitive movements, the need for more flexibility for employees in terms of working place and time, the blurring boundaries between work and private life, and, finally, increased work intensity/time pressure. In comparison to the topics discussed among all sectors, the AFBS sector seems to be particularly interested in topics related to repetitive movements, more flexibility for employees in terms of working place and time, and, finally, blurring boundaries between work and private life. In any case, it has to be kept in mind that these findings apply only to the 17% of establishments in the AFBS sector that use digital technologies at work and that report discussing about their possible impacts on the health and safety of employees.

Figure 51 Impacts discussed in the context of use of digital technologies, AFBS sector and all sectors, EU-27, 2019



Base: Responses only of those AFBS establishments that have used digital technologies for work and have discussed the possible impacts of the use of digitalisation technologies on the health and safety of employees

Source: IKEI/Panteia based on ESENER 2019

4.4.3 Other emerging factors influencing OSH management practices

In addition to the previous elements, a detailed statistical analysis plus the conducted qualitative interviews have shown the presence of other emerging technical, economic, social and organisational factors that are influencing OSH management practices within AFBS sector establishments. They are presented next.

- **Types of risks and employee representation**

Regression analysis (see Annex 2) show that the attention establishments pay to OSH management practices is also related to different types of risks that are identified (lifting or moving people or heavy loads; prolonged sitting; heat, cold or draught; chemical or biological substances; psychosocial risk of difficult customers). The nature of the causality of these relations is however not clear. It may be the case that identifying these risks prompts establishments to take additional OSH measures, but it may also be the case that establishments that pay more attention to OSH in general are also more likely to identify certain risks.

The same applies to the identified relation between the attention establishments pay to OSH management practices and the presence of different types of employee representation. It is worth mentioning, however, that the relation with these two types of employee representation is the strongest of all relations identified. The following example illustrates the strength of this relation. The attention establishments pay to OSH management practices is measured on a scale from 0 to 1, and 50% of all AFBS establishments have a score ranging from 0.34 to 0.62 (with average score of 0.49). If an establishment without any kind of employee representation would introduce both types of employee representation, the results suggest that this could increase the score on this scale by 0.16.[39] This is similar to an establishment moving from the 25th percentile to the 50th percentile (from 0.34 to 0.50), or from the 50th percentile to the 75th percentile (from 0.49 to 0.64).

- **Establishment characteristics**

Large establishments (with more than 100 employees) pay more attention to OSH management practices than smaller establishments. The average score for the indicator that represents the attention establishments have for OSH management practices ranges from 46% for establishments with 5-9

[39] See Annex 2. The effect of 0.16 is the sum of the parameter estimates for the variables representing the two types of employee representation.

employees to 76% for establishments with 250 or more employees.[40] This finding is consistent with what the interviewed experts have said about the relation between establishment size and engagement in OSH-related activities.

The conducted regression analyses indicate that about half of the size class difference between the smallest and largest establishment size classes can be explained by two factors. The first factor is whether establishments are part of a multi-establishment organisation or not. Eighty-eight per cent of AFBS establishments from the EU-27 with 5-9 employees are a single organisation (not belonging to any business group). This share decreases rapidly with establishment size (71% of AFBS establishments from the EU-27 with 10-49 employees; 51% of AFBS establishments from the EU-27 with 50-249 employees; and 33% of AFBS establishments from the EU-27 with 250 or more employees[41]). The regression analysis on ESENER 2019 data shows that being part of a multi-establishment organisation is positively related to the attention establishments have for OSH management practices. A possible explanation for this relation is that multi-establishment organisations may offer knowledge, expertise and practical support to their establishments for the hands-on application of the various OSH rules.

The second factor is employee representation. As discussed above, a strong relation exists between the attention establishments pay to OSH management practices and the presence of different types of employee representation. The presence of these types of employee representation is, in turn, strongly related to establishment size (which will be discussed in more detail in section 5.2). Smaller establishments are less likely to have employee representation, which in turn is associated with less attention to OSH management practices.

As mentioned, these two factors (being part of a multi-establishment organisation or not, and having employee representation) can explain about half of the size class difference in attention to OSH management practices between the smallest and largest establishment size classes. There are several other factors that also play a role (such as the main barriers and drivers mentioned by establishments and the types of risks that are identified). Nevertheless, if these are taken into account, a small unexplained establishment size class effect still remains.[42]

A similar observation can be made for country differences in the attention to OSH management practices: the average attention of establishments to OSH management practices varies between countries, and these differences cannot be fully explained by the conducted regression analyses (see Annex 2 for further details on the conducted analyses).[43]

- **Increasing presence of long-term subcontracting/outsourcing practices**

Interviewed experts identify a growing trend within the AFBS sector towards subcontracting/outsourcing on a long-term basis an increasing number of key activities that have been traditionally carried out internally by AFBS enterprises. Examples of these outsourced activities include restaurant and housekeeping activities or security services, for instance. These outsourcing practices, particularly common in the hotel sector, generate some specific OSH management challenges, for instance, in terms of the existing labour and working conditions of the subcontracted personnel (lower salaries, more work pressure, etc.) and the level and quality of training and material resources offered by enterprises to subcontracted workers.

In this regard, there are examples of good practices to counteract these possible bad practices. For instance, the sector collective bargaining agreement in the Spanish Balearic Islands has established the need to apply the collective agreement of the subcontracting enterprise, that is, the HORECA collective agreement, whereas in Canary Islands the subcontracting of cleaning activities in hotels has been declared as illegal by the regional judicial system.

[40] An average score of 76% means that establishments apply on average 76% of the specific OSH management practices and processes on which information is available in the ESENER 2019 survey. See Annex 2 for more information on the construction of this indicator.

[41] This size class accounts for less than 0.5% of all AFBS establishments from the EU-27 with five or more employees.

[42] This is captured by the significant parameter estimates for the different size class dummies in model 3 in Annex 2.

[43] This is evident from the fact that country dummies are significant in model 3 in Annex 2.

- **Increasing presence of platform workers, particularly in food delivery services**

Some interviewed trade unions stressed that last years have witnessed an increasing presence of work done through labour platforms (for instance, in terms of food delivery jobs or platforms providing accommodation services). This increase in home delivery consumption figures has also generated a transformation of the service to adapt to new consumer trends, giving rise to the creation of the so-called delivery premium (gourmet experiences outside the restaurant), the boom of dark kitchens or kitchen ghosts (already explained in section 4.4.1), and the digital transformation of restaurants (García-Madurga et al, 2021).

Also, this increase of platform work has resulted in more precarious forms of work organisation (European Agency for Safety and Health at Work, 2021b). In this respect, platform workers could be considered as self-employed, so they are not under the OSH rules of the company that hires them. In this respect, trade unions stress the need to specifically deal with these platform workers, for instance, in terms of new legislation regulating their working and OSH conditions. Relevant examples of this include the European Commission proposal for a directive on improving working conditions in platform work[44] or the national initiatives adopted in this respect.[45]

- **Increasing presence of 'green practices'**

According to some interviewees, many AFBS establishments are increasingly introducing some 'green choices' intended at alleviating the environmental impact of their activities. For instance, hotel customers are currently offered the option to opt-out from daily room cleaning in the name of 'green considerations'. This option makes the management of room cleaning and planning of work shifts more complicated,[46] particularly for cleaners (for instance, rooms are dirtier and more difficult to clean, stronger chemicals may have to be used, uncertainty about workload, added stress, etc.).

On the other hand, other interviewees stressed that the increasingly important environmental commitment within the AFBS sector is having and will have an important impact on OSH management issues, particularly in relation to training issues (use of chemicals and recycled materials, etc.).

- **Improvements related with technical changes**

In addition to digitalisation issues, recent technical and organisational changes are also influencing OSH issues within AFBS establishments. Thus, and on the one hand, new hydraulic-based solutions such as beds with a lift mechanism or workstation trolleys reduce the work-related risks for hotel cleaners arising from making beds, vacuuming, or handling trolleys and trays.

Another example is given by the presence of ICT tools that facilitate cooperation and better communication between waiting staff and kitchen services in restaurants, reducing the need for physical movement of waiting staff. Also, standardisation and automatisation is gaining ground within some AFBS sub-activities, so the use of prefabricated food is more and more common, reducing therefore the work contents for cooks.

- **Increasing violence suffered by AFBS establishments**

Some interviewees, particularly in northern European countries, identify an increase in violent behaviours among the general public since reopening of the sector after the pandemic, particularly in nightlife-related establishments. This situation is resulting in added stress levels and harassment situations for workers, as well as an increased need for certified security services able to successfully deal with these negative situations. In some countries (e.g. the Netherlands), some NGOs have developed ad hoc freely available online tools to successfully deal with these violent situations arising from external but also internal situations within enterprises (see https://www.slachtofferhulp.nl/professionals/praktische-ondersteuning/quickscan-grensoverschrijdend-gedrag/).

[44] See https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6605

[45] See https://www.eurofound.europa.eu/topic/platform-work#s-04 and also the activities conducted by Eurofound in this domain (https://www.eurofound.europa.eu/topic/platform-work#s-01).

[46] Artificial intelligence could be used for worker management as well, raising a number of new and emerging risks, as mentioned in this report (EU-OSHA 2022d): https://osha.europa.eu/en/publications/artificial-intelligence-worker-management-implications-occupational-safety-and-health

- **Increasing difficulties in finding suitable personnel, exacerbated by the COVID-19 pandemic**

One of the key elements influencing OSH management refers to the existing labour shortage within the AFBS sector. In this regard, interviewees stressed the importance of existing labour shortages, as well as the problems that enterprises and establishments are facing to fill these job positions. Poor working conditions (low salaries, long/unfriendly working hours), coupled with lack of attractiveness of the sector, are at the root of these difficulties, particularly for new-to-the-sector and young people.

Moreover, this labour shortage problem has been aggravated as a result of the COVID-19 pandemic, in the sense that the pandemic did force many workers to leave the sector due to closures or limited opening/closing times, where many of these workers have found jobs in alternative sectors and have limited willingness to return to their original jobs. Therefore, many OSH-related skills have been lost and enterprises have had to respond to these labour shortage challenges in a number of ways. Examples include attracting unskilled workers to the sector and training them, extending working hours among personnel, resort to multitasking and increasing digitalisation of work processes to combat personnel shortages. In some cases, AFBS enterprises have also opted for improving working conditions of the personnel to attract workers to the sector. For instance, one of the interviewees mentioned the example of a famous Michelin-star restaurant in the Netherlands, which already in 2017 decided to limit its opening hours to relieve pressure on staff, despite lower turnover. This practice has been copied by many other enterprises in the sector, so the four-day work week is used as a unique selling point by many sector employers to find new personnel.

5. Worker participation in OSH management practices in the AFBS sector

5.1 Introduction

This chapter analyses different elements related to the participation of AFBS workers in OSH management practices in the sector. In this respect, the chapter describes existing formal forms of employee participation in OSH management practices, followed by an analysis of the employees' involvement in OSH issues, including discussions between employee (representatives) and the management on OSH issues and employees' involvement in the design and implementation of OSH related measures. Last, the chapter provides information on the recent time evolution of these workers' participation practices.

5.2 Formal forms of employee participation in OSH management practices

Workers' active participation in OSH management practices is a key element sustaining these OSH management practices. In this respect, interviewed trade union representatives stressed that those enterprises that have good employee representation structures are also characterised by a higher involvement in OSH practices. In this respect, trade union representatives advocated for giving a greater voice to employees in OSH management issues.

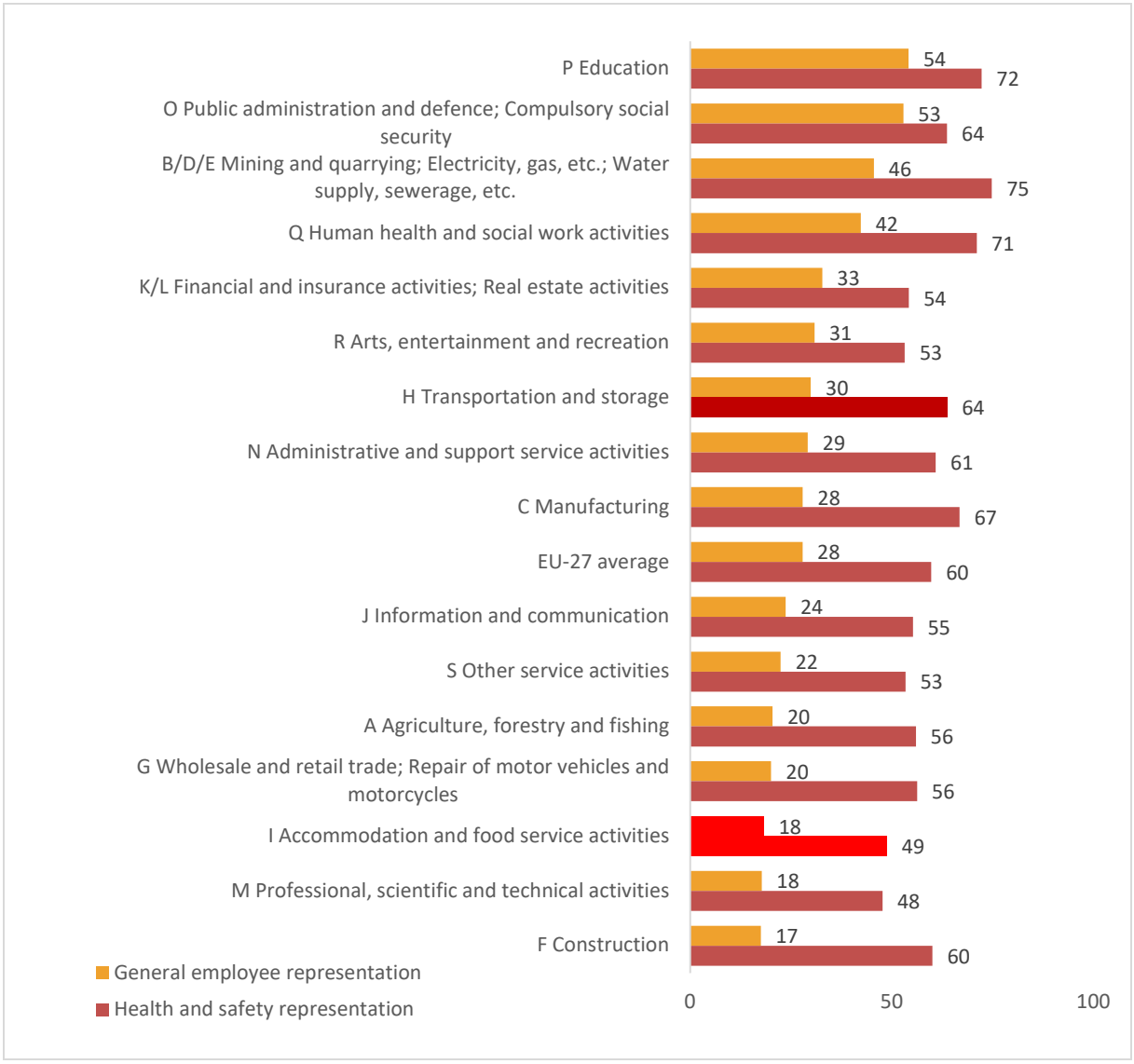
According to the available data from the ESENER 2019 survey, the AFBS sector has a lower presence of formal forms of employee participation[47] in comparison to other sectors and the EU-27 average. Thus, and concerning 'General employee representation' forms[48], only 18% of the AFBS establishments have this type of employee representation form, where this percentage is lower than the EU-27 average (28%) and in line with a handful of other sectors, such as construction and professional activities (17% and 18%, respectively). Meanwhile, the presence of 'Health and safety representation' forms[49] is higher, as practically half of the AFBS establishments (49%) count on health and safety representation. However, this share is again lower in comparison to most sectors and the EU-27 average (60%), where only the professional activities sector has a lower rate (48%).

[47] The ESENER 2019 questionnaire identifies four main forms of employee representation available in European establishments (Q350), namely 'works council', 'trade union representation', 'health and safety committee', and 'health and safety representative'. These forms of representation are not available in all Member States. In Germany and Austria, for example, the employee representation at the workplace level is generally with works councils, while in other countries (e.g. Cyprus) it is with so-called shopfloor trade union representations. To solve this problem, two forms of representation have been distinguished, namely, the 'General employee representation' (including both works council or trade union representation, whether the answer is yes to at least one of the two questions Q350_1 and Q350_2) and the 'Health and safety representation' (including both health and safety committee and representative, whether the answer is yes to at least one of the two questions Q350_3 and Q350_4).

[48] Comprising 'works council' and 'trade union representation'.

[49] Comprising 'health and safety committee' and 'health and safety representative'.

Figure 52 Share of establishments that have a formal employee representation structure available, by economic sector, 2019



Base: All establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

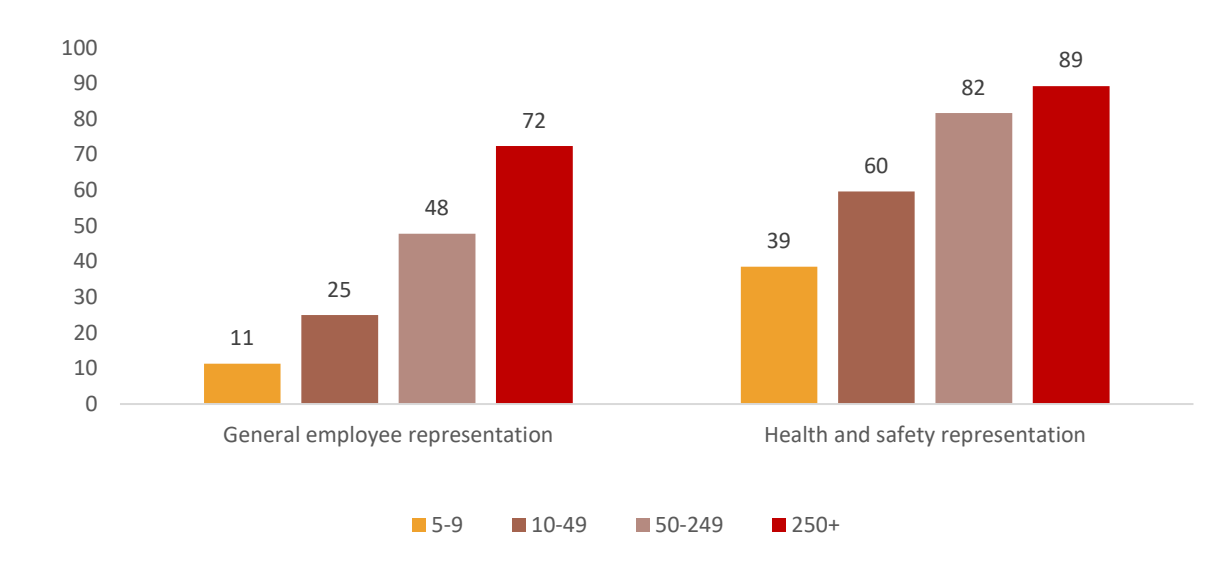
Other information sources consulted confirm this lower presence of formal employee representation structures in AFBS establishments. Thus, the European Company Survey (Eurofound, 2019) identifies a lower presence of a recognised body for employee representation in the commerce and hospitality sector, compared to other sectors (21% in the commerce and hospitality sector, which is the lowest among all sectors considered, versus 28% in the EU-27).

Interviewed experts also confirm this lower presence of formal employee representation structures in the AFBS sector. Some elements explain this situation. First, staff in AFBS establishments changes frequently, mostly as a consequence of its seasonal operation and characteristics of its workforce (e.g. young people), where this situation renders very difficult the possibility to choose a stable person who may act as employee/OSH representative within the establishment. Second, interviewed experts recalled that the largest share of AFBS enterprises are very small enterprises, which are less likely to have formal workers' representation structures and employers are more reluctant to have these formal structures. Third, several trade union representatives suggested a rather limited engagement of workers in OSH management practices (particularly in very small enterprises), and this is well reflected in employees' reluctance to volunteer for as a health and safety representative or to participate in OSH

management issues. Fourth, some interviewees highlighted the limited OSH knowledge that some employees' representatives may have (particularly in very small enterprises), which results in a need for ad hoc training and capacity building activities in this domain. Finally, some interviewed trade union representatives also highlighted that it is very complicated for them to assist and help sector employees, as AFBS sector employees are often reluctant to contact trade unions.

In any case, there are important subsector differences, so hotels, for instance, usually have a larger presence of employee representation structures in comparison to other subsectors such as bars and restaurants (likely influenced by their different average employment size). In this regard, and looking at differences in the presence of representation structures per establishment size, the ESENER 2019 data show a clear establishment size effect, in line with other service sectors. Thus, available data reveal that, in the AFBS sector, 'General employee representation' exists only in 11% of establishments with between five and nine employees, compared to 72% of establishments with 250 employees and more. The trend is similar concerning 'Health and safety representation', as it exists in 39% of the smallest establishments (5-9 employees), versus 89% of the largest ones (more than 250 employees).

Figure 53 Share of establishments that have a formal employee representation structure available, AFBS sector, by establishment size, EU-27, 2019

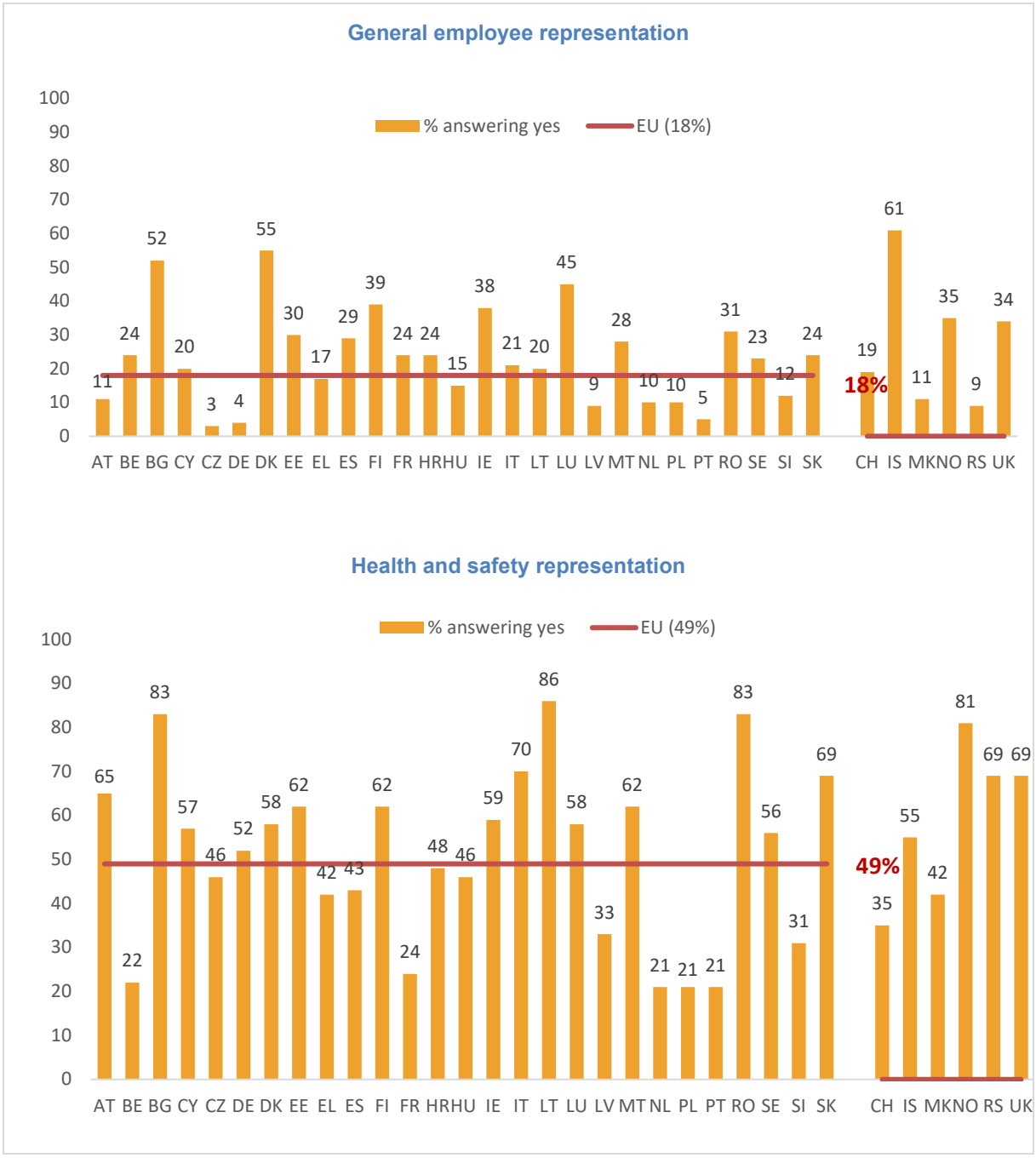


Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

There are also important differences among Member States in the presence of these formal employee representation structures within the AFBS sector. Thus, the larger presence of 'General employee representation' forms can be found in Denmark, Bulgaria or Luxembourg, whereas 'Health and safety representation' forms are particularly common in Member States such as Bulgaria, Lithuania and Romania. Existing legislation and collective bargaining cultural differences among Member States are likely behind these differences.

Figure 54 Share of establishments with General employee representation and Health and safety representation forms, AFBS sector, by country, EU-27, 2019



Base: All AFBS establishments in the EU-27

Source: IKEI/Panteia based on ESENER 2019

Last, the comparison with previous years shows that the share of AFBS establishments with 'General employee representation' forms is equal in 2014 and 2019 (19% and 18%, respectively), whereas this share was higher in 2009 (42%). Similarly, the share of AFBS establishments with 'Health and safety representation' forms was again practically similar in the time periods 2014 and 2019 (51% and 49, respectively), although very different to the data for 2009 (64%). It is likely that these higher shares of establishments in the ESENER 2009 survey are explained by the fact that establishments with 5-9 employees were not included in the ESENER 2009 survey.

Table 24 Worker participation in OSH management practices in the AFBS sector, ESENER 2014 and 2019, EU-27 (%)

Formal forms of employee participation	ESENER 2014	ESENER 2019
General employee representation	19	18
Health and safety representation	51	49

Base: All AFBS establishments in the EU-27

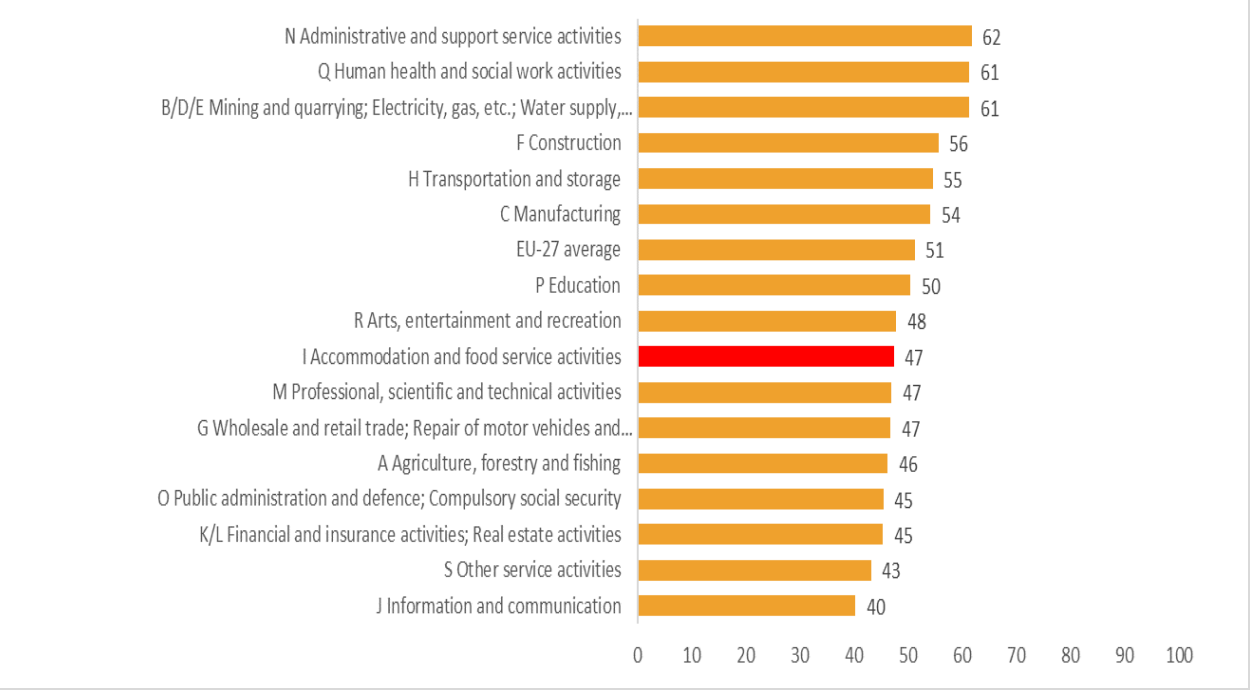
Source: IKEI/Panteia based on ESENER 2019

5.3 Employee involvement in OSH issues

5.3.1 Discussion of OSH between employee (representatives) and the management

According to the available ESENER 2019 data, 47% of the AFBS sector establishments that have formal employee representation structures are characterised by regular discussions on OSH issues between employee representatives and the management. This percentage is lower than the EU-27 average (51%) but above some other sectors such as information and communication (40%), other service activities (43%), and financial activities and public administration (45% in both cases).

Figure 55 Share of establishments where health and safety issues are regularly discussed between employee representatives and the management, by economic sector, 2019



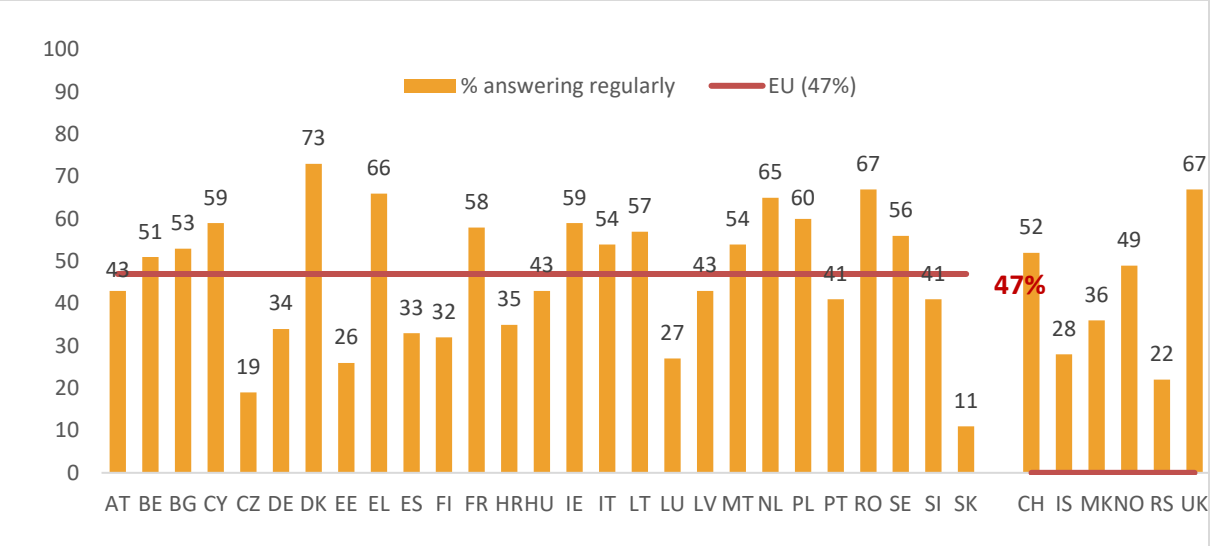
Base: Only establishments with a works council, a trade union, a health and safety committee, or another type of health and safety representative

Source: IKEI/Panteia based on ESENER 2019

Whereas there are no significant differences by size class, the ESENER 2019 data show noteworthy disparities among countries in the presence of regular OSH-related discussions between employee representatives and the management. Thus, whereas Denmark shows the highest percentage of establishments where health and safety issues are regularly discussed between employee

representatives and the management (73%), Slovakia shows the lowest (11%). Again, there are a wide array of reasons behind these differences among Member States, including different collective bargaining practices and cultures as well as different legislation requirements.

Figure 56 Share of establishments where health and safety issues are regularly discussed between employee representatives and the management, AFBS sector, by country, EU-27, 2019



Base: Only AFBS establishments with a works council, a trade union, a health and safety committee, or another type of health and safety representative

Source: IKEI/Panteia based on ESENER 2019

The comparison with previous years shows that the percentage of AFBS establishments where health and safety issues are regularly discussed between employee representatives and the management has experienced a small decline from 54% in 2014 to 47% in 2019.

Notwithstanding these results, the interviewed employers' organisations suggested that the AFBS sector is characterised by a high degree of informal communication flows between employees and managers on OSH issues, which results in a large input from employees although not always via official procedures. In this respect, some interviewed employer representative organisations stressed that many employers have good daily informal follow-up and communication flows with their employees on OSH issues, including one-to-one meetings with them. By way of contrast, several interviewed trade union representatives stressed the limitations of these informal practices, particularly in relation to the unbalanced nature of the discussions. In this regard, interviewed trade union representatives highlighted the importance of sectoral collective agreements as a key tool to ensure common level ground OSH standards for the whole AFBS workforce, including those in the smaller establishments.

Box 14 Example of good practice in social dialogue: Foundation for the Prevention of Occupational Risks in the Hotel and Catering Sector in the Balearic Islands

The 11th Collective Bargaining Agreement for the Hotel and Catering Industry of the Balearic Islands of 17 July 2002 established the commitment to create a joint body by the employer and trade union organisations with the purpose of promoting research, development and promotion of actions aimed at improving OSH in the hotel and catering sector of the Balearic Islands.

To this end, the Foundation for the Prevention of Occupational Risks in the Hotel and Catering Sector of the Balearic Islands (*Fundación para la Prevención de Riesgos Laborales en el Sector de Hostelería de les Illes*

Balears, in Spanish) was created in 2014, with a parity composition between the business and trade union sides. Specifically, the main activities conducted by the foundation include the following:

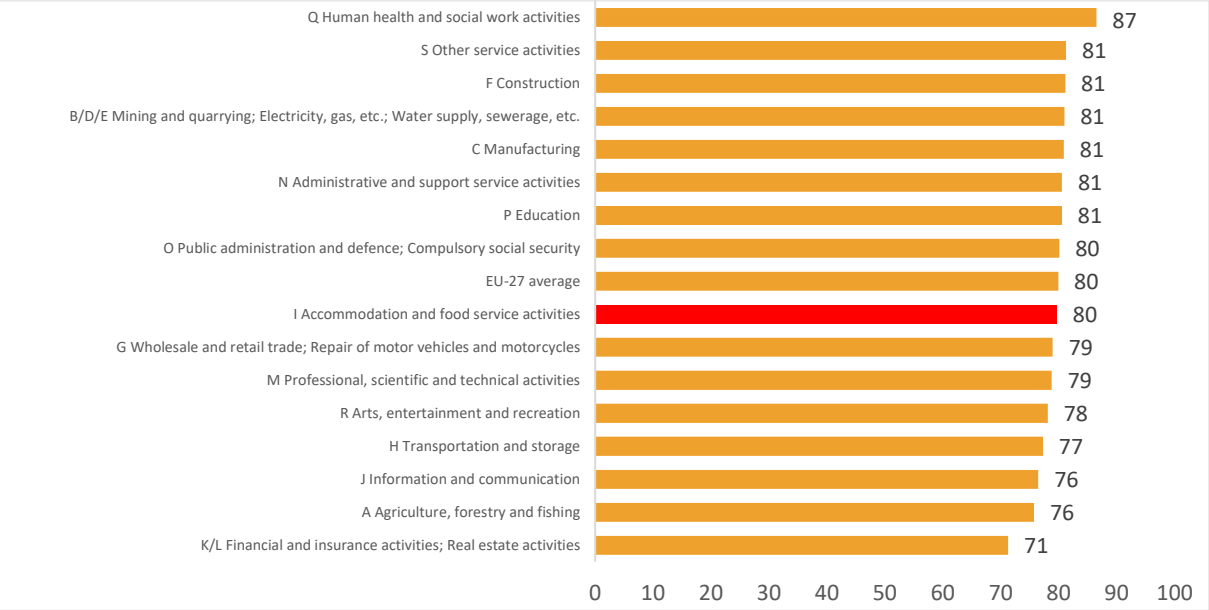
- Submit proposals to the Negotiating Committee of the Agreement.
- Carry out studies and research on the needs and shortcomings of the sector.
- Issue reports on its own initiative or at the request of the organisations belonging to the Collective Bargaining Agreement.
- Draw up and implement specific training plans.
- Information, dissemination and awareness-raising campaigns on OSH.
- Analysis and specific studies on occupational accidents, occupational illnesses, economic costs.
- Promotion of specific plans and programmes in the field of occupational safety, industrial hygiene, ergonomics, and applied psychosociology and occupational medicine.
- Study and implementation, where appropriate, of agreements on preventive matters adopted at a higher level.
- Obtain the necessary information to meet the aims of the foundation.

Source: http://www.fphib.es/

5.3.2 Employee involvement in the design and implementation of OSH measures

The ESENER 2019 survey provides some further information on the involvement of AFBS sector employees in the design and implementation of different OSH measures. Thus, and to start with, 80% of the AFBS establishments that regularly carry out risk assessments suggest that their employees are usually involved in the design and implementation of OSH measures following a risk assessment. This percentage is similar to the EU-27 average but lower than the human health and social work activities. No significant establishment size differences can be appreciated.

Figure 57 Share of establishments where employees are usually involved in the design and implementation of measures following a risk assessment, by economic sector,

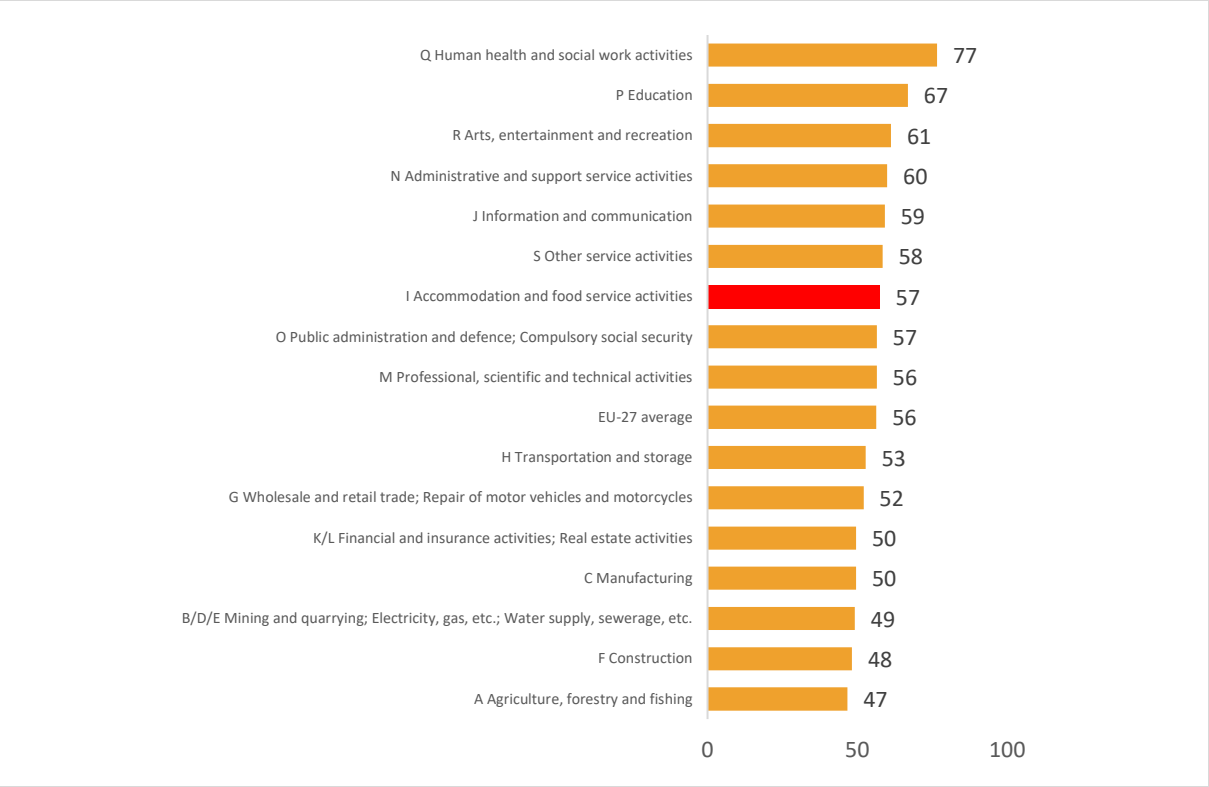


Base: Responses only of those establishments that regularly carry out workplace risk assessments

Source: IKEI/Panteia based on ESENER 2019

On the other hand, the ESENER 2019 survey data also show that around 57% of AFBS sector establishments that have introduced measures to prevent psychosocial risks have given a role to their employees in the design and set-up of these measures. This 'voice' given to employees is an element positively valued by several interviewees as an effective tool both to prioritise specific risks and customise associated measures to the needs of the establishment. This percentage is again relatively similar to the EU-27 average (56%), and again well below the human health and social work sector (77%), although higher than in other sectors such as agriculture (47%), construction (48%) and mining (49%). Again, no significant establishment size differences can be appreciated.

Figure 58 Share of establishments in which employees have a role in the design and set-up of measures to address psychosocial risks, by economic sector, 2019



Base: Responses only of those establishments that have introduced different measures to prevent psychosocial risks

Source: IKEI/Panteia based on ESENER 2019

When interpreting these figures one must remember that managing psychosocial risks is generally low in every sector. As shown in section 3.3 on preventive measures to cope with OSH risks, measures and formal procedures targeting psychosocial issues are usually present in less than 50% of the establishments. The above figure (57%) on workers' participation can apply only to this fraction. All in all, workers should be involved more in addressing psychosocial issues. This is underpinned by the characteristics of psychosocial risks, which are highly related to persons and organisation, and less of a technical nature. A core problem can be the lack of awareness among staff, which is higher in the AFBS than in the average of sectors, as shown in section 4.3 on barriers to OSH management. The sector may need more tailored approaches that could mainstream this issue and give useful tools and trainings that help in realising the complete risk identification-assessment-management cycle.

6. Conclusions and policy pointers

6.1 Main conclusions from the research

Characterisation of the AFBS sector and employment

The AFBS sector covers a wide range of different sectors including hotels, pubs, cafés, restaurants, contract caterers in various industrial and commercial premises, fast-food takeaways and bistros.

The AFBS sector plays an important role within the EU economy not only as a source of wealth and jobs but also as a creator of growth opportunities in other sectors. In 2019, the sector generated more than €593,309 million in turnover and €252,367 million value added. Despite the increasing presence of big hotel chains and franchises and the success of fast-food restaurants, more than 98% of enterprises are microenterprises employing 10 employees or fewer, where many enterprises are family-run and self-employed.

From an employment perspective, the AFBS sector had in 2021 a total of 7.8 million jobs in the EU-27, where the COVID-19 pandemic and related restrictions to social activity have negatively impacted sector employment. Thus, the sector lost 1.6 million jobs in 2021, resulting in a reduction of the share that the AFBS sector represents in total employment from 4.8% in 2019 to 4.0% in 2021. Also, the AFBS sector is characterised by a high presence of women, young workers and migrants, reflecting the presence of low skill barriers for accessing the sector. Many core jobs in the AFBS sector are female-dominated, although management and senior-level positions are predominately occupied by men. AFBS sector employment is also characterised by a high presence of atypical employment (temporary/seasonal and part-time work), a high presence of no written employment contracts, non-standard, irregular long/short working time and the presence of low levels of employers-paid training.

Main OSH risks and health outcomes in the AFBS sector

The main OSH risks present in the AFBS sector include repetitive hand or arm movements, risk of accidents with machines, exposure to heat/cold/draught and, finally, risk of slips/trips/falls. Less frequently reported OSH risks include lifting heavy loads, exposure to chemical/biological substances in the form of liquids/fumes/dust, tiring/painful positions at work, prolonged sitting, loud noise and risk of accidents with vehicles in the course of work. Meanwhile, AFBS sector workers are also confronted with other important psychosocial risks that superpose to other OSH risks, including continuous contact with customers and clients and high workload and time pressure (stress) to meet tight deadlines at peak times. Other psychosocial risks present in the sector include long and non-standard working hours, difficulties maintaining work-life balance, presence of precarious work and lack of job stability, often coupled with low salary levels for a large part of the workforce. Obviously enough, the importance of these risks is dependent on the different AFBS sector occupations. Only 15% of AFBS sector establishments suggest that psychosocial risks are more difficult to address than other risks.

The AFBS sector can be characterised as a relatively dangerous sector, in the sense that the number of accidents is higher than the average for all sectors, although the majority of these accidents are non-fatal. Most common health outcomes refer to a high presence of MSDs, where these MSDs arise from physical workload and forced postures as well as from the high presence of slips and falls due to the presence of wet or otherwise dangerous floors. Other common health outcomes identified among AFBS sector workers include skin and respiratory problems, cuts and lacerations, and burns and scalds. Work-related stress and ‘burnout syndrome’ are also relatively present.

Presence and characterisation of risk assessments

Approximately 71% of the EU-27 AFBS sector establishments regularly carry out workplace risk assessments, where this share is slightly below the EU-27 average for all sectors (75%). This presence of AFBS establishments regularly carrying out workplace risk assessments increases with establishment size, and it shows remarkable disparities among Member States — the largest shares of establishments that regularly carry out workplace risk assessments correspond to Romania and Bulgaria, whereas the lowest correspond to Luxembourg and France. Approximately half of AFBS establishments suggest that these risk assessments are contracted to external providers, where the most common topics include the

safety of machines, the presence of dangerous chemical/biological substances and organisational aspects (such as work schedules, breaks and work shifts). Some interviewed experts indicated that, in some cases, risk assessments are conducted by obligation, that is, to fulfil legal obligations, but it happens that follow-up measures are often not adopted. In some cases, they are just 'a paper' to present by the establishment when visited by the health and safety inspection. Most of the existing AFBS-related risk assessments pay no attention to some specific issues such as biological risks or the assessment of specific vulnerable groups (for instance, elderly workers). The largest part of AFBS establishments (88%) suggest having documented their risk assessments in written form. By way of contrast, three out of 10 sector establishments do not regularly carry out risk assessments, where the most extensive reason for not conducting such risk assessments is that risks are already known, followed by the fact that they do not identify major problems. Approximately one out of four AFBS establishments not regularly carrying out workplace risk assessments suggest that they lack the necessary expertise for doing these risk assessments, where this perception is particularly perceived by the small AFBS establishments.

Presence of preventive measures to cope with OSH risks

AFBS establishments take some general measures intended at health promotion among employees. Around 51% of AFBS establishments raise awareness on healthy nutrition, followed by 40% that raise awareness on the prevention of addiction (smoking, alcohol, drugs). Promotion of healthy nutrition is particularly well developed in the AFBS sector in comparison to other sectors. With regard to measures taken by AFBS establishments in the last three years to deal with OSH risks, the most recurrent practice is the provision of equipment to lift and move heavy loads, followed by the reduction of working hours for people with health problems, regular breaks for people in uncomfortable positions and the rotation of tasks to reduce repetitive movements. Interestingly, the provision of ergonomic equipment is not particularly relevant, especially in comparison to the average for EU establishments as a whole.

Finally, and related to measures applied by AFBS establishments in the last three years to prevent psychosocial risks, the most extensive measure includes allowing employees to take more decisions on how to do their job, followed by other measures such as the possibility of reorganising their work in order to reduce job demands/work pressure and the provision of confidential counselling for employees. Fifty-two per cent of the AFBS establishments with 20 or more employees have a procedure to deal with possible cases of threats, abuse or assaults by clients, whereas only 28% of AFBS establishments with 20 or more employees suggest having an action plan to prevent work-related stress. There is a positive relation between establishment size and the use of general health promotion measures and OSH-measures, including psychosocial risks. Nearly nine out of 10 AFBS establishments have a document in place that explains the responsibilities and procedures in place regarding health and safety.

Use of health and safety services and other external providers, access to external sources of OSH information

Two out of three AFBS establishments in the EU-27 regularly arrange medical examinations to monitor the health of employees. This percentage is lower than the average share of the total business sector and it is one of the lowest in comparison to other sectors. There are important differences among Member States in this respect. Meanwhile, slightly more than half of AFBS establishments (57%) did use the services of an external provider to support them in their health and safety tasks in the last three years, where this percentage is slightly lower than the EU-27 average but one of the lowest among all the different sectors and much lower than in other sectors such as mining and manufacturing. Around two-thirds of all AFBS establishments use the services of an occupational health physician, and approximately half of AFBS establishments use the services of a generalist in health and safety or an expert in accident prevention. Employers are not clear in many cases about the type of external services they really need to hire to comply with OSH legislation, and how much it is reasonable to spend on it.

On the other hand, AFBS establishments resort to different types of organisations for obtaining health and safety-related information. The most popular are contracted health and safety experts, the labour inspectorate and insurance providers, whereas other types of organisations such as employers' organisations, official institutes for health and safety at work, and trade unions are less used. Generally

speaking, larger establishments are more active in using different types of health and safety services and external service providers than smaller establishments.

Discussion on OSH issues at different levels

Management commitment is one of the key elements explaining differences in the extent and importance of developed OSH practices among enterprises. In this regard, establishments where health and safety issues are regularly discussed at the top level are more likely to have formal procedures in place to prevent psychosocial risks and take more measures to prevent such risks. Larger establishments and enterprises, especially those belonging to international groups such as international hotel chains, are particularly committed to OSH issues, where they comply with the regulations set by the group, which often go beyond existing national standards. Notwithstanding this, 56% of AFBS establishments suggest that OSH issues are regularly discussed at the top management level, where this percentage is lower than the EU-27 average for all sectors and one of the lowest in comparison to the rest of the sectors. Finally, OSH issues are regularly discussed in staff or team meetings in around one-third of AFBS establishments (32%), a percentage relatively similar to the EU-27 average for all sectors.

Training on health and safety issues

The successful implementation of different OSH management practices often requires the development of training activities to inform/train different layers of the company (managers, OSH company representatives, workers) on how to work safely and without risks to health. OSH training activities are often difficult to be organised because managers/workers have to be taken out of work during training and because enterprises often have neither the resources nor the knowledge to hire quality external OSH training experts. AFBS enterprises also face a very high labour turnover and seasonality of work, which is an added obstacle to training. All these problems are more acute among smaller enterprises. Indeed, larger establishments provide OSH training to their workers in a more systematic and regular manner, and even with a more job/department-related character (kitchen activities, reception activities, etc.), whereas in smaller establishments training is managed more informally and more on an ad hoc basis.

Approximately three out of four AFBS establishments with 20 or more employees provide training on how to manage health and safety in their teams to team leaders and line managers, where a similar percentage provide training during work time to help health and safety representatives to perform their health and safety duties. Finally, and with regard to employees' training, up to 81% of the AFBS establishments exposed to 'chemical or biological substances' have offered training on the use of dangerous substances to their employees and 79% of all establishments on emergency procedures. Meanwhile, 70% of AFBS establishments exposed to 'lifting or moving heavy loads' have offered training on how to lift and move heavy loads, the same percentage for those total establishments that have offered training on the proper use and adjustment of working equipment.

Evolution in time of OSH management practices

The evolution in time of OSH management practices in the AFBS sector does not show important changes in the time periods 2014 and 2019. If any, it is possible to identify an increase in the share of AFBS establishments that have introduced some general health promotion measures aimed at raising awareness about healthy nutrition or preventing addiction practices, as well as a reduction in the share of AFBS establishments that have introduced specific measures to reduce some OSH risks (particularly in relation to the provision of ergonomic equipment or in the encouragement of regular breaks for people in uncomfortable working positions).

By way of contrast, the share of establishments with 20 or more employees that have introduced different measures to prevent psychosocial risks has increased in the time period 2014-2019, particularly in relation to reorganisation of work in order to reduce job demands and work pressure, whereas the share of AFBS establishments with 20 or more employees that have an action plan to prevent work-related stress or procedures to deal with cases of threats, abuse or assaults by clients has experienced a decline in 2019 in comparison to 2014. The share of AFBS establishments with more than 50

employees that have procedures in place to support employees returning to work after a long-term sickness absence has experienced an upward trend in the last years. Finally, the share of AFBS establishments with 20 or more employees where health and safety issues are discussed regularly at the top level of management has experienced an upward trend since 2009.

Main drivers of and barriers to OSH management in the AFBS sector

The main drivers for addressing health and safety in AFBS establishments are two, namely the fulfilment of existing legal obligations and the avoidance of fines from labour inspectorate authorities. Other elements underpinning the involvement of enterprises in OSH issues include the growing importance attributed by enterprises to their socially responsible behaviour vis-à-vis the society in general and their employees in particular, the full involvement of top managers in OSH issues, and the active participation of workers and their representatives in the definition and implementation of OSH practices, among other reasons. AFBS establishments that address health and safety to fulfil legal obligations, to maintain the organisation's reputation, to meet expectations from employees or to increase productivity generally have more attention for OSH management practices than establishments that do not mention these reasons.

Labour inspectorates play a key role not only in driving compliance and fulfilment of existing OSH legislation but also in providing useful advice about how to successfully deal with and improve existing OSH management practices within AFBS establishments. Fifty-eight per cent of the EU-27 AFBS establishments have been visited by the labour inspectorate in the last three years in order to check health and safety conditions (a drop compared with the 64% share reported by ESENER 2014), where this percentage is the highest among the different sectors considered and well above other difficult sectors. This situation reflects a higher problematic image of the sector in comparison to others. Indeed, the HORECA sector (along with construction and cleaning) is among the sectors with the highest rates of undeclared work.[50]

Meanwhile, AFBS establishments are confronted with a number of difficulties in addressing health and safety issues. The most important difficulty is the complexity of existing legal obligations (which is particularly perceived in some Member States such as Belgium, Germany, France, Italy and the Netherlands), followed by lack of time/staff to deal with these issues and existing paperwork. Other suggested barriers include the effective implementation and enforcement of existing OSH legislation/regulations, the lack of human and material resources (including specific expertise) to engage in OSH activities, the lack of an OSH preventive culture at all levels of the company, the perception that the sector is not particularly hazardous (for instance, in terms of serious and/or fatal accidents), the low health literacy of the workforce (including low interest in the topic), and the perception among enterprises themselves that these OSH activities are time-consuming and do not add value to the business (so they are kept to the bare minimum).

Some of the consulted experts underlined that the AFBS sector is often more concerned with HACCP rules[51] and food safety chain inspections than OSH regulations and inspections, so they pay more attention to the former than the latter. Interestingly also, smaller AFBS establishments are particularly sensitive to the difficulties generated by paperwork and complexity of legal obligations in comparison to larger establishments.

Additional elements influencing OSH management practices include the impact of the COVID-19 pandemic and the increasing digitalisation within the sector, as well as other elements such as the characteristics of establishments, the increasing presence of long-term subcontracting/outsourcing practices, the increasing presence of platform workers (particularly in food delivery services), the increasing presence of 'green practices', several improvements related to technical and organisational changes, an increasing presence of violent events suffered by AFBS establishments and the increasing difficulties to find suitable personnel, exacerbated by the COVID-19 pandemic.

[50] See https://www.ela.europa.eu/en/undeclared-work

[51] HACCP is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product

Participation of AFBS workers in OSH management practices

Workers' active participation in OSH management practices is a key element sustaining these OSH management practices. Unfortunately enough, and according to the available data from the ESENER 2019 survey, the AFBS sector has a lower presence of formal forms of employee participation in comparison to other sectors and the EU-27 average. Interviewed experts pointed out several elements explaining this situation, including frequent changes of staff due to seasonal operation and characteristics of its workforce that render very difficult the possibility to choose a stable person who may act as an employee/OSH representative within the establishment, very small average size of the existing sector enterprises (which are less likely to have formal workers' representation structures and employers are more reluctant to have these formal structures), and a rather limited engagement of workers in OSH management practices (particularly in very small enterprises), and this is well reflected in employees' reluctance to volunteer as health and safety representative or participate in OSH management issues. Other reasons pointed out include the limited OSH knowledge that some employees' representatives may have (particularly in very small enterprises) and, finally, the reluctance of many AFBS employees to contact trade unions to assist and help them. There are important subsector differences, so hotels, for instance, usually have a larger presence of employee representation structures in comparison to other subsectors such as bars and restaurants (likely influenced by their different average employment size).

Approximately half of the AFBS sector establishments that have formal employee representation structures are characterised by regular discussions on OSH issues between employee representatives and the management, with important national differences among Member States ranging from 73% of Danish establishments where health and safety issues are regularly discussed between employee representatives and the management to 11% among Slovak establishments. Notwithstanding this, the AFBS sector is characterised by a high degree of informal communication flows between employees and managers on OSH issues, which results in a large input from employees although not always via official procedures. Several interviewed trade union representatives stressed the limitations of these informal practices and highlighted the importance of sectoral collective agreements as a key tool to ensure common level ground OSH standards for the whole AFBS workforce, including those in the smaller establishments.

From a time perspective, the percentage of AFBS establishments with a formal form of employee participation where health and safety issues are regularly discussed between employee representatives and the management has experienced a small decline from 2014 to 2019.

6.2 Policy pointers

- The study has shown that SMEs need a special policy action focus, since they are not only reporting less frequently existing OSH risks in general (including psychosocial risks) but are also less inclined to make use of OSH services or introduce remedial activities to deal with these risks, including carrying out risk assessments (probably derived from their limited financial and human in-house resources). In this respect, the study confirms the importance of introducing ad hoc measures (awareness-rising activities, ad hoc training, specialised technical assistance services, etc.) to improve the existing knowledge and expertise among SMEs on OSH issues and their importance. Of course, these ad hoc measures have to be particularly customised to the SMEs' needs, including financial and time accessibility issues. The development of ad hoc tools adapted to SMEs, such as OiRA[52] can be particularly relevant for them.
- This study has also shown that one of the most effective ways to improve existing OSH management practices in AFBS establishments refers to increasing and promoting the commitment of managers and top staff to OSH issues (individual employers or entrepreneurs in the case of the smallest enterprises). Employers need to understand that health is not an expense but rather an investment.

[52] See https://oiraproject.eu/en

- Specific awareness-raising activities are particularly needed among AFBS managers and employers to properly value the importance and negative impacts that existing sector-related psychosocial risks can have on employees' mental health. As shown by the study, these psychosocial risks are often undervalued by managers as well as by staff and employees, despite their increasing importance in recent years (for instance, within a context of increasing violence towards AFBS employees in certain activities).
- Employers have to make sure that everyone in the company has relevant information on existing and new OSH risks as well as on existing measures in place to deal with these risks (including emergency procedures). Some particular groups of workers deserve particular attention for accessing relevant information on existing and new OSH risks as well as on existing measures in place to deal with these risks (including emergency procedures). Examples include new recruits (especially if they are young or have no experience), workers changing jobs or taking on extra responsibilities within the company, and migrant workers coming from a third country. In this regard, the study has shown that certain groups of AFBS workers, particularly young and migrant workers, tend to relegate OSH risks in favour of other elements such as salary conditions or working time patterns.
- The study has shown the importance of increasing employee participation in the management of OSH within establishments, one of the lowest in comparison to the rest of the economic sectors. For this purpose, specific actions have to be implemented by tripartite organisations, including employers and employees' representative organisations and public authorities. Specifically, trade unions need to make a very important effort to increase their activities among AFBS employees, particularly those in the smallest enterprises. In this regard, it is important to reinforce the key role that sectoral collective agreements have as a key tool to ensure common level ground working conditions and OSH standards for the whole AFBS workforce, including those in the smaller establishments. Finally, ad hoc measures have to be implemented, both by trade unions and enterprises themselves, to train employee representatives to successfully audit and control the company's approach to OSH management.
- It is important to ensure that risk assessments become a real instrument to identify existing workplace-related risk factors that have the potential to cause harm to the workforce in general (and to specific vulnerable groups in particular) but also to prioritise remedial actions to eliminate or control these risks in an iterative process (following the Plan-Do-Check-Act (PDCA) cycle) of continuous improvement.
- Labour inspectorates can play a key role, not only in driving compliance and fulfilment of existing OSH legislation (legislation is perceived as sufficient but it is poorly implemented in many cases) but also in providing useful information and advice on how to successfully deal with and improve existing OSH management practices to build up a sound safety culture within AFBS establishments. Linked to the previous point, labour inspectorates can also ensure that risk assessments effectively map the real situation of the workplace, are reviewed on a regular basis and are properly applied in practice.
- It is important to ensure that existing OSH rules and regulations are well disseminated among enterprises, particularly for SMEs. Public authorities, together with trade unions and employers' organisations, can play a very significant role in this respect.
- A possible boost to OSH practices within the sector might be to link HACCP rules and food safety chain inspections with OSH regulations and inspections (e.g. by publications focusing on both topics, by cooperation between inspection bodies). It is not clear though if this solution is feasible and easy to implement in (many) Member States and across different establishment sizes. This could also include a more general integration of OSH management with HACCP and ISO management systems.
- The AFBS sector is confronted with a number of emerging changes that are likely to have an impact on employment and OSH issues. These changes, fostered by technical change and increasing digitalisation of activities, the introduction of new organisational models

(subcontracting, platform work) and several changes introduced by the COVID-19 pandemic, require an in-depth discussion between governments and social partners in order to identify them and introduce, if needed, remedial solutions. In this sense, special attention is required to remedy existing labour shortages within the sector, where this problem is very likely to become aggravated in coming years.

- Last but not least, it is important to continue mainstreaming OSH issues into HORECA vocational and tertiary education curricula, so future sector professionals might be well acquainted with OSH from the very beginning of their professional activities.

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Annex 1: Regression analysis on commitment to OSH management as determinant of the management of psychosocial risks

Which research question is answered with this analysis?

The objective of this analysis is to determine how commitment to OSH management is linked with the management of psychosocial risks.

The management of psychosocial risks is captured by questions Q300 to Q304 in the ESENER 2019 survey. Together, these questions cover nine different plans, procedures and measures that an establishment can apply. Based on the answers to these questions, we have examined to which extent the usage of these 'psychosocial risk management instruments' is related to the commitment of top-level management and team leaders to OSH management. More specifically, we have tested the hypothesis that commitment of top-level management and team leaders will have a positive effect on the management of psychosocial risks.

Which data were used?

This analysis is based on data from all establishments from the AFBS sector from EU-27 Member States that participated in the ESENER 2019 survey. From this subsample, 12 observations were removed because of their reply to question Q113 on the position of the respondent:

- One of the answer categories to this question is 'external health and safety consultant'. Only two respondents from the subsample provided this answer. This is too low to determine any relationship between this answer category and the management of psychosocial risks. We have therefore decided to remove these two observations from the sample.
- Ten of the respondents from the subsample provided no answer. Since this question is one of the main dependent variables of this analysis, we decided to also remove these 10 observations from the subsample.

The resulting subsample includes 2,544 observations.

Which dependent variables have been examined?

The ESENER 2019 survey includes questions on nine different plans, procedures and measures that establishments can apply. Some of these questions refer to the presence of different procedures or action plans, while other questions are concerned with actual measures. We have therefore constructed two different indicators, on the number of procedures and measures taken by establishments:

- Questions Q300-Q302 are concerned with the presence of three different procedures/action plans. The answers to these questions have been used to compute an indicator for the presence of formal procedures. A higher score may be interpreted as an indicator for a more formalised, advanced and/or proactive management of psychosocial risks. This indicator is only defined for establishments with at least 20 employees. The (weighted) average score for this indicator is 1.3, with a minimum of 0 and a maximum of 3. For the analysis we aggregated this information to a binary variable indicating whether or not at least one of these procedures/action plans is present (PSR_procedures).[53]
- Questions Q303-Q304 are concerned with the application of five different measures to prevent psychosocial risks (Q304) and whether employees have been involved in identifying possible causes for work-related stress (through a survey or otherwise). The answers to these questions have been used to compute an indicator for the application of relevant measures. This indicator

[53] Reducing an ordinal variable with four answer categories to a binary variable makes it possible to use a logistic regression to examine the relation with other variables.

(PSR_measures) is defined for all establishments in the ESENER 2019 survey. The (weighted) average score for this indicator is 2.8, with a minimum of 0 and a maximum of 6.

While these two indicators are positively related with each other (Spearman's correlation = 0.463, with a significance level of 0.000), the correlation coefficient is so small that it indicates that these two indicators should be viewed as indicators for two different aspects (or dimensions) of the management of psychosocial risks. Therefore, to answer this research question we have conducted separate (regression) analyses on both dependent variables.

Which explanatory variables were included?

The main explanatory variables are the commitment of top-level management (Q162) and team leaders (Q163) to OSH management practices and the position of the respondent in the establishment (including whether health and safety is the main task of the respondent). The first two of these questions have only been posed to establishments with at least 20 employees. For the first dependent variable (PSR_procedures), this is not a problem since this variable is also only available for establishments with at least 20 employees. For the second dependent variable (PSR_measures), this presents a dilemma:

- Include these explanatory variables, at the cost of excluding all establishments with up to 20 employees (which account for the large majority of all establishments)?
- Or, make sure that the analyses include establishments from all size classes, even if this means excluding the two questions that contain the most specific information on the commitment of OSH management?

Since the research question is about the relation between commitment to OSH management and the management of psychosocial risks, we have opted for the first solution (i.e. include the information from questions Q162 and Q163). We also performed analyses in line with the second solution (i.e. exclude the information from questions Q162 and Q163) but do not present the results of these analyses.

In addition to these explanatory variables, we also included the following potentially explanatory variables (based on the conceptual framework discussed in Chapter 1):

- Several characteristics of OSH management that may be related to the management of psychosocial risks:
  - Whether the establishment has carried out a workplace risk assessment (Q250).
  - Whether the establishment has taken different measures to prevent MSDs (encouraging regular breaks for people in uncomfortable working positions, provision of ergonomic equipment, the possibility for people with health problems to reduce working hours).
- Variables describing the amount and/or nature of worker participation:
  - Whether employees are involved in the implementation of measures based on the workplace risk assessment (Q258).
  - Different types of employee representation. The survey includes four different types of employee representation (variables Q350_1 to Q350_4). The first three of these have however not been presented to establishments in all participating countries, because in some countries these specific types of employee representation do not occur (this topic is further discussed in both the technical report and quality report of ESENER 2019[54]). To solve this problem (i.e. to arrive at a variable that is defined for establishments from all participating countries), the answers to the questions concerning the four different types of employee representation are aggregated to the following two variables:[55]
    - Employee representation: general. This variable indicates whether a works council and/or trade union representation is present in the establishment.
    - Employee representation: health and safety. This variable indicates whether a health and safety committee and/or health and safety representative is present in the establishment.

[54] See https://visualisation.osha.europa.eu/esener/en/about-tool

[55] The same procedure is also applied in both the technical report and quality report of ESENER 2019.

These two variables can be constructed for establishments from all 33 countries participating in ESENER 2019.

- Different types of risks (including psychosocial risks).
- Variables describing workforce characteristics (the share of elder employees,[56] whether employees work from home and/or anywhere else outside the premises of the establishment).
- Control variables:
  - Country dummies (the default country is Ireland).
  - Establishment size class dummies (the default is the largest size class, with 250 or more employees).
  - Whether the establishment is part of an enterprise with more than one establishment.
  - Founding year of the establishment (before 1990; 1990 to 2015; after 2015. The middle category is the default category).

Which estimation techniques have been used?

As mentioned before, we have examined two different dependent variables to answer this research question. These dependent variables require different regression techniques:

- PSR_procedures is a variable with only four answer categories. We have constructed a dummy variable whether establishments have applied at least one of the three procedures, and used logistic regression to establish to which extent PSR_procedures can be explained by the various explanatory variables.
- PSR_measures is a variable with seven different answer categories. Although this is an ordinal variable, it is not uncommon to use the Ordinary Least Squares (OLS) regression technique to examine (dependent) variables with seven answer categories. We have followed this convention and used OLS to examine to which extent PSR_measures can be explained by the various explanatory variables.

Which models were estimated?

The more explanatory variables that are included in the model, the less observations are available for the regression analyses (most questions have been answered by most establishments, but only a few questions have been answered by all establishments). This may result in a selection bias. For this reason, we used a preliminary regression to determine which of the explanatory variables were significantly related to the dependent variables, and which were not. We then re-estimated the regression model with the explanatory variables entering the model in four consecutive steps. These four steps can also be interpreted as four different (nested) models:

- Model 1 includes only the main explanatory variables:
  - To which extent health and safety issues are discussed at the top level of management (never, occasionally or regularly).
  - Whether team leaders and line managers receive any training on how to manage health and safety in their teams (no; some of them; all of them).
  - The position of the respondent in the establishment (the default category is ‘Owner of a firm, managing director or site manager’. The other categories are ‘manager without specific OSH tasks’, ‘manager with specific OSH tasks’, ‘OSH specialist without managerial function’, ‘Employee representative in charge of OSH’ and ‘Another employee in charge of the subject’).
  - Whether the establishment has carried out a workplace risk assessment.
  - Whether the establishment has taken different measures to prevent MSDs (encouraging regular breaks for people in uncomfortable working positions, provision of

[56] Four different categories can be distinguished: 0%; between 0% and 25%; between 25% and 50%; and more than 50%. The first category (0%) is the default category in the analyses.

ergonomic equipment, the possibility for people with health problems to reduce working hours).

- Model 2 adds other explanatory variables that are significantly related to the dependent variable, such as employee representation (health and safety) and whether employees work from home and/or anywhere else outside the premises of the establishment.
- Model 3 adds several control variables: age distribution of employees, single establishment, country dummies.
- Model 4 adds all non-significant explanatory variables.

We have applied these four steps for each of the two dependent variables separately.

We have selected model 3 as the final model. This model is used to answer the research questions in the main text. Model 3 is based on almost the same number of observations as model 2, but we favour model 3 over model 2 because it includes some relevant (significant) control variables. Model 1 misses some relevant explanatory variables, and model 4 does not increase the explained variance significantly (as compared to model 3).

Results of the analysis on PSR_procedures

The regression results in Table 25 indicate a positive relation between having regular meetings on health and safety issues at the top level of management and having formal procedures in place to prevent psychosocial risks. Although reversed causality cannot be excluded (installing formal procedures to prevent psychosocial risks may result in more meetings at top management level to discuss health and safety issues), this result is in line with our hypothesis that commitment of top-level management and team leaders will have a positive effect on the management of psychosocial risks.

The results find no relation with the position of the respondent (who is supposed to be the person in the establishment who knows best about OSH). Apparently, whether an establishment has formal procedures in place to prevent psychological risks or not does not depend on whether the person who knows best about OSH has a management position or not and/or has specific OSH tasks or not.

The first two models suggest that establishments that regularly carry out workplace risk assessments are more likely to have formal procedures in place to prevent psychological risks. However, once the control variables are included in the model (the share of elderly employees, whether the establishment is a single organisation, and country dummies), this relation is no longer significant. Possibly, the effect of having regular workplace risk assessments may be mediated by one or more of these control variables.

In addition, there are three variables that are significantly related with having formal procedures in place to prevent psychological risks. Establishments are more likely to have formal procedures in place to prevent psychosocial risks, if they allow people with health problems to reduce working hours (as a way of preventing MSDs); if a health and safety-specific employee representation is in place; and if employees work anywhere else outside the premises of the establishment (including from home).

Once these factors are taken into account, the founding year and size class of the establishment are not related to the likelihood of having formal procedures in place to prevent psychosocial risks. This likelihood is also not related to any of the distinguished health risks for employees, including psychosocial risks.

Table 25 Logistic regressions on whether formal procedures to prevent psychosocial risks are in place (PSR_procedures)

Variable	Model 1:			Model 2:			Model 3:			Model 4:		
	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.
Health and safety issues discussed at the top level of management	*	2	0.014	*	2	0.022	**	2	0.006	**	2	0.002
occasionally	0.063	1	0.894	0.175	1	0.716	0.143	1	0.799	-0.540	1	0.434
regularly	0.730	1	0.130	0.799	1	0.101	1.054	1	0.072	0.735	1	0.310
Team leaders and line managers receive training on how to manage health and safety in their teams.		2	0.683		2	0.764		2	0.649		2	0.954
some of them	0.381	1	0.706	0.370	1	0.719	0.620	1	0.580	-0.076	1	0.952
all of them	0.231	1	0.398	0.194	1	0.486	0.289	1	0.401	-0.128	1	0.758
Position of the person who knows best about OSH												
Manager without specific OSH tasks	0.402	1	0.153	0.334	1	0.251	0.211	1	0.576	-0.230	1	0.601
Manager with specific OSH tasks	1.185 *	1	0.034	1.007	1	0.077	0.715	1	0.345	0.192	1	0.817
OSH specialist without managerial function	20.259	1	1.000	20.769	1	1.000	18.519	1	1.000	16.543	1	1.000
Employee representative in charge of OSH	0.178	1	0.758	-0.018	1	0.975	-0.276	1	0.688	-0.565	1	0.517
Another employee in charge of the subject	0.097	1	0.750	0.026	1	0.934	0.622	1	0.102	0.319	1	0.486
health and safety is respondent's main task	0.985	1	0.366	0.864	1	0.441	0.614	1	0.674	0.442	1	0.814
Do you regularly carry out workplace risk assessments?	0.726 **	1	0.006	0.607 *	1	0.029	0.659	1	0.051	0.341	1	0.492
Preventive measures for MSDs												
Encouraging regular breaks for people in uncomfortable working positions	0.307	1	0.192	0.299	1	0.212	0.114	1	0.685	0.412	1	0.232
Provision of ergonomic equipment	0.133	1	0.572	0.058	1	0.811	0.283	1	0.326	0.347	1	0.330
The possibility for people with health problems to reduce working hours	1.190 **	1	0.000	1.147 **	1	0.000	1.102 **	1	0.000	1.171 **	1	0.000
Additional explanatory variables												
Health and safety representation				0.589 *	1	0.016	0.845 **	1	0.007	1.061 **	1	0.007
Employees work anywhere else outside the premises of the establishment (incl. from home)				0.489	1	0.085	0.778 *	1	0.025	0.901 *	1	0.042

Variable	Model 1:			Model 2:			Model 3:			Model 4:		
	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.
Control variables												
share of employees aged 55+:												
< 25%							0.744 *	1	0.029	0.591	1	0.156
25% - 50%							1.130 *	1	0.028	1.224	1	0.063
> 50%							0.422	1	0.657	0.699	1	0.681
Establishment is single organisation							0.031	1	0.925	-0.793	1	0.184
Country							**	26	0.000	**	26	0.029
Insignificant control variables												
Establishment is subsidiary site										-0.881	1	0.207
Establishment size class:											4	0.381
..20-49 empl.										-0.150	1	0.852
..50-99 empl.										0.033	1	0.969
..100-149 empl.										0.721	1	0.512
..150-249 empl.										2.148	1	0.120
Founding year of establishment:												
before 1990										0.418	1	0.297
after 2015										-0.147	1	0.846
General employee representation										-0.150	1	0.723
Workplace risk assessment carried out regularly, Employees involved in measures taken										0.248	1	0.557
Types of risk:												
Lifting or moving people or heavy loads										0.335	1	0.391
Repetitive hand or arm movements										0.295	1	0.474
Prolonged sitting										-0.583	1	0.162
Tiring or painful positions										-0.083	1	0.824
Loud noise										0.236	1	0.583
Heat, cold or draught										-0.423	1	0.254
Risk of accidents with machine										0.590	1	0.150
Risk of accidents with vehicles in the course of work										-0.521	1	0.213
Chemical or biological substances										0.083	1	0.828
Increased risk of slips, trips and falls										0.078	1	0.831

Variable	Model 1:			Model 2:			Model 3:			Model 4:		
	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.	B	df.	Sign.
Psychosocial risks:												
Time pressure										-0.261	1	0.475
Poor communication or cooperation										0.348	1	0.400
Job insecurity										-0.412	1	0.418
Long or irregular working hours										0.263	1	0.463
Number of valid observations	567			555			551			477		
Nagelkerke R^2	0.199			0.224			0.446			0.504		

Significant at: ** p<0.01; * p<0.05. All explanatory variables are dummy variables (0=no, 1=yes)

Source: Panteia based on ESENER 2019

Results of the analysis on PSR_measures

The results of the OLS regression on PSR_measures are presented in Table 26. Although these results show many similarities with the results of the regression on PSR_procedures, there are also some differences.

First of all, the attention of establishments to the prevention of psychosocial risks (as indicated by the number of measures taken by the establishment) is not only related to having regular discussions on health and safety at top management level but also to the amount of training that team leaders and line managers receive on how to manage health and safety.

Also, findings indicate that the position of the person who knows best about OSH -that is, the function of the ESENER target respondent- does matter. The results for model 3 suggest that the attention of establishments to the prevention of psychosocial risks will be higher if the person who knows best about OSH matters has a management position (other than being the owner or general manager) and is also responsible for specific OSH tasks. We have to be careful with this conclusion, however, since this relation is not significant in any of the other estimated regression models. In addition, this relation is also not significant if we estimate this model without the variables on regular discussions on health and safety at top management level and the amount of training for team leaders and line managers.[57]

Besides commitment and training of top-level management, only a few other variables are found to be significantly related to the attention to the prevention of psychosocial risks (in model 3):

- Establishments that take measures to prevent MSDs also pay more attention to the prevention of psychosocial risks. This is true for each of the three MSD measures included in the model (encouraging regular breaks for people in uncomfortable working positions, allowing people with health problems to reduce working hours, providing ergonomic equipment).
- If workplace risk assessments are carried out regularly but employees are not involved in the implementation of any resulting measures, this is actually associated with a lower attention to the prevention of psychosocial risks. This follows from the negative parameter estimate for 'workplace risk assessment carried out regularly' and the positive parameter estimate for 'workplace risk assessment carried out regularly, employees involved in measures taken'.
- Establishment that do not employ people aged 55 or more pay more attention to the prevention of psychosocial risks than establishments with employees from this age group.

Similar to the regression on PSR_procedures, we find that once these factors are taken into account, the age and size class of the establishment are not related to the attention to the prevention of psychosocial risks. This attention is also not related to any of the distinguished health risks for employees, including psychosocial risks.

[57] These variables are only available for establishments with at least 20 employees. Estimating the model without these variables means that smaller establishments will also be included in the analysis.

Table 26 OLS regressions on indicator on measures to prevent psychosocial risks (PSR_measures)

Variable	Model 1:		Model 2:		Model 3:		Model 4:	
	B	Sign.	B	Sign.	B	Sign.	B	Sign.
(Constant)	0.540 *	0.018	0.613 **	0.007	1.054 **	0.001	1.105 *	0.043
Health and safety issues regularly discussed at top management level	1.070 **	0.000	0.981 **	0.000	1.227 **	0.000	1.165 **	0.000
Team leaders and line managers receive training on how to manage health and safety	0.531 **	0.001	0.523 **	0.001	0.558 **	0.001	0.475 *	0.012
Position of the person who knows best about OSH								
Manager without specific OSH tasks	0.007	0.964	0.005	0.976	0.056	0.725	-0.076	0.671
Manager with specific OSH tasks	0.347	0.146	0.288	0.220	0.485 *	0.048	0.446	0.108
OSH specialist without managerial function	-0.215	0.847	-0.333	0.762	-0.169	0.878	-0.345	0.761
Employee representative in charge of OSH	0.215	0.497	0.312	0.325	0.146	0.648	0.053	0.887
Another employee in charge of the subject	-0.274	0.108	-0.268	0.113	-0.067	0.710	-0.096	0.631
Health and safety is respondent's main task	-0.043	0.917	-0.111	0.787	-0.370	0.367	-0.108	0.816
Workplace risk assessments carried out regularly	0.141	0.394	-0.382	0.074	-0.463 *	0.031	-0.396	0.099
Preventive measures for MSDs								
Encouraging regular breaks for people in uncomfortable working positions	0.664 **	0.000	0.647 **	0.000	0.635 **	0.000	0.632 **	0.000
Provision of ergonomic equipment	0.394 **	0.003	0.379 **	0.003	0.326 *	0.013	0.241	0.114
Possibility for people with health problems to reduce working hours	0.809 **	0.000	0.818 **	0.000	0.646 **	0.000	0.679 **	0.000
Additional explanatory variables								
Workplace risk assessment carried out regularly, employees involved in measures taken			0.675 **	0.000	0.630 **	0.000	0.591 **	0.003
Control variables								
Share of employees aged 55+:								
< 25%					-0.415 **	0.009	-0.368 *	0.046
25% - 50%					-0.631 **	0.006	-0.585 *	0.033
> 50%					-0.633	0.114	-0.386	0.437
Establishment is single organisation					-0.237	0.095	-0.304	0.159
Country dummies					yes		yes	
Insignificant explanatory variables								
Do any employees work anywhere else outside the premises of the establishment (incl. from home)?							0.190	0.249
Establishment is subsidiary site							-0.024	0.923

Variable	Model 1:		Model 2:		Model 3:		Model 4:	
	B	Sign.	B	Sign.	B	Sign.	B	Sign.
Establishment size class:								
..20-49 empl.							-0.256	0.398
..50-99 empl.							-0.333	0.298
..100-149 empl.							-0.096	0.800
..150-249 empl.							-0.241	0.533
Founding year of establishment:								
before 1990							0.029	0.852
after 2015							0.041	0.893
Health and safety representation							0.284	0.098
General employee representation							0.008	0.961
Types of risk:								
Lifting or moving people or heavy loads							-0.233	0.164
Repetitive hand or arm movements							0.287	0.080
Prolonged sitting							0.140	0.381
Tiring or painful positions							0.160	0.320
Loud noise							0.103	0.554
Heat, cold or draught							-0.002	0.988
Risk of accidents with machines							0.145	0.371
Risk of accidents with vehicles in the course of work							-0.340	0.065
Chemical or biological substances							-0.202	0.193
Increased risk of slips, trips and falls							-0.041	0.788
Psychosocial risks:								
Time pressure							-0.154	0.316
Poor communication or cooperation							-0.027	0.874
Job insecurity							0.152	0.513
Difficult customers							0.187	0.254
Number of valid observations	695		689		683		591	
Adjusted R^2	0.205		0.227		0.272		0.263	

Significant at: ** p<0.01; * p<0.05. All explanatory variables are dummy variables (0=no, 1=yes), except for 'Health and safety issues regularly discussed at top management level' and 'Team leaders and line managers receive training on how to manage health and safety' (both are ordinal variables on a three-point scale)

Source: Panteia based on ESENER 2019

Annex 2: Regression analysis on drivers of and barriers to OSH management practices

Which research question is answered with this analysis?

The objective of this analysis is to determine the main drivers and barriers that influence OSH management practices, based on the data obtained through the ESENER 2019 survey.

Which data were used?

This analysis is based on data from all establishments from the AFBS sector from EU-27 Member States that participated in the ESENER 2019 survey. This subsample includes 2,566 observations.

Which dependent variable was examined?

The ESENER 2019 survey includes questions that cover many different OSH management practices. By counting the number of OSH management practices that are applied by establishments, we have constructed an indicator that represents the attention establishments have for OSH management practices.

Not all questions regarding OSH management practices can be used to construct such an indicator:

- Some questions are concerned with the nature of OSH management practices or how they are carried out, and not whether they are carried out (for instance, question Q251 whether workplace risk assessments are conducted by internal staff or external service providers).
- Some questions have only been posed to establishments with at least 20 employees (for example, question Q162 whether health and safety issues are discussed at the top level of management). These establishments form a minority of all establishments from the AFBS sector.
- Some questions have only been posed to establishments where specific risks were identified (for example, question Q202_1 has only been answered by establishments that identified lifting or moving people or heavy loads as a risk factor). These establishments form a minority of all establishments from the AFBS sector.

The ESENER 2019 dataset includes 38 variables that are concerned with the application of different OSH management processes by establishment that can be used to construct an indicator that represents the attention establishments have for OSH management practices (see Table 27). These variables have been recoded into dummy variables coded as 0 (no) or 1 (yes). This makes the parameters in the regression analysis easier to interpret.

The OSH management practices indicator (OSH-MPI) is calculated as the average of these variables, calculated over all valid answers. This means that if an establishment has not answered all of the 38 questions (which applies to the majority of establishments), OSH-MPI is based on the answers of the subset of questions that have been answered (otherwise, the regression analysis would be restricted to the subset of enterprises that answered all of the 38 questions, in which case the results would not be representative for the whole sector anymore). To control for the fact that the average score on OSH-MPI may be different for establishments that did not answer some of the 38 questions, we took the following two actions:

- Establishments that answered fewer than 30 of the 38 questions are excluded from the estimation procedure. This is only a small group of establishments (6%).
- The regression model includes two dummy variables that indicate whether establishments did not answer some of the questions (validcount_dummy_35, indicating if 35 to 37 questions have been answered; and validcount_dummy_30, indicating if 30 to 35 questions have been answered).

Table 27 Variables from the ESENER 2019 dataset used to construct the indicator OSH-MPI, representing the attention establishments have for OSH management practices

Variables		
Q150	Q202_3	Q303all
Q151_1	Q202_4	Q304_1
Q151_2	Q202_5	Q304_2
Q151_3	Q250	Q304_3
Q151_4	Q252_1	Q304_4
Q151_5	Q252_3	Q304_5
Q152	Q252_4	Q355_1
Q155	Q252_5	Q355_3
Q157_1	Q252_6	Q355_5
Q157_2		Q357
Q157_3		Q358_1
Q157_4		Q358_2
Q158		Q358_3
		Q358_4
		Q358_5
		Q358_6

Source: IKEI/Panteia based on ESENER 2019

The resulting indicator has a (weighted) average score of 0.49, ranging from 0.00 to 1.00. The (weighted) average score is clearly related to establishment size, ranging from 0.46 for establishments with 5-9 employees to 0.76 for establishments with 250 or more employees. Likewise, the minimum value of 0.00 only occurs for a few establishments in the smallest size class. For establishments with at least 100 employees, the minimum score for OSH-MPI is 0.27.

Which explanatory variables were included?

The main explanatory variables are based on questions about different reasons for addressing health and safety (Q262), main difficulties in addressing health and safety (Q263), and main obstacles in dealing with psychosocial risks (Q308). The answers to questions Q262 and Q263 are given on a three-point scale (not a reason/difficulty; minor reason/difficulty; major reason/difficulty). To deal with the ordinal nature of these variables, we included two dummy variables for each question about a specific reason or difficulty: one dummy indicating whether the relevant reason or difficulty was at least a minor reason/difficulty, and one dummy indicating whether the relevant reason or difficulty was a major reason/difficulty.

In addition to these, we also included the following potentially explanatory variables (based on the conceptual framework discussed in Chapter 1):

- Variables describing workforce characteristics (the share of elder employees,[58] whether employees work from home and/or anywhere else outside the premises of the establishment).
- Different types of employee representation. The survey includes four different types of employee representation (variables Q350_1 to Q350_4). The first three of these have however not been presented to establishments in all participating countries, because in some countries these specific types of employee representation do not occur (this topic is further discussed in both the technical report and quality report of ESENER 2019). To solve this problem (i.e. to arrive at a variable that is defined for establishments from all participating countries), the answers to the questions concerning the four different types of employee representation are aggregated to the following two variables:[59]
    - Employee representation: general. This variable indicates whether a works council and/or trade union representation is present in the establishment.
    - Employee representation: health safety. This variable indicates whether a health and safety committee and/or health and safety representative is present in the establishment.

  These two variables can be constructed for establishments from all 33 countries participating in ESENER 2019.
- Control variables:
    - Country dummies (the default country is Ireland).
    - Establishment size class dummies (the default is the largest size class, with 250 or more employees).
    - Whether the establishment is part of an enterprise with more than one establishment.
    - Founding year of the establishment (before 1990; 1990 to 2015; after 2015. The middle category is the default category).

Which models were estimated?

As mentioned in Annex 1, a selection bias may occur if too many explanatory variables are included in the model (if this reduces the number of valid observations too much). For this reason, we used a preliminary regression to determine which of the explanatory variables were significantly related to the dependent variable, and which were not. We then re-estimated the regression model with the explanatory variables entering the model in four consecutive steps. These four steps can also be interpreted as four different (nested) models:

- Model 1: this model includes the two dummy variables indicating whether establishments did not answer some of the questions, the main drivers of and barriers to OSH, and whether psychosocial risks (PSR) are more or less difficult to address than other risks.
- Model 2 adds other significant explanatory variables to model 1.
- Model 3 adds control variables to model 2.
- Model 4 adds the non-significant explanatory variables to model 3.

With each step, the number of observations on which the results are based decreases. For this study, we select model 3 as the final model. This model is used to answer the research question in the main text, for the following reasons:

- Model 1 misses some relevant (significant) explanatory variables that are introduced in model 2. We therefore favour model 2 over model 1.
- Model 3 is based on almost the same number of observations as model 2. Because it includes some relevant control variables, we favour model 3 over model 2.
- Model 4 does not increase the explained variance as compared to model 3, while it reduces

[58] Four different categories can be distinguished: 0%; between 0% and 25%; between 25% and 50%; more than 50%. The first category (0%) is the default category in the analyses.

[59] The same procedure is also applied in both the technical report and quality report of ESENER 2019.

the number of valid observations by almost 200. We therefore favour model 3 over model 4.

Which estimation technique was used?

The model was estimated using OLS.

Results

The estimation results are presented in Table 28.

The results show that several reasons for addressing health and safety are positively related with the attention to OSH management practices. These are: to fulfil legal obligations; to meet expectations from employees; to increase productivity; and maintain the organisation's reputation. Only one reason is not significantly related with the attention to OSH management practices (to avoid fines).

Likewise, several difficulties that establishments report in addressing health and safety are negatively related with the attention to OSH management practices. These are: a lack of time of staff; a lack of expertise or specialist support; and a lack of awareness among management. Interestingly, a lack of awareness among staff is positively related with the lack of attention to OSH management practices. This variable is positively correlated with the lack of awareness among management. This implies that if a high score on 'lack of awareness among staff' is combined with a high score on 'lack of awareness among management', this has no effect on the dependent variable (attention to OSH management practices). Only if lack of awareness among management is seen as a difficulty while lack of awareness among staff is not, a negative effect on the dependent variable occurs. Three difficulties are not significantly related with the attention to OSH management practices: lack of money; paperwork; and complexity of legal obligations.

Different types of risks are also associated with attention to OSH management practices. Significant relations have been found for four different types of risk (lifting or moving people or heavy loads; prolonged sitting; heat, cold or draught; chemical or biological substances).

The attention for OSH management practices is also significantly related with several aspects of psychosocial risks. A rather straightforward relation is that establishments where 'difficult customers' are believed to form a psychosocial risk for their employees pay more attention to OSH management practices. A less straightforward relation is found with the question whether psychosocial risks are believed to be easier to address than other risks, more difficult, or whether there is no big difference. The answers 'easier' and 'more difficult' are both significantly positively related with the attention to OSH management practices. A possible explanation for this finding is that both answers imply that the establishment has given some thought to the similarities and differences between psychosocial risks and other risks. Establishments that have not given this topic much thought may be more inclined to answer 'no big difference' to this question. If so, the answer category 'no big difference' would not identify establishments where psychosocial risks are deemed actually just as difficult to address as other risks, but would instead identify establishments that have not given much thought to this topic. This would be consistent with the identified relation with the attention to OSH management practices.

The strongest relations with attention to OSH management practices are found for the presence of employee representation, either general or specific for health and safety issues.

Turning to the control variables, even if we take the effects of all significant explanatory variables into account, we find that establishments with 100 employees or more tend to pay more attention to OSH management practices than smaller establishments. Similarly, establishments that are part of an organisation with several other establishments pay more attention to OSH management practices than establishments that are not part of an organisation with several other establishments. Country differences also occur.

We must be careful with any conclusions regarding the causality of the identified relations, since reversed causality may occur. This applies, for example, to the significant relation between the two types of employee representation (general, or specific for health and safety) and the attention to OSH management practices. Here, causality may run both ways. Having a health and safety committee may stimulate establishments to increase their attention to OSH management; at the same time, establishments that want to apply more OSH management practices may decide to install a health and safety committee as part of this process.

Also, we cannot rule out the possibility that a significant parameter estimate in the regression model is due to a more specific relation between, for example, an identified risk and one or two specific OSH practices associated with that risk.

Table 28 OLS regressions on OSH management practices indicator

Variable	Model 1:		Model 2:		Model 3:		Model 4:	
	B	Sign.	B	Sign.	B	Sign.	B	Sign.
Constant	0.262 **	0.00	0.141 **	0.000	0.265 **	0.000	0.270 **	0.000
validcount_dummy_35	0.020 *	0.05	0.008	0.371	0.003	0.717	0.001	0.889
validcount_dummy_30	0.056 **	0.00	0.035	0.061	0.053 **	0.004	0.045 *	0.024
Reasons to address health and safety:								
..to fulfil legal obligations	0.056 *	0.03	0.053 *	0.025	0.048 *	0.032	0.039	0.106
..to fulfil legal obligations (major reason)	0.031	0.06	0.018	0.215	0.006	0.671	0.001	0.962
..to meet expectations from employees	0.003	0.90	-0.019	0.382	-0.025	0.228	-0.016	0.488
..to meet expectations from employees (major reason)	0.046 **	0.00	0.042 **	0.000	0.049 **	0.000	0.044 **	0.000
..to increase productivity	0.015	0.47	0.012	0.500	0.008	0.641	0.015	0.439
..to increase productivity (major reason)	0.012	0.32	0.023 *	0.035	0.026 *	0.012	0.029 **	0.010
..for the organisation's reputation	0.051	0.07	0.052 *	0.035	0.057 *	0.016	0.060 *	0.017
..for the organisation's reputation (major reason)	0.026	0.09	0.022	0.096	0.018	0.149	0.009	0.528
..to avoid fines	0.040	0.12	0.034	0.134	0.025	0.241	0.021	0.366
..to avoid fines (major reason)	-0.001	0.95	-0.005	0.724	-0.006	0.657	0.006	0.666
Difficulties in addressing health and safety:								
..lack of time or staff	0.024 *	0.04	0.017	0.106	0.014	0.148	0.017	0.104
..lack of time or staff (major difficulty)	-0.039 **	0.00	-0.028 **	0.002	-0.024 **	0.007	-0.029 **	0.002
..lack of money	-0.008	0.44	-0.007	0.446	-0.003	0.751	-0.004	0.705
..lack of money (major difficulty)	-0.015	0.22	-0.004	0.679	0.000	0.976	0.007	0.530
..lack of awareness among staff	0.048 **	0.00	0.025 *	0.017	0.021 *	0.032	0.025 *	0.018
..lack of awareness among staff (major difficulty)	0.008	0.51	0.002	0.842	-0.010	0.315	-0.014	0.201
..lack of awareness among management	-0.031 **	0.01	-0.029 **	0.007	-0.027 **	0.008	-0.029 **	0.007
..lack of awareness among management (major difficulty)	0.016	0.30	0.015	0.292	0.009	0.489	0.016	0.268
..lack of expertise or specialist support	-0.019	0.09	-0.023 *	0.016	-0.018 *	0.050	-0.020 *	0.041
..lack of expertise or specialist support (major difficulty)	-0.025	0.07	-0.021	0.084	-0.017	0.151	-0.017	0.176
..paperwork	0.001	0.94	0.015	0.174	0.015	0.156	0.019	0.083
..paperwork (major difficulty)	-0.024 *	0.04	-0.001	0.886	0.000	0.990	-0.005	0.662
..complexity of legal obligations	0.003	0.82	0.003	0.817	0.004	0.742	0.001	0.908
..complexity of legal obligations (major difficulty)	-0.006	0.57	-0.007	0.505	0.006	0.562	0.008	0.421
Psychosocial risks:								
..are easier to address than other risks	0.057 **	0.00	0.049 **	0.000	0.048 **	0.000	0.048 **	0.000
..are more difficult to address than other risks	0.062 **	0.00	0.043 **	0.000	0.022 *	0.017	0.023 *	0.023

Variable	Model 1:		Model 2:		Model 3:		Model 4:	
	B	Sign.	B	Sign.	B	Sign.	B	Sign.
Additional explanatory variables								
Employees work anywhere else outside the premises of the establishment (incl. from home)			0.029 **	0.001	0.022 **	0.009	0.022 *	0.018
Types of risk:								
..lifting or moving people or heavy loads			0.026 **	0.001	0.021 **	0.008	0.019 *	0.027
..repetitive hand or arm movements			0.016	0.065	0.016	0.050	0.022 *	0.012
..Prolonged sitting			0.056 **	0.000	0.037 **	0.000	0.034 **	0.000
..Heat, cold or draught			0.013	0.080	0.020 **	0.008	0.018 *	0.026
..Chemical or biological substances			0.023 **	0.003	0.020 **	0.009	0.016	0.066
.. Psychosocial risks: Difficult customers			0.034 **	0.001	0.021 *	0.037	0.022 *	0.045
Employee representation:								
general (works council and/or trade union representation)			0.078 **	0.000	0.067 **	0.000	0.061 **	0.000
health and safety (H&S committee and/or H&S representative)			0.091 **	0.000	0.090 **	0.000	0.091 **	0.000
Control variables								
Establishment is single organisation					-0.052 **	0.000	-0.048 **	0.000
Establishment size class:								
..5-9 empl.					-0.073 **	0.000	-0.096 **	0.000
..10-19 empl.					-0.056 **	0.000	-0.077 **	0.001
..20-49 empl.					-0.069 **	0.000	-0.089 **	0.000
..50-99 empl.					-0.042 *	0.018	-0.066 *	0.013
Country dummies					yes **		yes **	
Insignificant explanatory variables								
Establishment is subsidiary site							0.007	0.645
Sizeclass: 100-149 empl							-0.028	0.381
Sizeclass: 150-249 empl.							-0.025	0.419
Founding year of establishment age: before 1990							0.007	0.449
Founding year of establishment age: after 2015							0.014	0.341
Share employees aged 55+: 1 % - 25%							0.003	0.774
Share employees aged 55+: 25% - 50%							0.005	0.680
Share employees aged 55+: 50% or more							0.008	0.775
Types of risk:								
..Tiring or painful positions							0.002	0.847
..Loud noise							0.006	0.569
..Risk of accidents with machines							0.005	0.565
..Risk of accidents with vehicles in the course of work							0.003	0.765

Variable	Model 1:		Model 2:		Model 3:		Model 4:	
	B	Sign.	B	Sign.	B	Sign.	B	Sign.
..Increased risk of slips, trips and falls							0.004	0.606
..Psychosocial risks: Time pressure							-0.003	0.699
..Psychosocial risks: Poor communication or cooperation							-0.003	0.723
..Psychosocial risks: Job insecurity							0.008	0.464
..Psychosocial risks: Long or irregular working hours							-0.008	0.317
Number of valid observations	1936		1846		1844		1655	
Adjusted R^2	0.114		0.325		0.401		0.384	

Significant at: ** p<0.01; * p<0.05. All explanatory variables are dummy variables (0=no, 1=yes)

The default country is Ireland; the default establishment size class is 250+ employees; the default share of employees aged 55+ is 55%; the default founding year of the establishment is 1990 to 2015.

Source: Panteia based on ESENER 2019

Annex 3: Identifying a typology: cluster analysis on attention for OSH management practices

Which research question is answered with this analysis?

The objective of this analysis is to identify a typology of establishments from the AFBS sector in their approach to managing OSH at the workplace.

There is no guarantee that a meaningful typology can be found. The first research question is therefore whether it is possible to determine a meaningful typology. If that is the case, the subsequent question is how the different establishment types that are identified can be characterised.

Which data were used?

This analysis is based on data from all establishments from the AFBS sector in EU-27 Member States that participated in the ESENER 2019 survey. This subsample includes 2,566 observations.

Which variables were examined?

The ESENER 2019 dataset includes questions that cover many different OSH management practices. As discussed in Annex 2, we used 38 of these variables to construct an indicator that represents the attention establishments have for OSH management practices. Our analysis to identify a typology on attention to OSH management practices is based on the same set of 38 variables. In some analyses, we added the OSH-MPI to this set of variables, to see if this would lead to another (and possibly more meaningful) typology (see Annex 2 for more details on this indicator).

Which clustering technique was used?

Different cluster methodologies are available:

- Hierarchical cluster: this method generates a series of models with cluster solutions from 1 (all cases in one cluster) to n (each case is an individual cluster). In case of large datasets, this methodology requires a considerable amount of time. Hierarchical cluster analysis can handle nominal, ordinal and scale data; however, it is not recommended to mix different levels of measurement.
- K-means cluster: for this method the number of clusters has to be defined in advance (and preferably also an estimate of the average scores per cluster for each variable), after which the procedure quickly classifies all variables. This method is often combined with hierarchical cluster analysis: a hierarchical cluster analysis is performed to determine the number of clusters (and the average scores per cluster for each variable), after which K-means clustering can be applied to determine the final cluster solution.
- Two-step cluster analysis: this method identifies groupings by running pre-clustering first and then running hierarchical methods — in this respect, it can be seen as a combination of the previous two approaches. Two-step clustering can handle scale and ordinal data in the same model, and it has the option to automatically select the optimal number of clusters.
- Latent class analysis (LCA): this method does not assign each observation to a specific class or cluster, but determines the probability for an observation to belong to different classes or clusters. Similar to the above three methodologies, LCA results in a solution that distinguishes mutually exclusive and exhaustive clusters or latent classes. And similar to a two-step cluster analysis, it can deal with ordinal variables (and also with nominal variables). What sets it apart is that the exact class membership is unknown for each observation. Instead, each LCA solution involves a set of inclusion probabilities (how likely it is that each observation will be in any of the latent classes).

The available indicators for the different OSH management practices are a combination of a scale variable (OSH-MPI), an ordinal variable (Q357) and dichotomous (dummy) variables (all other variables). Hierarchical cluster analysis is not a suitable method for this combination of variables (which also applies to K-means clustering, if only because it requires a hierarchical cluster analysis first to determine an

initial cluster solution). This leaves two-step cluster analysis and latent-class analysis as two feasible clustering techniques. We have chosen to apply a two-step cluster analysis rather than a latent-class analysis, partly because a two-step cluster analysis results in a typology where every establishment can be assigned to a specific type or cluster (which makes it easier to characterise the resulting types in terms of variables not used in the cluster analysis, such as country or establishment size class).

Running a two-step cluster analysis

The outcomes of a two-step cluster analysis may be influenced by the way in which the data are ordered. To increase the quality of the outcomes, the observations in the dataset have therefore been ordered randomly before applying the two-step cluster algorithm.

To identify possible clusters, the cluster analysis was performed on unweighted data. The cluster analysis was restricted to establishments that provided a valid response to each of the 38 OSH management practices considered, which resulted in a sample of 1,798 establishments.

The number of clusters distinguished was based on the following three available indicators:

- Silhouette measure of cohesion and separation.
- An information criterion (IC), which is either the Bayesian information criterion (BIC) or the Akaike information criterion (AIC). Both have been used to check if the number of clusters depends on the choice for a specific IC (which has not been the case).
- The distance measure (since most of the variables involved are either ordinal or dichotomous, the only valid distance measure is the log likelihood).

The silhouette measure of cohesion and separation can be used as an indicator for the goodness of fit of the chosen solution. This indicator ranges from -1 to +1. Positive values indicate that the average distance between cases in a cluster is smaller than the average distance to cases in other clusters, and are thus desirable. According to Finch et al (2015), there is no common understanding of how to interpret the values for this measure. Rather than using criteria based on theoretical arguments, criteria on when a silhouette is considered to be good enough are based on the experience of researchers in their own particular field. Finch et al (2015) indicate 0.2 as a generally accepted criterion, meaning that if the silhouette measure is < 0.2, the quality of the average silhouette measure across the whole sample is considered poor; a silhouette measure between 0.2 and 0.5 indicates a fair solution and a silhouette measure exceeding 0.5 is a good solution. van den Berge et al (2017) are a bit more conservative and suggest a lower threshold of 0.25 for the silhouette measure. This is consistent with the two-step cluster algorithm in SPSS (the software that we have used for these analyses), which interprets a silhouette measure of 0.2 as a poor solution. The silhouette measure may increase with the number of clusters that are distinguished, so this measure cannot be used on its own to determine the optimal number of clusters.

The two-step procedure offers the possibility to automatically detect the optimal number of clusters. This is based on two criteria:

- an IC; and
- the distance measure.

The cluster procedure determines the value of the chosen IC for each potential number of clusters. Smaller values of the IC indicate better models, so, if a solution exists where the minimum value of the IC is reached for a limited number of clusters, this will be the optimal solution. However, there are clustering problems in which the IC will continue to decrease as the number of clusters increases, but where the improvement in the cluster solution (as measured by the change in the IC) is not worth the increased complexity of the cluster model (as measured by the number of clusters). In such situations, the changes in IC and changes in the distance measure are evaluated to determine the ‘best’ cluster solution.

To determine the number of clusters of OSH management practices, the following procedure was applied:

1. Automatically select the optimal numbers of clusters, based on the IC and distance measure.
2. Determine the silhouette measure for this solution.
    - If this is 0.25 or higher (fair solution), consider this the final cluster solution.
    - If it is 0.20 or lower (a poor solution), consider the values for the IC.

- If the IC continues to decrease if the number of clusters increases, then determine whether or not the silhouette measure increases (to levels > 0.20) if the number of clusters is manually increased. If this occurs for a reasonable number of clusters (say, no more than 12), consider this the final cluster solution. Otherwise, the conclusion should be that it is not possible to determine a meaningful clustering.
- If the IC reaches a minimum value for this solution, conclude that it is not possible to come up with an acceptable clustering of the respondents.

Results: no meaningful cluster solution was found for all risks combined

This procedure did not find a meaningful cluster solution for the group of 38 variables on different OSH management practices.

When the two-step cluster procedure was set to automatically determine the optimal number of clusters, a two-cluster solution resulted. The silhouette measure for this solution was 0.2, which meant that the average distance between cases in a cluster was only slightly smaller than the average distance to cases in other clusters. Following van den Berge et al (2017), this is considered to be a poor solution. Manually increasing the number of clusters did not result in an increase of the silhouette measure.

To test whether to which extent this result depended on the ordering of the data, we performed the whole procedure of randomly ordering the data and performing a cluster analysis five times. Four of the five analyses resulted in a silhouette measure of 0.2, and one analysis in a silhouette measure of 0.1.

We then added the OSH-MPI variable to see if this would result in a solution with a higher silhouette measure. This was however not the case.

The conclusion is therefore that it is not possible to come up with a meaningful clustering of EU-27 establishments from the AFBS sector regarding this set of OSH management practices.

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