A decorative graphic consisting of a grid of dots in various shades of grey and red, arranged in a pattern that suggests a network or a map.

Production as a service

Plural network organisation as a challenge for industrial relations

JÖRG SYDOW & MARKUS HELFEN

November 2016

- Traditional demarcations between production and service are increasingly losing their contours. Plural forms of network organisation are becoming ever more salient alongside those of the market and hierarchy.
- Departing from the single enterprise view, plural network organisation brings about a change in traditional human resource management and labour policy. The dynamics of this development pose a challenge to institutionalised forms of labour regulation as these are circumvented and undermined. At the same time, new forms of service companies are emerging that are marked by low degrees of trade union organisation and poor labour standards.
- As a result, trade unions which follow traditional demarcations increasingly face a structural disadvantage. To effectively represent employees' interests, a combination of strategies appears advisable that includes both cooperative formation of alliances and networks between trade unions as well as with other societal actors. In addition, unions can leverage »focal« enterprises that »orchestrate« such networks in order to build pressure to support workers at the networks' periphery.



Content

1. Introduction	2
2. Production in networks as a plural form of organisation	3
2.1 The automotive industry: leading the way in global production in networks	3
2.2 Chemicals industry: even process technology does not afford protection from organisation in servitization networks	5
2.3 Airports: privatisation has led to service networks with shares of production	6
3. Servitization of production networks	7
4. Industrial relations in servitized production networks	7
5. Trade union policy implications of plural network organisation – competition or cooperation between trade unions in servitized production networks	10
6. Summary	13
Endnotes	14
Bibliography	15

1. Introduction

The organisation of value creation has changed fundamentally over the last quarter century. Vertical, more or less deeply integrated production enterprises have increasingly been replaced in most sectors by »production in networks« (Sydow & Möllering 2015). More and more products and services are being produced in »leaner« large enterprises together with small and medium-scale enterprises and specialised service providers, but also in cooperation with research and educational training facilities. In extreme cases, these (previously large) enterprises could come close to what was described in a visionary article published in the 3 March 1986 edition of *Business Week* as a »hollow organisation« as a result of »fine-slicing« (Contractor et al., 2010). This article draws attention to control over a large share of value creation with extremely low »factor input« – and correspondingly low fixed costs and a small workforce. Regardless of whether this extreme form is practiced locally or on a global scale right from the start: production in networks is not only the result of outsourcing company functions to other organisations, but also of a closer cooperation than one would generally expect from market-based coordination of economic activities.

By the same token, production in networks – and this is key to the perspective that is developed in the following – does not replace economic activities either organised along hierarchical or market lines. Instead, it interacts with these at multiple levels. This is precisely the reason why we adopt this reference to »plural form« (Bradach, 1989; Bradach & Eccles, 1989), although the term was originally used in connection with franchise systems (from the perspective of employees it was often referred to as »McDonaldization«; see Royle, 2010) and the mixture of branches and franchise outlets, i.e. hierarchical and network-like elements, frequently found there.

Following this brief introduction (chapter 1), we first of all illustrate by means of handpicked cases what exactly is meant by production in networks as a plural form of organisation (chapter 2). At the same time, the special role played by industrial services will become evident, and this aspect then distilled in the analysis (chapter 3). The outsourcing, distribution and reintegration of services in a network constitute a special challenge for industrial relations, including especially trade union organisation and policy. Before examining its national and interna-

tional implications (chapter 5), however, the challenges posed by servitized production in networks for industrial relations are outlined (chapter 4). The analysis then closes with a summary of the most important conclusions (chapter 6).

Market – network – hierarchy – plural form – servitization of production

Hierarchy traditionally and typically evolves *within* an enterprise (i.e. within a company group as well). The standard approach towards coordination is by issuing orders and instructions. Control over staff, processes and qualities are in one and the same set of hands as are responsibility for these.

The **market** takes place *between* enterprises, typically distributing control and responsibility among various legal entities. Generally speaking, unrestricted market relationships thus – and this is the prevailing opinion – absolve business customers from responsibility for working conditions and mistakes made by providers. Coordination of exchange for the most part takes place via the price mechanism.

Network stands for long-term cooperation based on »give and take« and is hence characterised by joint agreements rather than mere price coordination. It is attempted here to combine and link market and hierarchical elements of control. This is why the term »hybrid« is also sometimes used in the context of network-like organisations.

Finally, the **plural form of organisation** *combines* the three forms of market, network and hierarchy – which are in principle equally important from a business perspective – allowing a correspondingly (more) rapid change in the institutional arrangement. The impact of this form of organisation for industrial relations is accordingly complex, unpredictable and subject to dynamic change. This is further reinforced by the »**servitization of production**«, i.e. the increase in services as the actual value-creation activity, with these developments taking place in tandem with one another.

2. Production in networks as a plural form of organisation

Value creation has traditionally been hierarchical, organised in various levels of enterprises more or less deeply integrated vertically and achieved in the market by means of transactions. For as long as a quarter century now, the market and hierarchy have been joined by a third form of organisation of economic activities in the guise of networks (Williamson, 1985; Powell, 1990; Sydow, 1992). In particular, this form of value creation through services, which is playing an ever more important role in the course of so-called »servitization« (Baines et al., 2009), takes place in networks by means of long-term or recurring cooperation with correspondingly specialised service providers.¹

We take three examples from different sectors that we have analysed in various research projects supported by the Hans Böckler Foundation² to illustrate this. While the first two examples of servitization shed light on industrial value-creation in the automotive and chemistry industry, the third example focuses on airports and dedicated »service networks« (Stauss & Bruhn, 2003) or »service delivery networks« (Tax et al., 2013). In the first two examples, the production of services is for the most part closely interwoven with key material services (automotive or chemical products).

Here, although we explicitly address German examples (for cross-border aspects see Fichter, 2015; Fichter et al., 2011, 2012, 2013; Hübner, 2015), these examples fit nicely into the international discussion about value-creation networks and value chains and their consequences for work (Gereffi et al., 2005; Levy, 2008; Coe & Jordhus-Lier, 2011; Lakhani et al., 2013; Wright & Kaine, 2015), as they shed light on the special aspects of servitization of value creation for units that are similar in all parts of the world (automotive, chemical, airports) (Helfen, 2013). Global attention to value-creation networks, which has by now become substantial (see the discussions in ILO, 2016; OECD et al., 2014; UNCTAD, 2013), especially focuses on the *cross-border* steering and control of value-creation chains that are rising up between sites in different countries and regions of the world (Gereffi et al., 2005). From the perspective of employees, however, this development coincides locally with outsourcing, subcontracting and precarisation of work. This means that employment is being experienced by workers as increas-

ingly insecure, unpredictable and risky (for one example among many here, see: Kalleberg, 2009). Our examples underscore especially this simultaneity of »globality« and local experience (Anderson, 2015) by revealing the impact of a plural organisation of networks in a country in the western hemisphere. In our view, this is also especially illuminating for the international discussion, as it demonstrates that it is not only the so-called periphery that is involved, but also the »centre«.

2.1 The automotive industry: leading the way in global production in networks

In the automotive industry, which some observers consider to be a conceptual leader when it comes to global production in networks (Coe & Yeung, 2015; Sydow & Möllering, 2015), Original Equipment Manufacturers (OEMs) have almost without exception adopted the Japanese model, banking increasingly on close cooperation between system and module suppliers. While this form of cooperation indeed increasingly corresponds to the notion of network cooperation, relations between system and module suppliers and their own suppliers of components and sub-assemblies (which tend to be located more in the periphery of such networks) are more based on market competition, i.e. are (more) strongly coordinated through the price mechanism and relations are more of a more temporary nature. Even though scarcely any automotive manufacturer can be said to have attained the scale of networking achieved by Toyota – and this not only in Japan, but also throughout the world (Dyer & Singh, 1998; Wilhelm, 2009; Sydow & Möllering, 2015: 237–240), networks are becoming increasingly important in this sector. One special aspect of this sector, however, is above all that system and module suppliers (e.g. Bosch, Hella or Schaeffler) are usually integrated in production networks of several manufacturers. Precisely for this reason, one should not mindlessly slip into language referring to »network competition« (Gomes-Casseres, 1996; see also Sydow & Möllering, 2015: 230–231), which supposedly posits competition between enterprises. Competition between networks – instead of enterprises – namely presupposes that over the long haul no or only a few suppliers are integrated in more than one production network.

Enterprises specialised in the rendering of services are also integrated in the usually global production of networks

of automotive manufacturers, which in the case of module and system suppliers are nevertheless overlapping (see Figure 1). This also goes for labour-intensive areas of service such as catering, building management, cleaning, security and logistics as well as for more knowledge-intensive services such as contract logistics, engineering service providers or Maintenance, Operations and Repair (MOR). These service providers usually have very different wage levels (see Figure 1). Not few of these specialised service providers are globally operating enterprises (e.g. DHL, G4S). Mechanical and plant engineering enterprises often diversify in the MOR sector, for instance when the supplier takes over a paint shop for the OEM or a system supplier assumes its operation and recovers its investment by charging a piece rate.

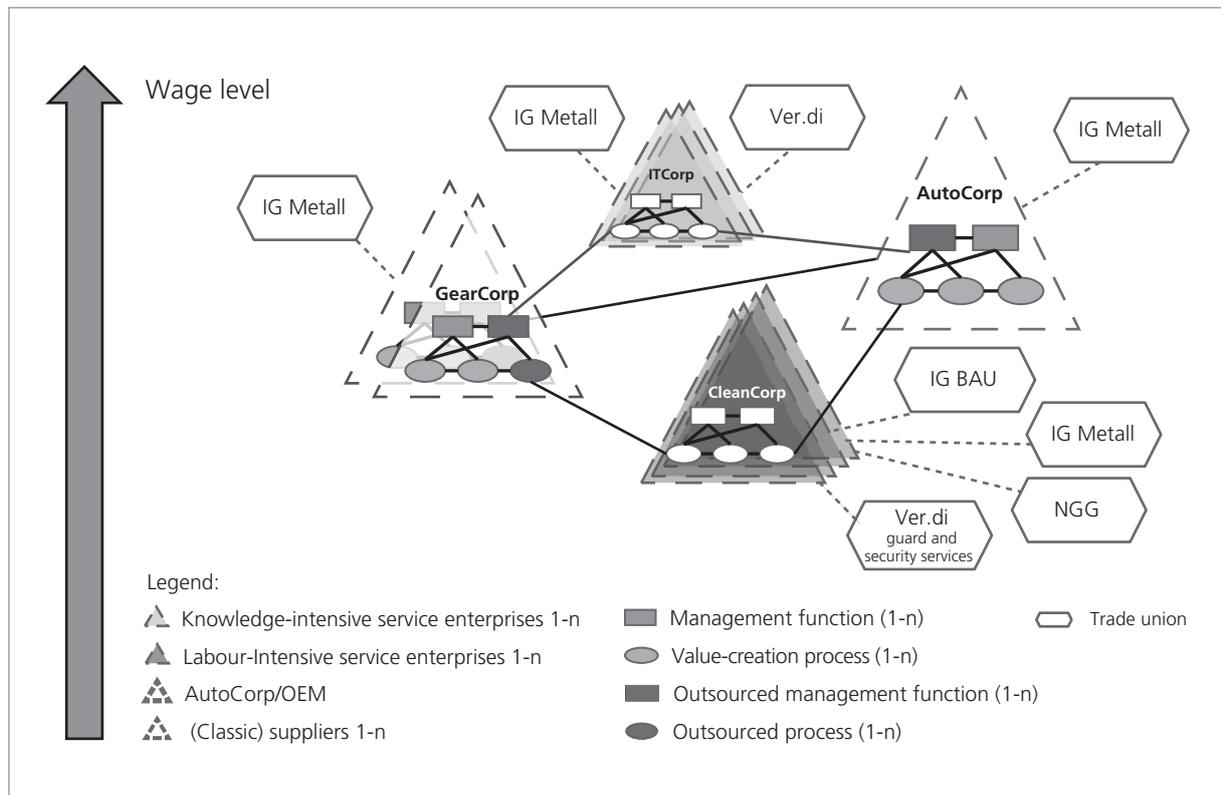
In effect, employees of the manufacturer work (either on a fixed or temporary basis) side by side with employees of service suppliers, system and module suppliers and temporary staff from agencies through the manufacturer itself in the factories of OEMs and their supplier park. Working conditions and pay for all these groups differ

markedly in some cases. The tendency is for wages at the OEM and the module and system suppliers to be at a higher level than those of labour-intensive service providers, although the former are for their part exceeded by some knowledge-intensive service providers (as indicated above by the arrow in Figure 1).

Figure 1 provides a schematic view of production in »plural« networks in the (global) automotive industry. This is because, in addition to hierarchically-structured organisations (OEMs, system supplies, but also labour- and knowledge-intensive service providers), »cooperation« takes place at the centre of the network on a long-term basis, while highly temporary market relations continue to predominate on the periphery (e.g. with component and parts suppliers). Production in a network is in this sense a plural form, i.e. an intelligent and increasingly dynamic combination of these three basic forms of organisation (Sydow & Möllering, 2015).

The relocation of tasks to network partners leads to complications in the representation of interests, usually weakening it

Figure 1: Car production in a network



As a result of sectoral and branch borderlines as well as almost always national borders being crossed, it is not very surprising that different trade unions are involved with the representation of employees' interests in networks. Figure 1 shows – once again schematically – the situation for Germany. One direct consequence of the relocation of tasks to network partners is a multiplication of trade union competencies and commensurate complication of interest representation, often causing it to weaken.

2.2 Chemicals industry: even process technology does not afford protection from organisation in servitization networks

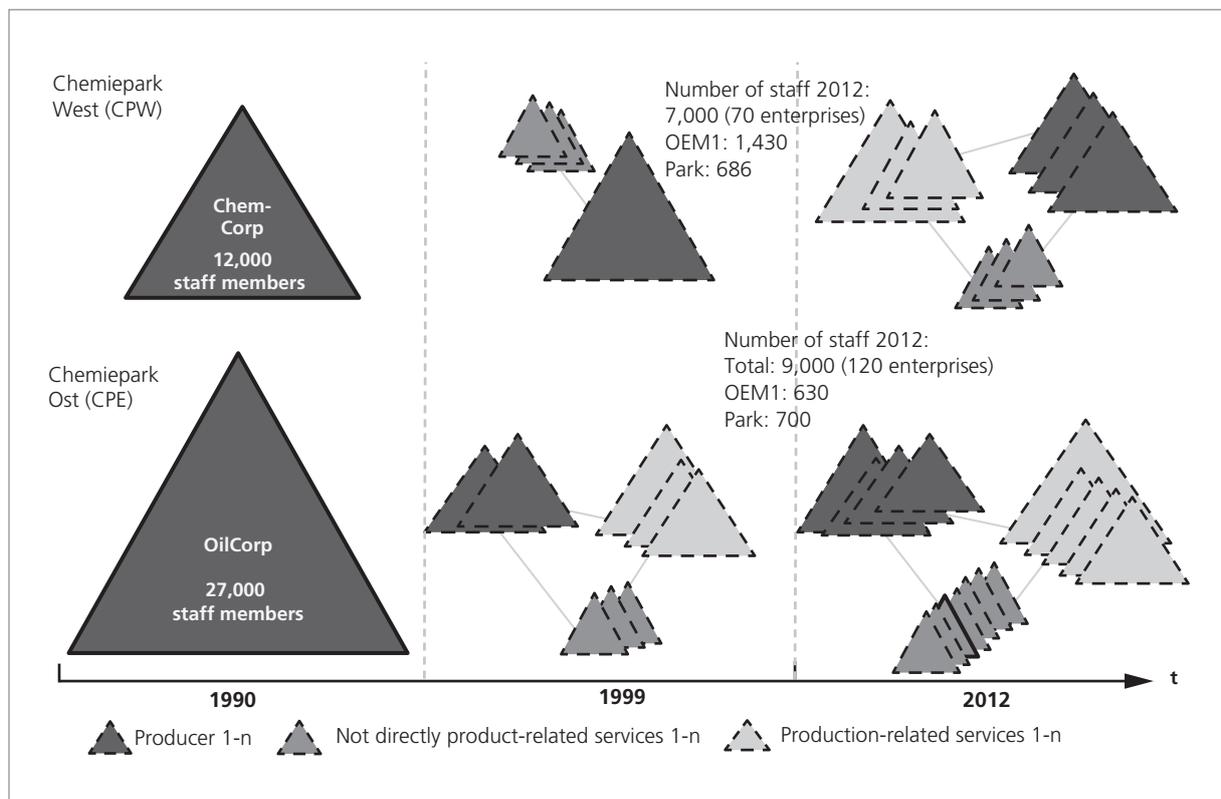
For a long time, the chemicals industry was a classic example of a deeply vertically integrated value-creation organisation, not least in Germany (Kädtler, 2009). In the meantime, however, structures characterising large companies are, if not being replaced, at least being supplemented with production in networks here as well.

This change in the organisation of value creation is most apparent in so-called chemical parks.

Parts of large enterprises along with their subsidiaries (such as, for example, Bayer Gastronomie) and joint ventures (for example, Currenta) are to be found in chemical parks along with enterprises that are not only legally, but also financially, autonomous (e.g. Lanxess) as well as specialised service providers. The latter have not infrequently taken over processes along the lines of servitization that used to be controlled by the big multinationals themselves like at Bayer. On top of this, independent service-providers generally attend to maintenance of the technological infrastructure of the chemical park.

Figure 2 provides a schematic impression of the development of chemical companies that were originally highly vertically integrated into production in networks. At the same time, chemical parks in which such networks are locally concentrated are in the meantime being presented as a global model (<https://chemicalparks.eu/>). These parks also correspond closely to the notion of a plural form of organisation in terms of the combination of market, net-

Figure 2: Chemical production in a network (Helfen et al., forthcoming)



work and hierarchy. With chemical parks as well, a large number of trade unions are involved in representing the interests of employees as a result of outsourcing or the assumption of functions by network partners.

In the examples cited in the foregoing, a differentiation has taken place over the course of the last 20 years in which in one case (West) a large enterprise with 12,000 employees was replaced by a structure of 71 enterprises with a total of around 9,100 employees. In the case of the other chemical park (East), an enterprise with 27,000 employees developed into a network made up of 122 companies. More than half of jobs there were shed in the process, with those remaining becoming increasingly differentiated in terms of working conditions and wage levels.

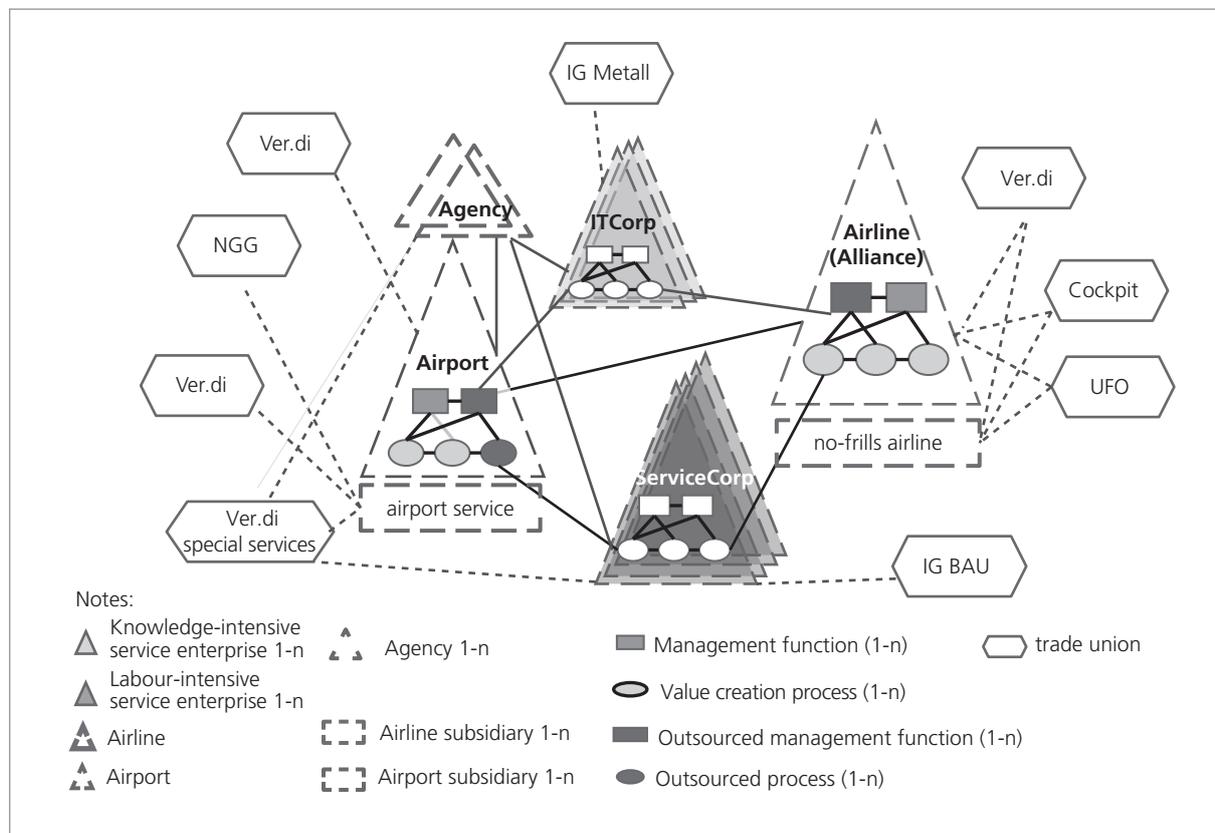
Specialised service providers have often assumed processes that used to be controlled by big companies themselves in the past

2.3 Airports: privatisation has led to service networks with shares of production

Similar to the case of chemical parks, the globalisation of air traffic, passenger and cargo can be witnessed at a concrete location: airports. Airports are not only important hubs in global production and logistics networks; production in networks can also be observed at these sites. In contrast to global production networks in the automotive and chemical companies, these are essentially dedicated service networks. At their periphery, however, material production is taking place, such as when logistics companies located at the airport perform final assembly there or finish products. Thus, the borderline between service and material production is starting to dissolve here as well.

Figure 3 shows schematically how an airport operating company operates as a »hub firm« (Jarillo, 1988), »focal enterprise« (Sydow, 1992) or »network orchestrator«

Figure 3: Production by air traffic service providers in a network



(Paquin & Howard-Grenville, 2013). Such orchestrators work more or less closely and long term with ground traffic service providers, cleaning and maintenance companies, fire brigades, construction and security service providers, air-traffic control, retailers, restaurant, catering and hotel companies – just to name a few. Among these companies in this dedicated network of service providers strategically managed by the airport operator, one must not forget the airlines with their passengers and freight – probably the most important business customer. Not few of these enterprises operate in global networks themselves, like Star Alliance or One World.

Not apparent from the figure, but important to an understanding of the driving forces underlying this development, is that these networks have usually arisen from previously vertically integrated service providers, whose public owners were and are municipalities and/or the state. It is apparent that this once again has a considerable impact on trade union interest representation, which as a result of the large number of trade unions involved is no less complex at present than in the networks of the automotive and chemical industries. Here as well, group subsidiaries (e.g. manpower service providers or no-frills airlines) are growing in importance. We are unable to assess whether these are being set up with the explicit objective of »escaping collective agreements«, as some trade unionists contend. It should not come as a surprise, however, that the differentiation of specialised services at airports has encouraged a parallel differentiation of collectively bargained conditions and the splintering of interest representation into individual lists and trade unions representing a specific professional branch – a development that may even gain momentum in the future.

3. Servitization of production networks

As all three examples show, production in networks is increasingly relying on more or less specialised service providers, with this phenomenon being described in the literature using different terms. Reference is made, for instance, to »production with services« (Heidling et al., 2010), »service transformation« (Kushida & Zysman, 2009) or »servitization« (Baines et al., 2009). While this trend towards servitization of production networks was initially associated with a differentiation of supplementary services on offer, the principle of »service-dominant

logic« (Vargo & Lusch, 2004, 2008) is now being understood very broadly. This perspective essentially means that the customer or user in its capacity as a »co-creator of value« is necessarily integrated in the process of rendering services, sometimes very early on at the stage of product development, but ever more frequently in the use of products. The (use) value co-created by the customer results from the service which is ultimately offered to the customer by the exchange of the product or a service. The importance of this perspective, which at the same time emphasises the need for an integration of resources and network structure in the coordination of the process of rendering the service, is not least becoming more apparent as a result of digitalisation. Numerous digital services do not have any use value, or only a small one, without involvement of the user and its co-production (e.g. making respective data available). This development in information technology – together with the dissemination of the »service-dominant logic« and the at best gradual ability to distinguish between tangible products and services that was first noticed more than twenty years ago (Engelhardt et al., 1993) – already suggests what the consequences will be for industrial relations, allowing us to speak – in somewhat pointed terms – of »production as a service« (for a programmatic view, see only Schneider, 1997).

The growth in contract work will make it manifoldly more difficult to gain acceptance for international labour standards

The increasing differentiation of service specialists

(from temporary work agencies to engineering service providers) and their targeted integration in production in networks is against this background only one important special case.

This servitization of value-creation networks of course does not stop (any longer) at national borders. For this reason as well, a new group of actors – large service conglomerates like ISS or G4S, spanning the world with hundreds of thousands of employees – is arising (Helfen et al., 2012; Fichter & McCallum, 2015).

4. Industrial relations in servitized production networks

Production in networks and in particular the servitization of production networks outlined here raises important questions for industrial relations – both for management and employees (Helfen, 2014). Many questions remain

unanswered, however, especially with regard to the responsibility of enterprises as well as the question as to how acceptance can be gained for labour standards in networks nationally and – above all – internationally. This becomes evident in particular with the widely varying forms of contract work (Barrientos, 2013; Coe & Jordhus-Lier, 2011; Flecker et al., 2013; Hertwig, Kirsch, & Wirth, 2015). Although trade unions have in the meantime recognised that production networks servitized in this manner and growth in »triangularized« employment relationships associated with these, like temporary and contract work, pose a major challenge to their radius of action, strategies holding out the prospect of success nevertheless are still hazy. These have at best only reached the experimental stage.

To better understand the tremendous heterogeneity that is associated with plural forms of organisation in general and work in servitized production networks in particular, it is important to recall the following: both market and hierarchical forms of organisation remain preserved in such networks in spite of all efforts towards outsourcing (Weil, 2014) or – to be more precise – »quasi-externalisation« (Sydow, 1992). In addition to the market coordination of transactions (»buy«, essentially through prices) and hierarchical organisations (»make«, ultimately through commands), specific coordination mechanisms crop up in differing combinations in the network, whereby it remains a matter of controversy whether this mechanism is accurately reflected by the term »cooperate« (Williamson, 1985; Powell, 1990; Sydow & Windeler, 2000; Sydow, Schübler & Müller-Seitz, 2016). With all their differences, however, the following aspects characterising network cooperation are of importance:

- Longer term or – in particular in the case of projectified transactions – recurrent relations with the network partner;
- Orientation towards longer-term reciprocity (the norm of give and take) instead of seeking short-term benefits from the transaction for oneself;
- Negotiation instead of hierarchical command or market price coordination in the pursuit of common interests;
- Taking the interests of the business partner into account in one's own actions;
- Maintenance and design of multilateral instead of bilateral relationships;

- In some circumstances, even the assumption of common responsibility through the network itself.

The more these aspects are taken into account by management in the design of network cooperation, the more convincing the distinction that can be made between a »corporate« and classic »buy« in the market and »make« in the hierarchy.

The discussion over a possible new version of corporate law, for instance along the lines of »law governing networks« has also been wrestling with these problems (e.g. see as far back as Teubner, 2001; most recently Jung et al., 2015). Proposals in this vein have not met with any acceptance in legal policy practice in Germany to date, however. The problem here will also be that the dissemination of plural forms of organisation will further boost the variety of possibilities. If enterprises can already be organised in very different ways (e.g. with more or less autonomous divisions all the way to the legal autonomy of divisions in the affiliated group), this applies all the more so to cooperative network ventures with a view to the aforementioned aspects (e.g. degree of detail in the design of supply agreements, forms of contract work). The plural form of organisation is respectively complicated – including in the legal sense – and the more important the network cooperation in it, the more difficult it is to comprehend.

In spite of research efforts in the last two decades, production in networks, in particular with a view on human resource management and labour policy, has tended to be relatively neglected (see as exceptions Fisher et al., 2010; Kinnie et al., 2005; Marchington et al., 2005; Sydow & Wirth, 1999). This is due to the fact that individual impact and latitude for human resource management and labour policy in network cooperation have scarcely penetrated the classic fields of activities ranging from the provision of staff all the way to adjustments in the number of staff. There appears to be a clear understanding that the institutionalised form of human resource management and labour policy is in a state of flux. Staff policy tasks are increasingly being concentrated in shared service centres within company groups (Gospel & Sako, 2010) or even transferred to autonomous (personnel) service providers. The latter may be temporary work agencies, which are expanding their scope of services while maintaining a local presence (for example, in automotive factories, chemical parks or at airports). Or other

»labour market intermediaries« (Bonet et al., 2013) are acting as job-placement agents, serving as an interface between workers and the organisation for which work has to be performed. In both cases, a »triangularised work relationship« (Davidov, 2004) comes about, which has already been referred to in the foregoing – with correspondingly complex constellations of relationships and major challenges for trade union interest representation (see Figure 4).

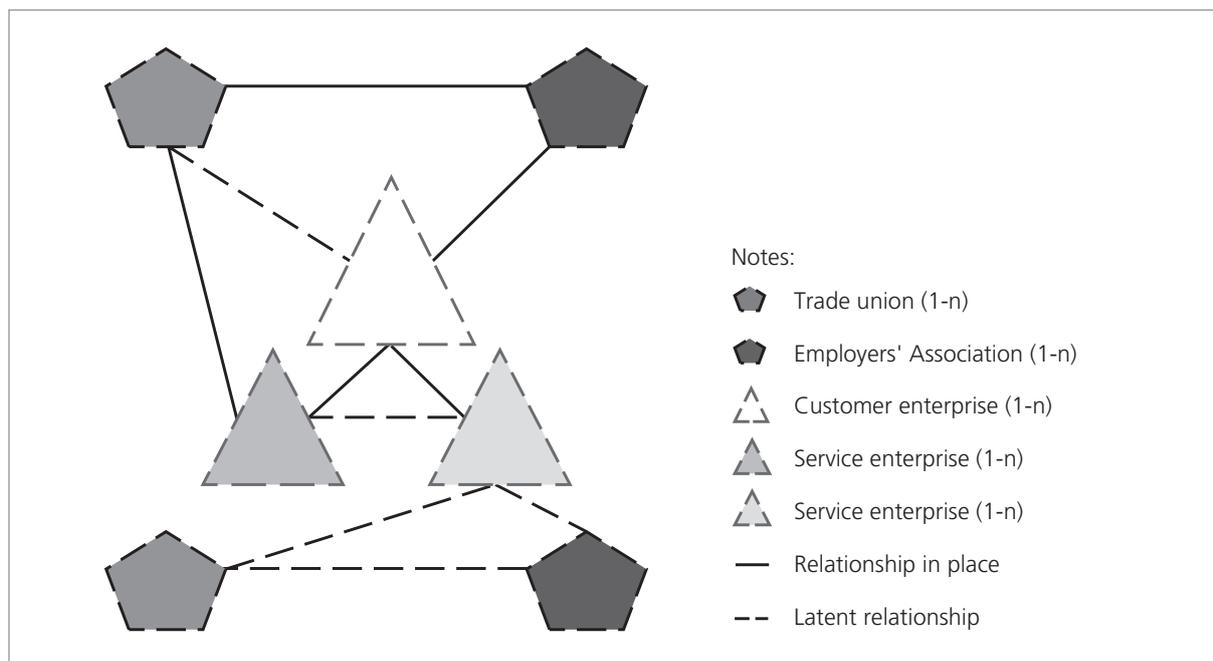
From the perspective of employees or their interest representation bodies, the biggest challenge is helping shape network rules intelligently, especially for these specialised service providers. By the same token, it must be taken into account that the spread of the network form of value creation does not mean that labour can only be entrusted to the market based on simple wage cost comparisons through externalisation (»marketization«, as described, for instance, by Doellgast et al 2016). Instead, management also depends vice versa on network partners making their own contributions if overall success is to be achieved. This is all the more the case the more outsourcing or quasi-externalisation that is used. As a result, linkage points also come about for interest rep-

There are opportunities for interest representation in networks – but they differ in each and every case

resentation in the network to apply strategically coordinated levers of structural, institutional and organisational power (Fichter, 2015).

Management appears to only gradually be realising that, beyond outsourcing and offshoring, the overall context of inter-organisational value creation also needs to be supported by personnel. Service-management and marketing concepts (from service life cycle all the way to service centre management) that have been advanced can only be realised, for example, when the connection between staff and customer is seen. One difficulty faced by interest representation as well as by management – and not least by management research as well – however, remains the heterogeneity of the »new« forms of organising work that we are witnessing. This ranges from the further professionalisation of certain services (e.g. underpinned by new professions) to removal of job categories from collectively bargained agreements in the course of internal and external outsourcing (i.e. the outsourcing of work to group subsidiaries or to external service providers) and offshoring all the way to work for crowdsourcing platforms and in sweat shops in the Third World. By the same token, it is not even possible to predict with any certainty that »decent work« will be more likely to exist over the long term in the hierarchical form of organisation than in markets or network-like

Figure 4: Relationships in the case of employment at several employers (Helfen et al., 2016: 288)



organisations, or at the centre of networks rather than on their periphery.

On top of all this, employment is increasingly project-based. At the same time, the spectrum of possibilities is once again very diverse and ranges from professional project work in longer-lasting arrangements to precarious employment in short-term, one-time projects (Lundin et al., 2015). In extreme cases, individual workers will more often be under contract with a host of mini-job employers via various Internet-based platforms in the future. With these forms of (additional) flexibilisation in plural forms of organisation, industrial relations will be faced with additional challenges, which will further exacerbate the problems of production in networks being discussed here.

As »colourful« the world of inter-firm networks, outsourcing, offshoring and project work may be, a general tendency towards »fragmentation of collective bargaining« (Helfen et al., 2016) can be witnessed in almost all areas. This fragmentation increasingly infects value creation in traditional core segments of manufacturing as well. For works councils and trade unions, new gaps in representation and competition for representation arise. The result is a plethora of negotiating relationships in the network which weakens the enforcement of collectively negotiated rules. Collective bargaining policy is having great difficulties in preserving pay levels. Instead, collective bargaining actors are confronted more frequently with the phenomenon of ambiguous and conflicting rules.

Another important tendency is directly linked to »inter-organisational segmentation« (Helfen et al., 2016) of workforces, causing considerable complications for company level and sectoral level interest representation. It is becoming increasingly complicated for works councils or local unions, if they exist in the first place, to represent all of the staff at a given production site. Trade unions struggle against multiple fragmentation of workforces across national, sectoral and industry demarcations with regard to interest representation in networks as they are pushed into inter-union competition for representation of fragmented workforces (Helfen & Nicklich, 2013).

Project-based and online work are strengthening the trend towards fragmentation of collective bargaining policy

5. Trade union policy implications of plural network organisation – competition or cooperation between trade unions in servitized production networks

The tendencies discussed in the foregoing have considerable implications for trade union policy. The servitization of networked production can even have fundamental consequences for trade union organisation itself. Industrial trade unions as well as service trade unions are affected simultaneously, albeit with diverging consequences.

In many countries, specialised service trade unions have formed in response to earlier phases of privatisation, outsourcing/offshoring and the loss of members resulting therefrom (e.g. Ver.di in Germany or SEIU in the United States), not least especially so-called trade unions representing a specific professional branch or craft trade unions (e.g. Vereinigung Cockpit and UFO in the aviation industry; for a recent work on this as well as the attempt at regulation, see also Keller, 2016). This specialisation has in the meantime been spawning a good deal of complexities plaguing representation as well as competition between trade unions both at the local and global level.

On the global level, service trade unions are members of various international trade union federations for instance (e.g. UNI, ITF or PSI), or they are at the same time members of several of these »meta-organisations« (Ahrne & Brunsson, 2006). Even in the case of pure service networks or »service delivery networks«, this causes problems with cooperation, such as in the retail trade, traffic and transport or public infrastructure services.

In the following, however, we posit that in times of increasing servitization of production in networks, the representation of »service« employees in specialised (service) trade unions systematically leads to competition with other (industrial) trade unions.

Servitization would appear to be a key organisational problem for industrial trade unions because it goes hand in hand with an undermining of union manufacturing strongholds in which there are high degrees of unionization, at least in Germany. At the same time, new (intermediate) service industries are emerging that are comprised of smaller firms which are not (yet) organised by

trade unions. Conversely, in production networks service enterprises that are already organised by trade unions are becoming more salient, but are associated with collective bargaining traditions that diverge profoundly from those in the manufacturing sector. In both cases, collective-bargaining conflicts as well as conflicts of interest between industrial and service trade unions can multiply.

The rendering of services through combinations of employee posting and other forms of contractual agreements (on this see Andrijasevic & Sacchetto, 2016, for an extreme case) in cross-border production networks, is only gradually being addressed by trade unions. From a transnational perspective, employee representation bodies are being confronted with a persistent challenge of linking a common strategy reaching beyond borders with locally »grounded struggles, [and] disputes in particular sites« (Anderson, 2015). By the same token, wide-ranging differences relating to specific countries need to be balanced out in systems of industrial relations as trade union traditions in the various countries are shaped by diverging occupational institutions and ideologies, for example. Surmounting these differences in a cooperative manner is anything but simple and easy because it requires taking into account diverging corporate and sectoral cultures as well as heterogeneous organising logics and strategies of (individual) trade unions, respectively (Platzer & Müller, 2011). To put it in blunt terms: the representation problems that result are considerable and are significantly exacerbated wherever the ties between employees and a company are becoming of ever shorter duration and are of an ever more multifarious nature by means of so-called »atypical employment conditions« or even »precarious work« (temporary employment, agency work, service agreements, project work, self-employed work, etc.) (see Heery, 2009).

In dealing with these structural challenges, unions and labour activists have already developed – and even in some cases tested – various strategies and approaches. These strategies range from the activation of existing resources in and surrounding focal enterprises in the network, the formation of trade union networks, alliances with third parties and their combination in specific civil society initiatives. Given the present state of heterogeneity, it seems advisable rather to combine all these approaches

than to give priority to just one particular strategy (this is also argued by Platzer & Müller, 2011).

Activation of representation resources at focal enterprises. First of all, trade unions should take into account for their own organisation that their traditional strongholds and domains, although they could often continue to be centres of gravity for organisation, will nevertheless inevitably lose importance when production is performed increasingly in networks in general and in the form of servitized production networks in particular. For a transitional period, »hub firms« (Jarillo, 1988) or »focal enterprises« (Sydow, 1992), which are central actors in the organisation of value creation – even if this is only through the orchestration of networks – are of growing strategic interest to trade unions. These »hub firms« are »focal« in the case of multiple employer relations because enterprises have a potentially vast indirect influence in a network while at the same time as a result of their public visibility they can be expected to offer good access for trade union efforts. The dilemma that exists here, however, is that the focal companies frequently have previously organised staff whose trade union organisation has neither been developed so as to be responsible for service employees as well, nor started to support other trade unions organised in the network. On top of this, the management of focal companies will only reluctantly give up the latitude for action offered by multiple employer relationships.

Trade union networks. From the perspective of the trade unions, an inter-organisational trade union policy could provide one approach from which to regain latitude for action (Marchington et al., 2005; Helfen, 2014). For the organisation of trade unions this also includes a reaching out beyond focal enterprises and an engagement with forming network forms of coordination among themselves. The notion of transnational trade union networks can be leveraged here (Davies et al., 2011; Helfen & Fichter, 2013). On a global scale, the Global Union Federations (GUFs) are increasingly being called upon to act in their capacity as internationally operating trade union networks (Helfen & Fichter, 2013). At least three actors cooperate in these – for example, the global and European umbrella trade union federations, their member organisations, works councils and civil society organisations as well – with the aim of raising employment standards and cross-border participation. It is apparent that servitized value-creation networks also raise

the issue of cooperation across sectoral divides between umbrella trade union federations, in which in particular service and industrial trade unions work together. One example to be cited here is efforts seeking to define a transnational regulatory framework for contractual work, service employment and other forms of employment (ILO, 2016).

Joint initiatives. With global framework agreements, a company-related strategy has been developed which takes an OEM as its point of departure, but goes above and beyond the narrow domain of the focal enterprise – often a company group and its core employees – in the quest to expand to the peripheral units in the value chain (Fichter et al., 2013; Hammer, 2005). In contrast to the case with direct inter-sectoral cooperation between global union federations, framework agreements offer an approach at the company level to cope with the transnational organisation of production by making a focal enterprise the addressee for »its« production network. These framework agreements have been analysed in detail elsewhere in terms of their actual content, their implementation and their impact, including their limits and critical aspects (for example, Fichter et al. 2013; Helfen & Fichter, 2013; Rüb et al., 2011, Davies et al., 2011). Experience to date with agreements like these has been rather disappointing – with single exceptions in a number of cases (see Fichter et al., 2011, for examples). Against the background of limited resources, both on the part of national trade unions as well as the GUFs, this is not particularly surprising. Nevertheless, the supply chain clauses contained in global framework agreements can be recognised as an approach to coping with servitized value-creation. In principle, responsibility beyond the focal enterprise can be defined with supplier clauses in agreements; however, at present these supplier clauses diverge considerably in formality and impact. Looking at agreements that have been concluded to date, however, it is clear that the multi-sector nature of a large number of servitized value-creation networks has not been adequately taken into account because the service suppliers are usually not recognised in agreements.

In the agreements, the primary focus is on direct suppliers in the sense of procurement of inputs for production; sub-contracting to service providers closely linked to the

signatory company such as personnel services, catering, industrial cleaning and similar facility services are not explicitly mentioned. Clearly, it is difficult to draw clear lines for including these types of network firms. So far, however, this type of multi-sector cooperation in servitized networks has remained a blind spot of global framework agreements. Vice versa, however, global framework agreements that have been concluded with service enterprises only very rarely contain »supply chain« clauses in the first place. Moreover, no connection whatsoever is usually drawn in these agreements to working conditions in client industries and enterprises.

Alliances with third parties. On the whole, the constellation of problems that is conjured up through multi-employer relationships and production as a service in plural network organisations appears to be too complex for it to be tackled by trade-unions alone. For this reason, last but not least we briefly list some ideas on

what alliances with third-parties could contribute for enforcing labour standards in networks, i.e. for instance consumers, lawmakers and international authorities or non-governmental organisations. For example, consumer initiatives could offer a contribution by holding companies accountable for their Corporate Social Responsibility (CSR) programmes, in particular if they evaluate corporations against their self-obligations propagated with the CSR label (Donaghey & Reinecke, 2015). For trade unions and workers, these consumer efforts are advantageous if they point out the limits of a far-reaching ignorance of collective industrial rights (e.g. Locke et al., 2013; Anner, 2012). In addition to the activation of customer initiatives – and very generally the revival of alliances with non-governmental organisations (NGOs) (Egels-Zandén & Hyllman, 2011) – alliances with lawmakers at various levels are also conceivable. Examples include efforts to

define focal firms legal liability for their suppliers' working conditions (e.g. Davidov, 2004; Anner, Bair, & Blasi, 2013), or

calls for strengthening the role of government labour inspection (Weil 2014). For the time being, all these initiatives can make a contribution to compensate for recognisable deficits in unions' efforts without dispensing with trade unions' own responsibilities.

Can global framework agreements also lay down responsibility for peripheral parts of value-creation chains?

Staff services and facility services should be explicitly included in supply chain clauses

6. Summary

Production in networks is so widespread nowadays that, not least also for this reason, reference has been made to a »network society« (Castells, 2001; Raab & Kenis, 2009). This is both a condition as well as a result of an increasingly plural organisation of economic activities, in which networking plays the central role. As has after all been illustrated in two of the three examples presented, production in networks is intimately linked to the involvement of specialised service providers. Dedicated service networks, on the other hand, constitute an exception (although a remarkable one).

Industrial relations are being confronted with extreme complexity and a plethora of obscurities in the guise of production in networks. One crucial reason for this is that plural forms of organisation characterising production in networks allows relatively smooth switching between market, hierarchy and network. Management has increasingly gained experience in how to switch between »make« in the hierarchical organisation and »buy« in the market to »cooperate« in the network – and vice versa. This also makes it possible to constantly readjust steering of the network, for instance in response to trade union successes. In these cases, greater use is being made of specialised service providers as labour market intermediaries than in the past – including for human resource and workforce management.

The implications for the organisation and policy of trade unions are far-reaching. It is becoming evident that multi-sector cooperation is increasingly necessary but not at all easy as a result of fact that there can be differing interests, while even interests within the sectors involved may differ at the transnational and national levels. Nevertheless, respective efforts should not shy away from a reorganisation of trade unions at the transnational and national levels, either, and instead seek to establish needed competencies for cooperation. This applies equally to »service« and »industrial« trade unions. Only rarely will a trade union acting alone be able to organise employment in one entire (service) network. The general rule, rather, is to get involved in and contribute to the organisation of workforces in servitized networks and coordinate efforts

with other (industrial) trade unions. The only alternative to inter-organisational trade union cooperation from our perspective is the fundamental restructuring of trade unions themselves.

Cooperative trade union networks have to struggle with many unsolved problems and challenges. It has been shown that the potential for multi-sectoral cooperation both with respect to direct cooperation between umbrella trade union federations within the framework of transnational regulation efforts (ILO, EU) as well as with regard to a company-oriented approach of global framework agreements has not been completely exhausted so far. In the examples cited, the dichotomy between cooperation and competition constitutes a neuralgic point that arises from fragmented claims to interest representation

If the next stage in trade union networking is not successful, changes in organisations themselves will be unavoidable

emanating from servitized value creation. How precise multi-organisation and multi-sector cooperation between trade unions needs to be

structured given the competition existing between trade unions is decided in local and cross-»border« practice. Herein lies at the same time potential to recover some of the latitude for action lost through globalisation.

The consequence of all this for trade unions is networking. Hence, similar to the networks between cooperating enterprises (Sydow et al., 2016), competent management of the tension between cooperation and competition is needed. For this reason, the required competencies and capacities need to be established and kept available for trade unions in order to register important developments

associated with production in specific networks of enterprises and take action if need be. This also includes the ability to detect management problems in individual networks of enterprises and the cost and/or earnings-related disadvantages emanating from these and render these useful to collective interest representation. These are frequently very concealed, often resulting from insufficient (e.g. not very reliable) coordination, especially with regard to human resource and labour policy. Above and beyond what has been stated about these, in particular the monitoring of adherence to (global) labour standards and the observation of third parties assigned with monitoring (e.g. auditing companies) is becoming ever more important.³ The conclusion of global framework agreements by GUFs with transnational enterprises may create more favour-

The implications for trade union policy are far-reaching and will range all the way to reorganisation of trade unions

able preconditions for this. Because GUFs generally do not have the required resources, it is interesting that at least one global trade union federation, namely IndustriALL (2014), has recently bolstered its strategy regarding global framework agreements by making additional resources available to this end (e.g. in the form of experts) for national trade unions.

It is evident that the servitization of global production networks not only constitutes an additional challenge to achieving global acceptance of labour standards. What is more, a cross-border trade union policy, elements of which already exist in part, can be used to counter this development. The more that services merge with industrial production, the more that borderlines between enterprises are strategically redrawn while at the same time activities and processes continue to fragment, the more necessary it will be to redefine the arena for trade union actions above and beyond evolved organisation and sectoral borders.

One paramount objectives for trade unions could be to mobilise employees in labour-intensive, industry-oriented service activities, but also in other (new types of) service enterprises and sectors to pursue a collective labour policy. Because this challenge crops up in different countries at the same time, however – of course in different specific forms and intensities – the need for a transnational orientation is obvious.

One primary objective for trade unions in our view is to organise employees in labour-intensive, industry-oriented service activities

From the complications that arise in this regard, the conclusion we draw at this point is that multi-branch, multi-sectoral and multi-country cooperation can more easily be attained by combining different strategies (e.g. Weiss, 2013):

- Campaigns for cross-border re-regulation of minimum standards for contract work at the ILO level,
- Agreements with focal enterprises at the centre of multi-branch production networks;
- This includes the forging of multi-sector trade union alliances within transnational production networks as well as
- Support for local efforts at direct trade union organisation, in particular for staff in labour-intensive service areas themselves.

The global trade union federations and their regional sub-organisations may at the same time in our opinion become a strong link in (network-shaped) coordination of cooperation between organisations, branches and cross-border cooperation for the purpose of campaigns, actions and global framework agreements. In this manner, the various levels of trade union and company policy can be strategically linked without blocking joint solutions through claims to exclusive representation.

Endnotes

1. See also www.oecd.org/tad/gvc_report_g20_july_2014.pdf, p. 15.
2. Projects: *Projektnummer* S-2011-466-2, -2013-678-2, and -2014-741-2.
3. The development of the required capacities or competencies may take place, for example, within the framework of campaign research projects. One interesting example of such a participative project in the context of the South African international airport OR Tambo (ORT) is documented by ITF (2015).



Bibliography

- Andrijasevic, R., & Sacchetto, D.** (2016). >Disappearing workers: Foxconn in Europe and the changing role of temporary work agencies. *Work, Employment and Society*, doi: 10.1177/0950017015622918.
- Anner, M., Bair, J., & Blasi, J.** (2013). Towards joint liability in global supply chains: Addressing the root causes of labour violations in international subcontracting networks. *Comparative Labor Law and Policy Journal*, 35(1): 1–43.
- Anner, M.** (2012). Corporate social responsibility and freedom of association rights: The precarious quest for legitimacy and control in global supply chains. *Politics & Society*, 40(4): 609–644.
- Ahrne, G., & Brunsson, N.** (2008). *Meta-organizations*. Cheltenham: Edward Elgar.
- Arruda, L., et al.** (2012). International Framework Agreements – a powerful tool for ensuring Core Labor Standards in a globalized world? Insights from Brazil. São Paulo/Berlin: Friedrich-Ebert-Stiftung. <http://library.fes.de/pdf-files/bueros/brasilien/09531.pdf>.
- Anderson, J.** (2015). Towards resonant places: reflections on the organizing strategy of the International Transporter Workers' Federation. *Space and Polity*, 19(1): 47–61.
- Baines, T. S., Lightfoot, H. W., Benedettini, O., & Kay, J. M.** (2009). The servitization of manufacturing: A review of literature and reflection on future challenges. *Journal of Manufacturing Technology Management*, 20(5): 547–567.
- Barrientos, S.W.** (2013). 'Labor chains': Analyzing the role of labour contractors in global production networks. *Journal of Development Studies*, 49(8): 1058–1071.
- Bonet, R., Cappelli, P., & Hamori, M.** (2013). Labor market intermediaries and the new paradigm for human resources. *Academy of Management Annals*, 7(1): 341–392.
- Bradach, J.L.** (1989). Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*, 42(2): 276–303.
- Bradach, J.L., & Eccles, R.G.** (1989). Price, authority, and trust: From ideal types to plural forms. *Annual Review of Sociology*, 15: 97–118.
- Castells, M.** (2001). *Die Netzwerkgesellschaft*. Opladen: Leske & Budrich.
- Coe, N. M., & Jordhus-Lier, D.C.** (2011). Constrained agency? Re-evaluating the geographies of labour. *Progress in Human Geography*, 35(2): 211–233.
- Coe, N. M., & Yeung, W.-C.** (2015). *Global production networks*. Oxford: Oxford University Press.
- Contractor, F.J., Kumar, V., Kundu, S.K., & Pedersen, T.** (2010). Reconceptualizing the firm in a world of outsourcing and offshoring: The organizational and geographical relocation of high-value company functions. *Journal of Management*, 47(8): 1417–1433.
- Davidov, G.** (2004). Joint employer status in triangular employment relationships. *British Journal of Industrial Relations* 42(2): 727–746.
- Donaghey J., & Reinecke J.** (2015). After Rana Plaza: Building coalitional power for labour rights between unions and (consumption-based) social movement organisations. *Organization*, 22(5): 720–740.
- Davies, S., Williams, G., & Hammer, N.** (2011). Organizing networks and alliances: International unionisms between the local and the global. In Papadakis, K. (Ed.). *Shaping Global Industrial Relations. The Impact of International Framework Agreements*. ILO/Palgrave: Geneva and London, 201–219.
- Doellgast, V., Sarmiento-Mirwaldt, K., & Benassi, C.** (2016). Contesting firm boundaries: Institutions, cost structures, and the politics of externalization. *ILR Review*, 69(3): 551–578.
- Dyer, J. H., & Singh, H.** (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, 23(4), 660–679.
- Egels-Zandén, N., & Hyllman, P.** (2011). Differences in organizing between unions and NGOs: Conflict and cooperation among Swedish unions and NGOs. *Journal of Business Ethics*, 101(2): 249–261.
- Engelhardt, W.H., Kleinaltenkamp, M., & Reckenfelderbäumer, M.** (1993). Leistungsbündel als Absatzobjekte. *Zeitschrift für betriebswirtschaftliche Forschung*, 45(5): 395–426.
- Flecker, J., Haidinger, B., & Schönauer, A.** (2013). Divide and serve: The labour process in service value chains and networks. *Competition and Change*, 17(1): 6–23.
- Fichter, M., Helfen, M., & Sydow, J.** (2011). Regulating labor relations in global production networks. *Insights on International Framework Agreements. Internationale Politik und Gesellschaft*, 52 (2): 69–86.
- Fichter, M., Sayim, K.Z., & Berber-Agtaş, Ö.** (2013). Organization and Regulation of Employment Relations in Transnational Production and Supply Networks. Ensuring Core Labor Standards through International Framework Agreements? Ankara/Berlin: Friedrich-Ebert-Stiftung. www.fes-tuerkei.org/media/pdf/Partnerpublikationen/layouts%20web%20english.pdf
- Fichter, M., & Stevis, D.** (2013). Global Framework Agreements in a Union-hostile Environment: The Case of the USA. Berlin: Friedrich-Ebert-Stiftung. <http://library.fes.de/pdf-files/id/10377.pdf>
- Fichter, M., Sydow, J., Helfen, M., Aruda, L., Berber-Agtaş, Ö., Gartenberg, I., McCallum, J., Sayim, K.Z., & Stevis, D.** (2012). Globalising Labour Relations. On Track with Framework Agreements? Berlin: Friedrich-Ebert-Stiftung. <http://library.fes.de/pdf-files/iez/09422-20121129.pdf>
- Fichter, M.** (2015). *Organising in and along Value Chains*. Berlin: Friedrich-Ebert-Stiftung.
- Fichter, M. & McCallum, J.K.** (2015). Implementing global framework agreements: the limits of social partnership. *Global Networks*, 15: S65–85.

- Fichter, M., Helfen, M., & Sydow, J.** (2011). Employment relations in global production networks – Initiating transfer of practices via union involvement. *Human Relations*, 63(4): 599–624.
- Fisher, S.L., Graham, M. E., Vachon, S., & Vereecke, A.** (2010). Don't miss the boat: Research on HRM and supply chains. *Human Resource Management*, 49(5): 813–828.
- Gereffi, G., Humphrey, J., & Sturgeon, T.** (2005). The governance of global value chains. *Review of International Political Economy*, 12(1): 78–104.
- Gomes-Casseres B.** (1996). *The alliance revolution. The new shape of business rivalry.* Cambridge: Harvard University Press.
- Gospel, H., & Sako, M.** (2010). The unbundling of corporate functions: the evolution of shared services and outsourcing in human resource management. *Industrial and Corporate Change*, 19(5): 1367–1396.
- Heery, E.** (2009). Trade unions and contingent labour: scale and method. *Cambridge Journal of Regions, Economy and Society*, 2: 429–442.
- Heidling, E., Böhle, F. & Habler, T.** (Eds.) (2010). *Produktion mit Dienstleistungen. Integration als Zukunftschance.* München: Hampp Verlag.
- Helfen, M., Fichter, M. & Sydow, J.** (2012). Anfänge einer Institutionalisierung grenzüberschreitender Arbeitsbeziehungen? Zur Paradoxie der Internationalen Rahmenabkommen im globalen Dienstleistungssektor. *Industrielle Beziehungen*, 19(3): 290–313.
- Helfen, M.** (2013). Tertialisierung von Wertschöpfungsnetzwerken: Eine globale Herausforderung für die Gewerkschaften. In: Rüb, S. & Müller, T. (Eds.): *Arbeitsbeziehungen im Prozess der Globalisierung und Europäischen Integration.* Nomos: Baden-Baden, 81–96.
- Helfen, M.** (2014). Netzwerkförmige Tertialisierung und triangularisierte Beschäftigung: Braucht es eine interorganisationale Personalpolitik? *Managementforschung*, 24: 171–206.
- Helfen, M., & Fichter, M.** (2013). Building transnational union networks across global production networks: Conceptualising a new arena of labour–management relations. *British Journal of Industrial Relations*, 51(3): 553–576.
- Helfen, M., & Nicklich, M.** (2014). Gewerkschaften zwischen Konkurrenz und Kooperation? Inter-organisationale Beziehungen in der Facility Services-Branche. *Industrielle Beziehungen*, 21(2): 181–204.
- Helfen, M., Nicklich, N. & Sydow, J.** (2016). Interorganisationale Netzwerke und tarifpolitische Fragmentierung: Hebt Mehr-Arbeitgeber-Beschäftigung die Tarifeinheit aus den Angeln? *Industrielle Beziehungen*, 23(3): 280–308.
- Helfen, M., Nicklich, M. & Fortwengel, J.** Enacting global competition in local supply chain environments: German »Chemieparcs« and the micro-politics of employment relations in a CME. *International Journal of Human Resource Management* (forthcoming).
- Hertwig, M., Kirsch, J. & Wirth, C.** (2015). Onsite-Werkverträge: Verbreitung und Praktiken im Verarbeitenden Gewerbe. *WSI Mitteilungen*, 60(6): 457–465.
- Hübner, C.** (2015). *Globale Wertschöpfungsketten organisieren- Eine neue Herausforderung für Gewerkschaften.* Berlin: Friedrich-Ebert-Stiftung.
- ILO - International Labour Office** (2016). *Decent Work in Global Supply Chains.* 105th International Labour Conference Session. Geneva: ILO.
- IndustriAll** (2014). *Guidelines for Global Framework Agreements (GFAs).* www.industriall-union.org/sites/default/files/uploads/documents/GFAs/industriall_gfa_guidelines_final_version_exco_12-2014_english.pdf
- ITF** (2015). *Investigating the workplace. A powerful and challenging approach to airport organising.* London: International Transport Workers' Federation (ITF).
- Jung, S., Krebs, P., & Teubner, G.** (2015)(Eds.). *Business Networks Reloaded.* Stuttgart: Nomos.
- Kädtler, J.** (2009). German chemical giants' business and social models in transition. Financialisation as a management strategy. *Transfer*, 15(2): 229–249.
- Kalleberg, A.L.** (2009). Precarious work, insecure workers: Employment relations in transition. *American Sociological Review*, 74: 1–22.
- Keller, B.** (2016). Berufs- und Spartengewerkschaften. Zur Kritik des Tarifeinigungsgesetzes. *Industrielle Beziehungen*, 22(3): 253–279.
- Kinnie, N. J., Swart, J., & Purcell, J.** (2005). Influences on the choice of HR system: the network organization perspective. *International Journal of Human Resource Management*, 16(6): 1004–1028.
- Kushida, K. E., & Zysman, J.** (2009). The Services transformation and network policy: The new logic of value creation. *Review of Policy Research*, 26(1-2): 173–194.
- Jarillo, J.C.** (1988). On strategic networks. *Strategic Management Journal*, 9(1): 31–41.
- Lakhani, T., Kuruvilla, S. & Avgar, A.** (2013). From the firm to the network: Global value chains and employment relations theory. *British Journal of Industrial Relations*, 51(3): 440–472.
- Levy, D.L.** (2008). Political contestation in global production networks. *Academy of Management Review*, 33(4): 943–963.
- Locke, R. M., Rissing, B. & Pal, T.** (2013). Complements or substitutes? Private codes, state regulation and the enforcement of labour standards in global supply chains. *British Journal of Industrial Relations*, 51(3): 519–552.
- Lundin, R., Arvidsson, N., Brady, T., Ekstedt, E., Midler, C., & Sydow, J.** (2015). *Managing and working in project society. Institutional challenges of temporary organizations.* Cambridge: Cambridge University Press.

- Marchington, M., Grimshaw, D., Rubery, J., & Willmott, H.** (2005). *Fragmenting work. Blurring organizational boundaries and disordering hierarchies*. Oxford: Oxford University Press.
- OECD, WTO and World Bank Group** (2014). *Global Value Chains: Challenges, Opportunities, and Implications for Policy*. Paris: OECD.
- Paquin, R.L., & Howard-Grenville, J.** (2013). Blind dates and arranged marriages: Longitudinal processes of network orchestration. *Organization Studies*, 34(11): 1623–1653.
- Payne, A.F., Storbacka, K., & Frow, P.** (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36: 83–96.
- Platzer, H.-W., & Müller, T.** (2011). *Global and European Trade Union Federations. A Handbook and Analysis of Transnational Trade Union Organizations and Policies*. Oxford: Peter Lang.
- Provan, K.G.; & Kenis, P.** (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2): 229–252.
- Rainnie, A., Herod, A., & McGrath-Champ, S.** (2011). Review and positions: Global production networks and labour. *Competition and Change*, 15: 155–169.
- Raab, J., & Kenis, P.** (2009). Heading toward a society of networks: Empirical developments and theoretical challenges. *Journal of Management Inquiry*, 18(3): 198–210.
- Royle, T.** (2010). ›Low-road Americanization‹ and the global ›McJob‹: a longitudinal analysis of work, pay and unionization in the international fast-food industry. *Labor History*, 51(2): 249–270.
- Schneider, H.** (1997). *Produktion als Dienstleistung – Einführung*. In: Schneider, H. (Ed.). *Produktion als Dienstleistung*. Ilmenau: Technische Universität, S. 1–3.
- Stauss, B., & Bruhn, M.** (2003)(Eds.). *Dienstleistungsnetzwerke*. Wiesbaden: Gabler.
- Sydow, J.** (1992). *Strategische Netzwerke*. Wiesbaden: Gabler.
- Sydow, J., & Möllering, G.** (2015). *Produktion in Netzwerken: Make, buy & cooperate*. München: Vahlen.
- Sydow, J., Schübler, E., & Müller-Seitz, G.** (2016). *Managing inter-organizational relations. Debates and cases*. London: Palgrave Macmillan.
- Sydow, J., & Windeler, A.** (2000). Steuerung von und in Netzwerken – Perspektiven, Konzepte, vor allem aber offene Fragen. In Sydow, J., & Windeler, A. (Eds.). *Steuerung von Netzwerken*. Wiesbaden: Westdeutscher Verlag, 1–24.
- Sydow, J., & Wirth, C.** (1999)(Eds.). *Arbeit, Personal und Mitbestimmung in Unternehmensnetzwerken*. München/Mering: Hampp Verlag.
- Tax, S.S., McCoutcheon, D., & Wilkinson, I.F.** (2013). The service delivery network (SDN): A customer-centric perspective of the customer journey. *Journal of Service Research*, 16(4): 454–470.
- Teubner, G.** (2001). Das Recht hybrider Netzwerke. *Zeitschrift für das gesamte Handels- und Wirtschaftsrecht*, 165: 550–575.
- UNCTAD** (2013). *World Investment Report 2013: Global Value Chains. Investment and Trade for Development*. Geneva: United Nations.
- Vargo, S.L., & Lusch, R.F.** (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1): 1–17.
- Vargo, S.L., & Lusch, R.F.** (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1): 1–10.
- Weil, D.** (2014). *The fissured workplace. Why work became so bad for so many and what can be done to improve it*. Cambridge: Harvard University Press.
- Wilhelm, M.** (2009). *Kooperation und Wettbewerb in Automobilzulieferernetzwerken*. Marburg: Metropolis.
- Williamson, Oliver E.** (1985). *The economic institutions of capitalism*. New York: Simon and Schuster.
- Wright, C F, & Kaine, S.** (2015). Supply chains, production networks and the employment relationship. *Journal of Industrial Relations*, 57(4): 483–501.



About the authors

Dr. Jörg Sydow is Professor of Business Administration and holds the Chair for Inter-firm Cooperation at the Department of Management of Freie Universität Berlin, Germany. Currently, he is also the spokesperson of the Research Unit »Organized Creativity« financially supported by the German Research Foundation (DFG). His research interests include management and organization theory, strategic alliance and networks, project and innovation management as well as industrial relations. For further information please see:

www.wiwiss.fu-berlin.de/en/fachbereich/bwl/management/sydow/index.html

Dr. Markus Helfen is Visiting Professor of Human Resource Management and Employment Relations in the Department of Management of Freie Universität Berlin. He is principal investigator of the research project »Service delivery in aviation« (Hans Böckler Foundation). His research interests include organisation theory, human resources policy, industrial relations, corporate governance and sustainable management. For additional information, see:

www.wiwiss.fu-berlin.de/fachbereich/bwl/management/jackson/team/mhelfen/index.html

Imprint

Friedrich-Ebert-Stiftung | Global Policy and Development
Hiroshimastraße 28 | 10785 Berlin | Germany

Responsible:
Mirko Herberg | International Trade Union Policy

Phone: +49-30-269-35-7458 | Fax: +49-30-269-35-9255
www.fes.de/gewerkschaften

To order publications:
Blanka.Balfer@fes.de

Commercial use of all media published by the Friedrich-Ebert-Stiftung (FES) is not permitted without the written consent of the FES.

About us

Trade unions, works councils and other forms of workplace representation of interests are fundamental as an expression of democratic freedoms in a society. They enable a significant segment of the population to articulate its interests and contribute to the social and equitable development of societies in so doing.

To strengthen the representation of interests of wage and salary earners is therefore an integral part of efforts undertaken by the Friedrich-Ebert-Stiftung towards the promotion of social democracy across the globe.

The Friedrich-Ebert-Stiftung therefore seeks to ensure that trade union positions are included in political and economic decision-making at the workplace, at the national level, in regional as well as in international contexts.

Yet trade unions, works councils and other forms of workplace representation of interests can only achieve this if they are representative, democratic, autonomous, competent and efficient. To promote and advise trade union organisations in this manner constitutes an important part of the international support provided by the Friedrich-Ebert-Stiftung.

www.fes.de/gewerkschaften



The views expressed in this publication are not necessarily those of the Friedrich-Ebert-Stiftung or of the organization for which the authors work.



ISBN
978-3-95861-652-3