

Improving compliance with occupational safety and health regulations: an overarching review

Executive summary

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This is an executive summary of a report that 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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Cataloguing data can be found on the cover of this publication.

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Introduction

This executive summary briefly outlines the key findings of a research project that sought to provide an overarching review of the literature concerning external institutional support for improving occupational safety and health (OSH) in the context of the changing structure, organisation and control of work in the European Union (EU). The review is intended to inform a new European Agency for Safety and Health at Work (EU-OSHA) research programme on securing compliance and better OSH practice in EU Member States. The full overarching review and its findings are presented in two volumes. Consultations on early drafts strongly suggested a need to arrange the findings in ways that would maximise their readability and relevance for different readership groups. Therefore, the aims and intentions of the research, its methods, analysis and key findings, along with their implications for policy and further research, have been presented as concisely as possible in a final report, with the detailed analysis and substantiated findings of the overarching review being presented separately in a literature review.

The organising principles underpinning the research were designed to enable a more holistic appreciation of the system of support, and the relationships between its elements, in contributing to better OSH practice to prevent injury, illness and death at work. 'Better OSH practice' in this context includes better practice in proactively managing OSH risks, implementing OSH arrangements, and improving the extent and quality of compliance with the goals of the OSH regulatory scheme. It follows that, when discussing 'regulatory standards' and 'regulatory practices', the focus of the review was not limited to standards established by the state and the practices that these standards require, but also considered knowledge about the influences of other actors and processes in the business and social environments in which work takes place, and that regulate the activities of firms. The overarching review explored this knowledge within the context of theories and analyses found primarily in regulatory and socio-legal literature.

The aim of the overarching review was, therefore, to examine current knowledge concerning a set of specific types of institutional support for substantive compliance and better OSH practice within a rigorous theoretical framing of their context. The review focused on five areas that are typically affected by, and responsive to, changes in the structure, organisation and control of work in the EU and the contexts in which it takes place. They are:

1. social norms and social reporting strategies, and corporate social responsibility (literature review, Chapter 3);
2. economic incentives and the business case for OSH (literature review, Chapter 4);
3. the role of supply chain relations in supporting OSH (literature review, Chapter 5);
4. OSH prevention services (Literature Review, Chapter 6); and
5. strategies and practices adopted by OSH regulators (literature review, Chapter 7).

The overarching review also explored the connections between these five areas that contribute to supporting compliance and lead to better OSH practice, and examined each of the areas within the changing social, economic and political contexts in which they are situated. Exploring these five areas therefore illustrates both challenges related to these contexts and the effectiveness (or otherwise) of responses to them. The final report and literature review argue that none of the support types studied exists in isolation. In fact, the challenges they seek to address, which do not exist in isolation either, create a need for connectivity. The analysis situates these elements in relation to one another and the wider contextual determinants that affect them all. The aim of doing this was to enable the exploration of the significance of these interconnections for both future policies and further research within the wider programme of which this project is part.

Very few of the important implications for OSH arising from the COVID-19 pandemic were addressed in the published literature that is the main focus of the final report and literature review. Nevertheless, in both the final report and the literature review, we have tried to capture something of the emergent literature in relation to the effects of COVID-19 on work, its lessons for supporting better OSH practices and its implications for future empirical research and policies.

Executive summary

Research methods

The final report and literature review use the term 'current knowledge' to refer primarily to knowledge in research reports and scholarly papers. The research methods underpinning both are therefore essentially those of an informed approach to reviewing recent literature. Most authoritative studies on regulating OSH, including in EU Member States, are written in English. The literature review is therefore primarily based on these sources. As far as possible, the literature review also sought to explore significant contributions from studies in other languages, often by consulting key informants of the studies in question. However, limitations of the research team's language skills meant that significant sources were occasionally missed, particularly in relation to reports and other grey literature available within EU Member States. We think it unlikely that these gaps will have seriously affected the major findings of the review, but we acknowledge that some of these reports and other grey literature may have been useful in understanding national variations. It is for this reason that our recommendations on further empirical research stress the need for new comparative research in which, in support of fieldwork, the relevant grey literature of different EU Member States is explored in greater depth.

The literature was reviewed according to standard procedures. Research questions were established in relation to each of the five areas under review, upon which the development of a set of terms to guide the search of the international literature in each case was based. We aimed to capture a broad range of publications in the peer-reviewed and policy-focused (grey) literature, including descriptive material and theoretical sources, as well as empirical studies (qualitative, quantitative and mixed-method studies). Where publications were assessed as relevant to our research questions, we followed up the references that they cited. Hence, some publications cited in the literature review predate 2015 starting date that we had initially thought appropriate for gathering 'current' knowledge.

Guidance from key informants was useful in directing the overarching review in each area, and additional references were pursued at their suggestion. Interviews and group meetings were held to consult informants in two slightly different ways: as guides to national sources and as sources of reflection on and critique of our emergent findings. We originally intended to undertake face-to-face meetings with individual informants and facilitate critical discussion through one or more workshops, where participants would have been asked to discuss the research outputs. Restrictions caused by the COVID-19 pandemic meant that this plan had to be modified, and interviews and discussion groups were conducted online. Follow-up consultations were undertaken as a result of these meetings. Despite the restrictions, the interviews and group discussions provided a surprising amount of further material and a useful critique of preliminary findings.

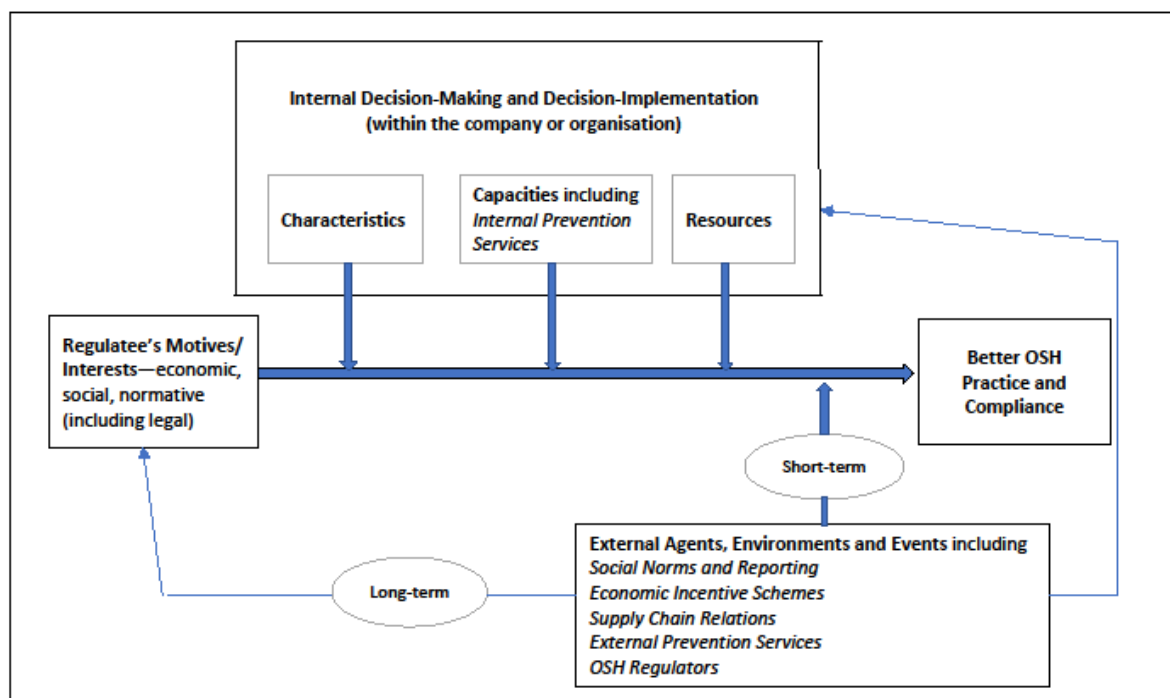
The analytical framework

As already noted, current scholarship takes a broad view of the range of actors in the regulatory process, the tools of regulation and the disciplines through which regulatory influence is examined. As Chapter 1 in the literature review argues, situating a review of the evidence of external influences on OSH practices within these frameworks is useful. The cross-cutting and systematic principles of analysis already present in this literature help in understanding processes involved in supporting better OSH practice, including compliance with OSH regulatory standards. It allows a critical and comparative evaluation of evidence of the effectiveness of the institutions and processes of support for compliance and better OSH practice, and more systematic identification of cross-cutting comparative themes, as well as allowing gaps in the knowledge to be identified.

Of particular interest for the review were new approaches to promoting, monitoring and enforcing compliance that have emerged in response to change in recent decades. Two features of the generic developments in regulatory thinking, policies and strategies prompted further reflection. The first, mentioned previously, is that, while the developments largely reflect a state's concerns and responses to regulation, they are broader than this. They acknowledge the involvement of private actors and processes in achieving what are regarded as acceptable levels of compliance with standards of conduct deemed appropriate by society. The second is that the wider critical socio-legal literature supports different interpretations of compliance (objectivist and interpretivist; substantive versus rule compliance)

and the internal processes involved in complying (motivation, learning how to comply, institutionalising compliance), all of which were relevant to the review. In particular, as its analytical framework, the review has drawn upon Parker and Nielsen's 'holistic compliance model', which explores the external factors influencing best OSH practice and substantive compliance with OSH regulations and the interactions among these (see Figure 1).

Figure 1: Parker and Nielsen's holistic compliance model, applied in this overarching review



Source: Adapted from the holistic compliance model figure in Parker and Nielsen (2011, p. 5)

The model identifies sets of factors that influence a firm's compliance behaviour. Internal factors relate to the firm's interests or motives for compliance, and decision-making characteristics and decision-implementation capacities and resources. The latter could cover OSH knowledge and skills, resources and processes for complying, an internal prevention service (if there is one), and the literacy and education level of managers and workers, among other factors. The external factors influencing compliance are external agents, environments and events. A key external factor is the OSH legislation in each Member State, which gives effect to the Framework Directive on OSH (Directive 89/391/EEC). External factors also include the five mechanisms for supporting compliance and best practice that are the focus of this project — (i) the activities of OSH regulators, (ii) external prevention services, (iii) economic incentive schemes, (iv) the role of supply chains and (v) social reporting. These five mechanisms influence a firm's motivations to achieve better OSH practice and compliance, its decision-making characteristics and its decision-implementing capacities and resources for achieving better OSH practice and compliance. Other external actors with the potential to influence OSH compliance and better practice include employer associations, unions and worker organisations, OSH auditing and certification bodies, and, of course, those in the wider political, economic and social contexts. The relationships between these factors and compliance are summarised in Figure 1 of the final report and also in Figure 1 of the literature review.

This said, although regulatory theory is well suited to the overarching nature of the review, and was the theory on which our analysis was primarily based, the review also recognises that other theoretical frameworks (for example those based on institutional theories; programme theories; ways of understanding industrial relations; or critical management and accounting theories) are also relevant to some of the literature reviewed. However, although the approach we have used has some limitations,

which we discuss in Part 1 of the final report and Chapter 1 of the literature review, we think that, overall, the concepts and principles from the regulatory literature have provided a useful context within which to consider many of the findings emerging from the overarching review. These concepts and principles help in understanding the institutions and processes involved in securing compliance and better OSH practice and in making critical and comparative evaluations of the evidence; they also provide a robust framework for the identification of future research needs.

The following sections outline the key findings from the overarching review. A more detailed discussion of the relevance of these findings to EU-OSHA's future research programme can be found in Part 3 of the final report. We have briefly summarised some of the key recommendations arising from this discussion in the final sections of this executive summary.

Findings of the overarching review

The brief summaries here are based on those included in Chapter 8 of the literature review; Part 2 of the final report presents a detailed discussion of the same findings. In addition to noting the policy relevance of some of the key findings through 'policy pointers', in this executive summary we have also tried to indicate the relevance of some findings for further research through 'research pointers'.

Contexts, change and the measurement of OSH outcomes

Chapter 2 of the literature review looks at the consequences of changes in the nature, organisation, structure and control of work in EU Member States, and the effects of the national environments in which support for better OSH practice and compliance operates. Overall, the literature reviewed in Chapter 2, along with testimonies from key informants, suggests an agenda for further research examining the relationship between the changing world of work, its national determinants and its health consequences. This research would be relevant to understanding the influences on support for securing compliance and better OSH practice.

- **OSH outcomes**

Research pointer

Develop better measurement methodologies

Chapter 2 also considers the extent of injury, ill health and untimely death resulting from work in the EU, difficulties created by the complexities of current economic development, and national differences in context for the effective measurement of the extent of work-related harm. In regard to this last point, Chapter 2 suggests that traditional methods of reporting mortality and morbidity attributable to work-related causes measure only part of the picture. A gradient of health outcomes in which more socially and economically disadvantaged groups of the population experience considerably worse health than those who are more affluent and advantaged is widely acknowledged. Many of these health outcomes are work related. The pointer for policy and practice identified from the overarching review here, therefore, relates to the need for the development of more effective and more holistic means of measuring the work relatedness of illness and injury, so that support for preventive strategies might be focused more usefully. The pointer for further research is the need to find better ways to achieve this that are practicable, affordable and result in the availability and use of better information, to inform future policy and action on securing compliance and better OSH practice.

Policy pointer

Better ways of measuring work-related illness and disease are necessary

- **Consequences of structural and organisational changes**

We have already indicated that, as both context and change affect the nature and operation of support for securing compliance and better OSH practice, their effects need to be explained and properly understood before we can be sure that policies and practices to address the provision of support will be effective. Chapter 2 notes the many challenges, well documented in the burgeoning literature, resulting from changes in the structure, organisation and control of work, in relation to the health, safety and well-being of workers, over the past several decades. These challenges relate to, for example, the extensive array of new work arrangements, the growth in micro and small enterprises (MSEs) and non-standard

work, and their effects on the shape of firm cultures (and subcultures), motives for compliance and better OSH practice, and the extent of OSH knowledge and skills. The literature indicates that context may further influence labour relations and the degree to which participative OSH management can be implemented, among other factors that impact on OSH performance within firms. It shows how units of production and service are increasingly regarded as parts of market-orientated, network-style economic structures, with greater capacity to harvest externally based scale advantages without becoming rigid organisations. Such changes have been facilitated in part by the restructuring of larger organisations and in part by changes in the business models they utilise, including in relation to downsizing, outsourcing, just-in-time production, increased porosity and more flexible labour contracting, and a greater focus on supply relations. The literature demonstrates how all of these have been further facilitated by rapid developments in information and communications technology. These technological developments have transformed the situations in which work is done, in relation to the structure, organisation and control of work; they have also profoundly changed the wider social and political contexts of work and globalised the societies in which it takes place. The workforces of EU Member States have also become more diverse as a result of an increase in the proportion of non-nationals and a rise in the labour market participation of women, older workers and those with disabilities; at the same time, their collective voice has become less well represented in the discourse around work as a result of the decline in organised labour. Policies to support compliance and better OSH practice therefore need to take account of these contextual influences and ensure that their effects are properly understood in the design of interventions.

Research pointer

Research on support for securing compliance also needs to account for the effects of change

There is a substantial need for further research in all these areas, as change is ongoing and many of its effects on safety and health remain poorly documented. It follows from this that further research in any of the areas of support for securing compliance discussed in this review will also need to take account of the effects of change.

▪ **Varieties of capitalism**

Chapter 2 further indicates that national differences in the contexts in which compliance with OSH standards is sought include variations in the way OSH regulation is implemented and administered, and in the roles of social and employment insurance, support services, trade unions, joint sector bodies, trade and manufacturers' associations, professional bodies and so on. Other even wider contextual differences may also be significant determinants of compliance outcomes. Here, the literature distinguishes different institutional structures within developed economies, such as those of the EU, and provides explanations for why greater convergence between these economies in the context of globalisation is not apparent. Subtler cultural differences are evident in public perceptions of the nature and extent of work-related outcomes for safety and health, for the legitimacy of public or private forms of regulation and for the support for different approaches to achieving compliance. These differences are all relevant when comparing determinants of health and social policy, as well as those of institutional change and interaction; they are also important for a comparative understanding of the operation of support for compliance in different Member State contexts within the EU. Here, again, there are indications of what policies at EU level may need to consider to have a positive influence on securing compliance and better OSH practices among Member States.

Policy pointer

EU policies on securing compliance need to account for different Member State contexts and changes

▪ **COVID-19 and change**

Changes resulting from the impact of the COVID-19 pandemic also require consideration. Workplaces have been shown to be prominent and potent sites of transmission; changes in the structure, organisation and control of work may have contributed to this, and also to increasing inequality in the distribution of transmission risk. Effective strategies to address COVID-19 and the possibility of future pandemics and develop adequate prevention measures therefore need to be built into approaches to

support better OSH practice. At the same time, their relevance to and integration with wider public health policy measures must be ensured, and the knowledge leading to their development must be sound.

The overarching pointer for policy and practice here, therefore, is that these findings derived from the literature concerning context and change apply to policies and practices developed to improve the external support indicated across all five areas of external support for compliance considered in the overarching review. Moreover, a number of further lessons for policy and practice emerge from a more detailed review of the literature, relevant to each of these areas.

Policy pointer

Future support for securing compliance will need to ensure capacity to respond effectively to the challenge of pandemics

Social norms, reporting and corporate social responsibility

Chapter 3 of the literature review explores relevant elements of the broad economic and regulatory social science literature concerning social norms and social reporting in support of securing compliance.

Research pointer
New research is needed on better ways to use social norms to promote support for compliance

It also takes some account of social and organisational psychology literature, particularly in relation to ideas concerning safety culture, safety leadership and means of ensuring compliance behaviours; however, as indicated, our review mainly focused on social, economic and regulatory studies. A number of clear policy pointers were found in this literature, again indicating the need to take account of the role of social norms in determining behaviour, as well as the possibilities of using them in the social amplification of desired improvement in support of compliance and better OSH practice. It also identifies a need for further research on these issues; this

includes fundamental research in the case of understanding social norms, and more applied and instrumental research concerning social reporting and corporate social responsibility (CSR). Research is required to understand the ways in which social norms might contribute more to the social amplification of OSH prevention strategies and why some controllers of business undertakings may be more responsive than others to social norms and social reporting. It is also necessary to assess their possible uses in relation to compliance in the case of 'hard-to-reach' firms and 'reactors' and 'avoiders' among micro firms and similar organisations.

▪ **Social norms influence compliance and better OSH practice**

The review of the literature demonstrates that, as support for compliance is influenced by the perceptions of those responsible for compliance, it is important to understand what shapes these perceptions. More specifically, an understanding of the role of social reporting as a tool to leverage change in such perceptions and improve OSH practices is important. The pointer for policy and practice here, therefore, is that, in both cases, developing policies that seek to promote the social amplification of messages to encourage or enforce compliance also requires an understanding of societal norms and the ways in which they are shaped. Previous EU-OSHA studies on MSEs found social norms to be useful aids

Policy pointer

Use social norms for the social amplification of compliance messages

in developing preventive strategies, acting as social amplifiers of the need for prevention or leading, for example, to produce mimetic behaviours among owner-managers of small firms. The studies also found social norms that influence perceptions about what constitutes unacceptable behaviour to be just as important, including notions of 'criminality' and 'stigma' associated with OSH crime. Chapter 3 explores support for these findings in the wider literature and extends them beyond MSEs; it also further establishes that the norms in question and what influences them vary. In addition, the findings of Chapter 3 point to strong cross-cutting connections with those in other chapters concerning compliance and the 'enforcement gap'.

▪ Concerted actions

The policy pointer that emerges most powerfully from Chapter 3 is the finding that social norms and social reporting do not act in isolation. Constellations of influence, such as business interests and those of particular interest groups, and the ethical values of corporate directing minds, are also involved. Nevertheless, social norms and reporting requirements may provide a suitable focus for leverage in the interventions adopted by regulatory strategists. In practice, it has been argued that such norms and reporting activities have been effectively deployed, for example through the concerted actions of interest groups representing workers, consumers, environmentalists and the like, such as seen in efforts to influence working conditions (including OSH) at the ends of global supply chains. These actions are often conducted within regulatory frameworks or seek to transfer regulatory standards and/or frameworks to the situations that are the focus of their attention. This sometimes occurs with the assistance of regulators and their agencies. Their effects, therefore, cannot be understood in the absence of this regulatory context and offer regulatory strategists opportunities to strengthen the role of regulation and, in particular, 'enforced compliance' at both global and national levels, as can be seen in the orchestration of influence to improve OSH practice in MSEs. These all provide strong indications of what needs to be properly taken into account in policy development, whether it is at EU, Member State or sector level.

▪ COVID-19, social norms and the workplace

The lessons of the pandemic are also relevant. Despite the obvious role of workplaces as potential sources of infection, in some countries the prominence of OSH issues in the reportage of the spread of the virus has been lower than anticipated, and control strategies adopted by national governments have in some cases disappointed OSH specialists. The limited role played by OSH in public discourse on the pandemic has been noticeable, as the literature from several countries attests to. This may have implications for understanding social norms as an influence on OSH compliance and therefore experiences of the pandemic may provide a useful focus for further analysis.

Policy pointer
Use social norms to promote concerted actions to support compliance and more effective CSR

▪ Requiring OSH in corporate social responsibility

With regard to the more institutional forms of social reporting embraced by CSR, the literature on the relationship between OSH and CSR points to several uncertainties. While a potential role for CSR in providing support for securing compliance has been claimed, and also increasingly promoted in policies at EU level, the literature shows only limited evidence of the causative effects of CSR on improving OSH practices. Here, too, some policy pointers have been derived from the literature reviewed in Chapter 3 that suggest that concerted actions, where the regulatory mix includes requirements for OSH reporting, may represent the best way forward for policies seeking to use CSR to support the securing of compliance and improved OSH practices.

The business benefits of OSH and economic incentives to improve OSH compliance and better OSH practice

Chapter 4 explores the evidence for a wide range of different forms of economic incentivisation in promoting actions on OSH by undertakings and the role of such incentives in national policies on OSH in EU Member States. Although it indicates that there is already a substantial body of literature describing these incentives and their potential benefits, it also indicates that further research would be helpful in exploring their effectiveness, especially in terms of issues of sustainability and transfer. Further research is also needed to explore the links between economic incentives and the business case for OSH and other strategies to support compliance and better OSH practice discussed in this review.

▪ Good safety and health are good for business

One of the widely accepted tenets of policy and practice in OSH is that there is a 'business case' for the dedication of a firm's resources to OSH, and a key theme of prevention strategies involves raising awareness of this. Many studies suggest that there are good financial reasons for businesses to do more than merely meet statutory requirements, and there is a large body of literature describing specific

Policy pointer
Continue to increase awareness of the business benefits of investment in OSH

interventions that claim to prove this. There is also a substantial body of literature that argues the presence of a link between employee well-being and strong business performance. Emerging from this literature, and coupled especially with Nordic approaches to 'workability', are ideas concerning the intangible benefits associated with investing in improved OSH: that is, benefits not necessarily identified by conventional forms of financial accounting, but that represent business benefits that are nonetheless real. While the body of literature focusing on more innovative management accounting in this respect is quite small, and largely deals

with Nordic countries, it does suggest some policy pointers concerning more innovative ways to promote a business case for OSH.

At the same time, however, analysis shows that, in practice, for many firms, investment in OSH is not necessarily seen to be beneficial for achieving better business outcomes, nor are these outcomes necessarily the principal reason for making such an investment. The clear pointer for future policy that emerges from these observations, therefore, is the continuing need for policy approaches that will help to increase awareness concerning the potential business benefits of such investment.

▪ Using economic incentives to improve OSH practices

Chapter 4 also explores the evidence of a wide range of different forms of economic incentivisation that have been used to promote actions on OSH by undertakings, and the role of such strategies in national policies on OSH in EU Member States. Various forms of economic incentive schemes are described in the literature. It is noted in Chapter 4 that their effectiveness and transferability are often difficult to evaluate comparatively. The premise on which each scheme is based is often very different, as are the wider contexts in which they are applied and that support or constrain their application. However, it seems clear that the more obviously successful and sustainable forms are often those undertaken through the support of employer-based social insurance systems, as is the case in Germany for example. Here, and to some extent in other countries with similar employment and social insurance systems, the orientation and scale of the wider system have allowed considerable innovation in schemes that had their origins in forms of claims management. Nowadays, in certain cases, these schemes even extend to MSEs not normally responsive to such incentives, and the literature reviewed in Chapter 4 includes some claims for their success. These findings offer obvious policy pointers; first, they show the existence of successful interventions; second, and arguably more importantly, they indicate something of the conditions necessary to support such success and its transferability. However, it needs to be further acknowledged that, beyond a very limited number of cases, an important problem remains concerning whether these kinds of incentives could play a role in reaching firms that are not normally proactive on matters of spontaneous compliance and influencing work arrangements are increasingly present in the changing economies of EU Member States. There is a need for further research here.

Policy pointer
Some national OSH systems provide significant support for economic incentives on OSH that is not available in other systems

Research and policy pointer
Awareness of business advantages of OSH improvements may be promoted by concerted actions by other stakeholders and processes

Perhaps even more important for policy development are the connections of economic incentives and the business case with other types of support for securing compliance and achieving better OSH practice. Economic incentives may be external in the sense that they take the form of direct financial inducements provided by third parties to encourage a firm's ownership/management to adopt a desired approach to OSH, such as those outlined in the previous paragraph. However, they may also arise as a result of the firm's ownership/management 'internalising' the business benefits of taking particular actions in relation to their OSH arrangements to reduce losses or enhance market position. For example, as we summarise in the section on the role of supply chains that follows, in some examples, successful leverage leading to better OSH in the lower tiers of supply chains has been

achieved by proponents being able to make the business benefits of actions clear to the corporate bodies controlling these chains. Here, a range of measures achieved by workers and their representative organisations, consumer interests, the media and state regulators acting in concert can persuade corporate bodies of the business benefits of adequate OSH arrangements across their supply chains, and thus provide economic incentives that cause them to act accordingly. Moreover, there are further examples in the literature that indicate how OSH regulators have been able to operate at sector level or even at site level (in the case of some large building projects, for example) to ensure that corporate clients and principal contractors cooperate to ensure support for OSH among their smaller contractors and subcontractors. The use of certification standards in these scenarios offers further opportunities for more systematic improvements. Significant pointers for both policy and practice in support of such coordinated actions are therefore suggested.

▪ COVID-19 and economic considerations for OSH

The COVID-19 pandemic may have implications for all these scenarios. At the very least, these examples suggest a need to take more account of the possibility of having to organise employment and work practices, as well as workplaces, in such a way as to offer better protection for workers against possible future human transmission of infectious diseases. Having adequate OSH arrangements in place to help prevent human transmission of microbial infections may require the rearrangement of work and workstations, with financial implications for employers and often also for workers. If adequate resourcing is not available to incentivise employers to adopt appropriate measures, it is clear from the experience of the pandemic that some employers, particularly those who fear that their businesses will

Research pointer
More research is needed to understand 'what works' and in 'which contexts' in relation to concerted actions to effect leverage on OSH in supply chains and similar business relations

not survive, may require workers to continue to work in unsafe conditions. Institutional support, such as support provided by statutory insurance organisations, statutory sick pay arrangements and tax exemptions, may need to be modified to help incentivise safe working arrangements.

Supporting compliance and better OSH practice through supply chains

Chapter 5 focuses on the evidence on ways in which leverage for supporting compliance with OSH standards and better practice has been operationalised in supply chain relations, and what determines and supports this. It notes the progressive efforts within the EU and elsewhere to broaden the focus of legal duties on OSH from a narrow

focus on direct employment relationships to a focus on a wide range of contractual arrangements. However, it also indicates that, despite some successful examples, progress in EU Member States has been limited overall. It suggests that a substantial research programme is required to provide a better understanding of how to achieve leverage in supply chains to support OSH. Examples in the literature suggest that measures are most likely to be effective where regulatory and compliance promotion strategies are combined to stimulate and support both vertical and horizontal pressures on firms in supply chains, thus ensuring that OSH considerations are prominent in the demands placed on suppliers and that suppliers themselves have sufficient resources and are motivated to deliver on these demands. Only rarely are either regulatory or market and business considerations alone sufficient to motivate supply chain actors to prioritise the safeguarding of workers in their dealings with one another.

▪ Regulatory mixes and coordinated actions

Two significant policy pointers emerge from Chapter 5 of the review. One concerns interactions between the different types of support for securing compliance. As noted above, for example, in successfully effecting leverage for better OSH in supply chains, social reporting and economic and business incentives, along with the representation of worker and consumer interests, can often be seen to be operating in conjunction with innovative regulatory approaches, in a regulatory mix that is

Policy pointer
Orchestrated/coordinated actions may be more effective than unilateral ones in leveraging better OSH, but their strong leadership is required

enhanced by a framework of legal duties imposed on a broader range of parties than just employer and employee. This approach ensures that responsibility for the protection of workers in supply chains rests with the actors who have the power to control and benefit from these chains. The second significant

Research pointer
Research may be needed to explore the implications for OSH compliance following changes in business supply relations resulting from the COVID-19 pandemic

element to emerge from this mix concerns leadership and coordination. Again, the evidence suggests that neither public regulation nor the market alone can ensure the compliance of the business actors involved in these scenarios; for example, among the initiatives to promote OSH compliance and better practices in supply chains, the most successful schemes, illustrated by the examples in Chapter 5, have been driven by a range of key actors often external to the businesses and supply chains in question. In all such initiatives, inspired leadership and coordinated actions play a significant role in their success. Further research is required to explore these relations.

▪ COVID-19 and supply chains

The experience of the COVID-19 pandemic is relevant here too. Given that the evidence on workplace exposure suggests that the poorest working conditions are often experienced in work and workplaces situated at the end of supply chains, it is no surprise that a similar situation has been seen with regard to work-related exposure to COVID-19. The disruption to the economy brought about by COVID-19 has also revealed the fragility of supply chains, exposing the vulnerability of complex global chains based on lean manufacturing principles. This has led to calls for the development of stronger, smarter and more diverse supply chains to ensure lasting economic recovery. Theoretically, this may offer further opportunities to use supply chain relations to improve support for OSH arrangements, but the details of how this might happen will require research on ‘what works’ in securing such improvement.

Prevention services

For many OSH practitioners and policy-makers, prevention services are central to supporting the achievement of better practice — as is made clear by their prominent position among the requirements of the Framework Directive. Yet, for workers, their experience of engagement with these services is often limited. Chapter 6 explores some of the reasons for this, and what the literature has to say about the role of prevention services in supporting compliance and better OSH practice.

▪ Form, function and cover

Despite structural changes in the economy, the ‘preferred model’ of a prevention service with legislative support in many Member States still seems to be one in which professions allied to medicine and engineering play a major role, alongside occupational psychology and related fields. Available evidence suggests that, in practice, prevention services based on this model have a relatively limited presence overall. At the same time, there has been a considerable increase in more generalist OSH practitioners, aspiring towards a set of competencies orientated towards supporting OSH management needs and focused more on knowledge of regulatory standards, human behaviour and OSH management, learning

Research pointer
Establish what works best, and in which context, for prevention services to support OSH compliance in EU Member States

and change, human factors, organisation and so on. It is also clear from the recent literature that these practitioners are an increasing presence among the support services deployed in larger organisations in both the public and private sectors, and that their professional bodies are prominent in policy discourse in some countries. However, it remains unclear to what extent they also are present in external services.

The literature contains few systematic data, comparable between EU Member States, on the extent of present-day coverage of prevention services (however they are constituted) or their effectiveness. Data that do exist suggest that both may be limited and biased towards the needs of larger firms. From the review of the literature in Chapter 6, it is difficult to argue that significant progress has been made in increasing the access of workers to prevention services since the measures of the

Framework Directive were adopted. In fact, circumstantial evidence suggests that such access may have diminished. Thus, there are a number of questions that might be asked concerning how, or in which direction, the role of these services might be developed to support compliance and better OSH practice in the future, and what could be done to drive such development — all of which are relevant and could inform future policies on how to make best use of specialist advice and support for OSH. There is clearly a research agenda here.

▪ **Historical perspectives and origins**

Prevention services largely originated as elements of health systems organised by the state or social insurance systems to support production. In addition, or alternatively, they were set up and supported within large organisations by corporate interests to serve the same purpose, especially in high-risk industries. They also proliferated in sectors with strong legal responsibilities to safeguard the public, such as food production and transport. In recent decades, however, changes in the economy and policies of governance have resulted in Member States reducing resources allocated to prevention services, and they are in decline in the presence of large industrial concerns that also invested in their provision. Nowadays, external prevention services are, therefore, increasingly required to take responsibility for their own economic survival.

▪ **Support**

The literature suggests that several consequences arise from this. First, a better structured market mechanism is needed to ensure that the business of prevention is sustainable and serves a wide range of firms. In Germany and other countries with strong social insurance systems, there is evidence that prevention services have weathered marketisation and maintained quality and diversity. They have contributed to the economic incentivisation of prevention and, to an extent, played a role in supporting compliance among MSEs and other hard-to-reach organisations in the ‘new economy’.

The critical literature suggests that the integrated services of other countries, such as the Netherlands and Sweden, may have been less successful. Commentary in these and other countries gives rise to further concerns. There is some evidence, for example, of the presence of poorly qualified or unqualified consultants offering inadequate services, especially to owner-managers in MSEs. Other studies suggest that the cost of prevention services means that firms (again, especially smaller firms) use them only minimally.

It remains the case that, despite these challenges, some OSH prevention services have succeeded in finding the means to secure their sustainability and deliver support for securing compliance and better OSH practice in different sectors in all EU Member States. It would perhaps be beneficial for policy-makers at both European and national levels to better understand the factors that have enabled these prevention services to do this.

▪ **Synergies between the role of prevention services and other forms of support for securing compliance and better OSH practice**

One consequence of the COVID-19 pandemic concerns the role of expertise in prevention services and in repositories of knowledge, and the professional expertise they share. In publications cited in Chapter 6, attention is drawn to the need to engage this knowledge and experience. It seems that many of the early mistakes made by some public authorities in their efforts to control exposure during the COVID-19 pandemic may have been avoided if they had been more receptive to such advice.

Two other obvious areas of synergy are evident. One is the potential role of internal prevention services operated by powerful buyers at the apexes of supply chains in supporting OSH needs at various levels in the same supply chains; another is the role of prevention services in the economic incentivisation of better OSH practices, such as that seen in some of the activities undertaken by the Berufsgenossenschaften (BGs) in Germany. These, and other examples, could help policy-makers to

Policy pointer

Consider if market-orientated external services are the best way to provide prevention services

Policy pointer

Consider if prevention services are useful in supporting compliance among MSEs and in other ‘hard-to-reach’ work scenarios

understand how such successful synergies might be sustained and transferred, and what the role of social norms, economic pressures or innovative compliance strategies might be in achieving their effects.

Research and policy pointer

Establish what the most effective form of professional support for improved OSH is in EU Member States

▪ **Prevention services versus OSH advisers**

Further lessons from the literature that may be relevant to policy and practice can be learned from the increase in the presence and significance of the 'generalist' OSH practitioner in recent decades. Traditional models of prevention services, which were developed in relation to an industrialised past, provide valuable contributions to supporting preventive practices; however, for a host of organisational, structural, economic and political reasons, they are ill suited to directly addressing the large-scale OSH prevention needs in present-day economies in most EU Member

States. As Chapter 6 points out, the future effectiveness of these services lies in their developing in other directions. It also suggests some parallels between this situation and that seen in the case of regulatory surveillance, where traditional methods of regulatory enforcement are seen to be ineffective in relation to increasingly hard-to-reach forms of work. As explored in Chapter 7, this has stimulated thinking about more effective ways of monitoring and securing compliance. The same kind of approach may also provide policy pointers for the future of prevention services too.

Encouraging novel approaches by OSH regulators

Chapter 7 observes that policy and practice of OSH regulators in EU Member States are steered by a series of international and EU-level instruments that promote the competence, professionalism and good governance of OSH/labour regulators, and increased staffing levels and resources. However, despite such convergence internationally, the literature reveals significant variation in priority setting and resource allocation, programmes and interventions, and how inspection and enforcement are conducted in different Member States. The mandates of OSH regulators enable them to address a narrow or broad range of problems, with the former focusing on OSH matters and the latter extending to labour relations and employment issues, which, in some circumstances, can be closely intertwined with OSH matters. It appears that risk-based regulation is the only regulatory model applied by some OSH regulators. It is sometimes used principally to target resources for investigations and responses to complaints and, to some extent, to choose what action to take in the course of inspections, rather than to choose between inspection and other types of interventions (as proposed in smart inspection). There are concerns about the adequacy of data and information for risk-based decision-making, and the potential to overlook new and emerging risks and vulnerable workers. As both Chapters 1 and 7 of the literature review note, some OSH regulators are exploring the use of machine learning to assist in choosing workplaces to inspect.

These findings have led to the recommendations set out in Part 3 of the final report concerning focusing part of EU-OSHA's research programme on the comparative study of regulatory inspection policies and practices in EU Member States.

▪ **Mind the gap**

Research and policy pointer

Consider how we can close the gap between theory and practice in innovative approaches to achieving compliance and better OSH practice

Perhaps among the more obvious messages for policy-makers and further research that emerges from the literature review is the need to be aware of the gap between what is theorised and discussed in the literature and evidence of practice among regulators in the Member States. Although there is a substantial body of literature discussing innovative regulatory practices, as reviewed in this report, there is much less in the way of published evidence of current practices in most EU Member States. Owing to the separation in some national systems between the agencies that implement compliance promotion,

monitoring and enforcement functions, some countries may have potentially greater challenges in coordinating innovative regulatory contributions to securing compliance. This would be the case

Research and policy pointer

Establish how social partners and other stakeholders could be involved more effectively in support for securing compliance and better OSH practice?

particularly if they were to contemplate a nuanced strategy of responsive regulation requiring coordinated and sequential use of compliance promotion mechanisms and a hierarchy of different types of sanctions.

The involvement of social partner organisations (employer and union representatives) is common among OSH regulators, as encouraged in the EU Strategic Framework on Health and Safety at Work and the Senior Labour Inspectors Committee's (SLIC's) developmental principles. However, most examples of social partner involvement are routine. They do not involve OSH regulators, non-state actors and employers using a three-

sided hierarchy of mechanisms and tools, as envisaged by some models of smart regulation in the literature, nor are they tailored interventions addressing the underlying determinants of non-compliance and drawing on the non-substitutable contributions of worker organisations or exemplary employers, as envisaged, for example, in the literature on strategic enforcement and cooperative enforcement.

- **The challenge of difference**

Although OSH inspectors have broadly consistent powers across EU Member States, there are differences in fines and non-pecuniary sanctions for non-compliance, and in the conduct of inspections across a range of variables. There are further differences in inspectors' style, which may be more facilitative, accommodative or coercive, and in whether or not there are follow-up inspections or some other means of checking responses to notices or fines issued. Other differences relate to public displays of the outcomes of inspection and enforcement, and firms' OSH management. A further key finding is that OSH regulators and the courts in EU Member States have a limited set of administrative and criminal sanctions to employ. This may constrain their ability to respond to differences in firms' capacities and motives, and Chapter 7 argues that there may be merit in establishing comprehensive hierarchies (pyramids) of support types and sanctions that regulators can use to secure compliance.

Overall, it appears that there is inconsistency in approaches to monitoring, promoting and enforcing compliance in EU Member States, rather than the consistency called for in SLIC's common principles. Studies in EU countries reinforce the findings of systematic reviews, namely that inspection and enforcement can have a positive impact on OSH compliance and outcomes, but shed little light on the effect of fundamental differences in approaches.

The message for policy here is that such insights are needed for OSH regulatory interventions in firms generally, for neglected firms (for example micro enterprises), for neglected workers (for example the precarious and vulnerable) and for specific risks.

In summary, despite EU-level frameworks encouraging consistency in compliance promotion, monitoring and enforcement by OSH regulators, there is considerable variation in policy and practice between EU Member States, which is likely to be substantially attributable to differences in social, economic and political systems (such as those discussed in Chapter 2 of the literature review).

Beyond variation in policy and practice, further key issues identified include the limited empirical evidence of what works in practice, the limited range of measures and sanctions that OSH regulators and the courts can employ to secure compliance, and the limited application of relevant inspection and enforcement principles or models across EU Member States. There are some interesting examples of novel approaches in EU countries, but the scale of the regulatory challenges facing OSH regulators calls for a fundamental shift in how these regulators promote, monitor and enforce compliance. This shift in enforcement policy requires interventions informed by comprehensive data, tailored to address systemic determinants of non-compliance, enlisting a range of worker and advocacy organisations, as well as exemplary firms, and employing a comprehensive set of support types and sanctions to secure compliance and better OSH practice; it also calls for careful consideration of the lessons learned from the COVID-19 pandemic on the role of OSH regulators in the future — all of which have important implications for policy and further research.

Recommendations for further research

The primary aim of the overarching review was to inform the development of a research programme in which several empirical research studies will be commissioned to help to fill gaps in the knowledge and applied understanding of ways to better support compliance on OSH in EU Member States. As such, it is intended to contribute to:

- the knowledge base concerning institutional support for securing compliance and better OSH practice;
- informing EU policies for supporting OSH in this respect;
- practical OSH outcomes addressing the questions of 'what works, for whom and in which contexts' in achieving improved institutional support for securing compliance on OSH in the EU at national, sector and workplace levels.

The condensed nature of an executive summary does not permit the detailed presentation of the substantial number of research questions identified in Part 3 of the final report; however, the following recommendations reflect the implications of its key conclusions:

- Despite the presence of a large and wide-ranging body of knowledge concerning institutional support for compliance and better OSH practice, and on the influence of change and context, substantial knowledge gaps still exist. It is recommended that EU-OSHA commissions further empirical research to address these gaps, with the initial focus of its research programme being a comparative study of innovations in the strategies of regulatory inspection in EU Member States and what supports the achievement of sustainable leverage on OSH in supply chains. The details of these recommendations are given in Part 3 of the final report.
- The literature review identified gaps in knowledge in all the areas studied, as well as in the understanding of context and the effects of change, which are influential in determining both the nature and outcomes of support for better OSH practice. These gaps are identified in Part 3 of the final report, along with research questions addressing them. It is recommended that EU-OSHA commissions further research projects to address these gaps. To prioritise further research, it is recommended that EU-OSHA addresses:
 - gaps that the review has identified between theoretical arguments about support for securing compliance and the application of such support in practice;
 - possible synergies between the roles of different forms of institutional support and the contexts that determine their effects;
 - suggestions in the review about how such cross-cutting projects can explore sustainability, transferability and the role of leadership and orchestration in achieving support for securing compliance;
 - recommendations concerning new research in each of the five areas on which the review focused and in the areas of context and change on which the review has also made recommendations for further research.

Taking account of these factors, the literature review and Part 3 of the final report identify the need for further research addressing all five areas studied, including the need for more precise knowledge on what works for economic incentivisation and on possible 'toolkits' at sector or national levels, and a more critical understanding of insurance-based incentive strategies and systems, and the conditions and contexts under which they work. On prevention services, better knowledge of form and coverage and of means of sustaining them and extending their reach to work situations not covered are important, as is gaining a better comparative understanding of their most appropriate forms in modern economies. Overarching research needs were also identified that should be addressed to provide a more cross-cutting understanding of the relationships and synergies between different elements in the five areas.

While considering its research priorities in the light of the above recommendations, it is further recommended that EU-OSHA considers the possible involvement of other partners that may be more appropriate sources of funding for research on selected topics highlighted in the overarching review.

- A particular challenge for a research programme that investigates knowledge gaps across several related elements that comprise a single overarching issue is avoiding repetition. It is important that EU-OSHA takes steps to avoid this risk.

None of this should preclude EU-OSHA from commissioning stand-alone research projects alongside more integrated ones. The recommendations in Part 3 of the final report also identify several areas where this might be appropriate, such as research on aspects of the role of prevention services, or further evaluation of the sustainability and transfer of specific strategies aimed at the economic incentivisation of OSH practices.

Some final conclusions and reflections

The overarching review demonstrates the existence of a substantial framework of institutional support for securing compliance and better OSH practice, which acts in a variety of different ways to achieve this task. It shows that this framework, while long standing and traceable to its development in the industrialised past of most EU Member States, has been responsive to changes in recent decades in the wider economic contexts in which it operates, and to policies guided by political and economic governance in Member States and among advanced market economies globally.

This has prompted an increasingly diverse set of compliance promotion strategies. Not only has public regulation sought to engage and encourage duty holders in the pursuit of forms of regulated self-regulation, but discourse on regulation has sought a broader understanding of its meaning and the role of private and public regulatory actors and processes potentially involved in defining and securing compliance.

Therefore, securing compliance with standards of good OSH practice (however such standards are determined) has taken on a broader meaning and, in parallel, the institutions and processes involved in supporting it have become more diverse. This has not occurred in a political or economic vacuum and, as this review has made abundantly clear, economic and political trends in the EU Member States have also strongly influenced the nature and extent of strategies to promote OSH compliance.

Institutions and processes that promote compliance include all those associated with national systems of governance for OSH in which, ideally, national policies and plans serve to coordinate and direct a spectrum of institutions and processes that regulate risks of potentially harmful outcomes resulting from work. Some of these are embedded in public regulation, some are market focused and others arise from social norms and notions of acceptable social behaviour. Thus, OSH compliance is achieved by the application of a range of support types for processes that span a spectrum of voluntary and coercive influences aimed at achieving better practices in the prevention of injuries and ill health arising from work. In discussing the types of support, we have grouped them into five areas. However, a major conclusion that emerges from the final report is that, while the five areas that the review focuses on cover much of the support for compliance that is available in the OSH systems of EU Member States and convey some sense of how it is structured and delivered, nowhere is this support found in isolation from the many other processes that are at work alongside it and are important in determining its outcomes. For example, the roles and effectiveness of workers' and employers' organisations, and the institutional and procedural products of relations between them (such as joint bodies or agreements), in contributing to securing compliance may not be obvious from the titles of the five focus areas of the review. However, in every case the literature recognises these roles as significant, while also recognising the influence of other groups and processes in the social and economic relations of business. Institutions of governance and consultation that are found from sector to international levels in the EU are also important in the systems for promoting compliance. As products of post-war consensus politics, most of these institutions in EU Member States have been tripartite bodies for a

considerable time, although nowadays they increasingly also involve individuals and representatives of other bodies.

Related to this is another major finding and policy pointer of the review that concerns the multiplicity of actors and processes that are engaged in effective support for compliance and better practice. Much of the specialist literature on OSH interventions tends to focus on single interventions, undertaken by one main actor, whether it be a prevention service, a state OSH regulator, a trade union representative, an employers' organisation or joint body, a social insurance agency or any other organisation. However, a more accurate account of the reality of such interventions shows that they depend on the coordinated actions of a multiplicity of actors and processes for their implementation and operation, and especially for their transfer and sustainability. A fuller account of the determinants of the success or otherwise of such interventions required the inclusion of an analysis of their wider contexts, taking proper account of the supportive or damaging effects of the other processes and institutional actors involved. A similar conclusion was reached in the findings of EU-OSHA's extensive review of successful OSH interventions in MSEs¹. It is also in keeping with current thinking on compliance more widely and it needs to be acknowledged, in both the design of interventions and in research to measure their effectiveness. These points also inform the recommendations for further research that are made in detail in the final report.

Commentary in some of the literature reviewed presents a strong argument that effectively governing prevention in OSH requires greater engagement from national agencies in providing leadership and the reflection of this in policies. It suggests that OSH is not fundamentally different in this respect from other aspects of financial and market regulation. Current literature indicates that coordinated innovative approaches to promoting compliance, using a variety of processes and institutional actors according to circumstances, are more likely to be effective in meeting the challenges of current and emerging economic and work scenarios than more unilateral ones. However, the task of achieving such coordination is not a small one. The limited evidence of successful initiatives to date suggests that this approach is more likely to be effective if there is strong leadership to support the regulatory mixes involved. The review concludes that agencies of the state remain better placed to undertake this role than most other institutional actors involved.

¹ <https://osha.europa.eu/en/themes/safety-and-health-micro-and-small-enterprises>

The European Agency for Safety and Health at Work (EU-OSHA) contributes to making Europe a safer, healthier and more productive place to work. The Agency researches, develops and distributes reliable, balanced and impartial safety and health information, and organises pan-European awareness-raising campaigns. Set up by the European Union in 1994 and based in Bilbao, Spain, the Agency brings together representatives from the European Commission, Member State governments, employers' and workers' organisations, as well as leading experts in each of the EU Member States and beyond.

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