Cross-border standardisation and reorganisation in European multinational companies

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Contents

1. Introduction

In light of the increasing integration of markets since the Second World War and the accelerating pace of social and political change, contemporary multinational corporations (MNCs) engage in various measures of reorganisation. Often, this means the standardisation of processes and practices in order to increase organisational efficiency and to enhance internal and external coordination. Many of the recent moves of standardisation and reorganisation (henceforth S&R) are fuelled by the rapid development of information technology (IT). Digitalised communication opens up opportunities for novel ways of organising which were previously out of reach. These developments require an in-depth and systematic inquiry, as the recent moves of process-standardisation, re-organisation and re-centralisation in MNCs have strong implications for labour and workers' participation all across Europe. We consider these developments as particularly important for three reasons:

Firstly, there is the *quantitative importance and qualitative variability* of 'new' S&R moves. Many of the reorganisation moves we address in this report are implemented in an increasing number of MNCs and across more and more industries (c.f. PriceWaterhouseCoopers, 2014). Simultaneously, S&R moves focus on different functional areas, touch upon different aspects of work, and gain a different depth depending on where they are implemented, with strong differences both within and across countries in Europe. Hence this report aims to provide an overview on the many ongoing S&R approaches in European MNCs, singling out in particular those that have a notable impact on labour relations, participation and (in some contexts) co-determination.

Secondly, our study includes a description of the *different managerial rationales which drive S&R processes within MNCs*. Contemporary MNCs are constantly involved in restructuring processes related to fashionable trends like Total Quality Management (TQM) or Continuous Improvement Processes (CIP), which focus on the improvement of the overall efficiency of operations. However, it is well-known that the implementation of these management tools is difficult, often unleashing unintended side-effects. Much of this is due to unrealistic strategic goals set by the management. Therefore this report aims to shed some light on the underlying rationales of S&R moves. It further looks at reasons for successes and failures of S&R moves with the aim to provide an encompassing information base that can be used by employees and their representatives when engaging in counter-discourses and bargaining processes both on the level of the MNC as well as in the political arena.

Thirdly, we believe that a careful re-assessment of S&R trends is needed because the *outcomes of these processes are increasingly ambivalent and thus quite hard to predict* in terms of both their positive and negative effects on the quality of work and employment in MNCs. Stanford professor Stephen Barley (1990, 2015) points out that direct short-term economic effects related to the introduction of new technologies might be relatively predictable and easy to measure. However, mid- and long-term influences of new technologies and related S&R trends on established work practices, managerial decision-making processes and organisational power structures are much more difficult to assess and predict. Nevertheless, such an assessment is needed in order to cope with the changes ahead.

Overall, this report provides a compendium of new (and renewed) S&R trends in European MNCs. We have gathered data through a systematic analysis of relevant literature and more than 30 in-depth interviews with experts on the subject matter. Departing from an overview on the various phenomena related to S&R processes to be found in the literature, our expert interviews led us to identify the following six main S&R trends that seem to be of particular importance and relevance in contemporary MNCs and that have a strong impact on the quantity and quality of labour, labour relations and codetermination. The trends are:

— The renewed impact of 'lean production' principles and 'lean thinking' on standardisation
— The critical role of outsourcing for standardisation processes
— New developments in HRM process standardisation
— IT-based standardisation
— Standardisation by Big Data and Industry 4.0 and
— Compliance-induced measures of process standardisation.

The remainder of the report is structured as follows: *Chapter 2* briefly describes our research design and documents the methods and data used for this report. *Chapter 3* summarises the results. In the first subchapter (3.1) we give an overview on different S&R trends, based on our in-depth literature review. This is followed by a short introduction into the main S&R trends identified in the expert interviews (3.2). Next we provide a detailed elaboration of each of the six trends that turned out to be of particular importance from the perspective of organised labour (subsections 3.2.1 to 3.2.6). The concluding chapter (4) then summarises our results and highlights the most important findings of our report. Based on a cross-trend analysis, it elucidates managerial rationales to engage in S&R, highlights the links between individual S&R moves, and assesses their impact on the quantity and quality of labour and workers' participation.

2. Research Design and Data Collection

The report is based on a systematic evaluation of academic and non-academic literature as well as on expert knowledge from academics, management consultants and trade union consultants. Data gathering and analysis unfolded in a four-staged research process.

Figure 1   **Overview of the research process**
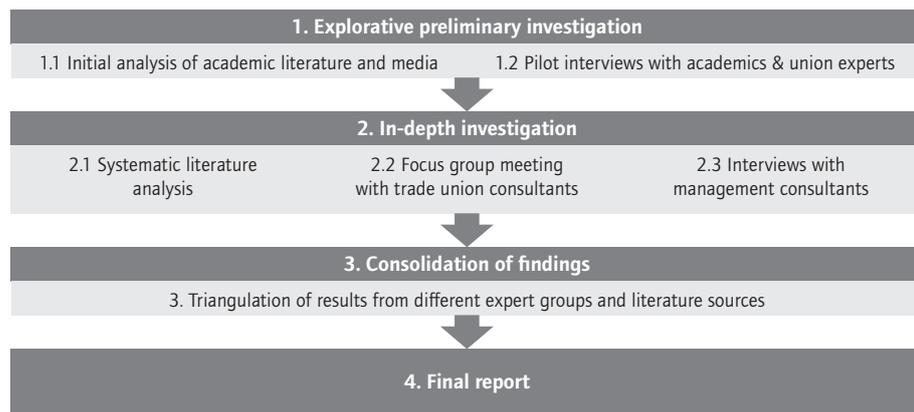
Source: own compilation

Stage 1 consisted of an initial investigation into the academic literature. Additionally, pilot interviews with academic experts on S&R moves in MNCs were carried out in order to develop an analytical framework for further empirical inroads into the subject. Following validation, *stage 2* then applied the analytical framework in three fields. First, a systematic and encompassing inquiry into the existing practitioner-related and academic literature was undertaken using keywords derived from the analytical framework. Second, a series of semi-structured interviews with management consultants were carried out with the use of an interview guideline that allowed both for an exploration of S&R trends as well as for a deeper understanding of the management rationale behind these moves. Third, we conducted interviews with trade union consultants, validating trends and exploring implications for labour and labour representation. These findings were corroborated and specified according to their geographical prevalence through a focus group meeting with trade union consultants from several European countries. In S*tage 3*, all findings were systematically triangulated and analysed for consistency in order to increase the reliability and validity of our research results. Finally, *stage 4* consisted of

the preparation of this report and other dissemination material. Figure 1 above provides an overview of the research process.

2.1 Data collection

As indicated above, the report draws on academic and non-academic literature as well as on expert interviews. Overall, we closely scrutinised more than 250 academic and non-academic texts and gathered information from 35 experts in interviews and our focus group meeting.

2.1.1 Literature review

In order to get an inroad into the state of the art on cross border standardisation and reorganisation, we screened a number of relevant journals in the field of organisational studies and international management. Based on this initial literature review, we were able to assemble an inventory of relevant keywords for the subsequent systematic literature review. Altogether 41 keywords[1] were singled out to represent the subject matter of cross-border S&R moves. Moreover, we decided to screen a total of 23 journals for these key words. Assuming that cross-border S&R moves and their implications for employment conditions and workers' participation touch upon issues that are at the intersection of organisation theory, international business & management and international human resource management / industrial relations, we focused in detail on:

1. Renowned journals from the field of *organisational studies (OS) and international Business & Management (IB&M) with a strongly theoretical focus*, namely Organization, Organization Studies, Organization Science, the Journal of International Business Studies, the Journal of International Management, the Journal of World Business and Management International Review; and

2. *Relevant international journals in the field of human resources (henceforth HR) and industrial relations (henceforth IR), namely* the Journal of Human Resources, the Journal of Labor Economics, Human Resources for Health, Industrial Relations, the British Journal of Industrial Relations, the Human Resources Development Quarterly,

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1. Adaption, BPO, business process outsourcing, buyer-seller relationship, centralization, communication technology, data management system, decentralization, e-hrm, enterprise resource planning, ERP, global reconstructing, HRM, incremental change, IT technology in HRM, knowledge management, knowledge transfer, knowledge, MNC, MNE, modularization, multinational, multinational corporation, multinational enterprise, organizational change, organizational processes, reconstructing, reorganisation, scheduling, standardisation, standardisation, structural change, structure, structuring, supplier integration, supplier-buyer relationship, supplier-buyer- relations, supply-chain-management, resistance, legal strategizing, collective bargaining.

Work & Occupations, ILR Review, Personnel Review, the Asia Pacific Journal of Human Resources, Economic and Industrial Democracy, and the European Journal of Industrial Relations.

These journals were complemented by journals known for their *high relevance for practitioners*, namely California Management Review, Organizational Dynamics, European Financial Review and the Journal of Supply Chain Management. Table 1 below provides an overview on our journal selection by academic disciplines.

Table 1 **Journals selected for the systematic literature review**

	Organization Studies & Organization Theory	International Business & Management	Human Resource Management & Industrial Relations
Journal	*Organization*	*California Management Review*	*Journal of Human Resources*
	Organization Studies	*European Financial Review*	*Journal of Labor Economics*
	Organization Science	*Journal of Supply Chain Management*	*Human Resources for Health*
	Organizational Dynamics	*Journal of International Business Studies*	*Industrial Relations*
		Journal of International Management	*British Journal of Industrial Relations*
		Journal of World Business	*Human Resources Development Quarterly*
		Management International Review	*Work & Occupations*
			ILR Review
			Personnel Review
			Asia Pacific Journal of Human Resources
			Economic and Industrial Democracy
			European Journal of Industrial Relations

Source: own compilation

Covering the years from 2000 to 2015, our keyword-based search in the journals listed above delivered 3834 articles. After eliminating those articles that did not fit the project requirements (i.e. when title and abstract unveiled that the contribution is of minor importance for our subject matter, despite keywords which had suggested their relevance) 248 contributions remained as core sample. Table 2 below gives an overview on the results of the selection procedure. In order to ease content analysis, each article was rated for its importance to our study from 0 = of minor importance to 3 = of paramount importance. Almost half of the articles (113) were found to be of either paramount (3) or high (2) importance, subject to close and repeated inspection throughout the research process.

Table 2 **Results of the systematic literature analysis and subsequent selection procedure**

Journals	Initial keyword search	Selection for core sample	3	2	1	0
Journal of Industrial Relations	727	87	14	25	29	19
Work and Occupations	411	3	-	2	-	1
Economic and Industrial Democracy	502	37	1	10	12	14
ILR Review	240	16	2	9	3	2
European Journal of Industrial Relations	350	45	3	15	15	12
Asia Pacific Journal of Human Resources	308	10	2	2	5	1
Journal of Human Resources	43	-	-	-	-	-
Journal of Labor Economics	53	3	-	-	3	-
Human Resources for Health	185	1	-	-	-	1
British Journal of Industrial Relations	167	4	-	2	2	-
Human Resource Development Quarterly	39	-	-	-	-	-
Personnel Review	304	8	-	1	2	5
Human Resource Management Journal	93	1	-	-	1	-
California Management Review	24	6	1	3	-	2
Organizational Dynamics	320	22	5	12	-	5
Supply Chain Management Review	-	-	-	-	-	-
European Financial Review	4	5	2	2	1	-
Total	**3834**	**248**	**30**	**83**	**73**	**62**

Source: own compilation

2.1.2 Expert interviews / Focus group

Semi-structured interviews were carried out with 35 experts, either individually or in a focus group meeting. Interviews on average lasted about 45 minutes. 12 interviews were carried out with academics from different disciplines, including operations management, business information systems, HRM, and production systems. Most academic interview partners were from Germany (see table 1 in the annex). Next, 8 interviews were carried out with management consultants. All management consultants had international experience, either in strategy consulting or in more specialised consulting areas that refer to cross-border S&R processes in European MNCs (see table 2 in the annex). Finally, we utilized input from 15 trade union consultants, representing different European countries and different sectoral expertise[2].

All interviews were carried out with the help of an interview guideline that was prepared in line with seminal methodological literature (i.e. Przyborski and Wohlrab-Sahr, 2010; Gubbins and Garavan, 2009). The guideline[3] addressed the following topics:

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2. 6 experts were interviewed individually prior to the focus group meeting. 11 Participants attended the focus group meeting, of which two also gave us an individual interview prior to the meeting (see table 13 in annex).

3. See annex.

— Interviewees' assessment concerning the most important cross-border S&R moves in European MNCs;
— The managerial rationales and environmental factors triggering S&R moves;
— The influence of S&R moves on organisational structures, occupations, quantity and quality of employment and codetermination.

In order to allow informant triangulation and to ensure comparability of interview data, all interviews were basically carried out with the same interview guideline. However, in order to carve out and to better evaluate the different views held by the informant groups, some modifications were made to the standardised guideline. For instance, the interviews with management consultants concentrated less on the direct link between S&R moves and effects on employees and labour relations, but rather more on the material content and the prevalence of S&R moves in European MNCs, discussing, for example, the significance of particular trends for future consulting assignments. Another example is that interviews with trade union consultants addressed the source of financing. This aimed to dismantle the fact that trade union consulting activities on the firm level often relate to particular provisions in labour law and go with particular labels that potentially hide their topicality and hence their relationship with S&R processes.

In order to get a better inroad into the potential implications of S&R moves for employment conditions and workers' participation, we organised with the help of the European Trade Union Institute (ETUI) a focus group of trade union consultants. The focus group meeting (which took place on 16/17 June 2016 in Berlin) aimed to capture a broader international perspective by including trade union consultants from other European countries, next to the 6 German trade union consultants we had interviewed individually. In addition we used the focus group meeting to present and discuss preliminary results. The focus group meeting as well as all other expert interviews were recorded, transcribed, coded and intensely discussed in team during the process of writing up the report. Information about the experts and the main topics of the interviews can be found in the tables 1 to 3 in the annex.

3. Results

This chapter provides the core findings of our investigation. In the subsequent section (3.1) we first present the results of the systematic literature review we have carried out. Based on the findings of the literature review and our interview data, we identified six major trends of S&R moves, in which European MNC are currently engaged. Following a short motivation as to why these trends have been selected (Chapter 3.2), the individual S&R trends are elaborated in detail in subsections 3.2.1 to 3.2.6.

3.1 Cross-border standardisation and reorganisation: A review of the academic literature

In a general sense, standardisation can be defined as the harmonisation of differing practices and work flows towards common organisational and (socio-) technical measures. Our literature review provides evidence that S&R moves are relevant in a wide range of industrial sectors and unfold across functional areas in MNCs. Most of the literature that we reviewed deals with reorganisation measures aiming at the standardisation of processes, not only within the MNCs, but also beyond across the international supply chain. We also found some evidence that MNC reorganisation may involve de-standardisation and re-localisation in certain cases (i.e. related to improving local responsiveness and national institutional fits of local subsidiaries). However, most of the literature in our sample deals with reorganisation and standardisation measures that lead to a homogenisation of management, work and employment, within and across national borders. Key rationales behind many standardisation processes are efficiency-seeking strategies of MNCs, which focus on economies of scale, 'lean' organisation, and the utilisation of cheap labour in certain locations, e.g. in Central and Eastern Europe. Next to that, certain standardisation and reorganisation measures are motivated by challenges induced by crucial societal transformations, such as demographic changes (for example by focussing on the demographically sustainable reorganisation of production processes), accelerating technological changes (for example the increased utilisation of IT-technology for HR-processes), or ongoing globalisation of value chains (for example the increased integration of suppliers into complex and globally oriented operation management systems).

In this section we will provide an overview of the academic literature on the S&R trends as reported in three academic disciplines, especially highlighting

themes and topics that we consider important from an employee and labour relations perspective. First, we will address S&R issues currently discussed in the field of Organization Studies and Theory (OS&T). Next, we focus on the field of International Business & Management (IB&M). Third, we consider key contributions of the academic literature in the fields of Human Resource Management and Industrial Relations (HRM&IR).

Organization Studies and Theory

Academic contributions from the field of Organization Studies and Theory (OS&T) are traditionally concerned with 'the examination of how individuals construct organizational structures, processes, and practices, and how these, in turn, shape social relations and create institutions that ultimately influence people' (Clegg and Bailey, 2008). The field's focus on social mechanisms within organisations, the role and nature of organisational membership, and the external socio-economic factors influencing organisational structures is reflected in the way the discipline has studied contemporary standardisation and reorganisation. We want to highlight two themes in the body of OS&T research that turned out to be particularly important for the study of S&R in contemporary MNCs:

— First, a set of contributions addresses the social and HR-related effects and implications of S&R moves related to wider social macro-trends, such as demographic change, technological transformation and the accelerating internationalisation of many organisations;
— Second, critical OS&T research is concerned about the 'unintended' effects of digitalisation and technology introduction.

The *first area of research* reflects on the challenges of MNCs related to current social and societal dynamics. A focus here is the demographic transition, in particular in highly industrialised countries, which has led to reflections on how organisations react and should react to new challenges of an ageing workforce. Consequently, HR-measures tailored to ensure 'lifecycle engagement at work' and 'sustainable careers' (Newman, 2011) are discussed. This includes measures of job enrichment as well as efforts to ensure appropriate (inter-generational) knowledge transfer and on-the-job training within organisations. Similarly, Organization Studies have picked up the broad discussion on how jobs should be designed to fit the requirements for 'work-life-integration' (Harrington and Ladge, 2009) and 'work-life fit' (Galinsky and Matos, 2011). The heightened sensitivity for 'employer attractiveness' goes along with the promotion of best-practice concepts of job improvement such as Mass Career Customization (MCC) that 'consider the career aspirations of men and women of all ages in the context of their work, personal, and family responsibilities' (ibid. 270).

This is also linked to another, widely discussed trend that contemporary organisations have to adapt to. It is stressed that traditional career aspirations and employment practices are changing rapidly. This development is described as 'de-standardisation' and fragmentation of work and employment in many

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local and internationally operating firms. It is stressed that classic full-time employment in many MNCs is increasingly replaced by freelance, fixed-term, and part-time work. Additionally, telecommuting and home-office work have become more and more widespread (see e.g. Bailey and Kurland, 2002; Pearce, 2009). Drawing on these developments, research discusses how the emerging 'blended workforces' can be managed appropriately by new or refined HRM-practices. This includes discussions about related issues like new monitoring practices and 'work-life boundary-management', plus new measures which are designed to enable the social integration of employees and the maintenance of productive work group cultures (Lautsch and Kossek, 2011).

The complexity of managing personnel is further enhanced by the increased internationalisation of many MNCs where a wide range of organisational procedures, internal and external workflows as well as management and administration processes are increasingly interconnected across industrial sectors and national borders. An extended amount of these tasks is carried out in virtual, globally dispersed teams today. Accordingly, scholars discuss the implications of this development for 'future HR' (Boudreau and Ziskin, 2011) with regard to a wide range of aspects such as knowledge management (Faraj et al., 2011), collaboration in Online Communities (OCs) (Faraj and Johnson, 2011), emerging conflicts in distributed virtual teams (Hinds and Bailey, 2003) and changing forms of control in virtual teams (Brown et al., 2005). A labour-related issue in this context is the demand on employees for constant connectivity, which often has negative effects on the quality of work as well as the overall productivity of MNCs (Wajcman and Rose, 2011).

The role of digitalisation is also discussed with regard to its implications for standardising organisational recruitment processes. Different sources discuss the role of standardised software-assisted recruiting in developing efficient tools for screening applicants (Bateson et al., 2014). Chauhan et al. (2013), for example, discuss the role of Social Networks (SNs), like Facebook, for personnel selection and the possible measures of using this source for gathering information and attracting potential employees.

Next to HR-related digitalisation processes, a *second theme* is highlighted in OS&T research, namely how digitalisation in a more general sense has influenced core value creating processes such as production and R&D. Technology in general is regarded as an important driver of many S&R-moves and is seen as a key driver for 'the changing fabric of organisation' (Zammuto et al., 2007) meaning that organisational arrangements are increasingly 'organised around what can be done with information' (ibid: 749). However, research has also begun to study the unintended (and often undesired) effects of related technology-driven S&R processes. Bailey et al (2012), for example, distinguish three types of virtual work, namely virtual teams, remote control, and simulations. Using the example of vehicle development in the automotive sector, they show how simulations 'distance workers from the physical referents of their models and [make] it difficult to empirically validate models' (ibid: 1485), meaning that the design of digitalised work structures e.g. in Research & Development (R&D) can become dysfunctional when new

workflows do not provide sufficient access to physical entities and processes. This is in line with other contributions in Organization Studies that critically assess the impact of new technologies on management and employment by contrasting it with other, more optimistic views that highlight the possible gains of technological developments (i.e. Pinkham et al., 2010). The core idea here is that the direct short-term economic effects after the introduction of new technologies might often be relatively predictable and easy to measure, while these prognoses often fail to consider the more subtle and lasting influences of new technologies on work practices, decision-making, communication processes, and power structures in the target organisations. The complex challenges of technology-based organisational change often produce manifold and problematic 'second order effects' (Barley, 1990; 2015) which appear in later stages after the initial introduction of the technology. It has been shown that such socio-cultural long-term effects are not only relevant for employment quality and codetermination processes, but can also have damaging effects on the originally intended economic rationalisation aims.

International Business and Management

Next we reviewed current publications in the field of International Business and Management (IB&M). Here three topics related to S&R processes turned out to be of major importance:

—   The utilisation of new technology for improved efficiency;
—   New possibilities to manage human resources; and
—   New possibilities to structure organisations and improve internal and external coordination processes and workflows.

The *first field of research* puts emphasis on technology as a source for value creation and efficiency, and discusses opportunities for a more effective design of organisational processes in the light of the new possibilities provided by digitalisation and technology (Ambos and Ambos, 2009; Kaufman and Horten, 2014; Kim et al., 2003). Pinkham et al. (2010) discuss how new technologies can be used to increase effectiveness by enhancing organisational core activities, knowledge management and financial resources. They present a holistic framework that guides this organisational quest and proposes various reorganisation measures, such as web-based job posting, recruiting and training, enhancing information processing, automating routine tasks, facilitating organisational learning and improved data collection and analysis. Their model is based on human capital and resource-based perspectives that conceptualise technology as an effective tool of 'freeing up the organisation's human capital resources to spend more time on core value-creating activities' (ibid: 230). This includes different measures of standardisation such as the implementation of Enterprise Resource Planning (ERP) systems for improved internal and external coordination with major supply-chain partners, data warehousing, and data mining in order to unveil scope for rationalisation as well as customisation of products and the establishment of a digital

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'architecture of participation' (ibid: 228) i.e. by utilising RSS-feeds[4], internal Wikis[5] and other social software solutions for enhanced knowledge and information management across borders.

The *second major theme* in IB&M research deals with the adjustment of HRM and work processes in order to deal with digitalisation, increased international dispersion and a higher level of organisational complexity. Similar to the OS&T-related studies mentioned above, critical IB&M-research has begun to reflect on problematic consequences of increased workplace digitalisation.

Cross and Gray (2013) address the problem of 'collaboration overload' in networked economies, meaning that the increased demands for internal communication in complex international organisational structures has led to the problem that an increased share of employees is 'spending so much time interacting with one another that they must do the rest of their jobs when they get home at night' ibid: 50/51). The authors call for a higher awareness of this issue and propose a set of reorganisation measures in order to readjust the ratio of collaboration and individual task-fulfilment.

In a similar vein, research is increasingly concerned with the challenges that arise from the ongoing digitalisation of knowledge-sensitive work and the increasing demand for workers to handle an increasing amount of digital information in their daily work. Research has described this problem as 'information overload' or 'knowledge overload' (i.e. Eppler and Mengis, 2004) and call for measures designed to ensure appropriate 'Information Ergonomics' (IE) (Franssila et al., 2015).

Challenges induced by the introduction of cross-border virtual teams are further increased by the ongoing internationalisation of many business processes, especially because emerging problems are often reinforced by cultural and language diversity-related issues when global virtual teams have to cooperate across national borders (Klitmøller and Lauring, 2013).

As these problems in cross-border virtual teams exemplify, increased global complexity and accelerating technology pose various new challenges to HRM. This has led to various calls for more strategically and internationally oriented HRM (SIHRM) approaches, 'considering HRM at a number of levels simultaneously – the national, organisational and the individual – and to accommodate the complexities and ambiguities of doing this' (Kramar, 2013). Next to the issues of new demands for work organisation standardisation, topics such as global talent management (Collings, 2014) and recruiting (Muenstermann et al., 2010) are seen as highly relevant and supporting mechanisms.

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4. Electronic connection from a website to another website, email account, etc. so that changes to the website are sent to the linked places (Cambridge Business Dictionary).
5. Intranet platforms similar to Wikipedia where everyone can add new information or change information in order to make knowledge accessible for all interested parties within the organisation.

The *third theme* of IB&M research on current S&R moves is concerned with the restructuring of organisations. On the one hand, new technology, in particular in the field of communication and IT allow for fine-slicing and reorganising value-creating and supporting activities. On the other hand, wage differentials and other localisation advantages create pressure for the relocation of various activities. As a result, many organisations engage in reorganisation by Business Process Outsourcing (BPO) characterised by 'the delegation of an entire business process to a third-party provider, including its supporting services' (Gewald and Dibbern 2009: 249). While the first wave of efforts for BPO mostly involved the relocation of labour-intensive manufacturing processes, current BPO increasingly includes knowledge-intensive professional tasks such as accounting and legal support (Blinder, 2006; Sako, 2006). Recent research has reflected on the decisions leading to BPO utilising several theoretical frameworks in order to understand how different factors influence this kind of outsourcing decision (Gerbl et al., 2015), pointing at the importance of location factors (such as national cultures, institutional environments and local labour-costs), process factors (such as task-related requirements and interdependencies between outsourced tasks and internal processes) and firm-level factors (such as resources to manage BPO and available experience). The success of BPO largely relies on the successful integration between service providers and BPO clients. The complexity and uncertainty of outsourced tasks affects the way integration measures need to be designed in order to achieve positive economic returns (Luo et al., 2010).

Human Resource Management and Industrial Relations

Research in the field of Human Resource Management and Industrial Relations (HRM&IR) also reflects on various developments related to contemporary S&Rs in MNCs. Three topical fields relevant to our project's objective have received particular attention within this discipline:

— In line with reflections on the increasingly international orientation of HRM outlined above, a number of contributions has focused on the international diffusion and standardisation of employment practices;
— A number of contributions focuses on technology-induced shifts in HRM and the related challenges for HR-management;
— Similar to contributions in OS&T and IB&M, a range of research papers deals with the processes and effects of organisational restructuring such as outsourcing and the 'lean' organisation of processes.

Within the *first area of research*, ongoing attention is paid to the diffusion and standardisation of employment practices within MNCs. Although HR can be considered as largely affected by idiosyncratic pressures rooted in cultural, institutional, social, and regulative environment of MNC host countries (i.e. Ferner and Quintanilla, 2002), research also highlights forces driving MNCs' HR practices towards a higher degree of cross-border homogenisation. This includes social factors such as country-of-origin effects, imprinted organisational culture as well as economic drivers and motives such as the benefits of

MNC-wide strategy homogenisation, efficiency-seeking efforts, and avoidance of administrative duplication (i.e. Ferner, 2000). In line with these developments, MNC HR-practices are regarded as a result of an interplay between countervailing pressures for global integration and local responsiveness (i.e. Almond et al., 2005). Critical research has pointed to the threat of a 'five-lane low-road convergence' of employment practices across a variety of host countries driven by an '*increasing rationalisation and standardisation* of products and work organisation, with the consequent emphasis on *low skills* and *low wages and* pressure to keep them low, high turnover and *low trust,* and increasing *union antipathy*' (Royle, 2004: 68 [emphasis in original]), in particular in service-sector employment. Research on the convergence of international HR practices has also highlighted that the positive effects associated with global standardisation of HR from a theoretical perspective are often not realised in practice. For example, in their study on global integration and local responsiveness in multinational subsidiaries' HR practices, Brock and Siscovick (2007) conclude that 'data suggest that integrative mechanisms [like HR standardisation] seldom contribute to the effectiveness of a MNE subsidiary [...]. A reason for this may be that the contingency logic we used for GI (global integration) often included various controls, standardisation, and integrating mechanisms. These structural contingencies may make theoretical sense, but may conflict with other realities of the contemporary MNE.' (ibid: 369). They argue that the lack of flexibility and autonomy induced by standardisation is negatively linked with subsidiary productivity.

Next to these shifts in HRM induced by increased internationalisation of MNCs, a range of developments in HRM is closely related to technological changes which is highlighted within the *second area of research*. Digital technology such as enterprise resource planning (ERP) systems have become important for many different functions within MNCs and increasingly also cover HR-related tasks and processes (i.e. Benders et al., 2009). Focusing on new ways of digitally organising collaborative work processes, various measures of electronic Human Resource Management (e-HRM), which is defined as 'a way of implementing HR strategies, policies and practices in organisations through the conscious and directed support of web technology-based channels in order to comply with the HR needs of the organization' (Ruël et al., 2004: 281), are in the focus of contemporary HR research (Heikkilä and Smale, 2011; Woodward et al., 2014; Voermans and Veldhoven, 2007). The main objectives of e-HRM seem to focus on a) cost reduction, b) the improvement of HR-service quality and c) improving the strategic orientation of HR (Strohmeier, 2007; Bondarouk and Ruël, 2013). Recent empirical investigations suggest that some e-HRM measures might have positive effects on HRM system responsiveness and service quality, and that it can enhance visibility, constancy and acceptance of HR practices (Obeidat, 2016).

While e-HRM refers to the usage of information and communication technology within the firm as a sign of 'internal digitalisation' of HRM, modern technology also allows for new forms of employment that particularly stem from the possibilities of the internet for external sourcing of a digital workforce.

Crowd workers and digital freelancers consequently become more and more important today, which has led to an intensified discussion on these new forms of atypical employment in the HRM&IR-literature (Brabham, 2013). As these new employment forms allow for high flexibility on the demand side because established employment relations systems are barely regulated, research has pointed to a (re-)commodification of labour that goes along with these developments. Accordingly, some crucial questions for unions and employee representatives emerge, such as how to deal with the facts that crowd workers and freelancers are often not covered by or reachable through traditional representation structures and hardly protected by employment laws in many cases (Bergvall-Kåreborn and Howcroft, 2014).

A *third field* of research focuses on the various trends of reorganisation and restructuring of MNCs as a whole. Similar to the research in OS&T, this stream of literature directly concentrates on standardisation and reorganisation of internal and external structures and production processes. With regard to the organisation of 'internal' production processes, a number of contributions deal with the ongoing efforts of many MNCs to optimise the production process by the implementation of 'lean production', manufacturing and administration (i.e. Oudhuis and Olssen, 2015). Within the past decade, the application of the 'lean' principles has gone beyond blue-collar work and is increasingly affecting white-collar work in administrative and knowledge intensive functions today (i.e. Riezebos and Klingenberg 2009). As we will discuss in greater detail below, these technologies provide new opportunities for refining and streamlining organisational processes, such as by IT-based controlling and production planning, or in optimising supply chain management and logistics systems.

With regard to external coordination, HRM literature—similar to OS&T and IB&M literature – explores BPO and various measures of outsourcing and refined supply chain management. From the HRM&IR perspective, the analysis of the advantages, disadvantages, and consequences of utilising shared services and outsourcing of specific routine processes in HR to subcontractors (Bartram et al., 2015a, 2015b; Howcroft and Richardson, 2012; Belcourt, 2006; Boon and Verhoest, 2016; Gubbbins and Garavan, 2009; Gregson et al., 2015; Kosnik et al., 2006) and Shared Service Centers (SSCs) has triggered a particular amount of attention. Much of this research points to problems and pitfalls of BPO. For example, Belcourt (2006) discusses the benefits and risks that go along with BPO agendas. She highlights that outsourcing can cause a 'disintegration' of organisational culture by alienating and deskilling employees, and risks 'hollowing out' organisations, meaning that knowledge and skills are lost to outsiders and BPO oftentimes limits firm's capabilities for creativity and cross-functional synergies. In line with research focusing on the unintended consequences of S&R, moves she argues that, as a consequence, the projected benefits of BPO cannot be realised in many cases. Kosnik et al. (2006) compare different strategies of HR process outsourcing and highlight that building trust between the different parties involved in BPO and sustaining productive and collaborative working relationships is crucial in order to ensure successful BPO.

Summing up, as we have seen, each discipline deals with contemporary standardisation and reorganisation in a pluralist way, covering different aspects from different theoretical perspectives. A 'common denominator' of the three disciplines is that all of them include three fundamental perspectives on S&R, namely:

1. *A social perspective* dealing with issues of organisational inclusion as a result of social and organisational dynamics;
2. *A technological perspective* highlighting the impact of new, predominantly IT-based technology on contemporary MNCs; and
3. *A structural perspective* reflecting on the dynamics of organisational restructuring.

Comparing the priorities set in each discipline, we see that OS&T tends to put a relatively strong emphasis on the societal forces (such as demographics) shaping organisations today. Moreover, contributions here stress the social effects of S&R processes (such as the effects of digitalised and de-standardised employment relations). In contrast, IB&M research often departs from the possibilities for MNC-wide economic efficiency (i.e. by improved cross-border value-creation or outsourcing) and therefore puts emphasis on the economic possibilities related to S&R moves, as well as on seeking solutions for challenges and implementation problems that come along with them. In comparison, HRM&IR research has, in line with the discipline's tradition, put questions of work and work quality at the centre stage when dealing with topics such as cross-border standardisation of HR, technology-induced shifts in work organisation and trends in organisational restructuring.

3.2 Contemporary cross-border standardisation and reorganisation in European MNCs: Major trends

Departing from the results of the literature review, interviews with a broad set of experts and practitioners were conducted in order to assess the practical relevance of the overall trends we found in the academic literature. Moreover, the interviews aimed to specify the prevalence of the trends across different industrial sectors, countries and regions in Europe, and to better elucidate the processual dimension of cross-border S&R moves in European MNCs. Integrating the findings from the literature review and the expert interviews, we were able to provide a condensed description of contemporary S&R trends in European MNCs, which covers the social, technological and structural dimensions of S&R as well as their interlinkages. For this report we finally selected six trends that appeared particular important to us. We chose those trends that were of paramount importance both in the relevant literature as well as in the expert interviews and at the same time demonstrated a great impact on issues of labour and workers' participation according to the basic perspective of this report. The following trends that will be explored in more depth in the subsections below have been chosen:

1. Our investigation found a renewed *impact of 'lean production'* principles and *'lean thinking'* in contemporary MNCs in Europe. The availability of advanced technology has led to various efforts combining the classical ideas of 'lean' organisation with the possibilities stemming from new technology. In line with this, many of our interview partners have highlighted the importance of 'lean' standardisation agendas in production and beyond. The related processes and challenges are described in Chapter 3.2.1.

2. The renewed impact of 'lean production' principles also reemphasised *outsourcing* as a crucial issue in the contemporary S&R agenda of European MNCs. As outlined above, all academic disciplines studied here deal with this development. Moreover, outsourcing-related issues such as BPO have been mentioned in various interviews. The critical role of outsourcing for cross-border standardisation processes is described in more depth in Chapter 3.2.2.

3. Our findings both in the literature review as well as in our expert interviews point to the great importance of HRM-related S&R in contemporary European MNCs. The crucial role HRM-related process standardisation (e.g. Success factors, ISO norms) plays for the quality of labour and codetermination is sketched out in Chapter 3.2.3.

4. As already indicated, many of the identified contemporary S&R trends in European MNCs are closely related to today's technological dynamics. Therefore, Chapter 3.2.4 gives a detailed overview on S&R moves that are fundamentally driven by Information and Communication Technologies (ICT).

5. Closely related to ICT-based standardisation, we put special emphasis on 'Big Data' and 'Industry 4.0' issues. While ICT-based S&R moves have been of an enduring importance for some time, our focus on 'Big Data' and 'Industry 4.0' in Chapter 3.2.5 highlights possible future S&R developments in European MNCs.

6. Finally, a number of our interview partners indicated that growing demands for compliance with good corporate behaviour stemming from national and supranational regulations induce S&R moves. While these findings have not yet found an inroad into the academic literature, we rather see this trend—just as the one on 'Big Data' and 'Industry 4.0'—as an emerging one. A detailed discussion of compliance induced S&R moves in European MNCs is provided in Chapter 3.2.6.

The following Chapters 3.2.1 to 3.2.6 are structured as follows: First, we provide an encompassing description and a detailed analysis of the cross-border S&R trend in question, as this was the main purpose of the study. This is then complemented by some first inroads into the effects the S&R trend in question might have on occupational and work-related matters as well as on power relations and workers' participation in MNCs. We would like to stress that these

inroads are preliminary and tentative at best, as there is hardly any direct and systematic knowledge available about the effects so far. Chapters 3.2.1 to 3.2.6 are written in a way that the reader will get an instructive overview about the specifics of the trend in question. This somewhat ignores the fact that the S&R trends presented below are strongly interrelated and sometimes overlapping. We cope with this by frequently cross referencing and by an integrated discussion in our concluding Chapter 4. Finally, it should not go unnoticed that in many cases, the trends we report about are not exclusively to be found in European MNCs or foreign MNCs operating in Europe, but are trends that apply beyond, sometimes globally. In addition, the cross-border nature of standardisation trends is generally implied even when not explicitly spelled out.

3.2.1 Renewed impact of lean production principles and 'lean thinking' on standardisation processes

The idea of 'lean production' emerged as an alternative to Fordist mass production in Japan. Later on, it was adopted by Western car manufacturers in response to the crisis of Fordism, which became even more acute because of the success of Japanese car manufacturers in the 1980s. The story of 'lean production' was promoted in the West and outlined in the study of the MIT published in 1990 under the title 'The machine that changed the world' (Womack et al., 1990). In the blurb of the German edition of the book, 'lean production' has been described as a 'Japanese secret weapon in the economic war' and as a concept which has helped Japanese car manufacturers like Toyota to 'conquer the whole world'. This vision has certainly become reality in contemporary MNCs, especially in the car industry, even when the implementation of 'lean production' tools was not always easy in Western firms, including in liberal market economies like the UK. It can also be assumed, as we will see below, that scale and depth of implementation are lower in emerging economies because of lower degrees of automation and digitalisation of production and related processes, and the availability of cheap labour for both low skilled and skilled jobs, e.g. in Central and Eastern Europe (henceforth CEE).

The idea of 'lean production' has by now been *applied in various sectors* beyond car manufacturing, from the oil industry to retailing across the globe. Especially in Western so-called 'high-wage' countries it has not only been applied widely in manufacturing industries, but also increasingly in the public service sector, such as in health care. One of the authors of the seminal MIT study runs a consultancy firm called 'The enterprise academy', which is dedicated to promoting 'lean' principles across industrial sectors with a strong focus on Western capitalist countries (see also the video presentation of Jones in 2011 for examples from selected sectors).

However, although 'lean production' has emerged as an alternative to the dominant Fordist mass production, its *key goals* seem to be quite similar to the Fordist agenda, as both increasingly focus on the optimisation of work,

employment organisation and thus finally on an increase in productivity and reduced costs. The latter is what distinguishes 'lean' from classic mass production, because of:

1. The *increased flexibility*, based on diversified and customised production, just-in-time supply systems, close collaboration with key suppliers including in R&D, and the delegation of decision making back to the shop floor and working team; and
2. The high quality of products and services through the *reduction of 'waste'* in the production process, supported by quality circles, flatter hierarchies and the careful selection of suppliers.

The introduction of new, 'lean' principles into work and organisation in MNCs has always led to both *enthusiastic support and criticism* (see e.g. Springer, 1999 and Clarke, 2005 for an overview of these debates). The first camp very much emphasised the economic value that the introduction of 'lean' principles has, because it creates a more efficient management and organisation. There are also arguments about positive effects that 'lean' principles may have on employee motivation and creativity, because of the strong support of teamwork and employee involvement via quality circles and continuous improvement processes. Critical aspects of 'lean' management were discussed under the labels 'Japanization' and 'Toyotism', pointing for example to implementation problems of 'lean' principles which often undermine rights of local employees and unions in coordinated market economies, and the exploitation and hollowing-out of supplier relations through the never-ending supplier polls and coercive comparisons.

The introduction of 'lean' principles has been going on for a long time and therefore cannot be seen as a novel trend anymore. Our research, based on literature review, expert interviews and in-depth discussions of our interim report at our focus group workshop in Berlin in summer 2016, however, indicates *a renewal of lean principles* in the context of process standardisation. These new developments are related to the emergence of the 'global factory', based on the beliefs of global management elites that to 'create a flat world by means of frictionless operating systems' is a key goal of the 'global factory' (Buckley, 2011: 273). In line with strong managerial beliefs, current socio-economic developments are also deemed responsible for a massive renewal of 'lean production' systems and the increased influence of 'lean' management principles. Politically, the liberalisation of markets worldwide has driven the current changes in global production and operation systems, supported by new technologies like CAD (Computer-Aided Design), CAM (Computer-Aided Manufacturing) or e-commerce, which reduced costs of production and services significantly. In short, technologically and managerially driven changes enable MNCs to 'fine slice' their activities and locate each 'stage' of an activity in its optimal location and to control the whole supply chain, even when not owning it (ibid: 270).

Next, we will discuss the renewed impact of 'lean thinking' at three levels: 1) the extension of 'lean' tools and thinking from the global factory to its supply

chain, 2) the effects and new challenges for employment and work within the global factory, and 3) the lingering national-specific differences of how 'lean principles' are implemented locally:

First, the increased importance of optimised supply chain management and logistics systems in the context of 'global factories' has been stressed. Accordingly, we learned about the implementation of new 'lean' related tools and standards, which are based on the increased use of new IT and controlling measures in order to streamline processes in and around the 'global factory' (Buckley, 2011). A website focusing on a practitioner audience summarises 25 of these renewed 'lean' tools (http://www.leanproduction.com/top-25-lean-tools.html). Some of the tools in this list, like just-in-time (JIT) or Kaizen (continuous improvement) are well-known, while others are new and point to an increased reliance on new technologies and the increased underlying focus on the increase of managerial control. Accordingly, our interviewed experts see standardisation processes in MNCs to be driven by greater efforts to implement central planning tools and decision-making procedures in order to 'eliminate waste' in line with 'lean' principles—like optimising inventory, waiting time, and transport—or just as means to reduce production and labour costs in a more traditional Fordist sense[6]. Our interviewees stressed that especially in the car industry, but also beyond the setup of standard global factories, these measures go hand in hand with significant standardisation processes of the whole supply and value chain, which becomes visible in:

1. The *new role of and pressure on suppliers*. Global factories are run with extremely short delivery times of supply parts, which are increasingly not produced in-house. This then leads to increased pressure on supplier firms to deliver in time. This has led to the setup of 'supplier parks' for so-called systems suppliers, which are situated close to production in global factories. System suppliers also increasingly take over traditional internal core tasks of global factories, including assembly, controlling and logistics functions.

2. The *increased importance of logistics systems for global factories*. Besides the increased direct involvement of core suppliers in global production hubs, we also see a greater geographical separation of previously connected value adding activities (Buckley, 2011). The global factory and its core suppliers outsource more and more the production of expensive and even complex supply parts to low-wage locations. This tendency has led to an increased importance of effective and frictionless logistics systems. Logistics companies, like Schenker of Germany or DSV of Denmark, take over large parts of the manufacturing units and run large and complex 'logistics to assembly line' delivery systems. This enables MNCs to spruce up the exact

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6. Our expert interviews mainly dealt with standardisation processes related to producer-driven value chains.

inventory costs, because they have been outsourced to specialised logistics firms and can now be found increasingly 'on the road', which of course does in the end create extra costs if supply parts are not delivered in time. More details on that can be found in the subsequent section 3.2.2 on outsourcing trends.

3. The emergence of *highly sophisticated IT systems and ongoing digitalisation allowed by modern communication technology*. This has led to a higher dependence of MNCs on software and IT firms, such as SAP for example; the meta-standards they set can hardly be changed after new IT systems have been installed. One interviewee points to the problem that digitalisation in a large part drives the standardisation of supply chain and manufacturing processes, which reduces the decision-making autonomy at the managerial and employee level, because alternative and informal ways of managing and working are impeded. Another interviewee (a trade union and works council consultant) describes the implementation of standard software with the metaphor of the 'Trojan horse', referring to the tendency that IT systems are increasingly developed for the global market and can more easily be set as a standard for a large number of subsidiaries. Voices of 'Gallic villages'[7], like Germany where 'Mitbestimmung' and employee rights would enable resistance, increasingly lose influence because of IT-driven changes of value chain management, even while the size of the German market still matters. For further information, see the sections 3.2.4 and 3.2.5 on IT and Big Data trends.

Second, new challenges created by the renewal of lean production systems and 'lean thinking' for employment and work have been highlighted. In line with contemporary scholarly analysis (e.g. Frey and Osborne, 2013) it has been stressed that human labour will and has been replaced increasingly by new technologies. Formerly *simple and repetitive tasks have been replaced by sophisticated IT systems and robots*. IT systems like SAP increasingly also support management in the control of workflows within the global factory, as well as in organising procurement and in rating and ranking of suppliers. In car manufacturing, certain traditional shop-floor tasks like welding have been entirely taken over by robots, which on the one hand replace special shop floor tasks, and on the other hand, enhance the supervisory and production control tasks for higher skilled labour. Also, in service sector firms such as retailers, lower skilled tasks like packing and packaging are taken over by specialised technologies. Thus, we see a strong tendency of standardisation driven by new IT throughout the 'lean' supply chain, which increasingly also affects high-skilled and high-wage countries like Germany. However, it is also stressed that the degree of computerisation and digitalisation is highest in countries like Germany or Sweden compared to countries where lower skilled workers in manufacturing are more common, like in liberal market economies as the

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7. For detailed description see Goscinny and Uderzo (1959).

USA[8], or where access to cheap labour is easy like in many developing Asian countries. However, in high wage countries like Germany and others we increasingly find other new employment-related developments associated with 'lean thinking', like the segmentation of the workforce into core and temporary employment within global factories. The latter group of employees is also to a large part allocated to the remaining repetitive and not yet automated work tasks. Furthermore, in comparison to the original adoption of 'lean' principles, the importance of teamwork at the shop floor seems to have lost its momentum in the global factory. Our interviewees report that many firms do not see teamwork in principle as a factor of humanisation of work anymore, but as a cost factor which, if it is not replaceable, needs to be controlled by sophisticated IT systems. This leads to the paradox that labour is—on the one hand—described as the most expensive part of 'lean production' systems which needs to be replaced if possible, but that skilled labour is—on the other hand—seen as the core of renewed 'lean production' systems when it comes to operating the highly complex global factory.

As already indicated, the paradoxes emerging in the implementation process of 'lean principles' have been subject to many past and ongoing *sociological debates*. These have gained a new momentum again in research on Industry 4.0, which is seen as a new stage of the 'technological revolution' – facilitated largely by Big Data and digitalisation. On the one hand, it is stressed that new paradigmatic technological changes support an upgrading of a number of jobs both in manufacturing and service sectors because of newly emerging possibilities for employee empowerment, based on intense social networking skills, extra-functional competencies and process-specific expertise (see e.g. Hirsch-Kreinsen, 2014). On the other hand, research points to contradictory developments that are especially seen as problematic in advanced capitalist welfare states. Critical research points here to 're-emerging assembly lines and the revival of 'hard-core lean' which brings harsh Taylorist principles back into the organisation of work (Johansson et al., 2013). Hirsch-Kreinsen's (2014) study also provides evidence that digitalisation enhances the impact of well-established and new 'lean production' concepts because downgrading effects not only endanger jobs of low-skilled employees, but increasingly also threaten jobs of high-skilled employees and middle managers. Additionally, a significant increase of 'precarious' work and employment conditions (see e.g. Dörre, 2005 for an overview) is linked with 'lean principles' that narrowly concentrate on cost-cutting, which forces MNCs and their suppliers (and subsequently their sub-suppliers across the supply chain) to reduce the quality of work and employment, both in developing and developed economies. Finally, research found that new digital technologies and Big Data more and more act as tools

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8. Accordingly, a recent article in the Financial Times (2016) shows that increasing protectionism in terms of proposed new trade deals like 'America first' is based on the false premise that jobs are lost because of trade. The article refers to research by Center for Business and Economic Research at Ball State University which found that the US indeed lost 5.6m manufacturing jobs between 2000 and 2010...(but)...85per cent of these job losses are actually attributed to technological change – largely automation – rather than international trade." (https://www.ft.com/content/dec677c0-b7e6-11e6-ba85-95d1533d9a62).

for enhancing managerial control of all forms—personal, cultural and bureaucratic control (for the different forms of control in MNCs c.f. Harzing, 1999).

In short, the renewal of 'lean production' principles in the age of Industry 4.0 cannot be interpreted just in neutral terms when it comes to process standardisation, but points to important socio-political dimensions, too. A key question which emerges here is what kind of strategic interests are behind such comprehensive forms of managerial control and how do these actually impinge on possibilities for collective bargaining and resistance of unions, employee representatives and other local subsidiary key actors and stakeholders (see also Geppert and Dörrenbächer, 2014).

Third, own research and especially the input which we received from European trade union consultants at our focus group meeting indicate that there is not just simply a revival of 'lean principles', *but also remaining national-specific differences of how 'lean production'principles are locally influenced*. Research in Nordic countries shows e.g. that the spread of 'lean principles' is quite far-reaching there. However, it is also stressed that the implementation has been significantly 'softened', because of the strong influence of unions in negotiations with MNC management (Johansson et al., 2013). Softer 'lean principles' are linked to political bargaining processes between companies and local unions, which ensured that principles of 'good work', focused on empowering key employees and improving their skills and social competencies, could be negotiated for certain groups of employees and occupations. At the same time the already referred to polarisation paradox has led to frustration for other groups of employees and occupations, because they have been labelled as 'replaceable' and 'unqualified' (ibid: 453) and/or forced into jobs which led to 'physical overexertion'.

There is also some evidence that 'lean principles' have not been implemented in the same manner and scale in subsidiaries based in CEE, when compared with Northern and Western Europe. A key reason for this development is seen in significant differences in wage levels, which made it attractive for Western MNCs to invest in higher-wage countries in the first place. Moreover, it is stressed that, even when the implementation of 'lean production' methods, especially in foreign-owned firms takes place, the scale and depth of 'lean' restructuring at plant level is moderated by the availability of highly qualified employees. They are much cheaper when compared to their costs in the home countries of MNCs. Thus, we might find some similarities in CEE countries in terms of polarisation of the workforce, but we do not know much about how common this is, in which countries in CEE and also whether and where 'lean principles' help to upgrade certain jobs and occupations, as it has been reported in so-called high-wage countries. Given that unions in CEE are much weaker and more fragmented than their counterparts in Northern and Western Europe, we doubt that local unions are able to negotiate 'good work' principles as effectively as in Sweden, for example. A report on 'Lean Implementations in Hungary' (Rendesi et al., 2013) e.g. shows that that 'lean principles' can be found predominantly in large foreign-owned firms. It is furthermore indicated

that the implementation has largely been a top-down process initiated by the parent company. This has led to some adaptation problems because of differing interests between locals and HQ management, acceptance problems, triggered by intended 'elimination of certain (local) processes', and proposed 'transferring employees from one unit to another' (ibid: 6). The survey-based report does not go into detail about how these problems actually affect the local management and organisation practices, but it is criticised that the implementation of 'lean' has been used mainly as a 'cost cutting' tool (ibid: 7). The problems listed above indicate some micro-political struggles which need to be studied further. Moreover the findings need to be compared in more detail with existing studies of Nordic countries (e.g. Johansson et al., 2013). A key question for such comparisons could be how far jobs are upgraded and/or downgraded at local subsidiary level, related to how much bargaining power local actors have and how far unions are willing and able to work with the local management in CEE in order to resist and negotiate the ways in which 'lean production' principles are implemented.

Changes in work practices and occupations

The renewed impact of 'lean principles' on process standardisation of work and employment practices is—especially in Northern European countries—strongly driven by digitalisation and Big Data. As found in earlier research on 'lean production', the revival of 'lean principles' continues to polarise: on the one hand, groups of 'winners' emerge whose jobs are upgraded in terms of responsibilities and quality of work, and on the other hand, groups of 'losers' are selected out by seeing them as replaceable and thus often driving them out of 'lean' firms, or moving them into repetitive and often more stressful working environments. The questions emerging from here are: Has the polarisation process increased and perhaps created more 'losers' than winners, especially in the context of Industry 4.0? What kind of novel work practices and occupations have emerged and to which group do they belong? Which high-quality jobs and occupations are downgraded or upgraded and why? And why are there significant country- and sector-specific differences, e.g. between North-Western European and CEE countries?

Power relations and workers' participation

We have mixed evidence whether the revival of 'lean principles' leads to shifts of power towards the top management and whether lower level management and employees are always in a 'loser' position. This power shift might, however, take place in cases where 'lean principles', heavily supported by digital technologies and Big Data, enhance the comprehensiveness of managerial control, such as by supporting a greater concentration of critical power resources at the top management level. However, we also found evidence that sector- and country-specific institutions still matter, because they influence how far 'lean principles' are locally adapted, and thus provide power resources to local key actors. A key question emerging here is, how far is the improvement of quality of work institutionally supported and does it represent an important part of socio-political bargaining at the firm level? The latter is

actually crucial for developing a better understanding of whether work and employment are going to be upgraded or downgraded during the implementation process. In short, how far process standardisation leads to significant shifts of power resources away from local subsidiaries, managers and employees towards the headquarters is influenced by the strength of labour unions in the host countries and possibilities for workers' participation and co-determination at the firm level. We have some evidence that both aspects differ quite significantly, especially between North-Western European and CEE countries.

Table 3   **Condensed overview: Renewed impact of 'lean production' principles and 'lean thinking'**

Renewal of 'lean'
– is mainly caused by
– political forces: Liberalisation of world markets
– technological forces: IT tools and digitalisation
– consists of
– the idea of a 'global factory': 'Fine-slicing' activities and efficiently locating them around the globe, based on differentials in national factor endowments (e.g. employee qualifications, wage levels, regulations)
_ the inclusion of the whole supply chain: optimisation of complete value networks, across organisational boundaries
– has diverse effects on employees:
– loss vs. creation and up- vs. down-grading of jobs possible
– national-specific differences (mainly Western Europe/Scandinavia vs. Central and Eastern Europe) in degree of implementation of 'lean principles' in MNC subsidiaries

3.2.2 The critical role of outsourcing for standardisation processes

In our section on new 'lean' trends, we already touched on the issues of outsourcing and offshoring. The latter refers to the relocation of certain functions within the MNC itself, often to sites located in low-cost countries. In comparison to offshoring, outsourcing refers to contracting out to obtain services and products from third parties, i.e. external independent firms. In this section, we will mainly deal with new outsourcing trends, and here especially with so-called 'strategic outsourcing' of primary value creating functions, which are linked with significant reductions and disintegrating of core business activities and thus often have negative effects on the overall quality of working conditions and industrial relations of MNCs (for an overview see e.g. Drahokoupil, 2015). Outsourcing based on 'make or buy' decisions of core business activities has been a key driver for restructuring processes of internationally operating firms for a long time. It has been used across sectors from traditional manufacturing to the service sectors, including the public services (Hall, 2000). Accordingly, business process outsourcing has been defined as 'delegation of an entire business process to a third-party provider, including its supporting service' (Gewald and Dibbern, 2009: 249), for instance

IT (ibid), but also HR functions (Belcourt, 2006). Socio-economic reasons given for these developments are:

1. The geographical separation of production and consumption, related to increased international trade;
2. The geographical separation of internalised stages of value-added activities, related to Foreign Direct Investment (FDI); and
3. The geographical separation of specific tasks through the global factory, mainly related to offshoring, but not exclusively (Buckley, 2011: 270).

Current cross-national comparative research shows, however, that country- and industry-specific[9] institutions still matter when it comes to outsourcing decisions (Kirchner, 2015). In this study the Nordic countries plus the three Baltic countries are placed on the top end in terms of percentage of companies that outsourced the production of goods and services in the European Union, while Central and Southern European countries and also the UK and Ireland are situated in the middle spectrum. At the bottom end we find Eastern European countries. These findings match our discussion above with regard to lesser degrees of influence of 'lean principles' in MNC restructuring in the context of CEE. Besides the availability of 'cheaper' qualified labour, societal institutional influences play a critical role, too. This becomes evident in cross-national comparisons of whether companies decided to fully or partially outsource production and service activities. Companies located in the most liberalised European market economies, the UK and Ireland, have made more use of complete site outsourcing, in comparison to the rest of the EU-28 countries (ibid). Thus, it can be concluded that a higher degree of governmental regulation of national economies (including core industries) has a limiting effect on managerial decisions about complete site outsourcing.

Our in-depth analysis of relevant literature, expert interviews and contributions at our focus group meeting points to *six crucial issues* concerning current critical outsourcing trends related to standardisation:

First of all, *vertical integration and the definition of core activities* has been a key focus of corporate restructuring since the 1990s. This development and a boom in mergers & acquisitions (M&As) triggered the dismantling of large conglomerate–like MNCs into smaller global factories, which increasingly concentrate on controlling key assets and advantages which are non-imitable by outsiders at the moment (see also Buckley, 2011). These developments also mean that some of the functions which used to be managed internally have been contracted out to specialised firms (see also section 3.2.1 on the renewal of 'lean production' and section 3.2.3 on new developments in HRM process standardisation). It has been emphasised that firms in crisis situations tend to rely more on outsourcing and are also highly involved in setting up so-called

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9. Not astonishingly three industries, manufacturing, electricity/gas and steam/air conditioning and construction, are the forerunners in terms of outsourcing in Europe, in comparison to more localised industries as food service, human health and social work activities and activities in arts, entertainment and recreation (Kirchner, 215: 32).

Shared Service Centers (SSCs). SSCs have been increasingly set up and used by MNCs in order to cut costs and optimise internal resources. They 'exemplify a reorientation in companies from departments to functions and from jobs to roles whereby similar tasks are identified, standardised and brought together in centres dedicated to back office activities' (Howcroft and Richardson, 2012: 113). SSCs are used to facilitate both centralising of internal business services and outsourcing of certain formerly internalised business functions to third parties, locally and internationally. Research, on the one hand, points to the benefits for the remaining, often high-skilled, core employees in terms of higher salaries they can earn after outsourcing (ibid). On the other hand, it is stressed that many employees, in both high- and low-skilled jobs, directly suffer from these developments. Contracting out to external shared service providers often not just reduces the ratio of skilled work in-house, but also significantly intensifies the workload and stress at work for both remaining employees and for contractors. Therefore, it is concluded that outsourcing to SSCs often leads to increased 'insecurities, loss of employee voice and absence of commitment' (ibid: 124).

Second, large parts of the *renewed impact of 'lean thinking' focuses more on complex primary value creation functions,* which have been seen as core competencies beforehand, such as logistics. In the car industry for instance, logistics, traditionally situated between the final manufacturer and suppliers, have become targets for outsourcing now. This function has become increasingly important, not just because of the introduction of Just-in-time (JIT) delivery systems, but also as manufacturers themselves, together with their system suppliers in nearby supply parks, have further expanded internationally. Beyond the supplier park where mainly first tier suppliers are situated, simpler parts are sourced in geographically more distant and cheaper locations. This development means that logistics suppliers are expected to deliver supply parts via helicopter e.g. in emergency situations from geographically more distant places in order to guarantee a continuous supply and thus frictionless production. A crucial problem with the introduction of new 'lean' tools seems to be the availability of supply parts in time and location to ensure the flow of customised production processes and the quality of products and services. Satisfying the demand of car buyers, adjustments like change of colour, seat design, etc. can be made until 6 days before the production of the ordered car is going to start. Shorter product cycles and smaller batch production seem to be other crucial reasons why the outsourcing of logistics to third-party specialists seems to be agreed upon to be an optimal solution. In short, global factories focus ever more on the highly flexible customised production process, in which core business delegates buffering functions to specialised suppliers.

Third, the trend of outsourcing certain formerly internalised functions has also led to an *increased involvement of temporary employment agencies* especially in global factories, but also in service-sector MNCs. In global factories we can see an increased separation of employees into core employees with full employee rights and higher wages, and employee groups at the periphery with lower rights and significantly lower wages. We increasingly find instances of

outsourcing of repetitive and routine blue-collar work tasks to temporary work agencies. Not surprisingly, a main motive for that is the reduction of production costs. One interviewee provided the example of Porsche Leipzig (Germany), where the use of temporary workers led to a massive reduction of hourly wages for the axle assembly. However, temporary employment also enhances the flexibility of global factories in order to respond to short-term market fluctuations, when temporary work is helpful by enabling smooth hiring and firing policies. These developments have caused more and more conflicts with unions, because they risk hollowing out traditional sector-specific collective bargaining agreements and employee rights. Moreover, it is more difficult to effectively organise labour in factories with large amounts of temporary workers. Research (see e.g. Altreiter et al., 2015) reports that MNCs not only outsource jobs, but also use insourcing of employees as a measure to reduce the number of local core employees and to discipline them by recruiting workers mainly from neighbouring low-wage countries. Such insourcing ranges from work migration to undocumented foreign workers, and also covers cross-country temporary agency workers or the posting of workers. Case studies on Foxconn Electronics e.g. show that this MNC has opened factories in the Czech Republic, Hungary and Slovakia not only in order to be able to label its products as 'Made in Europe', but also to hire young mobile workers, who are usually not unionised. In the two Czech Foxconn plants, more than 50% of the workforce is temporary and recruited from countries like Slovakia, Poland, Romania, Bulgaria, Ukraine and even Mongolia (ibid: 70). The same applies to employment practices at Amazon warehouses in Germany, where workers from all over Europe are recruited (ibid: 72). In the analysis of both case studies it has been concluded that insourcing temporary workers has helped to avoid unionisation and served to block the influence of local unions on improving the quality of work and payment conditions for parts of the workforce.

Fourth, there are also reports *about severe problems emerging in post-outsourcing sites due to a loss of expertise and core capabilities needed* to keep up the quality of products and services after having out-contracting key business functions. Additionally, severe coordination problems and the geographical distance between outsourcing and outsourced sites are seen as key reasons why some MNCs have made re-insourcing decisions, i.e. by relocating some of the contracted-out business tasks back in-house. A case-study based investigation refers to a food industry MNC which decided to outsource its logistics administration functions of one of its subsidiaries to a newly created global Shared Service Center (Ramioul and Hootegem, 2015). The study first of all points to the fact that the MNC was not able to fully outsource the entire logistics function as originally planned. A variety of unexpected and persistent problems emerged, like 'container loads were not correctly calculated, empty packaging loss, missing information on delivery schedules and customer forms and severe delays' (ibid: 100) after the relocation started. The move from full to partial outsourcing involved re-organising and re-establishing of parts of its former logistics functions. In short, some of the outsourced service functions were brought back; a 'rescue team' was installed as a new unit responsible to 'fire-fight and temporarily help out [in the Shared Service Centers] in order to minimise performance losses

and the permanent loss of uncodified [tacit or complex] knowledge' (ibid: 101). In comparison to insourcing of temporary work, which is, as discussed above, used to reduce costs by replacing local workers and avoid unions, re-insourcing can be seen as a measure of MNCs to deal with post-outsourcing problems and emerging escalating costs in post-outsourcing units.

Fifth, another critical outsourcing trend is very *closely linked with emerging standardisation possibilities through the intense use of IT and Big Data* (see also sections 3.2.4 and 3.2.5 in this report). One interviewee uses the metaphor of 'call-centrification' to point out how skilled labour and knowledge workers in European MNCs are increasingly outsourced, because new technologies allow for detailed work studies which go back to Taylor, but have usually been applied predominantly for blue collar or administrative work. New IT systems and Big Data enable detailed measurements, like key-stroke-measurements at computers or pausing, and thus make tight controls of knowledge workers and maintenance personnel possible, employee groups which have hardly been in the focus of Tayloristic work studies before. In short, white-collar and knowledge work becomes more and more comparable, not just between departments and subsidiaries, but also for comparative benchmarking with external firms, which has mainly been used as rationale for outsourcing of blue-collar work in MNCs so far (Morgan and Kristensen, 2006). Accordingly, it has been indicated that high-skilled service work is increasingly at risk to be outsourced when MNCs' decision-making becomes streamlined 'through the lens of standardisation' (Howcroft and Richardson, 2012: 112). Employees are 'separated out into tradable, quantifiable entities'. In short, a combination of process standardisation and outsourcing often leads to the creation of managerial tools for reframing highly skilled back office work into routine service work, which afterwards can be done by cheaper and lower skilled employees in-house or outsourced elsewhere (ibid).

The final critical outsourcing issue we came across during our interviews is the *competitive use of internal projects* in order to reduce costs for knowledge intensive work tasks and also to self-discipline project team members. In-firm project groups get the task to work on certain projects, like software development. The project is however only partly funded by the firm. Project team members are therefore expected to raise external funding, such as through crowd funding or by outsourcing some further tasks to external specialists.

Changes in work practices and occupations

We have seen that outsourcing is increasingly supported by new technologies and driven by new managerial and financial concepts, like crowd sourcing. Besides the traditional focus on outsourcing of blue-collar, repetitive and routine work, we now find that new groups of employees, such as knowledge workers and more complex work tasks and functions are also targeted in outsourcing processes of European MNCs. However, the loss of expertise in the form of tacit knowledge within the outsourcing site and the lack of quality and commitment when it comes to collaborate with the outsourced unit often

create new complexities and costs, which are often neglected in many of the 'make or buy' decisions of strategic outsourcing. More in-depth case study research on this matter is therefore needed. Moreover, we found that insourcing of young low-wage and non-unionised employees in certain industries, like retailing and car parts supply, from neighbouring countries has become an important trend in high-wage European countries. It remains open for further research to look more into the detail of these developments.

Power relations and workers' participation

Most of the critical research on outsourcing stresses the negative effects on power relations between capital and labour, as well as the increasing problems emerging for unions and workers' representatives in organising labour in more fragmented and non-unionised outlets across Europe. This applies to units in the country of origin even when organised labour is generally seen as strong here. It also applies to sites in host countries, where labour standards and relations are often weaker (see e.g. Drahokoupil, 2015). However, besides negative aspects of outsourcing and insourcing, which reduce the power and voice of employees and unions, it might be interesting to look into more positive case scenarios where employee participation and representation has helped to influence outsourcing decisions more into the direction of workers' interests. The questions which emerge here include: Do societal institutions provide toolkits to local managers, employees and unions to positively influence outsourcing decisions? In which industries and countries in Europe are such developments feasible? What arguments can be derived from re-insourcing following failed outsourcing?

Table 4   **Condensed overview: The critical role of outsourcing for standardisation processes**

A new wave of outsourcing
− is closely linked to the renewal of 'lean thinking' and is caused by the same forces
− consists of
− not only outsourcing low- but also high-value-adding activities
− not only outsourcing but also 'offshoring' MNC activities to Shared Service Centers
− employing a growing temporary workforce for reasons of increased flexibility
− raises major critical questions with regard to
− the potential loss of critical know-how of companies
− the loss of identification of employees with companies
− the usefulness of electronically supported benchmarking of activities as a basis for outsourcing decisions

3.2.3 New developments in HRM process standardisation

HRM-related process standardisation is hardly a new trend. Routine, maintenance-oriented, administrative functions of personnel management have been standardised for some time in European MNCs. This mainly includes auxiliary functions such as record keeping, payment processing, or

manpower administration. Nevertheless, in many interviews (across all informant groups) HRM-related process standardisation has been identified as a new trend in European MNCs, albeit with two basic, interlinked qualifications: (1) The cross-border dimension of HRM process standardisation and (2) the fact that HRM-related process standardisation increasingly relates to the strategic dimension of HRM. In the remainder of this section we will first describe these two more recent qualifications to the salient trend of HRM-related process standardisation. Next we will take a look at the organisational framework underpinning these changes: Ulrich's (1997) HR Business Partner (BP) model, that is of enduring impact. Here we will in particular evaluate effects on employees. Somewhat looking into the future, we will then shortly discuss the recent move of the International Standardisation Organisation (ISO) to fix international standards in HRM. We will close by evaluating the impact these changes have on work practices, occupations, power relations and *workers' participation* in MNCs.

The *first* qualification to the salient trend of HRM-related process standardisation is its increasing *cross-border* nature. Today, HRM-related process standardisation in European MNCs typically comes as a headquarter-driven attempt to enlarge the user basis of a particular HRM tool (such as a time tracking tool) by rolling it out country after country in the MNC. Even though HRM is persistently considered as one of the most local functions in an MNC due to pressures from different labour law provisions at local level (Rosenzweig, 2006), there are countervailing forces that turn such cross-border standardisation of HRM processes into a major frontier of contemporary MNCs' standardisation moves. These forces include deregulation-inspired changes in national labour laws, the harmonisation effects of supranational political integration, the emergence of cross-border (European, global) labour markets, as well as socio-technically spurred shifts in the conception of what is considered to be work, a workplace, or an employment relationship (see Chapter 3.2.2 on outsourcing) (Dickmann et al., 2016). Last but not least, the recent focus on cross-border aspects of HRM-related process standardisation might be an effect of the increasing claims for the social accountability of MNCs, aiming at guaranteeing some minimum employment standards throughout the MNC and the value chain (see the trend towards compliance induced standardisation in Chapter 3.2.6).

The *second* qualification to the salient trend of HRM-related process standardisation is that today's process standardisation increasingly refers to the *strategic* dimension of HRM. In this perspective, also named SIHRM (Strategic International Human Resource Management) perspective, process standardisation is not only geared towards reducing costs, but also towards generating value from human capital through quality-ensuring standard approaches to acquire, maintain, develop and use employees. As it forcefully transpired from our interviews, this includes the development and introduction of cross-border standard processes and procedures regarding such diverse matters as human capital management (skill/talent management systems), anthropocentric work systems (occupational ergonomics), recruiting processes, diversity management and work-life balance. In the following paragraphs we will look in more detail

to the two matters that took up most space in the interviews: human capital management systems and anthropocentric work systems.

Human capital management systems or skill/talent management systems have been around for about 15 years. However there have been changes in the content of these systems that by now incorporate 'best-of-class-processes'. If used, such best-of-class processes strongly promote standardisation in HR processes such as recruiting, employee selection as well as training and development within and across firms. What further makes human capital management systems a hot topic in European MNCs today is the push that is emanating from a recent marketing offensive of the leading human capital management tool called 'SucessFactors'. 'SucessFactors', a US producer of cloud-based software for talent management, core HR, and HR analytics was taken over by SAP, the leading ERP software supplier (next to Oracle and IBM) in 2011 for an impressive sum of 3.4 Billion US-Dollar, that needs to pay off and seems to pay off, as the tool offers economies of scope with basic SAP products that are installed across all industries. In the words of one interview partner (a trade union consultant): 'Everywhere where SAP is installed, we have or will sooner or later have a discussion about 'SuccessFactors'.'

The use of such human capital management systems that moved over to Europe from the US poses urgent questions of social compatibility, since they technically allow performance control of individual employees and touch upon personal privacy. Moreover, as the system promises to leverage personal careers, the unregulated use of such systems in some foreign subsidiaries might easily unleash a debate in those foreign subsidiaries where more regulations are backed by law, with the potential effect of a race to the bottom, especially in less unionised MNCs. Finally, as they are generally cloud-based systems, the introduction of human capital management systems run the risk of centralising processes and decisions that might better remain within the decision-making authority of decentralised HRM departments, since these are closer to the needs of employees. Moreover, disempowered local HRM departments are a problem for the representation of workers' interests. While cloud-based HRM systems such as 'SucessFactors' have all these risks, the effects are pretty much the result of how such systems are implemented and what concerns and interests had an inroad into the setup of these systems within the organisation. Further in-depth case-based research seems necessary to better cover the implementation processes, the set-ups, and the actual use of cloud-based human capital management systems.

Anthropocentric work systems: While the introduction of cloud-based human capital management systems is pushed by technological developments in line with the assumption widely held by our interview partners that the future of HRM is all IT, the introduction and further use of anthropocentric work systems in European MNCs is rather driven by societal developments. These have been labelled as the 'demographic challenge' or the 'aging workforce problem' with all Northern European societies affected (NB: all those countries which host the headquarters of a significant number of MNCs). The increased labour participation of older generation workers has led to a trend that can be

described as a *revitalisation of the anthropocentric work systems concept.* This concept was originally formulated in the 1990s as a production concept aiming at a comprehensive use of human abilities and performance through adapted technologies, less Taylorised forms of (group) work, and life-long learning (e.g. Wobbe, 1995). Examples for the revitalisation of the anthropocentric work systems concept (in order to secure labour participation of older generations) include: a growing concern with workplace ergonomics, an increased emphasis on effective group work systems, and the use of human-centred production technologies such as cooperative robots (intelligent robots that cooperate with and enhance the performance of workers).

While this trend has been observed by many of our interview partners, the overall evaluation was that this trend occurs in a few manufacturing industries only, with the automotive industry being a forerunner. Moreover, a strong divide between Northern and especially Eastern European countries regarding the introduction of human capital management system and workplace ergonomics was reported in our interviews. While such moves were clearly visible and documented for lead factories in Northern Europe, the situation in MNC subsidiaries in Central and Eastern Europe was reported as inconclusive. Here trade union consultants pointed to a strong divide according to the investment motives of MNCs. In subsidiaries that were newly founded or taken over with the aim of a long-term integration into the MNC network, these and other new trends in HRM were introduced to a level comparable to factories and offices in Northern Europe. However, in cases where factories were taken over to serve the local market for a foreseeable future only, new HRM tools and efforts to enhance workplace ergonomics were largely absent.

The organisational framework underpinning and linking today's increasing international and strategic shape of HRM process standardisation has been outlined in Dave Ulrich's '*HR business partner model*' (Ulrich, 1995; 1997; Ulrich and Brockbank, 2009). Despite being around for about 20 years now, it has had an enduring impact on HRM in large multinational corporations, with many firms currently working on its implementation (Hunter et al., 2016: 13). The starting point for developing the HR business partner model was the assumption that in large and internationally operating companies, HRM and business strategy are increasingly drifting apart. In order to better align HRM and (sub-unit) business strategy, and to enhance the contribution of HRM to overall value creation, the HR Business Partner model (also named the three-legged-stool model) proposed to divide the previously integrated HR-functions into three sorts of organisational units: (1) Shared Service Centers in which repetitive administrative work and basic support functions are concentrated for a range of MNC units across borders. (2) Business partners, which are individuals or small teams of managers who are responsible for the strategic aspects of HRM and who work closely with the managers of business units on specific initiatives. (3) Centres of Expertise who serve as repositories of key technical knowledge on HRM issues such as recruiting, reward, employment relations and who engage in conceptual work. Following Ulrich (1997), these three sorts of HRM units are overseen and steered by a small team of top

managers that are responsible for the functioning of the HRM system as a whole, including decision making on overarching strategies.

While this model continues to appeal to many MNCs, its *implementation has turned out to be quite demanding*. Problems occurred due to the fact that some firms implemented the far-reaching transformation of their HRM system without detailed operational targets for HR (Russo and Hirschberg, 2008). Others misinterpreted the HR Business partner model as a one-size-fits-all concept, missing out on crucial adjustments and individualisation (Ackermann, 2016). Again, other firms suffered from a weak preparation phase, with unclear role descriptions for business partners who were more often than not too unprepared and overburdened to take on strategic work and to co-operate with Shared Service Centers and Centers of Expertise units (Fox, 2012). It was also observed that the different sorts of HR units experienced rivalries about their roles and responsibilities (Cooke, 2006), with the business partner being in the spotlight and the role of the SSC being undervalued, despite the fact that performance improvements and cost reductions have been found to strongly come from the latter (Gerpott, 2015).

Given the many implementation problems of the HR business partner model, it is not surprising that employees are often strongly dissatisfied with the new model, since it has adverse effects on their legitimate claims against HR management. While centralisation and cross-border standardisation were important aspects to make the HR business partner model work in terms of improved efficiency and cost reduction, it also led to a lack of transparency and the loss of personal on-site contact to known HR managers and HR managers knowledgeable of the specific employee situation. Moreover, Cooke (2006) reported that a lack of clear ownership of HR problems and the relocation of HR staff off-site led to situations in which line managers alone had to exert personnel duties (e.g. disciplinary actions) without having a firm HR background or a notable HR support. HR Information Systems that have been introduced to compensate for the lack of on-site HR staff are often plagued with user unfriendliness, disregarding the employees as customers of HRM (Meijerink et al., 2013; 2016) ending up in low service quality for the employees (Olson, 2014). In sum, research indicates that the introduction of a HR business partner model entails the danger that HRM will be dehumanised and depersonalised. This creates a strong need for employee participation; the international dimension of the HR Business partner model puts international employee representation bodies like the European Works Council in a driving seat. This is also true as the shift to the HR Business Partner model involves the relocation of HR tasks across national and organisational borders to SSCs. In order to access cheap labour (Sparrow et al., 2016), HRM-related Shared Service Centers (SSCs) of European MNCs are often to be found in low wage Central and Eastern European Countries (e.g. Poland or Hungary). Typically, they are organised as rather Taylorist batch processing units for administrative work, including a call centre function. And, as is known about call centres in general, they are often plagued by poor labour conditions (see e.g. Huws, 2009, as well as our section 3.2.2 on outsourcing).

A final change that will strongly promote cross-border standardisation of HRM processes in European MNCs in the future is the 2016 release of a *series of standards on human resources practices by the International Standardization Organization (ISO)*. Unlike other business functions such as accounting, IT, or risk management, HRM has for a long time been exempted from formal standardisation moves. The initiative emanated from the US headquartered Society of Human Resource Management (SHRM), the world's largest HR professional society that has been developing HR standards for the American National Standards Institute (ANSI) since 2009. In 2011, ISO appointed SHRM to lead a working group charged with developing global HR standards (Bocean and Sitnikov, 2015). After five years of negotiation, the first four standards have been released. Next to a standard on HRM Terminology (ISO 30400) that aims at providing a common understanding of the fundamental terms used in HRM, a standard on Human Governance (ISO 30408) was published. This standard aims at providing guidance for the setting up of an HRM system that follows the provisions of the standard, shall respond effectively to organisational and operational needs, foster collaboration between stakeholders, and anticipate and manage HR-related risks. The two other standards address recruitment issues (ISO 30405) and workforce planning (ISO 30409). More HR-related standards are currently worked on or are in a planning stage, e.g. on human capital reporting, global diversity and inclusion, knowledge management, quality of hire, retention metric or sustainable employability of staff.

While an evaluation of the dissemination and the effects of these standards would be pre-mature, the process of how these standards have been developedn as well as their underlying philosophy point to *problems for workers and their representatives*. First of all, as other outflows of ISO's growing focus on social issues (such as ISO 26000 on social responsibility or ISO 45001 on occupational health and safety), the new standards on HRM were developed without proper representation of workers' interests. Workers representatives' contribution to these standards was indirect at best. There was piecemeal trade union representation in national standardisation bodies (e.g. in Scandinavian countries) that formed the ISO Technical committee 260, which is responsible for developing the human resource management standards. Moreover, union involvement through the so-called consensus approach of ISO that claims to call in (and recognise) comments of stakeholder, has remained 'pretty exotic' for labour related issues (ITUC, 2014). This is a problem, since these standards for one might conflict with ILO conventions and standards, what remains to be studied in more detail. Secondly, despite the fact that ISO standards are private instruments with no legally binding authority, a growing number of national and international laws refer to ISO standards as a reference. This might discredit existing national HRM regulation that goes beyond ISO standards and prescribe second best standards in countries that had no or insufficient HRM regulation.

Next, despite the fact that ISO standards always represent a certain consensus of the interests of national standardisation bodies, the US impact is clearly discernible, not only in the process, but also in the resulting HRM standards. According to one national representative to the ISO Technical committee 260,

the US lead partner was and is mostly concerned with HR metrics and a cost perspective on HR processes (e.g. cost per hire, retention metric, turnover metric, investor metrics) (Jacobs, 2013). Not all of these objectives generated a consensus; for example, investor metrics were not accepted for standardisation. More generally, the US desire to define 'minimum effective standards' was attenuated to 'educational guidelines' (Demmer, 2015). Nevertheless, the existing HRM standards with the many HR-metrics and Key Performance Indicators (KPIs) take HRM out of the unspecified area of overhead costs and open up opportunities for benchmarking HRM processes across countries and organisations with the potential results of coercive comparisons, intensified cost-cutting measures and further redundancies in HRM. To what extent these potentials will be used and what other impacts the existing and upcoming HRM standards (will) have on workers and their legitimate claims against HRM will need to be addressed in more detail in further research.

Changes in work practices and occupations

In view of the above, it is certainly not wrong to conclude that HRM-related process standardisation is leading to strong changes in work practices and occupations. This first and foremost refers to employees in the HRM departments of European MNCs that face a functional specialisation, which in many cases goes along with an increased duty of managing HRM IT systems. For employees in HRM that transform into so called business partners, concerns with business strategies add or replace the more human-centred aspects of their work. For some employees in HRM, functional specialisation and process standardisation in HRM also lead to a physical relocation of their jobs to another organisational unit, another country or even another employer. Last but not least, HRM-related process standardisation induces changes that affect all employees in European MNCs. The transformation of HRM according to the HR business partner model in many cases imposes a stronger IT-mediated way as to how employees can access the personnel function. Moreover, the shareholder value perspective prevalent in the HR business partner model, in particular the attempt of making better use of human capital, requires more strategic behaviour of employees regarding the personal information that they give away. This also gives rise to new fields for the representation of workers' interests.

Power relations and workers' participation

New developments in HRM process standardisation challenge established power relations between capital and labour in European MNCs. For workers, HRM is a highly sensitive function, since it is here where the employment relationship is basically defined. While for some time standardisation only referred to auxiliary functions, such as record keeping, payment processing, or manpower administration, more recent standardisation moves are across borders and touch upon strategic issues. This limits local HR managers' ability to practice what is needed locally and *induces a shareholder-value logic into HRM* that was hardly existent before. The outflow of this logic are strong

employer attempts to at the same time rationalise HRM and turn it into a value-creating corporate function. This is mainly followed by a functional specialisation of HRM tasks as stipulated in the HR business partner model. Functional specialisation within HR work gives rise to a number of worker representation issues. First and foremost, it remains a pivotal task of labour representatives in trade unions and European Works Councils to fight for decent workplaces in call centre-like Shared Service Centers for HRM, that are typically located at the European periphery. Going beyond the HRM function the same is true regarding workplace ergonomics, which have been found to be only weakly applied in some Eastern European subsidiaries of MNCs. Other topics for participation or co-determination surfaced as well. Trade union consultants for instance reported on an increasing need to deal with burnout cases, which seems to be built into the HR business partner model. The business partners are often inadequately prepared for their new role and overburdened by the ambiguity which this role harbours. Important issues for labour representatives also emanate though the increased introduction of IT-based HRM systems such as capital management systems. Here a participation of labour representatives in defining the scope and the use of such systems is needed in order to tame adverse effects such systems technically harbour. Finally, there is also a need that labour representatives to a larger extent engage with the ISO HRM standardisation. There is a task for trade union representatives to get more involved into the ongoing HRM standardisation (Cilona, 2013). At the same time, there is a task for national and European Works Councils to monitor the implementation of the already existing ISO standards on HRM and to evaluate their effects on labour rights and collective bargaining.

Table 5 **Condensed overview: New developments in HRM process standardisation**

New cross-border developments in HRM process standardisation
– are mainly caused by
– technological forces: Powerful IT tools like 'SuccessFactors'
– structural forces: Enduring impact of Ulrich's 'Business Partner Model' and new ISO standards
– consist of HRM process optimisation in terms of
– harmonisation and computerisation
– alignment with strategic MNC goals (rationalising HRM and focus on corporate value creation)
– designing anthropocentric work systems for improved work ergonomics
– have diverse effects:
– growing functional specialisation of HR tasks and partially resulting relocations of functions
– traceability and comparability of HR and employee performance
– increasingly IT-supported workplaces/workflows and IT-mediated interfaces between employees and HR department

3.2.4 IT-based standardisation

Information technology (IT) is continuously permeating modern work life. There is a steady flow of new hardware and software applications, which influence work processes and drive standardisation in European MNCs and beyond. The latter is strongly supported by professional associations as well as by IT consulting and IT service firms, whose interests lie with the creation and broad adoption of standard reference models by participating organisations and clients, since these pay membership, licensing or consulting fees for implementing the standards.

Associations are partially also supported by governmental agencies, who seem to strive for efficiency and subsequent welfare gains by raising industrial IT standards. In the following, current developments in the areas of IT processes, business processes, data management processes, as well as the level of general and project management are considered, before a preliminary trend forecast from the interviews and potential effects on occupations, labour, and workers' participation are formulated.

IT's most direct influence on standardisation is to be observed in the area of *IT-based process management*. The IT Infrastructure Library (ITIL) has become a de-facto-standard for processes in IT service management (ITSM). ITIL is a collection of best practices in ITSM whose primary aim is to align IT services with business needs. The current ITIL edition consists of five volumes which cover the different ITSM lifecycle stages (i.e. ITIL Service Strategy, ITIL Service Design, ITIL Service Transition, ITIL Service Operation, and ITIL Continual Service). ITIL is owned by AXELOS, a joint venture between the London-based business process outsourcing and professional services company Capita and the Government of the UK. ITIL underpins ISO/IEC 20000, the first international standard for ITSM. The Software Engineering Institute (SEI) of Carnegie Mellon University in Pittsburgh, Pennsylvania, which is mainly financed by the American Department of Defense, has developed standard frameworks for complex, distributed, real-time capable, embedded systems like the Capability Maturity Model Integration (CMMI) for software. Other influential standard reference models for IT governance and IT management are the Information Systems Audit and Control Association's (ISACA's) COBIT and The Open Group Architecture Framework (TOGAF). TOGAF is an enterprise architecture model with the four levels Business, Application, Data, and Technology. Generally, TOGAF follows a formal business-driven approach to IT architecture. The Open Group claims that TOGAF is 'the most prominent and reliable enterprise architecture standard in the world', applied by 80% of the Global 50 and 60% of the Fortune 500 companies (www.opengroup.org).

In the same realm, IT-based process management systems have become standards for *other business functions* as well. The American Productivity and Quality Center's (APQC) Process Classification Framework®(PCF) is supposed to be the most used process framework in the world. 'It creates a common language for organisations to communicate and define work processes

comprehensively and without redundancies. Organisations are using it to support benchmarking, manage content, and perform other important performance management activities' (www.apqc.org). APQC is a member-based non-profit organisation that partners with more than 500 member organisations worldwide in all industries. APQC is reported to have the largest benchmarking database and cooperates with the Benchmarking Center Europe (http://www.bmc-eu.com). APQC has introduced its new cloud-based business process tool, MosaiQ, in March 2016. MosaiQ provides benchmarks, metrics and best practices using APQC's knowledge base. It is dedicated to be a common language for all the activities with respect to sophisticated collaborative process management activities.

Specifically for service providers in the telecommunications industry, the Business Process Framework (eTOM; formerly caTMlled 'Enhanced Telecom Operations Map') is a standard maintained by the TM Forum, an industry association in the telecommunications and entertainment industries. Business Process Framework (eTOM) processes belong to the three sections Strategy, Infrastructure and Product, Operations and Enterprise Management. As the telecommunications industry and their b2b services are serving as a bridge between all market participants in a digitalised economy, the influence of their standardisation frameworks for the whole economy should not be underestimated.

On the level of *data management* – an intermediate layer between IT and business processes – the Data Management Association (DAMA) is driving the standardisation of concepts and practices in Information Resource Management (IRM) and Data Resource Management (DRM). DAMA is an international association of technical and business professionals and is organised as a set of more than 40 chapters and members-at-large around the world with a stronghold in the United States. The DAMA Guide to the Data Management Body of Knowledge (DAMA-DMBOK Guide) defines ten knowledge domains which are at the core of information and data management: Data Governance (as a central knowledge domain which connects all the others), Data Architecture Management, Data Development, Data Operations Management, Data Security Management, Reference and Master Data Management, Data Warehousing and Business Intelligence, Document and Content Management, Metadata Management and Data Quality Management. Standards in these areas support the link between the IT and the business layers which have been described before.

In a more indirect way, general management and project management frameworks have an effect on standardising *management* and afterwards *work processes* as well. Examples of such general management frameworks are still the Balanced Scorecard or the Business Model Canvas, for project management frameworks Scrum and Prince 2 for IT projects.

At the individual workplace, standard software has an effect on work behaviour: Tools for data management (such as collaborative workspaces) and communication (such as telephone conferences and chats) significantly determine daily activities. Microsoft's SharePoint or Cisco's Jabber can be

given as examples for supporting and standardising collaborative work. These tools give way to virtualising teamwork, potentially largely replacing face-to-face contacts. They also enable permanent, real-time traceability of individual work behaviours and are a potential source of heavy work stress.

Generally, standardisation is being achieved by the use of a common language and subsequent common conceptual frameworks. Mostly in larger organisations, audit and certification systems are implemented to rollout the concepts. Supported by the mentioned associations and consultants, certification systems are implemented, in which first individuals and then cascades of further employees are trained, continuously updated and used as agents for standardisation. Thus, a trend of centralising strategic IT functions is supported where major decisions on the IT architecture are taken centrally and decentral/local IT staff rather have the role to implement and to execute client care functions. One interviewee mentioned that quite often, companies standardise some, general business processes (e.g. accounting) while they differentiate by individualised processes in other, specific areas. A 'standardised core' is then seen as a prerequisite for simultaneously realising a 'differentiated periphery' which includes important performance factors from the customer's point of view. The challenge rests with the unbiased definition of specific processes in contrast to general processes.

The advent of *cloud-based computing* has given way to a potential new wave of standardisation and quest for efficiency in European MNCs and beyond. Virtual computing capabilities, ubiquitous availability of information and the possibility to subscribe to services as substitutes to former core processes could potentially have tremendous effects on work processes. More than 70% of German companies already use cloud services (ISACA and PwC, 2015), and the utilisation is expected to grow further.

At the level of business functions and business processes, SAP's 'SuccessFactors' or Workday's applications (for human resources), salesforce.com (for sales) or Amazon's services (for logistics) can be cited as examples of the transformation of work processes by cloud-based software (see in more detail Chapters 3.2.2 and 3.2.3). These have the potential to serve as readily available, standard or easy-to-customise solutions for main business functions, resulting in major business process outsourcing and standardisation of the remaining activities. Typical applications are Software as-a-Service (SaaS), Infrastructure as-a-Service (IaaS), Platform as-a-Service (PaaS) or Communication as-a-Service (CaaS). HR and supply chain processes as well as the retail industry are reported to be at the forefront of this trend.

One interviewee emphasised that the companies' risk of losing intellectual property due to insufficient *data security* is, however, countering the trend towards cloud-based solutions. Especially the American origin of major providers of cloud solutions in combination with the recently reported practices of the American secret services may lead to some reluctance in using cloud-based services, at least for critical business functions. Companies will use differentiated cloud services in the future, based on advanced

considerations which data to move (ISACA and PwC, 2015). However, the cloud can also have positive effects on data security as the used software may prescribe data securing procedures which might not be utilised in stand-alone systems. In mobile cloud solutions, i.e. systems including mobile devices, authorisation schemes and the possibility for users to change their privacy settings and thus dictate what information can be seen can support data privacy (Fernando et al., 2013: 98).

The European Commission's data protection reform package addresses data security concerns and offers a comprehensive set of data protection rules for the EU. It is designed to enhance legal certainty and strengthen trust in the digital marketplace (European Commission 2016). Especially in Germany and the Netherlands the issues of data privacy and data security are considered priorities. According to the German Federal Ministry of Labour and Social Affairs (BMAS 2015) the works councils will be of crucial importance, whether they hamper, enable, or shape the utilisation of employee (big) data in companies, for example when a digital search and collection technology is supposed to be implemented on an enterprise-wide basis.

With respect to the perception of the topic from the view of European citizens, the Vodafone Institute for Society and Communications (2016) finds many reservations. When asked about what they think about the Big Data phenomenon in general, the surveyed Europeans are sceptical. Less than one-third of all respondents state that they think there are advantages associated with the Big Data phenomenon. More than 50% of the participants even say they see more disadvantages. Only one quarter of respondents agree that organisations respect the privacy of their personal data and only 20 % state they know where and by whom their personal data is collected and stored. More than 80 % of Europeans feel that they do not have complete control over their personal data (Eurobarometer, 2015). A large majority of Europeans (almost 70 %) would like to give their explicit approval before the collection and processing of their personal data (Eurobarometer, 2015). Especially in Germany, citizens take a critical stance to privacy issues, and are particularly sensitive about their personal data being passed on. The general level of trust in how private and public-sector institutions manage personal data is still low (Vodafone Institute for Society and Communications, 2016).

Those findings are in opposition to the EU's current legal situation. The EU has the highest data protection standards in the world (European Commission, 2016). At EU level, the new General Data Protection Regulation (GDPR) provides a framework to implement data protection rights of individuals in the employment context. But the implementation of these standards will take time. With respect to the processing of data in the employment context, the EU Member States may, by law or by collective agreements, provide for more specific rules to ensure the protection of the rights and freedoms. As stated in Article 88 GDPR, these rules shall include suitable and specific measures to safeguard the data subject's fundamental rights, human dignity and legitimate interests. Different legal situations with respect to employee data security in the individual member states obstruct a consistent and aligned approach. The

rights regarding employee data processing projects are differing for instance. This means that the individual process of implementing new solutions with respect to employee Big Data follows different procedures. In many European countries national regulations are still to be adapted regarding the GDPR. With regard to cross-border transfers of data, it is important for the involved parties to determine the applicable law for data protection (Maxim, 2015: 201). Although there is some new common ground due to GDPR, there is still a lot of uncertainty, especially relating to employee data processing. This situation is very likely to continue: While in the past IT generally followed strategy and structure, the advent of best-in-class, cloud-based IT systems has enabled the reversal of this general rule. In the future strategy and structure will more often follow IT systems, with numerous applications evolving in an unregulated manner.

Finally, the digitalisation of business models and global connectivity may have major, sometimes disruptive effects on companies. Work and labour are affected on all possible levels. While concrete predictions are difficult at this stage, the following general tendencies can be described.

Changes in work practices and occupations

IT-based standardisation processes are expected to have a continuous strong impact on work practices. The digitalisation of processes is expected to result in a reduction of administrative jobs in large companies as well as business process outsourcing on a global scale. Automatisation will continue to substitute manual labour in Europe, driven by the differential in labour costs versus investments and operations costs of machines. On a continuous basis, IT-based process models permeate daily work, determine work habits and thus ultimately reduce certain degrees of freedom at the workplace. Manual as well as administrative processes and workflows will be steered by IT systems to a larger extent and be thus more standardised. Across all kinds of job families, interfaces with computers will increase. The availability of best-practice cloud-based standard solutions for many business functions puts pressure on management to reap potential efficiency gains and may even determine strategic and structural decisions. Cloud computing will on the one hand contribute to standardisation of work processes and on the other hand to flexible work arrangements as to location and time.

Power relations and workers' participation

In general, questions of workflow design and data security and privacy are matters for workers' participation, especially in those European countries whose workers' participation systems are underpinned by strong legal support. Yet, more individual work arrangements with regard to location and time – enhanced by IT/cloud solutions – will in general work against collective agreements. Less clear distinctions between work and private spheres occur and raise questions of workplace requirements, definition of work entities or business sectors and compensation, for example for work at home and for overtime. Players from the IT sector comparatively gain power over industrials.

Table 6 **Condensed overview: IT-based standardisation**

Standards in IT
– are mainly driven by
– widely adopted systems (de-facto standards)
– activities by associations, IT consulting and IT service firms (via certification and audit systems)
– show trends towards
– the centralisation of IT functions: Central decisions on IT architecture vs. decentral/local implementation and centralised core functions vs. differentiated periphery at the customer interface
– cloud-based computing: Virtually ubiquitous availability of information and subscription to services as substitutes to former core processes
– have diverse effects:
– reduction of administrative jobs in large companies as well as business process outsourcing on a global scale
– reduction of certain degrees of freedom at the workplace and comprehensive traceability of work
– put increasing pressure on management to reap potential efficiency gains from (cloud-based) standard solutions for many business functions.

3.2.5 Standardisation by Big Data and Industry 4.0

The two terms 'Big Data' and 'Industry 4.0', which are linked to each other, are currently en vogue and were mentioned by many interviewees in our survey. The terms are surely buzzwords, they are used in different contexts, and their meanings overlap with other terms, such as the 'Internet of Things (IoT)', the 'Internet of Everything (IoE)', 'Smart Industry' or 'Smart Production'.

There is no single *definition of Big Data*, but from a survey of early definitions, Ward and Barker (2013) conclude that the volume and complexity of data occurrence and the technologies for data analysis are integral parts of seminal definitions, so that they suggest: 'Big data is a term describing the storage and analysis of large and or complex data sets using a series of techniques including, but not limited to: NoSQL, MapReduce and machine learning' (Ibid:2). The element of machine learning provides the direct link to the idea of Industry 4.0, which is regarded as the 'fourth stage of the industrial revolution, based on cyber-physical systems (that) network resources, information, objects and people to create the Internet of Things and Services' (Forschungsunion and acatech, 2013: 13). In sum, an industrial setting is envisioned in which physical objects permanently collect data on their current conditions and their environments, where these data are stored, combined with other data via internet, analysed by (partially self-learning) algorithms, and where decisions on the next processing stage of the objects are automatically executed by the objects and/or their environments as a direct result of the algorithms. In the context of an industrial process, objects may be parts, components or machines. Human beings may be involved to varying degrees. In an extreme scenario, production processes do not involve any human labour ('dark factory' or 'lights-out manufacturing').

There are a number of *forecasted effects on the workforce* in the era of Big Data and Industry 4.0. First, there will be a transformation of the industrial workforce in terms of job descriptions and the occurrence of job families.

Consulting firms like The Boston Consulting Group (2015) or Roland Berger (2016) predict that there will be a decrease of jobs in assembly and production but an increase in new jobs, mainly in IT and data science. New jobs for highly skilled employees will appear, e.g. in analytics and in cyber-security. Generally, responsibilities of human employees in areas such as quality, maintenance and security will remain. In line with that, less qualified workers will be needed to operate so called cobots (collaborative robots) which physically interact with humans in a shared workspace. Generally, the employment level is not expected to change significantly; in sum, Industry 4.0 is thus neither expected to be a job-producer nor an employment-destroyer. But significant changes with respect to the structure of the workforce are expected.

On the *organisational scale*, Porter and Heppelmann (2015) foresee that organisational structures will change with the creation of a new functional unit ('unified data organisation'), which handles 'the enterprise-wide data aggregation and analytics, supports the functions' analytics, and shares information and insights across the firm'. Similarly, units for ongoing product development and customer success management may appear, both being functions which work with data that will be collected upon usage of the companies' products and services. Next to data analysts and data strategists; so-called 'algorithmists' are also expected to be needed. (Meyer-Schönberger and Cukier, 2013: 180). These are experts on analysing the structure and function of Big Data algorithms who can serve as auditors for data-driven corporations and thus control these in the public interest. Studies predict a shortage of talent necessary for organisations to take advantage of Big Data though. By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of Big Data to make effective decisions (McKinsey Global Institute, 2011).

Second, a *trend towards a 'liquid workforce'* is often cited. The German National IT Council expects more flexible work in the form of cooperation in networks with crowd sources, smart workers and freelancers, and simultaneously sees the need for more consensual, value-based leadership, building on trust, identity and employee engagement (Picot and Neuburger, 2014). An example from the software industry can be given with IBM's 'Liquid' initiative, which entails that project teams have to bid for order requests also internally, and that every new project team which is created for developing new software is given the goal to outsource 40% of the order volume to the crowd. In their 'Technology Vision 2016' Accenture formulate that 'the liquid workforce is rapidly becoming the new normal for how businesses organise themselves [...] Freelance is the Future: Within 10 years, we will see a new Global 2000 company with no full-time employees outside of the C-suite' (Accenture, 2016: 9). In terms of magnitude of the effect, Accenture predicts that 'forty-three percent of the US workforce is expected to be freelance by 2020' (Accenture, 2016: 5).

Third, employees will be integrated into *cyber-physical systems*. They will increasingly be equipped with electronic devices which support their activities and also collect data which may be used for the optimisation of work processes. Current examples are Volkswagen's roll out of 3D smart glasses as standard equipment in the area of order picking in the Wolfsburg plant in November 2015, and the launch of the product Oculus Rift which is expected to accelerate the development of virtually augmented work spaces.

Fourth, Big Data will increasingly be used as a basis for *staffing decisions*. In this context, decisions on personnel selection and promotions can be taken on the basis of Big Data algorithms. Classical recruiting processes with long analyses of resumes, selection interviews and assessment centres may be substituted by analyses of applicants' profiles with data from social networks, the internet footprint and other potential data sources. Based on large amounts of data and correlations (without underlying cause-effect plausibility checks), performance predictions of employees can be expected. The electronic devices of employees, like wearables or the aforementioned smart glasses, can be used for purposes of coordinating and steering. In this context the term 'call-centrification' was used by one interviewee to illustrate the growing spread of common practices which used to be reserved to call centres, such as the taping of calls and direct supervision of employees' performance (see also Chapters 3.2.1 and 3.2.3). Finally, many decisions will be taken without human intervention, like the replenishment of stock in retail, the calculation of optimal insurance policies, dynamic pricing decisions in many industries, or the implementation of preventive maintenance activities. Also with regard to the own workforce, Big Data applications will be able to monitor behaviour. Predictive interventions based on Big Data analysis of employees' behaviour will be possible. In the context of Behavior-Based Safety, large-scale observations of employee behaviour by cameras – such as in the construction industry (Guo et al., 2016) – may be used to modify safety regulations and eventually change behavioural habits.

When considering the *time frame* for certain developments Gartner Group's 2016 Emerging Technology Hype Cycle (see www.gartner.com) provides some insights: There are *three technologies with an expected mainstream adoption* within two to five years: 'machine learning' is currently at the top of the hype cycle, and 'software-defined anything (SDx)' and 'natural-language question answering' are in a post-hype phase. Many other technical developments in the context of Industry 4.0, such as smart robots or IoT platforms, are expected to take more than five years until mainstream adoption.

Machine learning can be understood as the automatic adjustment of computer program actions on the basis of detected patterns in new data without human intervention. Many applications at the customer interface in terms of online marketing or user behaviour analytics can be imagined and already exist today. The same is true for natural-language question answering systems which aim to automatically generate concise answers to arbitrary questions phrased in natural language. Software-defined anything (SDx) is an ambiguous term that relates to the growing role of software systems in controlling different kinds of

hardware and a greater range of devices, including personal devices like smartphones and tablets which are brought to work by employees. While personal devices can expand the network capability of a firm's IT, security issues and questions of liability from personal smartphone or tablet usage will inevitably be raised. The ability to program computers for these technologies is a basic skill for data analysts nowadays. To comprehend the potential of these kinds of systems and at the interfaces with humans and machines is crucial for employee literacy in the era of Industry 4.0. Basic and continued education with regard to skills that are needed in the era of Industry 4.0 are key (see also BMAS, 2017).

In summary, the term 'Big Data' has a shared origin between academia, industry and the media, while the concept clearly stems from the technological sphere: The technological possibility to process large amounts of data has accelerated the trend. It is, however, coupled with a rather mainstream attitude towards the positive individual opportunities of the usage of data via internet-connected devices, and the perceived 'hipness' of internet start-ups. While the actual pace and scope of the impact can be expected to play different roles in different countries, work and labour will be heavily affected on all possible levels, considering that in cyber-physical systems of the upcoming era of 'Big Data' and 'Industry 4.0', human beings will be subjects as well as objects with strongly conflicting opinions about whether employees would rather be subjects or objects.

Changes in work practices and occupations

Driven by the encompassing activities of digital giants as well as the ambition of start-ups in the digital arena, disruptions of traditional business models and of traditional work models in European MNCs and beyond are fostered at a fast pace. New forms of collaborations between humans and machines will arise – raising questions of workplace security and adequate skill development for employees – and Big Data applications will also enable extremely individualised treatments of employees, impacting factors such as incentives, motivation, and compensation. Data-related occupations, such as data analysts and data strategists, will gain in importance. To reap the benefits and simultaneously control the risks of Big Data, data control will be necessary, for example, by algorithmists who audit the respective Big Data algorithms of companies and prevent societal misuse of the data.

Power relations and workers' participation

While a need for a more consensual and value-based leadership style as well as employee engagement is noted, and while there are opportunities for individualised self-development, there is the clear risk of 'digital feudalism' (Meinrath et al., 2011) - i.e., with a divide emerging between a few powerful players on the one hand, and the remainder reduced to 'digital livestock'. Deep know-how and skills in the digital sphere should be developed, and a debate about opportunities and risks of Big Data and its effects on the workplace of the future should be conducted on all levels, from the firm to international regulatory

bodies. The key question arises how participation and union involvement can be organised in an increasingly distributed, networked, 'liquid' workforce.

Table 7 Condensed overview: Standardisation by Big Data and Industry 4.0

– Definitions
– Big Data is a term describing the storage and analysis of large and/or complex data sets using a series of techniques including machine learning.
– Industry 4.0 is regarded as the fourth stage of the industrial revolution, based on cyber-physical systems that network resources, information, objects and people to create the Internet of Things and Services.
– Standardisation by Big Data and Industry 4.0
– is driven by digital giants as well as start-ups in the digital arena
– entails new organisational structures in MNCs (e.g. new functional units for data analysis and management), new value networks (incl. 'liquid work forces'), new job families (e.g. data analysts, algorithmists) and new workplace designs (i.e. integration of employees into cyber-physical systems)
– provides opportunities for individualised self-development, but bears the risk of 'digital feudalism' (i.e. divide between a few powerful players and others as 'digital livestock')

3.2.6 Compliance-induced process standardisation

Compared to the previously mentioned trends, the impact of compliance on cross-border process standardisation in MNCs is less clear cut. Nevertheless, as we will outline below, there are theoretical arguments as well as scattered empirical evidence that compliance triggers cross-border process standardisation that is (or will be) of concern for labour representatives.

Based on an enhanced societal awareness of corporate misbehaviours, fuelled for example by the financial crisis of 2007 and frauds by companies such as Volkswagen that previously had a clean cut 'boy scout' image, compliance with good corporate behaviour is a trend that deeply impacts companies today and in the upcoming years. While in earlier times such requests have been prevalent in industries with high liability risks, such as the pharmaceutical or the airline industry, as well as in process industries such as the food industry, today such calls—sustained by competitive forces, business and government regulation—concern a broader range of industries. Moreover, calls for good corporate behaviour add to requests for compliance to high standards in product quality and product safeness.

Compliance, in essence, means respecting all laws, standards and regulations that are relevant to an organisation, with MNCs today facing multifaceted compliance requirements. Such requirements derive from government regulation, industry standards as well as from internal business guidelines and voluntary codes of ethics, which by and large reflect a company's assessment of legal and reputational risks.

Next to the large number of specific *instruments to safeguard compliance,* there are a few encompassing frameworks that more generally define what is

the material content of good corporate behaviour and hence provide a frame of reference for compliance. In the following, we shortly analyse three widely accepted encompassing frameworks that, despite having different status and purpose, nevertheless provide a clear picture of what areas and issues make up the material content of corporate compliance. The frameworks looked at here are:[10]

1. The legally binding non-financial information disclosure directive of the EU that has recently entered into force;
2. The Global Compact, a UN initiative launched in 2000 to encourage firms worldwide to voluntarily align their strategies and operations to a number of universal principles and to report on their implementation[11]; and
3. The ISO 26000 standard on corporate social responsibility, a non-certifiable standard that helps businesses to identify and to translate social responsibility principles into effective actions.

As Table 8 reveals, the three frameworks consider environmental matters, human rights, anti-corruption, and labour issues as core areas where companies need to comply in order to demonstrate a socially responsible business conduct.

Table 8   **Material content of three encompassing frameworks on socially responsible business conduct**

NFI	Global Compact	ISO26000
Environmental matters	Environment	Environment
Human rights	Human rights	Human rights
Anti-corruption and bribery matters	Anti-corruption	Organisational governance
Social and employee related matters	Labour	Labour practices
		Consumer issues
		Community involvement and development

Sources: EU (2014), UN (2000), ISO (2010)

Zooming in on labour issues (that are of pivotal interest in this report) the three frameworks unanimously call for compliance regarding at least the following matters: Non-discrimination at work; ILO core labour standards; working conditions and health and safety at work; and association, information and consultation rights and social dialogue (see Table 9).

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10. There are a number of similar encompassing compliance frameworks, such as the 'Global Reporting Initiative', the 'AA1000 AccountAbility Principles', the 'Equator Principles' or the 'SA8000 Certification / Social Accountability'.

11. Currently the UN global compact has about 13.000 participants worldwide.

Table 9 **Material content of three encompassing frameworks on responsible business conduct regarding labour issues**

NFI	Global Compact	ISO26000
Gender equality	Elimination of discrimination in respect of employment and occupation. (Principle 6); Non-discrimination; Equal opportunity (P&P)	Employment and employment relationships
Implementation of fundamental conventions of the International Labour Organisation,	Elimination of all forms of forced and compulsory labour (Principle 4); Effective abolition of child labour; (Principle 5); Mechanisms for age verification; (P&P)	Employment and employment relationships
Working conditions	Safe working conditions (P&P)	Conditions of work and social protection
Health and safety at work	Safe working conditions (P&P)	Health and safety at work
Right of workers to be informed and consulted, Trade union rights	Freedom of association and the effective recognition of the right to collective bargaining (Principle 3); Right to organise, Collective bargaining (P&P)	Employment and employment relationships
Social dialogue	Multi-stakeholder dialogue (P&P); Public disclosure of labour policies & practices (P&P)	Social dialogue
	Employee training and awareness (P&P) Supply chain arrangements (P&P)	Human development and training in the workplace
Dialogue with local communities and protection and the development of those communities		

Sources: EU (2014), UN (2015), ISO (2010)

Given an enhanced societal expectation of compliance and the emergence of a broad consensus at least on the core areas that form the material content of compliance, the process of developing, installing, operating and monitoring compliance systems for social via environmental reporting has become a *pivotal task for todays' companies*. This task is considerably more difficult and costly to master in MNCs which span political, legal, cultural and economic systems. According to a study of McKinsey, 'compliance and control today has become more complex for institutions that have far-reaching global footprints and therefore face myriad local laws, regulations, supervisory authorities, time zones and so on', which leads them to conclude that 'an effective compliance and control system consumes three to five times (in some cases, even more) as much profit as it did 10 years ago.' (McKinsey, 2012: 1).

The introduction of such costly compliance and reporting systems is certainly meant to enhance the overall legitimacy of the business conduct of a company. This is reflected by an increasing trend among companies to certify their compliance systems. The most often used standard here is ISO 19600:2014, a standard that claims 'to provide guidance for establishing, developing,

implementing, evaluating, maintaining and improving an effective and responsive compliance management system within an organisation'. The implementation of ISO 19600:2014 is seen as a top-down endeavour, in which the top management facilitates first an assessment of compliance risks and then supports a number of follow-up actions. The latter encompasses the development of a code of conduct (i.e. of good behaviour) that includes process descriptions, directions for action, as well as the instalment of integrated control measures. In order to make a compliance system operational, the code of good behaviour then needs to be communicated to the employees, who should receive training about how to handle the code. Next, the implementation needs to be internally monitored with the code continuously adapted to the changing risk landscape (Jonas, 2015).

The extent to which compliance management systems and social and environmental reporting have led to more standardised operations (and to a better alignment of what is considered good corporate behaviour), has yet to be fully studied. From a theoretical perspective, the *link between calls for compliance and process standardisation* looks straightforward. Process standardisation, in terms of defining measurable indicators as to how processes and tasks have to be accomplished, is promising an efficient control of a (legally or ethically) appropriate task execution. Fixed control points and control routines that allow for a constant internal (and if needed external) transparency are defined and rolled out across the company. In addition, thresholds are set as to when upper levels of the corporate hierarchy need to be involved, for information, clearance or approval. In contrast to such standardised procedures, all non-standardised processes need to be individually overseen for compliance which is costly, time consuming, open to ambiguity and particularly difficult to organise across the—often widespread—network of an MNC. Moreover, a standardisation effect might further emanate from what McKinsey has proposed as a strategic approach to compliance, labelled 'compliance and control 2.0' (McKinsey, 2012). In this approach, companies are advised to use compliance requirements to strategically and pro-actively redesign their business processes across borders reflecting both market best practices as well as the material spirit (not the letter) of regulations.

Changes in work practices and occupations

While our interview partners basically confirmed that compliance-induced standardisation processes can be observed in European MNCs, certain qualifications have been made to this statement. Clearly, compliance requirements and the introduction of compliance management systems have implications for all those employees who are involved in reporting processes. Typically, the items they have to report on are standardised across the MNC (often formalised in a code of conduct) with exceptions from the rule in most compliance management systems being subject to formalised approval processes.

Notable differences however have been observed regarding the *extent to which compliance requirements lead to a redesign and standardisation* of regular

business processes, including changes in work practices and occupations. One interviewee indicated that previously, compliance management systems had been retrofitted to the organisation by legal departments motivated by little more than the intention to ensure legal compliance. However, more recently this interviewee (working as an international consultant for compliance management systems) observes that firms increasingly follow a more strategic approach when implementing compliance management systems; as part of so-called integrated management systems, these aim towards more streamlined and efficient business processes across borders. Several interview partners confirmed that compliance systems reduce or remove individual discretion as to how tasks can be executed, which lead to more standardised business processes. More standardised and controlled regular work practices have also been observed in industries that were subject to strong regulations such as the banking and finance industry following the financial crisis. Interestingly, interview partners also mentioned that business practices are more standardised across borders when firms deliberately aim at more fair, social or sustainable business practices. One interview partner, for instance, reported about a trend to install a standardised code of conduct for suppliers that applies to all countries and regions covered by the company's supply chain. Notwithstanding strong differences among individual firms, such practices were seen to more likely occur in consumer goods industries as well as in large firms. Concerning labour issues, it was stressed that cross-border standardisation trends in many cases only refer to very basic issues such as 'no forced labour' or 'freedom of association' but not to more far-reaching social standards of workers' participation. Regarding the latter, strong differences were observed between Northern European and Central and Eastern European countries.

Power relations and workers' participation

The introduction of compliance management systems can have a strong impact on power relations in MNCs. Often it takes up to a few years until such systems are installed in larger multinational corporations. Typically, this process is conflictual, since the introduction of compliance systems promotes centralisation, allows a tighter control of decentralised units and restricts locally adapted business conduct. Blueprints of compliance standards are usually developed in or with a strong guidance from the headquarters and in turn imposed, discussed or negotiated in decentralised units that need to provide ample rationale in order to get local adaption and differentiation approved. While this process is not different to other standardisation processes in MNCs, the stakes for local adaptions in compliance systems are particularly high, as these systems aim at providing an overall transparency and legitimacy of business conduct. This is also supported by the fact that a fundamental driver for the introduction of compliance management systems is top management exculpation, with top management typically favouring standardised and formalised solutions here that can stand up in court.

Labour representatives can play an important role to make compliance management systems effective. They are sometimes involved in the development of the company-internal codes of conduct that form the backbone

of a compliance management system, or they contribute to the material development of standards, such as in the Global Reporting Initiative. These are chances to promote workers' interests that should be used or at least thoroughly considered[12]. Moreover, labour representatives can play a pivotal role in the verification of compliance standards, in particular regarding the labour issues outlined above. This incorporates a verification of the appropriateness and completeness[13] of the standards applied, as well as the verification of the factual compliance to such standards. This also includes a check whether the fulfilment of compliance standards violates other important worker rights such as the right to workplace privacy. While a number of trade union officials have taken on such tasks in multilateral initiatives such as the Forest Stewardship Council (FSC) or the Accord on Fire and Building Safety in Bangladesh, it has been noted that individual labour representatives, local works councils, as well as European works councils need to play an active role in verifying compliance and/or in reporting non-compliance at the company level and beyond. Enhanced societal concerns about compliance do not automatically turn the prevalent shareholder-value orientation to a stakeholder-value orientation, but merely modify the playing field.

Table 10 Condensed overview: Compliance-induced process standardisation

– Compliance
– means: Respecting all laws, standards and regulations relevant to an organisation
– rules are therefore determined by government regulations, industry standards and internal guidelines/codes of conduct

– Compliance-induced process standardisation in MNCs
– is among others driven by: EU non-financial disclosure directive, UN initiative 'Global Impact', ISO 26000 standard on corporate social responsibility
– is increasingly implemented in a strategic way, i.e. to not only formally safeguard legal compliance but to ensure globally standardised processes
– is, in some cases, the outflow of deliberately more fair, social or sustainable business practices
– is usually initiated from headquarters as part of their legitimacy strategy
– is subject for the participation of labour representatives, both locally as well as in the political arena

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12. Of course, there might be reasons not to contribute, i.e. when moves towards compliance are just ceremonial exercises.
13. This seems to be an issue with regard to the Global Reporting Initiative standards.

4. Summary, Discussion, Outlook

This report provides insights into three key matters: (1) the extent and quality of new or renewed S&R trends in European MNCs, (2) managerial rationales behind these S&R moves and (3) the impact these moves might have or already have on labour and workers' participation. We have addressed these matters by a systematic review of the relevant academic literature and more than 30 interviews with academic experts, management and trade union consultants.

In this final section we are going to summarise and discuss the contents of the report. We will first provide an integrated discussion of the six S&R trends we have discussed in isolation above. Next we will elaborate more systematically on the managerial rationales behind these S&R trends. Finally, we draw some initial conclusions on what impact contemporary S&R moves have on labour and workers' participation, an area which clearly deserves further in-depth research.

4.1 An integrated view on new and renewed S&R trends in European MNCs

New technological developments have played a major role in significantly transforming administration, manufacturing and service processes within the contemporary MNC (Gratton, 2011: 247-48). Besides the political liberalisation of markets, two trends, namely IT-based standardisation (3.2.4) and standardisation by Big Data and Industry 4.0 (3.2.5) can be seen as key driving forces. We found evidence that 'accelerating' technological change is a trigger for rapid and massive 'productivity increases' in MNCs, based on standardised devices like robots and decision-making tools like 'cognitive assistants'. Overall, we see evidence that technological developments in companies do not necessarily follow strategy as in the past, but that strategy and structure follow the new possibilities of IT, Big Data, and the so-called Industry 4.0 approach, as discussed in more detail above.

Technology has a pervasive impact on the setup of contemporary MNCs in Europe. Further technological enhancements, like the ones described above, have created new central managerial tools to better set up and orchestrate the *'global factory'* (Buckley, 2010), with advanced outsourcing measures combining with renewed 'lean principles' as their core elements. Outsourcing and offshoring have increasingly been used to 'unbundle' cross-border activities of MNCs – i.e., the geographic separation of specific tasks across the

globe (Buckely, 2010; Buckley and Strange, 2015). In contrast to S&R in traditional MNCs, where core activities and competences have been internalised into hierarchical structures in order to reduce transaction costs, 'global factories' seem to abandon classic hierarchies in favour of global network organisations which support management's aim to continually 'fine-slice' cross-border operations. This process is driven by two questions: Where should activities be located, and should they be controlled internally or externally? (Buckley, 2010). These questions are addressed in the 'global factory' through the standardisation of supplying, assembling and selling activities, all of which is facilitated by the use of IT and Big Data. This has led, as we have seen, to an increased emphasis on the 'externalisation' of formerly internalised costs, via outsourcing of operational tasks which can be produced cheaper elsewhere, first in lower-cost locations in Central and Eastern Europe and now also increasingly outside Europe (see Chapter 3.2.2). In the context of the 'global factory' framework, outsourcing is increasingly combined with advanced 'lean' management techniques, supported by new 'smart' IT solutions and Big Data. Here, it is not just the focal activities of the MNC, but also its whole supply chain and customer relations which are subject to cross-border restructuring (see Chapter 3.2.1). Another aspect of the spread of the 'global factory' model is an increased drive towards centralisation of decision-making processes facilitated by international network structures. Thus, for instance Yamin (2010: 288) stresses that the new role of the HQ and/or the 'focal firm' (Buckley, 2010) is on controlling core capabilities based on increased centralisation - i.e. 'more streamlined and focused structures of activity' (ibid.). The 'focal firm' is not just characterised as the most powerful based on centralisation and control, but also as 'smart' (ibid), based on the clever use of IT networks and Big Data (see Chapters 3.2.4. and 3.2.5.). This development comes at a price, however: the pressure for cost reductions across the MNC often 'waters down' established labour standards, especially in highly dependent peripheral parts of the 'global factory' network, such as in units that do not belong to the powerful core of the 'focal firm' (Buckley, 2010). When forced to meet demands for faster and cheaper production, local management of both wholly owned subsidiaries and peripheral suppliers often find themselves under pressure to 'cut corners' when implementing centrally developed 'lean' management measures and outsourcing decisions, for example by employing (further) sub-contractors. Soft measures, like codes of conduct and the demands of compliance management are in such cases often only met on paper and ceremonial (see Chapter 3.2.6.) in order to meet 'hard', i.e., measurable S&R objectives.

The spread of 'global factories' is certainly most relevant in lead *sectors,* like the automotive industry, where all six trends are evident at the same time. In the case of smaller MNCs and firms in less globalised industries, some of our six trends might be less prominent than others. However, we found some impact of 'accelerating' technological change, in addition to growing pressure to implement S&R measures also in smaller MNCs in Europe, because they are often part of 'global factory' networks, either as suppliers, buyers, or strategic partners. Nevertheless, there is evidence that location matters for the quality of labour and industrial relations in global factory networks. This applies

especially for the HRM practices and the local implementation of centrally developed compliance management systems. HRM is still seen as the most localised management function in MNCs, in contrast to IT activities (Bondarouk and Brewster, 2016). Furthermore, the quality of compliance management measures at local level is of course still very much influenced by the density of national regulation regimes, even when it is a global trend. Thus, especially societal home and host country contexts with dense national institutional frameworks and strong unions provide some room for labour to negotiate the ways in which S&R measures are actually implemented, especially when it comes to localising global HRM policies (see Chapter 3.2.3) and compliance management practices (3.2.6). The latter also applies to renewed 'lean' management practices and their overall effects on the quality of local work and employment (see Chapter 3.2.1 and Williams and Geppert, 2011). Especially large MNC are increasingly forced by various stakeholders to provide conditions of 'good work' and 'good governance' (Vitols, 2011), in particular in high-wage countries in Europe.

Despite sector and country-specific influences, there is no doubt that the global factory approach with its driving forces (IT, Big Data and Industry 4.0) and its main implementation tools ('lean' and 'outsourcing') is on the move in European MNCs, thus shaping many S&R measures there. This, however, has downsides; research has shown that short-term economic gains through the centralisation of decision-making based on increased outsourcing and the implementation of standardised HRM solutions might harm the overall dynamic capabilities and thus the innovativeness of the whole MNC in the long run (Yamin, 2010). Additionally, we found evidence that recent moves of process standardisation in European MNCs has led to what is labelled 'call-centrification', which not only takes place in low-wage but increasingly also in high-wage countries. IT and Big Data (3.2.4 and 3.2.5) enable detailed work studies of tasks carried out by middle and lower managers and other high-skilled employees. Based on such workplace focused standardisation measures, complex job tasks that have usually been carried out by higher qualified employees are 'fine-sliced' into smaller and smaller and often simpler work tasks. Subsequently they are standardised further in order to replace human work by robots and 'smart' technologies and/or to finally outsource such jobs to local Shared Service Centers or Shared Service Centers in low-wage locations. The trend of 'call-centrification' provides not just a good example of how IT- and Big Data-based standardisation measures affect professional work and traditional employment, but also for the function and strategic role of HRM. In this context, human capital management software platforms, for example, are increasingly used to refine and standardise HR processes across borders (see Chapter 3.2.3) and for a holistic optimisation of work systems. In between, these processes are often based on the use of mobile devices owned by the individual service worker, which lays the ground for creating and maintaining an increasingly 'liquid workforce': part time workers, home workers, subcontractors, freelancers, or crowd workers (see Chapters 3.2.2 and 3.2.5).

Last but not least, it should not go unnoticed that the pervasive role of the global factory approach, which we identified as highly important in defining

contemporary S&R moves in European MNCs, might be challenged in the future. There are a number of *new international players* which have been set up as start-ups first and managed to grow bigger while remaining 'lean'. Here, MNC strategy and organisation structure follows to a larger extent the new opportunities facilitated by IT and Big Data. It remains to be seen to what extent and how these new digital global players, like Uber, Airbnb, Amazon and Facebook in turn influence S&R trends in European MNCs in the future. A decisive role might be played here by strategy and new IT-consulting firms that promote new standardisation agendas as part of their (renewed) business models.

4.2   Management rationales behind S&R trends in European MNCs

The management rationales behind S&R-moves in contemporary MNCs have been discussed controversially in the academic literature, in our expert interviews, and during our focus group meeting.

On the one hand, S&R measures in MNCs point to an increased influence of *managerialist approaches* in MNCs. From such a point of view, standardisation processes are grounded in management rationales which are mainly focused on economic aims, such as enhanced global value generation (e.g. Muenstermann and Weitzel, 2008). Managerialist approaches see standardisation processes mainly as managerial tools for generating global value in overall global restructuring processes, in which human resources are mainly understood to be tradable and replaceable commodities when managing the MNC and its global value chain. Five management rationales have been seen as key drivers of process standardisation processes in global firms (e.g. Muenstermann and Weitzel, 2008). *First*, it is stressed that a key aim of management in S&R is 'improved process performance' – by reducing time and costs as well as increasing quality and performance measurability. We have referred to these aspects in all of our six trend reports, but the account is most detailed in the chapters on the renewed impact of 'lean' management principles in MNCs, on IT, as well as on the role of Big Data and Industry 4.0 (see Chapters 3.2.1, 3.2.4 and 3.2.5). A *second* managerial rationale for increased S&Rs is seen in the importance of 'enhanced readiness' – through increased outsourcing, M&As, and market flexibility (ibid: 6), an issue to which we have critically referred in our chapter on the role of outsourcing (see Chapter 3.2.2). A *third* managerial rationale lies in enhancing the 'ability to react to regulatory changes' – via increased standardisation of internal and external management processes. We discussed this aspect in detail in our trend report on compliance-induced process standardisation (see Chapter 3.6.2). *Fourth*, there is an increased impact of the rationale of 'enhanced technological interchangeability' in many S&R processes, which 'detaches the process from IT' and so 'enables the use of standard hard and software solutions' (ibid:6). We have discussed these matters in our trend reports on IT, Big Data and Industry 4.0 (see Chapters 3.2.4. and 3.2.5). *Finally*, the management rationale

of 'improved customer confidence', for example by reducing process-driven mistakes, is an issue which we shortly touched upon in our trend report on 'lean thinking' (see Chapter 3.2.1).

In combination, these managerialist rationales behind S&R in contemporary MNCs lead to increased *technocratic forms of managerial control*, in which 'outputs' are controlled through key performance indicators like profit, sales, and employee behaviour through direct supervision, rules, standard operating procedures, and business policies (see e.g. Alvesson and Kärreman, 2004). In this perspective, human resources, as mentioned above, are seen as commodities, which can either easily be replaced by IT and digital solutions, or managed and controlled effectively along the lines of the five management rationales just discussed.

Critical Management Studies, on the other hand, point to shortfalls of global process standardisation driven by narrow managerialist approaches (see e.g. Alvesson and Kärremann, 2004; Kilkauer, 2015), by pointing to the negative subjective and organisational aspects (for example, classical technocratic control mechanisms) and emphasising the delicate ideological nature of management rationales behind increased S&R moves. It is argued that the ideological stances which inform management rationales behind S&R are often based on a 'pessimistic view of human nature', as in the case of shareholder value management and transaction cost economics (Ghoshal, 2005). Such ideology-based management theories, which are quite powerful in classic International Business Studies, are seen as highly problematic because they often—based on 'gloomy visions' – damage 'good management practices' (ibid). Moreover, it is stressed that situations of 'functional stupidity' are quite common in S&R moves, because managers' and employees' 'reflexivity' about the usefulness and outcome of standardisation processes is often corrupted and blocked (Alvesson and Spicer, 2012). In our trend reports, we have accordingly pointed out that a narrow functionalist bias of many management rationales, for example in 'lean' management and outsourcing based S&R (see Chapters 3.2.1 and 3.2.2), can damage established 'good management practices' (Ghoshal, 2005) such as constructive employee involvement and representation. In some of our trend reports (see Chapters 3.2.1, 3.2.2, 3.2.3 and 3.2. 6), we also point to the crucial role of reflexivity in business communication between HQ and subsidiaries, different groups of managers, and employees and managers, which can be systematically blocked (Alvesson and Spicer, 2012) when S&R moves follow strongly one-sided interests.

In sum, our research confirms some of the problems that critical management studies point to, such as the dysfunctional aspects of S&R moves which lead to e.g. a 'call-centrification' of work and employment after outsourcing, a fragmentation of employee voice mechanisms in 'leaner' MNCs and outsourced units, enhanced technocratic forms of control in global factories, and standardised HRM and 'lean' management principles which often hollow out local innovation and responsiveness. However, we have also argued in our trend reports that IT solutions, digitalisation, 'lean' management principles, outsourcing, the implementation of global compliance standards, and HRM

standardisation hold the potential to support good governance and more humanist and age-friendly work and employment practices (at least in some MNCs, industries, and national contexts).

4.3 The impact of S&R trends on labour and codetermination in European MNCs

All identified S&R trends point to significant effects on job designs and task profiles, as well as to major impacts on the quality of work and employment in contemporary European MNCs. While some of these developments can be seen as beneficial for employees, other developments clearly point to more problematic outcomes for labour. Examples of *'positive' or beneficial outcomes* triggered by increased standardisation of work and organisation processes have been found related to the growing organisational sensitivity for ergonomics and the 'demographically sustainable" redesign of some blue-collar jobs and occupations, issues to which we referred to in Chapters 3.2.3 and 3.2.5 as well as in our literature review (see Chapter 3.1). Demographic challenges of an aging society have triggered important changes, especially at sites of MNCs in North-Western Europe which have largely led to improvements of the quality and safety of workplaces for aging employees, for example in car manufacturing firms. A key reason for this development is the shortage of qualified younger employees in these countries. Similarly, compliance measures, such as standards including distinct regulations for employee behaviour for dealing with bribery cases in the home and host countries of MNCs, have the potential to be developed into 'micro-political tools' which support and protect employees (Williams and Geppert, 2011). The fact that automatisation can upgrade (remaining) jobs in production, for example by enriching certain routine blue-collar job profiles through the integration of higher quality work tasks, such as maintenance and system diagnosis, can also be seen as a possible positive outcome form a labour perspective.

However, our analysis also unveiled several developments that might have *negative effects* on work and employment in MNCs and actually challenge some of the genuine interests of labour. In our chapters on S&R trends, we have already reflected on significant macro- and meso-level challenges for labour and the fear that ongoing digitalisation and automatisation might threaten a significant amount of jobs based in MNCs across Europe, not only in the segment of blue-collar work, but increasingly also in the white-collar sector, particularly in industrialised high-wage countries. However, since the net employment effects of these developments cannot yet be reliably estimated, they are the subject of highly controversial debates among experts in academia and practice (see also Chapter 3.2.5). Some pessimistic studies predict that about 50% of jobs in developed economies like will disappear in the next decades because of increased digitalisation of work (Greffrath, 2016). Moreover, we found clear evidence in our literature review and in our trend analyses that a number of the current S&R moves have put MNC employees across Europe under high pressure. A growing tendency of applying

sophisticated benchmarking systems and coercive comparisons has led to increased competition between employees, functional departments, and subsidiaries across contemporary MNCs. Thus, for instance MNC-wide human capital management systems, on which we reported in Chapter 3.2.3, often increase the exposure of local middle managers and workers to company-wide labour markets and fierce competition for posts and jobs. Similarly, the identified processes of 'call-centrification' enhance the replaceability of high qualified jobs and decrease overall job security for large numbers of employees. In a similar vein, the increased utilisation of BPO, temporary employment, and crowd working has increasingly threatened the regular jobs which are situated within the 'classic' organisational boundaries of the MNC. As argued in Chapter 3.2.2, such measures can and have already been used by management to discipline workers, weaken their overall bargaining position, and resist calls for higher wages. On the level of individual jobs and work tasks, we also see an increased risk of a loss in decision-making autonomy, especially when strict 'lean production' regimes are enforced and digital technologies take over controlling tasks which until now had been performed by specialised employees. This is often bolstered by the implementation of sophisticated software systems which are used for tightening technological control of performance measures for individual employees, teams, and whole production and administrative processes. IT platforms that are increasingly applied in the fields of 'lean production' and e-HRM (see Chapters 3.1, 3.2.1, 3.2.3) also lay bare the growing risks of intensified surveillance of employee behaviour at work and beyond, which includes their spare time.

All in all, it can be summarised that contemporary standardisation trends have created several *new challenges for unions and employee representatives* to maintain the security and quality of work. We found—especially in MNCs and industries where unions are rather weak—tendencies of increased pressures on employees, for example through the intensification of the overall work load, the transformation of formerly full-time into part- time jobs, and through increased competition between employees within and across organisational and national borders, which often decreases their working morale.

The increased competition between employees and different groups of employees turned out to be one of the major challenges posed by S&R moves for effective *workers' participation* in European MNCs. A central problem for national and international unions is to organise the often highly diverse workforce across organisational and national boundaries. This problem is increased by enhanced possibilities to circumvent and block effective workers' participation across borders, via BPO, centralised strategic international HRM measures, and the heightened role of subcontractors and crowd workers. Given these circumstances, the development of effective bodies for transnational collective bargaining and workers' representation in MNCs has become more and more important on the one hand, but on the other hand, it also turned out that the development of such strategies is quite difficult. The implementation of effective labour relations is often constrained by the increased fragmentation of the international workforce, such as through increased outsourcing of unionised jobs and insourcing of non-unionised employees. This is further

complicated because many of the S&R trends which we described in this report tend to lead to a further centralisation of decision making power at HQ level, which often in turn puts pressure on local employees and unions to make concessions and accept proposed standardisation and outsourcing measures in order to protect existing employment levels and a given quality of work. In some (probably rare cases), however, the homogenisation of work and employment practices might also lead to an upgrading of participation standards in MNCs. This is possible when higher national industrial relations standards are rolled out in the subsidiary network in the realm of a differentiation strategy (as opposed to a cost leadership strategy) or for the sake of 'good corporate governance'. But for sure, many MNCs harbour an enduring risk of engaging in a 'race to the bottom', especially in those MNCs where the shareholder value ideology is strong and various anti-union stances are common. Under such circumstances, the described S&R trends will lead to a higher pressure on local labour representatives to give in or up on workers' participation issues, and transnational solidarity building and the development of effective modes of cross-border employee representation will remain difficult.

References

Accenture (2016) Trend 2: liquid workforce: building the workforce for today's digital demands. https://www.accenture.com/fr-fr/_acnmedia/PDF-2/Accenture-Liquid-Workforce-Technology-Vision-2016-france.pdf

Ackermann K.-F. (2016) HR-transformation als neues zukunftsweisendes Reformkonzept, Personal Quarterly, 65 (1), 10-16.

Almond P. et al. (2005) Unravelling home and host country effects: an investigation of the HR policies of an American multinational in four European countries, Industrial Relations, 44 (2), 276-306.

Altreiter C., Fibich T. and Flecker J. (2015) Capital and labour on the move: the dynamics of double transnational mobility, in Drahokoupil J. (ed.) The outsourcing challenge: organizing workers across fragmented production networks, Brussels, ETUI, 67-87.

Alvesson M. and Kärremann D. (2004) Interfaces of control. Technocratic and socio-ideological control in a global management consultancy firm, Accounting, Organizations and Society, 29 (3), 423-444.

Alvesson M. and Spicer A. (2012) A stupidity-based view of organizations, Journal of Management Studies, 49 (7), 1194-1220.

Ambos T.C. and Ambos B. (2009) The impact of distance on knowledge transfer effectiveness in multinational corporations, Journal of International Management, 15 (1), 1–14.

Bailey D.E., Leonardi P.M. and Barley S.R. (2012) The lure of the virtual, Organization Science, 23 (5), 1485–1504.

Bailey D.E. and Kurland N. (2002) A review of telework research: findings, new directions, and lessons for the study of modern work, Journal of Organizational Behavior, 23 (4), 383–400.

Barley S.R. (1990) The alignment of technology and structure through roles and networks, Administrative Science Quarterly, 35 (1), 61-103.

Barley S.R. (2015) Why the Internet makes buying a car less loathsome: how technologies change role relations, Academy of Management Discovery, 1 (1), 15-35.

Bartram T., Boyle B., Stanton P., Burgess J. and McDonnell A. (2015a) Multinational enterprises and industrial relations: a research agenda for the 21st century, Journal of Industrial Relations, 57 (2), 127–145.

Bartram T., Boyle B., Stanton P., Sablok G. and Burgess J. (2015b) Performance and reward practices of multinational corporations operating in Australia, Journal of Industrial Relations, 57 (2), 1–22.

Bateson J.E.G., Wirtz J., Burke E.F. and Vaughan C.J. (2014) Sifting to efficiently select the right service employees, Organizational Dynamics, 43 (4), 312–320.

Belcourt M. (2006) Outsourcing: the benefits and the risks, Human Resource Management Review, 16 (2), 269-279.

Benders R., Schouteten R., el Kadi M.A. (2009) ERP-systems and job content: a case study of HR-assistant, Personnel Review, 38 (6), 641-654.

Bergvall-Kåreborn B. and Howcroft D. (2014) Amazon Mechanical Turk and the commodification of labour, New Technology, Work and Employment, 29 (3), 213-223.

Blinder A. S. (2006) Offshoring: the next industrial revolution?, Foreign Affairs, 85 (2), 113–128.

BMAS (2015) Re-imagining work: Green Paper Work 4.0, Berlin, German Federal Ministry of Labour and Social Affairs.

BMAS (2017) Weißbuch Arbeiten 4.0, Bundesministerium für Arbeit und Soziales, Berlin.

Bocean C.G. and Sitnikov C.S. (2015) Setting international standards in human resources, Management and Marketing Journal, 1 (1), 16-22.

Bondarouk T. and Ruël H.J.M. (2013) The strategic value of e-HRM: results from an exploratory study in a governmental organization, International Journal of Human Resource Management, 24 (2), 391-414.

Bondarouk T. and Brewster C. (2016) Conceptualizing the future of HRM and technology research, International Journal of Human Resource Management, 27 (21), 2652-2671.

Boon J. and Verhoest K. (2016) By design or by drift: how, where, and why HRM activities are organized in the public sector, Review of Public Personnel Administration, 38 (1), 110-134.

Boston Consulting Group (2015) Man and machine in Industry 4.0. How will technology transform the industrial workforce through 2025? https://www.bcg.com/industries/engineered-products-infrastructure/man-machine-industry-4.0.aspx

Boudreau J.W. and Ziskin I. (2011) The future of HR and effective organizations, Organizational Dynamics, 40 (4), 255–266.

Brabham D. (2013) Crowdsourcing, Cambridge, The MIT Press.

Brock D.M. and Siscovick I.C. (2007) Global integration and local responsiveness in multinational subsidiaries: some strategy, structure, and human resource contingencies, Asia Pacific Journal of Human Resources, 45 (3), 353-373.

Brown K., Royer S., Waterhouse J. and Ridge S. (2005) Virtual workforces and the shifting frontier of control, Journal of Industrial Relations, 47 (3), 310–325.

Buckley P.J. (2011) International integration and coordination in the global factory, Management International Review, 51, 269-283.

Buckley P.J. and Strange R. (2015) The governance of the global factory: location and control of world economic activity, Academy of Management Perspectives, 29 (2), 237-249.

Chauhan M., Buckley R. and Harvey M. (2013) Facebook and personnel selection: what's the big deal?, Organizational Dynamics, 42 (2), 126–134.

Cilona O. (2013) Trade union involvement in non-technical standardisation, HesaMag, #07, 28-30.

Clarke C. (2005) Automotive production systems and standardisation: from Ford to the case of Mercedes-Benz, Heidelberg, Physica-Verlag.

Clegg S. and Bailey J.R. (eds.) (2008) International encyclopedia of organization studies, Thousand Oaks, Sage Publishing.

Collings D.G. (2014) Integrating global mobility and global talent management: exploring the challenges and strategic opportunities, Journal of World Business, 49 (2), 253–261.

Cooke F.L. (2006) Modeling an HR shared services center: experience of an MNC in the United Kingdom, Human Resource Management, 45 (2), 211-227.

Cross R. and Gray P. (2013) Where has the time gone? Addressing collaboration overload in a networked economy, California Management Review, 56 (1), 50-66.

Demmer C. (2015) H.R. confidential, Personalwirtschaft, 10, 14-19.

Dickmann M., Brewster C. and Sparrow P. (eds.) (2016) International human resource management: contemporary HR issues in Europe, New York, Routledge.

Dörre K. (2005) Prekarität: eine Arbeitspolitische Herausforderung, WSI-Mitteilungen, 5, 250-258.

Dörrenbächer C. and Geppert M. (2014) Power and politics in multinational corporations: towards more effective workers' involvement, Transfer, 20 (2), 295-303.

Drahokoupil J. (2015) Introduction, in Drahokoupil J. (ed.) The outsourcing challenge: organizing workers across fragmented production networks, Brussels, ETUI, 9-21.

Eppler M.J. and Mengis J. (2004) The concept of information overload: a review of literature from organization science, accounting, marketing, MIS, and related disciplines, The Information Society, 20 (5), 325-344.

EU (2014) Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

Eurobarometer (2015) Data Protection-Report, Special Eurobarometer 431, Brussels, European Commission.

European Commission (2016) The EU Data Protection Reform and Big Data, Brussels, European Commission.

Faraj S. and Johnson S.L. (2011) Network exchange patterns in online communities, Organization Science, 22 (6), 1464-1480.

Faraj S., Jarvenpaa S.L. and Majchrzak A. (2011) Knowledge collaboration in online communities, Organization Science, 22 (5), 1224–1239.

Fernando N., Loke S.W. and Rahayu W. (2013) Mobile cloud computing: a survey, Future Generation Computer Systems, 29 (1), 84–106.

Ferner A. and Quintanilla J. (2002) Between globalization and capitalist variety: multinationals and the international diffusion of employment relations, European Journal of industrial Relations, 8 (3), 243-251.

Ferner A. (2000) The underpinnings of 'bureaucratic' control systems: HRM in European multinationals, Journal of Management Studies, 37 (4), 521-540.

Forschungsunion and Acatech (2013) Recommendations for implementing the strategic initiative Industrie 4.0, Final Report of the Industrie 4.0 Working Group. http://www.acatech.de

Fox A. (2012) Reaching new heights: the best HR Business partners connect human resources with business strategies, HR Magazine, 56 (6), 34-40.

Franssila H., Okkonen J. and Savolainen R. (2015) Developing measures for information ergonomics in knowledge work, Ergonomics, 59 (3), 435-448.

Frey C. and Osbourne M. (2013) The future of employment: how susceptible are jobs to computerisation?, Oxford, Martin School.

Galinsky E. and Matos K. (2011) The future of work-life fit, Organizational Dynamics, 40 (4), 267–280.

Gerbl M., McIvor R., Loane S. and Humphreys P. (2015) A multi-theory approach to understanding the business process outsourcing decision, Journal of World Business, 50 (3), 505–518.

Gerpott F.H. (2015) The right strategy? Examining the business partner model's functionality for resolving Human Resource Management tensions and discussing alternative directions, German Journal of Human Resource Management: Zeitschrift für Personalforschung, 29 (3-4), 214-234.

Gewald H. and Dibbern J. (2009) Risks and benefits of business process outsourcing: a study of transaction services in the German banking industry, Information & Management, 46 (4), 249-257.

Ghoshal S. (2005) Bad management theories are destroying good management practice, Academy of Management Learning and Education, 4 (1), 75-91.

Goscinny R. and Uderzo A. (1959) Astérix le Gaulois, Pilote, 1, 5-43.

Gratton L. (2011) Workplace 2025: what will it look like?, Organizational Dynamics, 40 (4), 246–254.

Greffrath M. (2016) Die Arbeit im Anthropozän: eine knappe Geschichte der Arbeit in praktischer Hinsicht, Deutschlandfunk, 3 January 2016 . http://www.deutschland funk.de/die-arbeit-im-anthropozaen-eine-knappe-weltgeschichte-der.1184.de.html?dram:article_id=337835

Gregson S. et al. (2015) Supply chains, maintenance and safety in the Australian airline industry, Journal of Industrial Relations, 57 (4), 604-623.

Gubbins C. and Garavan T.N. (2009) Understanding the HRD role in MNCs: the imperatives of social capital and networking, Human Resource Development Review, 8 (2), 245–275.

Guo S.Y., Ding L.Y., Luo H.B. and Jiang X.Y. (2016) A Big-Data-based platform of workers' behavior: observations from the field, Accident Analysis and Prevention, 93, 299–309.

Hall R. (2000) Outsourcing, contracting-out and labour hire: implications for human resource development in Australian organizations, Asia-Pacific Journal of Human Resource Management, 38 (2), 23-41.

Harzing A.-W. (1999) Managing the multinationals: an international study of control mechanisms, Cheltenham, Edward Elgar.

Harrington B. and Ladge J.J. (2009) Work–life integration: present dynamics and future directions for organizations, Organizational Dynamics, 38 (2), 148–157.

Heikkilä J.-P. and Smale A. (2011) The effects of 'language standardization' on the acceptance and use of e-HRM systems in foreign subsidiaries, Journal of World Business, 46 (3), 305–313.

Hinds P.J. and Bailey D.E. (2003) Out of sight, out of sync: understanding conflict in distributed teams, Organization Science, 14 (6), 615-632.

Hirsch-Kreinsen H. (2014) Wandel von Produktionsarbeit 4.0, Soziologisches Arbeitspapier 38/2014, Dortmund, Technische Universität Dortmund.

Howcroft D. and Richardson H. (2012) The back office goes global: exploring connections and contradictions in shared service centres, Work, Employment and Society, 26 (1), 111–127.

Hunter I., Saunders J. and Constance S. (2016) HR business partners: emerging service delivery models for the HR function, Farnham, Gower Publishing.

Huws U. (2009) Working at the interface: call centre labour in a global economy, Work Organisation, Labour and Globalisation, 3 (1), 1-8.

ISACA and PwC (2015) Cloud Governance in deutschen Unternehmen, Frankfurt, PwC.

ISO (2010) ISO 26000:2010 - Guidance on social responsibility, Geneva, ISO.

ITUC (2014) ISO is failing the standard test. https://www.etui.org/fr/Themes/Sante-et-securite/Unions-fend-off-draft-occupational-health-standard

Jacobs K. (2013) Does HR need professional standards?, HR Magazine, 12 November 2013. http://www.hrmagazine.co.uk/article-details/does-hr-need-professional-standards

Johansson J., Abrahamsson L. and Johansson S. (2013) If you can't beat them join them? The Swedish trade union movement and lean production, Journal of Industrial Relations, 55 (3), 445-460.

Jonas P. (2015) Die wichtigsten Inhalte der ISO 19600 für Ihr Unternehmen. https://www.lexisnexis.de/blog/compliance/iso-19600

Jones D.T (2011) Deployment of lean across the UK, UK Lean Summit 2011, 10-11 November 2011, Kenilworth. http://www.leanuk.org/who-we-are.aspx

Kaufman I. and Horton C. (2014) Digital transformation: leveraging digital technology with core values to achieve sustainable business goals, The European Financial Review, 20 December 2014. http://www.europeanfinancialreview.com/?p=3796.

Kilkauer T. (2015) What is managerialism?, Critical Sociology, 41 (7-8), 1103-1119.

Kim K., Park J.-H. and Prescott J.E. (2003) The global integration of business functions: a study of multinational businesses in integrated global industries, Journal of International Business Studies, 34 (4), 327–344.

Kirchner S. (2015) Who performs outsourcing? A cross-national comparison of companies in the EU-28, in Drahokoupil J. (ed.) The outsourcing challenge: organizing workers across fragmented production networks, Brussels, ETUI, 25-46.

Klitmøller A. and Lauring J. (2013) When global virtual teams share knowledge: media richness, cultural difference and language commonality, Journal of World Business, 48 (3), 398-406.

Kosnik T., Wong-MingJi D. and Hoover K. (2006) Outsourcing vs insourcing in the human resource supply chain: a comparison of five generic models, Personnel Review, 35 (6), 671-684.

Kramar R. (2013) The challenges and opportunities for human resource management in a globalised world, The European Financial Review, 2 December 2013. http://www.europeanfinancialreview.com/?p=1260

Lautsch B.A. and Kossek E.E. (2011) Managing a blended workforce: telecommuters and non-telecommuters, Organizational Dynamics, 40 (1), 10-17.

Luo Y., Zheng Q. and Jayaraman V. (2010) Managing business process outsourcing, Organizational Dynamics, 39 (3), 205–217.

Maxim M. (2015) The rights and obligations of the main stakeholders in cloud computing services, Perspectives of Business Law Journal, 4 (1), 190-203.

McKinsey (2012) Compliance and Control 2.0: unlocking potential through compliance and quality control activities, Washington DC, McKinsey. https://www.mckinsey.com/business-functions/risk/our-insights/compliance-and-control-20

McKinsey Global Institute (2011) Big data: the next frontier for innovation, competition, and productivity, New York, McKinsey Global Institute.

Meijerink J., Bondarouk T. and Maatman M. (2013) Exploring and comparing HR shared services in subsidiaries of multinational corporations and indigenous organisations in the Netherlands: a strategic response analysis, European Journal of International Management, 7 (4), 469-492.

Meijerink J.G., Bondarouk T. and Lepak D.P. (2016) Employees as active consumers of HRM: linking employees' HRM competences with their perceptions of HRM service value, Human Resource Management, 55 (2), 219-240.

Meinrath S., Losey J. and Pickard V. (2011) Digital feudalism: enclosures and erasures from the digital rights management to the digital divide, CommLaw Conspectus, 19, 423–479.

Meyer-Schönberger V. and Cukier K. (2013) Big data: a revolution that will transform how we live, work and think, New York, Houghton Mifflin Harcourt.

Morgan G. and Kristensen P.H. (2006) The contested space of multinationals: varieties of institutionalism, varieties of capitalism, Human Relations, 59 (11), 1467–1490.

Muenstermann B. and Weitzel T. (2008) What is process standardization?, Association for Information Systems, CONF-IRM 2008 Proceedings. http://aisel.aisnet.org/confirm2008/64

Muenstermann B., von Stetten A., Laumer S. and Eckhardt A. (2010) The performance impact of business process standardisation: HR case study insights, Management Research Review, 33 (9), 924–939.

Newman K. L. (2011) Sustainable careers, Organizational Dynamics, 40 (2), 136–143.

Obeidat S. (2016) The link between e-HRM use and HRM effectiveness: an empirical study, Personnel Review, 45 (6), 1281-1301.

Olson M. (2014) The business partner balancing act: an analysis of alternative employee advocacy practices in the modern HR function, Cornell HR Review, 31 October 2014. http://www.cornellhrreview.org/the-business-partner-balancing-act-an-analysis-of-alternative-employee-advocacy-practices-in-the-modern-hr-function

Oudhuis M. and Olsson A. (2015) Cultural clashes and reactions when implementing lean production in a Japanese-owned Swedish company, Economic and Industrial Democracy, 36 (2), 259–282.

Pearce J.A. (2009) Successful corporate telecommuting with technology considerations for late adopters, Organizational Dynamics, 38 (1), 16–25.

Picot A. and Neuburger R. (2014) Arbeit in der digitalen Welt. Zusammenfassung der Ergebnisse der AG 1-Projektgruppe anlässlich der IT-Gipfelprozesse 2013 und 2014, Hamburg, Bundesministerium für Wirtschaft und Energie.

Pinkham B., Picken J. and Dess G. (2010) Creating value in the modern organization: the role of leveraging technology, Organizational Dynamics, 39 (3), 226–239.

Porter M.E. and Heppelmann J.E. (2015) How smart, connected products are transforming companies, Harvard Business Review, October 2015.

PricewaterhouseCoopers (2014) Transparenzbericht 2014, Zurich, PricewaterhouseCoopers AG.

Przyborski A. and Wohlrab-Sahr M.(2010) Qualitative Sozialforschung: ein Arbeitsbuch, München, Oldenbourg Verlag.

Ramioul M. and Van Hootegem G. (2015) Relocation, the restructuring of labour process and job quality, in Drahokoupil J. (ed.) The outsourcing challenge: organizing workers across fragmented production networks, Brussels, ETUI, 91-115.

Rendesi I., Kovács Z., Szegedi Z. and Vastag G (2013) Lean implementations in Hungary, Proceedings of the Twenty Fourth Annual Production and Operations Management Society Conference, Denver, 3-6 May 2013.

Riezebos J. and Klingenberg W. (2009) Advancing lean manufacturing, the role of IT, Computers in Industry, 60 (4), 235-236.

Roland Berger (2016) The Industry 4.0 transition quantified: how the fourth industrial revolution is reshuffling the economic, social and industrial model, Munich, Roland Berger GMBH.

Rosenzweig P.M. (2006) The dual logics behind international human resource management: pressures for global integration and local responsiveness, in Stahl G.K. and Björkman I. (eds.) Handbook of research in international human resource management, Cheltenham, Edward Elgar, 36-48.

Royle T. (2004) Employment practices of multinationals in the Spanish and German quick-food sectors: low-road convergence?, European Journal of Industrial Relations, 10 (1), 51-71.

Russo A. and Hirschberg J. (2008) Strategisch und geplant auslagern, Personalmagazin, 10, 21-24.

Ruël H., Bondarouk T. and Looise J.K. (2004) E-HRM: innovation or irritation. An explorative empirical study in five large companies on web-based HRM, Management Revue, 15 (3), 364-380.

Sako M. (2006) Outsourcing and offshoring: implications for productivity of business services, Oxford Review of Economic Policy, 22 (4), 499–512.

Sparrow P., Brewster C. and Chung C. (2016) Globalizing human resource management, New York, Routledge.

Springer R. (1999) Rückkehr zum Taylorismus? Arbeitspolitik in der Automobilindustrie am Scheideweg, Frankfurt am Main, Campus.

Strohmeier S. (2007) Research in e-HRM: review and implications, Human Resource Management Review, 17 (1), 19–37

Ulrich D. (1995) Shared services: from vogue to value, Human Resource Planning, 18 (3), 12-23.

Ulrich D. (1997) Human resource champions: the next agenda for adding value and delivering results, Boston, Harvard Business School Press.

Ulrich D. and Brockbank W. (2005) The HR value proposition, Boston, Harvard Business School Press.

UN (2010) Annual Report, New York, United Nations Global Compact.

UN (2015) Labour checklist: Policies and practices (P&P) essential for rooting labour standards into a company's strategies, operations and culture.

Vitols S. (2011) What is the Sustainable Company, in Vitols S. and Kluge N. (eds.) The Sustainable Company: a new approach to corporate governance, Brussels, ETUI, 15-37.

Vodafone Institute for Society and Communications (2016) Big data: a European survey on the opportunities and risks of data analytics, Berlin, Vodafone Institute for Society and Communications.

Voermans P.M. and van Veldhoven M. (2007) Attitude towards E-HRM: an empirical study at Philips, Personnel Review, 36 (6), 887-902.

Wajcman J. and Rose E. (2011) Constant connectivity: rethinking interruptions at work, Organization Studies, 32 (7), 941–961.

Ward J.S. and Barker A. (2013) Undefined by data: a survey of big data definitions, Cornell University Library.

Williams K. and Geppert M. (2011) Bargained globalization: employment relations providing robust 'tool kits' for socio-political strategizing in MNCs in Germany, in Dörrenbächer C. and Geppert M. (eds.) Politics and power in the multinational corporation: the role of interests, identities, and institution, Cambridge, Cambridge University Press, 72-100.

Wobbe W. (1995) Anthropocentric production systems: a new Leitbild for an industrial symbiotic work and technology culture in Europe, in Benders J., de Haan J. and Bennet D. (eds.) The symbiosis of work and technology, London, Taylor and Francis, 117-133.

Womack J.P., Jones D.T. and Ross D. (1990) The machine that changed the world, New York, Rawson.

Woodward A. et al. (2014) Diffusion of e-health innovations in 'post conflict' settings: a qualitative study on the personal experiences of health workers, Human Resources for Health, 12 (22), 1-10.

Yamin M. (2010) A commentary on Peter Buckley's writings on the global factory, Management International Review, 51 (2), 285-293.

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Zammuto R.F. et al. (2007) Information technology and the changing fabric of organization, Organization Science, 18 (5), 749–762.

All links were checked on 18 May 2018.

List of abbreviations

ANSI	American National Standards Institute
APQC	American Productivity and Quality Center
BIBB	Bundesinstitut für Berufsbildung (Federal Institute for Vocational Education and Training)
BP	Business Partner
BPO	Business Process Outsourcing
CaaS	Communication as-a-Service
CAD	Computer-Aided Design
CAM	Computer-Aided Manufacturing
CEE	Central and Eastern Europe
CIP	Continuous Improvement Process
CMMI	Capability Maturity Model Integration
COBIT	Control Objectives for Information and Related Technology
DAMA	Data Management Association
DAMA DMBOK	DAMA Guide to the Data Management Body of Knowledge
DRM	Data Resource Management
e-HRM	electronic Human Resource Management
ERP	Enterprise Resource Planning
eTOM	enhanced Telecom Operations Map
FDI	Foreign Direct Investment
FSC	Forest Stewardship Council
GDPR	General Data Protection Regulation
GWS	Gesellschaft für Wirtschaftliche Strukturforschung (Institute of Economic Structures Research)
HQ	Headquarters
HR	Human Resources
HRM	Human Resource Management
HRM&IR	Human Resource Management and Industrial Relations
IaaS	Infrastructure as-a-Service
IAB	Institut für Arbeitsmarkt und Berufsforschung (Institute for Employment Research)
IB&M	International Business & Management
ICT	Information and Communication Technologies
IE	Information Ergonomics
IoE	Internet of Everything
IoT	Internet of Things
IR	Industrial Relations
IRM	Information Resource Management
ISACA	Information Systems Audit and Control Association
ISO	International Standardization Organization
IT	Information Technology
ITIL	Information Technology Infrastructure Library
ITSM	Information Technology Service Management
JIT	Just-in-time
KPI	Key Performance Indicators
M&As	Mergers & Acquisitions
MCC	Mass Career Customization

MNC	Multinational Corporation
OC	Online Communities
OS&T	Organization Studies and Theory
PaaS	Platform as-a-Service
PCF	Process Classification Framework
R&D	Research and Development
SaaS	Software as-a-Service
SEI	Software Engineering Institute
SIHRM	Strategic International Human Resource Management
SHRM	Society of Human Resource Management
SN	Social Networks
S&R	Standardisation and Reorganisation
SSCs	Shared Service Centers
TOGAF	The Open Group Architecture Framework
TQM	Total Quality Management

List of figure and tables

Annex

Interview Guideline ETUI-Project, Cross border standardisation and reorganisation in European MNCs'

1. In your opinion, what are the most important trends in process standardisation and reorganisation (S&R) in Europe today?

2. What is your perception, which industries (or areas within the service sector) were affected most fundamentally by S&R measures in the last decade?
    a) Why these industries?
    b) Which concrete S&R measures are most important in these industries?
    c) What are the specific characteristics of these newly emerging S&R measures, compared to traditional standardisation processes?

3. When it comes to newly emerging S&R-trends, are there pioneering industries or companies which did provide 'role-models' for other industries and enterprises?

4. Are there pioneering countries which especially promote newly emerging S&R measures? (for example when we compare the U.S and Europe or different European countries)

5. What are, in your opinion, the main reasons and drivers of contemporary S&R-measures?
    a) Could you provide examples based on your academic research, practical experience as a consultant/trade union expert or daily work?

6. What do you think are the major challenges related to newly emerging S&R measures, a) for management (i.e. when implementing these S&R measures) and b) for employees who are often effected by or have adapt to these measures?
    a) Do these S&R measures go along with shifts in competencies and decision-making authority, which might have effects on certain actors (like local management, line-managers, workers' representation bodies) within MNEs?
    b) Do these S&R measures come along with shifts in organisational information flows (which e.g. lead to the loss of local knowledge of management)?
    c) Could you, if possible, provide some examples?

7. What would be basic effects of S&R measures on companies operating internationally?
    a) What would be effects on the local and company-wide representation of employees?
    b) What would be effects on co-determination/worker's participation in general, and 'Mitbestimmung' in German subsidiaries?
    c) Do S&R measures lead to a loss of autonomy of local subsidiaries and other peripheral units of MNCs?

8. Are there certain competencies which are withdrawn at the local level because of certain S&R measures? If yes: What are the implications for local subsidiaries?

9. If interviewees have provided concrete examples, ask the following follow up question: Is this a typical example for the mentioned host countries of the MNC's subsidiary? Is this a typical approach for MNCs originating from the mentioned home countries?

10. Do you have any insights into the questions whether the mentioned newly emerging S&R measures have effects on:
    a) The opportunities for and patterns of labour representation and co-determination?
    b) The relationship of and coordination between employers and employees?

11. Is there anything else that seems to be important to you related to the topics that we discussed?

Table 11 **Interviews with academic experts**

Interviewee	Most important topics
Prof. Dr. Barbara Beham Berlin School of Economics and Law Chair for Occupational Psychology and Cross-Cultural Management	– Country specific differences: what can be standardised across borders (cultural clashes, same economic focal point, e.g. USA and China, Japan) – Implications of outsourcing for works councils
Prof. Dr. Nils Boysen Friedrich Schiller University Jena Chair for ABWL/Operations Management	– HR-related issues in the automotive industry, i.e. demographic concerns (e.g. ergonomics) – Reason for process standardisation: automatisation, logistics, computerisation, compliance
Prof. Dr. Michael Fritsch Friedrich Schiller University Jena Chair for Corporate Development, Innovation and economic change	– Process standardisation as preliminary step of rationalisation – Challenges for trade unions (e.g. flexible working hours) – Trends in R&D: division of labour
Prof. Dr. Frank Habermann Berlin School of Economics and Law Chair for Business Administration, Business Process Management	– Distinction between sector specific and sector neutral processes – Functionality of benchmarking only with a set of parameters like level of maturity, market power and sector/industry specific issues – Centralisation vs. decentralisation
Prof. Dr. Monika Huesmann Berlin School of Economics and Law Chair for Monika Huesmann Professor for Organisation, Human Resource Management and Information Management	– Cross border HRM standardisation – ISO HRM standards
Acting Prof. Dr. Harri Lorentz Turku School of Economics Acting Professor of Purchasing and Supply Management	– Concentration on international sourcing and SCM, sourcing and SCM capabilities, system dynamics, as well as emerging markets – Standardisation through cost savings, generation of synergies and achievement of economies of scale – Implementation constraints of standardisation processes in Eastern European countries
Honorary Professor Dr. Albert Maringer Friedrich Schiller University Jena 2000-2006 Siemens Canada Ltd.; President & CEO	– Importance of sustainability and resource building – Importance of work-life-balance (HR) – Tax issues related to FDI and the role of MNCs – Cloud and Industry 4.0
Prof. Dr. Roland Müller Berlin School of Economics and Law Chair for Business Informatics	– Problems of standardisation and automation of non-routine – processes through IT – Successful corporations: standardised core + customised in the periphery – Global Production networks, Industry 4.0, Artificial Intelligence – Standardisation enables coercive comparisons and makes plants increasingly comparable across countries
Prof. Dr. Armin Scholl Friedrich Schiller University Jena Chair for ABWL/Management Science Deanery of the Economic Faculty	– Trends: acceleration, automatisation, outsourcing, logistics, SAP, teamwork – Methods of working time measurement especially in production: proper registration of working time and focus on ergonomic adaptions because of aging employees – Process standardisation focused on improving product quality and reduction of costs which is often a contradictory

Table 11 **Interviews with academic experts (Cont.)**

Interviewee	Most important topics
Prof. Dr. Avo Schönbohm Berlin School of Economics and Law Department of Business and Economics Chair for General Business Administration with focus on Management Accounting	– Compliance Management – EU non-financial disclosure directive – Compliance induced process standardisation
Prof. Dr. Alexander Tsipoulanidis Berlin School of Economics and Law Chair for Operations Management	– Lean principles: improvement of quality based on reduction waste, focus on quality – Advantage of standardisation → controllable quality – Lean processes are increasingly combined with digitalisation – Pressures of standardisation help to improve effectivity of work and organisation in subsidiaries
Dr. Sigurt Vitols WZB Berlin Social Science Center Wissenschaftlicher Mitarbeiter der Abteilung Ungleichheit und Sozialpolitik	– Compliance management and good corporate behaviour – Compliance induced process standardisations: impact on labour and co-determination – The role of workers representatives in compliance management

Source: own compilation

Table 12 **Interview with management consultants (anonymised on request of the interview partners)**

Interviewee	Most important topics
Prof. Dr. G. B. Partner, BMG Associates Berlin	– Compliance orientated standardisation securing quality (i.e. CE-Certification, ISO-Certification in medicine, food and pharmaceutical industry) – Digitalisation: Enables simplification and planning of logistic processes – Increase in Private-Equity-Funds, Chinese investors in Spain, France, Germany, UK – Production as collaborative process, goes hand in hand with OEMs outsourcing
M. B. Managing Director ECG Management Consulting GmbH	– IT as driver for business transformation (work becomes more virtual), Industry 4.0 – Business Process Management Notation 2.0, Telecom Carrier and IT service provider ITOM PROCESS FRAMEWORK, BPMN2 and APQC Modell, BPMN 2.0, ITEL (Thatcher), KOBIT for security aspects, TOGAF, COBIT
M. D. Head of Human Resources Sopra Steria GmbH	– HR Cloud Tool SAP-'SuccessFactors' – Globalisation and digitalisation as drivers for business processes (i.e.Amazon offers standardised solutions and processes for mail order and receives 30% of the revenue) – Development of Competence Centers or Shared Service Centers – Trend towards EWCs, network and cooperation of works councils (i.e. Germany and France)
Dr. R. H. IT Strategy Consultant / Principal Consultant 30 years of experience in IT strategy & implementation projects	– Trend towards automatisation – Industry 4.0 leads to digitalisation (and standardisation), especially in production – ITIL standardisation processes, Cloud, elimination of exiting interfaces,
M.K. Idox Germany GmbH	– Compliance management – Application of ISO 19600 – Changes in reporting – Implications for business processes
J. L. Roland Berger und Partner	– Focus on compliance, importance of transparency (example VW) – Uniformity in operating business (HR, IT) – HQ defines ideal standard-processes, subsidiaries have the possibility to interfere, as long as the ideal standard process doesn't fit the local circumstances
M. P. PricewaterhouseCoopers GmbH	– (Cloud-based) standard IT solutions – Big Data/Industry 4.0 – Data privacy and security issues
R. T. SAP Senior Consultant SD, MM und CRM approx. 30 years of experience in IT/SAP implementation projects	– Further increase in standardisation → More employees, business units get involved. Especially in HR and administration (new tools for time measurement) – Recruiting processes increasingly standardised

Source: own compilation

Table 13 **Interviews with trade union consultants**

Interviewee*/Participants of focus group**	Most important topics/area of expertise /for participants of focus group)
Dipl. Wi-Ing. Kai Beutler* bsb GmbH (Betriebsräte Strategie Beratung), Germany CEO, Senior consultant	– Lean and katas (behavioural routines, work routines, pit stop principle) – Human orientated technologies – Supplier parcs – New generation of interactive robotics – No determination between standardisation and working conditions,i.e. ZF and John Deere: Awareness of improved working conditions for employees 50+
Prof. Dr. Heinz Bierbaum* Info Institut Saarbrücken, Germany Managing partner, Senior consultant	– Cross border process standardisation in the automobile industry – Management rationales driving standardisation strategies
Dr Antje Blöcker* Ruhr Uni Bochum, Germany Senior Lecturer: Chair for General Sociology, Work and Economy Senior Fellow Institut Arbeit und Technik	– Adjustment of work organisation and management strategies, i.e. automotive manufacturers and suppliers – Differences between SMEs and global players → Emergence of networks of suppliers as trend, are more standardised as SMEs – Positive effects of standardisation for human resource development, i.e. positive experience with group work → more aspects of quality and transparency get implemented
Dr. Ulrich Bochum*,** G•IBS mbH, Germany Senior Consultant	– Codetermination for Implementation of new IT Systems – SAP and talent management tools (SuccessFactors) – Big Data – Tensions between subsidiaries and HQ (example P&G)
Marielle van der Coelen** SBI Format, The Netherlands EWC trainer/Expert	– Extensive knowledge and skills in all EWC-matters (Legal, -Finance, -Strategy, -Culture etc.)
André van Deijk** Senior consultant GITP ORC, The Netherlands	– Focus on mergers, takeovers and reorganisation – Appointed manager of the team of trainers and consultants working for predominantly works councils in The Netherlands
Ana Isabel Martinez Garcia** Syndex, France Consultant, Project manager	– HRM – Industrial relations – Arduours work
Ildiko Kren** Business manager Solution4, Hungary	– Union support and training in EU accession countries – Project leadership for EU-Projects and expert for labour relations
Dr. Heinz Rudolf Meissner*, ** G•IBS mbH Germany Senior Consultant	– Awareness of technological change and implications for blue-collar-workers – Plants as centres for competencies (When the development of a new process is successful → rolling out) – Increase of Benchmarking as challenge for works councils → comparison between apples and pears (no consideration of the age of the production plant or made investments) – Data security
Marie Meixner** Syndex France Consultant, Project Manager	– Private equity and labour

Table 13 **Interviews with trade union consultants (Cont.)**

Interviewee*/Participants of focus group**	Most important topics/area of expertise /for participants of focus group)
Marcel Spatari** Syndex Romania Consultant, Project Manager	– Assistance to the trade union in carrying out macro-economic studies – Training of trade union representatives in economics and social dialogue – Preparing of European projects
Dipl.-Soz. Viktor Steinberger* TBS beim DGB NRW e.V , Germany Senior consultant	– Work organisation, team work, production- and management systems (Lean production, GPS, TQM, CIP), IT-Introduction (ERP, MES, SCADA), compensation schemes – Problems of outsourcing especially in IT, replacement of local IT units – Global Production Networks – SuccessFactors as Hype but general skill management exists since 2000 – Standardisation in service – 'Incapacities' of Management in subsidiaries – 'Callcentrification',(will be explained in section 3) – Outsourcing of skilled and knowledge worker in MNCs)
Eckhard Voss** Partner, Senior Consultant wmp consult, Germany	– Research projects for the EU Commission and other EU institutions – Advice and moderation of projects of EU social partners, EWCs and European Employment Strategy – Development, advice and moderation of cross-border networks
Dr. Jörg Weingarten** PCG – Project Consult GmbH · For decent and safe work, Germany, Consultant	– Research and consultancy on Industrial Relations, social and economic objectives – Business consulting with international perspective
Dr. Peter Wilke** Managing Director wmp consult, Germany	– Business expertise, assessment and development of business concepts – Industrial sector analysis and regional development studies – Development, advice and moderation of international networks

Source: own compilation