

Who Does an Elite Organization Emulate?

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We advance theories of the diffusion of innovations by examining the structure of emulation that emerged in one bank's benchmarking program. Prestigious firms and firms linked to the bank through executive migration were disproportionately likely to be recruited as benchmarking partners and, once visited, to be highly influential. Firms tied to the bank by board interlocks and geographic proximity were neither overrepresented nor influential. The bank also paid modest attention to other financial service providers, particularly rival money centers. These relationships hold net of area-specific recognition for excellence, which promotes attention but not influence, and financial performance, which affects neither. We emphasize the way organizational identity and decision-making processes activate and deactivate network ties as potential channels of innovation diffusion. ●

*I come from good old Boston,
The home of the bean and the cod,
Where Cabots speak only to Lowells,
And Lowells speak only to God.*

—Samuel Clarke Bushnell

Much research demonstrates the important role of interorganizational ties in the spread of practices across firms. Prominent examples include analyses of adoption timing (i.e., Davis, 1991; Haunschild, 1993), market entry (Haveman, 1993; Boeker, 1997), and clustering (Han, 1994; Geletkanycz and Hambrick, 1997). This line of work opposes atomistic conceptions of innovation as internal invention or structurally contingent choice. It elaborates a sociological model of action grounded in relationships between concrete actors.

Despite the achievements of this research tradition, our understanding of network diffusion remains more thin than deep. One problem is that regression-like studies generate circumstantial evidence. For example, Strang and Tuma (1993) developed a class of event history models that inferred contagion from short waiting times between the adoption dates of network partners. The inference is defensible; it identifies a pattern of consistent association, gets the time ordering right, and can be married to appropriate statistical techniques that permit control for measured covariates and temporal regularities. But model misspecification can inflate the estimated impact of prior adoption. The potential for common responses to environmental shocks to masquerade as diffusion effects is well known. As Max Weber observed, the fact that people typically open their umbrellas at about the same time does not mean they are influencing each other.

A second problem is that diffusion research develops little insight into the motives and mechanisms that underlie interorganizational influence. Analyses of interarrival times and spatial effects are unabashedly structural. These research designs are well honed to test hypothesized patterns of covariation. But they are blunt tools if we are unsure whether decision makers really attend to peers or if we lack insight into why some network ties are more important than others.

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Ironically, one consequence is that the literature suffers from an embarrassment of riches. A review of articles appearing between 1990 and 2005 in the *Administrative Science Quarterly*, *American Journal of Sociology*, *American Sociological Review*, and *Organization Science* reveals a bestiary of empirically identified diffusion channels: board interlocks, strategic alliances, joint ventures, supplier networks, memberships in the Business Roundtable and university consortia, peer contacts, shared regulatory classifications, ties between headquarters and subunits, ties between corporate siblings, same industry, head-to-head rivalry, and municipal, regional and national business communities—not to mention imitation of structurally equivalent, structurally similar, larger, smaller, and same-sized organizations! As the literature grows, the prospects for theoretical integration seem increasingly elusive.

Our proposal is not to abandon current practice for a hot new innovation. Longitudinal research that tracks the adoption of a given practice is the design of choice if we want to test strong arguments about given network channels. Broadly comparative research can also capture the big picture over time, identifying historical turning points and shifts in causal mechanisms. Recent years have witnessed considerable advances in the specification of network models of diffusion as well as their empirical scope.

More promising is a strategy of triangulation, in which concrete instances of interorganizational imitation and learning are studied to complement broader comparative analyses (see Lee and Strang, 2006, on the interaction between process tracing and pattern finding research strategies). Examination of one or a small number of organizations can provide direct evidence of forms of mimesis that broadly comparative studies must treat as assumptions; temporal propinquity is replaced by explicit measures of attention and influence. Inspection of the way managers appropriate external models helps to defeat the passive imagery of much diffusion research, building bridges to work on issue selling (Dutton and Ashford, 1993), organizational identity (Gioia and Thomas, 1996), and taxonomic mental models (Porac et al., 1995). A shift from the perspective of the diffusing practice to that of the organizational adopter does more than confirm the truism that “networks matter.” By getting closer to the actors and the action, it builds insight into why they matter.

This paper reports on a study of the benchmarking program of Global Financial, a large multinational bank. Benchmarking involves explicit attention to and learning from external firms as a vehicle for strategic planning and corporate innovation. As such, it provides a rich opportunity to study interorganizational networks in action. We examined the work of 15 benchmarking teams charged with developing strategies in a variety of operational domains, from quality management to the Internet to work/life balance. Each team visited external companies and drew heavily on these visits in generating proposals that led to a stream of initiatives at the bank.

Analysis of a benchmarking program inverts the conventional design of diffusion research. Rather than studying multiple

organizations adopting a single practice, we studied a single organization pursuing multiple innovations. Rather than recording adoption dates, we recorded the organizations that served as Global Financial's benchmarking partners and developed archival and perceptual measures of their impact on the recommendations of benchmarking teams. Rather than gaining qualitative insight from external change agents who promote innovations across organizational fields, we interviewed benchmarkers who sought to sell exemplars to their colleagues.

This paper examines the effects of multiple interorganizational relationships: board interlocks, spatial proximity, ties based on executive migration, within-industry competition, and status homophily. These are among the usual suspects in the study of organizational networks. We should thus emphasize that the goal is not to revisit prior research or to identify a singular relational structure that underpins diffusion—no such universal structure exists, due to great variability across adopters, diffusing practices, and historical contexts. Our theoretical focus is instead on the selective appropriation of interorganizational ties and the logics that turn diffusion channels on and off.

Global Financial did not face the problem of the social isolate that lacks trustworthy information about novel, poorly understood practices. As a major money center, the bank was embedded in a rich system of interorganizational exchange, affiliation, and rivalry. Its problem—or more precisely, the problem facing Globalbankers who administered and staffed the benchmarking program—was to locate external models that would help benchmarkers legitimate and push forward proposals for change and, in the process, legitimate and promote themselves. These considerations brought issues of corporate identity and the structure of organizational decision making to the fore.

In their search for compelling exemplars, however, benchmarkers confronted a dilemma. Global Financial is a prominent member of the *Fortune* 500, widely regarded as a leader in financial services (many would say the leader), and is celebrated for the technological and service provision innovations it has pioneered. Elites in the business world, like Boston's elite Cabot and Lowell families, stand in an awkward position within systems of communication and influence. As leaders they are highly subject to community norms, yet there are few exemplars to which they can appropriately defer. Global Financial thus faced a theoretically interesting, if enviable, problem. Who does an elite firm emulate?

CORPORATE BENCHMARKING

Benchmarking as studied here refers to an organization's effort to learn from "best practice," generally by combining site visits to external companies with other information gathering efforts. Xerox's Robert Camp, a leading proponent and the author of the first monograph on the subject, defined benchmarking as "the search for industry best practices that lead to superior performance" (Camp, 1989: 12).

Like many American managerial innovations of the last decades of the twentieth century, benchmarking emerged in



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response to Japan. Xerox pioneered the concept as part of an effort to retool after losing market share; early accounts described engineers tearing down Fuji copiers to see if their cost advantage was real. The copier manufacturer routinized benchmarking as a planning and target-setting technique in the early 1980s and conducted many analyses of best practice, most notably a celebrated study of L.L. Bean's warehousing techniques. Benchmarking gained prominence and legitimacy through its incorporation in the Malcolm Baldrige National Quality Award criteria as a requisite activity of world-class organizations. It was propelled to the very forefront of rational management progress when Xerox won the Baldrige in 1989.

While the earliest forms of benchmarking centered on analysis of head-to-head competitors, the idea was quickly generalized to embrace the study of best practice anywhere. The American Productivity & Quality Center (APQC), which formed the International Benchmarking Clearinghouse as a national repository for best practices, defined benchmarking as "the process of identifying, understanding, and adapting outstanding practices and processes from organizations anywhere in the world to help your organization improve its performance" (O'Dell, 1994). Celebrated success stories included a phone company that went to an auto manufacturer to learn how to handle multiple suppliers and an airline that visited an Indianapolis 500 pit crew to improve service. By the time Global Financial's program began in 1996, benchmarking was a mature and well-established management practice.

Benchmarking at Global Financial

Headquartered in New York, Global Financial is one of the world's leading financial services firms. At the time of this study, the bank operated in some 90 countries, employed a workforce nearing 100,000, and enjoyed revenues of just under \$40 billion. In a corporate training session, its managers described the bank as "financially strong," "competitive," "aggressive," and possessing "a reputation for innovativeness," but also as "bureaucratic," "risk averse," "inflexible," and even "abusive."

Team Challenge, the benchmarking program we studied, was devised to support Global Financial's growth strategy. A series of crises had been surmounted early in the decade, and the bank was enjoying an era of great success. Although a not-invented-here mindset had prevailed in the past, we were told, Global Financial was now aggressively pursuing good ideas wherever it could find them. Team Challenge was the most visible product of this emerging orientation. Located in the executive development division of Human Resources, the program's objective was to investigate new directions for the company while simultaneously expanding the horizons of rising "high potentials."

Between 1996 and 1998, five benchmarking rounds involving 22 teams took place, each of which examined one of a total of 13 innovation issues. Because the first of these rounds worked somewhat differently and left an incomplete record, for this paper we examined the 15 teams formed in rounds 2–5. Collectively, these teams addressed seven innovation



areas: quality, high-performance work environment, the Internet, work/life balance, quality culture, sales, and training and development.

Participating Globalbankers evaluated policy issues from multiple points of view, including internal interviews at Global Financial, visits to external companies, and discussions with management consultants and area experts. Teams were charged with evaluating the need for company action and making concrete proposals for change. Benchmarkers took a month-long hiatus from their regular jobs to participate on Team Challenge. The experience was intense—one manager described it as “the highlight of my career at the bank.” As a result, the Globalbankers who served as benchmarkers were unusually well positioned to describe the structure of interorganizational influence and to reflect on the logic behind their actions.

Some 12 to 20 managers were selected for each challenge topic. Team Challenge’s program organizer and staff sought diversity in business units, nationality, and gender. They provided team members with briefing books that included a selection of discussions from the business press and internal literature from Global Financial surveys, newsletters, and personal communications. Each of the benchmarking domains studied here was pursued by “rival” teams (three for the case of the quality challenge, two otherwise) that reviewed much of the same material and visited many of the same companies.

All teams first met at a site in the New York metropolitan area to be briefed by the bank’s chief financial officer and other senior executives. Benchmarkers were given a project definition and often a list of deliverables, though they had some leeway in reinterpreting their mission. For example, participants turned a planned “Work/Family Balance” Challenge into the “Work/Life Balance” Challenge. The first days were devoted to team building and familiarization with the problem area. Teams met with selected academics, consultants, and area experts.

Benchmarkers then spent two weeks traveling the globe. They conducted external benchmarking through site visits and internal benchmarking via one-on-one interviews and focus groups. On average, team members visited three companies during the two-week period, though some saw only a single company and others as many as seven. Some site visits were tightly scripted by the host, while others were more informally organized. One Globalbanker described his visiting experience in vivid terms:

We went to a sorting center. As the center was doing its work, they were literally monitoring the sort in real-time. At the end of the night, it tells them how efficient the sort was. They knew what their greatest customer dissatisfiers were—lost packages were a bigger problem than same-day, late packages. Once you knew what mattered to the customer, you could focus on it. That very next day they would say, “Here’s how we did.” . . . One of the things we realized was we didn’t know what our problems were. We had *assumed* we knew what the problems were . . . we didn’t have good disciplines in place for understanding what our quality problems were.



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After the two-week travel phase, team members gathered for a week to compare notes and develop proposals for action at Global Financial. Their reports presented a diagnosis of the challenges facing the bank, their broad strategic vision, and a list of specific action items accompanied by a proposed timeline. Benchmarking teams met with Global Financial's chief executive officer and top management team to present their findings.

The programs that emerged from Team Challenge were central to many of Global Financial's business and managerial initiatives during the late 1990s. The quality challenge led to a corporate-wide process improvement campaign; the high-performance and work/life balance challenges prompted efforts to address strains within the bank's intensely competitive culture; the Internet challenge set directions for the bank's Web offerings and led to the construction of a stand-alone Internet division; and the sales challenge promoted a shift toward cross-selling financial products. These programmatic effects were substantial, though it is important to emphasize that benchmarking formed just one step in often arduous "innovation journeys." Although most team proposals were formally accepted (a program organizer put the figure at 80 percent), the streams of corporate activity that they set into motion subsequently evolved in unpredictable ways. We do not consider the impact of benchmarking recommendations here because it would deflect attention from the role of external models in diffusing practices into the organization. For analysis of the programs that emerged under the umbrella of Team Challenge, see Strang and Jung (2005, 2009) and Strang (2010: chaps. 8 and 9).

Diffusion Channels

A fundamental argument in the study of innovation diffusion is that new practices flow along lines of social interaction. In a pioneering sociological analysis, for example, Ryan and Gross (1943) found that farmers turn to their neighbors when deciding whether to plant new seed varieties. Coleman, Katz, and Menzel (1966) discovered that doctors rely on close colleagues—discussion partners, advisers, and friends—when determining whether to prescribe a new drug.

The problem for organizational research is to find parallels to the social relationships that are so central to individual choice. This is most apparent when we consider that there is no corporate equivalent to face-to-face encounters. Although individuals meet, in some fundamental sense, as wholes, organizations generally connect as parts. In this study, we examined five types of ties that have been shown to play substantial roles in interorganizational diffusion elsewhere. These include three cohesive relationships—board interlocks, spatial proximity, and management ties based on executive migration—as well as indirect forms of equivalence based on competition and social status.

Board interlocks. The workhorse in studies of interorganizational networks is the tie formed when executives or directors of one firm sit on the board of another. Useem's (1984) ethnographic work suggests that board interlocks permit an



inexpensive but effective form of “business scan.” Board interlocks are relevant to multiple theoretical concerns, including research on collusion, classwide rationality, exchange dependency, and the power and compensation of the CEO (see Mizruchi, 1996, for a review). Davis (1991) showed that firms were quicker to adopt “poison pill” protections against hostile takeovers if interlocked with prior adopters. Haunschild (1993) demonstrated that a firm’s propensity to engage in corporate acquisitions was related to the acquisition activities of its board interlocks. Palmer, Jennings, and Zhou (1993) found that late-stage adoption of the multidivisional form was lubricated by non-directional board ties to prior adopters. Westphal, Seidel, and Stewart (2001) showed that the influence of interlocking board members can extend beyond mimicry of particular practices to the structure of underlying decision processes.

Hypothesis 1: Firms linked by board interlocks to Global Financial are more likely to be benchmarked and to have greater influence on benchmarking teams than firms not tied through boards.

Spatial proximity. Interaction and influence fall off with distance. Thick webs of communication generally depend on physical proximity, particularly when we consider the full range of contacts across two groups of employees. Spatially proximate firms are also likely to share cultural understandings about business strategy and managerial techniques. As a result, much work has identified the spatial character of contagion. Burns and Wholey (1993) demonstrated that matrix management spread geographically. Hedstrom (1994) showed that the trade union movement in Sweden expanded out of the industrial heartland as workers spread the gospel. Audretsch and Stephan (1996) found that location is critical to the spread of new technologies and scientific discoveries. Davis and Greve (1997) documented the diffusion of golden parachutes within municipal business communities, which they argued were able to foster local norms in support of a practice that lacked legitimacy.

Hypothesis 2: Firms located near Global Financial are more likely to be benchmarked and to have greater influence on benchmarking teams than geographically distant firms.

Executive migration. A third linkage is the tie formed when a manager moves from one firm to another. As Kraatz and Moore (2002) argued, executive migration provides a high-capacity conduit for the transfer of organizational practices. Executives bring strategic inclinations and knowledge bases with them when they move, leading firms to hire outsiders to plug gaps (Rao and Drazin, 2002). Interorganizational mobility also has unanticipated secondary effects—the migrant fills a “structural hole” linking the two companies and thereby constructs a bridge that others can traverse.

A number of studies point to the impact of managerial mobility on diffusion outcomes. Virany, Tushman, and Romanelli (1992) found effects of executive migration on a variety of strategic decisions, including divisional structure and control practices. Boeker (1997) showed that executive migration generates parallels in product market entry. Geletkanycz and Hambrick (1997) discovered that firms are more



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likely to deviate from industry norms when more of their executives come from outside the industry.

Hypothesis 3: Firms linked through executive migration to Global Financial are more likely to be benchmarked and to have greater influence on benchmarking teams than firms not linked through executive migration.

Competition. An alternative network logic emphasizes the common relations to third parties that link rivals. Burt (1987) argued that structural equivalence leads to the rapid flow of innovative behavior even when information flow or direct ties between competitors are absent. If two actors stand in similar relationships to others, their ability to replace each other provides a powerful incentive for mutual surveillance and imitation of each other's possible advances.

In business, the sharpest rivalries occur when organizations compete for the same customers. Fligstein (1990) found that the M-form spread more rapidly within industries than between them. Osterman (1994) showed that TQM and small group-based production methods were adopted early by American firms facing stiff competition from Japan. By this logic, we might expect Global Financial to have used benchmarking to monitor and incorporate the best practices of its rivals.

Hypothesis 4: Global Financial's competitors are more likely to be benchmarked and to have greater influence on benchmarking teams than non-competitors.

Prestige. A fifth network of interest is defined by social status, defined as the esteem and respect that actors enjoy within some social community. Much research points to the imitation of prestigious firms, due to their visibility, possession of putative secrets of success, and broader standing as leaders. Haveman (1993) showed that firms in the California thrift industry followed large, profitable firms into new markets, and Han (1994) discovered that firms tend to reproduce the accounting choices of larger firms within their industry. Haunschild and Miner (1997) found that choices of an investment banker are influenced by the size and success of the banker's current clients.

The effects of prestige can also be viewed in relational terms, because we have not just one organization but a partnership between the benchmarker and the organization it visits. Podolny's (1993, 2005) model of status homophily is useful here (also see Blau, 1955). The key idea is that status "bleeds" along the lines of interaction and exchange: a relationship between a high-status and a low-status actor leads the first to lose status and the second to gain status. Status-aware actors will thus seek to associate with those above them while shunning those below. The result is that stable relationships tend to emerge among status equals; when material advantage leads unequals to associate, the higher-ranked party can extract a rent. Supportive evidence for the argument comes from Podolny's (1993) study of investment banking partnerships and Stuart's (1998) analysis of technology alliances. In the case of Global Financial, itself an elite firm, these considerations suggest great sensitivity to issues of social status and a focus on learning from the most prestigious firms.

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Hypothesis 5: Firms with high prestige within the business community are more likely to be benchmarked and will have greater influence on benchmarking teams than firms with lower prestige.

METHOD

We distinguished between two stages of corporate benchmarking: recruitment and influence. Recruitment involves the process that led Global Financial to formally visit some organizations as benchmarking partners, while influence speaks to the impact of those organizations on the recommendations forwarded by benchmarking teams (team recommendations, for short). The two stages are distinguishable, in that visits were arranged before teams began their work. In addition, partners were recruited once within each problem domain but had different effects on the representatives of two or more teams that generally paid them a visit. Our strategy was to develop separate models of recruitment and influence that made optimal use of the information we had on each stage, though we also developed an integrated model of recruitment and influence.

Recruitment. Once the topic of an upcoming Team Challenge was determined, the program organizer identified and contacted potential benchmarking partners. Assistance was provided by the team's sponsor, a high-ranking Globalbanker whose responsibilities overlapped with the topic, as well as by others with relevant expertise inside and outside the bank. The goal was to identify companies that excelled in the issue domain, but accounts of the process indicated that personal and organizational ties played an important role as well. The program organizer described meetings with Global Financial senior staff and calls to board advisory committee members to find personal contacts at cutting-edge firms. "[W]e used consultants and we leveraged our own relationships [with firms] or theirs. . . . In most cases we did have some kind of contact." Our interviews did not uncover cases in which Global Financial was rebuffed in seeking a site visit, though we cannot assert that this never occurred.

Benchmarkers were able to augment the visits arranged by the Team Challenge organizer. While some teams followed their schedule to the letter, others were more restive. According to one benchmarker, "We did our own thing. Had to decide, 'do I need to talk to sport teams? The Mafia? After GE, Xerox?'" While rare overall, team-initiated visits could change the content of the team's experience considerably. In one challenge, 10 prearranged visits were expanded to 19 at the request of the teams involved.

An important feature of Team Challenge was the bank's tendency to repeatedly visit some organizations across issue domains. For example, a movie studio participated in both the high-performance and quality culture challenges, while a database management company was visited by both Internet and sales teams. We treat benchmarking partnerships occurring in different challenges as representing distinct recruitment events and add terms for prior visits to capture their possible interdependence.

In all, Global Financial conducted 93 benchmarking visits in the seven Team Challenges studied here. These included



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65 visits to publicly held corporations based in the United States, 13 to privately held American companies, 10 to foreign companies (all publicly held), and five to organizations in the public and not-for-profit sectors. This breadth of scope gives witness to the potential breadth of Team Challenge; there are few other occasions in which corporate managers self-consciously learn from hospitals or government agencies. At the same time, however, the fact that 94 percent of visits went to fellow corporations underlines the degree to which Globalbankers saw the private sector as the vanguard of the organizational world and the primary source of best practice.

To model recruitment, we defined a risk set of organizations that could have become the bank's benchmarking partners and compared the characteristics of those that were and were not visited. This sort of comparison cannot be comprehensive, because no massive dataset describes the pool of organizations of all types, from all corners of the world, that might have conceivably participated in Team Challenge. We restricted our attention to publicly held U.S. corporations, a comparison group for which systematic data are available and one from which 69 percent of Global Financial's benchmarking partners were actually recruited.

We drew two candidate pools as subsets of Compustat/Business Direct, an extensive database on publicly held American companies. The first consists of all publicly held members of the *Fortune* 500 (about one tenth of the 500 largest American companies are privately held and thus excluded from our analysis). The second candidate pool was defined for the purposes of this study and is named here the Compustat 6000. It consists of publicly held American corporations whose annual sales were greater than two million dollars and whose workforce numbered at least 180 employees during the period under study. We chose these threshold values to match the smallest firms actually visited in Team Challenge. The two pools complement each other because they get different features of the size distribution of Global Financial's benchmarking partners approximately right. The Compustat 6000 covers the realized distribution's range, while the *Fortune* 500 better represents its central tendency. The median company visited in Team Challenge ranks in the *Fortune* 500's 58th percentile in workforce size and in the 71st percentile in sales.

Influence. Two indicators capture variation in the impact of Global Financial's benchmarking partners. The first is based on managerial self-reports, drawn from a mail survey returned by 93 of 156 participants in Team Challenge (a response rate of 59 percent). Each manager was presented with a list of the firms that his or her team had benchmarked and was asked "How influential were the examples provided by the following external companies for the development of your team's thinking and recommendations?" Managers scored firms on a 5-point scale from "no influence" to "extremely influential." The mean influence of visited firms as reported by benchmarking managers was 3.3 (or slightly more than "somewhat influential").

Benchmarking teams rather than individuals were the key actors in Team Challenge. We thus conducted analyses of



variance to examine the feasibility of aggregating individual survey responses to the team level. Variation in the reported influence of companies within teams proved to be small relative to variation in the influence of different companies within teams and the same company across teams ($F = 2.84$, $p < .001$, $\eta^2 = .48$). We averaged perceptions of the impact of each visited firm, generating a continuous measure that varies between 1 (if all team members regarded the firm to have had no influence) and 5 (if team members unanimously judged the firm as extremely influential).

A second indicator came from the reports that each benchmarking team presented to Global Financial's top managers. When teams offered policy recommendations, they named the organizations that they regarded as models of best practice, and/or where they had witnessed the practices they recommended. For example, a sales team that proposed that all senior Globalbankers should have customer contact went on to identify three visited companies where this policy was in place. In interviews, benchmarkers often referred to these citations when they wanted to summarize the impact that a given organization had on the team. Asked which partnerships had most strongly affected his team's thinking and recommendations, for example, a participant in the training and development challenge described one of the visited organizations as "connected to three of our four major recommendations, more so than others." *Best practice citations* counts the number of times each visited company was described as a source of best practice in connection to specific policy proposals.

The average benchmarking visit generated almost two best practice citations. At the extremes, more than a third were never mentioned, while 13 percent were cited six or more times. The most cited firm was a communications giant, which one of the three quality teams connected to 14 recommendations involving process mapping, continuous benchmarking, online messaging, effective orientation, individual training, team-building practices, and self-directed teams.

Relational Indicators

Board interlock equals 1 if (a) Global Financial's senior executives and inside board members served on a firm's board; (b) that firm's executives served on Global Financial's board; or (c) Global Financial's outside board members served on that firm's board. We included all firms that had a board interlock to the bank within a five-year window ending with the year of the relevant challenge.

Same region is a binary indicator that equals 1 for companies headquartered in New York, where Global Financial is based, or in the states of Connecticut and New Jersey that adjoin the New York metropolitan area.

Executive migration is a binary indicator based on the prior corporate homes of the bank's top management team. We retraced the career histories of Global Financial's executive officers using internal publications, the databases ABIInForm, Hoovers, and *PRNewswire*, as well as the search engine Google (see Still, 2007, for more detail). We coded all firms in



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which Global Financial's current executives had been employed within the last five years as being linked to the bank via a management tie. In all, eleven senior managers moved to the bank during the period observed here, most from manufacturing and telecommunications. Only one had previously worked in the financial sector.

During the same period, six of the bank's senior executives left Global Financial to take positions elsewhere. Three went to other financial institutions, while the other three moved to leading companies in the telecommunications, computer software, and imaging industries. Global Financial's position within the corporate mobility network was thus one of exporting senior talent within financial services while importing senior managers from other fields. Analyses below focus on in-migration ties, though robustness checks found that the addition of out-migration linkages did not generate qualitatively different results.

Competitor identifies those companies with businesses in any of the two-digit Standard Industrial Classification (SIC) categories in which Global Financial operates: depository institutions, non-depository credit institutions, and security and commodity brokers. Competitors do not include firms in other financial segments or firms whose financial activities (like General Motors' GMAC unit) were modest enough relative to their overall operations not to be identified in SIC classifications.

Fortune 100 Most Admired captures high levels of prestige within the business community. Since 1983, *Fortune* has polled samples of up to 11,000 executives, directors, and market analysts to evaluate firms within their industry. Although the magazine reports reputations on eight dimensions as well as an overall score, factor analyses indicate these are well represented by a single underlying dimension (Fombrun and Shanley, 1990). The measure is a binary indicator equaling 1 if a benchmarked firm scored among the top 100 on the magazine's reputational measure in the year before it was benchmarked. As a leading bank, Global Financial was regularly included in this select group, so *Fortune 100 Most Admired* can be interpreted as a measure of status equivalence as well as a marker of organizational prestige.

Non-Relational Indicators

We developed a series of measures to capture non-relational sources of interorganizational attention, with a focus on issue-specific achievements and financial performance. *Award winner in issue area* equals 1 if a firm had been recognized for excellence in the innovation domain for which it was benchmarked. The selected awards include the Baldrige (quality and quality culture challenges); "The 100 Best Companies to Work For" (high-performance work environment challenge); *Working Mother* magazine's "Best Companies for Working Mothers" (work/life challenge); *Chief Information Officer* magazine's "CIO 100" (Internet challenge); *Sales & Marketing Management* magazine's "Best Sales Force" (sales challenge), and the American Society for Training and Development's Best Practice Award (training and development challenge). We included all award winners over the five-year

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period leading up to each challenge, with the exception of the Baldrige (for which all years since the award's inception were included, due to its highly selective nature) and the ASTD's award (which had only been offered for three years before the relevant challenge took place).

A second measure of issue-specific recognition came from the business press. We searched ABIInform's business category for articles that discussed each benchmarking partner (as identified in the abstracting service's "company" field) and the topic of the Team Challenge for which it was visited (for example, when measuring attention to firms benchmarked in the Internet challenge, we searched the subject terms "Internet," "World Wide Web" and "electronic commerce."). *Press attention in issue area* represents the ratio of these articles to the total number of articles on the Team Challenge topic; to adjust for skewness, we added one and took the logarithm. Because collecting these data was highly time consuming, we only calculated this measure for Global Financial's benchmarking partners, and thus it enters into the analysis of influence but not of recruitment.

We measured financial performance as return on assets (ROA) and growth in sales. Data were available for most firms from Compustat and were supplemented by additional sources when necessary. All measures were calculated for the year immediately preceding the Team Challenge when the company was benchmarked. Additional covariates included organizational size (the log number of employees and log sales), whether the firm was a manufacturer, and a count of the number of times the company had been visited in previous Team Challenge rounds.

RESULTS

Recruitment

Bivariate analyses. We begin by contrasting the composition of Global Financial's benchmarking partnerships with the composition of the two candidate pools. Table 1 shows that firms with board interlocks and migration-based management linkages to the bank were significantly overrepresented in Team Challenge. About a quarter of benchmarking visits (18) involved ties of each type. These figures dwarf the incidence of either relationship in the risk sets, which for board interlocks are about 7 percent in the *Fortune* 500 and 1 percent in the Compustat 6000, and for migration-based ties are 4 percent and less than 1 percent, respectively.

By contrast, spatial proximity within the United States did not play an apparent role in Team Challenge. Firms headquartered in New York and nearby states were not overrepresented among the bank's benchmarking partners. Further inspection showed that Global Financial cast a wide net, recruiting firms from all regions of the country in rough accordance with their numbers. For example, 28 percent of the bank's benchmarking partners were headquartered in the South, where 26 percent of the *Fortune* 500 and 30 percent of the Compustat 6000 hail from.

This pattern of homogeneous mixing did not hold, however, when we consider the geographic scope of international

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Table 1

Characteristics of Benchmarked Firms (Publicly Held American Corporations Only) versus Two Risk Pools*

| Variable | Benchmarked firms (N = 64) | Compustat 6000 (N = 6279) | Fortune 500 (N = 455) |
|---------------------------------------|----------------------------|---------------------------|-----------------------|
| Board interlock | .28 (.45) | .01*** (.08) | .07*** (.26) |
| Same region | .08 (.27) | .07 (.26) | .11 (.31) |
| Executive migration | .28 (.45) | .00*** (.04) | .04*** (.20) |
| Competitor | .09 (.29) | .08 (.28) | .14 (.35) |
| Manufacturer | .61 (.49) | .39*** (.49) | .41*** (.49) |
| Fortune 100 Most Admired | .66 (.48) | .01*** (.12) | .17*** (.38) |
| Employees (ln) | 10.8 (1.2) | 7.5*** (1.6) | 10.14*** (1.04) |
| Award winner in issue area | .44 (.50) | .01*** (.10) | .09*** (.29) |
| Sales (ln) | 9.4 (1.3) | 5.6*** (1.8) | 8.8*** (.78) |
| Return on assets | .16 (.13) | .04 (5.6) | .10 (.59) |
| No. of prior visits in Team Challenge | .44 (.71) | .00*** (.05) | .03*** (.21) |

*** $p < .01$.

* Standard errors are in parentheses.

benchmarking. When team members conducted site visits outside the U.S., their attention was focused on Europe; within Europe, on Northern Europe; and within Northern Europe, on Great Britain. Global Financial's international benchmarking partners were British (four visits), Danish, German, Finnish, Dutch, and Swiss. This culturally restricted pattern of visits was at odds with Global Financial's own geographic scope, which includes substantial banking operations in Asia and Latin America, and with internal interviews conducted by Team Challenge participants on those continents as well.

Financial institutions played a modest role in Team Challenge. Within the Compustat 6000, competitors were slightly but not significantly more likely to be benchmarked. When the Fortune 500 is taken as the risk set, financial service providers were underrepresented. This discrepancy points to a suggestive feature of within-industry benchmarking: team members were more likely to visit smaller banks, brokerage houses, and the like than Global Financial's head-to-head rivals. Major money centers with a national or international presence were seldom consulted. In interviews, team members responded dismissively to questions about visits to the bank's competition. As one said, "We didn't benchmark any financial institutions. Not interesting." Another told us, "We didn't compare ourselves to [Global Financial's chief rival], didn't feel we could learn anything. . . . Some people say [Global Financial] is the best, that's where we should go."

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The trips to financial service providers that did occur were largely segregated within a single challenge: the Internet. Benchmarkers concerned with charting a Web strategy journeyed to five of the nine financial institutions ever visited in Team Challenge. The Internet was also the only domain in which major money centers—one European, two American, none headquartered in New York—were consulted. Intra-industry site visits were central to benchmarking efforts to devise a Web strategy, in which they comprised half of all partnerships, but were marginal in all other issue domains.

Prestigious firms were often visited in Team Challenge, considerably more than their numbers within the American business community would suggest. Within the subset of publicly held American companies studied here, almost two-thirds were among the 100 most admired companies in *Fortune* magazine's poll, while only 1 percent of the Compustat 6000 and 17 percent of the *Fortune* 500 received this accolade. Team members described the bank's benchmarking partners as "the world's greatest companies" and Team Challenge as "the best benchmarking the best" (given that Global Financial was one of the world's greatest companies as well).

Firms were also more likely to be visited by Global Financial if they had won an award in the relevant innovation domain, had high sales volumes and a large workforce, were manufacturers, and had been involved in earlier Team Challenge rounds. These effects were substantial. For example, some 44 percent of benchmarked companies had won awards in the areas for which they were visited, whereas only 1 percent of the Compustat 6000 and 9 percent of the *Fortune* 500 had done so. The recent financial performance of the bank's benchmarking partners was somewhat stronger than that of non-visited companies, though this differential is not statistically significant.

In short, table 1 paints a clear portrait of the reference group that Global Financial constructed in Team Challenge. Benchmarking partners were large, prominent, prestigious firms that were often tied at the executive level to Global Financial. By contrast, the bank's recruitment pattern was insensitive to geography within the United States (though not internationally), involved few financial institutions, and was not directly tied to recent financial performance.

Multivariate analyses. Logistic models of recruitment into Team Challenge simultaneously examine the factors discussed above. The impact of each organizational characteristic on the probability of receiving a benchmarking visit is given by the estimated coefficient B . Effect magnitudes are best summarized by $\exp(B)$, the multiplier of the selection probability for a one-unit change in the covariate. Appendix A gives correlations between all indicators.

Table 2 presents results from two models: one in which the Compustat 6000 is treated as the risk set from which benchmarking partners are recruited, and the other in which the *Fortune* 500 plays this role. The first analysis contrasts 65 visits to U.S.-based publicly held companies versus some 6,200 such firms that were not visited (in each challenge;

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Table 2

| Variable | Compustat 6000 | | | Fortune 500 | | |
|---------------------------------------|----------------|------|--------|-------------|------|--------|
| | B | S.E. | Exp(B) | B | S.E. | Exp(B) |
| Board interlock | .30 | .39 | 1.35 | .43 | .42 | 1.03 |
| Same region | -.58 | .53 | .55 | -.37 | .55 | .69 |
| Executive migration | 1.04*** | .42 | 2.82 | 1.17*** | .43 | 3.21 |
| Competitor | 1.44*** | .53 | 4.22 | .49 | .84 | 1.63 |
| Manufacturer | .29 | .33 | 1.34 | .54 | .37 | 1.72 |
| Award winner in issue area | 1.45*** | .32 | 4.26 | 1.42*** | .32 | 4.15 |
| <i>Fortune</i> 100 Most Admired | 2.14*** | .36 | 8.52 | 1.49*** | .38 | 4.45 |
| Employees (ln) | .24 | .21 | 1.27 | .17 | .25 | 1.18 |
| Sales (ln) | .40** | .19 | 1.49 | .08 | .27 | 1.09 |
| Return on assets | .01 | .04 | 1.00 | .22 | .18 | 1.25 |
| No. of prior visits in Team Challenge | .89*** | .24 | 2.44 | .88*** | .24 | 2.4 |
| N Companies per challenge | 5952 | | | 414 | | |
| N Benchmarking visits | 64 | | | 53 | | |
| Model fit | 546.76 | | | 368.55 | | |
| Nagelkerke R ² | .43 | | | .32 | | |

** $p < .05$; *** $p < .01$.

the full set of non-benchmarked firms across challenges is 43,585); the second contrasts 53 visits to publicly held members of the *Fortune* 500 versus some 450 publicly held members of the *Fortune* 500 that were not visited in each challenge (for a total of 3,136 companies). Because the results of multivariate models are broadly consistent with what we have learned from the bivariate analyses, we summarize them briefly.

Ties based on executive migration are associated with the formation of benchmarking partnerships even when a host of other organizational characteristics are taken into account. Companies that had sent executives to Global Financial were more than three times as likely to be visited as companies that did not have this tie to the bank. By contrast, the presence of a board interlock did not increase the chance of a Team Challenge visit once we controlled for other factors. Although companies that shared a board member with Global Financial participated in Team Challenge at a relatively high rate, this differential can be explained by the size and prestige of those companies and the often simultaneous existence of migration-based ties.

The apparent tendency toward intra-industry benchmarking depends on the comparison set we examine. When we contrast the bank's partners to the Compustat 6000, financial service providers were significantly overrepresented. Within the pool defined by the *Fortune* 500, however, the frequency of visits to financial institutions differs little from the frequency of visits to firms outside financial services. This reflects the fact that while probabilities of recruitment generally increase with organizational size, the opposite occurs where inter-industry benchmarking is concerned. Of the many financial institutions that appear in a list of the 500 largest American businesses, Globalbankers visited only two.

A firm's prestige is a powerful predictor of recruitment into Team Challenge. Fellow members of the *Fortune* Most Admired were about eight times as likely to be visited as less widely esteemed firms in the Compustat 6000 and four times as likely as their counterparts in the *Fortune* 500. Additional analyses suggested that differentials also emerged not only in contrasts between the 100 top-ranked firms versus all others but also on the basis of the reputational score awarded in *Fortune's* survey. The more admired a firm was within the business community, the more likely it was to be visited by Global Financial's benchmarking teams.

Area-specific recognition for excellence also has strong and consistent effects on recruitment into Team Challenge. Companies that had received awards for excellence in the innovation area were some four times more likely to be benchmarked than members of the Compustat 6000 and *Fortune* 500 who had not. Baldrige Award winners were much more likely to participate in the quality and quality culture challenges than firms that had not won these awards; those recognized by *Working Mother* were more likely to be visited by work/life balance teams than unrecognized firms, and so on.

Strong financial performance did not increase the likelihood that a firm would be visited in Team Challenge. Table 2 shows a weak and statistically non-significant effect of a firm's return on assets in the previous year. Supplementary analyses also showed that sales growth was unrelated to recruitment. Firms with larger sales volumes were benchmarked more frequently than smaller firms, though this is better interpreted as an effect of size than of financial success.

Finally, participation in Team Challenge tended to beget more participation. Controlling for organizational characteristics, each visit roughly doubled the likelihood of being visited later on. Additional analyses found that prestigious firms with migration-based ties to Global Financial were particularly likely to be revisited, while competitors were not—only one financial services provider (a securities dealer) was seen twice. The overall tendency toward repeat benchmarking combines an intensification of the bank's broader attention pattern with an apparent process of cross-industry relationship building.

Influence

Bivariate analyses. In studying the impact of visited firms, we again begin with bivariate relationships. Appendix B provides correlations. For binary indicators like board interlocks, we contrast the firm's influence when the tie is present versus absent. For continuous measures like firm size, we report correlations. Each data point now represents a benchmarking partner-team pairing, because rival teams were differently affected by the same external visits. Archival records permitted us to characterize all 171 company visits, whether the partner was public or private, American or international. Self-reports provided 166 useable partner-team pairs.

Both of the executive-based ties measured in this study show connections to interorganizational influence in Team Challenge. Firms with board interlocks to Global Financial

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received about a third more best practice citations, although they were not perceived by benchmarkers as having a disproportionately large impact. Firms whose executives had moved to Global Financial scored high on both measures. They were assessed as highly influential by team members and were cited more than twice as often in team reports. These strong effects of migration-based ties are consistent with what Team Challenge participants said during interviews. When senior executives were mentioned, benchmarkers often provided capsule biographies that stressed the executive's employment history. One said, "Everyone knew [the recently hired vice president] had been at [Company X] and that they did things right there. Management was into [Company X] and that's why they hired him. We were aware of that."

Table 3 suggests an inverse relationship between spatial proximity and influence. Benchmarking partners headquartered in New York were described as having less impact than firms based elsewhere and received 0.4 fewer citations for best practice. The same pattern also obtains when we consider all visits to companies headquartered in the Northeast and Mid-Atlantic states. If team members could reach a benchmarking partner by foot or by car, the visit generally had modest impact.

Financial service providers suffered from an even more severe influence deficit. Visits to banks, securities traders,

Table 3

Bivariate Relationships between Organizational Characteristics and Influence on Benchmarking at Global Financial

| Variable | | Participant surveys | Report mentions |
|---------------------------------------|----------|---------------------|-----------------|
| All visited firms | | 3.27 | 1.75 |
| Board interlock | No | 3.27 | 1.65 |
| | Yes | 3.28 | 2.36 |
| Same region | No | 3.31 | 1.72 |
| | Yes | 2.84 | 2.27 |
| Executive migration | No | 3.15 | 1.53 |
| | Yes | 3.79*** | 3.05*** |
| Competitor | No | 3.32 | 1.96 |
| | Yes | 2.84* | 0.67*** |
| <i>Fortune</i> 100 Most Admired | No | 3.05 | 1.22 |
| | Yes | 3.51*** | 2.11*** |
| Manufacturer | No | 3.28 | 1.51 |
| | Yes | 3.27 | 1.97 |
| Award winner in issue area | No | 3.08 | 1.20 |
| | Yes | 3.54*** | 2.59*** |
| Press attention in issue area | <i>r</i> | .39*** | .22*** |
| Sales (ln) | <i>r</i> | .04 | .13* |
| Sales growth | <i>r</i> | .00 | .05 |
| Employees (ln) | <i>r</i> | .06 | .14* |
| Return on assets | <i>r</i> | -.07 | -.06 |
| No. of prior visits in Team Challenge | <i>r</i> | .25** | .29** |

* $p < .10$; ** $p < .05$; *** $p < .01$.

brokerage houses, and the like generated few proposals for the transfer of best practice. On average, organizations within financial services received a third as many best practice citations as benchmarking partners in other industries and were scored a half a point lower in influence by team members.

Global Financial's peers among *Fortune's* Most Admired had a substantially greater impact in Team Challenge than did less-esteemed firms. They scored almost half a point higher on influence according to team members and received more than 150 percent as many best practice citations. Companies that had won area-specific awards and gained business press attention in the innovation domain also had a disproportionately large impact. Team reports referred to award winners twice as often as non-award winners, and press attention is strongly correlated with the volume of best practice citations and managers' perceptions of influence.

Organizational size and financial performance are not related to a firm's influence in Team Challenge. Sales and sales growth are linked to neither participant perceptions nor best practice citations. Workforce size is positively related to mentions in team reports, though the correlation is not large. Return on assets is negatively correlated with both measures of influence. Companies visited in more prior challenges received a disproportionately large number of best practice citations and were scored as highly influential by team members as well.

Multivariate models of managers' perceptions of influence. Table 4 presents analyses of perceived influence that simultaneously examine the covariates discussed above. Because team-aggregated scores vary continuously between 1 and 5, we estimated effects within an OLS framework. Although these analyses might generate out-of-range estimates, no predicted score is in fact less than 1 or greater than 5.

Models 2–7 in table 4 also adjust for an important source of unobserved heterogeneity: the fact that some teams may have been more oriented toward external companies than others. For example, one work/life balance team attended closely to visited firms, while the other centered on learning from focus groups composed of bank employees. To control for these team effects, we express all indicators as deviations from mean values for the team, a strategy analogous to estimating fixed effects models in longitudinal analyses.

In all models, firms tied to Global Financial through executive migration were significantly more influential than other benchmarking partners. These relationships are robust under a variety of alternative specifications involving the kinds of ties we count and the temporal window when overlaps are observed. Firms that shared board members with Global Financial had above-average influence as well, but this effect is less than twice its standard error.

Geographically proximate firms and within-industry competitors, by contrast, had low levels of influence in Team Challenge. Companies headquartered in New York

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Table 4

Coefficients from Regression Analyses of the Perceived Influence of Visited Firms (N = 60)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------------|--------|---------|---------|---------|---------|--------|---------|
| Board interlock | .00 | .22 | .21 | .22 | .28* | .12 | .25 |
| Same region | -.50** | -.49** | -.48** | -.49** | -.51** | -.69** | -.48** |
| Executive migration | .61*** | .49*** | .48*** | .48*** | .56*** | .32* | .44** |
| Competitor | -.47** | -.30 | -.24 | -.25 | .03 | -.05 | -.27 |
| <i>Fortune</i> 100 Most Admired | .31** | .40*** | .33** | .35** | .41*** | .36** | .39*** |
| (ln) Employees | -.10* | -.17*** | -.16*** | -.16*** | -.19*** | -.05 | -.17*** |
| Award winner in issue area | | | .17 | | | | |
| Press attention in issue area | | | | .02 | | | |
| Sales growth | | | | | .03 | | |
| Return on assets | | | | | | .17 | |
| No. of prior visits in Team Challenge | | | | | | | .08 |
| Control for team effects | No | Yes | Yes | Yes | Yes | Yes | Yes |
| R ² | .16 | .41 | .41 | .41 | .41 | .44 | .45 |
| D.f. | 154 | 140 | 139 | 139 | 130 | 119 | 139 |

* $p < .10$; ** $p < .05$; *** $p < .01$.

scored about half a point lower on influence than those located far from Manhattan. Financial service providers had low levels of influence, though this effect is only statistically significant when team effects are not included in the model. As noted above, fellow banks and other financial service providers were concentrated in a single challenge, which makes it difficult to identify their impact net of team effects. The financial institutions seen by Internet benchmarkers were described as having rather little influence, but not markedly less than the other companies that they saw.

Table 4 shows strong effects of corporate prestige, though not financial performance. Team Challenge participants rated their fellows among *Fortune's* Most Admired as having a strong impact on their thinking and recommendations. Firms that had issue-specific awards were also described as influential, but this effect is smaller and not statistically significant when the *Fortune*-based measure of generalized reputation is included in the model. We suspect that benchmarkers often saw their status equivalents as providing natural models, while the issue-specific exemplars they visited could appear culturally alien. A participant on the work/life challenge recalled to us, for example, that his trip to a young firm known for its environmentalism and employee-centered values had been "eye opening," but that the firm's practices could not be replicated because they depended on a unique corporate culture and founding story. Work/life benchmarkers ultimately drew heavily on companies whose stature was comparable to that of Global Financial.

Multivariate models of best practice citations. Table 5 provides parallel analyses of our second measure of influence, the frequency with which visited companies were cited as sources of transferable best practice. These citations were modeled in a negative binomial framework, because the raw volume of mentions is overdispersed relative to a Poisson process (Allison and Waterman, 2002). We again controlled

Table 5

Coefficients from Negative Binomial Analyses of Best Practice Citations Linked to Visited Firms (N = 171)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Board interlock | -.04 | .18 | .14 | .18 | .20 | .03 | .27 |
| Same region | -.15 | -.15 | -.08 | -.15 | -.16 | -.20 | -.16 |
| Executive migration | .65** | .67*** | .65*** | .68*** | .76*** | .69*** | .54*** |
| Competitor | -.98** | -.09 | .00 | -.10 | .29 | .12 | -.00 |
| <i>Fortune</i> 100 Most Admired | -.03 | .15 | .08 | -.15 | .12 | .07 | .11 |
| (ln) Employees | .05 | -.02 | -.02 | -.03 | -.03 | .08 | -.05 |
| Award winner in issue area | | | .28 | | | | |
| Press attention in issue area | | | | -.01 | | | |
| Sales growth | | | | | .06 | | |
| Return on assets | | | | | | .82 | |
| No. of prior visits in Team Challenge | | | | | | | .23** |
| Control for team effects | No | Yes | Yes | Yes | Yes | Yes | Yes |
| α | .85*** | .14* | .13* | .14* | .10 | .08 | .10 |
| χ^2 | 20** | 106*** | 108*** | 106*** | 93*** | 93*** | 110*** |
| D.f. | 163 | 149 | 148 | 148 | 139 | 128 | 148 |

* $p < .10$; ** $p < .05$; *** $p < .01$.

for team effects, in this case by including a full set of binary indicators.

The companies linked to Global Financial via executive migration were prominently featured in team reports. Controlling for a wide range of company characteristics, migration-based ties nearly double the predicted number of citations. Of the thirteen site visits that generated six or more mentions in team reports, six were to companies at which top managers at Global Financial—often members of the team's audience—had once worked. Prior visits in Team Challenge were also associated with a statistically significant increase in best practice citations; each earlier visit translates into an 8 percent rise in citations. Other organizational characteristics bear weak and statistically non-significant relationships to best practice citations, though they are generally in the same direction as their effects on managerial self-reports in table 4.

We interpret the greater resolving power of perceived influence versus best practice citations in terms of a private/public distinction. Self-reports describe the private understandings of managers who were deeply involved in Team Challenge and well positioned to recall subtle forms of influence. Benchmarkers knew much more about their team's decisions than public documents like their official reports could convey. Some recommendations were more important than others, for example, and some companies had shaped the team's thinking in more fundamental ways than others. It is not surprising that variations in perceived influence can be linked to the characteristics of benchmarking partners in a finer-grained way than variation in citation patterns can.

It also seems revealing that the two organizational characteristics that predict best practice citations were easily observable by the benchmarker's audience. By connecting their proposals to companies at which executives had previously worked, benchmarkers may have found natural allies in a



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high-stakes meeting. Attention to previously benchmarked firms may also have been linked to perceptions that these firms had carried weight in prior rounds of benchmarking. As we move from the relatively private world of the team's internal discussions to the public realm of a meeting with top managers, patterns of interorganizational influence appear to follow an increasingly strategic logic.

Recruitment and Influence

Our discussions of recruitment into the benchmarking pool and of the influence of benchmarking partners have proceeded on separate but parallel tracks. There are good reasons for keeping the two apart. Decisions about which organizations to visit were complete before influence could arise, were largely made by program organizers rather than team members, and characterized benchmarking issues rather than teams. Integrated analyses of the two processes carry real costs in sacrificing data points on the influence of benchmarking partners, which are scarce, for data points on recruitment, which are abundant.

Nevertheless, it is useful to examine recruitment and influence within an integrated framework. By doing so, we can control for shared unobserved factors that might affect the two processes jointly.¹ This is best addressed by putting perceived influence aside and focusing on best practice citations, because only in the latter case can meaningful influence scores be ascribed to unvisited firms. Citations can be modeled in a zero-inflated regression framework in which a large pool of potential recruits (here, the Compustat 6000) are at risk. Let Y_i equal the (integer) average number of citations across teams participating in a given challenge if a company was benchmarked, and zero if the company was not visited. A zero-inflated Poisson model treats these counts as stemming from the mixture of two latent groups, one whose values are always zero and the other whose values are distributed as Poisson with parameter λ_i . What makes this scheme a particularly good fit to Team Challenge is the fact that zeros are generated by both regimes: unvisited companies receive no citations but so do some visited companies. Estimated quantities include p_i (the probability that a firm will be in the second latent class rather than the first—i.e., that it will be benchmarked) and λ_i (the expected number of citations the firm would generate if it was benchmarked). p_i and λ_i are logistic and Poisson distributed functions, respectively, of now familiar covariates like management ties, board interlocks, and the like.

Table 6 gives coefficients for a zero-inflated Poisson model of best practice citations applied to the Compustat 6000. The first column gives coefficients for the probability that a firm will be benchmarked (positive values increase the estimated probability of selection); the second column reports coefficients that drive citations conditional on p_i (positive values increase the estimated volume of citations).

Results dovetail with those presented above. A wide variety of factors increase the probability of recruitment into Team Challenge: companies are more likely to be benchmarked if they are large, are among the *Fortune* Most Admired, are tied

¹ Results from sequential models are unbiased only if they do not share unobserved factors (see Winship and Mare, 1992, for a review). A large though unsettled econometric literature beginning with Heckman (1979) addresses sample selection bias.





Table 6

Coefficients from Zero-inflated Poisson Models of Best Practice Citations, Compustat 6000 (N = 43,603)*

| Variable | Recruitment | Influence (best practice citations) |
|---------------------------------------|-------------|-------------------------------------|
| Board interlock | .23 | .34 |
| Same region | -.75 | .58 |
| Executive migration | 1.21** | .61*** |
| Competitor | .68 | .33 |
| <i>Fortune</i> 100 Most Admired | 1.49*** | .24 |
| Award winner in issue area | 2.74*** | |
| Sales (ln) | .10 | |
| Employees (ln) | .37* | |
| Manufacturer | .27 | |
| No. of prior visits in Team Challenge | 1.45*** | |
| Likelihood ratio χ^2 | | 58.3*** |

* $p < .10$; ** $p < .05$; *** $p < .01$.
* Models include controls for issue.

to Global Financial via executive migration, and have been more frequently visited in prior challenges. Net of these recruitment probabilities, however, only one organizational characteristic is associated with the expected volume of best practice citations: management ties based on executive migration.

DISCUSSION

Patterns of Interorganizational Influence

Benchmarking provides a rich opportunity to study interorganizational relationships. It involves a palpable form of imitation and learning, one concrete enough to be asked about in managerial surveys and located in company documents. These sources provide a glimpse of the multifaceted network of relationships that surrounds a firm and permit a search for patterns of attention and influence that shape efforts at organizational change.

From another perspective, benchmarking can be viewed as an attempt to transcend the limits of social networks. In the strictest conception of the exercise, all companies that pose the same question (like how to organize their corporate headquarters or how to achieve work/life balance) would troop to the same models and learn from the very best within this select group. Perceived excellence, and not interorganizational relationships, would be the key determinant of attention and influence.

As we have seen at Global Financial, however, social ties are not readily jettisoned. They provide resources that direct the benchmarker's attention to plausible exemplars while simultaneously making it easier to get in the door. An ongoing relationship between the two organizations may make the visit more productive, and the visit may in turn become an occasion that affirms and strengthens the connection. And when benchmarkers return from their journeys, they want to





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build a case for change around exemplars that their colleagues can relate to.

Two interorganizational relationships stand out here. First, executive migration forms the key cohesive tie in Global Financial's benchmarking program. The prior corporate homes of the bank's top executives were often visited, were described by benchmarkers as highly influential, and were linked to many policy proposals. And benchmarkers made it clear that they knew where the bank's top management team—their audience—had once worked.

We suspect that the effects of intercorporate mobility reported here are just the tip of the iceberg. People bring practices with them when they move. As one Globalbanker said jokingly, ". . . when someone joins here after working someplace else, we do a mind dump!" Migrating executives are strongly positioned to champion the experience they carry in their heads, and indeed they are often recruited for this reason. During the 1990s, for example, Global Financial hired an executive from the auto industry to strengthen the bank's system of operational controls (the bank's CEO said, ". . . he brought us the disciplines of a manufacturing company"), an executive from a consumer products firm to help build the bank's "brand," and a leading figure in telecommunications to develop the bank's Web offerings.

Team Challenge illustrates the secondary waves that can form in the wake of managerial migration. Executives did not tell benchmarkers to recommend the practices of firms they had recently left. But alert managers, particularly fast-charging "high potentials," do not need to be prodded. They frame their proposals in terms that seem likely to appeal to their audience and seek to enlarge on the direction in which their organization already appears to be moving. Participants in Team Challenge appear to have done just this as part of an effective issue-selling strategy (Dutton and Ashford, 1993).

Second, we found pervasive evidence of the importance of a firm's stature in the business community. Firms that were widely admired in *Fortune's* survey of corporate reputation were frequently benchmarked. Team members also described high-status benchmarking partners as strongly affecting their recommendations—generalized prestige is a better predictor of influence than area-specific awards, press attention, size, and recent financial performance. *Fortune* rankings were positively related to the volume of best practice citations as well, though this relationship was not statistically significant in multivariate models.

These findings jibe with additional survey responses reported in Strang and Still (2004). In addition to the questions about the impact of each benchmarking partner that we have focused on in this paper, the mail survey asked about the overall influence of three types of firms: "highly regarded organizations," "firms in financial services," and "customers and business partners." Highly regarded organizations were rated as having the greatest impact on benchmarkers' thinking and recommendations, with 70 percent of respondents indicating that they had been very or extremely influential. Firms in financial services were reported to be the least



significant reference group of the three. Only 35 percent described financial institutions as very or extremely influential, while 35 percent indicated that they had no or slight influence.

Why were Globalbankers so attentive to prestige? They were well-socialized corporate insiders whose broad interpretations of corporate excellence dovetailed with the executives surveyed by *Fortune*. In describing one of Global Financial's most influential benchmarking partners, for example, a team member said "[Company X] hasn't done that well [lately], but people know it's a great company." While recent financial performance is a key component of corporate reputation (Fombrun and Shanley, 1990), it is not the only component. Other values (like being a great place to work or a place where great products are made) also count, as do past achievements and expectations about the future. Prestige is theoretically significant as a synthetic judgment of worth that is publicly known and communicated. It is this summary valuation, rather than its components, that appears most robustly linked to interorganizational influence.

Attention to prestigious firms was reinforced by Global Financial's own position as a business community leader. Podolny's (1993) notion that interaction with lower-status actors can diminish one's own standing comes into play here. Benchmarking is an exchange relationship that expresses deference toward the visited partner, and the list of potential partners whose status was below that of Global Financial was very long. Nor did benchmarkers want to return from their hero's journey with exemplars that the top management team would disdain and whose connection to policy proposals would be a liability rather than a selling point.

Finally, we found that interorganizational influence in Team Challenge seldom followed the lines of market competition. Financial institutions were seldom benchmarked and were not particularly influential when they did serve as partners. Most striking is the lack of attention to head-to-head rivals. When Global Financial did pursue intra-industry benchmarking, it focused on smaller financial institutions whose market niches were disjoint from its own. Only on three occasions did major money centers act as benchmarking partners, and even these were not the bank's principal competition. Across problem domains, the Internet challenge provides the sole case in which fellow financial institutions played a major role in Team Challenge.

One way to explain disattention to fellow banks is to argue that competition is a differentiating rather than a homogenizing force (White, 1981; Greve, 1996). Potential within-industry partners may wish to conceal their operations from rivals. And on the demand side, benchmarking firms may ignore their competitors because to act as a second mover is a recipe for mediocrity. According to these strategic considerations, financial institutions played a minor role in Team Challenge because Global Financial could not obtain useful information from its competitors or because the bank preferred to import practices from other industries rather than mimic practices that rivals had already perfected.



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This cogent line of argument helps to account for corporate benchmarking's evolution from its competitive beginnings to the diffuse forms of cooperative learning that are institutionalized in contemporary best practice consortia. But a logic of strategic distancing does not jibe with the pattern of competitive attention in Team Challenge. The only teams to actively pursue intra-industry benchmarking were also the teams that were most concerned with secrecy and first-mover advantage. The Internet was a volatile, fast-moving domain that benchmarkers described as a critical test for Global Financial and as more consequential for the bank's future success than any other innovation area pursued in Team Challenge. A logic of strategic differentiation suggests that other banks would have rebuffed visits in such a sensitive area or that Global Financial would have been particularly concerned about second-mover disadvantage where e-commerce was concerned. Instead, it was only in this risky, high-stakes setting that Global Financial's usual reluctance to learn from competitors was overcome.

Global Financial's usual avoidance pattern toward fellow financial institutions can best be explained by sociological considerations. A regional bank, or an institution that had fallen on hard times, might plausibly have treated a larger, more successful bank as a model to imitate or learn from. Global Financial's elite position foreclosed this possibility. Unable to look up within its industry, the bank was unwilling to treat its rivals as exemplary sources of best practice. To draw an analogy from the world of sport: there is no loss of status if the Boston Red Sox visits an Indianapolis 500 pit crew to learn about streamlined interaction under pressure. But whether they win the pennant or come up short, they cannot ask the Yankees to show them how to turn the double play.

Limitations and Future Research

This paper examined 15 benchmarking teams that turned more than 100 site visits into an even larger number of policy proposals. In this sense, it offers a comparative analysis. But from another perspective, we report a case study of one bank and one program. We thus consider some of the limitations of the project reported here and suggest some fruitful avenues for future research.

First, Global Financial's history and business strategy may have shaped its benchmarking program in ways not understood or taken into account here. We have placed great stress on the bank's elite status, particularly in making sense of its close attention to prestigious firms located outside its own industry. But this study cannot sharply distinguish the social structural bases of Global Financial's emulation pattern from the singular vision of the company's leaders or the more idiosyncratic aspects of its corporate culture. We are analogously unable to identify a benchmarking effect in the network structure of innovation diffusion.

The remedy is comparative research, either via contrasts between the benchmarking programs of multiple organizations or through alternative data collection techniques that directly probe for organizational models, like Labianca et al.'s



(2001) survey analysis of emulation choices by universities. Do other elite organizations also pursue horizontal comparisons with non-competing peers, and if so, does a prestige hierarchy across industries and sectors emerge? Do smaller firms develop more vertically organized reference groups, and if so how far up do they look? Does the seemingly deliberate lack of attention to head-to-head rivals observed in Team Challenge also occur elsewhere, and under what conditions (as with the Internet teams here) do organizations shift toward a competitive focus?

Second, the effects of executive migration highlighted in this paper seem likely to vary across contexts. The facilitating role of in-migration ties observed here may have been accentuated by Global Financial's prestige and its strategy of extra-industry recruitment. Lower-status companies that draw managers from rivals, by contrast, may find themselves enmeshed in adversarial relationships that close off future exchange (see Somaya, Williamson, and Lorinkova, 2008, on the contrasting effects of mobility between competitors and cooperators). Still other companies may be influenced as much by where their managers go as where they come from. Patterns of executive migration and their consequences for subsequent organizational relationships form a complex and under-researched object of study.

Finally, benchmarking provides a strategic site for analysis of many aspects of innovation diffusion in addition to the network structures examined here (Strang, 2010). Benchmarks are influenced by contacts within the firm and with non-managerial experts as well as by external exemplars, and each of these plays a distinct role in the construction of calls for change. The content of recommendations provides a window into the managerial imagination and the structure of managerial discourse. And once recommendations are formally adopted, their implementation often involves a second-stage diffusion process that is more complex than the routes by which the practices were introduced into the organization in the first place.

Sharpening the Linkage between Interorganizational Networks and Influence

Beyond the pattern of interorganizational influence observed at Global Financial, this study suggests ideas about why some network ties serve as diffusion channels while others do not. As noted at the outset, research in this area faces an embarrassment of riches: too many ties are plausible vectors of contagion. The problem is to distinguish consequential ties from merely meaningful ones. We draw on this study to suggest two ways that relational ties can become diffusion channels: procedural activation, which depends on the relationship between interorganizational ties and the process whereby adoption decisions are made, and symbolic activation, which involves the relationship between interorganizational ties and organizational identity.

Diffusion research generally abstracts away from the process by which innovation decisions are made. It is thus easy to forget that interorganizational ties must somehow be

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introduced into the decision arena if they are to be influential. For example, many ties are defined by the boundary-spanning position of particular individuals. When these actors are centrally involved in an innovation process, the tie they embody is likely to be a significant diffusion channel. When they are marginal or uninvolved, the tie is likely to be irrelevant.

For Team Challenge, executive migration provides a great example of a procedurally activated channel. The key audience for benchmarkers was Global Financial's top management team. Their meeting with the bank's CEO and key executives was the much anticipated climax of a high-profile assignment and an opportunity to shine or fall flat. Top managers had also vetted decisions about what to benchmark, served as team sponsors, and were the key actors who would ultimately implement or not implement team recommendations. Benchmarkers were thus smart to link their policy proposals to the firms these heavyweights had come from. Once we remember who the elephants in the room were, we better understand what sorts of interorganizational ties were likely to matter.

Board interlocks, by contrast, illustrate a procedurally inactive channel in Team Challenge. Benchmarkers did not make presentations to Global Financial's board of directors, nor did these boards ratify or implement the team's action plans. There was thus no strong reason why firms linked to the bank by board interlocks would play a key role in Team Challenge. Much research shows that interlock patterns help explain the spread of innovations that are brought before boards, like policies related to mergers and acquisitions (Davis, 1991; Haunschild, 1993) and CEO power and compensation (Westphal and Zajac, 1997). But we suspect that board interlocks have little relevance for managerial practices and business strategies that are made elsewhere within the corporation.

More than who sits at the conference table is involved in organizational influence, however. The flow of practices from one organization to another always carries symbolic baggage. Mimicry and learning imply equivalence (the model and the mimic are in some sense comparable) but also asymmetry (the mimic learns from the model, while the reverse is not generally true). When the tie between the two enhances the mimic's identity, the model is likely to be consulted; when the tie undermines the mimic's identity, the model is likely to be avoided.

Podolny's (1993, 2005) model of symmetric shunning thus requires some modification. All else equal, a firm in search of best practice will prefer a higher-status partner to a lower-status partner; some of the teacher's prestige redounds to the credit of the student. Visited firms will also prefer higher-status partners to lower-status partners; the better the student, the better the teacher must be. But because benchmarking is an asymmetric partnership with overtones of deference, relationships between high-status teachers and low-status students can be status amplifying for both parties, while those between low-status teachers and high-status students should be rejected by the latter. Even partnerships

between status equals appear unstable. They boost the stature of the teacher but diminish the stature of the student.

Several insights into the logic of status equivalence are suggested by Global Financial's emulation pattern. The bank could not look up within its industry; the world's other great financial institutions were at best its equals and, by most measures, did not stand that high. Intra-industry benchmarking played a correspondingly small part in Team Challenge. Globalbankers were more likely to visit smaller financial institutions in disjoint niches than major money centers, who were only benchmarked when strategic imperatives trumped all other considerations in the Internet Challenge. Learning from rivals tended to undermine Global Financial's own status and did no favors to managers intent on using external models to forge programs of organizational change. Benchmarkers were curt in their dismissals: "We didn't think there was much we could learn from them."

But benchmarkers in search of best practice could not, like the elite Bostonians depicted by Reverend Bushnell, "speak only to God." Their solution was instead to focus the lion's share of their attention on elite firms in other industries. Learning from the world's great companies resonated with and affirmed Global Financial's status as a leader in its own field. When Globalbankers visited top pharmaceuticals manufacturers, communications giants, and movie studios, everyone gained in status terms from relationships coded as "the best benchmarking the best."

Global Financial, perched at the top of its industry pecking order, thus centered its deference pattern on the leaders of other communities with equivalent or higher status, much as chemists might once have looked to physicists, or TV stars to movie idols. By looking outside its own field, the bank located a region of robust reciprocity in asymmetric exchange. Rivalry accentuates the resolving power of status comparisons and generates great sensitivity to unnecessary acts of subordination. When actors do not compete, by contrast, invidious comparisons lose much of their force and deference its sting. From an elite bank's perspective, leading high-tech companies or airlines or even textile producers can be "other great companies"; a rival is either above or below. And though one's peers in an imagined community can gain honor at no cost to oneself, status among direct competitors is a zero-sum game.

While the effects of executive migration can be interpreted from a narrowly political perspective, we suspect that they reflect a logic of organizational identity as well. Global Financial was prone to draw external executive talent from outside its field and from organizations that exemplified the CEO's strategic vision. Several top managers, for example, were drawn from a manufacturer that was so respected that it was dryly described to us as "the source of all good things." When benchmarkers linked their recommendations to this sort of company, they deftly linked their proposals to an exemplar that the bank had already embraced and a direction in which the bank was already moving.

Most broadly, a close look at interorganizational influence reveals its fundamentally sociological cast. Managers



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reversed the technical logic advocated in the original version of benchmarking, in which competitors are monitored, imitated, and improved upon. Influence was instead organized around the social construction of some firms as "the world's great companies" and via the strong ties produced by executive migration. Networks induced by managerial mobility and organizational status, and the principles that underlie their relevance for Global Financial, seem likely to play substantial roles in the spread of many kinds of innovations.

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APPENDIX A: Zero-order Correlations for Analyses of Recruitment into Team Challenge (N = 43,650)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|------|------|------|------|------|------|------|-----|------|------|------|------|
| 1. Benchmarking partner | | | | | | | | | | | | |
| 2. Board interlock | .11 | | | | | | | | | | | |
| 3. Same region | .01 | .06 | | | | | | | | | | |
| 4. Executive migration | .16 | .28 | .06 | | | | | | | | | |
| 5. Competitor | .01 | -.02 | .04 | -.00 | | | | | | | | |
| 6. Manufacturer | .01 | .05 | .00 | .04 | -.24 | | | | | | | |
| 7. Fortune 100 Most Admired | .17 | .26 | .02 | .17 | -.01 | .03 | | | | | | |
| 8. Employees (ln) | .09 | .18 | -.02 | .13 | .00 | .00 | .24 | | | | | |
| 9. Award winner in issue area | .16 | .16 | .02 | .13 | .01 | .04 | .25 | .17 | | | | |
| 10. Sales (ln) | .09 | .18 | -.01 | .13 | .10 | .02 | .25 | .87 | .17 | | | |
| 11. Return on assets | .00 | .00 | .00 | .00 | .03 | -.00 | .00 | .01 | .00 | .01 | | |
| 12. No. of prior visits in Team Challenge | .30 | .14 | .01 | .24 | .00 | .02 | .23 | .10 | .15 | .10 | .00 | |
| 13. Sales growth | -.01 | -.01 | -.02 | -.02 | .00 | -.08 | -.01 | .01 | -.02 | -.00 | -.01 | -.01 |

APPENDIX B: Zero-order Correlations for Analyses of the Influence of Benchmarked Firms (N = 171)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|------|------|------|------|------|------|-----|-----|------|-----|------|------|------|------|
| 1. Influence | | | | | | | | | | | | | | |
| 2. Report mentions | .36 | | | | | | | | | | | | | |
| 3. Board interlock | .05 | .05 | | | | | | | | | | | | |
| 4. Same region | -.06 | .06 | .37 | | | | | | | | | | | |
| 5. Executive migration | .32 | .29 | .23 | .04 | | | | | | | | | | |
| 6. Competitor | -.15 | -.13 | -.18 | -.06 | -.06 | | | | | | | | | |
| 7. Manufacturer | -.09 | .03 | .36 | .04 | .04 | -.36 | | | | | | | | |
| 8. Fortune 100 Most Admired | .34 | .15 | .11 | -.11 | .26 | -.26 | .26 | | | | | | | |
| 9. Employees (ln) | .30 | .23 | .35 | .01 | .56 | -.31 | .21 | .38 | | | | | | |
| 10. Award winner in issue area | .27 | .25 | .12 | -.03 | .24 | -.15 | .18 | .41 | .32 | | | | | |
| 11. Sales (ln) | .20 | .13 | .43 | .05 | .44 | -.24 | .28 | .44 | .80 | .26 | | | | |
| 12. Return on assets | -.23 | -.20 | -.15 | .10 | -.51 | -.19 | .10 | .09 | -.50 | .12 | -.14 | | | |
| 13. No. of prior visits in Team Challenge | .19 | .14 | -.03 | -.03 | .38 | -.17 | .06 | .28 | .32 | .02 | .24 | -.22 | | |
| 14. Press attention in issue area | .30 | .06 | .06 | -.05 | .20 | -.14 | .01 | .33 | .17 | .36 | .23 | .15 | .04 | |
| 15. Sales growth | -.00 | .04 | -.13 | -.09 | -.17 | -.04 | .09 | .11 | -.17 | .17 | -.36 | .28 | -.03 | -.04 |