Work, employment and society
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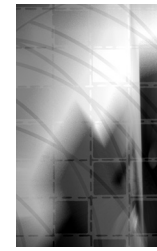

Organisational restructuring and emerging service value chains: implications for work and employment

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ABSTRACT

This article examines companies' and public sector organisations' external restructuring processes, with consideration of emerging or lengthening value chains and network relationships in the service sector. Focusing on two business functions – software development in the IT industry and IT services for public sector organisations – the article describes the types of inter-organisational relations that emerge and analyses the impact of restructuring on employment conditions and work organisation. The business functions clearly differ according to the form that restructuring takes and with regard to the impact of restructuring on work and employment. Common trends include increased insecurity, growing flexibility demands and higher levels of standardisation and formalisation of work.

KEY WORDS

employment conditions / information technology / outsourcing / restructuring / service sector / value chains / work organisation

External restructuring in the service sector and changes in work

Work and employment are not only shaped by individual organisations, their internal relationships and dynamics or their market and institutional environment. Increasingly, inter-firm relations impact more or less directly on

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work organisation and employment conditions. External restructuring, i.e. a process involving the dispersion of functions and activities across company boundaries, is thus an important driver of changes in work and employment. New approaches are needed to integrate external restructuring and inter-firm relations in the study of work organisation and employment relations. The concept of value chains is a useful analytical tool because it captures external restructuring by looking at the disintegration that occurs through outsourcing and relocation of tasks, functions and units across the entire range of actors involved in the chain: customers, producers, suppliers and service providers (Gereffi and Korzeniewicz, 1994; Henderson et al., 2002). Here 'value chains' refer to a growing literature in which chains are seen as dynamic and reconfigured on an ongoing basis (Sturgeon, 2000: 2), power relations are embedded in the analysis (Huws et al., 2009), the lead or dominant firm is part of the chain, and systems are dispersed but also linked, coordinated and controlled. In this contribution the term value chain is used to stress the power relations, the vertical ties and sequential stages of production as well as service provision processes.

Value-chain analysis has maintained that codification and modularisation are preconditions for outsourcing or, in general, for the lengthening of value chains. In manufacturing, this practice was aggressively pursued in the 1980s and 1990s, leading to a high level of geographical disintegration. The concept of 'systemic rationalisation' in German social science (Altmann et al., 1986) looked at inter-firm relationships with regard to developments in the method of value extraction in capitalist processes. In these conceptions, power was located at the centre and new units in the chain were extended workbenches for low-level work under precarious conditions. Also beginning with an analysis on the nature of inter-firm linkages in manufacturing, Gereffi and Korzeniewicz (1994) pointed to the increasing vertical disintegration of transnational companies into 'global commodity chains' and suggested a distinction between 'producer-driven' and 'buyer-driven' chains. Realising that a vertical disintegration introduced new issues of managing interactions and control between companies, the authors turned to categorising forms of global value-chain governance and distinguished between 'modular', 'relational' and 'captive' value-chain relations (Gereffi et al., 2005). These types derive from the position in the value chain, the forms of interconnectedness and the way power operates in supply relations. While 'modular' and 'relational' forms of inter-firm connections involve more balanced power relations, the term 'captive' refers to a supplier's dependence on a powerful client company.

Since commodity or value-chain analysis has focused exclusively on manufacturing goods, the question arises as to whether the concepts can be applied to service sectors. Gereffi (2006) maintains that the value chains emerging in the information economy are similar to the ones in the manufacturing and marketing of consumer goods. Initially, however, it was considered unlikely that many areas of the service sector would be externalised (Dossani and Kenney, 2006) because of the need for face-to-face contact and the difficulty in carving up 'knowledge-intensive' functions. Nonetheless, there is a growing trend

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toward the externalisation and outsourcing of service functions, including front-office activities in customer service, more and more domains in business processes and high-end software development (Grimshaw et al., 2007; Huws, 2003). Many organisations in manufacturing, financial services and the public sector rely on specialised accounting, research and development, human resource management and information technology (IT) service provision, and use suppliers of business-process outsourcing, including call centres. Through this development, suppliers and service-provider companies in many industries have now become major players with a global reach (UNCTAD, 2004).

Power relations between firms are obviously crucial when discussing the impact of inter-firm relationships on work organisation and employment relations. Gereffi et al.'s (2005) analysis was limited to understanding the processes of coordination between firms or organisational units: 'Little, if any, attention is given to the organisation of work and employment at the intra-firm level, clearly limiting an assessment of a place's location within a commodity chain' (Smith et al., 2002: 47). One body of literature helping to fill this void is that on segmented labour markets in which the use of low-cost and more flexible labour in production processes, and increasingly also in service provision, has traditionally been the focus. An early example, very prominent in academic debates in the 1980s and 1990s, is the dual character of the Japanese employment system and the way companies such as Toyota integrated several layers of supply firms with differing employment protection and working conditions into the production process (Elger and Smith, 1994). Another much debated issue was the 'flexible firm' (Atkinson, 1984), in which a core workforce provides functional flexibility and commitment to the company, while a peripheral workforce with more precarious working conditions is used to achieve numerical flexibility.

Yet, labour-market segmentation theorists have more recently argued that inter-organisational contracting as found in outsourcing may be less dichotomous than portrayed in core-periphery models. Research shows that organisational restructuring is 'motivated by interests of tapping into different market segments where wages are at a lower level, even though the work still requires commitments and skills' (Rubery, 2006: 9). The distinction between market transactions and employment relationships becomes blurred, with 'extended hierarchies' in inter-firm networks (Thompson, 1993) and labour processes under the control of both the employer and the employer's client organisation (Marchington et al., 2005; Rubery, 2006). Regarding the impact on work organisation, there are also conflicting portrayals: optimistic views claim that organisational fragmentation offers opportunities for new ways of working, less hierarchy and more opportunities for self-development, whereas pessimists stress the risks and the shifting of responsibilities for skill development (Rubery et al., 2005). Focussing on negative consequences, Frade and Darmon (2005) describe value chains in general as 'risk-and-flexibility transfer chains' in which the main consequence of externalisation strategies is the spread of precarious employment.

Research in industrial relations has suggested that outsourcing generates pressure to reduce labour costs and deregulate working conditions not only in

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manufacturing but also in the service sector. Research on telecommunications, for example, shows that companies cut costs through farming out work and spinning off subsidiaries and that they use the threat of outsourcing to win concessions in-house (Doellgast and Greer, 2007: 16). These findings also suggest that, even in industrial relations contexts where there are sector-level agreements, core workforces may still be weakened by the movement of some jobs out of the sector. External restructuring and the ensuing disintegration of companies is thus expected to contribute to a degradation of labour.

This article discusses the issue of external restructuring of companies and public organisations in service sectors and the emergence of cross-organisational value chains. The main interest is in identifying patterns and types of value chains and network relations and, above all, in demonstrating the impact of restructuring and ensuing inter-organisational relations on employment conditions and work organisation including contractual forms, wage levels, working hours and work organisation.

Method and research questions

The empirical data is derived from a pan-European project in which more than 50 case studies in 13 European countries were conducted to examine the impact of value-chain restructuring on the quality of work.[1] The case studies were carried out in four different economic sectors (textiles, food, information technology and public sector/public services). The main criterion for case selection was that the company had undergone a restructuring within the last two years in which new inter-firm links or an externalisation of services to a separate unit were involved in the restructuring process. The increasing fluidity of corporate structures that has resulted from continual processes of reconfiguration and fragmentation has led to a search for a unit of analysis that cuts across firm and sector. The concept of the business function (see Huws, 2006) was used to examine the effects of restructuring across the boundaries of individual companies and sectors (Huws et al., 2009). In this contribution, the focus is on one of the four sectors: the IT industry. To account for the heterogeneity of this sector, two rather diverse business functions are included: software development in the IT industry and IT services.

IT software development is generally considered to be a 'knowledge intensive' branch and also a highly internationalised function in which the trend toward outsourcing and inter-firm development is quite advanced. It provides the opportunity to observe a longer window into movements along the value chain. Also, the level of transnationalisation means that new EU member states as well as several Asian locations are important players in software firms' value chains. Five cases in software development in the IT industry from five different countries and institutional contexts are analysed in detail (see Table 1). The companies in the sample were all in the private sector.

In addition to software development, as a core activity in the IT industry IT service provision was chosen as a function and special attention was given

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Table 1 Case studies – software development

Focal company and country of (primary) access	*Form of restructuring*	*Organisation type*
Messenger – Austria	Takeover by US company; offshoring to small site in Croatia	Medium sized local IT company
Softserv – Bulgaria	Offshoring to Vietnam and newly outsourced site in Bulgaria	Small sized local IT company
Business Soft – Germany	Offshoring to India, upgrading of international sites; licensing agreements with small companies in Europe	Large German multinational
Domainsoft – Hungary	Upgrading of tasks in value chain; new outsourced sites in E. Europe	Large IT subsidiary of multinational company
Init – Sweden	Merger with US company; closure of Indian site, offshoring to Philippine site	Medium sized local IT company

to the dynamic changes currently taking place between the public and the private sector. IT service-provider companies cover a wide range of tasks supplying IT hardware, software and support, and they are increasingly engaged in business-process outsourcing offering back-office functions such as accounting, wage administration, etc. Focusing on IT services thus provides the opportunity to examine the effects on work and employment in a rather complex interrelationship between client and vendor, private and public. In contrast to software development only some auxiliary functions can be modularised and easily relocated whereas the core tasks are often fulfilled locally or even on the clients' premises. Eight case studies in eight different countries were carried out in IT service-provision and business-process outsourcing (see Table 2).

A case study was based on eight to 10 extensive interviews with representatives from management, employees directly affected by the restructuring, and, in cases with institutional representation, either union officials or shop stewards (in the selected business functions). These expert interviews with key informants, based on a standardised set of topics, covered a detailed description of the restructuring, the organisation of the business function across organisations, a description of the workflow and its changes, changes in employment conditions (working-time arrangements and contract forms), changes in work organisation, skills and knowledge and finally the role of industrial relations and regulations in the restructuring process. They resulted in a detailed account of the external restructuring of the organisations in the context of longer value chains or wider network relationships. When possible, interviews were conducted at both the core organisation and one of its outsourced units. The interviews were complemented by company documents such as annual reports and other secondary material such as newspaper articles to produce a comprehensive picture of the restructuring that had taken place. Researchers in the respective countries produced case studies in English from their interview material. Synthesised analyses were carried out on the basis of case study reports (see Flecker et al., 2008).

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Table 2 Case studies – IT service providers for the public sector

Public sector organisation	*Private sector organisation*	*Form of restructuring*	*Country*
ITPRO – Regional public admin.	Medium sized IT service provider	Task externalisation and contracting for development of IT-based workflow system	Belgium
MM Spinoff – Regional gov´t., police depts.	Small spin-off of large IT multinational	Public private partnership – develop centralised database for training and info exchange	Germany
Pro Consulting – Regional unemployment insurance offices	Large global IT service provider and consultancy	Contracting out, development of new organisational model and information system	France
Easttown – Municipal government	Large national IT service provider	Business-process outsourcing: develop and manage back-office database	Netherlands
IT Healthcare – Hospital administration	MNC for medical equipment and IT solutions	Contracting medical equipment and IT solutions for hospital administration	Portugal
IT Health – Hospitals and health centres	New public sector IT unit	Centralisation of IT services to new unit; transfer of employees	Norway
XY Data – National post office	Large IT services and BPO company	Outsourcing of wage administration – employee transfer	Sweden
Citycouncil – Municipal government	Large global IT service provider	Outsourcing of IT services – employee transfer	United Kingdom

The main research questions covered in the remainder of this contribution are the following: first, what are the motives and processes of restructuring in the two business functions and, in particular, what types of value chains emerge? Second, how do restructuring and inter-firm relationships impact on employment in terms of contractual forms, wage levels and working hours? Third, in what way does external restructuring influence the development of work organisation? Is it conducive or detrimental to the emergence of post-bureaucratic forms of work organisation? Finally, are there differences in work and employment outcomes within the IT sector and, if so, are they shaped by the diverse forms of value chain relations?

Jumping on the value chain – software development

The IT sector and the business function of software development in particular were early targets of value-chain rationalisation outside the manufacturing sector.

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The digitalisation of information and its increasingly rapid transfer made outsourcing easier and more attractive. Indeed, the IT-enhanced integration of value chains and work flows has been complemented and enabled by new functions and work roles that were needed for liaison and coordination between organisations and the digitised information they exchange (Braczyk, 1993). All software activities – design and development, analysis and customising for clients and applications for firms – involve a wide range of task complexity. Initially so-called low-level or simple processes such as rewriting code, customising, maintaining data and adding functionality to existing software were targeted for outsourcing or offshoring to lower cost sites to reduce the overall expenditure for software development projects. India, with its relatively inexpensive, qualified labour, was a prime location, but Eastern Europe and increasingly other Asian sites have gained in popularity. There is evidence that companies felt pressured to 'jump on the bandwagon' and participate in the management fad of offshoring, even without a real strategic plan for the use of remote sites (Lynn and Salzman, 2006).

Our study targeted privately owned firms that had either developed or adapted software packages and then sold or installed the software to customers. The sections below summarise the findings from five cases. The initial point of access to the companies' value chains occurred in Sweden, Germany, Hungary, Bulgaria and Austria (see Table 1). Regardless of size or business segment, the studied companies have all experienced a lengthening of value chains. This development is even the case in small niche producers whose headquarters are in what are characterised as low-cost countries such as Bulgaria. All companies have also undergone a dynamic redefinition of their function and role along the chain, which appears to be ongoing. An international division of labour is evident in every case. The value chains, however, are quite traditionally organised: characterised by a vertical, sequential approach.

Captive software value chains

The first step in offshoring or outsourcing in all of the software production cases was characterised by creating dependent captives which carried out dedicated work for the core unit. Power relations between the sites were clearly defined and hierarchically determined. Thus the initial phases of restructuring in software development were similar to previous examples of outsourcing in goods manufacture in which firms at the top of the chain retained the most skilled work and the better working conditions, leading to traditional core-periphery relationships between the units.

Restructuring in software development is quite dynamic, however, characterised by mergers, takeovers and new acquisitions. In a relatively short period of time, the chain tends to expand, with new units being added on. The restructuring of Softserv[2] in Bulgaria, for instance, involved the start-up of a Bulgarian satellite firm and a Vietnamese captive subsidiary. Messenger was originally an independent Austrian company with a wide range of international customers.

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After the takeover in 2004 by a US corporation with locations across the globe, a small Croatian supplier was assigned to the product development chain of the Austrian company to focus on the relatively low-level tasks of coding and testing software for Messenger.

Original units can move up or down the chain as the result of a restructuring. For example, the two cases (Init in Sweden and Messenger in Austria) that involved mergers with US-based firms resulted in a shift in their position on the value chain a notch down in the hierarchy. Usually the changes for the captives entail a move up the chain. Domainsoft in Hungary illustrates this trend. The software developer for business solutions is part of the value chain of a large and diversified multinational, which is its only customer. The Hungarian company started out as a low-cost 'body-leasing' type of organisation. Given the rising costs of labour in Hungary compared with other East European countries just entering the EU, the company strategy shifted to offering higher value-added services (such as professional services, contact with clients, project management) to remain attractive to the multinational customer-owner. In response to the plans of the management of the multinational to reduce as many activities as possible at Domainsoft, Hungarian managers argued that although they could not compete with Slovakian prices they 'can provide services of higher quality' (Makó et al., in Holtgrewe and Meil, 2008: 49). Later, the Hungarian unit started outsourcing work itself to less expensive East European sites to reduce costs and become more competitive in bidding for projects within the value chain of the multinational. Also, the German multinational Business Soft began its offshoring by setting up units in Asia for cost reasons. The German company had the resources to hire the best recruits from the Indian labour market and is currently upgrading its Indian operations, giving them larger and larger chunks of the software development process.

Employment outcomes: standard contracts and growing insecurity

In the case studies for the business function of software development in the IT sector, the employees, with few exceptions, have standard employment contracts and, for their countries, high wage levels. This is the case for the core units, but also for many of the captive sites. Lengthening of the chain does not automatically or immediately translate into negative consequences for the core sites. Four of the five cases did not involve transfer or job loss. The employment and working conditions also did not change noticeably as a result of the restructuring. In fact, strategies for flexibility of the employment relationship often occur outside the company further down the value chain. The German software development company, for instance, passes on the relatively low value-added process of implementing its software through licensing agreements to external companies, some also located within Germany. These employees generally have non-standard employment contracts and working times. Leaving the adaptation and implementation of software to independent local firms and consultants protects the core workforce from excessive demands for flexibility and mobility.

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There is an overall trend toward an increasingly flexible use of working time and an intensification of work. Flexibility in working time is often achieved within the chain through the use of different institutional contexts. In Hungary's Domainsoft, the site aggressively markets its less regulated working conditions in comparison to its West European counterparts – such as longer working hours, weekend work and willingness to take long-distance assignments requiring travel and long absences from home – to remain a desirable contract partner for its multinational owner. One cause of demands for flexible and extended working hours is being part of international value chains involving communication outside normal office hours. In Init, working time is more fixed than in other IT firms, with regular nine-to-five, 40-hour weeks. However, there is a growing expectation and acceptance of flexible working hours and working at home. This working pattern mainly involves carrying out the 40 hours outside the nine-to-five slot to meet the demands of working with US and Philippine partners. In Bulgaria's Softserv, as with most IT firms, the working-time arrangements are described as 'flexible' (Galev in Holtgrewe and Meil, 2008: 54). Most workers set their own working time depending on requirements arising from project needs, commitments to other team members and distributed work in countries with large time differences.

As chains lengthen and captive sites become more integrated into the development process and, partly, are being upgraded, competition between sites increases and this trend eventually puts pressure on overall job security, particularly in core units. In the German company Business Soft internal market competition across its company's sites was introduced by publishing tenders and having departments bid for them. Success depends in part on expertise and an evaluation of the project's potential, but of course cost also plays a role. The Swedish company Init experienced the most dramatic effect of between-sites competition. Not having been especially dominant on the market, the company experienced economic difficulties and engaged in a number of cost-cutting measures, including massive lay-offs at the Swedish site. The employees received settlement packages that were more generous than Swedish or EU law requires, in return for the agreement that the employees helped with knowledge transfer to the new Philippine site. The Hungarian company Domainsoft, embedded in a large multinational group, has to continually upgrade its services and find ways to reduce its costs in order to protect itself from downsizing in favour of less expensive East European sites.

Work organisation: upgrading and bureaucratisation

Dynamic value-chain research argues that standardisation and modularisation are preconditions for outsourcing and offshoring. Indeed, in the early stages of offshoring, non-core 'captives' typically undertake standardised tasks such as data maintenance, coding and testing for the core companies. This was the position of the Croatian unit for Messenger, the Austrian software development company, the Vietnamese unit of Softserv with a Bulgarian owner and the

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original position of Domainsoft in Hungary in the value chain of its multinational owner. For the original core units, the remaining work content does not change dramatically. What the case studies clearly reveal, however, is that the position of these non-core captives is not static. Over time, they begin moving up the value chain, as the Indian site of the German company Business Soft, the Philippine unit of the Swedish firm Init and the Hungarian company Domainsoft's increasingly higher value-added tasks demonstrate. At the time of the study, the Hungarian unit was already passing on lower-level tasks to a site in Romania. The reasons for this dynamic movement are diverse: rising costs in what were originally low-cost countries (as in Hungary and to some extent also in India), demands from highly skilled workers in tight labour markets for more interesting work content and a gradual integration of 'captives' into the work processes of the core unit through project work. At Messenger's Croatian unit for instance, programmers were being directly included in development teams in Austria, making a future upgrading of the Croatian location more likely. The most traditional form of offshoring in our case studies was found in the Swedish-US merger. Yet even there the new Asian site is taking over some of the tasks formerly carried out in Sweden, leading to knowledge (and job) transfer to the Philippines.

Even though simple codification of work does not survive in the long term, these distributed work environments do reveal a rising formalisation and bureaucratisation of processes through more rigid requirements for documentation and standardised data and communication exchanges both for the external units and the core workforce. Business Soft's restructuring process, for example, has resulted in a more formalised and hierarchical organisational structure. Two departments were created to separate 'conceptual' and 'operational' production of software. Also, there is an expectation to focus on particular issues and create specialities within teams in order to bid on internal company tenders more successfully. 'In former times the developer … he did everything … this all became much more specialised. Today a developer develops; a product manager writes the specifications … In either case the functional tasks became much smaller' (Krings et al., in Holtgrewe and Meil, 2008). Managing processes across the chain thus leads to increased rigidity and specialisation in the organisation of work despite the high skill content and complexity of the tasks.

In a final stocktaking, the effects of restructuring across value chains in software development on employment outcomes and work organisation have been an intensification of work and a greater demand for temporal flexibility: for instance to arrange time requirements around project or assignment needs and facilitate communication with offshore sites. There is also an ongoing lengthening of chains as the continual push on costs from particularly the large multinationals leads to ever more outsourcing efforts both within and outside home countries. These dynamics of restructuring are certainly driven by differentials in wages and employment conditions. This restructuring does not translate into a lasting simple centre-periphery dichotomy, however, with better

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working conditions and more highly value-added knowledge work remaining in the core and low-level work and poor employment conditions in the periphery. Most of the companies integrate their remote captive sites into the project organisation of their software development, thereby eventually upgrading their role in the value chain. This is a positive development for the captive sites. However, the increased competition between sites entails a growing insecurity for the entire chain, especially the core units. Regarding work organisation too, a simple centre-periphery dichotomy is soon being overcome in a process of upgrading. However, externalisation generally leads to growing formalisation and standardised communication which is often experienced as increased rigidity in the organisation of work.

Crossing the public-private divide: IT services

Next to software development, IT outsourcing has become a major business area within the IT sector. Companies and public organisations have increasingly outsourced the provision of information technology infrastructures and services, including hardware, software and support, to specialised service providers. These companies also offer consultancy and, based on IT, the implementation of various back-office functions such as accounting and payroll administration (Willcocks and Lacity, 2006). The rapidly growing market for IT outsourcing is increasingly oligopolistic and international, and the major companies are global players or, as the *World Investment Report* put it, 'a new breed of multinationals' (UNCTAD, 2004). The oligopolistic nature of the IT services business can be explained with reference to two main factors (Miozzo and Grimshaw, 2005): a reputation effect due to the inherent uncertainty in skill-intensive business services, and economies of scale stemming from the pooling of skills and cheap access to new technologies. The competitive advantage of transnational IT service providers stems from the fact that they find it easier to follow their transnational client companies around the world. In addition, they utilise cost differentials between countries and continents by distributing activities internationally within the corporation or by outsourcing parts of the work (Flecker, 2007; Ramioul et al., 2005).

In this section, evidence from eight case studies on public sector organisations in different European countries will be summarised. They cover IT outsourcing from the public sector to private providers, IT-based business process outsourcing to private providers and the centralisation and outsourcing of IT within the public sector (see Table 2 above). The main findings show that the governance of inter-organisational ties can largely be termed 'relational', yet the power relations are often contested. These network relationships and the limited differentials in wage levels between public sector organisations and IT companies limit the consequences of outsourcing in terms of employment conditions. In terms of work organisation, the main changes include commercialisation, formalisation, standardisation and the emergence of new work roles.

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Relational inter-firm ties

The main motives for external restructuring were cutting costs, updating IT infrastructures and gaining access to specialist knowledge. While economic gains rank highly among the aims and expectations, the outsourcing decisions themselves do not seem to be based on detailed cost-benefit analyses; rather, they seem to follow political considerations and general trends in the country (cf. Powell and DiMaggio, 1991). In contrast to software development as described above, characterised by linear or vertical relationships in which inputs are sequentially transformed into a final product or service (cf. Dicken, 2005), IT service provision consists more of a horizontal relationship in which infrastructures and support are provided to client organisations. However, vertical ties or chain relations can be found *within* large IT service providers if activities are modularised and the programming and testing of software, for example, are passed on to subsidiaries or subcontractors in low-cost countries. The frequent practices of taking over personnel from the client or seconding workers to the client reduce the need for codification of knowledge. In addition, the general support character of IT services limits the possibility of modularising these activities. Therefore, the ensuing 'relational' inter-firm or inter-organisational ties in IT services can be described as being characterised by complex interactions, high levels of asset specificity and mutual dependence (Gereffi et al., 2005).

Yet the series of case studies showed that the power relations are rarely balanced and often highly contested: public organisations try to avoid dependency and to keep open the option of switching service provider. Only the Belgian public administration under study made itself highly dependent on the private partners, by concluding an open-ended contract that can only be terminated with 10 years' notice. In this case, even IT managers in the public organisation are on the payroll of the private IT service-provider company. In the Dutch case of Easttown, where local authorities had used collective regional computing centres in the past but had turned to more flexible individual outsourcing to private providers, the case study observed a move towards re-collectivisation of IT activities: several municipalities established a joint organisation intended to play the role of an independent adviser and IT intermediary for local authorities, reducing the dependence of municipalities on private IT service providers.

In general, the case studies showed that crucial knowledge tends to move from the public organisation to the service provider, limiting the capacities of the former to control the service provision and to keep open alternative options. In spite of the competition from other powerful players in the industry, IT service providers are therefore in a rather strong position vis-a-vis their clients, a fact that is also relevant for their employment and working conditions.

Employment conditions: formal continuity, shifting practices

Direct job loss was rare in the cases under investigation, so employment-related issues mainly include the takeover of personnel by the IT service-provider

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companies; the differences in the forms and the regulation of employment between the different organisations involved and, in particular, differences between the public and the private sector; the gender-specific impact of restructuring; and the changes in job security.

In three of the cases, workers were transferred to a new employer as part of the outsourcing process. It was agreed that terms and conditions remained the same on a permanent basis and not only for one year as stipulated by the EU regulation on the transfer of undertakings. While in the case of Citycouncil in the UK this result was reached after an eight-week strike called by the unions to prevent privatisation, in the Swedish case (XY Data) it was attained in a consensual way. However, now more flexibility is demanded from the employees and the work load has become heavier. At Citycouncil only a few workers accepted the offer to change to the service provider's contractual conditions on a voluntary basis during the first year. This change meant shorter holidays, a one-hour longer working week, no flexitime, higher salaries and a weaker equal opportunities and diversity policy. In both cases there are worries on the part of the trade unions about possible relocations of work and ensuing job losses. In the UK case these were fuelled by a sudden relocation of the helpdesk, and in the Swedish case by the takeover of the service-provider firm by a US company and its integration into the new parent company's global value chains.

Such concerns were absent in the case of IT Health, involving IT outsourcing and transfer of workers from a group of hospitals to a new central IT service provider within the Norwegian public health sector, because the employees kept their employment conditions including job tenure. Here only their wages needed to be harmonised because of the considerable differences between the wage systems of the various hospitals and health centres. Generally, in this case employment conditions improved in the process: wages and overtime compensation increased, on-call arrangements and flexitime became more worker-friendly. In other cases, such as MM Spinoff in Germany for example, the IT service-provider companies seconded their employees to the client organisation, sometimes for lengthy periods, which is seen as a burden for the employees affected. The strong bargaining position of these highly skilled workers brings some IT service provider companies to negotiate with their clients a reduction of the time their workers need to spend there.

While there are big differences between the cases in relation to female employment, with up to 40 percent women in IT departments in Scandinavian cases and a much lower ratio elsewhere, the changes caused by outsourcing generally seem to be detrimental to women: more pressure for flexibility in the Swedish case, weaker equal opportunities and diversity policies in the UK case, less part-time work and increasing problems in reconciling employment with care duties in the Dutch case and some wage discrimination because of differences between men and women in formal education in the Norwegian case.

Overall, the qualitative employment consequences seem limited if one looks at the formal level only. Growing demands for flexibility, increasing job insecurity in several cases and disadvantages for women however indicate subtle deteriorations of employment conditions. Interestingly, these deteriorations are not

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compensated for by the inclusion of transferred workers into internal labour markets of large international service-provider companies because former public sector workers do not seem willing to seize the offered advancement opportunities that come with strings attached regarding mobility demands.

Work organisation: bureaucracy through the back door

External restructuring strongly impacts on work organisation, although the function and often the individual tasks remain the same after externalisation. In IT outsourcing, while workers provide the same services to the various departments of the public organisation as before, the work is now usually much more standardised and procedures are much more formalised. In the Citycouncil case the relocated helpdesk takes requests and the services are planned and scheduled through the information system. The move from a 'service-driven' to a 'cost-driven' department was experienced as a far-reaching change. Before the transfer the working culture was described as 'Let's get the job done, we're on a paid salary'; now everything needs to be costed, accounted for and there is a lot more paperwork which is seen as a 'waste of time' by some of the interviewees (Dahlmann in Flecker et al., 2008). Another major change in this case relates to the impact of 'service-level agreements' on working practices. Time pressures increase because of penalty clauses, and staff need to keep daily time sheets that are accurate to the minute.

Not only the scheduling and reporting but also the content of work and thus skill requirements are affected. Workers who perceived their work as creative, for example designing a website from scratch, are now supposed to use the templates and systems of the IT service-provider company: some of the staff felt they had become more ICT system administrators than creative software designers and they felt frustrated having to work in this more structured way. In the Norwegian case, software development was abandoned altogether in favour of buying standard software. In this case, this change led to some developers leaving the organisation. Here, centralisation makes work roles more specialised in contrast to a more generalist profile needed in the individual hospitals and health centres previously. More monotonous work was found at the helpdesk, where workers previously used to rotate between first- and second-level support but now have to stay in one function all the time.

The case studies showed that externalisation makes it necessary to establish new functions and work roles for liaison and coordination tasks. In the Dutch case, for example, the municipality had to establish strategic internal IT units to organise the relations between the municipality and the IT service providers. In the Norwegian case, too, a new liaison and coordination function was set up, because after all the IT workers had been transferred to the new central IT unit there were no IT specialists left in the hospitals to bridge the gap between the hospitals' various departments and the service provider. With externalisation, new tasks – which can be termed 'transaction work' – are thus being introduced into the value chain, and some of them are bundled into newly created functions.

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To sum up, externalisation and inter-organisational relationships affect work organisation both in service-provider companies and in public organisations. In IT services, the limits to modularisation and the prevailing relational network ties, in principle, imply close interactions across organisations. Yet commercialisation and the application of distinctive processes tend to increase time pressures and to enhance the level of formalisation and standardisation considerably. Together with the partly increasing specialisation and the emergence of new liaison and coordination roles, externalisation seems to work strongly against the spread of the 'post-bureaucratic organisation' (cf. Alvesson and Thompson, 2005).

Conclusions

In this article, research findings have been presented on the effects of external restructuring of companies and public sector organisations on employment conditions and work organisation. Focusing on two different business functions – on software development in the IT industry and on IT services for the public sector – in order to take account of the diversity within the IT industry, the article has outlined restructuring processes and their results in terms of value chains and network relationships, discussed the impact on employment conditions and analysed the consequences for work organisation. Differences could be found between the two business functions that are linked to the differences in the configurations of their value chains and in the power relations that characterise them. Inter-firm relations turned out to be rather dynamic, so that not only are there deviations from typical 'risk-and-flexibility transfer chains' (Frade and Darmon, 2005) but there is also change over time.

The way that value chains develop and grow differs in the two business functions of software production and IT service provision. In software production the chain grows vertically and internationally, with captive units added to the chain and gradually integrated into core processes. The IT service provision, the inter-organisational ties are rather horizontal and relational with balanced power relations, or even 'reverse' ones, in which the client is dependent on the service provider. These outsourcing relations do not always include only two organisations, because some functions can be isolated and moved to separate units or locations along the service provider's value chain. The differences between software development and IT services in the forms that value-chain or network development take are also reflected in differences in work and employment outcomes.

In software development, the dynamics of outsourcing and relocation are certainly initially driven by differentials in wages and employment conditions. There are also some indications of a tendency to initially cushion core workers from demands for flexibility and mobility. In some cases management could argue that outsourcing and relocation even secures employment of the core workforce, because the 'mixed wage rates' make the company more competitive.

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However, the upgrading of subsidiaries and external service providers tends to build up pressures on core firms and their workforces. Competition between sites, as non-core units move up the value chain taking on more and more complex tasks, leads to increased job insecurity. The risk of redundancies appears to vary by market position, but this position can quickly change in the volatile IT sector through mergers and acquisitions. Changes in work organisation triggered by external restructuring include intensification of work and a greater demand for temporal flexibility as well as some formalisation and standardisation, although not mere simplification, of tasks.

The outsourcing of IT from the public sector or from public services to IT service-provider companies often leads to contested relationships in which the public organisations aim to limit their dependence on the external service provider. There is a tendency, however, for outsourcing of IT to entail a shift of knowledge from the public organisation to the private provider company. Differences in terms and conditions between client organisations and service-provider companies reflect different systems of employment regulation in the public and private sectors rather than showing disparities in social standards. In contrast to software development the fragmentation of employment that partly results from restructuring has thus only limited material effects on workers. Regarding work organisation, IT service providers apply standardised company-specific procedures, leading to higher standardisation and less autonomy for IT workers. In addition, the service-level agreements between the client organisation and the service-provider company clearly shape work practices. They lead to higher degrees of formalisation, penalty clauses and increased time pressures. The case studies also revealed the emergence of new functions and work roles that are needed to coordinate workflows across organisational boundaries and to negotiate and monitor outsourcing agreements.

Overall, the case studies show that external restructuring and the reorganisation of value chains and network relationships affect both employment and work organisation. As value chains grow longer and network relations widen, demands for flexibility often increase and bureaucratic structures tend to be strengthened through the back door. Moreover, the cases illustrate that the power relations and the contractual arrangements between organisations have immediate, and often detrimental, consequences for labour, mainly in terms of time pressures and growing job insecurity.

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Notes

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2 For reasons of anonymity all company names are pseudonyms.

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