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Deregulation and Restructuring in Telecommunications Services in the United States and Germany

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The telecommunications services industry provides a particularly useful and interesting lens for considering the issue of mutual learning between the United States and Germany. As noted in Chapter 1 to this volume, most learning in the field of industrial relations has tended to be a one-way street, with U.S. researchers and practitioners advocating the replication of successful components of the “German model,” such as the apprenticeship system or works councils, which undergird high levels of skill and productivity in manufacturing. The experience of the telecommunications industry, however, provides the opportunity for Germany also to learn from the United States because the United States continues to lead the world in providing high-quality universal service. Mutual learning is particularly important in this industry because it employs 1–2 percent of the workforce in both countries (Katz 1997) and provides a critical infrastructure for the competitiveness of firms and “information-based” economies.

Historically and currently, the leadership role of the United States in telecommunications grows out of its technological innovations, with early pioneering work in information technologies and systems engineering at AT&T’s Bell Labs and with the later deployment of cellular, satellite, and other advanced technologies by new entrants such as Microwave Communications Inc. (MCI). The availability of alternative wireless communications systems from MCI and others, in turn, convinced U.S. regulators that the AT&T monopoly was not viable,

leading to deregulation of the long-distance and equipment markets by 1984.¹ In response to deregulation and new low-cost competitors, AT&T reoriented its corporate strategies and structures to serve differentiated market segments, invested heavily in fiber-optic cable and digital transmission and switching systems, and reengineered operating systems. These innovations brought significant cost reductions in equipment and long-distance service; dramatic improvements in response time, quality, and speed of transmission; and diversity of product offerings. Business customers, who were heavy users of equipment and long distance, particularly benefited. In anticipation of local deregulation (finally legislated in 1996), the regional Bell operating companies (RBOCs) mimicked AT&T's strategies. The U.S. case, therefore, serves as an example of how organizational restructuring improved performance of an industry that is vital to national economic competitiveness (both directly and as an important input into other goods- and service-producing industries).

By contrast, in spite of a historically high level of technological competence within Deutsche Telekom (Telekom), the nature and path of adjustment in response to the pressures of competition and reform have been significantly different, and slower. Deutsche Telekom was privatized in 1994 but still retained a monopoly in providing telephone and cable TV. Deployment of digital systems considerably lags behind that in the United States, and consumers receive slower service and fewer product offerings and pay higher prices. Telekom has struggled to reorganize itself by copying the corporate strategies, organizational structures, and work practices of U.S. firms.

Because of the slower pace of reform, however, Telekom also stands to learn from the mistakes made in the United States, where deregulation has led to increased inequality among consumers and workers. For consumers, the restructuring has benefited businesses because they no longer pay rates that subsidize universal residential service. Both business and high-end retail customers can take advantage of falling prices for long-distance calling, high-speed networks, or enhanced features such as voice messaging. For lower-income consumers, however, the basic costs of local service have risen, and these consumers are less likely to be able to take advantage of new products or enhanced features, even if they are less costly than before (Keefe and Boroff 1994, p. 318). For labor, restructuring has not only dis-

placed employees and reduced union strength, but it has also created more unequal labor market conditions both within and between union and nonunion segments. To the extent that Germany wishes to preserve equality for consumers and workers, this chapter provides an analysis of how inequality in U.S. outcomes has occurred.

The United States stands to learn from Germany as well. In response to real and anticipated deregulation, former Bell companies downsized rapidly, depleting their embedded skill base, demoralizing their workforce, and paying large severance or early retirement packages. As an unintended consequence, those packages subsidized the labor costs of competitors because competitors often hired former Bell employees whose pension and health insurance were already covered by their retirement packages. Moreover, from 1996 on, Bell companies failed to anticipate the explosion in demand for Internet access and new products, and they found themselves understaffed and scrambling to fill vacancies for skilled employees.² This chapter demonstrates how the slower pace and continued monopoly status of Telekom allowed it the opportunity to retrain its workforce and shift employees from traditional to growth segments of the market without incurring the substantial costs of turnover and displacement, which negatively affect both management and labor.

These differences in paths to restructuring are more striking because U.S. and German telecommunications monopolists have quite similar starting points. This similarity is in contrast to manufacturing, where mass-production systems in the United States were considerably more developed than in Germany. Historically, most countries operated public telephone monopolies with quite similar organizational structures. These companies were highly regulated, quasi-public enterprises providing a basic service to the public. While Deutsche Telekom operated as part of the Bundespost, which included the national post, bank, and telecommunications, under the auspices of the Federal Minister of Posts and Telecommunications, AT&T was regulated by the (functionally similar) Federal Communications Commission (FCC). Generally, telephone companies were large bureaucratic organizations offering lifetime employment with high wages and benefits to employees who either considered themselves public servants or who were officially part of the civil service. In other words, the internal labor market rules governing work and employment relations in different countries

(beyond just the United States and Germany) appear to have been remarkably similar. Equally, unionization rates in the industry were very high among eligible workers. Under these circumstances, one might expect the United States, Germany, and other countries to follow similar paths to deregulation, with similar corporate strategic responses and stakeholder outcomes.

Other unique features of the industry argue for the adoption of parallel adjustment paths among countries. To be globally competitive, most former national telecommunications monopolies need to pursue, and have pursued, joint ventures in order to enter each others' markets, such as AT&T with its World Partners and Deutsche Telekom with France Télécom and Sprint. These companies are laying global networks of cable to provide integrated voice, video, and data services to worldwide customers. The integrated nature, or "systemness," of network technology requires compatibility of systems across regional and national boundaries. Moreover, because of the concentrated structure of the industry in each country, in which former monopolists continue to be the dominant players, the strategic choices of a handful of players significantly shape the direction of industrial change. The key players, who include Deutsche Telekom, AT&T, and the regional Bell operating companies in the United States, closely watch and learn from each other's experience. In contrast to manufacturing, where decentralized production units are more viable, this predilection to watch and learn again increases the likelihood that the transfer of technology and the borrowing of work organization strategies among countries will be substantial.

Yet in spite of the similarity of initial starting points and underlying pressures for change, the trajectory of the telecommunications industry in the United States and Germany has diverged. We argue that the different paths of restructuring in the two countries reflect classic underlying differences in governance structures and industrial relations systems. There is also variation within the United States, however, which reflects the weak institutionalization and fragmentation in government regulatory bodies and labor market institutions at the national and state levels. Thus, we argue that differences in national and regional industrial relations systems play a central role, both in shaping regulatory policy and in shaping corporate strategy and work organization. These alternative approaches, in turn, lead to significantly differ-

ent outcomes for stakeholders: consumers, firms, employees, and unions. We distinguish cases along a continuum from the highly unconstrained, “market-driven” example of AT&T, to the intermediate “consumer-driven” cases of two RBOCs, to the highly constrained, “labor-mediated” approach of Germany.

On the product market side, deregulation and reregulation are the result of political contests within existing institutional structures and are therefore not exogenous. In the AT&T case, market reform was evolutionary and did not occur through legislative or “overtly political” action. Rather, MCI, backed by corporate constituents, used the FCC and the courts to create a “free market.” In an interesting twist on the historic use of the courts to undermine labor’s power, the MCI coalition used the courts to undermine the power of the unionized employer and create a nonunion alternative. The resulting policy was one of “regulatory asymmetry” that privileged new entrants, ensured that AT&T would lose market share, and prohibited former Bell system companies from entering certain product markets (local and cable TV in the case of AT&T and long distance, equipment, and cable TV in the case of the RBOCs). This structure, in turn, created the incentive for reregulated Bell companies to shift the costs of restructuring to their unionized workforce. In sum, the evolutionary transformation of the product market was a response to corporate constituents who pushed in a pluralistic (or fragmented) institutional environment not for complete market deregulation but for reregulation that would favor new entrants.

In contrast to AT&T, the RBOCs enjoyed a longer time horizon and more favorable conditions for restructuring because they served local markets, which were not as lucrative for new entrants. More importantly, politically elected regulators and legislators were concerned about the potential negative effects of restructuring on the mass of citizen consumers—their political base. The RBOCs were and continue to be regulated by state Public Utility Commissions (PUCs), elected bodies whose purpose is to keep rates low for consumers and to ensure universal service. Product-market liberalization occurred incrementally, on a state-by-state basis. In exchange for guarantees of low rates and continued quality service, some state PUCs replaced fixed rates with more market-oriented, “incentive” rates—rates that allowed RBOCs to retain some of the profits from efficiency-enhancing innovations. In the two cases here, BellSouth was successful in this strategy

in all of its nine states, while NYNEX³ was not. In addition, rather than oppose deregulation as AT&T had done, all of the RBOCs united to use their political strength in states and communities across the country to gain U.S. Congressional support for a version of deregulation that favored incumbent local providers, the bill that finally passed in 1996.

In the German case, it was the powerful Deutsche Postgewerkschaft (DPG) union that successfully pressured the national government to approach deregulation at a much slower and more cautious pace and in ways that have privileged and protected Deutsche Telekom in the intervening period. In this case, the “regulatory asymmetry,” which favors Telekom and the unionized workforce, is not a response to business (as in the AT&T case) or to consumers (as in the RBOC case), but to labor. As Germany privatizes and deregulates the telecommunications industry, for example, Telekom has been allowed to continue monopoly control of the cable TV market, potentially giving it a substantial strategic and competitive advantage. The DPG was able to exercise significant influence and protect employee and union interests because it operated in a neocorporatist framework within a “semi-sovereign state” (Katzenstein 1987). That is, within the German system, political power is dispersed between large, encompassing social groups and decentralized states. The integration of peak economic interests into the formulation of economic policy constrains unilateral decision making and promotes cooperation and consensus. Privatization and reregulation have, consequently, occurred in a framework designed to perpetuate union and employee rights.

Differences in labor market institutions and managerial strategic choice provide a parallel story. AT&T’s market-driven approach has been characterized by unilateral action on the part of management, a failure to jointly develop work reorganization strategies, and a reliance on technology and reengineering, rather than human resource strategies, to achieve organizational reform and competitiveness. As a result, the workforce has borne the major costs of restructuring. The restrictions on entering new markets, coupled with the economies of scale of new technology and cost pressures from new nonunion entrants, led AT&T to downsize its nonmanagement workforce by 60 percent and the management workforce by 30 percent in a decade.

The RBOCs have imitated many of AT&T's strategies, but with a longer time horizon and under the constraints of state PUCs. While the mission of the PUCs is not to protect union or workers' rights, unions have been able to leverage the concern of the PUCs for consumer welfare to gain decisions that also benefit workers. For example, unions have united with consumer groups to block rate reform unless accompanied by higher staffing levels to ensure good customer service. They also have induced the RBOCs to agree to union rights in their new subsidiaries in exchange for not opposing RBOC petitions before state utility commissions. Thus, the strategic use of PUC oversight by unions has had an indirect positive effect on worker welfare and union rights, an effect that varies among states.

The German approach, by contrast, has been a "mutualist," or labor-mediated, one. The DPG has slowed the pace of deregulation while simultaneously seeking to protect union and employee interests through detailed involvement and participation in the reorganization of work and corporate structures. Equally, until late 1995, the DPG restricted the possibility of downsizing, while it also influenced corporate strategies to encourage the development of an expanded range of services to ease the impact of digitalization on the workforce. However, the slower pace has translated into slower adoption of new technologies, work practices, and corporate structures. The quality and availability of new services has suffered. Consequently, consumers rather than workers have absorbed more of the costs of restructuring. The remainder of this chapter elaborates the details of the above argument by presenting the evidence of the U.S. cases and the German case. Comparative analysis and conclusions for mutual learning follow.

THE UNITED STATES

The events surrounding the breakup of the Bell System in 1984 have been well documented (Coll 1986; Temin 1987; Stone 1989; Teske 1990; Cohen 1992). The attack on AT&T's monopoly was in response to a series of regulatory decisions, in the 1940s through 1960s, which meant that AT&T's high long-distance rates were

increasingly subsidizing local calls. This created an incentive for new competitors to enter the lucrative long-distance market, offering services at costs lower than AT&T but above “market-clearing” prices. After winning a 1969 lawsuit that allowed it to provide private-line services, MCI spent the next decade building an anti-AT&T coalition comprising other new entrants, the computer industry led by IBM, and major corporate users, particularly multinational financial services and airline corporations (Aronson and Cowhey 1988; Teske 1990; Cohen 1992). A series of FCC decisions in the 1970s, coupled with court rulings which favored the anti-AT&T coalition, progressively undermined the structure of the Bell system.

Divestiture occurred with very little political support. Over 70 percent of telephone customers opposed the 1984 breakup of the Bell system (Keefe and Boroff 1994, p. 316), as did state PUCs and independent telephone companies.⁴ Even the Reagan administration opposed the breakup. However, the pluralistic structure of the U.S. government meant that “interested parties could approach that part of the government most sympathetic to their cause” (Temin 1987, p. 341). In the early 1980s, MCI, IBM, and business customers achieved their goals through the Department of Justice and the courts, having become frustrated with Congress and temporarily blocked by the FCC.

The court order that dismantled the Bell system in 1984 responded to the interests of the anti-AT&T coalition: MCI and other alternative providers gained access to long-distance markets; multinational corporate users obtained reductions in the cost of long distance and equipment inputs. AT&T retained its long-distance and equipment operation but was forced to compete in a system of “asymmetric regulation,” which ensured that AT&T’s long-distance market share dropped steadily. By 1994, this share amounted to 60 percent (FCC 1992/1993). AT&T’s 22 local telephone companies were merged into the seven RBOC monopolies, which were barred from participation in equipment production. They could only enter other markets providing they did not use their monopoly position to do so.

Stakeholders, such as unions, employees, and residential customers, were entirely excluded from the deregulatory process and were unable to promote either the status quo or the security of union institutions, a sharp contrast to Germany. In spite of the fact that Bell system employees numbered over one million, or almost 1 percent of the U.S.

workforce, neither job security nor the future of collective bargaining structures was addressed in the divestiture process (Darbishire 1997b).

In the following sections, we assess the variation in processes and outcomes of restructuring in the cases of AT&T and of the RBOCs BellSouth and NYNEX, to illustrate how variation in product and labor market institutions have shaped firm strategies and stakeholder outcomes. The variation reflects differences in the extent and rapidity of deregulation, differences between local and long-distance product markets, and differences in the political embeddedness of the enterprises and union strategic responses. More fundamentally, the extent of variation reflects the fact that institutions such as labor unions and employee and consumer groups that might have strengthened the positions of their members were weak, and this weakness left room for substantial managerial prerogative in shaping reregulation.

AT&T

The AT&T case represents a strong example of managerial prerogative in which the company focused on converting itself from a public service bureaucracy to a lean, sales-maximizing global enterprise. Three factors shaped AT&T's business and labor strategy during this period: its strategic focus on global over domestic markets, its lack of political constraints or local service requirements, and its need to immediately compete in an asymmetrical regulatory environment against new low-cost competitors such as MCI and Sprint. Union influence on AT&T's strategy has been limited to maintaining high relative wages and negotiating generous severance and early retirement packages in exchange for labor peace. Although joint labor-management work-design initiatives received considerable publicity in the 1990s, they had little impact on actual management practices.

First, with respect to globalization, AT&T focused on the "natural" extension of its long-distance market and leveraged this competitive advantage to create international networks, reshaping itself into a global corporation. Global service means providing an integrated set of voice, data, and video services through a seamless international network, particularly for multinational businesses. This global strategy has included political efforts to reduce international trade barriers, including a strong push to deregulate public monopolies in all coun-

tries. The RBOCs, by contrast, have entered international markets by leveraging their expertise in local service provision to form joint ventures with national monopolists to improve basic services, particularly in developing countries.

Second, AT&T and the RBOC's historic division of the long-distance and local market within the United States means that AT&T largely has indirect contact with its massive customer base. AT&T's long-distance service is provided through access to local networks operated by the RBOCs, who themselves have a more direct and ongoing relationship with customers. AT&T continues to be regulated by the FCC, but it does not have political ties to states or regions and is not constrained by state PUCs. AT&T has taken advantage of its national structure to consolidate and move operations to whatever location offers the lowest cost. The RBOCs, by contrast, cannot move operations out of their state jurisdictions without state PUC approval.

Finally, in 1984 (just after the deregulation of the long-distance and equipment markets), AT&T immediately began competing against new nonunion, low-cost entrants in long distance in the asymmetric regulatory environment. The cost advantages of these new competitors derived from the following: they did not inherit bureaucratic organizational structures, they began with more maintenance-free technologies, they did not have sunk costs in obsolete technologies or have to reengineer complex systems, and they were operating with a younger, nonunion workforce with labor costs of roughly half those of the Bell companies.

To respond to these cost pressures, AT&T reorganized into cross-functional business units targeting distinct market segments: large business, small business, and residential customers. To achieve segmented marketing strategies, business unit reorganization, and geographic consolidation, AT&T relied primarily on its traditional strengths of technology and engineering to achieve economies of scale rather than on human resource strategies. It anticipated significant gains in cross-functional coordination through reengineered information systems that flow horizontally. These technology and reengineering strategies were designed to maximize the multiple goals of reducing costs, increasing the speed and quality of transmission, expanding the variety of services offered, and improving response time.

On the network side, AT&T upgraded its long-distance network by replacing copper with fiber-optic cable and completing the digitalization of switching and transmission systems. Together these technologies created a system that is largely maintenance-free and has greater capacity to transmit voice, video, data, and higher quality service. Digitalization allows employees to remotely diagnose and repair network systems. This capability has reduced the demand for blue-collar craft workers with high levels of traditional electromechanical skills. They have been replaced by a much smaller number of white-collar computer specialists and systems analysts and a much larger number of computer-monitoring clerks paid at 80 percent of former craft wages. Central office switching was consolidated into two major centers—one serving customers east of the Mississippi and one serving those to the west, plus a handful of remote regional centers (MacDuffie and MacCoby 1986).

On the sales and service side, AT&T cut costs and labor by consolidating hundreds of local operator and customer service offices into a handful of remote national centers with toll-free phone access. Rather than reduce Taylorism,⁵ it has used new computer and software information systems to create repetitive jobs that are machine-paced, electronically monitored, and functionally specialized. This strategy, however, varies significantly by market segment. Automatic call distribution systems determine the call volume of customers and automatically link them to the appropriate labor market segment. College-educated managers handle large business customers and provide on-site, “one-stop shopping.” Nonmanagement service consultants serve small business customers, handling 25–30 calls per day. Residential service reps serve the mass of consumers; unlike “universal service reps” of the past, these employees are now functionally specialized into sales, billing, collections, and repair. Furthermore, they are tied to computers driven by expert systems and handle roughly 80–90 calls per day. Management and union representatives alike agree that these have become the most stressful jobs in the industry because of intense pressure to sell, to handle customers courteously, and to turn over calls quickly, all within the context of ongoing electronic monitoring.

In sum, the market segmentation strategy increases inequality in service among customer segments according to the ability to pay; the strategy also increases labor market segmentation within companies, as

the design of jobs, skill requirements, and wage levels are equated to the customer segment being served (see Batt 2000a for a broader discussion of these segmentation strategies and outcomes). This segmentation strategy, coupled with the downward pressure on wages from nonunion competitors, particularly at the lower end, has led to increased labor market inequality within occupations, companies, and the industry as a whole. Between 1984 and 1994, for example, wage inequality within customer services more than tripled (Batt and Strausser 1998; Batt and Keefe 1999).

Two additional effects of these strategies on the workforce have been paramount: labor displacement and declining morale. While initially viewed as a temporary strategy, downsizing became an increasingly routine part of business for AT&T in the decade following deregulation. AT&T reduced its domestic nonmanagement workforce by 60 percent between 1984 and 1995 (from 250,000 to 100,000); it reduced management ranks by 33 percent.⁶ As downsizing continued, involuntary rather than voluntary separations came to represent an increasing proportion of the terminations, with later rounds of downsizing offering employees smaller severance or early retirement packages. In the first two years of postdivestiture operations, for example, AT&T reduced its head count by 56,000 positions. Only 25 percent involved layoffs; the remainder left through attrition, voluntary severance, early retirement, transfers within AT&T, or transfers back to the RBOCs. Between 1984 and 1992, 58 percent of separations in the unionized workforce involved layoffs, while 42 percent involved voluntary separations. In the company's 1996 announcement of another round of downsizing, it indicated that most separations would occur through layoffs (see Keefe and Batt 1997).

For the survivor workforce, restructuring has had profound effects on morale. While in 1981, 68 percent of the nonmanagement employees felt that the company provided job security and only 8 percent did not, by 1991, the opposite was true: 73 percent said there was little job security while less than 4 percent felt there was any job security. Sixty-six percent felt unable to affect the course of events at AT&T, and 80 percent had little confidence in management's ability to lead the corporation (Keefe and Batt 1997). Career opportunities also fell. Whereas in the past, employees would follow job ladders in local communities, now they often had to move their families across the country to accept

promotion opportunities. A 1991 study surveyed workers who had survived several rounds of downsizing at AT&T. Those workers whose jobs had been “surplused” (eliminated) and who had stayed at AT&T by transferring to other positions found themselves in the “surplus” status on average 2.5 times in a five-year period (Keefe and Boroff 1994, p. 328). Some 87 percent of the survey respondents said they wanted to keep their current jobs until they retired, but less than 10 percent believed that there was any opportunity for advancement at AT&T (Keefe and Boroff 1994, p. 328).

AT&T’s cost-cutting labor strategy also included shifting from a predominantly unionized (67 percent) workforce in 1984 to a predominantly nonunionized one (42 percent) in 1995. This was accomplished by downsizing the unionized core, expanding the workforce in non-union enterprises, and increasing the number of management job titles, which are ineligible for union representation. AT&T established two nonunion subsidiaries, American Transtech (the largest U.S. telemarketing service) and AT&T Universal Card (the second largest U.S. credit card company). It acquired two nonunion equipment manufacturers, Paradyne (data communications equipment) and National Cash Register (NCR). American Transtech and NCR were subsequently spun off as separate companies. In addition, new jobs requiring more technical or professional skills related to new technologies were often defined as managerial and exempt from union representation. As a result, the percentage of the workforce defined as managerial grew from 29 percent in 1984 to over 50 percent in 1995 (Keefe and Batt 1997).

Labor–management relations, historically cooperative, collapsed under these pressures, as did the Quality of Worklife (QWL) program negotiated in 1980. Beginning in the late 1980s, AT&T initiated some joint union–management experiments in total quality management (TQM) and self-managed teams. However, most fell apart in the 1990s when the company initiated downsizing and reengineering, which undermined employee morale and the stable relationships between workers and managers necessary to make these innovations successful. In 1992, a negotiated pact, “Workplace of the Future,” was designed to reestablish cooperative labor–management relations by involving the union and workers in work innovations at several levels of the organization, from the strategic business units to the workplace. Successful

adoption, however, depended on managerial choice at decentralized business units, and few managers chose to participate. Today, many managers, workers, and trade unionists remain highly skeptical about top management's commitment to this effort. They cite AT&T's history of presenting positive public relations images but not following through on the implementation.

The Regional Bell Companies: BellSouth and NYNEX

The political debate and approach to regulatory reform surrounding the RBOCs has been considerably different than that for AT&T because of the RBOCs' central role in providing basic universal service. The issue of consumer welfare figured more prominently in the debate over deregulating local markets among both national and state officials, and as elected officials responded to their constituents, labor often benefited as an unintended consequence. While long-distance service is viewed as unessential, local service is considered a necessity for emergency medical and life-threatening circumstances. Because costs exceed revenues in local service, regulators historically ensured universal service by requiring AT&T to help subsidize local service by paying an access fee to connect to the local Bell infrastructure, a requirement extended to all long-distance companies after 1984.

The central problem in local service deregulation, therefore, was to figure out how to ensure continued universal access, particularly in small towns and rural areas. A "free market" solution would have resulted in dramatic price increases for basic service, an unacceptable political solution. This, in fact, did occur as a result of long-distance deregulation, where long-distance rates dropped by 40 percent and call volume doubled, but basic residential rates increased by more than 60 percent—from \$11.58 to \$18.66 (Keefe and Boroff 1994, p. 318).⁷

The RBOCs, therefore, continued their monopoly in local service in the decade after divestiture while regulators considered alternative solutions. This longer time horizon also benefited consumers as well as employees by allowing the RBOCs to reduce their workforce through attrition, early retirement offerings, or through retraining and replacement in growth sides of the business, particularly cellular. Finally in 1996, a politically powerful RBOC coalition successfully

pushed through its version of legislative reform in the U.S. Congress, a “fast track” version that favored incumbent providers over AT&T, MCI, and new entrants. In this version, local companies could offer long-distance service as soon as they opened their markets to competitors; but because of their established base, the RBOCs were considered to have a competitive advantage. Moreover, in May 1997, FCC regulators finally issued rules to handle the cross-subsidy problem. While a comprehensive agreement on universal service was not reached, an initial compromise gave the RBOCs transition time by phasing in reductions in access charges over a five-year period, a longer time horizon that will ease the negative effects on labor adjustment. The long-distance lobby (AT&T, MCI, Sprint, and others) had sought complete, immediate reductions. FCC regulators also protected low-end users, raised monthly rates by \$1.50 for second lines to residences (e.g., higher-end consumers) and \$3.00 for business consumers, and created a special fund to subsidize Internet access to schools and public libraries (Landler 1997).

Meanwhile, at the state level, the ongoing oversight of PUCs constrained the RBOCs’ business strategies in ways that directly favored consumers, and indirectly, labor. In the first half of the 1990s, for example, PUCs cited several RBOCs for poor service delivery (Bell Atlantic, NYNEX, and U.S. West), and in some cases (e.g., Bell Atlantic and U.S. West) required the companies to increase staffing levels to meet consumer demands.

State PUCs differ considerably in their standards and policies, and BellSouth and NYNEX represent opposite ends of the spectrum. While NYNEX has historically faced a “tough” New York state utility commission (with respect to rate setting and service standards), BellSouth has faced a more lenient one in its several-state area. BellSouth and NYNEX also operate under distinct labor laws; BellSouth operates almost entirely in “right-to-work” states, with laws that weaken union institutional security. Thus, differences in the political role of the regulators and in labor laws create a distinct institutional framework at the regional level. However, institutional variation does not fully explain the regional variation in restructuring processes and outcomes. In light of weak regional institutional structures for stakeholder participation, the strategic choices of the companies and their unions played a far stronger role in determining the variation of outcomes (Turner 1991).

On the one hand, the BellSouth strategy emphasized joint partnerships to improve customer service, relatively high levels of employment stability (force reductions of roughly 20 percent), but low relative wage and benefit increases. The Communication Workers of America (CWA, of which District 3 represents workers in the BellSouth region) emphasized labor–management cooperation as the most effective way to build union membership and power in the context of weak labor laws. Yet even here, it was difficult to sustain a cooperative approach to implementing work reorganization in the face of anticipated local deregulation. On the other hand, the NYNEX strategy included no union involvement in workplace innovations, high wage and benefit increases, and high levels of workforce reductions (roughly 35–40 percent). The regional union at NYNEX (District 1 of the CWA) had the most militant record of the seven regional districts and pursued the most aggressively adversarial strategy against NYNEX in its six north-eastern states. In response, the company sued for labor peace beginning in 1992, a shift in strategy that led to high employment security for the survivor workforce through the most extensive retraining and replacement program in the industry.

BellSouth

Even though BellSouth operates in a relatively weak regulatory environment in right-to-work states, union membership traditionally has been high (over 80 percent of union-eligible employees), and the union and management had adopted a cooperative relationship. This cooperative approach dates to a particularly bitter strike in 1956, after which the company accepted the union as a fact of life and began building a relationship of trust and mutual respect. The union also made the strategic decision to pursue cooperation to keep membership levels high in this right-to-work environment, where workers could choose whether or not to be members and feared management retaliation. Regular interactions between union leadership and management followed the negotiation of a “responsible relationship clause” between AT&T and the CWA in 1966, while by 1971, a problem-solving approach to grievances had reduced the number reaching the state executive level by 50 percent. In 1977 negotiations, the parties agreed to a procedure to expedite arbitrations (Crane 1990).

Experiments in “participatory management” began in the late 1970s (Crane 1990, pp. 34–46), and when AT&T and the national CWA negotiated the joint QWL program in 1980, Southern Bell and CWA District 3 actively implemented it at local worksites. While QWL efforts soon died out in most companies, at BellSouth they still numbered over 600 in 1989 when they were merged into a TQM program. Workers generally viewed QWL programs as a benefit, an example of management actually listening to their concerns. Additionally, the parties at BellSouth developed a joint QWL oversight structure in which management at the district (local), state, and corporate levels invited union leaders to attend regularly scheduled business meetings, an important precedent for subsequent labor–management information sharing and consultation.

In the early 1990s, the parties formalized union participation in monthly business meetings and set up a three-tiered joint structure for union–management collaboration in TQM. The union backed the strategy to improve competitiveness and save jobs. Joint labor–management training teams at the local, state, and corporate levels developed curriculum and provided training to virtually all employees in the company over a two-year period. The trainers also provided technical assistance in problem solving, process improvement, and job redesign efforts such as self-managed teams. The parties also negotiated the parameters for local experimentation in workplace innovations, including telecommuting, self-managed teams, and bringing subcontracted work back in-house.

Local experimentation with TQM and self-managed teams was substantial, and by 1994 both management and the union considered the efforts successful. Twenty percent of workers in network and customer services had participated in TQM problem-solving teams, and 5 percent were participating in self-managed teams. Quantitative evaluation comparing performance of self-managed and traditionally supervised work groups showed significant positive effects of teams for the company, workers, and the union: performance of teams was significantly higher, indirect labor costs fell, workers preferred the arrangements, and nonmanagement jobs were saved at the expense of management jobs (Batt 1999, 2001). A 1996 customer service survey by an independent consulting firm found that BellSouth had the top ratings in customer service of any telephone company (J.D. Power and

Associates 1996). Furthermore, a 1994 survey found that 92 percent of managers and 81 percent of local union presidents supported the union's participation in TQM. Seventy-seven percent of managers and 77 percent of union presidents believed that union participation was critical to the success of TQM. Ninety-seven percent of local union presidents were participating in monthly business meetings, and 32 percent were participating in weekly management staff meetings. Similarly, 90 percent of workers believed the union should participate in TQM, and 60 percent believed union participation was critical to the program's success (Batt 2000b). The union also supported the company in going before state PUCs to gain regulatory reforms that would shift rate regulation from fixed to incentive-based systems, a shift that allowed the company to keep some of its profits from efficiency gains.

The union's participation in partnership strategies depended fundamentally on the company's long-standing commitment to employment and union institutional security and to the mature bargaining relationship that the company and union had achieved. At the time of divestiture, for example, when BellSouth set up a separate subsidiary known as Advanced Systems, Inc. (ASI), it negotiated a separate contract with the CWA rather than operate ASI as a nonunion subsidiary (in contrast to AT&T). In the first round of bargaining after divestiture, BellSouth was the only RBOC to agree to the union's request for regionwide bargaining (as opposed to the more decentralized approach of bargaining with each telephone company in the region). All postdivestiture contracts were approved by the membership without strikes. The company and union also used memoranda of agreement extensively between contracts to promote workplace change. Other negotiated clauses offset the membership declines associated with attrition. A 1989 joint union-management task force studied the content of managerial jobs and returned 550 jobs to the bargaining unit. A 1995 joint study team studied the costs of subcontracting work out and negotiated an agreement to bring the work in-house.

Compared with AT&T and NYNEX, BellSouth has pursued a high relative employment strategy with low relative wages. This strategy may reflect the market characteristics of the region, where (at the time) the population was more rural, geographically dispersed, and growing. Employment fell through attrition by roughly 10,000, or 12 percent of 83,000 employees between 1990 and 1993. Another 10,800 employees

were targeted to leave between 1994 and 1996, with roughly equal percentages of managers and workers affected, but many of these proved unnecessary as market conditions improved. Wage increases were relatively low (averaging about 2–3 percent annually after divestiture).

Cooperative labor relations were critical to the considerable experimentation in work innovations at BellSouth. Yet this cooperation was based on the strategic choices of management and labor, rather than through local mandates that would have institutionalized stakeholder participation; and, this cooperative work reorganization occurred in a context in which unilateral management rights threatened to reassert themselves. In fact, by the mid 1990s, BellSouth was adopting a strategy of reengineering, reducing the emphasis on self-managed teams (in spite of their success), and increasing its emphasis on downsizing. This strategic withdrawal from cooperation strained union–management relations, and in 1995 bargaining, the union and management reduced their commitment to joint activities. Management’s unilateral decision to focus on reengineering and consolidation of work sites illustrated the weak position of the union in sustaining a cooperative approach in the absence of legal mandates.

NYNEX

In contrast to CWA District 3 at BellSouth, the official position of the regional leadership of both the International Brotherhood of Electrical Workers (IBEW) and the CWA District 1, which represent NYNEX workers, was one of nonparticipation in joint quality and performance-improvement teams. Both unions had a militant history and both continued a traditional approach of “effects bargaining” throughout the 1990s.⁸ That is, management makes technology and operational decisions, and the union negotiates the effects of those decisions. Both unions collaborated effectively in a successful three-month strike in 1989 over maintaining health care benefits; they formed a consumer coalition and successfully convinced the New York PUC to refuse the company’s request for a rate increase during the strike, a decision that was a major factor in the NYNEX’s decision to settle the strike.⁹ The unions’ militant strategy over the course of the 1980s and early 1990s resulted in the highest wage and benefit increases in the industry. NYNEX negotiated 3–4 percent annual wage increases in all four rounds of bargaining since divestiture in 1984 (almost double those at

BellSouth); it is the only company to continue to provide fully paid health insurance without the requirement of shifting to health maintenance organizations or copayments.

As a result of the 1989 strike, the company made the strategic decision to bring in a seasoned labor relations expert from AT&T (James Dowdall), whose sole purpose was to develop a mature bargaining relationship with the two unions. For 1992 bargaining, Dowdall hosted the unions in a two-week joint training session in mutual gains techniques and paved the way for labor peace. In 1992 bargaining, the company and unions established formal joint committees around technology and workplace issues, but by management and union accounts alike, these existed on paper only. The bitterness evoked during the 1989 strike continued for several years, undermining any real possibility for joint labor-management efforts. Because both unions give considerable autonomy to locals, local union leaders have the choice of participating in joint committees. Only a handful did so, however; the overwhelming majority of local leaders consistently followed district policy, refusing to participate in joint productivity-enhancing programs such as the kind overwhelmingly supported by union leaders at BellSouth. Meanwhile, work restructuring followed a path emphasizing reengineering, the creation of customer service “megacenters,” and labor displacement to obtain cost savings.

In spite of their traditionally adversarial bargaining relationship, in 1994 the parties negotiated the most far-reaching employment and union security clauses in the industry. The NYNEX strategy was to build a highly educated, flexible, and productive technical workforce but without employee or union participation in work redesign. In addition to wage increases above the industry average, NYNEX agreed to heavy investment in a two-year training program that created a new multiskilled craft title of “Telecommunications Technical Associate,” or “Super-Tech.” In the first two years of the program, roughly 1,100 employees enrolled (Clifton 2000). The new contract also developed a force reduction plan with incentives aimed at voluntarily eliminating 16,800 of 57,000 nonmanagement jobs at an estimated cost of over \$2 billion, or \$77,000 per participating employee (many of these proved unnecessary because market demand increased dramatically). In addition, the contract enabled all NYNEX employees with five years of service to take a two-year educational leave; created

a job bank and a new job-sharing provision; guaranteed union workers access to all new NYNEX ventures; ensured that new subsidiaries were required to offer union workers the opportunity to bid into the new jobs; and further enhanced union institutional security through card-check recognition, company neutrality, and access to NYNEX's nonunion workplaces. These provisions helped the CWA win a closely contested union election victory among 1,500 customer service representatives in New England, a unit that had historically been anti-union and had turned down representation in previous campaigns.

In sum, in exchange for high wages, retraining, union security, and expansion into nonunion subsidiaries, the unions agreed to more substantial employment reductions than were taking place at other regional companies, although in the end, these reductions were fewer than expected and occurred through attrition and early retirement buy-outs. By 1993, NYNEX had eliminated 19,000 jobs, but only 6,000 were among union members, who accepted generous early retirement offers. The remaining 13,000 were among managers, who either accepted generous settlements or forced layoffs. Under the 1994 contract, the 16,800 nonmanagement jobs targeted for elimination by 1996 would have amounted to an overall drop of at least 35 percent. The company strategy was to build a (smaller) highly skilled, flexible, and productive workforce while maintaining unilateral management rights with respect to operational decision making.

The unions were able to make gains in employment and union institutional security in part because they were able to leverage their power with the state public utility commission. That power was critical to their winning the 1989 strike, which led management to sue for labor peace in the early 1990s. In the 1994 negotiations, management agreed to give the union access to new lines of business in exchange for the union's agreement to support it before the state utility commission. That support was crucial for the company in persuading regulators to allow it to merge with other companies (Bell Atlantic and GTE). Despite these more amicable labor relations, the union and company never experimented with joint workplace innovations. In fact, labor relations deteriorated in the second half of the 1990s as the company experienced unanticipated negative consequences as a result of its downsizing and cost-cutting focus. The demand for data and Internet services and second lines to homes led to an explosion of demand in

the latter half of the 1990s. The company substantially underestimated demand growth and overestimated the number of reductions that it needed. In the end, many more employees took the retirement buyouts than the company would have preferred. This change of events created a large understaffing problem, and customer service suffered. The company responded by freezing mobility opportunities for frontline workers and by requiring forced overtime, even for the largely female office workforce that had never had this requirement. These and other conflicts led to a major strike during the 1998 contract negotiations. Thus, the company and unions continue to have very traditional union and management roles, with management retaining decision-making authority and the union engaged in effects bargaining. In contrast to the AT&T case, however, the unions continue to be able to go before state regulators on issues such as adequate staffing for customer service and employment security, to prevent jobs from being outsourced to other states.

GERMANY

The labor-mediated path to a deregulated telecommunications market in Germany has differed substantially from the judicial drive to a free market in the AT&T case as well as the consumer-driven path in the case of the RBOCs. Neocorporatist decision-making structures have resulted in the use of legislation to promote the social market, have created asymmetric structures of regulation which have benefited Deutsche Telekom, and have minimized the negative effects of restructuring on union and employee stakeholders. Consistent with the promotion of the social market, stakeholders (including the firm, employees, unions, suppliers, and to some extent residential consumers) have been full participants in restructuring at both the industry and firm level, influencing the speed, form, and structure of the reregulated product market, and developing new work practices, labor adjustment, and corporate structures. However, once European Union (EU) policies began to drive deregulation, they helped undermine the influence of stakeholders and actually altered the nature of Germany's semisovereign state (Darbishire 1997b, 2000; Katzenstein 1987).

In perpetuating the social market, the participation of multiple stakeholders in a quasi-corporatist policymaking process has resulted in a path of restructuring that exhibits high levels of stability, limited deregulation, and limited labor displacement. In contrast to the United States, a strategy of technological displacement of labor and cost minimization has not dominated. Of equal importance, however, the performance of Telekom has continued to lag behind that of AT&T and the RBOCs along several dimensions: slower restructuring to take advantage of new technology, difficulty in reorienting Telekom from providing a basic social infrastructure to being a critical input into business competitiveness, and fewer experiments or innovations in work organization. The costs of restructuring also have been distributed significantly differently among the stakeholders, with customers receiving poorer service and higher costs.

In spite of being highly competent technologically and having the largest cable TV and integrated services digital network (ISDN) in the world, Deutsche Telekom has been slow to utilize the potential of new technology. By 1994, for example, only 30 percent of network switching and transmission was digital, compared with 100 percent in the United States and Britain. The availability of services from Telekom has also been poor, and problems include underdevelopment of data transmission, absence of itemized billing, high prices, long waiting lists for installation and repair, and high fault rates (DTI 1994). The lack of integrated computer systems to provide enhanced customer service has compounded these problems, while organizational and network structures and operating procedures have been slow to adjust and realize performance gains, even where new technology has been introduced. Furthermore, slow digitalization of the network and poor performance occurred in spite of Telekom investing substantially more than other telecommunications companies in the 1980s (Gerpott and Pospischil 1993; Darbishire 1997a).

In parallel with the United States, the telecommunications market in Germany historically was organized as a closely regulated monopoly. However, it also operated under public ownership and, until 1989, as part of the Deutsche Bundespost jointly with the postal and telegraph services. As part of the Ministry of Posts and Telecommunications, regulatory and operational decision making were not separated, and Telekom was immediately subordinate to the federal minister.

With an underlying mandate of public service comparable to that of AT&T prior to divestiture, Telekom focused on its public service obligations and underplayed commercial objectives. Similarly, Telekom's universal focus meant that it was slow to respond to the capabilities of new technologies and use them to develop differentiated market segments or meet the divergent demands of business and residential customers.

Repeated attempts to reform the Deutsche Bundespost in the 1960s and 1970s included proposals to create a management structure with greater independence from political influence and to operate Telekom on business principles. Although reform proposals clearly accepted the principle that public ownership, monopoly provision, universal service, and social welfare obligations should be retained, these attempts failed, largely because of union opposition (Duch 1991; Noam 1992).

In 1982 the Bundespost as a whole was responsible for 3.4 percent of the German gross national product (GNP), contributed 10 percent of its revenues to the government, employed 500,000 workers, and was by far the most important purchaser of equipment from Siemens, one of the world's largest telecommunications equipment manufacturers (Noam 1992). However, this is insufficient to explain Deutsche Telekom's slow process of deregulation, because AT&T was in a similar position as the world's largest company, with over one million employees. Rather, in contrast to the United States, German unions succeeded in watering down policy initiatives during the 1980s. German institutional structures grant social partners, such as the unions, a substantially greater institutionalized voice in the management of the economy, and in the structure and timing of deregulation, than does the United States. This neocorporatist role of the social partners, a central component of what Katzenstein (1987) characterizes as the "semisovereign state," substantially limits the extent of deregulation.

The neocorporatist structures allowed the stakeholders (employees, unions, and their work councils) within the Bundespost to form a passive coalition against any fundamental shift in the strategic orientation (or organization) of the telecommunications industry, such as implied by digitalization. In contrast to the United States, no dominant reformist business cohort could form in Germany to promote a significant deregulation of the industry, in large part because of the institutionalized position of existing stakeholders. The stakeholders included not

only employees, but also suppliers, who long operated an effective cartel in the equipment market, with prices substantially above world levels (Darbishire 1997b).

The continued debate over the structure of the Deutsche Bundespost and, as importantly, over the inaction that resulted from each reform attempt, was reflected in the influential 1987 report of the Witte Commission. This body was appointed by the government to examine the future structure of the telecommunications industry. The Commission reflected neocorporatism in Germany, as well as the institutionalization of stakeholders' voice, and took one year to establish because the panel needed to include not only all four major political parties but also the unions, Bundespost officials, and business (though there were no representatives of users on the Commission). The inclusion of a broad range of stakeholders ensured that a moderate compromise resulted.

The report recommended separating the entrepreneurial functions of telecommunications management from regulatory decisions; increasing managerial independence; separating the three Bundespost companies (post, bank, and telecommunications); bringing prices increasingly in line with costs and focusing more on profits; and increasing the flexibility of the companies in personnel policy (Witte 1987). After a series of debates over the Witte recommendations, the government implemented these changes under Post Reform I (July 1, 1989), and also introduced elements of competition into the terminal equipment, value-added network services, and mobile telecommunications markets. The Deutsche Postgewerkschaft (DPG) union consistently opposed these changes, though the ability to block change is less a feature of corporatism than the ability to significantly influence policy. Thus, the compromise nature of Post Reform I ensured that Telekom retained its critical monopoly over telephony services and the network itself, which constituted 90 percent of its revenue.

The debates surrounding Post Reform I contrasted significantly with those in the United States over deregulation. In particular, the structure of the reregulated product market was not determined by "secondary" actors (such as the courts) but importantly by those stakeholders most critically affected by deregulation, including employees, unions, and the company itself. The endogeneity of decision making was characteristic of neocorporatism, a key feature of the German

model, which applies particularly to corporate bodies such as the Bundespost, which were founded under public law to carry out important policy functions. The unions were in a position to substantively affect both the timing and extent of regulatory change. Indeed, with respect to telecommunications policy, “all the way up to the Federal Chancellor there are people who want to avoid a conflict with the DPG [Deutsche Postgewerkschaft],” given the strength of the union’s influence (Morgan and Webber 1986, p. 69). The vigorous opposition of the DPG to any change in the structure of the Bundespost, or to that of the telecommunications market, reflected its concerns about the impact of new technology. In particular, the DPG was concerned that the new technology would allow cost cutting through employment reductions. The union also was concerned that liberalization threatened a significant decline in its role, which had long been one of the strongest and most influential in Germany.

Pressure to further restructure Telekom resurfaced far more rapidly than had been anticipated after Post Reform I. The privatization of Telekom under Post Reform II was enacted in 1994 and driven by three factors. First, pressure from the EU played an increasing role in determining the pace of deregulation. The European Commission issued a series of directives under Article 90 of the Treaty of Rome, which successfully forced the majority of EU countries, including Germany, to agree to open their telephony services market by 1998. Because the effect of EU policies was to increasingly dictate the regulatory structure and enforce competition, the very nature of debates within Germany was narrowed. Consequently, Post Reform II did not even address deregulation but rather confined itself to privatization. The central focus of Post Reform I debates, therefore, was removed from the arena, and German stakeholders could have little influence on it. Furthermore, EU directives on procurement policies undermined the possibility of member states having national champion equipment suppliers, and consequently meant that companies such as Siemens had progressively less interest in maintaining the status quo.

Second, and also of considerable importance, German unification resulted in the need for Telekom to undertake a massive upgrading of the east German network, with a projected cost of DM 60 billion between 1990 and 1997. Given increasing budgetary pressures, the government proposed the privatization of Telekom under Post Reform

II to help fund unification. Because Telekom itself had a deteriorating financial position, reflected in a declining reserve asset ratio,¹⁰ Telekom management and political parties regarded privatization as a necessary step to rectify this weakness. Third, given the growing importance of the international telecommunications market and an increasing emphasis on international joint ventures, Telekom management promoted privatization to remove restrictions from Telekom's global ambitions. Furthermore, the inevitability of product market deregulation led Telekom to argue that it needed to be released from the political control and bureaucracy of the public sector (Darbishire 1995).

In addition to generating greater stability in the telecommunications market in Germany, the integrated role of key stakeholders, particularly employees and unions, helped them protect their own interests. The DPG principally campaigned for employee and union institutional security. At the industry level, both the *Länder*, or federal states, and the DPG were concerned with how EU policies to liberalize the product market would be enacted in Germany. Stakeholders ensured their influence on the structure of the product market through the creation of a Regulatory Council under Post Reform II restructuring. Through this council, for example, they ensured the adoption of a high standard of universal service (of general ISDN availability) by the end of 1995. By establishing the general availability of a high level of service as a matter of public policy, stakeholders had substantially greater input into the product market structure than in the United States, while simultaneously constraining the strategic options available to Telekom.

During the political negotiations over Post Reform II, the DPG secured the right to bargain with Telekom in all of its subsidiaries, which were in turn bound to negotiate with the DPG. Through this mechanism, the DPG constrained Telekom from even considering a nonunion employment strategy (Darbishire 1997a). Employee representation on the Supervisory Board was made uniquely strong, even in a German context, while employee concerns about the postprivatization structure of works councils led to additional alterations. These included the initial extension of the three-tier, public-sector works council structure to the privatized Telekom, as well as a higher number of works councilors (Darbishire 1995). Furthermore, the DPG secured the continuation of the contractual rights of all its employees, including

their impressive employment security guarantees (which apply to civil servants, who constitute half of Telekom's workforce, as well as to all workers aged 40, with 15 years of service). These rights have, in turn, constrained Telekom from adopting a technological displacement strategy and substantially downsizing its workforce.

The institutional constraints on Telekom's labor market approach are illustrated by the relative employment stability within the company. Between 1984 and 1994, Telekom employment in West Germany was virtually unchanged, with a decrease of only 4,000 from 191,000. Total employment, including the former East German telephone workers, stood at 225,435. It was only in March 1995 that Telekom officially doubled its goal of eliminating 30,000 jobs throughout East and West Germany to 60,000 (26 percent of the workforce) by the year 2000.

While the extent of potential technological displacement should not be underestimated, Telekom's underlying strategy has emphasized a revenue-enhancing, up-market approach, with slow, heavily negotiated change. The emphasis on revenue generation rather than technological displacement, downsizing, or cost minimization is significant. In contrast to the United States, where access lines per employee is the standard performance measure, Telekom established a corporate objective of revenue per employee, set at DM 470,000. This measure has underlain Telekom's strategy, substantially promoted by the DPG, of seeking new employment opportunities rather than cutting costs. By mid 1995, the DPG presented Telekom with over 50 proposals of how to generate new business to enhance employment security. Telekom took these proposals seriously, especially because of the downsizing constraints it faced because the DPG had made employment security its top priority.

The rights of the works councils—concerning the introduction of new technology and restructuring of work, and the regrading of employees, transfers, and appointments—required that Telekom work cooperatively with the union. For example, between June 1993 and March 1994, the DPG negotiated a unique contract in response to the proposed elimination of 11,000 posts under a restructuring program known as Telekom Service 2000. This contract guaranteed employment security to all workers affected by restructuring and specified compensation for those adversely affected by the cost-cutting plan. In

late 1994, the DPG extended this contract (in negotiations over a broader reorganization plan) to all workers, thereby guaranteeing comprehensive employment security until the end of June 1996. Moreover, Telekom's plan to downsize by 60,000 was premised on the use of expensive voluntary redundancy and early retirement packages.

The positive impact of these industrial relations on Telekom's business strategy was facilitated by the favorable regulatory environment that Telekom enjoyed and the absence of countervailing financial market pressures. Rather than being constrained by asymmetric regulatory structures from entering closely aligned market segments (as, for example, AT&T was in the local market and the RBOCs were in the cable TV market), Telekom continued to operate the largest cable TV company in the world with a *de facto* monopoly and had 14.6 million subscribers by the end of 1994. Combined with the largest ISDN network, these conditions provided Telekom with the potential for the development of an integrated telecommunications services industry and an up-market strategy generating new, high-quality businesses.

However, despite longer time horizons, a favorable regulatory climate, and the integration of DPG and works councils into decision making, Telekom has continued to be slow in developing innovative work practices or effective restructuring. For example, management viewed the lack of local autonomy as a principal deficit of its organizational structure and a division of the corporate structure needed to meet differentiated customer demands. Telekom initiated a project in 1993–1994 to reorganize the company into three decentralized divisions (serving business and residential customers, and managing the network). Although this model drew on successful U.S. and U.K. experience and involved substantial works council and union participation at every stage, the reform proceeded in a slow, cautious, and centralized manner. This project included testing two competing models of corporate structure. One, favored by Telekom management, was based principally on market segments and another (favored by the DPG) on geographic units (Darbishire 1997a). The piloting of competing models indicates the strength of the union's influence in seeking to minimize the perceived negative effect of restructuring on union and worker interests.

Unlike the slow pace of corporate restructuring, digitalization of the network has led to substantial work reorganization and operational

cost cutting. As in the United States, this change involved a shift away from functional organization, though significantly without any attempt to increase the extent of Taylorism or machine pacing of work, as at AT&T and the RBOCs. Rather, digitalization occurred in the context of intensive consultation and agreements with the central works council, which utilized its codetermination rights to ensure that systems capable of monitoring workers' behavior have neither been used to do that nor to intensify the pace of work.

In summary, rather than adopting a cost-minimization or labor-intensification strategy, Telekom instead fully involved works councils and the union in the process of restructuring. As a result, it did not experience the declines in morale or cooperative union-management activity experienced in the United States. Nevertheless, there have been no decentralized workplace trials equivalent to those in the United States. Three factors contributed to this outcome. First, Telekom was slow to decentralize its operational structures, characteristic of its public sector legacy. This tardiness restricted its potential for workplace innovation. Second, the union and works councils were strongly focused on the technological displacement and downsizing implications of restructuring. Third, because employee representatives feared that restructuring had the potential to undermine their position, they attempted to minimize its downside by conducting highly detailed, centralized negotiations about new work organization practices.

More generally, the restricted pattern of workplace innovation reflects the radical nature of technological change in the telecommunications industry. Although extensive worker and works council involvement have promoted such innovation in industries experiencing incremental changes in technology, in the telecommunications industry the situation differs. Workers perceive that technical changes will undermine their existing skill sets as jobs become based more on knowledge of software, clerical, and service skills. Potential gains from the transformation of work in the telecommunications industry derive from new skill sets and cross-functional organizational integration as described in the AT&T and RBOC sections, not from building on these workers' existing craft skills (Darbshire 1997b; Lehrer and Darbshire 1997). The combination of strong worker rights, together with a negative perception of the adjustment process, led to a more

cautious restructuring of Telekom's product market, although it generated a significantly different outcome in the labor market.

CONCLUSION

What lessons for mutual learning can be gained from these comparisons? Several are noteworthy. At the most basic level, the ability of stakeholders to influence or control the pace of change significantly affects the outcomes. The weak institutional position of unions in the AT&T case prevented them from slowing the course of change. The unions in the regional Bell cases did not have more power but could leverage concern for consumer welfare to slow the pace of change. By contrast, the institutional power of the German unions allowed them to significantly slow the pace to explicitly address labor's concerns.

The slower pace of restructuring in both the regional Bell and Telekom cases provided a longer time horizon to develop a range of labor adjustment strategies to meet the needs of both management and labor. At a minimum, these strategies included softening the negative effect on the displaced workforce through the use of attrition, voluntary severance, and early retirement programs. These strategies also had positive "spillover" effects on the morale of the survivor workforce. For management, this positive effect on morale increased the likelihood that the survivor workforce would play a more cooperative role in ongoing restructuring. Additionally, the longer time horizon provided the needed time for retraining and redeployment, strategies that benefited not only the incumbent workforce but management as well by building on the embedded skill base rather than losing that base to competitors.

By contrast, the faster, unconstrained approach allowed companies to take advantage of the full implications of new technology and market flexibility, both in terms of process and product innovation. In the United States, the most significant outcome of this decade of market-driven restructuring has been to alter the fundamental purpose of the telecommunications industry. Its mission has changed from providing an integrated universal service to the public and maintaining national security to supporting national economic competitiveness in a global

economy. In general, then, the U.S. telecommunications industry has outperformed its German counterpart in terms of speed of delivery, response time, product diversity, and price reductions—both as an input into other industries and as a direct contributor to national economic growth. However, employees bore the major costs of restructuring through displacement, decline in morale, and ongoing employment insecurity. Labor market segmentation increased. Unions lost power and members.

In Germany, by contrast, the influence of government policymakers, unions, and corporate stakeholders in slowing the pace of restructuring prevented Telekom from taking advantage of the implications of new technologies, limiting performance improvements for business and residential consumers. However, workers have not suffered the kind of displacement, demoralization, or insecurity that U.S. workers have faced. Unions have retained membership levels as well as their institutional power.

These findings would argue for a classic story of the trade-offs between consumer and worker welfare. While in the short run, this argument has some merit, the longer-term outcomes are far from certain. First, to the extent that rapid, market-driven deregulation leads to efficiency and innovation, corporate users and the national economy more generally benefit. Certainly, the United States continues to lead the world in innovations in telecommunications technologies. But it is difficult to ascribe this positive outcome entirely to deregulation, because the United States historically led the world in this field (Victor 1989; Rosenberg 1994).

Second, haste makes waste. AT&T's divestiture and deregulation were premised on the assumption that new microwave technologies would erode the natural monopoly argument in the telecommunications market. However, the digitalization of network switching and transmission systems substantially increased network economies of scale and scope. This has led some who are strongly pro-deregulation to admit that technological efficiencies may lead to a recentralization of the industry (Huber 1989). The 1990s have confirmed some of these worries, as merger activity has dominated the decade, exemplified by the eight large local carriers at divestiture (the seven RBOCs and GTE) that have merged into four. In addition, some researchers have argued that significant reductions in productivity growth have accompanied

this period of duplication and overcapacity. Using three different measures of productivity used in the industry,¹¹ Keefe found that productivity growth in the 1984–1991 period (3.4 percent annually) was half that of the 1974–1983 period (6.9 percent per year) and the 1951–1983 period (6 percent per year). By the early 1990s, when AT&T served 60 percent of the long-distance market, MCI and Sprint together had the capacity to meet the needs of the entire country (Keefe and Boroff 1994, pp. 321–322). Moreover, while corporations benefited from competition in the equipment industry, the U.S. economy suffered as imports rose dramatically (from Canada’s Northern Telecom and Germany’s Siemens). U.S. manufacturers of telecommunications equipment were decimated.

Third, the distribution of benefits to consumers in the United States has been highly unequal. Large business users have benefited the most. Small business and residential consumers have also benefited through greater product diversity and reductions in the price of long distance, which offset price increases in basic service. Notably, however, residential consumers were protected because regulators slowed the pace of deregulation in local service. Otherwise, basic rates would have skyrocketed in the 1980s. Low-end consumers fared worse under deregulation in the 1980s and 1990s because basic rates rose and they could not afford to take advantage of long-distance price reductions. While new FCC regulations seek to ensure universal service as well as Internet access to low-income residents, the implementation of regulations will determine longer-term outcomes.

It is not only pace of change that matters, however. As we have argued, more fundamentally, the outcomes depend on the relative power and strategic choices of institutional actors and stakeholders in shaping the trajectory of deregulation and restructuring. In the AT&T case, the courts and regulators deliberately chose to reduce the profitability of AT&T, and the company, unions, and consumers were excluded from the decision-making process. In the case of the regional Bells, political embeddedness gave the companies, unions, and residential consumers a position to win politically favorable legislation that tempered a free-market approach. In the German case, institutional stakeholders deliberately chose an approach to reregulation that privileges Telekom by retaining its monopoly in telephony and cable TV. This choice provided the opportunity for a carefully managed,

integrated approach to restructuring and the provision of multimedia services. Although the EU may alter its adjustment path, Germany has the potential to avoid duplicating its infrastructure as did the United States, where the systemness of technology continues to favor economies of scale. The German social market solution has the potential in the long run to create mutual gains for firms, unions, employees, and consumers. Yet the promise is still to be fulfilled.

Finally, it is noteworthy that none of the approaches to reregulation and restructuring has achieved a new system of “high-involvement” work organization comparable to the innovative team-based or lean production systems in manufacturing. While more experimentation has occurred in the United States, those experiments have been short-lived, overcome by broad-scale cost-cutting initiatives. Meanwhile, Telekom and the German unions have positioned themselves for greater labor–management cooperation in workplace innovations. Rather than adopting a cost minimization or technological displacement strategy, Telekom has focused on a revenue enhancement strategy. This has the potential to create a high-involvement approach to work organization while limiting the ultimate costs and adjustment burden borne by employees and the union. Of key importance, however, is whether the cautious but sustained cooperative approach to restructuring will produce performance gains in the long run. The outcome will itself be strongly influenced by the ability of stakeholders to successfully implement changes to sustain the up-market strategy in spite of ongoing downsizing and before new competitive entrants can erode Telekom’s substantial market share.

Notes

1. Until 1984, AT&T, or the “Bell system,” was a regulated monopoly composed of Bell Labs (the research and development arm); Western Electric (the equipment-producing arm); AT&T long lines (the long-distance arms), and 22 local Bell companies (the local service providers). In response to a lawsuit filed by MCI, which sought entry into AT&T markets, the courts dismantled the monopoly. AT&T retained ownership of the equipment and long-distance subsidiaries but not local service. The 22 local phone companies were reorganized into seven regional Bell operating companies (RBOCs) with monopoly control of local service; they also jointly owned Bell Labs until 1996.
2. Source: author’s interviews with Bell company representatives.

3. NYNEX comprises the New York and New England telephone companies. It merged with Bell Atlantic, which subsequently merged with GTE to form Verizon. In this chapter, we refer to the company as NYNEX because the material is specific to NYNEX before it merged with Bell Atlantic.
4. AT&T unsuccessfully led a coalition of consumers, unions, independent telephone companies, and state PUCs.
5. *Taylorism*, after Frederick Taylor, refers to the practice of using time and motion studies to separate thought from execution and break down complex jobs into narrow repetitive tasks to improve efficiency.
6. Source: author's interviews with management and union officials.
7. Moreover, heightened transaction costs and consumer confusion, for example, are a consequence of the package deals to consumers (such as MCI's Friends and Family and AT&T's Reach Out and True Voice). This trend is in sharp contrast to current theories of quality in customer service that argue that customer loyalty and longevity are the key to competitiveness (Schlesinger and Heskett 1991a, 1991b).
8. A 1996 union election replaced the long-standing CWA district leadership with a leadership team more open to joint strategies, but the company was focused on merger activity (with Bell Atlantic and GTE). Contract negotiations in 1998 and 2001 were settled only after a strike.
9. For a fuller account of the unions' use of the state utility commission to curb corporate behavior, see Katz, Batt, and Keefe (2000).
10. Having amounted to 30 percent in 1990 and 25 percent in 1992, the reserve asset ratio was projected to fall to 18 percent by 1994.
11. These measures are average annual increases in access lines per employee hour, in switched minutes per employee hour, and in adjusted revenue per employee hour.

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