

Who Does an Elite Organization Emulate?

Networks, Influence, and Benchmarking*

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Abstract

We seek to advance theories of network diffusion by examining the structure of emulation that emerges in a global bank's benchmarking program. This design inverts conventional diffusion research, focusing on multiple innovations in one organization rather than multiple organizations adopting a single innovation. We find that prestigious firms and firms linked to the bank through executive migration are highly influential, firms tied to the bank by board interlocks and geographic proximity are not particularly influential, and competitors within financial services have markedly little influence. These relationships highlight the way organizational identity and decision processes activate and deactivate network ties as potential channels of innovation diffusion.

Much research demonstrates the important role of interorganizational relations in the spread of organizational practices. 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.

But our understanding of how networks shape diffusion remains more thin than deep. It is difficult to be confident that the relationships that emerge from regression-like studies of adoption will also appear when we look at identifiable cases of imitation. While all research strategies have weaknesses as well as strengths, two inferential issues are cause for concern.

A first problem is that most diffusion analyses generate indirect evidence of contagion. For example, Strang and Tuma (1993) develop a class of event history models that infer contagion from short waiting times between the adoptions of network partners. 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. There is also a real (though less often discussed) danger that the effects of measured ties will be conflated with those of unmeasured but correlated networks.

A second problem is that most diffusion research generates little insight into the mechanisms that underlie influence. Longitudinal research tracking the adoption of a given practice is the design of choice if we want to test strong hypotheses about whether diffusion trajectories are consistent with a particular network channel. But it is a blunt tool if we are unsure if organizations really affect each other, or if we lack insight into why some network ties are more important than others.

Ironically, one consequence of these inferential weaknesses is that diffusion research suffers an embarrassment of riches. The variety of interorganizational ties that have been empirically linked to innovation diffusion is large and unstructured. They include board interlocks, strategic alliances, joint ventures, supplier networks, associations like 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.

A useful remedy is to triangulate by developing “process mapping” studies of interorganizational influence that complement “pattern finding” analyses of diffusion channels.¹ A study of one organization can witness the concrete cases of mimicry that studies of many organizations must assume are occurring. And by getting close to the actors, process mapping studies can build a better understanding of what networks matter and why networks matter.

To catch interorganizational influence in the act, this paper inverts the conventional design of diffusion research. Rather than study multiple organizations adopting a single innovation, we study a single organization pursuing multiple innovations. The goal is to identify interorganizational ties that are robustly associated with influence across a variety of innovations.

We study the benchmarking program of Global Financial, a large multinational bank. Benchmarking involves explicit attention to and learning from a variety of external firms as a vehicle for strategic planning and corporate innovation. As such, it provides a rich setting for

¹ While organizational research seldom employ process tracing approaches to imitation, work in other disciplines provides some excellent models. One example is Bennett’s (1991) analysis of how British and Canadian policymakers used the U.S. Freedom of Information Act in writing their own transparency laws.

inquiry into how network relationships translate into influence. This paper examines 15 management teams charged with developing strategies in a wide variety of domains, from total quality to the Internet to work-life balance. Each team visited external companies in an effort to identify ‘best practice,’ and drew heavily on these visits in generating proposals for Global Financial. We develop a network analysis of why some benchmarked companies were more influential than others.

Three relational principles are the focus of theoretical attention here: cohesion, competition, and prestige. *Cohesion* suggests that influence is greater when two firms are directly linked – a natural idea, but one which requires us to locate consequential interorganizational ties. *Competition* argues that firms will be highly attentive to what their rivals do, even if direct ties are absent. And *prestige* implies that firms tend to imitate the practices of high or higher status actors.²

The price paid for getting close to interorganizational influence, at least in this paper, is narrowness on the adopter side. Global Financial is a prominent member of the Fortune 500, is widely regarded as a leader within financial services, and is well known for its technological and service provision innovations. The network position of this sort of elite firm is distinctive, generally displaying high centrality and range. And even more important, we think, elites stand in an ambiguous relation to innovation diffusion. Leaders are highly subject to community norms, yet there are few they can legitimately follow.

² We describe all three lines of argument as relational, though this is more a theoretical than an operational definition. Measures of competition and prestige might or might not involve direct observation of interorganizational relationships. But note that competition implies structural equivalence in some social network (Burt 1987), and that prestige implies an underlying social structure organized by public acts of deference (Podolny 1993).

The firm we study thus faces a theoretically interesting, if enviable, problem. As an elite firm – who does Global Financial emulate?

Corporate Benchmarking

While an earlier use of the term “benchmarking” described standard tests of operational performance (i.e., how quickly a new PC executes a standard bubble-sort), corporate benchmarking refers to systematic efforts to assess and learn from other organizations. 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 corporate innovations of the last decades of the twentieth century, benchmarking originated as a response to Japanese competition. Camp’s own program began when Xerox engineers tore Fuji copiers apart. Benchmarking was legitimized by its incorporation in the criteria of the prestigious Malcolm Baldrige National Quality Award as a requisite activity of “world-class organizations.”

As benchmarking spread, the idea was generalized to include not only competitor analysis but examination of best practice anywhere. The American Productivity & Quality Center (APQC), which formed the International Benchmark 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 airliner 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 business 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 "abusive."

Team Challenge, the benchmarking program studied in this paper, was part of Global Financial's broad growth strategy. A series of crises had been surmounted early in the decade, and the bank was enjoying an era of great success. While 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 within the executive development division of Human Resources, the program's objective was to investigate new directions for the company while also furthering the careers 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. Since the first of these rounds worked somewhat differently and left an incomplete record, this paper examines the 15 teams formed in rounds II – V and the seven innovation areas they addressed.

These seven innovation areas are total quality, high performance work environment, the Internet, work/life balance, quality culture, sales processes, and training & development. Programs developing from Team Challenge were central to many of Global Financial's major organizational initiatives during the late 1990s. The total quality challenge led to a global quality initiative; the high performance and work/life balance challenges led to programmatic efforts to address strains within the bank's intensely competitive culture; the Internet challenge set directions for the bank's Web offerings; and the sales challenge promoted a shift towards cross-selling financial products.³

Participants on Team Challenge evaluated policy issues from multiple points of view, including internal interviews at Global Financial, visits with external companies, and discussions with management consultants and area experts. Teams were charged with evaluating the need for company action and making implementation proposals. Benchmarkers took a month-long hiatus from their regular jobs to participate on Team Challenge. Their efforts culminated in a meeting with the bank's CEO and top management team where teams presented their findings and recommendations.

From 12 to 20 managers were selected for Challenge topic. Organizers sought diversity of business unit, nationality and gender. They provided briefing books with a selection of discussions from the business press and internal literature from Global Financial surveys, newsletters and personal communications. Except for the quality challenges, which involved

³ We should emphasize, however, that benchmarking formed one step in an arduous "innovation journey" in each of these areas. The proposals that form this paper's subject matter led to a stream of corporate activities that evolved over time in unanticipated and unpredictable ways. In the sense benchmarking recommendations represent not the end of the story, but the end of the first chapter. Its importance was greatest in generating a case for action and setting an initial direction for change efforts.

three teams representing each of the bank's major divisions, each topic was investigated by two 'rival' teams that reviewed much of the same material and visited the same companies.

External visits varied in intensity and in the kinds of interactions team members experienced. Some companies set up interviews for Global Financial team members, some allowed benchmarkers freedom to mingle with employees and observe for themselves, and others provided structured contact with managers overseeing relevant programs. One team member describes his experience at Federal Express:

“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.”

Team Challenge organizers constructed an initial list of organizations that would be formally benchmarked, and set up a schedule of visits. Some teams expanded on this list. In one Challenge, 10 pre-arranged visits became 19 at the request of the teams involved.

A prospective firm's reputation and its ties to Global Financial both played important roles in its selection. “(W)e used consultants and we leveraged our own relationships [with firms] or theirs,” a Team Challenge organizer said. “In most cases we did have some kind of contact.” Generally, identification of best practice came first; 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. In other cases interpersonal relationships drove who was benchmarked, sometimes producing a form of “courtesy” benchmarking.

The firms benchmarked by Global Financial thus do not form a random sample. Concerns about unmodeled selection processes (Winship and Mare, 1992) naturally apply. But because the selection process involved relational criteria, we suspect that the analysis of conditional influence presented below is highly conservative. That is, analysis of the combined effects of selection into the benchmarking pool and of the influence of firms within the pool would tend to reveal larger effects of all the variables studied here: cohesive ties, competition, and firm reputation.⁴ And observable differentials in influence are likely to be narrow precisely because Global Financial sought to benchmark firms that were potentially influential; the bank had little interest in benchmarking those it could not learn from.

HYPOTHESES

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 sort of social relationships that are so central in studies of individual decision-making. In the benchmarking context studied here, three ties form useful candidates: board interlocks, spatial proximity, and management linkages based on executive migration.⁵

⁴ In future research we plan to analyze the selection process directly. The theoretical interest of this problem and the methodological issues it raises seem to us too substantial to be incorporated here in a sub-analysis.

⁵ In contexts like technology transfer, strategic alliances and partnerships are key inter-organizational ties. This sort of explicit cooperative relationship does not appear relevant to

Board interlocks. The workhorse in studies of organizational networks is the tie formed when executives or directors of one firm sit on the board of another. Board interlocks are relevant to multiple theoretical concerns, including research on collusion, classwide rationality, exchange dependency, and CEO power and compensation (see Mizruchi, 1996 for a review). Useem's (1984) ethnographic work suggests that board interlocks permit an inexpensive but effective form of "business scan."

Much research finds that board interlocks serve as diffusion channels. Davis (1991) shows that firms were quicker to adopt 'poison pill' protections against hostile takeovers if interlocked with prior adopters. Haunschild (1993, 1994) demonstrates that the propensity to engage in M&A activity and the premia offered in takeover bids are related to the parallel actions of interlocked firms. Palmer, Jennings, and Zhou (1993) find that late-stage adoption of the multidivisional form is lubricated by "non-directional" board ties to firms with M-form architectures. We thus hypothesize:

H1 Firms linked by board interlocks to Global Financial will have greater influence on benchmarking at Global Financial than firms not tied through boards.

Spatial proximity. A second key connection is provided by geography. A thick web of communication often develops when two organizations are located near each other. And geographically proximate firms are more likely to share cultural understandings about business strategy and managerial techniques. Work on industrial districts (Saxenian, 1994) suggests the power of frequent, face-to-face communication in linking firms at both managerial and professional levels.

benchmarking, which involves a more fleeting relationship oriented to broad managerial and strategic concerns.

Much work identifies the spatial character of contagion. Burns and Wholey (1993) show that matrix management spread geographically. Davis and Greve (1997) find that golden parachutes spread within municipal business communities, which they argue were able to foster local norms in support of a practice that many audiences found objectionable. Hedstrom (1997) shows that trade union movement in Sweden expanded out of the industrial heartland as workers spread the gospel. In the present context, we expect:

H2 Firms located near Global Financial will have greater influence on benchmarking at Global Financial than geographically distant firms.

Executive migration. A third linkage is the tie formed by inter-organizational mobility, where a manager moves from one firm to another. As Kraatz and Moore (2002) argue, executive migration provides a “high capacity conduit” for the transfer of organizational practices. Not only do executives bring strategic inclinations and knowledge bases with them when they move, but top level movement generates a motivation and opportunity for broader contact between the two firms. Rao and Drazin (2002) show that firms use external hiring to plug gaps – young firms recruit veterans while those with low rates of product innovation raid firms with stronger records.

A number of studies point to the importance of the tie established when managers move between organizations. Virany, Tushman and Romanelli (1992) find effects of executive migration on a variety of strategic decisions including divisional structure and control practices, while Sorensen (1999) discovers that similarities in hiring patterns among competitors diminish organizational performance. Boeker (1997) shows that executive migration generates parallels in product market entry. Geletkanycz and Hambrick (1997) find that firms are more likely to deviate from industry norms when more of their executives come from outside the industry.

H3 Firms linked through executive migration to Global Financial will have greater influence on benchmarking at Global Financial than firms not linked through migration.

Competition. An alternative network logic emphasizes mimicry between competitors. The argument is elaborated by Burt (1987), who points to the close monitoring that often occurs between rivals:

“The more similar ego and alters relations with other persons are -- that is, the more alter could substitute for ego in ego’s role relations, and so the more intense ego’s feelings of competition with alter are---the more likely it is that ego will quickly adopt any innovation perceived to make alter more attractive as the source or object of relations,” (Burt 1987: 1291).

In business, the sharpest rivalries occur when organizations compete for the same customers. Fligstein (1990) finds that the M-form spread within industries more rapidly than between them. Osterman (1992) shows that total quality and small group-based production methods were adopted early by American firms facing stiff competition from Japan. Following the same logic, we might expect Global Financial’s benchmarkers to have kept out a sharp eye for moves taken by business rivals.

H4 Global Financial’s competitors will have greater influence on benchmarking at Global Financial than non-competitors.

Prestige. An actor’s status within the larger social system – the extent to which she enjoys high standing and respect – provides a third source of influence. In studies of individual adoption, for example, much work delineates “opinion leaders” (Lazarsfeld, Berelson and Gaudet, 1948; Rogers, 1995). Many potential adopters follow the lead of community members who are widely esteemed, visible, and possess relevant forms of expertise.

In parallel fashion, DiMaggio and Powell (1983) conceptualize mimesis as the emulation of legitimate and successful models. Haveman (1993) shows that firms in the California thrift

industry followed large, profitable firms into new markets, and Han (1994) discovers that firms tend to emulate the accounting choices of larger firms within their industry. Haunschild and Miner (1997) find that choices of an investment banker are influenced by the size and success of the banker's current clients.

In the business world, like any socially constructed system of competition, prestige is in large part a historically evolving summary of who wins and who doesn't (Fombrun and Shanley 1990). But prestige and financial performance are not the same thing. First, prestige (or reputation, which we treat as synonymous) rests on an evaluation of success over time rather than a scrutiny of last quarter's results. And prestige involves other dimensions as well (like being a good employer, or a place where important or exciting things happen), which are valued both for their own sake and as long-run bases of superior performance. As one manager at Global Financial commented to us, "I think bankers look up to high-tech firms. That's where the cool stuff happens. Banking isn't rocket science."

H5 Firms with higher prestige within the business community will have greater influence on benchmarking at Global Financial than firms with lower prestige.

DATA AND VARIABLES

Influence. We develop two measures of influence: a perceptual indicator drawn from a survey of benchmarking managers, and a behavioral index based on team recommendations.

Between December 1998 and April 1999 we sent a 12-page mail survey to the 156 managers who participated on Team Challenge.⁶ Twelve managers had left the bank, leaving 144

⁶ Surveys were developed after 10 phone interviews were conducted with team members as well as with the program organizer. These conversations familiarized us with the benchmarking process and furnished insight into how participants thought about inter-organizational influence.

participants; 93 returned surveys for a response rate of 65%.⁷ For each team, we included a list of the firms it had benchmarked, and 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 scale from 1 (“no influence”) to 5 (“extremely influential”).

Since benchmarking teams are the key actors in Team Challenge, we conducted analyses of variance to examine the feasibility of aggregating individual 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 thus averaged perceptions of each visited firm, producing 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).

We should note that perceptual assessments of influence could also be combined at the level of the benchmarking issue. But pairs of “rival” teams were not encouraged to work together, and indeed appear to have kept their distance. Direct representation of differences among rival teams also provides a conservative test of hypotheses, since explanatory variables characterize not the team but the company in the context of a particular issue and time period.⁸

⁷ We detected no important differences in respondent and non-respondent background characteristics. On average, respondents had been with the bank for 11 years, had worked for two other companies and in one other industry. Eighty percent had graduate degrees, with half holding MBAs. Twenty percent were women. Benchmarking managers received an average salary of \$163,101 (compensation data available only for US-based managers).

⁸ As one example of across team variation, the two work/life balance teams viewed Levi Strauss in quite different terms. One team ranked the firm as very influential and recommended a number of its practices. The other decided that the clothier's policies depended on its inimitable corporate culture, and reported little influence.

To develop a behavioral indicator, we reviewed the reports that each benchmarking team presented to Global Financial's top managers (these reports were kindly made available by Team Challenge organizers). While serving multiple purposes, team reports centered on recommendations for corporate policy, generally in the form of specific proposals and a timeline for implementation.

Policy recommendations liberally referenced benchmarked companies, both to document the sources of team proposals and to provide evidence that advocated practices were in use elsewhere. *Mentions in Team Recommendations* counts the number of times each visited company was referenced in connection to proposed policies.⁹ For example, one of the sales teams recommended that senior bank leaders be required to have customer contact and engage directly in selling, and noted that this practice was followed at General Electric, Dell Computer, and Primerica.

Inter-organizational relations. Firms are linked to Global Financial through a board interlock if 1) Global Financial's senior executives and inside board members served on that firm's board; 2) that firm's executives served on Global Financial's board, or 3) Global Financial's outside board members served on that firm's board.

Spatial proximity is based on headquarters location. Since only nine benchmarked firms were headquartered in New York City, we cast a broader net. *Same region* equals one if a firm is headquartered in New York or a bordering state.

To trace the migratory paths of executives, we followed the career histories of Global Financial's executive officers. Biographical searches were conducted using internal publications,

⁹ Companies were also thanked, quoted, and were referenced in sections other than that of the team's "action plan." While some of these references may reflect influence, we limit attention to recommendations as the strongest indicator.

the databases ABIInform, Hoovers and *PRNewswire*, as well as the search engine Google. We coded all firms in which Global Financial's current executives had been employed within the last five years as being linked to Global Financial via executive migration.

As an important money center, Global Financial had business activity in several market segments. We defined the bank's competitors as those firms with businesses in any of the two-digit SIC categories where Global Financial operates: depository institutions, non-depository credit institutions, and security and commodity brokers. Competitors do not include firms in other financial segments (including insurers and real estate brokers) or firms whose financial operations (like General Motors' GMAC unit) are a small enough component of their business to not be identified in SIC classifications.

We develop several measures of a firm's prestige. The first draws on *Fortune* magazine's annual rankings of corporate reputations. Since 1983, *Fortune* has asked samples of up to 11,000 executives, directors, and market analysts to evaluate firms within their industry. While 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). *Admired in Fortune Survey* is a binary indicator equaling 1 if a benchmarked firm was among the 100 most admired companies in the year before it was benchmarked.

The second measure of prestige is based on media attention. We searched ABIInform's business category for all articles featuring each firm (as identified in the abstracting service's "company" field) in the year before the Team Challenge. Since business press treatments are generally flattering (Burns and Wholey 1993), attention and prestige are closely and reciprocally connected. The business media attends to more prestigious firms, and also reinforces their reputations (Staw and Epstein 2000). *Press Attention* gives the (log) number of such articles.

We also develop an indicator of the firm's prestige in the area of the Team Challenge topic, rather than its generalized standing within the business community as a whole. To do so we identified articles that discuss both the Team Challenge topic and the benchmarked firm. For example, when measuring attention to firms benchmarked in the Internet challenge, we search the subject terms "Internet," "world wide web" or "electronic commerce," and then combine these searches with the results for each visited firm. We sum the number of articles at this intersection and divide by the total number of articles on the Team Challenge topic. Since this ratio is positively skewed, to form *Area-Specific Press Attention* we add one and take the logarithm.

Organizational size and financial performance. We collected information on employment (as a measure of organization size) and both market and accounting measures of performance. Market measures include sales, growth in sales over a three-year window, and sales per employee. Accounting measures include return on assets (ROA) and return on equity (ROE).¹⁰ Data were available for most benchmarked firms on COMPUSTAT; additional sources include MergentOnline, the Million Dollar Directory, Hoovers Online, America's Corporate Families, S&P Corporate Records, S&Ps Register of Corporations, Directors and Executives, Ward's Business Directory and Principal International Business World Marketing Directory. All measures were calculated for the year immediately preceding the Team Challenge when the firm was benchmarked.

Descriptive Statistics The teams studied here conducted 166 formal benchmarking visits. Since almost all "rival" teams benchmarked the same organizations, and some organizations were

¹⁰ Accounting measures are limited to publicly-held firms, so they are employed in supplementary analyses. Other measures are available for all firms, with the exception of growth in sales (available for 88% of cases).

benchmarked in more than one issue area, a total of 62 different organizations were visited. Of these, 58 were private sector firms and four were not (these include the US Army, an internationally renowned soccer team, a hospital, and a university). For both theoretical and operational reasons, we restrict attention to private sector firms.

The mean influence of visited firms as reported by benchmarking managers was 3.3 (or slightly more than “somewhat influential”). Only nine companies received an average rating below 2 (“slightly influential”) while 28 scored better than 4 (“very influential”). Six firms were rated by all team members as extremely influential, receiving the highest possible score of 5.

Visited firms were mentioned on average about two times in team reports. But this conceals substantial variation. Fifty nine benchmarked companies (i.e., more than a third) were never mentioned, while 19 (13%) were cited six or more times. The most cited firm was Federal Express, which one of the three quality teams connected to 14 recommendations including process mapping, continuous benchmarking, online messaging, effective orientation, training program, team-building practices, and self-directed teams.

All of the network ties studied here are well represented in the pool of firms benchmarked by Global Financial. About a sixth of benchmarked firms were linked by a board tie, a fifth via executive migration, and a quarter were headquartered in the bank’s region. A little less than a tenth of benchmarked firms were competitors within the financial services industry. In all, exactly half of benchmarked firms possessed one or more of these four ties.

Benchmarked firms generally enjoyed strong reputations within the corporate community. More than half were listed among *Fortune*’s 100 Most Admired Companies. Benchmarked firms also garnered high levels of press attention. The average visited firm was featured in 5,836 articles in the year before its Team Challenge, 167 of which pertained to the

area of the challenge. Viewed from another angle, 1.4 percent of topic area articles discussed the average benchmarked firm. (All of these counts are positively skewed; we note simple counts here to give a sense of scale, but work with logarithmic transforms below.)

RESULTS

Bivariate Relationships. We begin with bivariate relationships between characteristics of benchmarked firms and the two measures of influence. For binary indicators like board interlocks, we contrast levels of influence when the tie is present versus absent. For continuous measures like press attention, we report correlations. (Note that there is no ambiguity about causal ordering, since it is implausible that any of the measured organizational characteristics were affected by Team Challenge.)

Table 2 shows that of the three cohesive ties measured here, only executive migration is linked to high levels of influence. Firms whose executives had moved to Global Financial are described as more influential by benchmarking managers, and are cited twice as often in team reports. By contrast, neither board interlocks nor headquarters proximity are associated with influence at Global Financial. In fact, firms possessing these ties had a weaker impact than did firms that lack them.¹¹

The strong effects of executive migration are consistent with what we learned from Team Challenge participants during interviews. When senior executives were mentioned, benchmarkers generally provided us with capsule biographies that almost always centered on the individual's prior employer. And some drew a stronger connection:

“Everyone knew [the recently hired vice president] had been at GE and that they did things right there. Management was into GE and that's why they hired him. We were aware of that.”

By contrast, no mention was made in interviews of geographic proximity or affiliations based on Global Financial's board of directors.

Competitors within financial services had lower levels of influence in the bank's benchmarking program than did firms in other industries. The magnitude of these negative effects is substantial, and similar in scale to the positive effects of ties based on executive migration. Competitors score about a half point lower on perceived influence than non-competitors, and are cited about a third as often on team reports.

While these results directly oppose hypothesis 4, they are quite consistent with what we were told in interviews. A number of benchmarkers conveyed a sense of disdain towards other

¹¹ While spatial proximity is measured here at the regional level (firm with headquarters in New York or a bordering state), we also examined narrower and wider groupings (headquarters in New York City, and in the U.S. versus abroad.) None were related to influence.

banks, often in terms that reminded us of Global Financial's elite status. One manager said "We didn't think there was much they could teach us," while another explained

"There weren't any financial services companies on our list. They have not done quality [i.e., TQM] programs, so there's not much value to benchmarking them."

This rationale would be more persuasive if its premises were not factually incorrect. Quality initiatives were rife in financial services throughout the 1990s (McCabe et al, 1998). It would appear that a more social animus towards mimicking or learning from fellow banks was involved.

Table 2 shows that more prestigious organizations were highly influential. Area-specific press attention has a positive bivariate relationship to report recommendations ($r = .22$) and an even stronger effect on participant perceptions of influence ($r = .39$). Benchmarked exemplars include Milliken in the total quality area and Patagonia in the area of work/life balance. While both firms are among the smaller visited companies, and neither possesses direct links to Global Financial, both had clear effects on the proposals generated at the bank.

Influence is linked to generalized prestige as well as area-specific reputation. Firms listed among Fortune's 100 Most Admired Companies are described as influential by participants and were also prominent in team recommendations. The total amount of press attention received by a firm is positively related to both indicators, though neither difference is large. These patterns resonate with the understanding we developed in interviews, since several managers spoke of "great companies" in a fashion that seemed to point beyond the Team Challenge topic at hand.

By contrast, organizational size and financial performance show little connection to interorganizational influence. None of the sales-based measures of performance is linked to benchmarker perceptions of influence, and only one is positively related to team

recommendations. Larger organizations play larger roles in team reports but not according to benchmarks. And firms with high returns on assets and equity have less influence than firm with low returns, though the idiosyncrasy of this relationship and the limitation to publicly held firms caution us against over-interpreting this result.

Managerial Perceptions of Influence, multivariate relationships. Table 3 develops multivariate models of managerial perceptions of influence. Since these aggregated scores vary continuously between 1 and 5, we estimate effects within an OLS framework (while these analyses might generate out-of-range estimates, no predicted scores are in fact less than 1 or greater than 5). In addition to covariates of theoretical interest, we include organizational size in all analyses to control for simple prominence.

Multivariate models also control for an important source of unobserved heterogeneity – the fact that some teams may have been more influenced by external companies than others. For example, one work/life balance team attended closely to visited firms, while the other was centered on learning from focus groups conducted among Globalbankers. To control for “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.

Controlling for other organizational characteristics and team effects, firms tied to Global Financial by executive migration remain significantly more influential than firms lacking this relationship. Firms tied to the bank by board interlocks and headquarters proximity are somewhat less influential, though these effects are never statistically significant.

Firms in financial services are described as having little impact on benchmarking at Global Financial. This is an extraordinary result, because (unlike other ties examined here)

competitors were visited by few teams. In fact, only in the Internet challenge were banks a major presence. But even controlling for team effects, Global Financial's benchmarkers report that fellow banks had less impact than did firms in other industries.

We also continue to find strong effects of prestige. Firms that are listed in Fortune 100 most admired companies, which receive much business press attention, and which receive much attention in the Team Challenge domain are described by benchmarkers as highly influential. By contrast, firms that perform well in the market had little impact.

Table 4 probes this last set of findings more closely, since various measures of prestige and performance are all conceptually interrelated.¹² Area-specific press attention dominates overall press attention (and also market measures of performance) but not business community esteem as measured in the *Fortune* surveys. It thus appears that both generalized and area-specific prestige are relevant to benchmarking.

Mentions in Benchmarking Recommendations, multivariate relationships. Tables 5 and 6 provide parallel analyses of the frequency with which visited companies appear in team recommendations. We model report mentions in a negative binomial framework, since the variance of mentions is almost 50 percent larger than the mean. We again control for team effects, in this case by including a full set of binary indicators.

Teams recommend the practices of prestigious firms and firms linked to Global Financial more often than they do the practices of other firms. Indeed, these sorts of firms dominate benchmarking reports. For example, 13 of the 15 firms whose practices are recommended six or more times are either on Fortune's list of most admired firms or have an executive migration tie to

¹² The strongest correlation is between sales and press attention ($r = .58$). Both measures of generalized prestige are positively linked to sales and sales per employee, while area-specific prestige is related to sales but not sales per employee. Since smaller firms tend to grow faster, growth is negatively correlated with both prestige and to sales.

Global Financial. (Of the three prestige indicators, Fortune's measure of esteem forms the best predictor, while a comparison of Tables 6 and 4 indicates that area-specific prestige plays a smaller role in team recommendations than in managerial perceptions.)

Multivariate analyses find that competitors are neither more nor less likely to be cited in team reports than non-competitors, all else equal. This stands in sharp contrast to the bivariate relationship shown in Table 2, where competitors are shown half as many recommendations as firms outside financial services.

Further analyses show that the moderating factor is not a characteristic of visited firms, but control for team effects.¹³ As noted above, the benchmarking of fellow banks was concentrated in a few challenges. It turns out that the teams involved, particularly in the Internet challenge where banks were most heavily represented, tended to offer relatively few visit-based recommendations. While a paltry number of recommendations were linked to fellow banks, but no paltrier than would be expected by chance given the teams involved.

Finally, market performance is positively associated with team recommendations in multivariate analyses. Firms with high sales, rapid sales growth, and high per capita sales are mentioned in more team recommendations than are firms with less financial success. But as Table 6 demonstrates, these relationships disappear once we include direct measures of corporate prestige in the model. Financial success thus seems spuriously related to team recommendations via its strong link to corporate prestige (Fombrun and Shanley 1990).

Overall, the sorts of firms that figure centrally in team recommendations are similar to those described by benchmarkers as influential. (The two indicators are also fairly strongly

¹³ Multivariate models that control for other organizational characteristics, but not for differences in recommendation frequencies across teams, show strong and statistically significant negative effects of competition.

related to each other: $r = .35, p < .001$.) But we find it intriguing that while managerial perceptions point to strong effects of area-specific prestige, generalized prestige and financial success play larger roles in team recommendations.

In contrasting the two indicators of influence, we think it important not to view one measure as intrinsically stronger or more accurate. Instead, the two measures tap different facets of the complex process of benchmarking. The perceptual measure conveys the insider's perspective. By contrast, the behavioral measure captures the point of contact between insiders and outsiders, where benchmarkers seek to convince an external audience to engage in a particular line of activity.

It makes sense that the perceptual measure suggests strong effects of area-specific prestige. During Team Challenge, benchmarkers immersed themselves in the culture of their innovation topic. They became aware of exemplars within the problem domain, and may have been influenced (and been aware that they were influenced) by these exemplars in many subtle ways. For example, interviews with participants on the quality challenge indicated that they discriminated among "factory" versus "service provider" models of TQM, associating each with a well-known corporate exemplar.

But team reports were not efforts to summarize the team's mental model; they were vehicles for making a case to senior management. One way to strengthen the case was to build team recommendations around firms that top managers could easily relate to. It appears that as benchmarkers entered the "issue selling" arena (Dutton and Ashford 1993), the balance between more and less accessible reference points shifted. Firms with strong area-specific reputations slipped into the background, while proposals centered on the practices of the more recently successful of the world's great companies.

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 complex network that surrounds a firm, and permit a search for ties that are robustly related to influence.

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 team recommendations. And benchmarkers made it clear that they knew where the bank's top management team – their audience – had once worked.

Of course, the main effect of migration is that managers bring practices with them when they move. And certainly, this was the core motivation for external recruitment at the bank. During the 1990s, Global Financial hired an executive from the auto industry to strengthen operational controls, a consumer products firm to build the bank's "brand," and a technology leader to build a presence in on-line banking. In describing the first of these corporate leaders, Global Financial's CEO said "he brought us the disciplines of a manufacturing company."

But executive migration links companies in more subtle ways as well. Migrating executives did not push benchmarkers at Global Financial to recommend the practices of firms they had recently left. Even without prodding, however, many managers (particularly fast-charging "high potentials") will seek to frame proposals in terms that seem likely to appeal to

senior management. Participants on Team Challenge appear to have done just this as part of an effective “issue selling” strategy (Dutton and Ashford 1993).

Second, we find pervasive evidence of the importance of a firm’s standing in the business community. Firms that are highly admired and that receive much press attention were emulated more than those enjoying less prestige. Firms with strong area-specific reputations are also strongly connected to influence as benchmarking managers see it, though their impact was less apparent in the ways teams framed their recommendations.

Attention to the corporate elite was also evinced in responses to a second set of survey items not examined here. After asking managers about the influence of specific visited companies, we inquired about the impact of three different *types* of firms: “highly regarded organizations,” “firms in financial services,” and “customers and business partners.” “Highly regarded organizations” were rated the highest, with 70% of benchmarkers indicating that they were very or extremely influential.¹⁴

The strong impact of prestige reminds us that a key form of imitation is emulation of community leaders – a major theme in the sociological literature on diffusion, but one often neglected in contemporary organizational research. Findings here highlight the importance of research that renders prestige hierarchies visible, like Podolny’s (1993) inspection of tombstone advertisements and Stuart’s (1997) analysis of patent citations. Indeed, benchmarking is itself a form of implicit deference, where one organization sends out its personnel to learn from another.

Finally, we found little influence for the third major relationship we examined – market competition. Firms on financial services were seldom benchmarked, and were not particularly influential when they were visited. The Internet challenge provides a partial exception, since

¹⁴ We discuss these survey items in detail in xxxx 2004. “Firms in financial services” was rated the least influential of the three categories, which also parallels findings here.

benchmarkers were concerned to discover how other banks were approaching the Web. But even here, the plan presented to Global Financial's top management team contained few references to financial services, and benchmarkers reported that banks had influenced them less than other firms had.

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). On the supply side, firms may conceal their "secrets of success" from rivals. And on the demand side, a firm may ignore its competitors because to act as a second mover is a recipe for mediocrity. According to this strategic analysis, Global Financial was little influenced by banks because it could not obtain useful information from them, or because it calculated that importing practices from other industries was better than mimicking strategies that rivals had already perfected.

This line of argument is cogent, and helps us understand why corporate benchmarking evolved from Xerox's aggressive form of competitor analysis to a more diffuse type of cooperative learning. But strategic imperatives do not provide a plausible account of interorganizational influence at Global Financial. In general, the topics addressed by Team Challenge did not involve readily replicable strategies that Global Financial's rivals might wish to keep secret. And by the same token, Team Challenges did not involve strong first-mover advantages. It is difficult to see how the efficacy of Global Financial's total quality or work/life balance initiatives, for example, were vitiated by the parallel efforts of rivals.

Further, the Team Challenge where financial services firms played the largest role was also one where pressures for secrecy and first-mover advantage were most evident. A number of Globalbankers told us that the Internet represented both a remarkable opportunity and a dangerous threat. A strategic analysis suggests that other banks would have refused to let Global

Financial benchmark them, or that Global Financial would have looked everywhere but banking for Web-based service models. But it was in the Internet, where a strategic analysis is most relevant, that Global Financial's usual reluctance to visit and learn from competitors was partially overcome.

We argue that Global Financial's "avoidance pattern" towards fellow banks is better 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. But as an elite bank, Global Financial could not. Unable to look up within its industry, Global Financial was unwilling to look down or across.

Limitations and extensions. This paper examines seven innovation areas and 166 instances of interorganizational influence. In this sense it offers a broad comparative analysis. But from the perspective of the organizational site, we report a case study of one bank. Some limitations and possible extensions can be described.

The kinds of interorganizational networks that are salient in benchmarking may differ from those most salient in everyday decision-making. For example, Team Challenge was a high profile program with the funds to jet benchmarkers around the globe. Routine decision processes are probably more strongly shaped by spatial proximity.

Global Financial's history and structural location within the business community may also shape its action in ways that we do not understand. We have suggested that one of Global Financial's key characteristics is its elite status, and have linked this to the avoidance behavior exhibited towards other banks. But this study is not well positioned to identify what results are generalizable, and to what population. It is possible that patterns of interorganizational influence

shown here are characteristic of banking, or of firms headquartered in New York City, or even just this one organization.

These limitations make the case for studies of interorganizational influence across organizational settings. Examination of the role of different kinds of peer networks on a biotech firm would be of great interest, for example. And since benchmarking is such a rich setting for the study of interorganizational influence, the research strategy followed here could be applied to a variety of different types of organizations, permitting insight into the kinds of ties that influence a manufacturer, or a regional bank, or even another global money center. Comparison across settings, as well as across methodologies, provide the firmest basis for developing powerful and parsimonious models of innovation diffusion.

Finally, we should recall that this paper's estimates of organizational influence are predicated on Global Financial's prior decision to benchmark that firm. In our view, this is less a methodological concern than a substantive limitation. Methodologically, it seems clear that the total effects of network ties (i.e., coefficients that include the probability that a firm of a certain sort is benchmarked) would be larger than the coefficients reported here, since Globalbankers overtly relied on interorganizational relationships in deciding who to benchmark. And an informal examination of Table 1 suggests that all of the network relationships studied here are overrepresented, most obviously in the case of the ties shown to have positive influence here: prestige and executive migration.

In more substantive terms, however, analysis of who is benchmarked provides an rare opportunity to study the construction of reference groups. While much study of interorganizational influence implicitly makes reference group arguments, in most empirical contexts it is impossible to distinguish the potentially influential from the actually influential.

Examination of the firms that an elite organization chooses to compare itself to and learn from has the potential to extend network models of influence, and in particular to build a bridge between structural models of interorganizational relationships and the cognitive schemas described by Reger and Huff (1993) and Porac et al (1995).

Sharpening linkages between interorganizational networks and influence. Beyond the specific pattern of influence 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 would emphasize two characteristics of the innovation adopter that help activate interorganizational ties. One, which produces what might be called *procedural activation*, concerns the relationship between interorganizational ties and the adopter’s decision-making routines. The second, which produces *symbolic activation*, involves the relationship between interorganizational ties and organizational identity.

Diffusion research generally abstracts away from the process by which organizations make innovation decisions. It is thus easy to forget that interorganizational ties must somehow be introduced into the decision arena if they are to be influential. For example, some ties are directly embodied in people (for example, specific individuals construct a board interlock). When these individuals are centrally involved in an innovation process, the tie they embody is more likely to be an important diffusion channel. When they are marginal or uninvolved, the tie is likely to have little influence.

For Team Challenge, executive migration provides a great example of an activated channel. While executives did not design the schedule of visits, their meeting with benchmarkers was the much anticipated highlight of the entire process. Team members regarded the opportunity to brief top managers as a chance to shine, or to fall flat. It is thus not surprising that they often sought to connect policy proposals to the past experience and predilections of their audience.

Board interlocks, by contrast, illustrate an inactive channel. Since benchmarkers did not make presentations to Global Financial's board of directors, there was no special reason why firms represented there should be stressed. Much research shows that interlock patterns are crucial for understanding innovations brought before boards, like mergers and acquisitions (Davis 1991; Haunschild 1993) and issues concerning CEO power and compensation (Westphal and Zajac 1997) But we suspect that board interlocks have little relevance for the many innovations that are never brought to the board.

More than who sits at the conference table is involved in organizational influence, however. The flow of practices from one organization to another always carry symbolic baggage. Mimicry implies both equivalence (the mimic and the mimicked are at some level alike) and inequality (the mimic has something to learn from the mimicked, while the reverse may not be true). When the tie between firms X and Y enhances X's identity, X is more likely to mimic Y; when it undermines X's identity, Y is likely to be avoided.

These symbolic implications seem central to the interorganizational relationships observed here. Learning from the "world's great companies" resonated with and affirmed Global Financial's self-conception as one of these companies. By contrast, mimicry of close competitors tended to undermine Global Financial's identity as an elite bank. A logic of

organizational identity, rather than a logic of competitive advantage or rational learning, helps us understand why emulation of market competitors was problematic at Global Financial.

Organizational identity is also relevant to the importance of ties based on executive migration. Top manager recruitment is about the “sending organization” as well as the individual manager. (The same phenomenon occurs in academic markets, where faculty hires are related to the value put on the department where the individual was trained or had his or her prior appointment.) At Global Financial, for example, several top managers were hired from a corporation that was so respected that it was dryly described to us as “the source of all good things.” When benchmarkers linked recommendations to this sort of company, they deftly linked their proposals to the direction the bank’s leadership wanted to go, and was already moving.

Most broadly, a close look at interorganizational influence reveals its fundamentally sociological cast. Managers reversed the technical logic advocated in the original version of benchmarking, where competitors are monitored, imitated and improved upon. Instead, influence was organized around the social construction of some firms as peers to be emulated, and the strong ties produced by elite migration. Both the prestige and mobility networks, and the principles that underlie their relevance for Global Financial, seem likely to play important roles in the spread of many kinds of innovations.

Table 1. Descriptive Statistics

	Mean	S.D.
<i>Influence of Benchmarked Firms</i>		
Managerial Perceptions of Influence	3.28	0.84
Citations in Team Recommendations	1.89	2.52
<i>Ties linking benchmarked firms and Global Financial, and other organizational characteristics</i>		
Board Interlock	0.15	0.36
Same Region	0.23	0.42
Executive Migration	0.21	0.40
Competitor	0.08	0.27
Press Attention in Benchmarked Area (ln x + 1)	1.40	2.53
Press Attention (ln)	7.58	1.83
Admired in <i>Fortune</i> survey	0.63	0.48
Sales (ln)	22.76	1.75
Sales growth	0.61	1.53
Sales per employee	288.8	271.7
Return on Assets	21.08	16.67
Return on Equity	7.60	7.13
Employees (ln)	10.47	1.49

Table 2. Bivariate relationships between organizational characteristics and influence on benchmarking at Global Financial (N = 166 firms.)

		<i>Participant Surveys</i>	<i>Report Mentions</i>
Board Interlock	No	3.29	1.77
	Yes	3.20	2.26
Same Region	No	3.29	1.72
	Yes	3.20	2.27
Executive Migration	No	3.17	1.53
	Yes	3.68***	3.05***
Competitor	No	3.33	1.96
	Yes	2.71**	0.67***
Admired in <i>Fortune</i> survey	No	2.99	1.22
	Yes	3.45***	2.11***
Press Attention	<i>r</i>	.09	.10
Press Attention in Benchmarked Area	<i>r</i>	.39***	.22***
Sales	<i>r</i>	.04	.13*
Sales growth	<i>r</i>	.00	.05
Sales per employee	<i>r</i>	.01	.05
Employees	<i>r</i>	.06	.14*
Return on Assets	<i>r</i>	-.22**	-.24**
Return on Equity	<i>r</i>	-.18*	-.17*

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

Table 3. Coefficients from regression analyses of managerial perceptions of the influence of benchmarked firms (N = 166). All analyses control for team effects.

Board Interlocks	-.02	.12	-.06	-.05	-.03	-.01	-.02
Same Region	-.13	-.20	-.26	-.16	-.16	-.06	-.13
Executive Migration	.49***	.40**	.50***	.38**	.52**	.53***	.50***
Competitor	-.49**	-.26	-.48**	-.36	-.50**	-.17	-.50**
Press Attention in Benchmarking Area		.42***					
Press Attention			.13***				
Admired in <i>Fortune</i> survey				.55***			
Sales					.07		
Sales growth						.04	
Sales per employee							.00
Employees	-.07	-.11**	-.14**	-.14**	-.01	-.06	-.07
R ²	.32	.39	.36	.39	.32	.32	.32

*: p< .10 **: p< .05 ***: p<.01

Table 4. Coefficients from regression analyses of managerial perceptions of the influence of benchmarked firms (N = 166). All analyses control for team effects, spatial proximity, board interlocks, executive migration, and competitors.

Press Attention in Benchmarking Area	.34***	.31***						
Press Attention	.05		.12***		.10**		.12***	
Admired in <i>Fortune</i> survey		.43***		.55***		.57***		.60***
Sales			.01	.02				
Sales growth					.04	.01		
Sales per employee							.00	.00
R ²	.39	.42	.36	.39	.32	.36	.36	.39

*: p < .10 **: p < .05 ***: p < .01

Table 5. Coefficients from negative binomial analyses of the number of times each benchmarked firm is cited in team recommendations (N = 166). All analyses control for team effects.

Board Interlocks	.09	.27	.10	.09	.05	.09	.07
Same Region	-.12	-.21	-.28	-.17	-.20	-.02	-.17
Executive Migration	.61***	.56***	.66***	.53***	.68***	.72***	.64***
Competitor	-.05	.16	-.04	.09	-.06	.33	-.14
Press Attention in Benchmarked Area		.37**					
Press Attention			.16***				
Admired in <i>Fortune</i> survey				.49***			
Sales					.20*		
Sales growth						.06*	
Sales per employee							.08**
Employees	.01	.02	-.09	-.07	-.19	.00	.03
α	.13	.12	.09	.10	.12	.09	.11
χ^2	103.7	110.1	113.0	111.7	107.2	88.1	109.9

*: p< .10 **: p< .05 ***: p<.01

Table 6. Coefficients from negative binomial analyses of the number of times each benchmarked firm is cited in team recommendations (N = 166). All analyses control for team effects, spatial proximity, board interlocks, executive migration, and competitors.

Press Attention in Benchmarking Area	.15	.25						
Press Attention	.09		.14**		.13**		.10**	
Admired in <i>Fortune</i> survey		.42**		.47**		.63***		.41**
Sales			.09	.12				
Sales growth					.06	.04		
Sales per employee							.08	.05
χ^2	112.0	114.4	113.7	112.9	93.0	96.8	115.1	113.9

*: p < .10 **: p < .05 ***: p < .01

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