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Still a Coordinated Model? Market Liberalization and the Transformation of Employment Relations in the German Telecommunications Industry

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Still a Coordinated Model? Market Liberalization and the Transformation of Employment Relations in the German Telecommunications Industry

Abstract
This paper examines recent changes in collective bargaining and employer strategies in the German telecommunications industry following market liberalization in the late 1990s. Germany’s distinctive co-determination and vocational training institutions encouraged large firms to adopt employment systems in technician and call center workplaces that relied on high levels of worker skill and discretion. However, organizational restructuring is undermining these gains, as firms use outsourcing and the creation of subsidiaries to escape or weaken company-level collective agreements. These trends have substantially weakened unions and contributed to the further disorganization of coordinated bargaining structures. Findings are based on interviews with union and works council representatives, managers, and employees at Deutsche Telekom and its major competitors conducted between 2003 and 2007, as well as secondary analysis of company documents and industry reports.

Keywords
Germany, telecommunications industry, labor relations, labor market, collective bargaining

Disciplines
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This paper examines recent changes in collective bargaining and employer strategies in the German telecommunications industry following market liberalization in the late 1990s. Germany’s distinctive co-determination and vocational training institutions encouraged large firms to adopt employment systems in technician and call center workplaces that relied on high levels of worker skill and discretion. However, organizational restructuring is undermining these gains, as firms use outsourcing and the creation of subsidiaries to escape or weaken company-level collective agreements. These trends have substantially weakened unions and contributed to the further disorganization of coordinated bargaining structures. Findings are based on interviews with union and works council representatives, managers, and employees at Deutsche Telekom and its major competitors conducted between 2003 and 2007, as well as secondary analysis of company documents and industry reports.

In the 1980s and 1990s, the German telecommunications industry was characterized by stable industrial relations institutions and high levels of worker participation in management decisions. The union and works councils at the former monopolist Deutsche Telekom (DT) played a central role in guiding incremental adjustment to new technologies and more competitive markets (Darbishire 1997). DT’s resulting “labor-mediated” restructuring strategies maintained high wages, stable jobs, and worker skills at a time when similar firms in the United States and United Kingdom were pursuing “market-mediated” strategies that involved forced layoffs and deskill (Batt and Darbishire 1997; Katz 1997).

Developments since the late 1990s have led to more radical changes in the German telecommunications market. New regulations in 1998 ended DT’s monopolies in all market segments, encouraging the expansion of low-cost service providers with weaker, or no, collective agreements. DT management has come under increased pressure to maximize shareholder value, at the same time that it faces declining market share and growing price-based competition. The shift to more liberalized markets, shareholder-oriented corporate governance arrangements, and non-union competition represents growing convergence on the conditions that incumbent providers in liberal market countries like the United States faced in the 1990s. At the same time, other institutions have proven more resilient. Germany continues to have broad co-determination rights and a
“dual” apprenticeship system that promotes employer investment in vocational training, while union membership density and support have remained high at DT.

In this paper, I ask how, and to what extent, these distinctive institutions have influenced the recent restructuring measures adopted by large German telecommunications firms. The findings of this study contribute to contemporary debates on the extent and nature of recent changes in Germany’s “coordinating” institutions (for example, Bosch and Weinkopf 2008; Kitschelt and Streeck 2004; Streeck 2009; Thelen and van Wijnbergen 2003). Based on studies of German manufacturing workplaces in the 1980s, Streeck (1991) and Turner (1991), among others, argued that sectoral bargaining with strong unions, workplace-level co-determination, and vocational training emphasizing polyvalent skills constituted productive constraints on firms that promoted social peace while enhancing corporate performance. The more recent literature on national varieties of capitalism emphasizes complementarities between these institutions and Germany’s stakeholder-oriented corporate governance arrangements, which are argued to support competitive advantage in quality-focused markets (Hall and Soskice 2001).

A growing body of evidence, however, suggests that broad trends of internationalization and liberalization of markets are undermining these advantages and weakening traditional constraints on management. German firms are under pressure to increase short-term returns, in response to the growing proportion of individual shareholders and shareholder activism by international institutional investors (Hopner 2003). Union density and bargaining coverage have declined across sectors, employers associations are losing members, and concessionary plant-level bargaining has increased (Doellgast and Greer 2007:57–58). These developments raise two questions. First, how (if at all) do national and workplace-level industrial relations institutions in Germany continue to influence firms’ strategic choices under conditions of market liberalization and declining union power? Second, to what extent, and in what ways, have these institutions been transformed by the erosion of traditional supports for workplace-level bargaining?

Using telecommunications as a case study, I examine the process of change in Germany’s coordinating institutions at the industry level, as well as the effects of more stable bargaining structures and bargaining rights at the workplace level, in a setting where this change has been dramatic in recent years. Findings are based on over 150 interviews with union and works council representatives, managers, and employees conducted between 2003 and 2007, as well as company documents and industry reports.

**Market Liberalization and Industry Restructuring**

Deutsche Telekom (DT) was a publicly owned company in the 1980s and 1990s, retaining its monopolies in long distance and local phone services as well as in the growing mobile, Internet, and cable markets. Deregulation and privatization initially occurred through a drawn-out series of legislative reforms. Post Reform I went into effect in 1989 and separated the postal service, the post bank, and telecommunications services. Mobile and satellite communications were opened to limited competition, but DT maintained its monopoly in network services. In 1993, the European Council passed a directive calling for member states to eliminate monopolies on network infrastructure and voice telephony services by 1998. The German government responded with Post Reform II in 1995, which laid the groundwork for the privatization of telecommunications and postal services. The DBP-controlled postal service, post bank, and telecommunications services were converted to private corporations, and Deutsche Telekom AG was established as a joint-stock company with 100% state ownership.

Despite these changes, as of the mid-1990s DT still controlled around 90% of the data services market and 90–95% of the cable network. DT also benefited from “asymmetrical” regulation that gave it a number of advantages, with low incentive price regulation and few limitations on cross-subsidization or market entry (Darbishire 1997:195–96).
This changed in 1998, when legislation came into effect that ended DT's remaining monopolies and placed new restrictions on DT with the aim of curbing its market power. Almost overnight, the German telecommunications market shifted from one of the most protected to one of the most liberalized in the world. National network operators like Mannesmann Arcor and o.tel.o and smaller utilities and city carriers like Net Cologne and Worldcom/MFS expanded their own competing network infrastructure, targeting lucrative urban and corporate networks markets. Service providers and resellers benefited from new rules that allowed them to sell network capacity from Deutsche Telekom at lower rates.\(^1\) Intensified price competition in fixed network communications led to declining call charges, which fell more than 60% between 1998 and 2000, representing "the steepest cuts in any European market for years" (Althaus 2000).\(^2\)

At the same time, DT management became increasingly focused on raising the company's lagging share price. In 1996, DT made an initial public offering (IPO) and one million private investors purchased 26% of its stock. State ownership was further eroded following second and third public offerings in 1999 and 2000. By 2004, the federal government directly held 26% of shares, with 17% held by the federal Loan Bank for Reconstruction; and by the end of 2007 their joint ownership had dropped further to 32%. Meanwhile, by 2002, the price of DT shares had fallen to less than 10% of their peak several years earlier (Economist 2002), prompting a class-action lawsuit by investors who claimed the company had been overvalued when new shares were issued in 2000 (Economist 2008). Large institutional investors have also begun playing a more important role in shaping management strategy. The private equity firm Blackstone is believed to have been particularly influential in advising management on recent restructuring decisions (Schröder 2007).

Despite these changes, the German telecommunications market continues to be influenced by its past development trajectory. DT was able to maintain market power and a diversified corporate structure, which have allowed it to remain the dominant provider in core segments and in the growing multimedia services market. It has been accused of using judicial review to delay or block unfavorable regulatory decisions and leveraging its market power to delay provision of leased lines and to introduce artificially low "dumping prices" in certain markets, such as DSL (OECD 2004:59–60). More recently, DT lobbied Germany's coalition government to exempt new investments in its high-speed fiber-optic network, VDSL, from regulation. In 2006, the Bundesnetzagentur, backed by the EU, required DT to offer local loop unbundling on the network. However, in February 2007 a new clause in the German Telecommunications Act came into effect that exempted new markets from regulation, allowing DT to prevent competitors from gaining full access to most of its fiber-optic network for a fixed period. The EU Commission instituted breach-of-contract proceedings, arguing that these provisions conflict with the EU's legal framework. At the time of writing, this conflict had not yet been resolved.

DT's role in developing Germany's telecommunications infrastructure also has given it a sustained competitive advantage in high-speed internet services. The company did not invest in a competing cable network for voice and internet, instead promoting DSL services and expansion of its high-speed integrated services digital network (ISDN). DT was forced to sell majority stakes in its nine regional cable companies in 2000, following the Cable Directive. However, DT temporarily retained a "25% plus one vote" share in each of these companies, which gave it veto rights over major restructuring decisions. In

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\(^1\)By the end of 1998 there were already over 120 licenses for voice telephony. By the end of 1999, 262 licenses for voice telephony services had been awarded to operators with their own networks and 365 licenses had been awarded for transmission lines, with a total of 1,700 companies providing telecommunications services in Germany. In 2004, the number of licensees had grown to 875, with around 2,200 telecommunications companies (Deutsche Telekom 1999, 2004).

\(^2\)By the beginning of 2008, prices for international calls had been reduced by up to 98% compared to their level before liberalization (with variation by destination country) (Bundesnetzagentur 2007).
addition, the direct customer connections continue to be owned and operated by a large number of small private companies, which has made it both complex and expensive for the large cable operators to invest in upgrading their infrastructure. As a result, the cable network has not become a major competing source of broadband services, as it has in the United States and the United Kingdom.3

Finally, the German telecommunications market has been relatively stable compared to that of other countries. DT suffered from a plummeting share price and revenue losses until 2003, when it finally managed to turn a profit. Rapid growth after liberalization gave way to consolidation and tighter margins in the early 2000s. However, these growing pains were relatively minor compared to the accounting scandals, overbuilding of capacity, and plummeting share price that U.S. telecommunications firms experienced at the end of the 1990s. Despite a shift to a stronger “shareholder value” orientation, stakeholder-based corporate governance traditions have given banks and employee representatives additional oversight over company finances and investment decisions (Börsch 2007).

DT’s continued market power and regulatory influence have protected the company to some extent and allowed it to maintain a dominant market position in most segments. At the same time, it is increasingly disadvantaged by its high-cost structure, large fixed infrastructure investments, and new regulations that seek to curb its market power. While other firms can “cherry-pick,” choosing to concentrate on high-value-added market segments, DT has an obligation to provide universal service. The company has a number of social obligations that create additional costs, including its continued employment of Beamten, or civil servants, who enjoy special rights under German law, as well as its negotiated commitment to train thousands of new apprentices every year.4 Only 20% of apprentices are offered jobs at DT after completing their training, and thus DT’s competitors or subcontractors enjoy spillovers from this investment.5

DT has also been slow to enter new market segments. Its fixed network business unit T-Com only began offering internet telephony, or Voice over IP (VoIP), in 2005, long after AOL and Freenet had developed their own services. DT also did not develop a “Triple Play” of VoIP, internet, and broadband television services until the end of 2006, prompted by the loss of customers to competitors. These innovations were delayed by fears of short-term revenue loss from higher-margin traditional telephone services, and were implemented only after the online subsidiary T-Online was integrated into the fixed line operations at T-Com. DT is currently suffering losses as this segment contracts, due to substitution by mobile communications and, to a lesser degree, internet telephony.6

These structural disadvantages and missed investment opportunities are increasingly hurting DT’s competitive position. Overall, DT’s share of the telecommunications market (based on revenues) fell from 70% in 1998 to 61% in 1999, and then to 48% in 2007; its

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3 In Germany, only 0.5% of residents in 2006 subscribed to cable broadband services and 16.4% to DSL, whereas in the United States, 10.3% subscribed to cable broadband and only 8.5% to DSL (OECD 2007). However, the cable market in Germany is beginning to experience a boom, with the market doubling to 1 million broadband customers in 2007 (Bundesnetzagentur 2007:77).

4 Deutsche Telekom employed 12,000 apprentices in 2006, with a regular work force of 159,992; thus, apprentices represented close to 8% of employment. In comparison, Vodafone offered 500 apprentice positions with a regular work force of 9,000, representing just 3% of employment.

5 Reported apprentice numbers are based on interviews and company documents.

6 According to the German telecommunications association BITKOM, revenues from voice services were declining by 1 billion Euros per year by 2006. German companies generated 4.5% less revenue from fixed network calls, while the mobile communications market grew by 2% (Deutsche Telekom 2006). In 2006, 10% of German households had a mobile phone, but no telephone service (Eurobarometer 2007). The volume of calls has changed, as well: in 1999, 92.4% of calls were from fixed networks, and 7.6% from mobile, while in 2006, 77.6% were from fixed networks, 19.2% from mobile, 3% from VoIP, and 0.2% from cable (Bundesnetzagentur 2006).
GERMAN TELECOMMUNICATIONS

Figure 1. Change in Deutsche Telekom's Market Share Based on Selected Indicators, 1998-2007.

Sources: Deutsche Telekom annual reports and Bundesnetzagentur Jahresbericht (2007).

share in local telephone services has fallen by over 30% since 1998 (See Figure 1). DT's mobile subsidiary T-Mobile controls around 38% of the wireless customer base (See Table 1). DT also controls around 50% of the growing internet market, where it competes with fixed-network and internet service providers such as Arcor, FreeNet, Versatel, and Hansenet (See Table 2). In the past few years, DT has faced a more rapid hemorrhaging of customers, whose numbers declined by 1.5 million in 2006, and shrinking net profits, which dropped close to 60% in the first quarter of 2007.

Effects of Restructuring on Industrial Relations

These recent developments in the German telecommunications market have had wide-ranging effects on collective bargaining institutions, both at DT and in the industry as a whole. The Deutsche Postgewerkschaft (DPG) operated as a single-company enterprise union in the Deutsche Bundespost and then at DT, and enjoyed considerable influence over strategic decision-making through the union-dominated personnel councils and representation on the company's advisory board. In the 1990s, the DPG continued to enjoy close relationships with managers and works councilors. Member density in core areas of the business remained high, at around 70-80%. Close to 50% of the former Bundespost's employees were civil servants, and thus enjoyed lifetime job security along with other special employment rights.

In 2001, the DPG merged with four other service unions to form the conglomerate

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7 DT's competitors accounted for 45% of domestic and 78% of long distance "call minutes" in 2007, but only 24% of telephone channels (including fixed network and cable connections) (Bundesnetzagentur 2007:66).

8 Although in 2007 DT controlled 49% of the market for end-customers in DSL, resellers (selling DT's DSL lines under their own name) controlled 19%—and a large portion of these revenues are returned to DT (Bundesnetzagentur 2007:75).
### Table 1. Major Wireless Providers, 2006.

<table>
<thead>
<tr>
<th>Wireless Provider</th>
<th>Ownership</th>
<th>Subscribers (Millions)</th>
<th>% of Total Subscribers</th>
<th>Revenue (Billions of €)</th>
<th>Employees</th>
<th>Union Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-Mobile</td>
<td>DT (Germany)</td>
<td>34.3</td>
<td>38%</td>
<td>8.2</td>
<td>5,700</td>
<td>ver.di</td>
</tr>
<tr>
<td>Vodafone</td>
<td>Vodafone (UK)</td>
<td>31.6</td>
<td>35%</td>
<td>8.0</td>
<td>9,000</td>
<td>IG Metall</td>
</tr>
<tr>
<td>E-plus</td>
<td>KPN Mobile (Netherlands)</td>
<td>13.6</td>
<td>15%</td>
<td>2.9</td>
<td>2,200</td>
<td>None</td>
</tr>
<tr>
<td>02</td>
<td>Telefónica (Spain)</td>
<td>11.6</td>
<td>13%</td>
<td>2.8</td>
<td>4,700</td>
<td>IG BCE</td>
</tr>
</tbody>
</table>

Source: Company web sites, annual reports, and interviews. Subscriber numbers were current as of June 2007; Revenue and Employees data are for the end of 2006.

union ver.di, with most staff moving to the new union's telecommunications and IT division Fachbereich 9 (FB9). Union membership remained high in traditional areas of the business, and union and works council representation on the company's supervisory board gave ver.di continued influence over corporate strategy.

However, ver.di has been less successful in growing industry segments. Because DT was a monopoly, collective bargaining was traditionally organized at the enterprise level, with no employers association or industry-level agreement. The union attempted to establish sectoral bargaining following liberalization, but it was unable to do so for several reasons. First, the DPG, and then ver.di, continued to be viewed as the union of Deutsche Telekom. Local exchange carriers and competing network operators were unwilling to cooperate with the former monopolist or its union, which placed a priority on protecting DT's market position; and the employees of these firms were wary of joining a union that represented DT employees' interests. DT's competitors formed the Association of Telecommunications and Value-Added Service Providers (VATM), but membership remains voluntary and the association has not sought to engage in collective bargaining.

Second, the DPG faced competition from other unions as it sought to organize new workplaces. As firms in the public, metalworking, chemical, and energy sectors diversified into telecommunications and IT, their unions negotiated agreements with these new business units. Today ver.di's only agreements outside of DT are with cable providers formerly owned by DT, such as Kabel Deutschland, and with city carriers like NetCologne that had agreements with the former public sector union ötv (See Table 3).

Restructuring exacerbated the competition among unions, particularly between the metalworking union IG Metall and the new conglomerate service union ver.di. Those two unions both negotiated separate agreements with different operating subsidiaries of the DT group's company T-Systems, which was formed when DT's telecommunications and IT service division merged with Debis Systemhaus, a service division of the automaker DaimlerChrysler. DT's major fixed network competitor, Arcor, was formed through the mergers of subsidiaries that had separate agreements with IG Metall, Transnet, and IG BCE. In 2000, the unions formally divided responsibility for new telecommunications and IT companies. However, this has not prevented conflict at a time of declining membership and changing firm boundaries. For example, ver.di had agreed that the metalworking firm Mannesmann's mobile phone subsidiary D2 Mannesmann Mobilfunk fell under IG Metall's jurisdiction, but changed its position after the British telecommunications company Vodafone took over Mannesmann. These jurisdictional conflicts have prevented the unions from developing a coordinated strategy at the industry level and divided works councils at the company level.

A third challenge to establishing sectoral bargaining has been the persistence of low union density in new industry segments. Most small service re-sellers and internet service providers have not negotiated union agreements. Larger competitors were established either by international firms that did not have a prior relationship with German unions or by diversified German firms that
**Table 2. Major Fixed-Line Providers, 2006.**

<table>
<thead>
<tr>
<th>Provider</th>
<th>Ownership</th>
<th>DSL Subscribers (Millions)</th>
<th>% Total DSL Subscribers</th>
<th>Voice Subscribers (Millions)</th>
<th>% Total Voice Subscribers</th>
<th>Revenue (Billions of €)</th>
<th>Employees</th>
<th>Union Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-Home</td>
<td>DT (Germany)</td>
<td>7.7</td>
<td>49%</td>
<td>33.2</td>
<td>61%</td>
<td>21.8</td>
<td>86,315</td>
<td>ver.di</td>
</tr>
<tr>
<td>Arcor</td>
<td>Vodafone (UK)</td>
<td>2.1</td>
<td>14%</td>
<td>4.1</td>
<td>8%</td>
<td>2.1</td>
<td>3,735</td>
<td>Transnet/IG Metall</td>
</tr>
<tr>
<td>Freenet</td>
<td>Freenet (Germany)</td>
<td>1.0</td>
<td>7%</td>
<td>3.0</td>
<td>6%</td>
<td>2.1</td>
<td>3,646</td>
<td>None</td>
</tr>
<tr>
<td>Versatel</td>
<td>Versatel (Germany)</td>
<td>0.5</td>
<td>3%</td>
<td>0.1</td>
<td>0.1%</td>
<td>0.7</td>
<td>1,395</td>
<td>ver.di</td>
</tr>
</tbody>
</table>

*Source: Company websites, annual reports, and interviews. Subscriber numbers are based on reports by companies in reporting year 2006 or 2006/2007. Calculations of percentages are based on 14.4 million total DSL subscribers and 54.5 million voice subscribers in 2006 (Bundesnetzagentur 2007).*

were reluctant to negotiate new agreements for their telecommunications subsidiaries. D2 Mannesman Mobilfunk began negotiations with IG Metall in the mid-1990s, but did not conclude a collective agreement until 2001, after the company was taken over by Vodafone. Membership has remained low, at around 5%, and in some regions works councilors have broken off all ties with the union. Employees at the wireless provider E-plus selected works councils in the late 1990s with ver.di’s assistance, but as of 2009 union membership still remained low, union affiliation of the works councilors was fragmented, and there had been no progress toward an agreement.

These three factors—distrust by new employers of DT’s close relationship with the DPG, competition between unions, and low union membership in new segments—help to explain the continued lack of a sectoral agreement. More surprisingly, the DPG also has not negotiated a common framework agreement for the companies in DT’s corporate group, where the union continues to have a strong and institutionalized bargaining relationship with management. As DT transitioned from a fixed network carrier to a diversified corporate group in the 1990s, the company established independent subsidiaries for different market and service segments. In 2000, DT shifted to a new divisional structure, based on its four market “pillars” of T-Com (fixed network), T-Mobile (wireless), T-Systems (business and IT), and T-Online (internet services). T-Com remained an internal division of the parent company, Deutsche Telekom AG, and thus remained under the company’s original collective agreement. However, the DPG concluded separate agreements with T-Mobile and T-Systems and was unsuccessful in securing an agreement with T-Online.

Negotiations between ver.di and T-Online ended in 2005 when DT announced that it would bring the subsidiary back into the parent company to take advantage of synergies between internet and network services, rebranding T-Com as “T-Home.” At the same time, the group within T-Com servicing small and medium-sized companies merged with T-System’s large business customers group to create a new business customer division. DT has also established a number of subsidiaries that perform cross-divisional management functions or operating activities, and these are either covered by the parent company agreement (often with unique terms) or by separate agreements. Ver.di representatives estimated in 2007 that there were over 100 collective agreements across Deutsche Telekom.

This fragmentation of collective bargaining within DT can be partially explained by the broader developments in the telecommunications industry discussed above. Ver.di membership and works council ties have remained weaker in business units competing in newer market segments: union density is around 70–80% in the parent company, but is estimated to be 10–20% at T-Mobile and T-Systems, and was close to 5% at T-Online before it was re-integrated into the parent company.

Sako and Jackson (2006:356–58) provide two additional explanations that are specific
to DT. First, the union merger that formed ver.di drained resources and diverted attention from newer DT operations, hampering membership recruitment and allowing works councils in these operations to assume a more central and independent role. Second, pay and working conditions in the new business units were initially better than those at the parent company, as DT sought to encourage employees to accept transfers as well as to attract new employees with technical skills that were in high demand. Works councils and employees in the subsidiaries thus had both the means and the incentive to maintain a structure of separate agreements.

A further explanation for DT’s fragmented collective agreements is its unique history of enterprise unionism. Because the DPG negotiated with only one employer, it had established a tradition of formal collective bargaining on a number of topics that are typically included in works agreements in other sectors, such as scheduling practices and variable compensation. As management sought to differentiate these practices, union representatives preferred to negotiate separate agreements rather than shift responsibility to works councils through opening clauses. This tradition was a source of labor strength in the 1970s and 1980s, based on an unusually close relationship between the works councils and a single-employer union. However, as DT has decentralized its own corporate structure, the formerly close relationships between works councils in different areas of the business have broken down. Union and works council representatives are now jointly responsible for administering increasingly complex collective agreements. The corporate group’s works council plays a relatively weak role, dealing primarily with decisions that affect the entire group, while company-level works councils have primary responsibility for negotiating agreements on such matters as work design, job security, and compensation practices that are not covered in agreements with ver.di. As a result, ver.di has found it increasingly difficult to coordinate bargaining and participate in strategic decision-making at the corporate group level.

Figures for membership density and bargaining coverage in the German telecommunications industry are not publicly available, and thus can only be roughly estimated. In 2006, ver.di representatives claimed to have 70% density in Deutsche Telekom’s broadband/fixed network operations and headquarters (with around 115,000 employees), an average of 40% in DT’s other subsidiaries (45,000 employees), and 5% in new industry entrants (56,000 employees).9 Union density

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9DT reported a total of 159,992 employees in its German operations, of whom 86,315 were in Broadband/Fixed Network (T-Com/T-Home) and 28,188 in Headquarters/Shared Services—leaving 45,489 employees
was thus at most 47% in 2006, falling from an estimated 57% in the mid-1990s (Funk 2004). Coverage of employees by firm-level collective agreements is still high, due to DT's continued high share of industry employment. Based on similarly rough calculations, it appears to have fallen from close to 100% to around 85%. However, these figures do not take into account the large and growing proportion of customer service, sales, and technician jobs performed by third-party subcontractors, which have lower union density and are typically not covered by collective agreements—a trend that is discussed in greater detail below.

In the absence of sectoral bargaining, works councils have assumed central responsibility for negotiating collective agreements in many new workplaces. However, works councils have not built strong relationships with the union outside of DT's fixed network business. Works councilors at different locations in large firms often do not know each other due to frequent restructuring, and membership in company-level works councils changes often as divisions are spun off and as former competitors merge. Moreover, in diversified firms like Mannesmann and DT, works councils located in different business units often have distinct or conflicting interests (Höpner and Jackson 2003; Sako and Jackson 2006).

Market liberalization and corporate restructuring have thus contributed to the fragmentation of collective bargaining in the telecommunications industry. Today DT faces competition across market segments from firms with weaker or no collective agreements. Meanwhile, ver.di representatives are struggling to develop new approaches to regulating working conditions in a more competitive sector, without the institutional moorings of a sectoral bargaining structure or a common framework agreement at DT.

**Employment Systems**

Growing fragmentation in industrial relations and more differentiated markets provide greater scope for managers to exercise strategic choice as they seek to reorganize work and implement new performance management systems. As markets reach saturation, both DT and its competitors increasingly seek to attract and retain customers, which creates incentives to invest in service quality. At the same time, growing price-based competition and declining profit margins introduce potentially conflicting pressures to reduce labor costs. New technologies increase the complexity of many jobs, but also facilitate rationalization, routing of calls to remote locations, and individual performance monitoring.

The following section focuses on the employment practices that German employers adopted as they sought to respond to these contradictory pressures and incentives, drawing on case study data from Deutsche Telekom's two largest business units, T-Com (fixed network) and T-Mobile (wireless), and from two of its major competitors, Arcor (fixed network) and Vodafone Germany (wireless)—both of which are owned by the British multinational Vodafone. Case studies were conducted in two major areas of telecommunications employment: technicians and customer service and sales workers, with a particular focus on call centers.

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The major telecommunications companies with collective agreements in 2006 included the DT group (159,992 employees), Arcor (5,755 employees), Vodafone (9,900 employees), O2 (4,700), Kabel Deutschland (2,700), Versatel (1,935), EWE TEL (950), and Net-Cologne (700). This represented 183,172 employees covered by an agreement, out of total employment of 215,892. Official statistics on union membership are not available.

**Technicians.** Technicians are responsible for constructing and maintaining networks, both for private customers and for large businesses, as well as installing and repairing lines and services. Here I focus on technicians at T-Com and Arcor, where these jobs represent a major occupational group (in contrast to the mobile companies, which employ a smaller number of specialized technicians). DT owns most of Germany's infrastructure (83% of telephone channels in 2006), which
is then leased or resold by competitors; and its technicians are responsible for maintaining and servicing both this fixed network and a large proportion of Germany's wireless network. Even where competitors own their own network, DT typically services the "last mile," or the connection between the distribution point and the customer. This means that the majority of telecommunications technicians are employed by DT—for example, while DT's service regions typically employ over 1,000 technicians, similar Arcor regions employ less than 100.

At T-Com, there were four main job categories: Monteur handled simple connections and product assembly; Service Monteur and Service Techniker were responsible for maintenance and repair; and Service Techniker Spezial built and maintained large business networks. Almost all of these employees had completed apprenticeship training in the Systemelektroniker/in trade, and most received their training at DT. Arcor had a similar division between its System Spezialistin, Professional System Spezialistin, and Senior System Spezialistin. The majority of technicians were trained in the more unusual occupation of Facharbeiter für Nachrichtentechnik due to the company's prior ownership by the Deutsche Bahn. T-Com continued to offer apprenticeship places in technician trades, and made a commitment in its collective agreement with ver.di to hire a proportion of these apprentices into permanent positions every year (currently around 80). In contrast, Arcor did not offer apprenticeship places, instead hiring technicians who received training elsewhere. The content of jobs also differed: DT technicians typically performed a wider variety of tasks associated with servicing customer connections, while Arcor technicians were primarily responsible for large business customers and network maintenance.

Work organization in both companies changed over the 1990s, due to new technologies that facilitated the tracking and distribution of jobs. Previously supervisors would meet with employees each morning to distribute assignments; today, technicians primarily work alone, and all job assignments are allocated over the internet through personal laptops. At T-Com, employees met with "virtual teams" of 17 to 20 technicians at least once a month to discuss team goals and to receive training on new products. Management introduced team competitions, but these were optional and did not affect bonuses until recently (which will be discussed below). Employees also had working time accounts and flexible working hours, allowing them to start up to half an hour early and to work up to 10 hours per day. Additional hours were accumulated in their accounts, and technicians negotiated individual plans with team leaders for "drawing down" these accounts by the end of the year through reduced hours. All of these changes were negotiated with strong works councils, which resisted the introduction of pay-at-risk, protected employees from electronic monitoring, and ensured that individual technicians maintained broad control over their working time arrangements. T-Com's technicians thus traditionally enjoyed considerable autonomy, with few substantive consequences or incentives attached to meeting performance goals.

At Arcor, work was organized similarly, but with less use of teams: technicians typically worked alone and most communication occurred between individual employees and their regional dispatcher, who allocated jobs, approved individual schedules, and planned training. Working time accounts allowed technicians to accumulate only 10 "plus" or "minus" hours, and employees had less individual control over use of accounts. In addition, Arcor technicians had a larger component of variable pay based exclusively on individual bonuses. Once a year, a supervisor evaluated performance in several areas, and employees received a bonus payment based on "points" received, amounting to, on average, 5% to 10% of total pay. While work was more individualized than at T-Com, Arcor technicians also enjoyed high levels of autonomy and relative status within the company. Union and works council agreements provided extensive protections; for example, individuals were able to contest bonus evaluations, and there were strong negotiated limits on monitoring.

Customer service and sales. Service and sales jobs—primarily in retail stores and call
centers—have become more important as a strategic channel for attracting and retaining customers. These jobs are expanding at all telecommunications companies, but make up a larger proportion of employment at DT's major competitors than at DT, particularly among service resellers, which do not maintain their own infrastructure.

Formal vocational training continues to be important for recruitment and promotion in service and sales jobs, although this varies across firms. DT offered an apprenticeship in retail sales, or Kaufleute im Einzelhandel, in its retail subsidiary T-Punkt, which represented 16% of its total apprentice places in 2006. While other firms offered this training, they did so at a lower rate, and typically adjusted the number of new apprentice places based on their recruitment needs. Call center agents at DT traditionally completed the apprenticeship training Kaufleute für Bürokomunikation (Management Assistant in Office Communications), which was not specific to call centers, thus offering mobility to other jobs in the company and sector. Its competitors and call center subcontractors, in contrast, recruited employees from a variety of backgrounds, with a heavy reliance on students; and many did not fund apprenticeship training. In 2006, a new call center apprenticeship, Kaufleute für Dialogmarketing, was negotiated between ver.di, the DGB, and the employers' organization Kuratorium der Deutschen Wirtschaft für Berufsbildung (KWB), with the cooperation of several large call center vendors. According to union representatives, close to 90% of training for the new apprenticeship takes place in the firm, making it less costly than other apprenticeship courses that involve more extensive classroom training. Employers have argued that the new apprenticeship will help to raise the status of call center work and improve skill portability. However, union and works council representatives at DT felt it represented a devaluing of the broad skills provided in the previous apprenticeship, and would serve to further segregate call center agents and reduce mobility within DT.

Call centers have also been a central focus of work reorganization measures. New technologies have made it easier to route calls between remote locations and to subcontractors, match agent availability with fluctuating call volume, and monitor agent performance. These jobs represent a large proportion of employment, averaging around 30% of jobs in the largest companies, and thus provide an obvious target for reducing labor costs. Although the companies studied here—T-Com, T-Mobile, Arcor, and Vodafone—have adopted different practices, all four moved toward a similar employment system in the early 2000s that relied on worker skill and discretion.

First, all four companies increased the complexity of call center jobs. In 1999, T-Com retrained agents to handle a range of billing, sales, complaints, telemarketing, and service calls. T-Mobile also gradually reduced specializations, although it maintained dedicated groups for high- and low-value customer segments. Arcor and Vodafone had more specializations, but pay and working conditions were not differentiated based on call type and mobility across jobs was high. These changes were associated with low-wage spread within each company's internal call centers and allowed managers to distribute calls more flexibly between locations and agent groups.

Second, all of the companies adopted scheduling arrangements that provided managers with more flexibility to adjust employment levels to daily and seasonal fluctuations in call volume, while giving workers some control over their working time. T-Com and T-Mobile negotiated working time accounts with their works councils in the early 2000s, which allowed employees to build up hours in their accounts when call volume was high, and then draw down those hours when they needed extra time off. Employee control over these arrangements was strongest at T-Com: works agreements specified that team leaders could not force agents to work overtime or prevent agents from leaving when they chose if they had sufficient “plus” hours. As a result, team leaders relied on maintaining a good relationship with their team to avoid staffing problems. Arcor and Vodafone did not have working time accounts, but this was in part due to works councils' perception that managers would take advantage
of these arrangements. At Arcor, the works council had gradually improved scheduling predictability and helped individual workers to secure favorable shifts based on needs such as child care, while Vodafone employees were able to refuse requests by managers to change their shifts.

Third, new performance management practices relied on developmental forms of motivation through coaching and training rather than discipline and dismissals. Works councils placed strict, negotiated limits on individual monitoring and incentives. These limits were strongest at T-Com and T-Mobile, where works agreements prohibited managers from recording individual performance metrics, disciplining individual workers based on their performance, or basing variable pay on individual sales goals. At Arcor, works agreements also prohibited individual monitoring, with the exception of call length; and “mystery calls” evaluating service quality were reported only at the team level. Vodafone allowed mystery calls to be reported at the agent level, but individual results were only available to several “trainers” at each center who could only use these data to give employees feedback and coaching. Coaching was described by managers and works councilors as a negotiation rather than evaluation, as team leaders had restricted ability to threaten poor performers with hard consequences, such as dismissal.

Fourth, all four companies adopted team-based work organization and incentives—encouraged in large part by these negotiated limits on individual monitoring. At T-Com and T-Mobile, evaluations of team performance determined the distribution of variable pay. At T-Com, this was overseen by a committee at each workplace with an equal number of employee and employer representatives. In addition, sales goals for each team were incorporated into a collective agreement, and employees were able to appeal these goals before a joint committee. Teams at Arcor’s call centers were responsible for providing “team reports” that identified group goals and suggestions for improving systems. Employees in each team were assigned a coaching role, and variable pay was distributed by team leaders as a bonus on top of base pay. At Vodafone, teams had weekly and monthly sales goals, and managers organized special team competitions and bonuses. At all of the companies, there was a strong focus on building “team spirit,” with regular team meetings, workshops, and training sessions, as well as activities planned together outside of work.

These employment practices reinforced one another: limits on monitoring, combined with broad control by employees over their working time, made it difficult to pursue individualized, discipline-based strategies for motivating workers. Employees adopted a more professional attitude toward their jobs, encouraged by their broad autonomy and a strong “occupational identity” fostered by apprenticeship training in a sales or administrative profession. Works councils played an important role in placing these negotiated limits on the possible range of management practices, as well as ensuring some fairness in the implementation of new incentives such as variable pay.

Participatory practices were further supported by high and uniform wage levels and job security, secured through collective bargaining with ver.di at DT and IG Metall at Arcor and Vodafone. Union agreements were strongest at T-Com, with higher pay across call center jobs and job security provisions. However, union agreements at the other companies had also helped to reduce internal inequality and raise overall pay, collapsing often complicated structures of individual contracts and varied pay grades that were the legacy of mergers and spin-offs into a simpler structure with less variation. For example, Arcor was formed by a series of mergers between o.tel.o, germany.net, and a number of smaller city carriers. In 2003, IG Metall and Transnet finally concluded a collective agreement for the company’s new call center subsidiary that collapsed 16 different employment contracts from these mergers into two contracts, while ensuring that no employees were assigned a lower pay grade.

Organizational Restructuring

The above comparison demonstrates that worker representatives played an important
role in encouraging large telecommunications firms to invest in employment systems that relied on worker skills and involvement to improve productivity in the late 1990s and early 2000s. However, in recent years, employers have adopted in parallel a set of externalization strategies that have undermined many of these gains. Outsourcing and the creation of new subsidiaries are two increasingly popular organizational restructuring measures that involve shifting some portion of core work—or, alternatively, entire departments or establishments—to a new organization, thus entailing a renegotiation of employment contracts and collective bargaining agreements. These organizational changes have led to increased variation in pay and working conditions and declining coordination between works councils across establishments.

**Outsourcing.** Large telecommunications firms rely on third-party subcontractors to perform technician, retail, and call center work. DT traditionally used subcontractors to handle peaks in demand for technicians, but increasingly uses them for regular work. For example, in Nordrhein-Westfalen, the company’s largest administrative region, DT employed 1,800 in-house technicians and 1,200 external technicians through its subcontractors in 2007. These subcontractors were used primarily to handle simple jobs, such as installation; were not used for large business accounts; and were more likely to be assigned to jobs ordered from competitors who resell services on DT’s network. At Arcor, subcontractors employed around half of the technicians servicing the company’s network. Again, these employees tended to perform more routine or lower-skilled jobs, but Arcor was using them for an increasing proportion of technician work in all areas.

The organization of retail establishments is more decentralized: large firms typically both own their own retail stores and rely on franchises or third-party chain stores to sell products and services. In 2007, DT owned 600 stores employing over 4,000 sales workers. These were moved to a subsidiary, “T-Punkt,” in 2004, but the new company was covered by a collective agreement and primarily employed workers with apprenticeship training in retail sales. Employment was less regulated in the third-party stores that sold DT services, which were not covered by the DT agreement and tended to recruit more students or other employee groups that lacked formal qualifications. Vodafone Germany owned 240 of its own stores in 2007, but had over 1,000 franchises, or “partner stores,” that employed close to 3,000 employees and were not covered by Vodafone’s collective agreement with IG Metall.

A similar trend can be seen in call center operations. Several companies, including T-Online and the mobile provider E-plus, outsourced a majority or all of their call center work, and others outsourced peaks in call volume or certain lower-skilled jobs such as operator services. T-Com outsourced most of its directory assistance jobs in the late 1990s, and T-Mobile gradually increased the outsourcing of calls during late hours, peak times, vacations, night shifts, and outbound campaigns. By 2007, according to DT works councilors, around 7,000 of T-Com’s call center jobs were performed by subcontractors. During this same time period, Arcor increased outsourcing of call volume peaks, late-night calls, outbound campaigns, and all directory assistance work. Union officials estimated that close to 90% of Arcor’s “simple” or transactional call center jobs were performed externally, while managers retrained the internal work force to focus on more complex technical service jobs and high-value-added customer segments.

Works councils and union representatives initially cooperated with these measures, as they were viewed as a useful escape valve for pressures to reduce labor costs or extend service to unsocial working hours (Doellgast 2008). For example, in 2000, Vodafone’s works council agreed to allow management to outsource peaks in call volume and some telemarketing campaigns in exchange for strong job security protections. However, outsourcing often created new and unexpected pressures. Vodafone began to outsource all new growth in call volume rather than expand employment in-house. In-house workers were benchmarked against subcontractors, increasing pressure on works councilors to im-
prove productivity and allow more individual performance monitoring. Ver.di negotiated a special agreement in 2006 with T-Mobile that included pay at risk and reduced starting pay for new hires in call centers, following an emotional campaign in which management threatened to outsource all customer service jobs if the agreement was not accepted.

The growing use of subcontractors for formerly core telecommunications jobs has moved thousands of these jobs to companies that are typically not covered by union agreements. Only one large call center subcontractor, Walter Services, negotiated an agreement with Ver.di, and this was considerably weaker than those that covered the workers of its major clients, including DT (Holst 2008). While large subcontractors often have works councils, they tend to be newer, to have weaker relationships with unions, and to have little contact with the works councils of client companies. These companies also typically pay lower wages, monitor work more intensively, demand greater scheduling flexibility from their workers, and rely more heavily on commission and pay at risk.

Subsidiary creation. An alternative set of restructuring measures involves moving internal departments or entire job categories to subsidiaries. Similar to outsourcing, this is an organizational change that allows firms to re-negotiate collective agreements. Subsidiary creation has not been a major element of restructuring at Arcor or Vodafone. When Arcor and o.tel.o merged in the late 1990s, Arcor brought together their call centers into a new company, Mannesmann Customer Operations (MCO), and negotiated a separate agreement for these workers. However, the subsidiary was subsequently brought back within Arcor in 2003, at the same time that the company began downsizing employment due to increased use of subcontractors for call center jobs. Deutsche Telekom has been most aggressive in adopting this strategy for both fixed network and mobile operations—due in part to its size and strong job security agreements that limit other forms of externalization.

In March 2004, DT established two new subsidiaries, Vivento Customer Services (VCS) and Vivento Technical Services (VTS), to handle lower-skill call center and technical support work across DT, as well as to provide subcontracted services to external clients. These new businesses were formed due to DT’s unique employment commitments. Between 1995 and 2004, Deutsche Telekom cut 110,000 positions in its core operations, largely through early retirement, voluntary buy-outs, and natural turnover. Redundant employees who could not be accommodated through these measures were moved into Vivento Personal Service Agentur (PSA), a “temporary employment and qualification company” or Beschäftigungsgesellschaft created in 2002 that was intended to place employees in short-term assignments within and outside of DT. By 2003, Vivento PSA had grown to close to 20,000 employees, whom DT was obligated to maintain at their former pay level.

VCS and VTS were established to target new markets using this surplus work force, and over 4,000 employees were moved to the two subsidiaries from Vivento PSA. Under the 2004 collective agreement, the new subsidiaries remained under the DT agreement, although pay was reduced to 91.25% of employees’ former salaries. While employees transferred from other DT companies were able to keep their employment contracts, new employees were hired under less favorable terms. For example, the starting monthly salary at VTS was 1,900 Euros in 2006 compared to 2,300 Euros for T-Com’s in-house technicians. By 2007, DT was contracting a portion of its “outsourced” call center and technical service work to VCS and VTS.

Ver.di representatives were initially optimistic that the Vivento companies would allow DT to in-source thousands of jobs performed by vendors. However, management soon made it clear that it intended to sell the new subsidiaries. Between 2006 and 2008, DT transferred 12 of its 19 VCS establishments, representing around 1,800 employees, to the subcontractors Walter Services and Arvato. It also established Vivento Interim Services as a separate temporary staffing company in 2006, which was subsequently transferred to a joint venture with Manpower in 2007. Finally, DT established a strategic partnership agreement with Nokia Siemens Networks that
led to the operational transfer of 1,600 VTS employees in 2008.

The sale of the Vivento establishments demonstrated management’s increased willingness to outsource technician and service jobs. However, in contrast to DT’s former outsourcing strategies, these measures shifted formerly core workers (and ver.di members) to firms with weaker or no collective agreements. This presented a new set of challenges for ver.di’s telecommunications department, FB9, as it sought to support its members who were transferred to call center vendors. Call center employees transferred to Arvato (owned by the notoriously anti-union conglomerate Bertelsmann) had the terms of their existing collective agreement secured through 2009, and managers have indicated that they will ask employees to sign individual contracts at a lower level when the agreement expires. Union and works council representatives were informed that pay would average €25,000 a year, with more than a third of that amount paid directly by Deutsche Telekom; however, this “top-up” is secured only for five years. In addition, working time will be increased to 40 hours from 38, and other former perks, such as vacation time, will be cut. Ver.di is encouraging employees not to sign the new contracts, and instead seeking to pressure Arvato management to negotiate a collective agreement, using leverage from its members in the former VCS locations where membership density remains at around 40%. Predictably, it is facing steep resistance from management, which has informally threatened to move work to other locations (with weaker union support) if employees refuse to sign individual contracts.

Ver.di faces a different set of challenges at the VCS locations that were transferred to Walter Telemedien. Walter was the only major call center vendor to negotiate a collective agreement with ver.di, but the price for this was a “competitive” wage rate for the industry: the agreement set minimum hourly pay at €5.11, with an additional performance-based component of €1–2. When Walter purchased the new locations from DT, the employees were automatically transferred to this existing agreement, based on a provision in German law that provides an exception to transfer of undertakings rules when both firms are covered by agreements with the same union. Walter’s agreement had been negotiated and administered by a different department within ver.di, FB13—against the resistance of ver.di representatives in the telecommunications department FB9. This meant that employees who had formerly earned an average annual salary of €33,000 saw their pay cut by around a third. Walter’s collective agreement expired at the end of 2007, at which time ver.di sought a new agreement at its preferred minimum wage of €7.50. However, Walter refused to consider an agreement at this level, arguing that doing so would put it at a disadvantage in competing for clients with non-union subcontractors.

Further conflicts were sparked by DT’s announcement in 2007 that it planned to shift 50,000 of its technical service, technical infrastructure, and call center jobs to three new subsidiaries (to be called “T-Service”), coupled with the demand that ver.di renegotiate pay and working conditions. Ver.di led a six-week strike—the first in the history of the company—with strong support from its membership. Despite this show of strength, the union faced a number of challenges in building bargaining power in negotiations. Ver.di’s members initially sought to use their position on the DT Aufsichtsrat to oppose the creation of the subsidiaries, but were unsuccessful. Once management decided to go ahead with the planned restructuring measures, the union was unable to use a strike to oppose these measures under German law; it could legally strike only to protest the consequences of such measures for employees. In addition, managers planned to move employees from both T-Mobile and T-Com into the subsidiaries, which they argued gave them the legal right to adopt the

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11 Paragraph 613a from the Bürgerlichen Gesetzbuch (BGBl) establishes that employees who are transferred to a new owner through the purchase or takeover of their company have the right to maintain their existing working conditions for a year. However, this does not apply when the new owner has an existing collective agreement with the same union as the former owner: in this case, employees are immediately transferred to the new agreement. See http://www.juraforum.de/gesetze/BGB/613a/.
Table 4. Comparison of Call Center Pay Levels at Deutsche Telekom’s Subsidiaries and Major Vendors, 2006–2008.

<table>
<thead>
<tr>
<th>Employment in CCs</th>
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<th>Employment in CCs</th>
<th>Employment in CCs</th>
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<tbody>
<tr>
<td>% Total Employment</td>
<td>~18,000</td>
<td>~3,000</td>
<td>~3,000</td>
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<tr>
<td>Starting Salary</td>
<td>21%</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td>T-Service, DT Kundenservice (2007)</td>
<td>~22,000</td>
<td>~7,000</td>
<td>~10,000</td>
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<tr>
<td>Walter Services (2007)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Arvato Services (CC/CRM) (2007)</td>
<td>~€16,000</td>
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<table>
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<tr>
<th>Average Salary</th>
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<th>Average Salary</th>
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<tr>
<td>Dir. Assistance</td>
<td>€23,772</td>
<td>€20,435</td>
<td>~ €18,000</td>
</tr>
<tr>
<td>Service (simple)</td>
<td>€29,646</td>
<td>€20,435</td>
<td>~ €18,000</td>
</tr>
<tr>
<td>Cust. Service</td>
<td>€34,620</td>
<td>€23,490</td>
<td>~ €18,000</td>
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<tr>
<td>Large Business</td>
<td>€31,374</td>
<td>€26,545</td>
<td>~ €18,000</td>
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<tr>
<td>Employees transferred to Vivento retain</td>
<td>€32,088</td>
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<td></td>
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<tr>
<td>Service and Sales</td>
<td>€28,470</td>
<td>€22,478</td>
<td>€22,478</td>
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<tr>
<td>Cust. Service</td>
<td>€37,392</td>
<td>€25,839</td>
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<tr>
<td>Large Business</td>
<td>€35,564</td>
<td>€29,199</td>
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<tr>
<td>~15–20%</td>
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<table>
<thead>
<tr>
<th>% Variable Pay</th>
<th>% Variable Pay</th>
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<tbody>
<tr>
<td>Service and Sales</td>
<td>7%</td>
<td>10%</td>
<td>15%</td>
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<td>Large Business</td>
<td>€5323 (100%)</td>
<td>€7260 (100%)</td>
<td>€7985 (150%)</td>
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<td>€7985 (150%)</td>
<td>€12,375 (150%)</td>
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<td>Pay at Risk Working Hours</td>
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<tr>
<td>38</td>
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</table>

Sources: Pay data from the DT companies and Walter Services are based on collective agreements and estimated averages from union and works council representatives. Pay data from Arvato are based on estimated averages from works councilors.
less favorable T-Mobile agreement without further negotiation (particularly for the new call center subsidiary). Finally, DT publicly threatened to sell the service subsidiaries if it was unable to get a favorable agreement. This put ver.di in a weak, and largely defensive, bargaining position.

Under the agreement eventually reached by both parties, wage levels for former T-Com employees moved to T-Service were reduced by 6.5% over 42 months, and weekly working time increased from 34 to 38 hours without pay compensation, amounting to an overall reduction in compensation of more than 10%. In addition, new employees were to earn 30% below the former level; the use of variable pay increased, with 15% of base pay tied to DT's organizational performance and individual and team performance targets; and the regular working week was lengthened to include Saturdays in call center operations. Management agreed to extend protection against compulsory layoffs until 2012, to refrain from selling the new service subsidiaries until 2010, and to offer 4,150 jobs at T-Service to DT apprentices.

Management also used the restructuring process as an opportunity to renegotiate works agreements on a range of topics. For example, DT was introducing GPS tracking systems and began to discuss with its works councils the possibility of using this technology to monitor the movements of individual technicians, resulting in a limited pilot project. Because the agreement introduced pay at risk tied to performance, management sought and secured limited exceptions to works agreements that allowed supervisors to look at individual performance metrics. Worker representatives also faced difficult negotiations over whether the time technicians spent driving to their first assignment and home from their last assignment would be included in employees' official working hours. Both parties eventually resolved this with a compromise agreement allowing employees some limited use of company-owned vehicles as compensation for lost pay. These changes represented a substantial reorganization of work, characterized by a shift to individual incentives and increased monitoring.

In addition, works councils accustomed to their distinct company "cultures" were obligated to develop a new structure for decision-making and communication. Call center jobs from both T-Com and T-Mobile were moved into the new subsidiary; and while T-Com's works councils were organized on a regional basis and dominated by ver.di members, T-Mobile's works councils had a workplace-based structure and weaker links to ver.di. Works councilors anticipated that the integration process would generate conflicts in the short term and divert resources from negotiations over substantial planned changes in work organization. After a year within the new structure, local works councils were struggling to maintain autonomy as management sought increasingly to by-pass the local level and negotiate agreements with the central works councils for each new company.

Summary. The outsourcing and subsidiary strategies discussed above further eroded already weak coordinated bargaining structures and contributed to increased labor market segmentation and downward pressure on wages within large firms. Pay level and structure for technician jobs were similar between DT and Arcor, following the reductions in base pay and introduction of variable pay at DT: at T-Service, technicians in the lowest major pay grade started at €26,000, with an average salary of around €35,000, and top salaries close to €50,000 for senior specialists. At Arcor, the lowest pay grade started at €25,000, with an average salary of around €33,000, and a maximum of €43,000 for senior specialists.\footnote{Pay rates based on collective agreements as of 2007.} Table 4 compares pay levels for call centers in Deutsche Telekom's subsidiaries and major vendors. This illustrates the large variation between in-house and outsourced firms performing largely similar work, as well as the extent of potential pay reduction for DT's call center workers as they are shifted from T-Com to the subsidiaries T-Service and Vivento.

Conclusions

The liberalization of the German teleco-
Communications market in the 1990s precipitated a number of changes in industrial relations institutions and management strategies. The industry today is characterized by increasingly fragmented collective bargaining structures, declining union bargaining power, and growing variation in pay and working conditions within and across firms. These developments are particularly striking when measured against the industry's recent history. Up to the mid-1990s, the industrial relations system was characterized by encompassing bargaining structures, strong internal bargaining coordination, and a tradition of social partnership (Darbishire 1997). Outcomes for workers included relatively high and egalitarian wages, protection against job loss and erosion of working conditions, and substantial opportunities to participate in management decision-making.

These institutions quickly unraveled following the privatization of DT and the introduction of competition across market segments. While the DPG and now ver.di have sought to establish closer relationships with works councils in new firms, they face considerable obstacles, including lack of interest or cooperation from new employers, competition between unions, and low membership density in new industry segments. Today, collective bargaining in the German telecommunications industry occurs at the company level, even within the DT corporate group, while works councils have displaced unions as the primary, or only, form of collective representation at DT's competitors. Meanwhile, managers are reorienting their investment strategies to increasingly price-competitive and differentiated markets, at the same time as they seek to balance obligations to their existing work force with increased pressures to maximize returns to shareholders.

The scope of these changes in markets and institutions makes the telecommunications industry a particularly useful case for examining contemporary change in the German industrial relations system. First, the findings provide evidence that a substantial transformation in bargaining structures and union bargaining power is occurring in Germany, on a scale reminiscent of U.S. developments in the 1980s (for example, Kochan et al. 1986). Industrial relations in the German telecommunications industry has undergone what Erickson and Kuruvilla (1998) describe as a fundamental or transformative change, measured in terms of both formal institutions and their system effects. Germany's strong workplace-level co-determination institutions have been viewed as interdependent with (or complementary to) industry-level bargaining structures, distinctive financial institutions providing "patient capital," and quality-focused competitive strategies in international markets (Hall and Soskice 2001)—all of which have been weakened or are absent in this sector. In telecommunications, the stability of industrial relations also relied on a high degree of market protection. Political decisions at the EU and national level to liberalize telecommunications markets have increased pressures on firms to reduce costs, exacerbated by changing ownership patterns. These dynamics are not unique to telecommunications: many service industries in Germany, such as postal services, utilities, transportation and logistics, and hospitals, are currently undergoing similar changes in markets and ownership, affecting a large swath of traditionally protected workplaces (Brandt et al. 2008; Keune et al. 2008). Across these sectors, bargaining coverage and unions' capacity to coordinate bargaining at sector level have declined, contributing to growing wage inequality (Bosch and Weinkopf 2008).

Second, the findings demonstrate that organizational restructuring is a central element of firm strategy that is being used to drive institutional change in Germany. The case studies presented here show that new, more networked or vertically disintegrated organizational forms constitute an important mechanism through which managers are able to pursue transformative change in employment systems. This represents what Streeck and Thelen (2005:31) term "displacement" as employers defect from dominant arrangements, leading to the "cultivation of a new 'logic' of action inside an existing institutional setting." Despite formal stability in bargaining rights and some continuity in bargaining structures within core firms,
unions and works councils are increasingly circumscribed in their ability to influence working conditions outside this core. Even at DT, the use of subcontractors and renegotiation of contracts in subsidiaries have increased variation in employment systems across establishments and across different groups of employees in similar jobs. These trends are particularly pronounced in telecommunications, due to its history of single employer bargaining and lack of a sectoral agreement. However, they are also consistent with the findings of recent studies in other sectors. Processes of vertical disintegration have weakened coordinated bargaining in the German auto industry (Doellgast and Greer 2007; Greer 2008a; Jürgens et al. 2003), health care sector (Greer 2008b), and logistics (Plehwe 2001). This suggests that the findings presented here may be representative of broader trends in the German economy, whereby the growing ambiguity of sectoral boundaries and growth of new non-union or weakly unionized sectors are making it increasingly difficult for industry-based unions to coordinate bargaining across complex supply networks.

Several core features of the traditional German model have persisted in large telecommunications firms—most notably, independent firm- and workplace-level codetermination structures and “dual” vocational training arrangements. Union and works council influence looks particularly strong when compared to more liberal countries such as the United States and Australia, where bargaining rights have traditionally been weaker and bargaining coverage has declined more dramatically over the past two decades (see the articles by Keefe and by Ross and Bamber in this issue). German works councils’ formal role in management decision-making is unlikely to be contested in the near future, as managers rely on these bargaining structures to gain worker acceptance for, and cooperation with, new measures that reorganize core jobs (Blutner et al. 2002). Employers also remain largely committed to the apprenticeship training system, as apprentices are valued as a source of relatively low-cost labor and skills. However, this privileged core is shrinking as firms outsource work and reduce the skill content of certain jobs.

Together, these findings suggest that industrial relations institutions will play an increasingly circumscribed role in shaping management strategy and worker outcomes in the German telecommunications industry. Reversing these trends would require re-establishing coordinated bargaining, ideally across both large firms and their subcontractors. The degree to which bargaining coverage and coordination have declined in Germany is in some respects unique, and linked to distinctive traditions of Tarifautonomie, whereby employers and unions have broad rights to negotiate collective agreements without state intervention. Telecommunications unions in other European countries with stronger state intervention in industrial relations have been more successful in establishing industry-wide bargaining structures. For example, in Belgium, France, and Finland, mandatory extension mechanisms require all firms in a sector to adhere to agreements negotiated by major employers, leading to 100% bargaining coverage; and in Austria, mandatory membership in employers associations plays a similar role (Traxler 2007:22). Absent the development of new mechanisms in Germany for extending minimum terms of employment, competition between locations for investment will continue to undermine the coordinated bargaining institutions that have traditionally supported egalitarian pay structures and worker participation in restructuring decisions.
REFERENCES


