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# Organizational Performance in Services

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# Organizational Performance in Services

## Abstract

The question of performance in service activities and occupations is important for several reasons. First, over two-thirds of employment in advanced economies is in service activities. Second, productivity growth in services is historically low, lagging far behind manufacturing, and as a result, wages in production-level service jobs remain low. In addition, labor costs in service activities are often over 50% of total costs, whereas in manufacturing they have fallen to less than 25% of costs. This raises the question of whether management practices that have improved performance in manufacturing, such as investment in the skills and training of the workforce, may be more difficult or costly to apply to service activities. At the same time, these practices may be even more important for organizational performance in these labor-intensive activities. Third, the role of the customer in production makes the process of service delivery fundamentally different than that found in goods production. Thus, it is useful to focus on the factors affecting performance in services, the topic of this chapter.

## Keywords

performance, service activities, service occupations, productivity growth

## Disciplines

Human Resources Management | Labor Relations | Operations and Supply Chain Management | Organizational Behavior and Theory | Work, Economy and Organizations

## Comments

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# Organizational Performance in Services

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Competition in service activities has intensified over the last two decades and corporations have responded by fundamentally restructuring their organizations. On the demand side, national product market deregulation has encouraged price competition and facilitated the internationalization of service activities. On the supply side, advances in information technologies have expanded remote service options and automated processes, while heightened international immigration has increased the availability of labor for traditionally low-wage service jobs.

In this context, the quest for more efficient and effective service delivery systems has become a central topic among academics as well as industry practitioners. While leading management theorists in the 1970s advocated competing on price by applying industrial models of production to services (Levitt, 1972), quality service and customer relationship management have emerged as dominant themes since the mid-1980s (Heskett, Sasser & Schlesinger, 1997).

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services is historically low, lagging far behind manufacturing, and as a result, wages in production-level service jobs remain low. In addition, labor costs in service activities are often over 50% of total costs, whereas in manufacturing they have fallen to less than 25% of costs. This raises the question of whether management practices that have improved performance in manufacturing, such as investment in the skills and training of the workforce, may be more difficult or costly to apply to service activities. At the same time, these practices may be even more important for organizational performance in these labor-intensive activities. Third, the role of the customer in production makes the process of service delivery fundamentally different than that found in goods production. Thus, it is useful to focus on the factors affecting performance in services, the topic of this chapter.

To understand competition and performance in services, we first briefly review the nature and extent of change in market institutions, technologies and business strategies. We conclude that while there is variation within and across service industries and across countries, overall intensified price competition has led firms to focus more on cost reduction than on quality-enhancing strategies. Where quality and relationship management strategies are adopted, they are typically reserved for business or high-valued added customers. To understand the predictors of performance, we turn to empirical studies within organizations regarding the link between management practices and performance outcomes, and then to empirical studies of causal mechanisms. Our literature review covered quantitative studies from 22 journals between 1995 and 2001. Conclusions follow.

## CHANGING MARKETS, TECHNOLOGIES AND BUSINESS STRATEGIES

Competition in services has intensified as markets that were once local and regional have become national and international in scope. This expansion has been facilitated by a growing demand for services as inputs into global manufacturing, advances in information technology that have increased the speed and volume of electronic transactions, and political movements to deregulate and privatize service industries. We reviewed changes in markets, technologies and business strategies in five industries—airlines, financial services, telecommunications, hotels and health care. We found common patterns with respect to heightened price competition, increased scope of the market, increased concentration in ownership structures, a focus on cost cutting and the use of customer segmentation strategies.

Price competition has accelerated in airlines, financial services and telecommunications, primarily due to deregulation and privatization of national product markets. In airlines, deregulation began in the USA in 1978 and spread to the UK, New Zealand, Chile, Canada and Australia, among others (Oum & Yu, 1998). Most European nations began to deregulate in the mid-1980s and progressed more gradually (Doganis, 2000). In financial services, deregulation and privatization began in most OECD countries in the 1970s and early 1980s in **response** to high inflation, the internationalization of banking and the abandonment of fixed foreign exchange rates. It continued in the 1980s due to international debt crises and the entrance of new financial actors such as mutual funds and credit card companies. In telecommunications, the UK and US undertook deregulation and privatization

in the early 1980s, and within a decade almost all other countries around the globe were doing the same (Katz, 1997).

The hotel industry, by contrast, experienced economic difficulties due to overbuilding of capacity in the late 1980s and early 1990s. In the USA, in particular, thousands of hotels were foreclosed and several major chains filed for bankruptcy. Competition has intensified as national and global chains have gobbled up more traditional, independently owned and operated hotels (Lattin, 1998, pp. 96-98). In health care, rising costs have threatened funding systems in most countries, although there is great variation due to the variety of national systems of funding and the high level of government involvement in health care. The USA faces the greatest crisis, with health care costs rising at two or three times the rate of inflation in recent years, due to factors such as new technology, an aging population, the rise of medical malpractice suits, overspecialization, and the cost of poor quality (Gaucher & Coffey, 1993).

Regardless of the source of pressure, organizations in these industries have responded by focusing heavily on cost-cutting strategies. In industries undergoing deregulation, new entrants to the market typically have lower cost structures and a non-union workforce, while established companies have sunk costs in obsolete technologies and a higher-waged, unionized workforce. The established firms have responded by cutting labor costs. In airlines, for example, US companies focused heavily on cutting labor costs, and European airlines followed suit by the late 1980s and early 1990s. Strategies included: downsizing; two-tier wage structures; concessions in work rules; establishing low-cost subsidiaries with lower wage scales and more flexible terms; and outsourcing activities, such as aircraft cleaning and

maintenance, passenger handling, in-flight catering and accounting (Doganis, 2000, pp. 112-119).

In banking, companies began offering a range of new products, such as insurance, credit cards, cash management, and pension and mutual funds. US banks led the way in shifting the business focus from service to sales maximization and reducing labor costs through labor-saving technologies, such as automatic teller machines, new back-office data-processing technologies, and telephone and Internet banking. Banks in other OECD countries have followed many of these practices. There is some evidence that these changes have had a negative impact on customer satisfaction, as in a Norwegian study that found that cost cutting and restructuring led to significant declines in service quality and to customer defection (Lewis & Gabrielson, 1998).

In telecommunications, the old monopolies responded by investing heavily in digital technologies and slashing labor costs through downsizing. With deregulation, sales maximization replaced the historic goal of providing a universal service to the public. These patterns varied by country, with more market-driven strategies in the USA, UK, and Australia and more union-mediated strategies in the European countries and Japan (Katz, 1997).

In the hotel industry, globalization has allowed firms to maintain low labor costs through the utilization of large numbers of low-wage immigrant workers. Labor-saving technologies in this industry also include property management systems, Internet booking, and automated check-in and check-out. In health care, organizations have attempted to constrain spending and seek more efficient organizational and funding strategies

(Howard & MacFarlan, 1994). The USA has shifted from “patient-driven” to “payer-driven” competition, which has led to a decline of the influence of the medical profession and the rise of for-profit financial interests (Dranove & White, 1999). This market-orientated strategy distinguishes the USA from other industrialized nations, which responded to increases in health care costs by adopting more centralized, budget-driven strategies (Dranove & White, 1999, p. 34). While the USA appears to be experiencing the greatest crisis in health care, restructuring to reduce costs is occurring in most countries (Sochalski, Aiken & Fagin, 1997).

Some studies show that cost cutting has had negative results in health care. For example, a study of re-engineering at a large US hospital found that it had extremely negative results for employees and patients. Using three waves of employee surveys, researchers found significant increases in depression, anxiety, emotional exhaustion, job insecurity, workloads and team work. Workers also reported significant declines in the overall quality of care they gave (Woodward *et al.*, 1999). A survey of nurses from over 700 hospitals in the USA, Canada, England, Scotland and Germany in 1998-1999 found a high rate of dissatisfaction and experiences of job-related strain in all countries except Germany (Aiken *et al.*, 2001). They found a high level of discontent associated with negative perceptions of staffing adequacy and workforce management policies.

In addition to cutting labor costs and investing in labor-saving technologies, service companies have responded to heightened competition by consolidating organizations and ownership structures. While deregulation is designed to increase the number of industry players, it has led to rising

concentration of ownership across OECD countries in airlines (Oum & Yu, 1998), banking (Hunter, 1999) and telecommunications (Katz, 1997). In the hotel industry, concentration has also increased, with the USA leading the way with new forms of chains, franchising, hotel development and management. Hotels in other countries are replicating US practices as international franchising and alliances increase (Lattin, 1998, pp. 54—56). The USA also has led the world in the consolidation of health care facilities, as managed care organizations assume a growing role and independent hospitals are incorporated into for-profit chains (Dranove & White, 1999).

Another service management strategy is the use of customer segmentation, in which companies stratify customers by their ability to pay. Segmentation allows companies to compete on quality and relationship management for high value-added customers, such as business clients, but to adopt a cost-minimizing or industrial model of service provision in the mass market. In airlines, for example, business customers pay a premium for quality service, while the bulk of consumers register complaints regarding cramped seating arrangements, poor baggage handling and automated reservation systems. Banks distinguish between high net worth and mass-market sectors in personal banking; and large, medium and small sectors in business banking. Segmentation strategies are problematic in banking, however, because of the difficulty of identifying the future value of customers (Hunter, 1999). In telecommunications, customer segmentation strategies have become widespread, with different levels of customer service and labor strategies for workers serving various tiers of business customers and the mass market (Batt, 2000). Similarly, hotels are typically classified into three basic strata: upscale, mid-scale, and budget/economy. Management

practices and labor strategies differ across the strata, with some attention to recruitment, training and compensation at upscale hotels, but little or none in mid-scale or economy hotels. The “mass market” approach in the lower tier of the market emphasizes rationalization and intensification of work for the bulk of low-wage workers. Nonetheless, even at the high end, labor investment strategies tend to focus on front office employees and managers, not the three-quarters of hotel workers who occupy “low-level” service occupations, such as maid, janitor, food server or hotel clerk (Cobble & Merrill, 1994, pp. 455—457).

The use of workplace innovations or human resource strategies that invest in the workforce are relatively undeveloped in service organizations. Exceptions, such as Southwest Airlines, are notable. More generally, where companies have experimented, it is with a particular type of innovation. In airlines, for example, employee stock ownership plans (ESOPs) have become popular since their introduction by United Airlines. They are designed to motivate workers to have a stake in the company by offering equity in exchange for pay and work rule concessions. All major US airlines now have ESOPs and employee representation on their boards (Doganis, 2000, pp. 121-122). In banking, the literature has noted examples of work reorganization in branches to provide workers with a broader set of skills for service and cross-selling of a variety of products (Baethge, Kitay & Regalia, 1999, pp. 7-14). In telecommunications, a handful of US companies experimented with TQM and self-directed teams in the 1980s, but soon after abandoned them (Katz, 1997). And in health care, there is widespread interest in the application of TQM principles to hospitals, a trend that began in the USA in the 1980s but which is spreading throughout OECD countries.

However, Ennis & Harrington (2001) found that only 25% of the hospitals they surveyed had formal TQM programs, and half of those had started in the year prior to the survey.

In sum, service companies have paid relatively little attention to competing through high-commitment work practices that invest in the skills of the workforce and provide opportunities for employee participation and collaboration in teams. National surveys show that service industries have lagged behind manufacturing in the use of high-commitment work practices, at least in the USA. For example, a 1993 national survey of establishments by the US Bureau of Labor Statistics found that 56% of manufacturing plants used at least one innovative practice (use of teams, TQM, job rotation or quality circles), but only 36% of retail firms and 41% of all service firms did (Gittleman, Horrigan & Joyce, 1998). Hunter's (2000) analysis of a US national establishment survey found that service establishments were roughly half as likely as manufacturing establishments to use TQM and self-managed teams.

Our brief review of several major service industries suggests that firms have responded to intensified competition primarily by cutting costs and using new technologies to compete on product and process innovation. They have made relatively little use of innovative human resource practices, and where they have, these are in workplaces serving business or high-value-added customers. The question, then, is how and why quality service strategies and high-commitment practices can lead to better performance in a broader array of service activities, particularly in the mass market.

## **MANAGEMENT PRACTICES AND PERFORMANCE OUTCOMES**

We identified a range of models for service management that vary on

a continuum from those designed to focus exclusively on cost to those focused on quality professional service. Industrial models of service production are designed to maximize volume and minimize cost by emphasizing mechanization, individually designed jobs with low skills and discretion, and intense monitoring and rule enforcement (Levitt, 1972). At the other end of the spectrum are relationship management strategies modeled after professional service (Gutek, 1995; Heskett *et al.*, 1997). They are characterized by high levels of specialization and education, independent judgment, long-term personal relationships between providers and consumers, and intense focus on quality, loyalty and customization. Between these two extremes is a range of strategies characterized by some mix of attention to cost and quality—what some have termed “mass customization” (Pine, 1993; Frenkel *et al.* 1999). They involve some level of automation and process re-engineering found in industrial models, coupled with some level of attention to service quality and customer loyalty found in the professional model.

Implicit in these models is the assumption of an inverse relationship between cost and quality, an assumption contrary to that found in TQM, which assumes that costs and quality may be jointly maximized. Under TQM, costs are reduced by involving workers in problem solving to lower defect rates. However, the investments in training and high relative pay for skilled workers under TQM, lean production, or other high-commitment production models, means that labor costs are higher in these systems (Cappelli & Neumark, 2001). Thus, whether there is a net performance gain from high-commitment systems is an empirical question that is likely to vary with the relative labor intensity of an activity. The labor-intensive nature of

services coupled with tight profit margins may limit the utility of high-commitment practices in mass markets.

However, evidence that the effectiveness of high-commitment practices is contingent on a quality or up-market strategy is inconclusive. On the one hand, a study of 209 hotels in the UK showed that investment in HRM was ineffective where cost control was the business strategy, but effective for hotels pursuing a quality strategy (Hoque, 1999). On the other hand, Delery & Doty (1996) studied banks in the USA and found that while some HR practices had some contingent effects, universal effects were stronger. Batt (2002) similarly found that an index of high-commitment practices had significant positive effects overall, and that the effects were *more* powerful in the mass market, where price competition dominates. Finally, using archival data from 525 US nursing homes, Mukamel & Spector (2000) found that the relationship between cost and quality was not linear. Rather, they found an inverted U relationship between quality and costs, suggesting that there are quality regimens in which higher quality is associated with lower costs. This evidence from a highly labor-intensive and cost-constrained industry supports the idea that cost and quality can be jointly maximized in mass market service activities, as TQM theory predicts.

In the remainder of this section, we first review the evidence on management practices and performance in three areas: the use of technology and skills, the organization of work, and HR incentive and control systems. We then turn to studies that integrate these dimensions and examine the processes linking management practices to organizational performance. Most of the studies included use objective measures of

operational outcomes, such as productivity and quality, defined in contextually-specific ways or measured by managers or customer reports. We also included some studies of employee attitudes and behaviors that shed light on explanatory mechanisms and the limits of current research.

### **Information Technology and Skills**

In the 1980s, service firms began investing heavily in information technology to improve historically low productivity levels in services. However, in the USA where technology investments in service industries outpaced other countries, aggregate data revealed no productivity gains in the 1980s and early 1990s (compared to manufacturing, where technology-related productivity grew significantly). Researchers referred to this phenomenon as the productivity paradox (National Research Council, 1994). By the mid- 1990s, however, evidence began to shift. In a major review of the literature, Brynjolfsson & Yang (1996) concluded that the main benefits from using computers appear to be improved quality, variety, timeliness and customization—none of which are well measured in official productivity statistics. These findings held across manufacturing and service industries. In recent research, Brynjolfsson and colleagues surveyed over 400 large firms and found that greater levels of IT are significantly associated with higher skill levels, investments in training and the reorganization of work to emphasize decentralization and the use of teams. These factors, both independently and interacting with each other, lead to higher productivity. These findings, however, were not disaggregated by sector (Bresnahan, Brynjolfsson & Hitt, 2002).

Other studies specific to service industries reach similar conclusions.

Pennings (1995), for example, examined 10 years of data from 107 banks on product and process innovations (ATMs, computers). He found that both had a significant positive effect on efficiency and effectiveness indicators, with computer innovations having a stronger effect on internal measures of performance and ATMs on external measures. He also found that mimetic adopters (adopting IT when many others already have done so) enjoyed fewer performance advantages than their innovating competitors who “left the pack early”. Reardon, Hasty & Coe (1996) found that IT contributes as much on the margin towards the creation of output as spending on additional selling space in retail establishments. They concluded that retailers are underutilizing IT. Quinn (1996) reviewed government and service industry data and presented alternative benefits from investments in IT that do not show up in “productivity” data: maintaining market share, avoiding catastrophic losses, creating greater flexibility and adaptability, handling complexity, improving service quality, creating an attractive work environment, and increasing responsiveness and predictability of operations. However, Nielsen & Host (2000) found that IT support was not significantly associated with measures of service quality.

### **The Organization of Work**

Choices regarding technology may influence, but not entirely predict, the design of work. One set of choices concerns the extent to which individual jobs are designed to enhance employees’ use of skills through greater decision-making discretion or breadth and variety of tasks. A second set of choices concerns the organization of work as an individual or interdependent function. While most manufacturing technologies imply task

interdependence, the extent of technically-required interdependence is more varied and less obvious in service settings where “products” are more intangible. Managers, therefore, have considerable choice in the extent to which they emphasize work as an individual or collaborative function in such areas as customer service, banking, retail sales, airline reservations and service, hotels and health care.

### ***Discretion, Participation and TQM***

Prior reviews of the literature on job design have shown that individual employee autonomy, “empowerment”, or participation in off-line teams are generally associated with better employee attitudes, such as satisfaction, but either modest positive or no objective performance outcomes (Cotton, 1993). Findings from our review of articles since 1995 are consistent with this evidence. On the one hand, Harel & Tzafir (1999) found a positive correlation between participation and manager-reported performance in a study of service organizations in Israel. Similarly, Hunter & Hitt (2001) found that higher levels of worker discretion in retail banks were associated with significantly higher objective productivity and sales. On the other hand, King & Garey (1997) reported that empowerment had no significant correlation with guest satisfaction ratings in hotels. Rodwell, Kienzle & Shadur (1998) found no evidence that employee participation in decision-making predicts self-rated performance in a study of an Australian IT company. Other research showed that participation in off-line quality teams had no relationship to subjective and objective performance criteria for field technicians (Batt, 2001) or call center workers (Batt, 1999). In fact, in the latter case, greater autonomy was significantly negatively associated with

self-reported quality. Preuss (1997,2001) studied similar issues in hospitals, and found that greater discretion for nursing assistants led to higher rates of patient errors, while greater discretion for nurses led to lower rates. Employee involvement in personnel decisions such as scheduling, training and assignments had no effect on patient error rates.

TQM generally includes two dimensions of job redesign. One is delegation of decision making discretion to lower organizational levels, so that employees with tacit knowledge closest to the “the point of production” can make operational decisions. The second is the use of off-line quality improvement groups (quality circles and the like) to solve problems. Several organizational studies of TQM also have shown mixed results. Douglas & Judge (2001) found a significant positive relationship between performance and the degree of implementation of TQM in a study of financial performance in 193 hospitals. Hospitals that implemented a comprehensive array of TQM practices outperformed those that had less well-developed programs. Lammers *et al.* (1996) found that commitment to TQM philosophy and the number of active teams explained 41% of the variance in perceived quality improvement in 36 medical centers. However, in another study of TQM involving 3000 patients in 16 hospitals, Shortell and colleagues (2000) observed that while there were two- to four-fold differences in all major clinical outcomes, little of the variation was explained by TQM. Patients in hospitals scoring high on TQM were more satisfied but also more likely to have hospital stays greater than 10 days. And in a study of TQM in 61 hotels in the UK, Harrington & Akehurst (1996) found that only 22% of those that had a formal quality policy reported return on capital rates of more than 10% in a 3 year period (1989— 1992). There was no evidence of a statistically

significant relationship between company adoption of a quality orientation and their rates of return on net assets. These inconsistent results suggest that the value of individual worker discretion, participation or TQM must be examined in contextually specific ways.

### ***Teams and Group Collaboration***

With respect to the use of groups or collaborative forms of work organization, prior reviews have found fairly consistent positive performance outcomes associated with semi-autonomous work groups or self-managed teams (Cohen & Bailey, 1997). Cohen & Bailey's review, however, contained only a handful of studies of work teams in services, and these showed inconsistent results. Since that review, new studies of semi-autonomous teams in frontline services have found more positive performance results. In a study of knowledge workers in financial services, Campion, Papper & Medsker (1996) found that Hackman & Oldham's (1980) model of job characteristics, measured at the work group level, significantly predicted better self-reported and managerial ratings, and archival data on performance. Similarly, Batt (1999) found that self-directed teams of customer service representatives had 9.2% higher monthly sales and higher self-reported quality than traditionally supervised groups. Langfred (2000) studied 1000 workers at two service workplaces: a social service agency and the Denmark military. He found that both group and individual autonomy predicted the quality and accuracy of group outcomes as reported by managers. Uhl-Bien & Graen (1998) studied 400 public sector workers and found that individual selfmanagement showed a strong, positive relationship

with team effectiveness (as reported by managers) in functional work units, but a weak, negative relationship with effectiveness in cross-functional teams.

Other research has examined the importance of inter-group relations in services, particularly among project and product development teams, where much of the original research on this topic emerged (Cohen & Bailey, 1997). More recent research, however, has shown the importance of inter-group coordination among frontline service workers, e.g. Gittell found that cross-functional coordination is a significant predictor of objective performance measures in airline (Gittell, 2001) and health care settings (Gittell *et al.*, 2000). In sum, there is growing evidence that opportunities for group work and collaboration are associated with better performance in frontline service work.

Similar to the literature on technology, researchers increasingly recognize that group effectiveness depends not only on the design of groups, but on a series of supportive management practices that create a coherent set of directions and incentives. Arguably, these management practices are more important in service workplaces, because the justification for group-based work rests less on interdependent task characteristics and more on intangible aspects, like information sharing and learning. Most of the studies of service teams, discussed above, found that group effectiveness was enhanced by supportive management practices, such as training, supervisory support, rewards and work group relations.

Cohen, Ledford & Spreitzer (1996) tested a structural equation model of performance as predicted by four dimensions of the work environment:

group work design; encouraging supervisor behavior; group characteristics, such as coordination and expertise; and “employee involvement” context (information, feedback, training, resources and recognition). They found some significant relationships between all four dimensions and four outcome variables: satisfaction, self-rated and manager ratings of performance, and absenteeism. Among their strongest findings are that the context variables significantly predicted employee satisfaction and manager ratings of performance, but encouraging supervisor behavior was significantly negatively related to manager ratings. They attribute the latter finding to the possibility that supervisors interfere in worse-performing teams or that supervisors who intervene in teams may indeed undermine performance, because workers are better situated to know what to do.

### **HR Incentive and Control Systems**

Incentive and control systems may be usefully classified as either behavior-based or outcome-based, and these may be viewed as substitutes (Eisenhardt, 1985). Behavior-based systems rely on supervisory monitoring and enforcement of rules and are typically utilized for jobs that are defined as low-skilled or routine and relatively easy to monitor. Outcome-based systems rely more on performance-based pay and are typically utilized for jobs that do not have easily programmable tasks and are difficult to monitor.

Classic mass production control systems are usually behavior-based, and thus rely heavily on monitoring and rules. High-commitment systems, in which jobs are defined as more complex and less programmed, typically rely on some type of performance-based pay. If work systems require group work, then group-based pay is the logical concomitant. If firms adopt

outcome-based systems, then, in theory, supervisory responsibilities should change, from disciplining employees and enforcing rules to facilitating support, resources, employee development and coordination across work groups.

Service jobs that involve customer interaction—the bulk of employment in services— should in theory have outcome-based control systems because the customer introduces uncertainty and variability into the production process. Tasks are not easily programmed.

Sales jobs, for example, have historically relied heavily on commission pay. In reality, however, many firms have adapted mass production models to services, from call centers to fast food. In these settings, behavior-based controls are viewed as even more important than in manufacturing, because current technology limits the extent to which standardization can be accomplished through machine-pacing. Thus, service managers also must set standardized routines for interacting with customers, coupled with supervisory monitoring. In recent years, technological advances have allowed electronic monitoring systems to be used in a much broader array of service jobs, reducing the number of supervisors while maintaining high levels of surveillance.

Empirical research on the performance effects of alternative incentive systems is quite undeveloped. For example, there is limited research on the relationship between electronic monitoring, supervisory monitoring, and performance. On the one hand, electronic monitoring may replace supervisors, thereby reducing indirect labor costs and improving organizational efficiency. On the other hand, intense electronic monitoring

causes emotional exhaustion and burnout (Carayon, 1993; Holman, Chissick & Totterdell, in press), which may negatively affect productivity. In addition, supervisors may be a complement to electronic monitoring, as in research by Holman *et al.* (in press), who found that supervisor support moderated the negative effects of electronic monitoring.

Similarly, the research on supervisors is theoretically and empirically undeveloped. Often researchers include a measure of supervisor support (positive feedback, fair treatment of workers) when they study management practices, but what supervisors actually do is unexamined. These studies typically show that supervisors influence employee attitudes but not necessarily performance, e.g. Cunningham & MacGregor (2000) found that supervisor support was a significant predictor of employee satisfaction, intention to quit, and absenteeism in a study of 750 telephone and service station workers. However, in an international survey of 400 call center workers, supervisor support and team member support had a significant relationship with job satisfaction but not employees' commitment or reported capacity to satisfy customers (Sergeant & Frenkel, 2000). Singh (2000) found that task control was more important than supervisor support as a resource for call center workers in financial services, and King & Garey (1997) found that positive supervision and leadership in hotels had little correlation to guest ratings of responsiveness and slight negative correlations to welcoming and helpfulness.

A second set of issues concerns the ratio of supervisors to workers: are new forms of work organization a complement to or substitute for supervision? One group of studies has shown that self-managed teams are a

substitute for supervisors. A meta-analysis of research on self-managed teams, for example, found that teams without supervisors performed better than those with supervisors (Beekun, 1989). In a recent study of call center workers, Femie & Metcalf (1999) found that team-based pay systems and low supervisor: worker ratios were associated with higher self-reported productivity and financial performance. Batt (2001) found that field technicians in self-managed teams absorbed the monitoring and coordination tasks of supervisors in one-third of the time required by supervisors, thereby reducing indirect labor costs without adversely affecting objective quality and productivity. In theory, teams that develop the capacity to be self-regulating and to do without supervisors will perform better. Cohen *et al.* (1997) tested this idea using data from 900 employees in self-managed and traditionally supervised work groups in a telecommunications firm. They found that self-managed teams scored higher on these dimensions and that these dimensions predicted employee satisfaction and self-rated effectiveness. They also found that these leadership behaviors were applicable to traditionally supervised groups.

Other researchers say that supervisors are a complement to new forms of work organization. In a study of an airline company, for example, Gittell (2002a) found that higher supervisor: worker ratios predicted better performance, and that the supervisory effect acted through its positive impact on workers' cross-functional communication. She attributes this effect to the fact that small spans of control allow supervisors to provide intensive coaching.

The empirical research on alternative pay systems also provides

relatively little clarity about what predicts better outcomes, in part because of the many different types of plans and the fact that outcomes are contingent on the specifics of the plan (the fairness of the formula for payouts, the tightness of the link to performance, the type of behavior rewarded, and the combination of individual and group-level criteria, etc.). Outcomes also are contingent on the relationship between the pay system and other factors (such as the design of work and performance management). Recent comprehensive reviews of the compensation literature provide some evidence that linking pay to performance leads to better individual and organizational performance (Milkovich & Newman, 2002; Gerhart & Rynes, 2000). The strength and persuasiveness of the empirical evidence, however, varies considerably by the type of compensation plan. A few reliable studies show that gainsharing or work group-based plans produce higher performance, but the findings depend importantly on the formula for payouts. The few studies of skill-based pay plans suggest that they encourage more learning, which in turn positively affects quality. A handful of reliable studies on merit pay provide some evidence that it leads to better performance (Milkovich & Newman, 2002). Some research also shows that firms have better financial performance when they link pay to operational or financial goals (Gerhart & Rynes, 2000). However, a meta-analysis of research on financial incentives found that they were unrelated to performance quality, but significantly related to performance quantity (Jenkins, Mitra, Gupta, & Shaw, 1998).

A particularly relevant study for service and sales workplaces is a 6 year study of performance-based pay at 34 outlets of a large retail organization in the USA. The researchers tracked an experiment in which

roughly half of the retail stores switched to an incentive plan that rewarded workers with individual bonuses for sales over a given target. Notably, it also threatened termination if they failed to meet the target for two successive quarters. Supervisory monitoring declined in the experimental stores; and sales, customer service and profits grew significantly. This provides some support for the idea that behavior-based and outcome-based systems are inversely related. Performance outcomes were higher in stores serving higher-valued customer markets, also consistent with the idea that outcome-based systems are more appropriate for more unprogrammed service interactions (Banker *et al.*, 1996). However, it is unclear whether the improved performance in this case was due to the pay plan or the threat of termination.

In sum, there is some evidence that investments in information technology, coupled with high relative skills and collaborative work design, yield better performance in frontline services. There is also evidence that some types of performance-based pay are associated with better performance. The evidence is not overwhelming, however, and appears to be quite contingent on the nature of the industry, occupation and organizational context.

## **SYSTEMS AND MECHANISMS LINKING MANAGEMENT PRACTICES AND OUTCOMES**

Explanations regarding how and why management practices lead to better performance may be classified as primarily psychological and affective, on the one hand, or economic and sociological on the other. While studies in organizational behavior historically focused on worker satisfaction and

commitment, more recent research considers a broader array of emotional and affective outcomes, including positive responses, such as pro-social or citizenship behaviors, and trust; and negative responses, such as emotional exhaustion, stress, withdrawal (quits, absences) and other forms of resistance. Research based in economic and sociological explanations has focused on the importance of human capital, social capital and knowledge-sharing and learning on the job.

### **Psychological Explanations**

Affective models build on the large literature on work design, which has shown systematic relationships between enhanced job characteristics (e.g. autonomy, variety, ability to complete a whole task; Hackman & Oldham, 1980) and worker satisfaction, as have the studies of autonomous teams (Cohen & Bailey, 1997). However, these studies have failed to find that happier workers are more productive. More recently, a study of over 500 Canadian workers found that the use of high-commitment practices had contradictory effects on workers, bringing greater intrinsic rewards, such as satisfaction and commitment, but also greater reported stress (Godard, 2001). An analysis of the 1998 UK Workplace Employee Relations Survey by Ramsay, Scholarios & Harley (2000) casts doubt on the idea that the HR-performance link is mediated through workers' emotional and affective reactions. They found significant positive relationships between a comprehensive measure of high- performance work practices and several performance outcomes as reported by managers, including labor productivity, quality, financial performance, absenteeism and turnover. They then tested whether worker perceptions of discretion, management

relations, pay satisfaction, commitment, security and job strain mediated the relationship between management practices and performance. They report mixed and modest mediating effects, and conclude that there is no strong evidence that performance outcomes flow via workers' attitudinal outcomes. Neither of these studies differentiated between manufacturing and service organizations, however.

Several management theorists, nonetheless, have pursued this line of research on the hunch that worker attitudes are more important in customer-contact jobs because they can more readily spill over into customer interactions—positively or negatively. The most elaborate theory (the service profit chain) links human resource practices to employee satisfaction and loyalty, which in turn inspires customer satisfaction and loyalty, ultimately resulting in higher profits (Heskett *et al*, 1997). Loveman (1998) is the first to empirically demonstrate correlations along several links in this chain (HR practices; employee satisfaction and loyalty; and customer satisfaction, loyalty and profits), based on employee and customer data from 479 branches of a multi-site regional bank.

Schneider and his colleagues have taken a similar approach by measuring workers' reports of management practices and the extent to which they support a positive "service climate" (Schneider *et ai*, 1980). The measures in Schneider's service climate survey have parallels with the measures used in the high-commitment literature. Recent studies provide support for a significant positive relationship between worker perceptions of service climate, worker attitudes, and customer reports of service quality (Schmit & Allscheid, 1995; Johnson, 1996; Peccei & Rosenthal, 2000; Borucki

& Burke, 1999) and financial performance (Borucki & Burke, 1999). In a longitudinal study of 134 bank branches, Schneider,

White & Paul (1998) found that their measure of service climate was significantly associated with higher customer reports of service quality. Moreover, in cross-lagged analyses of data over 3 years, they found a reciprocal effect for service climate and customer perceptions of quality. However, the causal relationships are not entirely clear in this line of research, as some researchers have found that customer satisfaction leads to worker satisfaction (Ryan, Schmit & Johnson, 1996). Moreover, other studies have found no relationship between commitment and objective measures of performance among hospital employees (Somers & Bimbaum, 1998).

A growing area of research concerns the boundary-spanning role of service workers as they are positioned between management and the customers. One study of a Canadian bank, for example, found that the employee-customer interface was the most important predictor of a worker's prosocial behavior (Chebat & Kolas, 2000). This boundary-spanning position, however, is vulnerable to role ambiguity and conflict because management and customers may place contradictory demands on workers. A good example is in call centers, where management may seek to limit call-handling time, while customers demand more time. Similarly, "service workers" increasingly play a dual role of service; and selling-^ roles that require opposite skill sets and approaches to customers. In a study of restaurant workers, Babin & Boles (1998) found that role stress negatively affected customer-server interactions and increased workers' intentions to quit. Hartline & Ferrell (1996) surveyed several hundred managers, workers and

customers at 279 hotels and found that role conflict contributed significantly to employees' frustration in their attempt to fulfill their jobs: In a major meta-analysis of research on role ambiguity and role conflict, Tubre & Collins (2000) found a significant negative relationship between role ambiguity and performance. However, the analysis found a negligible relationship between role conflict and performance.

Another emerging, line of research seeks to understand the relationship between management practices, worker well-being and performance. Several studies of call center workers have found that routinized work design and high levels of electronic monitoring lead to stress, anxiety, depression, emotional exhaustion and burnout (Carayon, 1993; Holman, 2001; Holman, Chissick & Totterdell, 2002; Deery, Iverson & Walsh, 1999; Singh, 2000). Deery *et al.* (1999) found that customer interactions, scripts, routinization, workloads and managerial emphasis on quantity predicted emotional exhaustion, which in turn predicted absenteeism. Singh (2000) found that worker burnout with customers is associated with lower self-reported service quality. With increasing levels of burnout, call center workers were able to maintain their productivity levels, but their self-reported quality was lower. Other organization-level studies also show that electronic monitoring predicts higher quit rates (Shaw *et al.*, 1998; Batt, Colvin & Keefe, 2002).

### **Economic and Sociological Explanations**

A second set of explanations focuses on how management practices influence the use of human capital and knowledge at work. Implicit or explicit in these approaches is Gary Becker's work on human capital (1964) and the

idea that productivity hinges on the effective use of the skills and abilities of workers. Human capital theory predicts that high-commitment or high-performance systems should produce better organizational performance and wages because they provide opportunities and incentives for employees to use their skills more effectively.

In customer contact settings, firm-specific human capital is particularly important, because employees manage the boundary between the firm and the customer and their behavior shapes customers' buying behavior. Employees need to manage a range of firm-specific information and knowledge in at least three domains: products, customer and processing protocols. Product knowledge covers specific features, service agreements, pricing, packaging and legal regulations. Customer-specific knowledge includes an understanding of demand characteristics of particular individuals or segments and the ability to use that knowledge to customize service or sales. Workflow and processing protocols require specific knowledge of information processing systems and capabilities and how these affect each customer and product offering.

Research supports the idea that firm-specific human capital positively affects service performance. In a study of a department store chain, for example, Sharma, Levy & Kumar (2000) found a significant positive relationship between sales experience and performance, and they attributed this finding to the knowledge structures of workers with greater expertise. In a meta-analysis of 22 studies of job experience, Quinones, Ford & Teachout (1995) found a 0.27 correlation between experience and performance.

One study of high-commitment practices in service and sales centers

found that they influenced organizational performance in two ways: directly, via the effect on employee performance, and indirectly, via employee attachment to the firm (Batt, 2002). High quit rates not only increased the costs of recruitment and selection but also negatively affected performance, because new employees face a learning curve. Long-term employees have the tacit firm-specific skills and knowledge—and often personal relationships with customers— to be more effective. In a micro-level follow-up study, Moynihan & Batt (2001) found that the design of group-based work, recognition and reward<sup>^</sup> led to greater knowledge sharing among workers which in turn was correlated with objective service quality in call centers.

Another study in this vein focused on the importance of the quality of information in health care settings, where uncertainty is high and the quality of information is extremely important (Preuss, 1997, 2001). Preuss found that information quality is critical in this setting because patients' health status changes constantly. As a result, information on each patient's status must be updated regularly. Based on a sample of 1100 nursing employees on 50 acute care hospital units, Preuss found that units with lower medical errors were those that relied on nurses with higher levels of formal education, higher levels of experience and broader task responsibilities. Units that gave more responsibilities to lower-skilled employees had significantly higher medical errors. The quality of information mediated the relationship between work design and staffing decisions and medical errors.

A similar approach, developed by Gittell (2000b), focuses on the importance of communication and relationships among employees in service settings, particularly in settings characterized by high levels of uncertainty

and time constraints. Based on her fieldwork in airlines and health care, Gittell developed a measure, “relational coordination”—the extent to which employees communicate and have positive relationships with one another within and across departments. She found that several management practices, including selection, cross-functional and flexible work design and supervisor support, shape the extent of coordination among workers. In a study of orthopedic hospital units, the extent of relational coordination predicted significantly lower post-operative pain, shorter lengths of stay and better patient-reported care (Gittell *et al.*, 2000). In airlines, relational coordination led to lower gate time, staff time, customer complaints, lost bags and late arrivals (Gittell, 2001). In her study of hospitals, Gittell (2002b) also found that stronger relationships among providers and between providers and customers produced higher levels of customer satisfaction. However, Rodwell, Kienzle & Shadur (1998) studied communication among IT employees and found that it related positively to teamwork, job satisfaction and commitment but negatively to performance.

Another recent study has focused on the knowledge-creation capability of firms. Drawing on a sample of managers and employees from 78 high-technology firms, Collins, Smith & Stevens (2001) found that four types of management practices (effective acquisition, employee development, commitment-building and networking practices) significantly improved sales growth through their effect on knowledge-creation capability. They defined this capability along three dimensions—human capital, employee motivation, and information combination and exchange—and found that these interacted to positively affect sales growth. Collins & Clark (2001) also studied internal and external networks of top management teams in high-technology

companies and found that the size and range of networks significantly predicted sales growth and stock returns.

Together, these studies point to the importance not only of individual human capital, but also of networks of human capital, or organizational social capital (Leana & Van Buren, 1999). Organizational social capital may be thought of as an asset embedded in the relationships among employees. While these ideas are at initial stages of conceptual and methodological development, recent research points to the importance of communication networks and relationships of trust among employees as important sources of organizational performance.

## **DISCUSSION AND CONCLUSIONS**

In this chapter, we have reviewed the literature on the restructuring of service industries and concluded that organizations have focused much more attention on cost-cutting strategies and investments in technology than on work redesign or human resource strategies. We then examined quantitative studies of the predictors of performance in services. This research has been conducted in a wide range of contexts and levels of analysis—across industries, firms, establishments-and work groups.

At the most general level, researchers across many disciplines—from economics to psychology to sociology—have concluded that various dimensions of management practices must be understood in relation to one another, or as systems. Students of IT, for example, have demonstrated that investments in IT, when coupled with complementary high-commitment practices, are associated with higher productivity, innovation, customization and quality in services. Researchers in organizational behavior have similarly

determined that group effectiveness is contingent on the presence of complementary management practices. However, despite this recognition, most studies do a poor job of understanding relationships among management practices. For example, with a few exceptions, students of organization studies and human resources have not integrated an understanding of IT into their work. As a result, at the level of work groups and organizations, we know relatively little about how the differentiated uses of IT (such as electronic monitoring or the availability of software programs and databases) interact with the organization of work and human resource management practices to produce different results. Similarly, our understanding of the relationship between alternative forms of work organization and incentive systems is undeveloped.

Our review of work organization revealed that a growing number of studies show that collaborative forms of work organization predict better performance in service contexts. Service organizations that create opportunities and incentives for collaboration within and across groups appear to perform better than those that do not. This finding is important, because in many service settings the relationship between employees and customers appears to be more salient than the relationship among employees. Sales work, for example, has typically been defined as individual. Field technicians usually work alone. However, the service process frequently depends on coordination among workers who are located in different job classifications, work groups, locations or functional departments, as in airlines, hotels or telecommunications. It also depends on collaboration across hierarchically-defined occupational groups, as in health care. In these settings, where interdependence is important but not self-evident or

necessarily in the self-interest of employees, managers must self-consciously create mechanisms and incentives for employees to collaborate and cooperate. However, the specific type of coordinating mechanism—whether more or less autonomous work groups, cross-functional groups, or virtual teams—is likely to depend on the nature of work, technology, and industry setting.

The search for general findings with respect to incentive and control systems is more elusive. There are two quite different theories about whether supervisors are substitutes or complements to new forms of work organization. While some research suggests that electronic monitoring and team-based systems are substitutes for supervision, other studies suggest the opposite. It could be that both alternatives produce equally good outcomes or it could be that contingency perspectives prevail. Supervision in the form of coaching and support may be particularly important in service settings because of high levels of uncertainty and emotional labor in customer-provider relations. Further research is needed to untangle the answers to these questions.

Empirical research on pay systems is also undeveloped. While some form of performance-based pay appears to be associated with better organizational performance, the devil is in the details. We know relatively little about the differentiated effects of incentive vs. at-risk pay, about systems that combine different types of incentives or about how these systems affect employees at different income levels.

Finally, research on causal mechanisms linking management practices to outcomes is only beginning. Scholars in organizational behavior have

moved from a focus on satisfaction and commitment to a wider array of worker attitudes and emotional outcomes. This work needs to move to the next step of linking worker outcomes to objective performance. The research on human capital, knowledge sharing and social capital is particularly promising, but needs to be developed theoretically and expanded empirically to cover a wider array of occupations and work settings.

In sum, while researchers have begun to identify the ways in which work organization and human resource practices influence service performance, our theoretical models are undeveloped and our empirical evidence is piecemeal. Without clear evidence to the contrary, managers have little reason to shift from tried and true strategies of competing on cost. Interdisciplinary research projects over the next decade must do a much better job of explicating the relationship between management practices and service performance in more systematic and contextually-specific studies of industries and occupations.

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