CHAPTER 1

Low-Wage America: An Overview

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This volume describes changes in the workplace for Americans who do not earn enough to support themselves and their families. The number of such workers is substantial. In 2001 about 34 million Americans, 23.9 percent of the labor force, earned less than \$8.70 an hour (Mishel, Bernstein, and Boushey 2003, table 2.9). Working full-time for the entire year at this wage produces annual earnings of just \$17,400—about equal to the poverty line for a family of four, and not nearly enough to sustain most working families. For example, a family with two parents and two children requires between \$27,000 and \$52,000 annually in order to maintain a basic standard of living, depending on the community; the national median is about \$33,500. For a single working parent with two children, a basic family budget ranges from \$22,000 to \$48,600. Overall, in the late 1990s, fully 29 percent of working families with children under twelve had incomes lower than the basic family budget for their communities.[1]

As the chapters in this volume document, firms in all parts of the economy—in manufacturing, in retail sales, in telecommunications, in the hospitality industry, and in the health care industry—employ workers at wages below those needed to meet the basic family budget threshold. Low-wage workers are employed in a wide variety of occupations. They work as nursing assistants, food preparers and servers, customer service representatives, assembly-line workers, and housekeepers, and they include men and women from every racial and ethnic group.

The majority of low-wage workers in the United States have no educational credentials beyond a high school diploma. Many, including a large number of immigrants, lack even this credential. For this reason, we often refer to the frontline workers who are the focus of this volume as "high school educated workers." It is important to keep in mind, however, that college enrollment has not allowed all workers to escape low-wage work. Several chapters in this volume cite evidence that the low-wage workforce in particular industries includes a significant number of workers who have completed at least some college courses.[2]

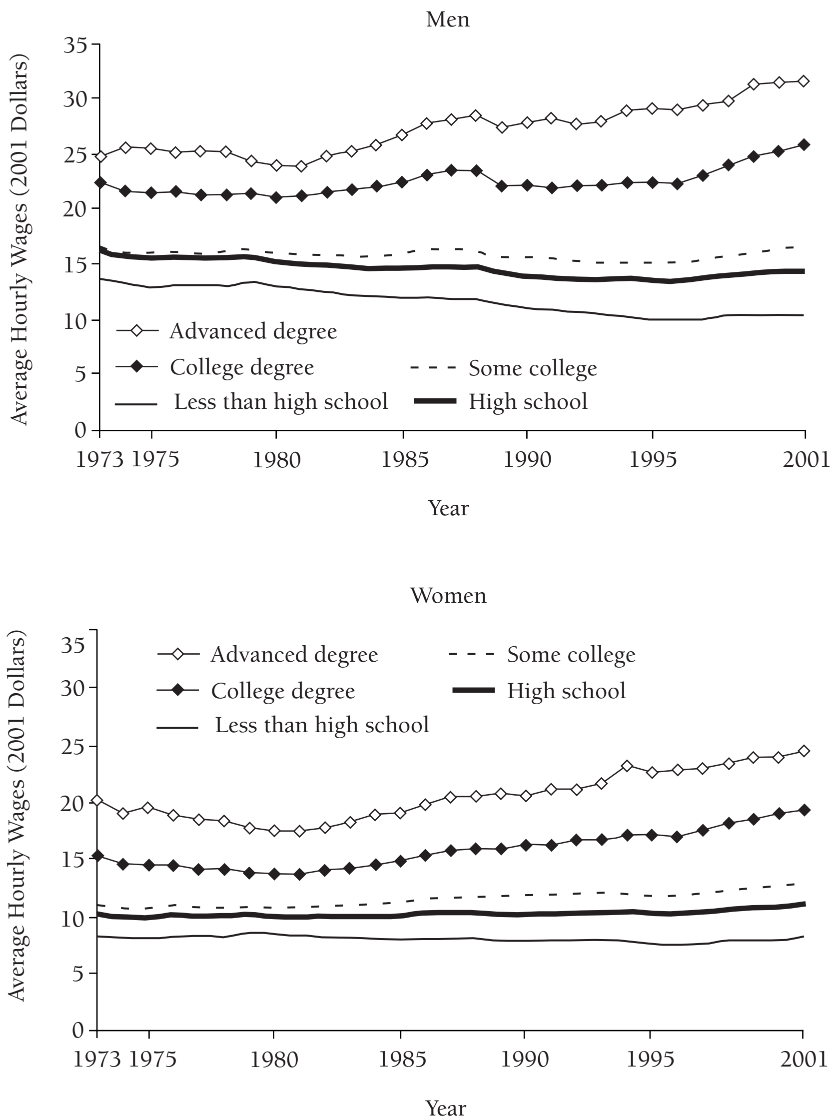
High school educated workers have not always fared as badly in the U.S. economy as they have over the last twenty years. As illustrated in the top panel of figure 1.1, male high school graduates earned an average hourly wage (in 2001 dollars) of $16.16 in 1973. Over the next twenty-two years the average real wage of male high school graduates fell by 17 percent, with the most rapid decline taking place during the 1980s. The strong economy of the last half of the 1990s allowed male high school graduates to recover about one-third of their lost ground, but they are still left with real wages markedly lower than those earned by their counterparts twenty years earlier (Mishel, Bernstein, and Boushey 2003, 158, table 2.18).

The wage trend for female high school graduates is somewhat different. As illustrated in the bottom panel of figure 1.1, the average real hourly wage of female high school graduates has been consistently lower than the wage of their male counterparts. However, the average real wage of female high school graduates was remarkably stable over the period 1973 to 1989 and rose by 9 percent during the 1990s (Mishel, Bernstein, and Boushey 2003, 159, table 2.18).

The real wage trends of high school graduates illustrate two important themes of the volume. The first is the importance of economic growth. The rapid growth of the economy during the 1990s created the tight labor markets that enabled high school educated workers to increase their hourly earnings. The second theme is that structural changes in the U.S. economy have increased the pressures faced by employers, and their responses have worsened labor market outcomes for high school educated workers. These changes are so profound that even the extremely tight 1990s labor markets, which resulted in the lowest unemployment rates in thirty years, did not allow the real earnings of male high school graduates to return to their 1970s level.

Many factors contributed to the economic pressures that American employers have faced over the last twenty years. One is the

Figure 1.1 Average Hourly Wages by Education, 1973 to 2001



Source: Based on data from Mishel, Bernstein, and Boushey (2003, 159, table 2.18).

globalization of markets. The internationalization of capital markets has increased the competition that American firms face in attracting capital. The growing potential to produce goods for the American market anywhere in the world has increased pressures on firms producing goods and services in the United States.

Advances in information technology (IT) have also increased economic pressures. Technological changes have led to the automation of many routine tasks (such as filing and bookkeeping and product assembly) that were previously carried out by high school educated American workers. Advances in IT have made it possible to locate data entry tasks and the work of customer service representatives anywhere in the world, not only in low-wage areas in the United States but also in countries with wages far below even the most modest U.S. wages. Technological changes have affected not only the jobs of workers who either use technology or whose work has been automated but also, indirectly, the jobs of many other workers as well. For example, new technologies have allowed large retail chains such as Wal-Mart to reduce costs dramatically, thus driving out of business smaller retailers that provided relatively better jobs for high school educated workers.

The deregulation of industries such as telecommunications, financial services, airlines, and trucking has increased price competition, intensifying pressures on firms to reduce costs. The introduction of health maintenance organizations (HMOs) in health care has altered the revenue stream for health care providers by breaking the link between service provision and revenue. This too has increased pressures to reduce costs.

Changes in financial markets have increased pressures on managers to achieve short-run results, making it increasingly difficult for them to embrace long-term investments, including investments in the skills of their workforces. One of these changes is the growth of mutual funds, which increases the power of institutional investors seeking steady increases in share prices. A second is the trend toward basing CEO compensation on the short-run performance of a company's stock (Appelbaum and Berg 1996).

Many studies have attempted to assess the relative importance of these factors—globalization, changes in technology, deregulation, and changes in financial markets—in explaining the increase in inequality that has characterized the U.S. income distribution in recent years.[3] In fact, these sources are deeply interrelated. For example, advances in information technology have made possible many aspects of globalization, including the development of worldwide markets in the delivery of services such as data entry and customer support. At the same time technological changes would not have had such large influences on the finance and air travel industries if deregulation had not taken place.

Institutional changes in the environment in which American firms operate have influenced their responses to competitive pressures. One such change is the decline in labor unions. In 1973, 24 percent of American workers were union members. That figure had declined to 14 percent by 2002, and among private-sector workers it was 9 percent. The decline in union representation has reduced the ability of workers to negotiate with managers about responses to increased competition and to bargain over the distribution of gains from improved productivity. The explanation for the decline in union representation lies partly in the market forces that are changing the economy. For example, historically, the manufacturing sector has been more heavily unionized than the service sector, and the percentage of the American nonfarm workforce employed in manufacturing fell from 28 percent in 1970 to 13 percent in 2001 (U.S. Department of Labor, various years). Some aspects of globalization, including the internationalization of production and a dramatic increase in the immigration of workers with relatively little formal education, have made traditional union organizing more difficult. A change in government attitudes toward unions has also contributed to their decline. From President Ronald Reagan's handling of the air traffic controllers' strike in 1981 to President George W. Bush's demand in 2002 that employees of the Department of Homeland Security be forbidden to belong to a union, all three branches of the national government in the last twenty years have exhibited greater hostility to unions than in earlier periods.

A second change in the institutional environment is the decline in the real value of the minimum wage. In 1974 the minimum wage in the United States, expressed in 2001 dollars, was $7.18 an hour.[4] In 2001 it was $5.15. This 28 percent decline in the real minimum wage has allowed firms to respond to economic pressures by cutting the real wages of their lowest-paid workers. Had this not been possible, at least some employers would have chosen the alternative response of investing in workers' skills or capital equipment so as to improve productivity.

Thus, today there are powerful forces that are reshaping the workplace. This book provides the most extensive study to date of how the world of work is changing for the 42 percent of U.S. workers who have never attended college.[5] The chapters investigate sectors that provide large numbers of jobs for these workers, sectors that are underresearched but vitally important in post-industrial economies. What is distinctive about the studies in this book is that they are based on interviews and data gathered from a wide range of managers and employees across a number of work sites in each industry. These empirical case studies examine the choices that managers make as they address the economic challenges confronting companies, and how these decisions affect outcomes for firms and workers.

THE CASE STUDIES

The case studies described in this book were designed to fill a large gap in knowledge about the consequences of economic restructuring for workers without a college degree. Data from national surveys such as the Current Population Survey have taught us a lot about changes in the aggregate wage structure over the past three decades. But they can only indirectly get at the complex reasons why those changes have occurred, and in particular, why there is significant variation in the wages of workers with similar education levels and in similar industries. Nor do these data provide any information on changes in the tasks done by frontline workers, the skills required for particular jobs, or the conditions of work. Finally, national survey data are the weakest when it comes to developing a deep, qualitative understanding of firm decisionmaking; such an understanding is critical to developing coherent policy responses.

To fill this gap, the Russell Sage and Rockefeller Foundations instituted the Future of Work Program and provided financial support for empirical case studies of firms in industries employing large numbers of relatively low-wage workers. This volume provides the results of twelve of these case studies, carried out by teams that included thirty-eight researchers and a great many graduate student assistants. Each chapter is guided by a specific set of research questions, but all of them try to come to an understanding of how firms have responded to increased economic pressures and how frontline workers have been affected by these responses. In particular, the case studies document how firms' responses to economic pressures have affected working conditions, work rules, productivity pressures, skill requirements, and opportunities for training and advancement for workers with less than a four-year college education.

The case studies funded by the Future of Work Program are industry-based. Some of the case studies focus on industries in which technological change has been rapid, such as telecommunications. Others focus on industries, such as hosiery production, in which international competition has been a force for change. Still others focus on industries, such as hospitals and hotels, in which technological change and international competition have had little effect on the jobs of high school educated workers, although increases in the number of immigrant workers have had important impacts.

A key feature of many of these studies is their use of research designs that compare firms facing similar economic pressures and competing in the same or similar industries. Such controlled comparisons allow the authors to ask whether firms have responded differently to these pressures and whether these different responses have led to different outcomes for their frontline workers.

Although the methodologies vary, all of the case studies make use of interviews, typically with both managers and workers in several firms within a particular industry. The interviews provide a great deal of information about changes in the competitive conditions that employers face, their responses to increased competition, and the impact of their responses on workers. A total of 464 establishments in 25 industries were studied. More than 1,700 managers and workers were interviewed, and more than 10,000 workers and managers completed surveys. Together these studies paint a vivid picture of how changes in the American economy have affected the work lives of tens of millions of workers at the bottom of the wage distribution.

The case studies in this volume are organized into five parts. The first part, "Services: Where the Jobs Are," includes two studies. In chapter 2, Annette Bernhardt, Laura Dresser, and Erin Hatton explore the impact of changes in the hotel industry, including widespread consolidation of ownership, on the large number of workers who clean rooms and prepare food. Chapter 3, by Eileen Appelbaum, Peter Berg, Ann Frost, and Gil Preuss, is an examination of how increasing cost pressures on hospitals have led to changes in the jobs, work conditions, and wages of housekeeping and food service workers. Chapters 1 and 2 show that employers in these industries have been subject to significant pressures to reduce costs and improve productivity, and that their extremely different responses have had different effects on labor market outcomes for the great many high school educated workers they employ.

The second part, "Technology: Fewer Better Jobs?," contains three chapters that focus on the impact of technological changes on labor market outcomes for high school educated workers. In chapter 4, David H. Autor, Frank Levy, and Richard J. Murnane lay out a model of what computers do and use this model to explain the very different impacts of a specific set of computer-based technological changes on the design of jobs in two departments of a large bank. Chapter 5, by Ann P. Bartel, Casey Ichniowski, and Kathryn Shaw, describes how new technologies altered production processes in three manufacturing industries and affected skill demands and worker outcomes for production workers in these industries. In chapter 6, John W. Ballantine Jr. and Ronald F. Ferguson examine the consequences for workers of the introduction of new technologies by relatively small firms that manufacture plastics products. Chapters 4, 5, and 6 document that the demand for skills is highly dependent on the market niche firms seek to embrace. They show both that technological changes have important impacts on outcomes for high school educated workers and that these outcomes are often not obvious.

The third part, "Career Ladders: The Past or the Future?," contains two chapters that examine changes in career ladders in two sets of industries employing a great many high school educated workers. Chapter 7, by Julia Lane, Philip Moss, Harold Salzman, and Chris Tilly, describes how changes in food service industries have disrupted traditional internal labor markets in food service organizations, such as restaurants and cafeterias, but have led to the introduction of new internal labor markets with job ladders in food manufacturing firms. In chapter 8, Rosemary Batt, Larry W. Hunter, and Steffanie Wilk describe how changes in the organization of call center work have affected job ladders for operators, customer service representatives, and telemarketers. These chapters demonstrate that outcomes for workers are heavily influenced by managerial choices in the design of call centers.

The two chapters in the fourth part, "Temps: Part of the Solution or Part of the Problem?," examine how the growth of the temporary staffing industry has affected labor market outcomes for high school educated workers. In chapter 9, David Finegold, Alec Levenson, and Mark Van Buren examine employers' reasons for using temporary staffing firms to find workers, as well as workers' reasons for using temporary staffing agencies to find jobs. Chapter 10, by George Erickcek, Susan Houseman, and Arne Kalleberg, examines why auto supply manufacturers, hospitals, and public school districts make use of temporary staffing services and outsourcing, and how these practices impact on labor market outcomes for workers. Chapters 9 and 10 show that the consequences of nontraditional staffing arrangements for high school educated workers vary: new opportunities are created for some workers, but others are left in dead-end, low-paying jobs.

Part V, "Globalization: Always a Job Killer?," explores how the increase in competition from abroad has affected the decisions of domestic producers and labor market outcomes for production workers. Chapter 11, by Rachel A. Willis, Rachel Connelly, and Deborah S. DeGraff, describes workforce and technology trends in the hosiery manufacturing industry and the impact of changes in the purchasing requirements of large hosiery customers, such as Wal-Mart. In chapter 12, Susan Helper and Morris Kleiner look at what happened to production workers' pay and work conditions when new human resource policies were introduced by a large auto parts manufacturer in the face of growing foreign competition. Chapter 13 is an examination by Derek C. Jones, Takao Kato, and Adam Weinberg of the responses of ten manufacturing firms in central New York State to increases in competitive pressures. They show that responses varied markedly, and that the different responses had very different consequences for worker outcomes. A theme in part V is that access to information about technology, organization of work, and human resource practices varies across firms; remote rural factories, for example, are often at a severe disadvantage. This has an important impact on how firms decide to respond to increasing competition and on outcomes for workers.

A SYNTHESIS OF FINDINGS

The national discussion about changes in the American workplace over the past three decades remains at a very rudimentary level. "Globalization" is invoked to explain the actions of employers with no recognition that the term has very different meanings in different contexts. "High-tech" is a term used to describe everything having to do with jobs, skill requirements, and why some workers have succeeded in the new economy and others haven't. These catchall terms obfuscate the many and varied factors that contribute to increased economic pressures in different industries and divert attention from the careful analyses required for intelligent policy responses.

The chapters in this volume show that firms have come under greater economic pressure for a number of different reasons, only some of which are related to increases in international competition. The degree of that pressure has varied as well; many industries find that they still have room to maneuver. Technology has had quite different effects on the tasks that workers perform and the skills required; in a surprising number of cases, there is little effect at all. And as in the past, the determinants of whether or not workers succeeded are quite complex, not a simple function of years of education or computer acumen.

At the same time, some clear and important patterns emerge across the host of industries and workplaces studied. In the rest of this chapter, we provide a broad summary of how our case studies answer the following two questions: In what ways have firms responded to growing economic pressures? And what has been the impact of these responses on frontline workers who do not have college degrees?

In organizing the rich array of answers to this question, we focus on perhaps the most important insight from the research presented in this volume. Although employers' responses to growing economic pressures have had a generally negative effect on frontline workers, especially those with only a high school degree, there are significant exceptions to this pattern. These variations offer important clues about what public policy can do to support the job prospects of workers without a college degree, and we attempt to draw out several such implications at the end of the chapter. To start, we offer a summary of the dominant strategies.

DOMINANT STRATEGIES WITH RESPECT TO FRONTLINE WORKERS

Most employers have responded to increased economic pressure by reducing costs. For a great many of them, cost-cutting has focused on the wage bill, especially the bill for frontline workers, most of whom typically have little or no education beyond high school. As summarized in table 1.1, this focus on cutting labor costs has played out in a number of different ways.

One set of strategies has focused on continuing to use the same workers but freezing their wages, cutting their benefits, and increasing their workloads. These actions have unequivocally negative impacts on workers. For example, in several of the high-priced hotels studied in chapter 2, housekeepers have not received pay increases for six years, in several others yearly increases have been ten to twenty cents at most, yet the number of rooms each housekeeper has to clean each day has increased steadily over the past two decades. A similar story obtains in the hospitals studied in chapter 3: rising medical costs and declining reimbursements have squeezed the wages of nursing assistants, food service workers, and housekeepers even as staffing levels have declined. Nor is this only a service-sector story. In one of the auto parts supplier plants studied in chapter 12, management had changed compensation systems, and 45 percent of workers reported that they had suffered a pay cut as a result.

Another set of strategies focuses on reducing labor costs at the front line by using temporary workers, by subcontracting or outsourcing, or by relocating jobs to lower-wage areas, either in this country or abroad. Evidence of these cost-cutting responses is present in almost every industry studied in this volume, and lowering labor costs is a central motivation. As shown in chapter 10, workers are especially vulnerable to being replaced with temps when they are well-paid but less-skilled. If the work is also self-contained, it may be a good candidate for being contracted out altogether. In 1999, for example, 32 percent of hospitals reported that they outsourced their food services, 27 percent outsourced housekeeping, and 62 percent outsourced laundry. The subcontracting of hotel restaurants both to avoid unions and to gain access to cheaper labor has become virtually complete in the industry. A related strategy is to keep frontline jobs in-house but to centralize and relocate them to another part of the country. As discussed in chapter 8, the rapid growth of large call centers illustrates this response, its impact on productivity, and its typically negative impacts on frontline workers. Finally, moving frontline jobs overseas is, of course, a practice that has fundamentally transformed U.S. manufacturing industries and the job opportunities available to high school graduates.

One consequence of relocating work is the disruption of the in-

Table 1.1 Employer Responses to Increased Competition and the Impact on Frontline Workers

	Dominant Strategies (Effects on Frontline Workers Largely Negative)	Variations (Effects on Frontline Workers Both Negative and Positive)	Sources of Variation
Firms that focus on compensation and the organization of work	Freeze wages and increase workloads Use contingent workers to cut labor costs Subcontract and outsource to cut costs and wages Relocate and consolidate functions	Use work reorganization to increase productivity and reduce turnover Innovate with respect to products Outsource to capture economies of scale; outsource only partially to gain better management Use temps to screen risky workers for permanent jobs	Unions Regional labor market institutions Quality of information available to managers about high-productivity strategies Regulation (minimum wage, industry regulation) Tight labor markets
Firms that focus on new technology	Introduce new technology to automate routine tasks and reduce reliance on low-skilled workers Technology deskills entry-level jobs	Train entry-level workers without college degrees for new technology Link entry-level jobs to career ladders	

Source: Authors' compilation.

ternal labor markets that historically provided many frontline workers with promotion opportunities. For example, when telecommunications firms handled customer service locally, representatives could increase their earnings by being promoted from servicing residential customers to servicing small-business customers and, eventually, to serving larger business clients. This type of movement is now rarely possible and entails substantial geographic relocation when it does occur, since one call center handles all residential customer service work for several states and another call center located in a different state handles small-business services for a large geographical area.

We should note that there is suggestive evidence that immigration has played an important role in some of these trends. Especially in labor-intensive industries, recent immigrants have replaced native workers in a variety of entry-level jobs. While the chain of causality here is difficult to untangle, the new supply of immigrant workers has clearly facilitated the drive by employers to reduce costs, cut benefits, increase workloads, and shift jobs to subcontractors. The lobbying for pro-immigration legislation by several industry trade groups, including the National Restaurant Association, illustrates the operation of this mechanism.

Up to this point, our discussion has focused on workplaces where the dominant competitive focus has been on reducing the cost of labor. These strategies are most prevalent in labor-intensive activities that consist of providing in-person services rather than transactions that can be handled remotely. In these settings, using technology to make significant changes in the use of frontline labor is either not feasible (for example, nursing assistants and housekeepers) or not desirable (such as when there is a need to have a human face at the sales counter).

When jobs consist of routine, repetitive, and predictable tasks, whether processing information or handling materials, the opportunities for using technology to replace frontline workers are great. Our case studies describe a number of diverse settings where technology has been at the core of employers' competitive strategies. The prototypical case is banking, where the arrival of ATMs took over many of the high-volume, routine tasks previously done by tellers. But as chapter 4 illustrates, information technologies have penetrated deeper into banking. Check imaging and optical character recognition technology have effectively automated several key tasks in check-processing departments, reducing the demand for high school educated labor. Once again, the impact of technology is not confined to the service sector. In the valve manufacturing industries described in chapter 5, new computer-controlled metal working machines have automated key tasks, enabling a greater range of products to be produced faster, with fewer operators.

What happens to the jobs that remain? In the simplest scenario, the infusion of new technology into the workplace raises skill requirements for the workers whose jobs have not been automated. For example, skilled operators in the valve industry spend more of their time problem-solving. Yet other scenarios also obtain. The new information systems that support the call centers described in chapter 8 have facilitated a fragmentation of jobs that in the past combined a variety of activities. As a result, a typical telephone operator today handles one thousand calls a day and has a call completion cycle that is many times shorter than it was for operators thirty years ago. Similarly, in the banking example in chapter 4, one department responded to the new check-processing technology by creating several narrow jobs from what used to be a single job involving many tasks, with one of the new positions involving lower skills and lower pay than the original many-faceted job.To summarize, case-study evidence suggests that in the main, employers' competitive strategies over the past several decades have hurt the job prospects and job quality of workers without college degrees. In some workplaces the story has been one of squeezing labor costs—by freezing compensation, increasing workloads, and shifting frontline jobs to cheaper locations or cheaper contractors. In other workplaces it has been a technology story: firms have used computer-driven machinery to automate repetitive tasks previously carried out by high school educated workers.

The evidence gained from the case studies illustrates the dominant actions of employers that led to the aggregate trends in the wage and job structures that have been so well documented: stagnant wages, rapid growth in contingent or subcontracted jobs, and declining upward mobility. But luckily, the story does not stop there. Among the case studies are important examples in which employers adopted quite different strategies, sometimes with very different consequences for their workforces. After describing these variations and their impacts on workers, we explore the reasons why some employers have responded to increased economic pressures in atypical ways.

ALTERNATIVE COMPETITIVE STRATEGIES

Although the pressure to reduce labor costs is strong in all of the industries studied, wide variations in firms' competitive strategies can nevertheless be observed. Rather than freeze wages, reduce benefits, use temporary workers, or relocate jobs to another part of the country, some employers have developed other ways to improve their financial performance.

One alternative strategy has been to focus on reducing turnover and increasing productivity. High turnover at the front line is often costly to firms: the new workers who must be recruited are likely to require some period of on-the-job experience before they are fully up to speed.[6] The cost to firms may be even higher in periods of low unemployment, when jobs are difficult to fill; it is more likely that positions will remain vacant and customer satisfaction will suffer. One way to reduce turnover is to reorganize the work process so that jobs are more interesting and rewarding for workers. For example, several of the hospitals studied in chapter 3 have introduced enhanced jobs for nursing assistants and food service workers to increase worker retention. This strategy is evident as well in some of the small and medium-sized manufacturing firms in central New York State examined in chapter 13. In response to pressures from large retailers for rapid turnaround and/or improved quality control, some manufacturers have integrated tasks into more complex jobs and given workers greater responsibility for many aspects of the production process. Such changes in work organization—and the greater employee commitment that often results—can reduce costs by making it easier for employers to recruit and retain good employees.

Reorganizing the work process can also increase productivity. In the study of Cabot Bank in chapter 4, workflow was reorganized in anticipation of the introduction of new technology, and productivity shot up even before the new technology was put on line.[7] Key reasons for the workers' embrace of the reorganization were that management promised not only more interesting (and demanding) jobs but also extensive training, opportunities for wage increases, *and* no layoffs. Management was able to make and keep this last promise because the firm's purchases of other banks increased the volume of checks that Cabot Bank processed, offsetting the reduced need for workers that initially resulted from the productivity increase. Of course, only firms that are growing can both make investments to increase labor productivity and guarantee no layoffs.

Another way in which firms have avoided myopic cost-cutting is by emphasizing product innovation and adopting human resource practices that support this strategy. For example, the plastics manufacturers discussed in chapter 6 are firms that compete on the basis of their ability to innovate, and they have promised to deliver products with zero defects on time to their customers. Team-based, quality-oriented work processes play an important role in these firms' ability to meet customer expectations. The auto parts firm described in chapter 12 makes innovative products with a moderately skilled workforce. It has developed expertise in the design and manufacture of electronic and electromechanical systems and developed a compensation system as well as workplace practices (such as just-in-time inventory reduction techniques) that support rapid innovation. These changes in work processes and human resource practices have resulted in interesting jobs at moderately good wages—jobs that workers want to keep.

Alternative strategies are evident even when firms do things that are usually seen as detrimental to workers—for example, when subcontracting out functions that were previously performed in-house. A case in point is schools and hospitals, which often have difficulty hiring experienced and capable managers for their food service or environmental service operations. As chapters 7 and 10 show, it has become quite common for schools and hospitals to contract out these management functions, since contract companies can hire more skilled managers and provide them with better career paths, leading to productivity gains. But control over the hiring and pay of frontline employees remains in-house, which matters in these organizations because their workers come in contact with vulnerable populations—schoolchildren or the sick and elderly. A similar "mixed" model has been pursued by one of the unionized hotels discussed in chapter 2: the management of a hotel restaurant was subcontracted for brand-name recognition, but the workers remained on payroll, covered by the union contract. In general, the net impact on frontline workers varies, but in many cases jobs have been retained that would otherwise have been lost.

Even in the case of complete subcontracting, the ultimate impact on workers is not necessarily negative. Food contractors, for example, can achieve economies of scale in buying food and can afford to purchase machinery to automate food preparation. As a result, restaurants, hospitals, and other food servers are increasingly contracting out salad preparation, purchasing precut vegetables and serving more foods prepared off-site in factory settings. As described in chapter 7, the net effect has been to transfer jobs from small food service sites to large food manufacturers. This has reduced opportunities for promotion in the food service sites, which tend to be concentrated in urban areas. However, a surprising consequence of this shift has been increased job ladder opportunities in the manufacturing sites, which tend to be located in more suburban and rural areas where land is less expensive. Thus, subcontracting in this industry appears to have diminished opportunities for central-city workers but increased opportunities for workers in selected outlying areas.

A similar story can be found in the temporary help industry. As discussed earlier, the use of temporary workers often reduces compensation (including fringe benefits) and job security for high school educated workers. However, in the tight labor markets of the 1996 to 2001 period, employers encountered difficulties as they tried to fill vacant positions for frontline workers through their usual hiring channels. Some employers lacked the capacity to recruit and screen potential new hires from a broader population, including workers with criminal records and those with poor work histories. Temporary help agencies specialize in recruiting workers and matching worker skills and job requirements. The case studies of temporary help services reported in chapters 9 and 10 found that some employers are contracting with temporary agencies to screen applicants with unfavorable characteristics. In addition, hiring such job applicants through a temporary firm makes it easier for managers to terminate and replace workers whom they view as weak contributors. As a result, in some situations the use of temporary help firms has resulted in improved job opportunities for the least attractive workers.

So far we have discussed a range of alternative competitive strategies focused on the organization of work in settings in which technological change has played at most a secondary role. But as discussed earlier, in industries such as financial services, call centers, complex plastic products, medical devices, and steel, technology has had a significant impact on workers without a college degree. Usually, though not always, skill requirements for frontline jobs have increased. In these industries outcomes for workers depend critically on whether the firm provides training for both incumbent and new workers.

Some of the case-study firms have embraced training as the way to fill these more skilled jobs. This is especially evident in the study of the hosiery industry in chapter 11. A central strategy that has enabled the hosiery industry to survive in North Carolina has been the creation of the Hosiery Technology Center (HTC) at Catawba Valley Community College, in partnership with individual firms, industry suppliers, and the regional industry trade association. The HTC has been critical to the transfer of technological knowledge to new, largely immigrant labor force entrants and to the training of experienced and apprentice machine technicians in the repair and maintenance of more highly computerized knitting machines. Knitting operators have to be able to interface with computer functions, and all employees have to work with the new computerized tracking system. Training by the HTC is specialized both to the needs of the industry and to the low levels of formal education in the workforce. Materials are designed to be easily read by workers who are more comfortable with a diagram of machine schematics than a paragraph of instructions. This and other specific features of the HTC training programs make it possible for firms to use the new technology without requiring that workers have higher levels of formal education.

Yet U.S. employers typically provide little training for workers with a high school degree or less, and this is indeed the preference of many of the case-study employers as well. For example, in manufacturing firms where technology has increased skill requirements, managers expressed a preference for hiring relatively more able high school graduates. In particular, they seek new hires who are literate, have good basic math skills, have good interpersonal and communication skills, are good problem-solvers, and have good mechanical skills. But this ambition has largely been thwarted to date, either by the tight labor markets that prevailed in the late

1990s or by a lack of new hiring due to increases in worker productivity or declines in consumer demand. In the interim, firms that have adopted sophisticated computer-based technologies are addressing the rising skill requirements in production jobs through training of incumbent workers and new hires. A medical devices plant that makes products such as biopsy needles (see chapter 5) relies on a combination of training and compensation policies based on pay-for-skill to develop the desired skills in employees. The innovative plastics manufacturer described in chapter 6 opened its own training institute to upgrade worker skills by providing training in English as a second language as well as preparation for earning the general equivalency diploma (GED). The training institute also retrained some former operators for jobs as skilled plastics technicians.

In fact, one common theme that runs across several case studies is that lack of computer skills per se has not been a skills bottleneck. All of the case studies that examined greater use of computers by workers found that modest amounts of training were sufficient to impart the requisite computer skills. For example, in the case study describing the consequences of introducing new computer-based technology at Cabot Bank (chapter 4), the reorganization of one department led to greater skill demands. Training went a long way toward providing incumbent high school graduates with the necessary skills, especially computer skills.

At the same time, however, it was more difficult to teach abstract problem-solving skills to many incumbent workers. Accordingly, Cabot Bank introduced a new recruiting process that favors applicants who have completed at least some years of college. Similarly, chapter 8 reports that the call centers that offer high-quality service and compete on the basis of customer loyalty prefer to hire workers with a college degree. Half of the employees in the call center that services large companies have college degrees.

Nevertheless, the prospects for call center workers who lack a college degree are not always bleak. The presence of a union can make a difference. The unionized telecommunications firm has invested more than twice as much in initial training, pay, and benefits for workers with a high school education compared with the nonunion financial services firm, and the union has helped maintain internal job ladders by limiting the outsourcing of work and the relocation of call centers to other states. More generally, mobility opportunities for workers with less than a college degree depend on managerial decisions such as whether to locate call centers near other services provided by the firm or near other company offices.

The simple lesson, then, is that training can play a key role in enabling firms to pursue alternative competitive strategies that do not displace or deskill workers without college degrees. But training is a path not often taken, and even when this strategy is tried, it is not always implemented well.

WHAT EXPLAINS VARIATION IN FIRM STRATEGIES AND WORKER OUTCOMES?

The findings in this book inexorably lead to two questions. Why have most firms responded to increased economic pressures by adopting policies that have negative effects on their frontline workers, even when alternative responses seem possible? And why have some firms, when faced with the same pressures, adopted policies that have not only improved their competitive position but also led to desirable outcomes for workers? In this section, we explore the answers to these related questions.

Unions

At a time when many speak of the triumph of the free market, it may seem an anachronism to speak of wage-setting institutions. Yet one of the more surprising findings from this volume is the continuing relevance of unions in determining the quality of frontline jobs. To varying degrees, unions have been able to prevent the squeezing of labor costs that is the first competitive option chosen by many employers. Collective bargaining has been important in maintaining real wage levels and benefits and in preventing increases in workloads. Nor has this effect been limited to the traditional stronghold of unions, the goods-producing sector. In fact, the most interesting union effects were documented in hospitality, health care, and telecommunications—service-sector industries with a high proportion of workers without college degrees.

This is not to downplay the marked decline in union representation over the past three decades and the exceedingly difficult hurdles that the American labor movement faces today. The decline in union representation in the American workforce over the last thirty years has been quite pervasive. It will take significant changes in the application of labor law and in organizing strategies to reverse this trend.

At the same time, it is striking that in a number of the industries examined in this volume, unions have played an important role in influencing employers' responses to competitive pressures. The impact of worker representation is greatest where unions have significant density in a specific region and industry, creating conditions in which all employers are competing on a level field. In these settings, several service-industry unions have been able to move beyond the bread-and-butter issues of wages and benefits to mediate the reorganization of work in ways that do not hamper competitiveness or profitability.

Again, these examples are few and far between. Only a few unions have embraced the challenge of organizing low-skilled immigrant workers. However, the examples do suggest that unions could play a key role in reversing three decades of growing inequality. A hopeful sign is that the successful union examples described in this volume occur in growing service industries, where innovative organizing campaigns are embracing a new generation of immigrant workers.

REGIONAL LABOR MARKET INSTITUTIONS

Equally surprising was the appearance, across a number of case studies, of new labor market institutions that have shaped employers' responses to growing competition. These institutions come in a variety of forms. In the hosiery manufacturing industry of North Carolina, a regional training consortium of major employers and community colleges helped to save the industry from overseas competition and integrate a new generation of immigrant workers into the production process (see chapter 11). In San Francisco a labor-management hotel partnership has engaged the major employers and union in the city in a joint effort to solve training and productivity issues while at the same time sustaining entry-level wages that are significantly higher than in other comparable cities (see chapter 2). And in New York City a large, multi-employer training fund supports the skills upgrading and promotion of frontline workers who have historically been stuck in dead-end jobs (see chapter 3).

In each of these cases, firms under intense pressure have been able to avoid the short-term cost-cutting (and even flight overseas) that would have severely hurt the job prospects of entry-level workers. Our understanding of these and other examples around the country is still evolving. It is clear that regional, multi-employer structures can deliver resources to individual firms that allow firms to pursue alternative competitive strategies. In the examples described in this volume, such resources include pooled training funds and recruiting and placement through hiring halls, joint benchmarking and dissemination of best practices, and a stronger industry voice in the policy arena. Moreover, the incentive structures for individual firms change in such partnerships. For example, firms are more likely to make investments in their employees when they do not fear the poaching of their trained workers.

THE QUALITY OF THE INFORMATION AVAILABLE TO MANAGERS

Alternatives to cutting the wage bill, such as reorganizing work to increase productivity, requires knowledge that many employers do not have. Access to knowledge about innovative management and production techniques appears to be important in explaining why some firms have adopted atypical strategies. For example, in central New York State a number of manufacturing firms have gone against the local grain and adopted "high-performance" work practices and made significant investments in their less-skilled workers. Although similar to their competitors in most respects, these firms are different in that they tend to be located close to metropolitan areas. This location results in better access to colleges, well-trained managers, and other vehicles for exposure to best practices in the industry, such as local trade groups. This is not a minor point. In daily practice, employers must make numerous decisions about how to organize work and production, and in every industry there are clearly better and worse ways to do so. Since firms typically need considerable knowledge and technical assistance to succeed in restructuring their workplaces—especially when the restructuring makes use of high-performance practices—there is a clear role here for intermediary organizations such as community colleges. Although having good information about high-performance work practices does not guarantee that firms will adopt them, a lack of information poses a significant barrier to adoption.

REGULATION

The declining real value of the minimum wage over the last thirty years means that there has effectively been a deregulation of the wage-setting process. The falling wage floor has had direct effects on how firms restructure jobs at the front line. Besides making it relatively easy for firms to cut wages, a declining real minimum wage has indirect effects as well. As the wage floor falls, it creates room for temp agencies and subcontractors to offer their services at lower costs than were possible in-house, where incumbent workers may have acquired seniority and could be earning more than the minimum wage.

In a number of industries other forms of deregulation have also resulted in significant changes to employers' competitive options. For example, deregulation in the banking industry allowed the consolidation and relocation of call centers to remote locations in the Midwest, causing dramatic changes in customer service jobs. Similarly, the highly publicized breakup of AT&T in 1984 and the deregulation of telecommunications played no small role in that industry's deunionization and the erosion of the quality of nonmanagerial jobs. Changes in methods of regulating health care costs—in particular, the practice of basing hospital reimbursements on patients' diagnoses rather than on the cost of the care they receive—make it difficult for hospitals to increase wages.

The important point is that both the presence and absence of government regulation play important roles in shaping how the labor market operates. The withdrawal of various forms of regulation in the 1980s and 1990s clearly had an impact on firm behavior and worker outcomes. As such, deregulation should be understood as an active policy intervention.

TIGHT LABOR MARKETS

In several of the industries studied in this volume, tight labor markets clearly have had an effect on employer practices. This is not just a story of the extraordinarily low unemployment of the late 1990s. A number of industries have long had to deal with a tight labor supply, especially when trying to fill frontline jobs with low wages and difficult working conditions. It is not surprising that the problems of recruitment and retention in tight labor markets have increased employers' willingness to explore innovative approaches to the organization and compensation of entry-level jobs. However, it would be a mistake to draw the conclusion that good things happen only in tight labor markets. In principle, a high-productivity–high-wage model can work in normal times as well. The challenge for policymakers is to identify the supports necessary to nurture such a model.

POLICY RESPONSES

The studies in this volume analyze the competitive conditions facing industries that employ large numbers of workers without college degrees and the choices that employers make in meeting these challenges. A primary goal throughout has been to understand how firm-level decisions shape a variety of worker outcomes, including wages, fringe benefits, training and promotion opportunities, job quality, and employment security.

The chapters offer analysis, not policy prescriptives. Nevertheless, we believe that they offer several important lessons to policymakers. First, there is a clear role for government in supporting managerial choices and competitive strategies that are beneficial for workers. Second, there is a clear role for government in making work pay for the many Americans who work full-time in the mentally and physically demanding jobs that are the backbone of much economic activity.

What, then, are the points of intervention? Most obvious and direct is the minimum wage, which in real terms has fallen over the last twenty-five years and has enabled firms to reduce the wages of their most vulnerable employees. Raising the real wage back to its 1979 level or higher would create a level playing field for those employers who want to invest in workers' skills and compete on the basis of service or product quality. A higher minimum wage would not only reduce the possibility that these firms will be undermined by competitors engaged in a race to the bottom but also reduce the incentives for subcontracting and outsourcing to low-wage suppliers. It is important to keep in mind that the most recent economic research shows that the negative effects on employment stemming from an increase in the minimum wage are quite small.[8]

In the longer term, one of the striking findings to emerge from this volume is the importance of regional labor market institutions for workers without college degrees. The hosiery, hospital, and hotel industries provide powerful lessons in how interfirm cooperation can set industry standards and disseminate best practices; how training consortia can reduce training costs for individual employers and encourage cross-firm mobility; and how multi-employer bargaining and high local union density can establish strong job quality and productivity norms. Government is in a unique position to nurture these types of structures, which require a great deal of technical assistance, intermediary organizations, public leadership, coordination of public training monies, and a vital and flexible community college system. Of course, there needs to be deep and sustained engagement of the stakeholders themselves. But ultimately the growth of these new labor market institutions cannot happen without a conscious decision by government to create the conditions that nurture high-performance work organizations.

The enforcement of U.S. labor law is also essential if workers with limited leverage in the labor market are to have the ability to earn wages that will sustain them and their families. High union density, as several chapters in this book show, is quite effective in raising wages for such employees, especially in labor-intensive service industries. Yet in a recent study of workers' freedom to organize and bargain collectively in the United States, Human Rights Watch found that illegal reprisals against employees attempting to form unions have risen from fewer than one thousand a year in the 1950s to more than twenty-three thousand in 1998 (Human Rights Watch 2000). The simple act of reining in this illegal activity by employers would go a long way toward reestablishing unionization as a viable choice for workers in this country.[9]

It is important to stress that these types of policies are especially critical for immigrant workers. Changes in immigration laws have opened America's doors to less-educated workers from around the world. These workers increasingly fill the low-wage jobs studied in this volume but often do not have the economic power to better their lives on their own. More than half of employers with high proportions of undocumented workers threaten, during union representation election campaigns, to call the Immigration and Naturalization Service (INS) if workers vote for the union (Bronfenbrenner 2000).

Even with a dramatic change in political will, it will obviously take time to make any significant change in the prevalence of low-wage jobs. Immediate relief is needed, and a simple improvement to the Earned Income Tax Credit (EITC) could help to deliver it. The EITC provides workers with a refundable credit against federal income taxes. While not sufficient to bring most working families with children up to basic budget levels, it does raise the incomes of many families above the poverty line. But the credit currently phases out quite rapidly as income increases, with several unintended consequences.[10] Slowing the phaseout rate for the EITC would provide more help to families with incomes above $12,500, allow workers to earn higher incomes before losing the credit entirely, and reduce the marriage penalty for large numbers of low-wage workers (Cherry and Sawicky 2000). Given bipartisan support for the EITC, this is a front where progress could be made, and quickly.

The United States may be the richest of the industrialized countries, but a distressingly large number of Americans employed across a wide range of industries work at jobs that do not pay enough to live decently. The findings in this book call for a national self-examination. They challenge us to ask ourselves: What kind of country do we want to live in? Do we accept that large numbers of low-wage workers are necessary for U.S. prosperity and job creation? Are we willing to countenance the profound economic, social, and political effects of the growing gap between rich and poor?

Rising inequality is not required for economic growth. As the Princeton economist Paul Krugman (2002, 76) pointed out in the *New York Times Magazine,* "The most impressive economic growth in U.S. history coincided with the middle-class interregnum, the post–World War II generation, when incomes were most evenly distributed." It is necessary to go back to the 1920s to find a period of such great disparities in income among Americans. Government has an important role to play in reversing the slide from the middle-class society of the 1950s and 1960s to the stark inequality of today.

It is important to keep in mind that the economic consequences of having more than one-fifth of the workforce earning poverty-level wages are not straightforward. Americans do pay less for some goods and services than they would if they were produced by workers earning a living wage. However, the research described in this volume shows that low wages elicit responses from both workers and their employers that increase costs. For example, low wages increase the likelihood that workers will quit their jobs, imposing turnover costs on employers. They increase the likelihood that firms will fail to seek out the most efficient technologies and work organization practices and will underinvest in workers' skills and capital equipment. These responses can result in higher prices and lower quality than would have been the case if a decent minimum wage had compelled all employers to make the best use of their workforces.

Moreover, a national commitment to a living wage could help the country deal with the recurring problem of creating demand for the enormous amount of goods and services that the economy is capable of producing. In periods of recession, such as 2002 to 2003, paying a living wage is a powerful way to stimulate demand and spur employment.

While the economic consequences of low wages are complicated, the social consequences are less so. In one of the world's wealthiest countries, fully 29 percent of working families with children earn less than the amount needed to maintain a basic standard of living, and that is a national disgrace. Such income inequality threatens the social fabric of our society and the stability of our democracy. It's past time for Americans to speak out about the kind of country we want to live in.

NOTES

1. These statistics take into account benefits received under the Earned Income Tax Credit (EITC). A "basic family budget" is adjusted for the cost of living in local communities and for family size and offers a realistic measure of how much income a family needs to have a safe and decent standard of living. For more details on the measure and the above estimates, see Boushey et al. (2001).
2. Changes in the questions about educational attainment included in the U.S. Census of Population and the Current Population Survey (CPS) make it impossible to estimate with current data how many years of college were completed by sample respondents.
3. For a review of the wage inequality literature, see Katz and Autor (1999).
4. In 1974 the minimum wage was increased from $1.00 to $2.00 an hour.
5. An additional 30 percent of the U.S. workforce attended college but did not earn a four-year degree. The changes in work opportunities described in this volume pertain to many of these workers as well (Mishel, Bernstein, and Boushey 2003, 161, table 2.20).
6. For example, Marriott Hotels estimates that it costs $3,000 in re-

cruiting expenses and lost production to replace a housekeeper who leaves (Eileen Appelbaum, interview with Donna Klein of Marriott, Washington, D.C., July 25, 2001).

7. The Cabot Bank case also illustrates an important but often neglected pattern: namely, the interconnectedness of technological changes, organizational changes, and human resource policies (Brynjolfsson and Hitt 2000). It took the prospect of new technology for Cabot Bank to reorganize exceptions processing tasks into more complex, multidimensional jobs.
8. For a recent review of the evidence on the employment effects of changes in the minimum wage, see Brown (1999).
9. For recent evidence on changing attitudes toward unions, see Greenhouse (2002).
10. In 1999 the EITC provided a family with two children earning between \$9,500 and \$12,500 with a maximum credit of \$3,618 a year. The credit phases out rapidly as family income increases, and it disappears entirely when family income reaches \$30,850—equivalent to a steep marginal tax rate of 21 percent on earnings above \$12,500. In addition, the rapid phaseout of the EITC creates a severe "marriage penalty" for low-wage workers. A man with two children earning \$20,000 is eligible for some credit under the EITC, as is a woman in the same situation. But if they marry each other, they and their four children would lose the credit.

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