

The view from the workplace: Safety and health in Micro and Small Enterprises in the EU

European Risk Observatory

National Report: Germany

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This report was commissioned by the European Agency for Safety and Health at Work (EU-OSHA). Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect the views of EU-OSHA.

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Table of Contents

List of figures and tables.....	2
1 Description of the national context	4
1.1. Introduction — remarks on the general economic context.....	4
1.2. National OSH infrastructure and regulatory context.....	4
1.3. Characterisation of the MSEs in Germany	8
2 Description of fieldwork and the sample.....	12
2.1. General remarks on the fieldwork and the methods.....	12
2.2. Description of the sample and basic company data.....	13
3 Analysis: data from the establishment reports (case studies).....	15
3.1. Risk awareness	15
3.2. Company OSH organisation and risk management practice	16
3.3. Mechanisms.....	22
3.4. Summary and key findings	26
4 References	29
5 Appendix.....	31

List of figures and tables

Figure 1 Dual OSH system in Germany	5
Figure 2 Percentage of MSEs and employees in MSEs per sector, 2013	10
Figure 3 Accident rate per 1,000 full-time (FT) worker equivalents by company size, 2014	12
Table 1 Number of MSEs by sector, 2013	9
Table 2 OSH-related topics for which the employees reported having received information and training (%)	11
Table 3 Company sample, sectors and size classes	13
Table 4 Geographical distribution of the companies	14
Table 5 Overview of the sample.....	31

1 Description of the national context

1.1. Introduction — remarks on the general economic context

The German economy is the biggest both in the European Union (EU) and in Europe. Germany is also part of the Eurozone. Its gross domestic product (GDP) per capita is around USD 46,000 in 2017 (purchasing power parity; IMF, 2018) which is above the EU average. It is one of the biggest capital exporters worldwide and has generated a high trade surplus for many years. In contrast to other national economies in the EU, it has quickly recovered from the 2007/2008 economic crisis, which caused only a temporary ditch in the national economic performance.

In Germany, manufacturing has stayed comparatively strong, making the national economy less dependent on the financial industry. In total, manufacturing and construction make up 30 % of the GDP (Statista, 2016). The backbone of the export-oriented economy is a multitude of small and medium-sized enterprises (*Mittelstand*) which successfully compete internationally. Often they are referred to as 'hidden champions': while they are relatively unknown to the public, they have often secured themselves strong market positions with highly specialised products (Schlepphorst et al., 2016).

With Agenda 2010, a bundle of political measures launched in 2003, Germany allowed cuts in the social security system, especially in the unemployment and pension benefits. At the same time, new laws strengthened liberal employment policies such as unlimited temporary work, a reduction in self-employment regulations and a reduction of employment protection standards. Many politicians and a number of experts perceive the bundle of measures as a major contribution to the reduction in the high unemployment rate from 12 % (2003) to 6 % (2016) and to the stimulation of the national economy. Critical voices see negative consequences for many workers as a consequence of the replacement of regular employment by temporary work and service contracts (see overview at Tagesschau.de, 2013).

1.2. National OSH infrastructure and regulatory context

1.2.1. OSH stakeholder and services

▪ Main actors and institutions

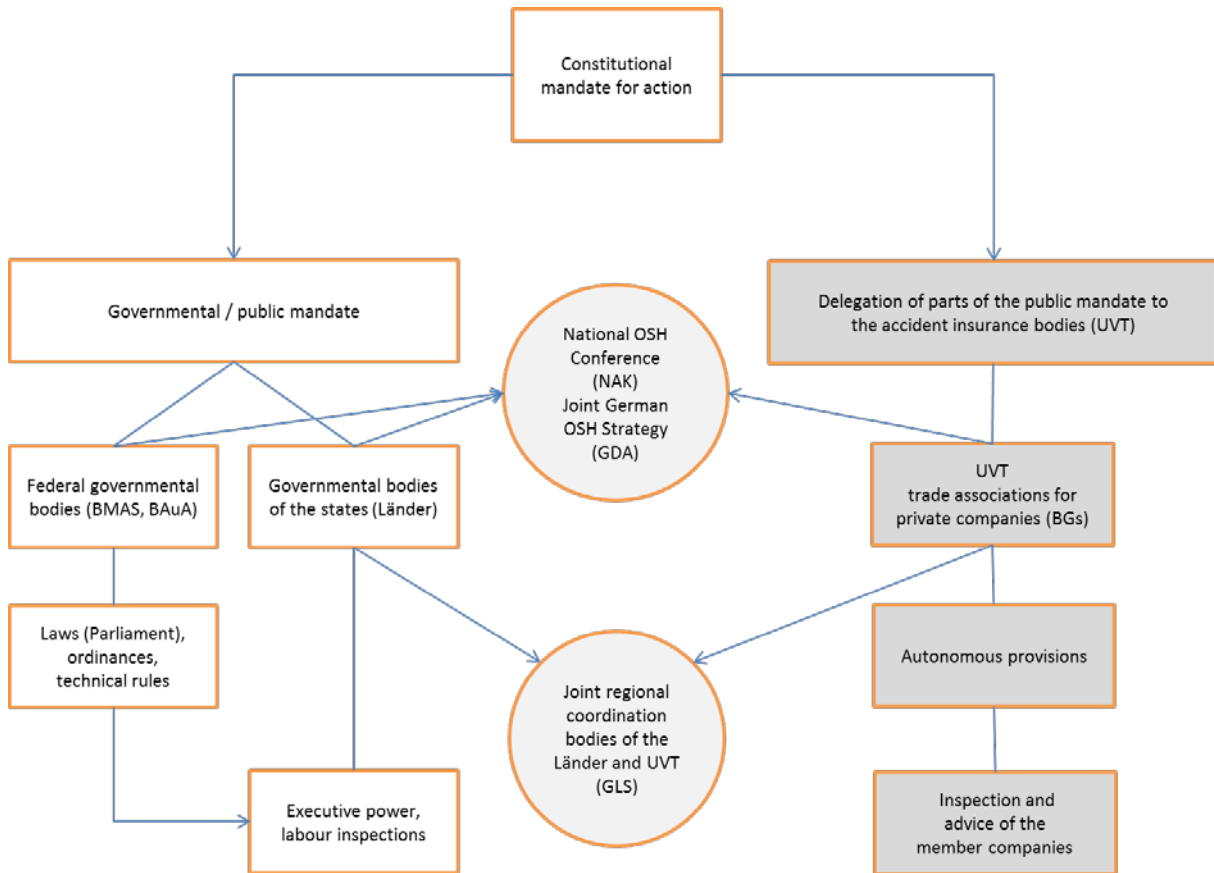
The German OSH legal system is characterised by the so-called dualism of governmental stakeholders and public authorities on the one hand and the statutory accident insurance on the other.

The first pillar of governmental stakeholders and public authorities is again divided between the federal government (national level) and the authorities of the 16 federal states (regional level). The national Parliament (*Bundestag, Bundesrat*) has legislative authority over OSH; the Federal Ministry for Labour and Social Affairs (*Bundesministerium für Arbeit und Soziales, BMAS*) prepares laws, prepares and enacts ordinances and supervises authorities. The Federal Institute for Occupational Safety and Health (*Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, BAuA*) is a research and advisory body subordinated to the Federal Ministry. The authorities of the 16 federal states (*Länder*), that is their ministries and labour inspectorates, are responsible for the enforcement of law and labour inspections in their territory.

The second pillar is made up of the sector-oriented statutory accident insurance institutions. The insurance bodies are constituted as self-governing bodies under public law (*Unfallversicherungsträger, UVT*) and are supervised by public authorities. Their mandate includes the prevention of work-related ill-health, which enables them to decide on their own prevention regulation, to run their own research centres and to inspect their member companies. Every company in Germany with one or more employees is obliged to be a member of an accident insurance institution.

The National OSH Conference (*Nationale Arbeitsschutz Konferenz, NAK*) is the top-level coordination body, which consists of representatives of the different parties and receives advice from the social partners. The NAK is responsible for the strategic steering and agenda setting of the Joint German OSH Strategy (*Gemeinsame Deutsche Arbeitsschutzstrategie, GDA*). The joint regional coordination bodies of *Länder* and accident insurance institutions (*Gemeinsame Landesbezogene Stellen, GLS*) are responsible for agreements on joint programmes and inspection strategies.

Figure 1 Dual OSH system in Germany



Source: based on unpublished report for BAuA, *Institutionenlandschaft*, Brück et al. (2013).

▪ Labour inspection

In Germany, enforcement and supervision of OSH regulation is delegated to the federal states. There are 16 OSH authorities of the *Länder*, which are in charge of supervision. In addition, there are special authorities for the mining and seafaring industries. The public authorities of the federal government are supervised by the Statutory Accident Insurance Body of the Federal Authorities (*Unfallversicherung Bund und Bahn*). Further inspections are made by the technical inspection services of the different statutory accident insurance bodies. They are authorised to supervise and advise their member companies.

The labour inspectorates enforce OSH issues, working time regulation, protection of young workers and mothers, product safety, medical products, environmental safety and in some federal states also issues of consumer protection. The 16 ministries in charge of the labour inspectorates cooperate in the Conference of Ministers of Labour and Social Issues (*Arbeits- und Sozialministerkonferenz, ASMK*) and the Commission for Occupational Safety and Health (*Länderausschuss für Arbeitsschutz und Sicherheitstechnik, LASI*), where they work on common practices and guidelines. They also cooperate with technical inspection services of the statutory accident insurance bodies within the Joint German OSH Strategy (*Gemeinsamen Deutschen Arbeitsschutzstrategie, GDA*), for example in common inspection strategies and programmes (legal basis §21 [paragraph 21] Abs. 3 [sub-paragraph 3] *Arbeitsschutzgesetz* [OSH law, abbreviated to *ArbSchG*]). The technical inspection services of the statutory accident insurance bodies concentrate on checking compliance with OSH regulations. Within the GDA framework, the partners also develop common guidelines for all inspection services.

In general, inspections are prioritised following the assignment of companies to risk categories (according to an algorithm taking account of sectors and size classes). Each federal state sets its own

priorities in accordance with the economic structure and enforcement resources. In practice, the smaller the company is and the less accident-prone its activities are, the less likely is the inspection. Micro- and small companies which do not match criteria (for example with office work only) can be under the radar of the labour inspectorates for many years.

▪ Prevention services

In all companies in Germany, the employer is obliged to appoint an OSH specialist (*Sicherheitsfachkraft*, often abbreviated to Sifa; §5 Arbeitssicherheitsgesetz [Work Safety Law, abbreviated to ASiG]) and an occupational physician (*Betriebsarzt*; §2 ASiG). In micro- and small enterprises (MSEs), they are usually contracted from external prevention service providers. They support the employer in doing the risk assessment and in every aspect of prevention in the company. Their annual service hours depend on the size and the risk profile of the company. Some statutory accident insurance bodies have medical and technical service departments (*Arbeitsmedizinische und Sicherheitstechnische Dienste*, ASD), which have prevention services under contract, helping member companies (MSEs) to find qualified service providers. Some accident insurance bodies also have prevention service centres.

Unfortunately, there seems to be a lack of preventive services on the market, which makes it especially difficult for MSEs to contract OSH specialists and occupational physicians. As a consequence, some statutory accident insurance bodies are already exploring the possibilities of how far additional specialists such as medical assistants, physiotherapists, ergonomists and psychologists can take over single preventive tasks from occupational physicians (Kirsch, 2015).

Regulation 2 (V2, *Betriebsärzte und Fachkräfte für Arbeitssicherheit*) of the German Social Accident Insurance (*Deutsche Gesetzliche Unfallversicherung*, DGUV) already establishes additional prevention models for MSEs. In companies with up to 10 employees, the employer can participate in the sector model (*Branchenbetreuung*). The sector model includes free consultation provided by service centres of the different accident insurance bodies. In companies with up to 50 employees, the employer can participate in the employer model (*Unternehmermodell*). In the employer model, employers must attend an OSH course, which qualifies them to carry out certain OSH measures in the company. The employer may thus reduce the service hours of occupational physicians and safety specialists, whose services can still be requested when required.

In companies (*Unternehmen*) with more than 20 employees, the employer is assisted by a safety delegate (*Sicherheitsbeauftragter*; §21 Abs. 1 SGB [Sozialgesetzbuch, Social Code Book] VII), whose tasks are to support the OSH management and to be a person of trust to the workers. The safety delegate is appointed by the employer and must not be part of the company's management.

In establishments (*Betriebe*) with more than 20 employees (full-time equivalent), an OSH committee (*Arbeitsschutzausschuss*, ASA; §11 ASiG) has to be set up. The OSH committee meets at least four times a year and the management and all OSH stakeholders in the company must be represented. If a works council exists, works council members must also be represented.

Single legal provisions may require additional qualified persons (*Befähigte Personen*) in the company, for example for the handling of special work equipment, for the handling of dangerous substances (*Gefahrstoffbeauftragte*) or with regard to other risk factors. In practice, MSEs often contract qualified persons from external service providers. Usually, OSH specialists or occupational physicians have the required qualifications.

1.2.2. Regulatory context — OSH specific

The OSH Law (*Arbeitsschutzgesetz*, ArbSchG) of 1996 is the central law in the German OSH system. It incorporates general principles of the EU OSH Framework Directive such as the principle of the responsibility of the employer and the risk assessment. All kinds of risks, including psychosocial risks, must be considered in the occupational prevention processes. Further important laws are the Work Safety Law (*Arbeitssicherheitsgesetz*, ASiG), which establishes rules for the preventive services in the companies, and Social Code Book (*Sozialgesetzbuch*, SGB) VII, which is the legal foundation of the accident insurance. The legal framework is completed by special laws, regulations and technical rules for prevention, which serve as guidelines on how to comply with legal and regulatory provisions.

Regulations with binding character and rules for prevention can also be enacted by the statutory accident insurance bodies.

The general OSH framework in Germany are principally binding on any kind of private establishments, on public bodies (§1 and §2 Abs. 5 ArbSchG) and on board vessels. The laws cover all sectors and sizes of companies without distinction, including the public services and MSEs. Special rules are established for the mining industry. There are exemptions for the military services. Domestic workers and self-employed people are not covered by the general OSH provisions.

Until 2013, §6 ArbSchG exempted micro-enterprises (of 10 or fewer workers) from documenting their risk assessment. However, the exemption was never very relevant in practice, as there were numerous specific provisions that overruled the exemption. In addition, the labour inspectorate could prescribe the documentation in establishments with a high risk profile. Furthermore, the rules of prevention of the statutory accident insurance bodies, a general guideline for occupational safety in the establishments, recommended a simple documentation procedure for micro-enterprises. Furthermore, in a decision of 2002 the European Court of Justice (ECJ) envisioned a general obligation of OSH services, namely company doctors (*Betriebsärzte*) and safety experts (*Sicherheitsfachkräfte*), to document risk assessment findings regardless of the size of the companies in their reports.

1.2.3. National OSH programmes targeting MSEs

In Germany, there are not many OSH programmes which exclusively target MSEs. Still, many programmes which target all sizes of companies have also been very popular among micro- and small enterprises. Many of them aim at the improvement of management and risk assessment processes in enterprises.

Since 2002, the Initiative New Quality of Work (*Initiative Neue Qualität der Arbeit*, INQA) has been active in promoting good OSH practice among companies. Small and micro-enterprises especially have been at the focus of the activities. INQA started as a joint initiative of governmental OSH stakeholders, social insurance institutions, social partners and other interested parties under the presidency of the BMAS and the advice of the BAuA. A specific feature of INQA's activities is that the initiative strives to bring OSH stakeholders and companies together. During the last 15 years, INQA has established specific network collaborations targeting and with the participation of small enterprises, such as 'Offensive Mittelstand', 'Offensive Gutes Bauen' and 'Offensive Gesund Pflegen' ('Offensive/campaign for small and middle-sized enterprises', 'Offensive/campaign for better construction' and 'Offensive/campaign for healthy care'). INQA has also supported the development and promotion of good-practice tools for small enterprises.

With the current strategy period, the GDA also started to promote aids and guidelines for companies. In the context of the strategic programmes on reducing psychosocial risks and better organisation of companies, the GDA has issued recommendations and guidelines on integrating psychosocial risks into the risk assessment and how to improve the organisation of OSH management, for example with the instrument GDA-ORGACheck¹. GDA-ORGACheck is aimed especially (but not exclusively) at owner-managers of MSEs and gives them a self-explanatory tool to improve their OSH management. The GDA also promotes the national guideline for management systems and instruments which derive from them. Some of them have also been very popular among MSEs. The statutory accident insurance bodies and OSH authorities of the federal states were also partners in the promotion of the management systems, and supported the implementation with different forms of incentives.

The statutory accident insurance bodies also address and support MSEs with campaigns and other measures. Some accident insurance bodies automatically include OSH services (safety experts, occupational physicians) in the membership fee, especially *Berufsgenossenschaft Nahrungsmittel und Gastgewerbe* (BGN, food and hotel, restaurant and catering sector) and *Berufsgenossenschaft der Bauwirtschaft* (BG BAU, construction industries), whose members are often MSEs. The idea is to have better coverage of preventive services in MSEs. *Berufsgenossenschaft Verkehr* (BG Verkehr, transport sector) offers free training for employers whereby employers can get basic OSH information and

¹ <http://www.gda-orgacheck.de/daten/gda/index.htm>

information on how to qualify internal safety officers or can catch up with shared state-of-the-art OSH knowledge and measures. MSEs especially profit from such offers.

Enterprises with fewer than 30 workers can get financial compensation from the health insurance for workers who are on sick leave or on maternity leave. In Germany, the employer is obliged to continue paying wages to ill workers for up to six weeks and also to give paid absence due to pregnancy. In order to reduce the burden, micro- and small enterprises contribute to a special fund (Umlage U1 for sick leave and U2 for maternity leave) and can be reimbursed up to 80 % of sick pay and up to 100 % of maternity pay.

1.2.4. Industrial relations and worker representation

In German companies, workers are represented in works councils. Works councils in private companies are called *Betriebsrat*. The works council can be set up in an establishment with a minimum of five workers (§1 BetrVG), who will form an assembly (*Betriebsversammlung*; §42 ff BetrVG). In the public sector, works councils are called *Personalrat* and represent workers and civil servants (*Beamte*). The rights and duties with regard to OSH are comparable between the *Betriebsrat* and the *Personalrat*. Special forms of worker representation with fewer rights exist in establishments which belong to the Christian churches.

Recent panel data from 2011 shows that only 6 % of private MSEs have worker representation (Deutscher Bundestag, 2014; data from IAB Betriebspanel). Between 38 % and 45 % of workers in private establishments (varying between regions) are represented by a works council (Ellguth and Kohaut, 2010, 2013). Cases from private companies are documented where employers actively impeded the setting up of works assemblies, and consequently the formation of works councils (Riester, 2001; Fichtel, 2010).

Data do not exist on the share of work councils among public administration bodies and other public establishments such as schools, child care centres, hospitals and courts. However, coverage can be assumed to be higher than in the private sector (Ellguth and Kohaut 2010, 2013).

Industrial relations are organised sectorwise. Collective agreements are concluded between employer associations and trade unions. There are also in-house collective agreements in major companies. Data show that between 35 % (former East Germany) and 52 % (former West Germany) of the workers work in establishments that have sector collective agreements. There are also sector disparities. Throughout the last 20 years, there was a downward trend in trade union coverage (Hans-Böckler-Stiftung, 2015).

One specific feature of the German OSH system is that trade unions and employer associations are also represented in the bipartite assemblies and boards of the statutory accident insurance institutions. They are also represented on the steering committees of the GDA. Trade unions and employer associations also advise the National Parliament in the law-making process and the Federal Ministry for Labour and Social Affairs, for example in the committees that enact technical rules.

1.3. Characterisation of the MSEs in Germany

1.3.1. Economic profile of MSEs

In 2013, there were 3.63 million companies registered in Germany (DESTATIS, 2016). Recent data from the national statistical office, DESTATIS, on the share of MSEs² is available for a selection of sectors. Figures show that, in these sectors, more than 96 % of the enterprises were MSEs with fewer than 50 employees (Table 1). They employed about 41 % of the overall workforce, contributed 29 % to the gross added value and generated more than 17 % of the overall turnover in these sectors. The turnover per employee was around 50 % of the overall average of all companies in these sectors. It can be concluded

² Definition of MSEs used: micro-enterprises have max. 9 employees and max. EUR 2 million annual turnover; small enterprises have max. 49 employees and max. EUR 10 million annual turnover, and must not be categorised as micro-enterprises.

<https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/UnternehmenHandwerk/Glossar/KMU.html?view=getColorboxEntry>

that data back the findings of the literature review (EU-OSHA, 2016), according to which low road³ economic strategies and a weak economic position can be found in many MSEs.

Table 1 Number of MSEs by sector, 2013

Company size classes	Sectors according to German classification WZ 2008 ⁴	Number of enterprises	Number of employees	Annual turnover (million EUR)	Turnover per employee (EUR, rounded)
Micro-enterprises	B: Mining and quarrying	882	3,721	496	133,232
	C: Manufacturing	122,799	478,637	33,948	70,926
	D: Energy supply	354	513	305	593,776
	E: Water supply, sewerage, environmental services	1,547	5,199	1,451	279,041
	F: Construction	215,334	697,309	49,878	71,529
	G: Retail, wholesale, car repair	438,565	1,247,033	118,432	94,971
	H: Transport and storage	62,264	192,953	13,196	68,388
	I: Accommodation and food service	155,440	565,723	17,626	31,156
	J: Information and communication	84,704	180,732	14,594	80,747
	L: Real estate and housing	196,151	320,793	33,910	105,706
	M: Professional, scientific and technical services, freelancers	361,400	809,601	55,629	68,712
	N: Other professional services	120,888	309,996	18,272	58,943
	S (partly): Repair of IT and consumer goods	9,787	20,270	1,117	55,116
	Total (rounded)	1,770,114	4,832,479	358,851	74,258
Small enterprises	B: Mining and quarrying	659	11,905	1,974	165,813
	C: Manufacturing	57,981	1,099,515	116,739	106,173
	D: Energy supply	462	4,074	2,374	582,613
	E: Water supply, sewerage, environmental services	2,330	39,467	8,642	218,976
	F: Construction	48,382	817,148	81,738	100,028
	G: Retail, wholesale, car repair	92,165	1,435,897	241,267	168,025
	H: Transport and storage	22,677	426,143	39,393	92,442
	I: Accommodation and food service	44,499	805,527	24,939	30,960
	J: Information and communication	11,059	208,874	24,100	115,380

³ Low road MSEs are those MSEs that adopt well-recognised bundles of organisational and business strategies that increase pressure on wages, working conditions and so on in the fight for the survival of their business.

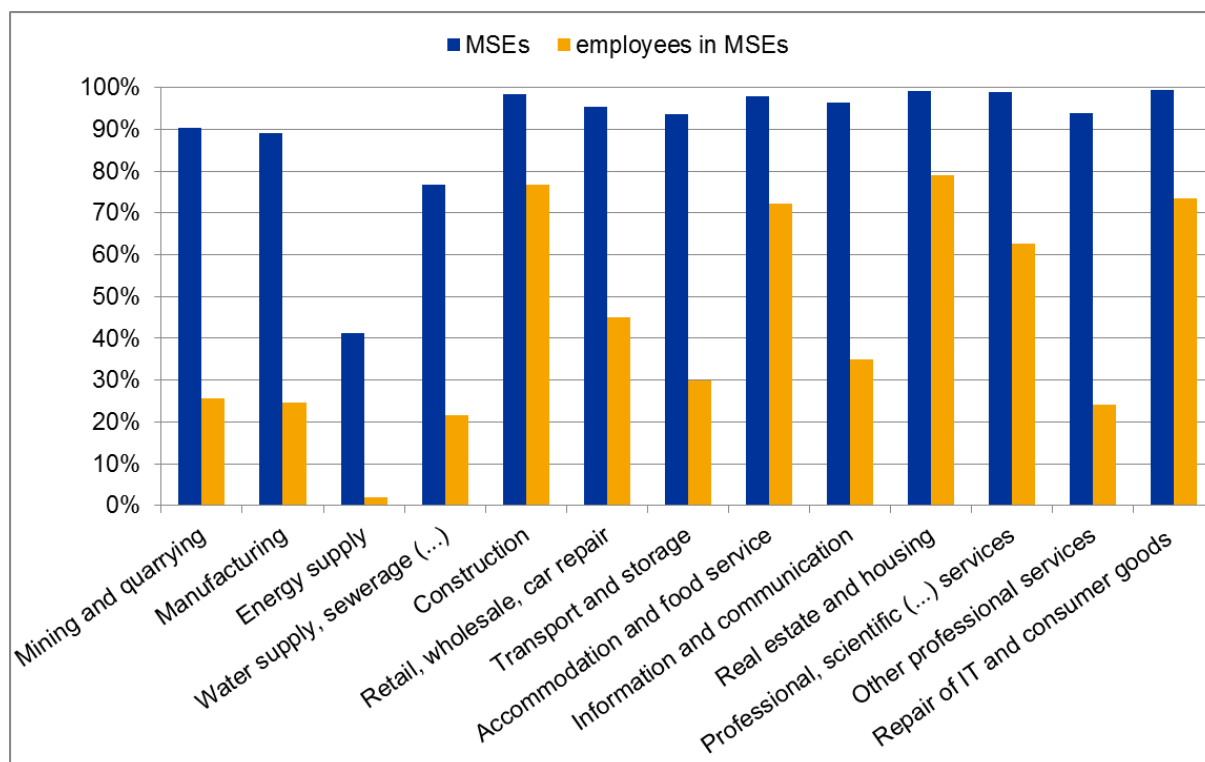
⁴ Classification according to WZ 2008, which is the national standard based on the Statistical Classification of Economic Activities in the European Community (NACE) Rev.2. See also DESTATIS, 2008. Not included in the analysis of DESTATIS are sectors A (agriculture, forestry and fishing), K (financial and insurance activities), O (public administration, social security and defence), P (education), Q (human health and social services), R (arts, entertainment and recreation), S (partly: activities of membership organisations), T (private households as employers) and U (activities of extraterritorial organisations).

Company size classes	Sectors according to German classification WZ 2008 ⁴	Number of enterprises	Number of employees	Annual turnover (million EUR)	Turnover per employee (EUR, rounded)
	L: Real estate and housing	7,641	83,433	22,009	263,790
	M: Professional, scientific and technical services, freelancers	34,036	584,049	53,459	91,531
	N: Other professional services	20,457	409,612	25,913	63,263
	S (partly): Repair of IT and consumer goods	435	7,510	604	80,464
	Total (rounded)	342,783	5,933,155	643,150	108,399
All enterprises	Total* (selected sectors only, rounded)	2,193,115	26,468,037	5,772,093	218,078

* Total values include all enterprises of micro-, small, medium and large size.
Source: DESTATIS, 2016

Figure 2 shows the relative representation of MSEs in Germany in the different economic sectors as well as the shares of employees working in MSEs. In 2013, repair of consumer goods was the sector with the biggest share of MSEs compared with the total number of enterprises (more than 99 %), while in energy supply only 41 % of the enterprises were MSEs. In energy supply, only 2 % of all employees worked in MSEs while in real estate and housing it was 79 %.

Figure 2 Percentage of MSEs and employees in MSEs per sector, 2013



Source: DESTATIS, 2016.

1.3.2. OSH profile of MSEs compared with larger enterprises

Recent telephone survey data from the evaluation of the GDA show that the size of establishments correlates with the likeliness of having a risk assessment: the smaller an establishment is, the less likely it is to have a risk assessment. Only 41 % of the establishments with fewer than 10 employees had a risk assessment. In establishments with 10-49 employees, the rate was 70 %. In both cases, there was a significant gap between them and establishments with more than 50 employees, which were above 90 %. In addition, the risk assessment in establishments of all size classes was often error-prone, as many establishments did not include aspects of work organisation, did not document it or did not take corrective measures (Lißner et al., 2014: 67 ff).

Many small establishments did not comply with the rules on preventive services: 63 % of the MSEs did not have an occupational physician and 40 % neither had an OSH specialist nor participated in the employer model (Lißner et al., 2014: 88 ff).

As can be seen in Table 2, employees in micro- and small enterprises more often reported receiving information and training on risks related to dangerous substances, on handling of machines and tools and on accident prevention than on risks related to long-term health effects such as ergonomic risks and on work organisation and stress reduction. In comparison with larger establishments, employees of MSEs were less often informed and trained (Lißner et al., 2013: 83-84).

Table 2 OSH-related topics for which the employees reported having received information and training (%)

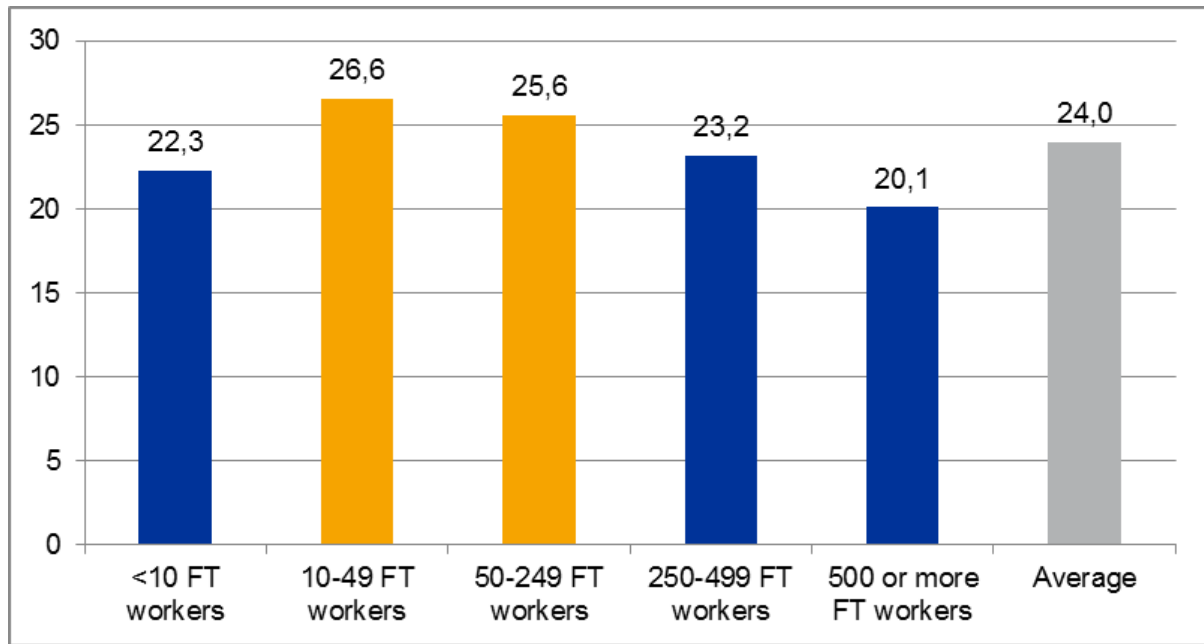
Information and training received from the current employer on the topic	1-9 employees	10-49 employees	All establishments
Identification and removal of hazards	58	61	64
Safe handling of dangerous and biological substances	78	75	80
Safe handling of machines and tools	74	78	83
Behaviour in case of emergencies and accidents	70	75	80
Methods of work organisation that help to reduce stress	35	40	42
Healthy postures at work	41	48	53
Other OSH topics	43	48	52

Source: GDA Beschäftigtenbefragung, $n = 5512$ employees, in Lißner et al., 2013: 84.

These findings are supported by another survey on the OSH knowledge of owners and managers of micro- and small establishments. The survey revealed that most of the respondents (83 %) were aware of their obligation to train the workers. In contrast to that, 60 % of the owners and managers did not know that they were obliged to carry out a risk assessment (Sczesny et al., 2014: 62 ff).

According to the 2014 statistics of the statutory accident insurance institution (DGUV, 2015; agricultural sector not included), the accident rate in small companies (10-49 employees, excluding commuting accidents) was the highest of all the size classes, with 26.6 accidents per year per 1,000 full-time worker equivalents. In contrast to that, the accident rate in micro-enterprises was below average, with 22.3 accidents per year per 1,000 full time worker equivalents. Unfortunately, there are no data available on rates of work-related or occupational diseases, early pensions due to work-related accidents or diseases, or fatalities by different size classes.

Figure 3 Accident rate per 1,000 full-time (FT) worker equivalents by company size, 2014



Source: DGUV, 2015.

2 Description of fieldwork and the sample

2.1. General remarks on the fieldwork and the methods

This report presents the findings of the case studies conducted in 20 German companies. Most of the companies were taken from the German sample of the ESENER-2-survey. These companies had agreed to participate in a follow-up qualitative survey. Some interviews were conducted in companies which were known to the researchers from professional networks (for example OSH networks and employer networks). During the identification process, the research team already tried to get more information on the companies from the ESENER sample in order to exclude franchises and subsidiaries that are under the control of a corporate management.

Interviews were conducted from January 2016 until July 2016. The process of approaching organisations and making the appointments was difficult and time-consuming. Often, numerous phone calls and emails were necessary before an appointment could be made. In some cases, the managers did not appear for the appointments and new companies needed to be contacted.

The first contact was usually made by telephone. In the telephone call, the researcher asked to talk to the owner or the managing director of the company. The researcher briefly explained the context of the survey and the methodology. In some cases, the manager directly agreed to be interviewed and a date was fixed. In any case, an email was sent with additional information on the survey, the context and the research team. Almost all appointments were made by telephone; only in one case did the researcher personally visit the establishment to make the appointment.

Only in cases where the managers were not available, or if there was no response to the call, was the first contact made by email. Experiences show that management representatives hardly ever respond to emails. Hence, the researcher made a follow-up call within one week. If still no top-level company representative answered the call, another telephone contact would be made in due course.

In cases where the manager did not reply to the third call and did not reply to the email, another company was chosen. This was also done in cases where there was no clear commitment for or against an interview even after several calls. The researchers usually approached a number of companies at the same time and strove to make local or regional clusters of interviews to reduce the burden of travel.

In all cases but one, the owner or the highest manager could be interviewed. Only in one case was the interview conducted with one of the two executive managers who were responsible to the chief executive of the joint stock company.

The necessity of the worker interview was communicated in advance so that both the manager and the worker could plan the meeting. In practice, the workers for the interviews were selected by the managers and often the selection was made spontaneously. In one case, the manager of a company refused to allow the researcher to contact a worker, even though both interviews had been booked in advance.

The workers were interviewed separately and usually after the management interview. Only in one case were the two interviews done in the form of a group interview with managers and workers of a micro-company. In another company, all six workers were interviewed in a group interview. In another case, the worker did not appear and a telephone interview was conducted instead.

At the beginning of each interview, the interviewees were assured of confidentiality and anonymity. In consequence, they were asked if they agreed to be recorded. The language of the interviews was German. The recordings were transcribed and the establishment reports were written on the basis of the transcripts by the researcher. In a few cases, the interviewees declined to be recorded and the researchers took notes which were used directly for the establishment reports.

The interview time varied from case to case. Recorded manager interviews were between 35 and 85 minutes; recorded worker interviews were shorter, between 20 and 60 minutes. Interviews where the researcher needed to take notes were significantly longer; one lasted approximately 150 minutes.

2.2. Description of the sample and basic company data

The distribution of sectors could be realised as planned. Unfortunately, the distribution of size classes could not be maintained in all sectors. Surprisingly, it was less difficult to contact micro-enterprises than companies of the ‘middle’ and ‘large’ size classes, 10-19 and 20-49 employees.

On occasion, the actual company size did not correspond to the ESENER sample data. Three of the interviewed micro-companies had fewer than five employees at the time the interview took place. It also happened that companies had changed size classes between the ESENER telephone interview and the present case study. Table 3 shows the distribution of the sample by sector and by size of the companies.

Table 3 Company sample, sectors and size classes

Size classes \ Sectors	C Manufacturing	F Construction	G Wholesale and retail	H Transport and storage	I Accommodation and food service
<9 employees	DE12	DE17	DE01	DE07	DE03
			DE16	DE20	DE04
					DE15
10-19 employees	DE02	DE05	DE11	DE10	
		DE06			
20-49 employees	DE14	DE13	DE09	DE08	DE18
	DE19				

The companies were geographically distributed over eight federal states and located in northern and central Germany. Table 4 shows the geographical distribution of the companies.

Table 4 Geographical distribution of the companies

Federal state	Number of companies visited
Baden-Württemberg	1
Hamburg	2
Lower Saxony	3
North Rhine-Westphalia	1
Saxony	1
Saxony-Anhalt	4
Schleswig-Holstein	7
Thuringia	1

The research team aimed to visit only independent MSEs. This was a difficult task in so far as in some sectors the ESENER sample included a number of subsidiaries and franchises whose statuses were not evident. This was especially the case in the transport and accommodation/food service sectors. Hence, in some cases, franchises and local branches of national companies were visited. In two cases of local subsidiaries, a certain influence of corporate OSH management could be observed. Subsidiaries of multinational companies were not included in the sample.

Most of the companies in the sample were well established. Only one was founded in 2015, three were less than 10 years old (in their current form), nine were between 10 and 25 years old, five were older than 25 years, and one manager did not provide information.

Seven of the 20 companies were owned or represented by women, 13 by men. Only one of the owner-managers was not German.

The professional profiles of the management representatives varied. They were between 23 and 71 years old. Two had only finished school, six had a professional education, five were master craftspeople of their trade and seven had a university degree. Most of them had already several years of experience in the enterprise.

About half of the owner-managers attended OSH training at least once, usually when the company participated in the employer model. Other training courses were not mentioned. In isolated cases, information on OSH was provided through professional networks or chambers but not in the form of OSH training.

Most of the company representatives said that the company faced moderate to strong competition. However, most of them did not feel a strong dependency on clients or suppliers and felt independent in the general business management and also in OSH management. In one case, the introduction of an OSH management system had been requested by a client. In another case, the company had installed a quality management system because they felt impelled by external circumstances. In two cases, it became obvious during the interview that the OSH management was influenced by mother companies.

Even though many companies faced strong competition, in only two companies was business vulnerability considered medium to high. Often the financial resources were considered good or very good by the owner, who explained they would cope with the situation. In 16 companies, the business strategy was middle road or (less clear) high road⁵. In only four companies was the business strategy considered less clear low road. Three of them were from the accommodation and food service sector and one from the transport sector.

⁵ High road implies the opposite of low road and refers to MSEs that enjoy a high growth success, such as the so-called gazelle companies, but also, more generally, small businesses that are able to invest in skills and innovation in ways that act to support their growth and business success.

Most of the companies employed skilled workers on regular contracts. Seven companies had a majority of unskilled workers: all four accommodation and food sector businesses, one in the construction sector, one in the manufacturing sector and one in the transport sector. Of these, all four companies in the food service sector had predominantly female workers; the ones in the transport sector and the construction sector employed more male unskilled workers. The manufacturing company did not specify its gender distribution and the educational level of its workforce. In six of the seven companies, the worker vulnerability was considered high or medium to high. In the rest of the companies, it was considered medium or low.

One company made use of temporary employment, two of seasonal or student helpers. All three companies belong to the group where unskilled work could be frequently found.

None of the case companies had a works council (*Betriebsrat*). This is not surprising, as worker representation is not obligatory and is rarely found in small private enterprises.

Most of the workers were paid in accordance with collective agreement standards. Individual negotiations could be found in three enterprises, two of which used individual schemes in addition to collective standards. In most cases, the wages were considered average. Two companies paid only minimum or close to minimum wages, two were considered low or medium-low and three companies paid more than the average.

During the interview phase, the researchers gained the impression that the ESENER sample was positively biased. Though the researchers did not find many examples of good practice, most companies complied with OSH regulations in general and many followed high road or at least less clear high road strategies. From an expert's point of view, there is evidence that usually a substantial proportion of MSEs pursue a 'low road survival strategy', which can be characterised by a few indicators such as weak economic position, low investment in OSH, limited knowledge, awareness and competence of owner-managers, limited capacity to manage systematically, attitudes and priorities, and concerns for economic survival (EU-OSHA, 2016). However, this was not the case for most of the sample companies visited.

3 Analysis: data from the establishment reports (case studies)

3.1. Risk awareness

In almost all companies, a tendency towards the prioritisation of acute risks, that is immediate risks for health such as an accident, over long-term risks, that is risks with a long latency such as repetitive strains for musculoskeletal diseases or work overload for mental ill-health, could be observed. While in most of the sample companies owner-managers were aware of acute risks such as the risk of accidents, the long-term consequences of work practices were often not sufficiently considered. This was in many cases supported by an unsystematic management approach which was led by common sense⁶, based on practical work experience and sound reasoning, and which concentrated on work practice and work routines.

Several interviewees (owner-managers and employees alike) spoke about minor accidents ('normal accidents') as if they were considered almost unavoidable and part of the work. The same pattern of normalising workplace risks could be observed with regard to strenuous working conditions such as heavy lifting and poor ergonomic conditions. These tendencies were most commonly found in the following sectors: wholesale and retail, construction and food and accommodation. Often it was not clear if any actions were taken in order to improve the working conditions. While owner-managers tended to play down the risk for the workers and described it as average, it seemed that the workers compensated by being proud of the fact that they could deal with hard work, even when they realised that the strain was possibly more than average.

⁶ The interviewees referred to *gesunder Menschenverstand*, which literally translated means 'healthy human reasoning'.

Of course we have cuts, this happens once in a while. (Owner-manager, DE11, wholesale and retail)

Ergonomic strains are actually a higher risk. You must stretch yourself, bend over, lie down, you must lie in the car on your side. That's nothing for pen-holders [office workers]. (Worker, DE01, wholesale and retail)

[asked about occupational diseases] Colleagues who work here don't have such things. Sometimes we have backache when lifting heavy objects. But in fact, tasks that are required are nothing special in construction. I would say, an accident could happen but not here in the company. (Worker, DE06, construction)

When assessing the similarities and differences in the risk awareness of owner-managers and employees (contrasted by the researcher's assessment), there are two groups.

- In one group can be found companies where the researcher's assessment and the owner-manager's assessment (in several cases also the employee's assessment) are very close. However, in general the employees have a lower awareness of risks at the workplace or they report fewer risks at the workplace than employers. Perhaps this is partly because of a more restricted insight into other employees' workplaces than the employer.
- In contrast, in the other group of companies there is generally low or lower risk awareness on the owner-manager's side as well as on the employee's side in comparison with the researcher's assessment. In two cases, however, the researcher analysed that the employee's risk awareness was more comprehensive than the owner-manager's.

A more frequent deviation between researcher assessment and owner-manager's risk awareness was noted especially concerning psychosocial strains. They include, for example, time pressure and tight deadlines, contact with difficult or demanding clients or partners, and travelling. This is of special relevance because only recently there has been a legislative change explicitly stating the necessity to assess psychosocial risks at the workplace. Psychosocial strain or stress was reported to be lower by several companies which were in an economically safe position.

Chemical and biological agents (mostly for cleaning) and wet work are another category of risks that was frequently either not recognised as risk or assessed as a much lower risk than the researcher did. Furthermore, in several cases the risks stemming from electrical installations and risks from dangerous substances are underestimated when the measures to control the risks are implemented.

In one case, there was a striking difference between the manager's assessment of risks at the workplace (no risks at the workplace) and her description of the workplace (falling down the stairs, strenuous postures). In another case, workplace safety was restricted to questions of first aid, fire protection and avoiding stumbling accidents. In these two cases, the companies have commissioned an external service provider to ensure OSH. This might be a supporting argument in favour of the German *Unternehmermodell*, which transfers the obligation to conduct the risk assessment to the owner-manager, who must attend several seminars. It is possible that the lack of these seminars caused the huge differences found in the risk assessments from the researcher's and the manager's perspective.

3.2. Company OSH organisation and risk management practice

3.2.1. Practices of acquiring OSH knowledge

From the interviews, it can be assumed that more than half of the interviewed owner-managers actively gather information on OSH. They stated that they read a lot to learn more about workplace health and safety and how to prevent accidents or work-related diseases. Several information sources were named in the interviews. Seven of the interviewees mentioned that they had hired an OSH specialist and regarded the specialist as their main source of information. Reasons to hire an external provider are a high amount of work, a lack of OSH knowledge or the wish to fulfil legal obligations (for example when the external service provider conducts the mandatory written risk assessment).

Besides that, the internet, authorities, the statutory accident insurance bodies, networks, newsletters and trade journals were also named as important and main sources. Seven owner-managers practise

the employer model. They have participated in OSH-training measures and are allowed to do the risk assessment on their own. Three of them hired an additional OSH specialist.

Furthermore work experience, common sense and close contact with the employees in combination with open communication were mentioned as source of information. This matches to some extent the observation that risk awareness was also dominated by common sense and that typical risks were considered inherent and not manageable:

When trained in the profession, you learn how to behave, wear PPE [personal protective equipment], not to stand under heavy loads, to use checklists. (Owner-manager, DE05, construction)

You get instilled already in your vocational training that you should not touch the V-belt. You must not do that, of course, so you don't do it automatically. (Worker, DE01, wholesale and retail)

Again, common sense and professional training were perceived as sources of OSH knowledge. In this context, it could be observed that in some sample companies unskilled workers were predominant. While in two of them management took account of that, it remained unclear in others if there were special training measures in place for the unskilled workers. This is of importance, as unskilled or semi-skilled workers cannot rely on the same professional experience or on a skill set required in a professional environment.

It should also be mentioned that some of the interviewed employees named their owner-manager as the most significant source of information regarding OSH. While it shows that OSH communication took place in the companies, it can also lead to a less critical workforce in cases where the owner is the only or very dominant source of information. This is relevant because not a single German MSE in the sample had a worker representative.

In general, the research team had the impression that some of the answers were biased by social desirability. When asked about sources of OSH knowledge, the interviewees listed some sources even though they are not used frequently. So sometimes the level of knowledge was low, but when asked for sources of information they named several. Therefore, the results need to be treated with care.

3.2.2. Risk analysis practice

According to the OSH Framework Directive 89/391/EEC and, consequently, to the German Occupational Safety and Health Act, every employer is obliged to conduct a risk assessment in order to determine and assess the occupational risks. The detected risks and the consequences (for example protection measures) need to be written down. The responsibility for making sure that a risk assessment is conducted lies with the employer and it has to be done irrespective of the size of the company. In practice it is not unusual that external (or internal) service providers (safety expert, occupational physician or another professional) do the main task.

Nevertheless, not all of the case companies conducted a formal and annual risk assessment. In total, seven owners stated that there is no formal risk assessment: one from the manufacturing sector and two each from the wholesale, transport and accommodation, and food service sectors. Only in the construction sector did all case companies conduct frequent and formal risk assessments. It can be assumed that this is because there are more regulations in the construction sector (for example on sharing risk assessment information between companies on site).

However, irrespective of the presence of these risk assessments, two of the companies from the construction sector described it as not useful. One of the employers stated that the problems are more at the individual level and are thus not tackled in the risk assessment. This view was confirmed by other companies that conduct a risk assessment but stated that it is not useful or is useful only to some extent and it does not bring new insights in comparison with other routines such as daily observations.

The measures are too general. Some are implemented but these are the ones which are already internalised. For example, you must not stand near the excavator. I don't need a regulation to recognise this, this is pure common sense. (Owner-manager, DE05)

The companies that do not conduct a formal risk assessment detect hazards by chance or use their common sense and prior work experiences to do an informal risk assessment. Using common sense

was also named as a strategy to detect hazards by several of the companies that do have a formal risk assessment in place.

I keep my eyes open. This is a good way of doing the risk assessment. (Owner-manager, DE11, wholesale and retail)

In the companies that did the risk assessment, it was done either by the owner (when they participate in the employer model) or by an external service provider. Positive and negative aspects could be attributed to both strategies. Some of the owners performed a rather informal risk assessment, only because they are obliged to do so. Others were probably not sufficiently trained. For example, one employer described that she was doing an assessment based on the training she received from the statutory accident insurance body, but when there was an inspection by the labour inspectorate they detected even more hazards that she was not aware of.

As a result of the interviews, it can be assumed that an active role of the employer in the risk assessment leads to a higher awareness of OSH-related topics. In cases where the risk assessment is done only by service providers, the opposite can happen and lead to reduced awareness among the top management. In one manufacturing company, the safety processes were almost exclusively managed by the safety delegate, who by legal definition should only support the owner-manager. Almost the only time the management was involved was when material or personal protective equipment (PPE) needed to be purchased.

In conclusion, active involvement of the owner in the risk assessment was described as very helpful. Employees were rarely involved in the risk assessment and no special emphasis was laid on psychosocial strains.

3.2.3. Risk communication practice

There is a great variety in risk communication patterns in the German sample. There are some companies that have a rather structured, formal and standardised approach. Especially in the manufacturing and construction sectors, the employees receive instructions frequently. Firstly, every new employee receives the safety instructions for the machines and technical devices. Secondly, when a new machine is installed all the workers receive the instructions for it. Thirdly, companies that work on varying construction sites often reported that instructions on the daily tasks and the corresponding safety measures are provided by the owner or a supervisor.

In addition, some companies have frequent meetings in order to discuss new developments and related topics. Other positive examples of formal risk communication approaches were mentioned by a company from the transport sector. Before the external service provider inspects the company and provides training for the employees, they are asked about the topics they are interested in, complaints and wishes. The same applies to the annual maintenance of the machines, when a checklist is provided to the workers. This example illustrates that the company is highly motivated to involve the employees in risk communication. This stands in contrast to most other companies with a formal approach: they rarely involve their employees, but there is one-way communication from the owners or external service providers towards the employees.

Nevertheless, irrespective of the existence of formal routines, several interviewed workers (and also some managers) emphasised the relevance of good social relations. According to the interviewees, good social relations facilitated the process of talking informally about problems that occurred.

There were a number of companies that had no formal approach towards risk communication; this especially applies to the accommodation and food service sector. There were no standardised communication paths, and a good working atmosphere was required in order to enable sufficient communication. The owner-manager of a manufacturing company stated when asked about risk communication and providing safety information: 'In the end we do it. Not formally, but generally we do it' (owner-manager, DE19, production of paper-testing technology and machinery, 28 employees). The interviewed employee from the company also confirmed that they received information once a year and spoke with the manager about risks.

One company from the accommodation and food service sector reported that it actively used the information gathered through the risk assessment in order to communicate with the employees about

these problems. This company was described as having open communication and there were frequent OSH-related meetings, in conjunction with irregular meetings when a need was detected. It also provides a newsletter to colleagues, clients and suppliers that also includes OSH-related topics.

Only a few companies used such media channels for information. It was mainly found in companies with machines or technical devices that require certain safety standards. Only two companies had written communication paths for emergency situations in their facilities.

All in all, it can be stated that most of the German companies use a combination of formal and informal communication paths. OSH is usually one of many topics in the general formal or informal meeting routines. It is also part of occasional meetings, for example when new equipment or machinery is purchased. The formal communication paths are mainly from the owner to the employees, and the informal paths more frequently include the employees.

3.2.4. Routines ensuring safe and healthy work

In some case companies, no or only few routines to ensure safe and healthy work could be identified. However, instructions and frequent meetings as described in the previous section were named as relevant routines in order to prevent accidents or to decrease the psychosocial strains. Especially when a new employee was hired, there were standardised safety instructions, mainly for companies in the construction and manufacturing sectors.

Besides that, several interviewees mentioned that a good social climate and dialogue among colleagues, but also with the owner-manager, are good routines to ensure safe and healthy work. So companies working on varying construction sites have frequent discussions about risks in the current workplace. In addition, they observe each other routinely in order to detect hazards. Thoughtfulness was also regarded as a good routine by one employer.

PPE was named by all companies from the manufacturing, construction and wholesale sectors as a relevant routine. Equipment included protective gloves, safety goggles, protective shoes, earmuffs, leather aprons, helmets, knee pads and facemasks. PPE was also common in the accommodation and food service sector. The workers in one of the case companies wore protective shoes. In others, employers provided gloves for cleaning purposes. One employer added that there are two hand lotions for the employees to ensure skin protection from wet work.

While in some companies the workers were urged to wear their PPE, in others its use was considered an individual responsibility and there were not frequent checks. In some interviews, employers even showed understanding of employees not using PPE and demonstrated in a way that doing the job quickly is more important than doing it safely:

PPE is not always used but depending on the exposure. Workers do not use ear plugs [when working with the plate compactor] if the area is not so big. I can understand if they are not willing to go back to the car just to pick up the hearing protection. (Owner-manager, DE05, construction)

Thus, even though PPE is present, it is not necessarily used. The same applies to equipment which was in place to avoid strenuous work. One worker stated that the creeper dolly was not used frequently because it slowed down the work. In contrast, another worker described going into the shower with the hearing protection on, because he got so used to it that he forgot about it.

Good organisation was mentioned as a further relevant protective routine: Equipment was stored away, liquids were immediately mopped up after being spilt and the amount of dust was reduced by cleaning frequently. According to the case companies, the risk of accidents was reduced.

Furthermore, good work organisation was mentioned by two employees as a way to decrease the psychosocial stress by reducing the time pressure. So, when customers appear in waves, the workers prepare themselves (for example preparing meals in restaurants the day before, or before the busy work hours) to lower the stress level to a minimum.

When the responsibilities and duties are clearly delegated to certain employees, this can also be regarded as routine to ensure healthy working conditions. For example, in a company with a radiation source, only a few employees have access to it.

The frequent maintenance of the machines and technical devices was also mentioned as helpful in order to decrease the risk of an accident.

3.2.5. Use of external OSH expertise

There are two main sources of external OSH expertise that were mentioned by the interviewees. Firstly, there are private external service providers that are contracted and, secondly, there is the statutory accident insurance body.

Seven of the case companies have contracts with external service providers. Some of them solely write the obligatory risk assessment and check if the legal requirements are met, but some of them also offer further support such as training for the employees or mediation. If there is an external provider, it is regarded as useful and supportive because of its good knowledge and high quality. In addition, the support was considered to be a relief, because a lot of work is done by the professionals. Only one company reported that there was no added value due to the external support and thus it was cancelled.

The vast majority of the case companies had contact with the statutory accident insurance body. Those employers who participate in the employer model have been to an OSH-related training course at least once. In addition, the statutory accident insurance body also does inspections of the workplaces and provides information. As the insurance body differs between sectors, the support and control of the statutory accident insurance body was perceived differently by the interviewees. Some had the impression that it was only a safeguard, but it had no added value. One owner stated that the person from the insurance body was 'living in an ivory tower' and only gave advice that the owner-manager regarded as being irrelevant to the daily duties. In contrast, some interviewees highly valued the support of the insurance body because new hazards were detected, there was relief from time pressure or they provided useful information material.

Other external support schemes mentioned by the case companies were trade control, hygiene checks by authorities, occupational physicians (named by two companies), professional associations and guilds. Finally, when the company belongs to a larger *group* of companies, sharing experience with the (safety) managers of the other subsidiaries, who often work with similar products and in similar conditions, can also be a useful source of expertise to help with a specific issue.

3.2.6. Motivation of company OSH practice

The main source of motivation for the owner-managers to look after aspects of OSH is to be found in their norms and values, that is maintaining the health of the employees. Some owner-managers extend their intrinsic motivation to their own health. However, when questioned further, this motivation was extended mainly to economic reasoning: when employees are healthy, there are fewer burdens on the company (reorganising work, economic burden). Another owner-manager stated that it would be difficult to hire new workers if an employee got sick.

Another motivational aspect is compliance with legal obligations. They play an important role in the management of OSH in a number of the German sample companies.

We do what the legislature requires us to do. Basically, this is the foundation of our activity.
(Owner-manager, DE14, manufacturing)

However, some employers would not admit it, because they feel that regulation is not needed and common sense could be used instead.

We implement these regulations. Of course we do it depending on the situation. The measures have to be appropriate. (Owner-manager, DE05, construction)

An aspect which is closely related is the awareness of checks, for example by the labour inspectorate or by other authorities, which could impose fines if the legal requirements are not fulfilled. This goes hand in hand with the probability of inspections from either the statutory health insurance body or the public authority. One owner-manager feared a penalty by the insurance body in the event of an occupational accident. However, one interviewee also felt that more inspections could contribute to the improvement of OSH.

With more inspections there would be the possibility that more would be done in the field of OSH. (Owner-manager, DE12, manufacturing)

Several owner-managers also stated that OSH is already a routine (learned during vocational training or by practice over years) and that they simply continue this.

In one case in the accommodation and food service sector, it was demand from customers that made the employer implement an OSH measure (gloves). Another interviewee, from the transport sector, also stated that the clients' quality requirements are a motivation for OSH.

Finally, one owner-manager answered that the requirements and rules are set by the mother company and therefore this has an influence on the company's OSH management.

In relation to the workers' motivation for, interest in and engagement in OSH, only a few employees gave answers. They mostly focused on their own health and/or the health of their colleagues. One employee stated he wants to go home healthy to his family and wants his colleagues to be able to do this as well.

Only a few interviewees mentioned obstacles to implementing better OSH measures. One owner-manager stated he had too little time to acquire OSH knowledge. Another explained that the regulations of the commercial client were too strict and kept her from improving OSH in her company.

Positive effects of regulations stemming from the field of hygiene or food hygiene have been reported.

3.2.7. Worker participation

Almost all employees and owner-managers report very good social relations and a positive working climate. This includes open communication, constructive criticism and sharing of work in peak hours (if possible). However, no workers' representation bodies have been reported in any of the case companies.

In most cases, employees are not included or consulted in the workplace risk assessments. In a few cases, informal inclusion in the risk assessment or common discussions of OSH topics were reported. In one company, the employees make proposals for new equipment or for organisational measures.

The employees of another company stated they could report any problem to the management; however, the management complained about a lack of contributions from the workers.

One owner-manager stated in the interview that the social relations improved significantly after a restructuring of the company that went together with cutting down staff number. This view was confirmed by the interviewed employee.

Almost all owner-managers attributed a high level of responsibility for safety and health at the workplace to themselves. Most of the workers also attributed a high level of responsibility to the owner-managers.

Most of the owner-managers and the workers also attributed a high level of responsibility to workers. In isolated interviews, the responsibility of the workers was even perceived as higher than the responsibility of the employer:

To some extent, the management is responsible, for example that the training is frequently organised. But first and foremost, everybody is responsible for oneself, for example for the helmet, the safety goggles and the gloves. Because the management does not know how one gets on the site and what the conditions are. (Worker, DE13, construction)

Only a small proportion of the workers and of the owner-managers attribute only a medium level of responsibility to the workers.

All in all, formal worker involvement was rather limited in this sample. Nevertheless, many workers emphasised the importance of good social relations in order to talk about OSH-related topics informally.

3.2.8. Good OSH practice examples

In only a few cases could the researchers identify examples of good OSH practice in the companies visited.

In general, good OSH practice in micro- and small enterprises does not happen in formalised ways but is rather an everyday routine. Several interviewees stated that, if a dangerous situation is identified or a problem becomes apparent, there is often immediate communication between employees and management, and a solution is usually found and promptly implemented. The starting point for this fast and targeted problem solving and hands-on OSH practice is the good social relationships in MSEs and the conviction of managers that the health of employees is indispensable (see sections 3.2.6 and 3.2.7)

In addition, we could identify a good practice in a company from the accommodation and food service sector that demonstrates how simple and effective but also almost surprising solutions are found. A regular customer who usually comes to the coffee house criticised the lunch multiple times, complaining about the oils used for the preparation of the meals. The complaint was discussed between staff and manager. Therefore, the manager and employees decided to invite the customer to a test-lunch where they varied the oils and other ingredients. This led to a decrease of stress on both sides and has already been repeated several times.

3.2.9. Effectiveness of OSH management practice

Most of the companies had a medium level of risk control (as assessed by the researcher) and a medium level of knowledge about whether or not the level of control is sufficient, followed by several companies with high risk control and a high level of knowledge about whether or not the level of control is sufficient. Both risk control and knowledge are assessed as low in only a few companies.

In some cases, the researcher assessment of the level of risk control was rather vague for lack of information gained during the interviews.

3.2.10. Classification of company OSH strategy

When analysing the overall management approach of the companies visited, it is remarkable that several categories were hardly used (defensive, proactive and authoritarian), whereas most of the companies' management approaches can be classified as reactive, minimalist, communicative and participatory.

As regards the compliance type according to the typology of Hasle et al. (2012) most of the companies are of the type 'standards must be met', whereas only one company belongs to the type 'avoider'.

There is no clear picture when looking at typical links between the risk awareness level and the quality of OSH practice.

The same applies to the company size effect for OSH strategy. Some interviewees stated a positive effect of the small size of the company (better communication, more participation of the employees); on the other hand, other companies stated that larger companies can provide better OSH because of more systematic approaches, more resources and specialised staff or service providers.

3.3. Mechanisms

Determining factors

- **The role of legislation and sector-level regulation**

The employers of the German sample named external service providers, the statutory accident insurance bodies and sector-level associations as the main sources of information regarding legislation and sector-level regulations. The internet, newsletters and professional associations were also named as significant sources of information. In addition, the sources of information on OSH mentioned in section 3.2.1 also apply.

Furthermore, several owner-managers stated that they gathered knowledge on sector-level regulation through their apprenticeships. In particular, interviewees from the construction, wholesale, retail and repair, and transport and storage sectors referred to their apprenticeships as relevant sources of information.

Besides that, the owner-managers who participate in the employer model stated that they receive information through their statutory accident insurance bodies in the (annual) OSH-related training courses. These courses are specialised in the sector.

Nevertheless, six of the interviewed companies named no (or few) relevant sources of information and provided only limited information on relevant regulations or legislations. An interviewee from the wholesale, retail and repair sector, for example, mentioned that 'there are some regulations' and added that they are perceived as 'normal' and thus saw no need for further elaboration.

Relevant regulations mentioned by interviewees of the construction sector covered risk assessment, technical safety measures, safety instructions, ergonomic design of the workplaces, use of protective equipment, especially when dealing with chemical agents, safety of machines and safety on construction sites. Additional regulations named by the interviewees of the other sectors were fire safety regulations, product safety regulations, traffic laws and hygiene regulations.

Other relevant political domains described in the interviews are technical safety and consumer protection.

All in all, it can be stated that the general knowledge about sector-level regulation and legislation varied among the interviewed case companies. In some of the companies there was a high level of knowledge (especially when they acquired knowledge from external service providers and the statutory accident insurance body) and in some a low level (especially in the accommodation and food service sector). In general, the most relevant regulations were known by most of the case companies.

▪ **The role of support from authorities and from external service providers**

More than half of the case companies reported that they were supported by the statutory accident insurance body. In these cases, the owner-managers either participated in the employer model and thus attended OSH related trainings of the statutory accident insurance body, or reported inspections by the respective statutory accident insurance services.

Some of the case companies received support from an external service provider that was directly approached by the companies. Further external support came from the chamber of crafts (*Handwerkskammer*), the labour inspectorate (two of the case companies reported it, even though it is rare for companies of this size, and one mentioned a local OSH authority) and sector associations. In cases where authorities were involved in the supporting schemes, the case companies were mainly approached by them and did not actively seek support.

The experience reported with the external services varied and was almost equally described as positive and negative. While some of the interviewed companies regarded the external support as helpful, others stated that they did not benefit from the support and/or described both positive and negative experiences. The rest of the sample did not report about external supporting schemes or did not state the quality of those schemes.

When the quality of the supporting schemes was judged as negative, the interviewees named the following reasons: the support was not applicable to their daily routines, not necessary, inadequate, or perceived as a check or as too academic. They suspected that the support organisation was not aware of the risks of the specific company and they perceived its support as inadequate.

One case company from the accommodation and food service sector gave various examples of external supporting schemes. The company receives support from an external service provider, local authorities and the statutory accident insurance body. The owner-manager approached these institutions actively because the company participates in various award schemes. Beyond this example, only few external support schemes or authorities were named and the case companies rarely initiated the contact.

An owner-manager who is very engaged in OSH issues and the well-being of the employees in his coffee house stated that the amount of OSH-relevant information was increasing and it was becoming

more difficult to handle this: 'It is so much information, one does not know where to start and where to end' (owner-manager, DE18, coffee house, 20-49 employees).

▪ Value chain effects on company OSH management

In the manufacturing sector, the clients have an impact on the OSH management of the case companies because they demand their own safety rules. Clients' influence has a direct effect on all the employees, for example when they are all working on the same construction site. A case company works at changing construction sites and prior to the first day of work a contract with binding safety regulations needs to be signed. In one of the case companies, only certain employees visit other companies, for example to repair the machines, and thus the OSH management of the case company is not affected directly. Nevertheless some good experiences were adopted by the case company.

A few other case companies reported positive examples of clients' influence on OSH management. In one, a client requested a certain certification scheme, which was introduced. In another, the communication with the clients had an influence on the overall risk assessment. Both cases are from the construction sector.

However, the clients' influence does not have to be positive. In a company in the accommodation and food service sector, clients requested that the employees wear gloves while working with food. The reason was probably the clients' expectations in terms of food hygiene. While it was regarded as positive by the owner-manager, the prolonged and frequent use of gloves can cause skin irritations and diseases. Another influence of clients on OSH management that was frequently mentioned by the interviewees was that they impose time pressure. The pressure was mainly attributed to the nature of the business. In addition, a company from the construction sector mentioned that there is a seasonal fluctuation of orders, which imposes financial and time pressures that need to be tackled in the overall OSH management.

According to the interviewees, there was only limited influence of the suppliers on the OSH management of the companies. Two case companies from the construction and transport sectors reported that certain quality standards are required by the suppliers and have to be followed. The effects were assumed to be positive. Furthermore, a company from the wholesale sector described that there was indirect influence from the suppliers due to the market situation.

All in all, it can be stated that, according to the German sample, there is a considerable value chain effect of clients (mostly positive) in some cases. The reported effect of suppliers is rather small.

▪ The role of management style and social relations

The social relations among all the case companies were described as very good, familial and personal by the interviewees. This applied to the relationships between the employees but also between the workers and the owner-managers. This observation matches with experiences from other studies, where informal social relations in MSEs were also reported as strong and almost familial. However, it should be mentioned that most of the employees were selected by the owner-manager. In one case, the owner-manager was present. Thus the employees' answers might have been biased. However, the researchers also had the impression that the social climate was good in most of the companies.

The motivation of the owner-manager to engage in OSH measures was described as having a decisive influence on the OSH management of the company. If the level of interest is high, there is a higher possibility that further measures are taken or additional information is gathered. However, a high level of motivation does not necessarily lead from a common-sense-dominated ad hoc approach to more structured, systematic or even proactive OSH management.

Some owner-managers mentioned that it is their aim to apply certain OSH-related measures in order to keep their employees healthy. So one of the interviewees stated that it is a 'matter of the heart' to promote the health of his employees. This illustrates the positive influence of good social relationships and the advantages of small companies. The familial climate in combination with the low number of employees leads to a flat hierarchy or informality and enables the employees to talk more openly. Moreover, a good social relationship among the employees and also with the owner-manager (hence,

a good social climate) is a crucial factor facilitating open discussions, because these discussions enable the employees to also talk about problems constructively. Especially in sectors with a high frequency of client contacts (for example in restaurants), an open discussion helps to reduce psychosocial strains.

In one example from the construction sector, the motivation of the management on OSH was higher than the motivation of the workers, which led to a paternalistic management style.

Nevertheless, in some of the case companies the social relations were not as important because the workers have to do their job individually. This is not necessarily negative, but in one special case there was infrequent communication among the workforce in combination with a high pressure and thus a high degree of psychosocial strains. Discussions facilitated by the owner-manager were mentioned as a possible way of relieving the pressure and strains.

According to the German case companies, there is considerable influence of the official regulations on the OSH management. The interviewees stated that it is a main driver for OSH, alongside the characteristics of the owner-manager and the social relations.

In conclusion, it can be stated that the motivation and engagement of the owner-managers have a decisive influence on the overall OSH management of the German case companies. Moreover, a good social climate helps to decrease the burden, especially the psychosocial strains.

▪ Other factors

The company size has an influence on the OSH management, because of enhanced social relations among the workers but also with the owner-manager. The German case companies judged the impact of the company size differently. One interviewee did not see any influence of the size. Three interviewees prefer to work in smaller companies, as the relationships with colleagues are closer and the OSH management is perceived as simplified because there are fewer employees. In contrast to that, two interviewed owner-managers stated that they perceive the OSH management in bigger companies as easier because they had more resources (for example dedicated personnel) to engage in OSH management. This is also underlined by an employee's observation. He stated that in the company where he had worked previously there were more OSH-related measures and meetings. He assumed this to be an effect of a company with more employees: 'In bigger companies safety is more important than in smaller companies. In my view' (employee, DE11, car repair workshop).

Depending on the sector, there is an impact from authorities and official regulations. All interviewed companies from the manufacturing, construction and transport sectors regarded the impact as high. Nevertheless, several companies from the other sectors also saw an influence of the legal regulations.

Furthermore, the previous work experiences and common sense of the owner-manager and the workers were named in several case companies as having a decisive influence on the OSH management. The educational background and OSH-related training were also mentioned several times.

There were decisive factors that were only mentioned by few case companies, but they provide a good overview. The economic burden when an employee gets sick was described as a main driver to engage in OSH measures. When a specialised employee is absent as a result of a work-related accident, this may cause major economic problems for a small company.

Some of the interviewed employees stated that OSH measures were implemented after they were requested by an employee or client or after an accident happened. The impact of business vulnerability on OSH regulations varies among the case companies. Some of the companies experience a negative effect because there is a high time and financial pressure and other companies experience a positive effect due to high engagement and legal regulations.

One manager from the construction sector described the effect of the technical innovations over the past years: on the one hand there was a positive effect because new elevators or cranes reduced the ergonomic burden and on the other hand the time pressure increased because of an increase in reporting schemes. The interviewee stated that too many preventive measures cause more accidents because the employees are overloaded by regulations.

According to a company from the wholesale sector, the location may also have a considerable influence on OSH management. The interviewee stated that there is less competition in a small town, which makes work and time management easier and lowers the financial pressure.

3.4. Summary and key findings

All in all, the German case companies showed a great variety of OSH practices and strategies towards OSH. It can be estimated that the sample included several companies at the 'better end' of German MSEs because the method of selection of the case companies and thus they are not representative of MSEs in the sectors included. Because of methodological constraints, the analysed case studies are not expected to reveal sufficient information about companies from the 'worse end' of the spectrum on problems and concerns of small and micro-enterprises, their motivation for OSH and the resources that they can use, because these companies are not expected to participate in interviews and to disclose information that would shed an unpleasant light on them.

When considering awareness of acute risks (for example slips, trips, physical hazards) and risks with long-term consequences (for example musculoskeletal), a prioritisation of acute risks over long-term consequences could be observed. Especially the awareness of psychosocial risks was notably low in this sample, which is striking when considering a recent legislative clarification that explicitly emphasised the importance and necessity of conducting a risk assessment that includes psychosocial strains. The reported awareness of psychosocial risks was lower in case companies which were in an economically safe position because they suffered less financial pressure.

Several interviewees reported that they perceived 'typical risks' as part of their job (for example cuts or bruises in the accommodation and food service sector) and regarded them as being of minor importance. This leads to a lower level of risk control, as preventive measures are rarely taken. In addition, the use of protective equipment led to an underestimation of risks in some case companies, because the risks were perceived as being under control.

It could be also observed that the detection of acute risks did not necessarily lead to the implementation of measures to prevent them. Those companies that had a proactive management approach had a higher level of implementation of improvement measures.

Companies in Germany are obliged to conduct a written risk assessment, and the responsibility to do so lies with the employer. However, seven of our 20 case companies did not conduct a written risk assessment. Some owner-managers who did not conduct a written risk assessment stated that they assess the risk by using common sense, which might lead to an introduction of ad hoc measures, but not to a comprehensive understanding of all risks present.

Only in the construction sector did all case companies conduct a risk assessment, which might be because of stringent regulations affecting the sector. In general, the influence of regulations depended on the sector and was thus especially high in companies in the manufacturing (three of four conducted a written assessment) and construction sectors. These case companies were more likely to conduct a risk assessment and it can be assumed that they did so because they were used to adhering to industrial and sector regulations.

But even when the risk assessment was conducted it was not considered useful by some of the interviewees. For example, an owner-manager from the construction sector reported that there are problems on an 'individual level' that are tackled insufficiently by the written risk assessment: 'In winter, workers would never wear a safety harness when entering a newly made shaft, because then they would need to put it on, and they don't do it. They often do not realise that the issue affects them. I agree with this' (owner-manager, DE05, 10-19 employees).

In several cases, the management did not use the risk assessment for planning and implementing measures. In these cases, the risk assessment remained a standalone action done for formal reasons. This was also true of companies that participated in the German employer model⁷ (*Unternehmermodell*) as well as those that had external support by a service provider. All in all, the actual participation of the

⁷ In the employer model, employers must attend an OSH training course which qualifies them to carry out certain OSH measures in the company.

owner-manager in the OSH management seemed to be the most relevant influencing factor in this context.

In case companies lacking an overall informal approach to analysing workplace risks, but also in case companies with a formal approach, the owner-managers referred to using common sense or their professional experience as a means to detect and to assess risks. This is critical, as standardised processes such as risk assessment should serve to broaden the perspective in such a way that the management detects risks which are beyond the common. As a consequence, a company culture that heavily relies on common sense as basis for risk awareness and risk management will have more difficulties in detecting and managing more complex or long-term risks.

For workers, the main source of OSH information was often in-house communication and therefore dependent on the owner-manager's OSH knowledge. With regard to the acquisition of OSH knowledge, especially managers from companies that lacked formal OSH management or routines emphasised the relevance of common sense (that is sound reasoning and a layman's risk assessment based on practical experience) and they stated it was their main source of information, alongside the professional education or vocational training (for example apprenticeship). As one manager stated:

The measures [as derived from the risk assessment] are too general. Some are implemented [by the employees], but these are the ones that are already internalised. For example, you must not stand near the excavator. I don't need a regulation to recognise this, this is pure common sense. When being trained in the profession, you learn how to behave — wearing PPE, not to stand under heavy loads, and so on, to use checklists, in order not to forget anything. (Owner-manager, DE05, 10-19 employees)

For both parties, the dominant practice must be seen as critical, as it reinforces deficits and one-sided perceptions, for example in the risk awareness and risk assessment, as the owner-manager's restricted OSH knowledge will be the only or main source of knowledge, and additional information will not be found and put into practice.

The involvement of employees in the OSH management is rather restricted in the German sample. Good social relations among employees and with the owner-manager (which could be observed especially in the smaller companies of this sample) seemed, however, to facilitate the communication about OSH and OSH-related issues on an ad hoc basis, especially when there were no formalised routines to initiate this exchange of information. If companies had formalised routines and communication paths, those were mainly used as one-way communication from the employer towards the employees.

However, it remains unclear if good personal relations really have any impact on the improvement or the management of OSH. Practically all interviewees emphasised the good personal relations in the company regardless of the (OSH) management being dysfunctional or proactive or the level of risk detection being high or low.

It can be concluded that what are perceived by many interviewees as contributing factors to OSH performance are in reality factors that prevent MSEs from improving. In the interview context, several interviewees mentioned common sense and informal routines as being incompatible with or even adverse to structured management routines, as if the management needed to decide to either make occasional workplace visits or conduct a risk assessment, either informal talks or meeting routines, either ad hoc improvements or routine management schemes. The opposite is the case: even when employers do a risk assessment, they can still have additional workplace inspections; OSH meeting routines do not require stopping informal communication.

As a consequence, neither good informal relations nor management motivation lead to better OSH when they are mentioned as sole factors. They can be described rather as typical patterns in small organisations. With regard to the employer's motivation, it can be explained by the fact that when owner-managers refer to their norms and values as drivers to care for the safety and health of their workers this is not necessarily altruistic (caring for the workers' wellbeing more than for economic success) or OSH reasoning (providing safe workplaces), but has an economic context. Especially the smallest companies suffer when skilled workers are absent due to (work-related) accidents.

The employer's motivation can however be relevant in the context of other factors. For example, managers' previous experiences (for example from a former position in another company) had a positive impact. In such cases, the owner-managers had experienced structured OSH routines in the work environment and were able to adopt these measures in their own company.

Irrespective of participation in the employer model or of the use of external services, an owner-manager actively participating in OSH management is highly important for the integration of OSH issues in the management process (through conducting and actively using the risk assessment). Some interviewees stated that an external consultant was appointed to conduct the risk assessment, mostly to comply with legal obligations. They did have a positive influence when the employer (or the management) also had a reasonably high degree of motivation and was actively involved in the OSH management.

In a few sample companies, external OSH-related needs from clients (for example because they requested a certification scheme or management system) were reported. In these cases they had a positive impact on the OSH management of case companies.

Companies that had a more proactive management were better at identifying risks that will affect the employees' health in the long term and they more often had measures in place to address these risks. This indicates that a better structured approach to workplace safety is one key to improving OSH in MSEs. It could also be observed that, in bigger companies of the sample, formalised management structures supported the OSH management.

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5 Appendix

Table 5 Overview of the sample

Case no	Number of employees	Type of enterprise	Main business functions
Manufacturing			
DE02	Small (10-19)	Independent (B2B)	Preparation and packaging of crabs
DE12*	Micro (1-5)	Independent (B2C)	Small artist's forge, metal construction
DE14	Small (20-49)	Independent (B2B)	Manufacturing of air-conditioning units
DE19	Small (20-49)	Independent (B2B)	Production of paper-testing technology and machinery
Construction			
DE05	Small (10-19)	Independent (B2C)	Underground construction, civil engineering
DE06	Small (10-19)	Subsidiary (B2C)	Renovation of buildings
DE13	Small (20-49)	Independent (B2C)	Electrical installation
DE17	Micro (5-9)	Subsidiary (B2B)	Construction planning, project management and fund raising for building planners
Wholesale and retail			
DE01	Micro (5-9)	Independent (B2C)	Maintenance and repair of motor vehicles
DE09	Small (20-49)	Subsidiary (B2C)	Pharmacy
DE11*	Small (10-19)	Independent (B2C)	Maintenance and repair of motor vehicles
DE16*	Micro (5-9)	Subsidiary (B2C)	Optician
Transport and storage			
DE07	Micro (5-9)	Independent (retail)/franchise (post office) (B2C)	Retail of electronic devices, with integrated post office and lottery counter; 2 of the 8 employees work at the post office
DE08	Small (20-49)	Independent (B2B)	Storage of goods, management of international freight transport by road; vehicle fleet is outsourced to a Polish daughter company
DE10	Small (10-19)	Subsidiary (B2B)	Franking and sorting of letters
DE20*	Micro (5-9)	Independent (B2B)	International freight transport by road, including dangerous goods
Accommodation and food service			
DE03	Micro (5-9)	Franchise (B2C)	Snack bar, fast food

Case no	Number of employees	Type of enterprise	Main business functions
DE04	Micro (5-9)	Independent (B2C)	Event catering
DE15*	Micro (1-5)	Independent (B2C)	Cafeteria
DE18*	Small (20-49)	Independent (B2C)	Coffee house, pastry, bakery
* = non ESENER-2 company			

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