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Media Reputation as a Strategic Resource: An Integration of Mass Communication and Resource-Based Theories

David L. Deephouse
Louisiana State University

The resource-based view proposes that reputation is a resource leading to competitive advantage. Past research tested this by using Fortune *ratings to measure reputation, but these ratings are theoretically weak. This paper integrates mass communication theory into past research to develop a concept called media reputation, defined as the overall evaluation of a firm presented in the media. Theoretical and empirical analyses indicate that media reputation is a resource that increases the performance of commercial banks.*

Reputation is receiving increased attention in strategic management because it may be an intangible resource leading to sustained competitive advantage (Barney, 1991; Dierickx & Cool, 1989). For instance, Hall (1992) found that U.K. executives ranked reputation as the most important of thirteen intangible resources. Using *Fortune*'s survey of America's Most Admired Corporations to measure reputation, past research found the *Fortune* ratings had a positive effect on stock market and accounting performance (McMillan & Joshi, 1997; Roberts & Dowling, 1997; Rupp & Hamilton, 1996; Srivastava, McInish, Wood, & Capraro, 1997; Vergin & Qoronfleh, 1998). Unfortunately, inference is limited because of well documented problems with these measures (Baucus, 1995; Brown & Perry, 1994; Fombrun, 1996; Fryxell & Wang, 1994; Sodeman, 1995; Wood, 1995). Thus, much more research is needed to adequately examine the complex, multidimensional reputation concept (Dollinger, Golden, & Saxton, 1997; Fombrun & Shanley, 1990; Gatewood, Gowan, & Lautenshlager, 1993).

This paper contributes to this gap in the research in two main ways. First, it revisits the reputation concept and develops a variant called media reputation, defined as the overall evaluation of a firm presented in the media. Second, this

Direct all correspondence to: Rucks Department of Management, E. J. Ourso College of Business Administration, Louisiana State University, Baton Rouge, LA 70803-6312; e-mail: <mgdeep@lsu.edu>.

paper provides theoretical and empirical support for the conjecture that media reputation is a strategic resource leading to competitive advantage. Detailed analysis of the determinants and other consequences of media reputation is beyond the scope of this study. The paper is structured as follows. The first section develops the media reputation concept by integrating reputation, communication, and resource-based theories. It concludes by proposing that a more favorable reputation increases performance. The second section describes the sample, the measurement procedures, and the dynamic model used to test the proposition in a panel of commercial banks. The third section reports the results. The paper concludes with several research implications.

Theory Development

This section develops the conjecture that media reputation is a strategic resource for firms in four steps. First, it briefly reviews the resource-based view of the firm and the general challenge of empirically testing the theory. Second, it reviews the reputation concept and the use of the *Fortune* ratings as a measure of reputation. Third, it presents an overview of research in mass communication and its application to management that suggests why the media could be important in the reputation process. The section concludes by integrating these research streams to develop a formal proposition that a more favorable media reputation increases performance.

Testing the Resource-Based View of the Firm

The resource-based view of the firm focuses on the assets, skills, capabilities, and so forth, tied semipermanently to a firm that it uses to create competitive advantage in its product markets (Barney, 1991; Caves, 1980; Hall, 1992; Wernerfelt, 1984). Many factors may be resources, such as: plant and equipment; geographic location; knowledge and skills of employees, managers, and teams; corporate structure, culture, and control systems; and brand loyalty (Barney, 1986; Castanias & Helfat, 1991; Fiol, 1991; Rumelt, 1987; Wernerfelt, 1984). Many theoretical papers listed different resource properties that indicate how beneficial a resource may be (Barney, 1991; Chi, 1994; Conner, 1991; Dierickx & Cool, 1989; Peteraf, 1993; Reed & DeFillippi, 1990). Because consensus on a set of properties that are analytically independent of each other has yet to emerge, this paper uses those presented by Barney (1991): rare, valuable, imperfectly imitable, and nonsubstitutable. These four incorporate many properties mentioned in other papers, such as tangibility and social complexity.

Researchers are grappling to develop ways to test the resource-based view of the firm. In their review of research methods in strategic management, Hitt, Gimeno, and Hoskisson (1998: 13) wrote: "Empirical testing of the resource-based view faces significant challenges." Godfrey and Hill (1995) pointed out that the most valuable resources are unobservable—once they are observed (and later measured), they are easier to imitate. Godfrey and Hill (1995) still endorsed trying to measure resources

One approach to testing for the existence of a resource that incorporates suggestions of Godfrey and Hill (1995) and Hitt et al. (1998) uses a two-step

process. The first step identifies a potential resource(s) and then analyzes it theoretically in terms of the properties identified in past research. The second step measures the proposed resource and shows it has a positive effect on performance. One example of this approach is the work of Powell and Dent–Micallef (1997), who focused on resources related to information technology (IT) among U.S. retailers. Based on a survey of retail executives, they found that human and business resources complementary to IT increased performance, but IT itself had no effect because of its commodity-like nature. Another example is a study by Russo and Fouts (1997), who focused on the importance of a firm's environmental performance in a multi-industry study using archival data. They found that higher environmental ratings from Franklin Research increased return on assets, even after controlling for other determinants of performance identified in a meta-analysis (Capon, Farley, & Hoenig, 1990). This paper uses a similar two-step process in examining media reputation.

Reputation and the Fortune Ratings

Past research proposed that a positive reputation is a resource leading to competitive advantage (e.g., Barney, 1991; Hall, 1992). Reputation is used in a number of disciplines, such as sociology and game theory, and each discipline has its own conceptual definition. Reputation is defined in this paper as the evaluation of a firm by its stakeholders in terms of their affect, esteem, and knowledge (*The American Heritage College Dictionary*, 1993: definition 1; Dollinger et al., 1997; Fombrun, 1996: 37; Hall, 1992: 138). Reputation is an intangible asset that belongs to the firm (Hall, 1992, 1993). A firm's reputation is produced by the interactions of the firm with its stakeholders and by information about the firm and its actions circulated among stakeholders, including specialized information intermediaries (Daellenbach, Sharma, & Vredenburg, 1998; Fombrun, 1996; Logsdon & Wartick, 1995). A firm builds its reputation not just by word but also, and perhaps more importantly, by deed (Caudron, 1997; Fombrun & Shanley, 1990). As noted by Hall (1993: 616), a positive reputation "is usually the product of years of demonstrated superior competence." Nevertheless, there are cases when reputation diverges from competence. For instance, Argenti (1998) described how Dow Corning's product reputation tumbled during the silicone breast implant controversy, even though scientific studies in places like the *New England Journal of Medicine* and the Harvard Medical School were unable to implicate the implants. Also, Wal-Mart was better known for buying American made products than Kmart, even though Wal-Mart imported twice as much as Kmart did (Thompson, Pinegar, & Kramer, 1995). A positive reputation is important for competitive advantage because it signals stakeholders about the attractiveness of the firm who are then more willing to contract with it (Fombrun & Shanley, 1990; Weigelt & Camerer, 1988).

Empirical studies of reputation's status as a resource used *Fortune*'s survey of America's Most Admired Corporations to measure reputation. This survey has been published every year since 1982. Released early in the year, the *Fortune* ratings are compiled from surveys of executives, directors, and analysts conducted in the previous fall. Respondents score firms on eight attributes using a scale from

0 to 10. Research used not just the overall score to measure reputation but also its individual attributes to measure corporate social responsibility, innovativeness, and management quality (e.g., McGuire, Sundgren, & Schneeweis, 1988; McGuire, Schneeweis, & Branch, 1990; Rupp & Hamilton, 1996). Empirical research found the overall score on the *Fortune* ratings had a positive effect on stock market and accounting performance (McMillan & Joshi, 1997; Roberts & Dowling, 1997; Srivastava, McInish, Wood, & Capraro, 1997; Vergin & Qoronfleh, 1998).

Although these findings provide some support for the idea that reputation is a source of competitive advantage, the conclusions that can be drawn from these results are limited because of weaknesses in the *Fortune* ratings. First, the *Fortune* ratings are highly correlated with financial performance. For instance, Fombrun and Shanley (1990) and Fryxell and Wang (1994) showed that all eight items on the *Fortune* ratings loaded on a single factor. To address this, Brown and Perry (1994) developed a method for removing the performance halo by regressing the *Fortune* ratings on various performance measures and then using the residuals as reputational and corporate social performance ratings. Still, Baucus (1995) criticized the halo adjustment process as introducing different sources of variation and being difficult to replicate. Second, *Fortune*'s choice of executives, directors, and analysts represents a limited set of stakeholders (Fombrun, 1996; Fryxell & Wang, 1994; Wood, 1995). Other important stakeholders include customers, suppliers, government agencies, special interest groups, employees, and so forth (Clarkson, 1995; Fombrun, 1996; Freeman, 1984). Third, the *Fortune* ratings exist only for the large U.S. firms in the survey. There is no evidence that reputation is a resource increasing the performance of smaller or non-U.S. firms. And although the *Financial Times* and *Fortune* recently introduced reputation measures for global companies using an worldwide survey, these measures have some of the same weaknesses of the U.S. *Fortune* ratings (e.g., both publications survey only executives, analysts, and directors, although on an international basis). Finally, Sodeman (1995) pointed out that the real purpose of the *Fortune* ratings was not for the scientific study of reputation or social performance but to sell magazines, a fact freely admitted by *Fortune*. In this light, it is likely these data were used because they were easily available and longitudinal. As Wood (1995: 197–8) noted, this measure was "about the only game in town." These weaknesses imply the need to revisit the complex, multidimensional reputation concept (Dollinger et al., 1997; Fombrun & Shanley, 1990; Gatewood et al., 1993) and develop a more theoretically informed version of this abstract concept. This paper begins filling this need by integrating mass communication research with reputation and resource-based research.

Mass Communication Research and its Application to Management

Mass communication research examines many topics, including the content of the mass media, its production and delivery to audiences by media organizations, and the resulting effects on audiences (Ball–Rokeach & Cantor, 1986; Gans, 1979; Shoemaker & Reese, 1991; Smith, 1995). General conclusions from this research form the basis of the two-part assumption that the media record public

knowledge and opinions about firms and influence public knowledge and opinions about firms. This assumption, although based on research mainly about public issues (e.g., Gans, 1979), has been used in management research (Brown & Deegan, 1998; Chen & Meindl, 1991; Dutton & Dukerich, 1991; Elsbach, 1994). To wit, Fombrun and Shanley (1990: 240) observed: "The media themselves act not only as vehicles for advertising and mirrors of reality reflecting firms' actions, but also as active agents shaping information through editorials and feature articles." The following highlights the communication research underlying this assumption before reviewing management literature that used this assumption.

Much communication research has suggested the media record public knowledge and opinions. Humans need to be aware of their social and physical environment, and this need is both cultural and biological (Shoemaker, 1996). A central function of the media is surveillance; the media specialize in providing information about important aspects of the environment (Lasswell, 1949). News "is an attempt to reconstruct the essential framework of an event" (Schramm, 1949: 288). From the individual journalist's perspective, a thorough, unbiased recording of events, issues, and opinions about them is an important practice norm. A majority of journalists view their role as neutral disseminators of information, according to Weaver and Wilhoit (1986). Similarly, the preamble of the Code of Ethics of the Society of Professional Journalists (1996) states: "The duty of the journalist is to further those ends (justice and democracy) by seeking truth and providing a fair and comprehensive account of events and issues." Of course, these roles and duties are norms, not universals. The extent to which journalists follow them may depend on a number of factors that are beyond the scope of this paper. Individual media writers and their employing organizations want to avoid being accused of bias and being publicly embarrassed by having to retract inaccurate stories (Hallin, 1986; Tuchman, 1977). For example, Janet Cooke and *The Washington Post* lost their 1980 Pulitzer Prize when it was discovered the main subject of the story was a composite fabrication. Market competition for audience attention and concomitant advertising dollars is an increasingly important factor as newspapers become more market- and reader-focused (Underwood & Stamm, 1992). If one media outlet's coverage of events or editorials consistently diverged from the public's knowledge of events and perhaps its opinions of them, then circulation may fall and reduce profitability (Schudson, 1978). In sum, although organizational constraints preclude an exact reconstruction of every event and solicitation of every opinion, there are pressures at multiple levels for the media to record thoroughly important events, issues, and opinions about them for the public.

Research also suggests the media influence public knowledge and opinions, particularly agenda-setting theory that initially proposed that media coverage of certain issues raises the salience of these issues in the public's agenda (McCombs & Shaw, 1972). The possibility that the media can influence the public has its origins in research on public opinion by Lippmann (1922) and on the effects of Nazi and Communist propaganda (George, 1959; Lasswell, Leites, & Associates, 1965). Some research takes a microlevel approach and examines the media's effect on individuals. For instance, Ball–Rokeach, Rokeach, and Grube (1984)

found that a 30 minute TV show that they produced and aired in one market resulted in a greater change in individuals beliefs, attitudes, and behaviors than in a comparable control market. Other research takes a macro approach, using content analyses of media and poll data of public opinion. For instance, Behr and Iyengar (1985) found that lead CBS news stories on inflation and energy led to increased public awareness of these issues in the same two-month period, using the two-stage method to account for reciprocal effects. Ader (1995) showed that increased attention to pollution in *The New York Times* was followed by increased concern about pollution in the general public measured by the Gallup Poll 3 months later.

More recently, agenda-setting moved beyond issue salience to examine media effects on attitudes and behaviors and the media's influence on the social construction of reality (Gamson, Croteau, Hoynes, & Sasson, 1992; Roberts, 1992; Smith, 1995). Contingencies to agenda-setting have also been identified. For instance, media coverage may have less effect on the public if the issue is more obtrusive, that is, if the public has direct experience with it (Ader, 1995; Zucker, 1978). And finally, if the media affects the public's agenda, a further question is what determines the media's agenda, that is, media content (McCombs, 1992; Shoemaker & Reese, 1991). As noted above, the media cannot record all events and opinions. Reviewing past research, McCombs (1992) observed that most events and opinions appearing in the news represented mainstream politicians, academics, and journalists.

The assumption that media coverage records and influences public knowledge and opinion is applicable to reputation because media coverage is a reasonable indicator of the public's knowledge and opinions about firms within a few months of the publication date. Some members of the public may have direct knowledge and opinions of an event or issue that reporters gather for newspaper stories. These stories may then influence those members of the public without direct experience or strongly held opinions. For instance, knowledge and opinions about the Exxon Valdez oil spill spread from those who lived on Prince William Sound through the media to the rest of the world. And from a practical perspective, the agenda-setting effects appear more rapidly <within 3 months, according to Ader (1995) and Behr and Iyengar (1985)> than the annual financial measures used in this research design. When the media data are aggregated to an annual measure, the nuance of temporal dynamics may be attenuated. Brown and Deegan (1998: 27) recognized these issues in their study comparing media and annual report attention to the environment over multiple years: "Whether community concern is driven, with a fairly limited time lag, by media attention (as the majority of studies seem to indicate), or whether media attention reflects community concern (this being the minority view that media coverage is market driven) is not crucial to our purposes."

In addition to Brown and Deegan (1998) and Fombrun and Shanley (1990), this assumption has been used in past management research. For instance, Chen and Meindl (1991) used the agenda-setting and social constructionist view to examine how changing portrayals in the media of Donald Burr, CEO of People Express Airlines, influenced individual's perceptions of him. Case studies from an

impression management perspective used the media as both a record of events and as an indicator of social evaluation (e.g., Dutton & Dukerich, 1991; Elsbach, 1994; Elsbach & Sutton, 1992).

A few notable studies used the media in statistical studies of reputation. Fombrun and Shanley (1990) and Wartick (1992) focused on the relationship between media coverage and the *Fortune* ratings but measured reputation with the *Fortune* ratings. Their theoretical treatment of the media differs from the perspective taken here. They assumed the media contain information available for processing by stakeholders in making reputational assessments, consistent with the signaling role of reputation (Weigelt & Camerer, 1988). This paper enriches their view with the mass communications perspective that assumes the media record and influence public opinion. This perspective moves the media beyond a provider of signals to a participant in the social construction process (Gamson et al., 1992; Smith, 1995). More consistent with this perspective is Ferrier (1997). He used media reports as indicators of a firm's reputation for being a tough competitor and found this reputation increased success in dyadic competition.

The Media Reputation of a Firm and its Resource Properties

Given these reviews, this section proceeds to integrate these theories, which can lead to better models of strategy phenomena (Hitt et al., 1998). The media reputation of a firm is defined as the overall evaluation of a firm presented in the media. This evaluation results from the stream of media stories about a firm. The production of this stream is described next. The section concludes by examining the resource properties of media reputation.

The information reported in the media comes from many sources. Company press releases are one source, and many have public relations departments that provide a steady stream of information to the media (Shoemaker & Reese, 1991). Stakeholders are another source. Individuals write opinion pieces and letters to the editor. The government and specialized rating agencies, such as Moody's or the Council on Economic Priorities, evaluate firms and issue their evaluations in press releases (Fombrun, 1996). A third source is media workers (Shoemaker & Reese, 1991). Reporters write news and feature stories using various sources, and editors and columnists also write about firms. The specific stories that appear are based primarily on media workers' judgments of importance and deviance from the norm in both negative and positive directions (Shoemaker, 1996; Shoemaker, Danielian, & Brendlinger, 1992). Other factors include proximity, timeliness, human interest, and conflict, but these may have contingent relationships with importance and deviance (Itule & Anderson, 1994; Shoemaker et al., 1992).

Conflicting information often appears in the media as reporters seek balance in a story (Society of Professional Journalists, 1996). They will ask a firm to respond to a stakeholder evaluation or ask a stakeholder to respond to a firm action or statement. One evaluation may lead to a competing or even a supporting evaluation by another source. Criticism by a stakeholder may raise the urgency of its claims to managers (Mitchell, Agle, & Wood, 1997). Thus, the media provide a forum where firms and stakeholders debate what constitutes a good firm and which firms have good reputations (Gamson et al., 1992; Hynds, 1994). Over

time, the stream of stories about a firm includes a record of many firm activities and many stakeholders' evaluations.

The media also provide information to stakeholders, reducing information asymmetry. Some stakeholders lack direct experience with a firm. Instead they rely on information intermediaries, such as the government, rating agencies, and the media, who, "screen, spin, and broker information for us; they help us make sense of companies' complex activities – and so affect company reputations" (Fombrun, 1996: 139; McQuail, 1985). The media report the evaluations of other information intermediaries and provide a consolidated source of information for stakeholders. The media thus is a counteracting institution that reduces stakeholders' uncertainty about a firm's characteristics, filling reputation's signaling role (Akerloff, 1970; Fombrun & Shanley, 1990; Weigelt & Camerer, 1988). Given these attributes of media reputation, the next step is to examine media reputation in terms of the resource properties mentioned above: valuable, imperfect imitability, nonsubstitutability, and rarity (Barney, 1991; cf. Chi, 1994; Conner, 1991; Dierickx & Cool, 1989; Peteraf, 1993; Reed & DeFillippi, 1990).

A resource has the value property if it enhances efficiency or effectiveness (Barney, 1991). In general, reputation facilitates value creation by signaling current and potential exchange partners, including employees, suppliers, investors, and customers (Fombrun & Shanley, 1990). In contracting with these partners, a good reputation provides at least three valuable strategic benefits: (1) it allows a firm to lower cost; (2) it allows a firm to increase price; and (3) it can create competitive barriers. If media reputation is a resource, it should add value to the firm in at least one of these ways. To demonstrate the value property, we describe how a media story can confer all three strategic benefits. The example is a newspaper story listing Twin Cities' firms with family friendly human resource policies, such as flex-time and on-site child care (Hage, 1989). This story indicates the quality of the firm as a workplace and signals employees about it. A well-regarded firm can offer lower wages to employees who prefer family-friendly policies to wages, thus lowering costs. This firm also may attract higher quality employees. They may be more efficient and less likely to shirk, reducing costs of production and of controlling for moral hazards. They may help the firm improve quality and develop better products, enabling it to raise prices. Finally, certain employees may only want to work for a family friendly firm. This creates a competitive barrier because they would seek employment at the firms mentioned in the story first. Thus, a media story can confer valuable strategic benefits. Similar reasoning can be applied to other stories, including critical ones.

The imperfect imitability property refers to the challenges and costs a firm faces when trying to copy a resource of another firm (Barney, 1991). The content of media stories is produced through a complex interaction of individual media workers, their working routines, the organizations they work for, external influences (including firm and stakeholder sources of news), and ideology (Shoemaker & Reese, 1991). Thus, media reputation is a collective concept connecting the firm, media workers, stakeholder sources of news about firms, and the readers of news. Media reputation develops over time through a complex social process involving the firm and its stakeholders, an important characteristic of reputation

generally (Fombrun & Shanley, 1990). Company reputation was perceived to have one of the longest replacement periods, according to Hall's (1992) survey of U.K. executives. The length of time needed to develop a good media reputation suggests it has the property of time compression diseconomies that reduces imitability (Dierickx & Cool, 1989). There is also the lack of an open market for reputations, except for the acquisition of the firm itself (Caves, 1980; Conner, 1991; Dierickx & Cool, 1989; Peteraf, 1993). In sum, the complex and social nature of media reputation implies it may be hard to imitate (Barney, 1991).

A resource also should be nonsubstitutable (Barney, 1991; Dierickx & Cool, 1989). Substitutability means there are other resources that allow a firm to implement the same strategies. Barney (1991) pointed out that a favorable reputation represents a psychological contract between the firm and its stakeholders and differs from long-term formal commitments like contracts or guarantees that might substitute for a good reputation. Because firms try to do both, he concluded they are not close substitutes. Similarly, although product manufacturers may have the same guarantees, some may have better reputations for reliability. For instance, customers use the reliability ratings of J. D. Power or *Consumer Reports* to form judgments of reliability for a particular product, and collectively this contributes to an overall reputation for reliability. Barney (1991) also points out that very different resources can be strategic substitutes. A study that measures many resources can test if one is a substitute for another, but the current lack of generalizable resource measures makes this difficult (Godfrey & Hill, 1995; Hitt et al., 1998). The recognition that product-market positions and resources "are two sides of the same coin" (Wernerfelt, 1984: 171) can be used to assess substitutability of these different resources indirectly. Product-market positions represent bundles of underlying resources (Wernerfelt, 1984). The inclusion of these positions in a model partially controls for these resource bundles. Like Russo and Fouts (1997), who included many strategy variables, this study includes measures of product market position and tests to see if they attenuate the effect of media reputation on performance. Lastly, to the extent resources are unobservable, specification of an autoregressive model controls for these unobservable resources (Dess, Gupta, Hennart, & Hill, 1995; Godfrey & Hill, 1995; Jacobson, 1990).

The last property is rarity. A resource is rare to the extent that other firms do not have the same resource. Barney (1991: 107) pointed out that rarity is difficult to evaluate. One necessary condition for rarity is variation in the media reputations of firms, such that some have better reputations than others do. This is analogous to differences in brand loyalty among products in an industry, such as soft drinks.

In sum, the media record much information about a firm, including its activities and evaluations of it by stakeholders. Media reputation, the overall evaluation of a firm presented in the media, may also influence other stakeholders' knowledge and opinions about a firm. A favorable media reputation may have the resource properties of rarity, value, imperfect imitability, and nonsubstitutability. Thus:

Proposition: *A more favorable media reputation increases performance.*

Methods

Sample and Data Sources

This proposition was examined empirically in a population of commercial banks competing in a single metropolitan area from 1988 through 1992. The population of banks was located in the metropolitan area of Minneapolis-St. Paul, Minnesota, U.S.A. (Twin Cities). A metropolitan area was selected because bank antitrust regulators defined a competitive market in banking as a metropolitan area during the period under study (Berger, 1995; Federal Reserve Bulletin, 1991; Liang, 1989; Smirlock, 1985). Banks in a single market compete by offering similar products to similar customers and by seeking similar factors of production, such as employees (Chen, 1996). Banks in a single market also compete for reputation among the same set of stakeholders. Thus, this site is a good location to test if media reputation affects performance because it controls for differences in community values and product and factor markets.

The banks were identified from the Call Reports database of U.S. bank regulators. The Call Reports are detailed financial statements required by regulators. The unit of analysis is the bank-year. The period 1988 through 1992 was selected to emphasize measurement accuracy over a five-year period within resource constraints (Sudman, 1976). There were 121 independent banks in the Twin Cities during the period, six of which were publicly traded. After entries and exits, the total number of observations totaled 526. Financial variables were measured from the Call Reports; media reputation was measured by a content analysis of newspaper archives; and hypotheses were tested with regression. Thus, the research design integrated quantitative and qualitative methods to test the resource-based view of the firm, as suggested by a recent review (Hoskisson, Hitt, Wan, & Yiu, 1999: 447).

Dependent Variable: ROA

Relative return on average assets (Relative ROA) was the performance measure used here. Because bank assets change over time, average assets were used in the denominator, consistent with bank regulatory practice. Reger, Duhaime, and Stimpert (1992: 195) declared that "ROA is the most meaningful financial indicator in the banking industry. . . " (cf. Gilbert, 1984; Mehra, 1996). ROA measures how well a firm utilizes its assets and controls for differences in size and capital structure. Relative ROA is the difference between a bank's ROA and the average ROA of all Twin Cities' banks in that year. This measure thus indicates how well a bank is doing relative to its competitors. It also controls for many economic and industry structure factors that vary over time, such as general business conditions and concentration.

Independent Variable: Media Reputation

Past research implies that local print media best covers local businesses. Palmgreen and Clarke (1977) showed that newspapers had a stronger effect than

television in setting the public's agenda for local issues. Moreover, Stempel (1991) found that 67.3% of the respondents to a nationwide survey got their news about local businesses from the local newspaper; television, radio, and other people all scored less than 27.1%. Audience recall is stronger from newspaper stories (DeFleur, Davenport, Cronin, & DeFleur, 1992; Robinson & Levy, 1996), and recall of information about a bank may lead to action regarding it (Fiske & Taylor, 1984; Schramm, 1949). Together, these studies imply that newspapers would be the best media source of public knowledge and opinions about banks. The selected newspapers were the Twin Cities' two metropolitan dailies, *The Minneapolis Star Tribune* and *The Saint Paul Pioneer Press*. These two have the largest circulations in the area. Readers include customers, suppliers, employees, regulators, and other stakeholders. Thus, these two papers should provide a good source for measuring media reputation using content analysis.

The sample of articles included all letters to the editor, all editorials, all columns, and a stratified sample of the remaining articles. All letters, editorials, and columns were included because they represent interpretations of firms that are overt attempts to influence attitudes (Fombrun & Shanley, 1990). There was a two-step process for selecting the remaining articles. For each bank with fewer than eight articles in a year, all articles were selected to increase accuracy. For banks with more than eight, a total of eight plus 25% of the remaining number of articles were randomly selected. A sampling fraction of 25% is well above that used in past communication research (e.g., Dickson, 1992; Riffe, Aust, & Lacy, 1993). In total, this sampling procedure yielded 1277 articles.

Coding the articles entailed identifying and rating recording units (Weber, 1990). This paper defined a recording unit as the evaluation of an individual bank in a single article. Because many articles mention several banks, 2071 recording units were identified. Only 275 (13.3%) were from letters, editorials, and columns; the rest (86.7%) were from news articles. Each recording unit was rated as favorable, unfavorable, or neutral, following common practice in media research (Janis & Fadner, 1965; Weber, 1990). A summary of each rating follows. A recording unit was rated *favorable* when a bank was praised for its actions or associated with actions that past research indicated should increase a firm's reputation. Examples of the latter include: awards given to the bank or its employees (Fombrun, 1996); monetary or in-kind donations (Fombrun & Shanley, 1990); and director linkages to other organizations (Weigelt & Camerer, 1988). An *unfavorable* rating occurred when a bank was criticized for its actions or associated with actions that past research indicated should decrease a firm's reputation. There were few of the latter, except for legal or regulatory charges. More often, an author or source criticized a bank's actions. The essence of a *neutral* rating was the declarative reporting of role performance without evaluative modifiers. Essential roles for banks included lending, holding deposits, purchasing from suppliers, trying to expand market share and profitability, and so forth This rating was also given when there was a balance of favorable and unfavorable reporting.

The author read and coded full text versions of all sampled articles. A colleague was instructed to use the same coding scheme on a random sample of

52 articles from the first year of coding (23%). The two raters agreed on 65 of the 71 recording units (91.5%), suggesting high intercoder reliability (Weber, 1990). After the coding was complete, a second colleague coded a random sample of 30 articles from a different year. The two coders agreed on 83.3% of the codes. Together, these checks enhance the reliability of the coding process (Weber, 1990).

The recording units were aggregated into annual measures suitable for statistical analysis using the Janis-Fadner coefficient of imbalance (Janis & Fadner, 1965). Initially developed for analyzing wartime propaganda, it measures the relative proportion of favorable to unfavorable articles while controlling for the overall volume of articles. Each article is given equal weight in the measure, consistent with past research (Brown & Deegan, 1998; Dickson, 1992). The resulting variable was called the *coefficient of media favorableness.* Its formula is:

$$\text{Coefficient of media favorableness} = \begin{cases} (f^2 - fu)/(\text{total})^2 \text{ if } f > u; \\ 0 \text{ if } f = u; \\ (fu - u^2)/(\text{total})^2 \text{ if } u > f; \end{cases}$$

where f = number of favorable recording units for a bank in a given year; u = number of unfavorable recording units for a bank in that year; and total = the total number of recording units for the bank in that year. The range of this variable is $(-1, 1)$, where 1 indicates all positive coverage, -1 indicates all unfavorable coverage, and 0 indicates a balance between the two over the year.

Given that performance is measured by ROA and media reputation by the coefficient of media favorableness, the proposition that firms with more favorable media reputations have higher performance is tested with the following hypothesis:

> ***Hypothesis:*** *The coefficient of media favorableness is positively related to ROA.*

Control Variables

Variables were added to control for other effects on performance. Larger banks should be more profitable than smaller ones because they may tacitly collude to control prices, have greater economies of scale or scope, or have superior efficiency (Demsetz, 1973; Gale, 1972). The latter two reflect underlying resources. Smirlock (1985) and Berger (1995) found support in the banking industry for the superior efficiency argument of Demsetz (1973). Thus, including market share enhances the assessment of nonsubstitutability because market positions and resources are two sides of the same coin (Wernerfelt, 1984). Firm size was measured using market share of deposits, consistent with prior bank research (e.g., Berger, 1995; Smirlock, 1985).

A firm's product market strategies should have an impact on performance (Rumelt, Schendel, & Teece, 1994). Principal product market strategies in bank-

ing are asset allocation decisions (Santomero, 1984). Banks have to decide how much and when to invest in each asset category, such as real estate lending. A resource underlying these allocation decisions is managerial ability to identify profitable markets (Castanias & Helfat, 1991), so their inclusion partially tests the resource property of nonsubstitutability. This paper used the four asset strategies common to Reger et al. (1992), Mehra (1996), and Swamy, Barth, Chou, and Jahera (1996): Commercial Loans, Real Estate Loans, Individual Loans, and Agricultural Loans. Each asset strategy was measured as a proportion of total assets.

The lagged dependent variable was also included. It controls for unobservables (Dess et al., 1995; Godfrey & Hill, 1995; Jacobson, 1990). It also reflects the possibility that changes in the independent variables affect the dependent variable over multiple time periods (Fomby, Hill, & Johnson, 1984; Hitt et al., 1998). Finally, inclusion of this variable enhances the causal inferences that can be drawn (Hitt et al., 1998).

Statistical Analysis

The following equation depicts the structural model based on the relationships specified above. Subscript i identifies the bank and subscript t identifies the year.

$$\text{Relative ROA}_{it} = b_0 + b_1 * \text{Relative ROA}_{i,t-1} + b_2 * \ln(\text{Market Share}_{it}) + b_3 * \text{Commercial Loans}_{it} + b_4 * \text{Real Estate Loans}_{it} + b_5 * \text{Loans to Individuals}_{it} + b_6 * \text{Agricultural Loans}_{it} + b_7 * \text{Coefficient of media favorableness}_{it} + e_{it}.$$

The sample forms a panel combining individual banks over five successive years (Greene, 1993). Several issues must be addressed to analyze the data. The first, and perhaps most important, is sample selection. After completing data collection, we discovered that all banks were not covered by the media in every year. Specifically, 265 of the 526 observations had measures of media reputation. Because media reputation is measured only for banks covered by the media, there may be sample selection bias (Heckman, 1979). That is, results based on the banks with media scores may not apply to all the banks in the period, raising generalizability concerns. To correct for this potential bias, Heckman's (1979) two-step procedure was used. The first step tests whether or not a bank was in the estimated sample (i.e., had any media coverage). This was estimated with a probit model on all 526 observations. Larger size and having locations in the central cities and counties of the Twin Cities were significant predictors of being covered in the media. The probit estimates are used to create a variable called the "inverse Mills ratio." The second step adds this variable to the regression model to correct for sample selection bias.

Two other important issues in panel data are heteroskedasticity and autocorrelation, two violations of ordinary least squares regression (Greene, 1993; Kennedy, 1985). The latter was assumed to be first order autocorrelation, consistent with most econometric work using annual data (Greene, 1993; Jacobsen,

1988). Durbin's t-statistic was used to assess the presence of autocorrelation when a lagged dependent variable is in the model (Durbin, 1970). This statistic equaled −.28 ($p < .39$, n.s.), so autocorrelation was not a problem here. Heteroskedasticity was evaluated by examining plots of residuals versus fitted values and independent variables. The "megaphone opening left" shape of the residual plot versus loans for agricultural production suggested that the error variance was inversely proportional to this variable. A special case of generalized least squares called weighted least squares was used to produce unbiased, minimum variance estimates (Greene, 1993; Kennedy, 1985).

A final issue is multicollinearity among independent variables. This was evaluated using condition numbers (Belsley, Kuh, & Welsch, 1980). The largest value of 24.2 was less than the 30 suggested as being cause for concern (Belsley et al. 1980; Kennedy, 1985).

Hierarchical weighted least squares regression was used for the final estimates. Model 1 estimated the control variables, including the sample selection correction. Model 2 added the coefficient of media favorableness to assess its impact on the model. The weighted least squares transformation negates the interpretability of R^2 goodness of fit measures. Consequently, Models 1 and 2 were compared statistically using *F*-tests computed with sums of squared errors (Greene, 1993; Griffiths, Hill, and Judge, 1993). Pseudo R^2 statistics are reported for reference, although this statistic should be interpreted cautiously.

Results

Table 1 presents the means, standard deviations, and correlations among all study variables for the 265 observations having media coverage. The mean of the coefficient of media favorableness was .22, and its standard deviation was 0.37. These results indicate that media reputation differed among banks in the sample, a necessary condition for resource rarity. The coefficient of media favorableness

Table 1. Means, Standard Deviations, and Correlations

Variable	*Mean*	*s.d.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Relative ROA	0.00	0.01							
2. Relative ROA_{t-1}	0.00	0.01	.59**						
3. Coefficient of Media Favorableness	0.22	0.37	.14*	.10					
4. Market Share of Deposits[1]	0.02	0.06	−.05	−.10	−.12				
5. Commercial Loans	0.16	0.09	−.26**	−.26**	−.05	.33**			
6. Real Estate Loans	0.26	0.10	.21**	.17**	.07	−.20**	−.41**		
7. Individual Loans	0.11	0.06	.01	−.00	.12*	−.07	−.16**	−.13*	
8. Agricultural Loans	0.00	0.01	.03	.00	−.02	−.09	−.03	.04	−.01

[1] The mean and standard deviations represent actual market share of deposits. Correlations are computed with the natural log of market share because it is used in the regression analyses.

$n = 265$

* $p < 0.05$

** $p < 0.01$

was correlated .14 with ROA, suggesting that media reputation has less of a financial performance halo than the *Fortune* ratings do (Brown & Perry, 1994). Moreover, its correlation with market share of deposits was −.12 (n.s.), implying that size was not related to a favorable media reputation.

Table 2 presents the weighted least squares estimates. Model 1 presents the results for the model of control variables. The coefficient for the log of market share was positive ($\beta = .09$) and significant ($p < .05$), consistent with expectations. Coefficients for asset strategies were nonsignificant. The lagged dependent variable was positive and significant, as expected.

Model 2 added the coefficient of media favorableness. The estimated coefficient for this variable was positive ($\beta = .22$) and significant ($p < .05$). Adding this variable significantly improved the fit of the model ($\Delta SSE = .02$; $F_{(1,255)} = 4.77$; $p < .05$). Because lagged ROA is in the model, a larger coefficient of media favorableness increases ROA over the past year (Hitt et al., 1998). The pseudo R^2 increased from .37 to .39. There were no noteworthy changes in the other coefficients. In sum, these results support the paper's principal hypothesis that the coefficient of media favorableness improves ROA.[1]

An alternative hypothesis worth investigating, however, is that ROA increases the coefficient of media favorableness. This was evaluated using tests of

Table 2. Results of Weighted Least Squares Regression[a]

Independent Variables	*Model 1*	*Model 2*
Intercept	0.30	0.35
	(0.29)	(0.28)
Relative ROA_{t-1}	0.55***	0.55***
	(0.05)	(0.05)
Market Share of Deposits (Log)	0.09*	0.11*
	(0.04)	(0.04)
Commercial Loans	−0.78	−0.82
	(0.51)	(0.51)
Real Estate Loans	0.74	0.65
	(0.46)	(0.46)
Individual Loans	0.10	−0.07
	(0.65)	(0.65)
Agricultural Loans	0.92	1.50
	(2.06)	(2.06)
Inverse Mills Ratio	0.21	0.23
	(0.12)	(0.12)
Coefficient of Media Favorableness		0.22*
		(0.10)
Sum of squared errors	1.09	1.07
Δ Sum of squared errors over Model 1		0.02*
Pseudo R^2	0.37	0.39

[a] Standard errors are in parentheses. $n = 265$.
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Granger causality, which examine if a dependent variable predicts an independent variable (Granger, 1969). Granger's original test regressed past values of the original dependent variable (ROA) and past values of the original independent variable (coefficient of media favorableness) on the current value of the independent variable. The coefficient for lagged ROA was not significant ($\beta = .02$; SE = .04). A stricter test adds the current value ROA (Enders, 1995). Neither coefficient for ROA was significant ($\beta_{ROA(t)} = .03$; SE = .04; $\beta_{ROA(t-1)} = -.00$; SE = .04). These tests did not support the alternative hypothesis that ROA increases the coefficient of media favorableness.

Discussion and Conclusion

The resource-based view of the firm proposed that a favorable reputation is an intangible asset that increases firm performance (Barney, 1991; Hall, 1992). Empirical research testing this has been constrained by using the atheoretical *Fortune* ratings to measure reputation (Baucus, 1995; Fryxell & Wang, 1994; Sodeman, 1995). This paper incorporated mass communications theory to develop the concept media reputation, defined as the overall presentation of a firm in the media. Theoretical and empirical analysis indicated that media reputation was valuable, rare, nonsubstitutable, and imperfectly imitable, four properties of a resource (Barney, 1991). Thus, media reputation may be useful in reputation research and the resource-based view of the firm.

This paper found that media reputation increased the pseudo R^2 of ROA by 0.02. Although this could be considered small on an absolute scale, it is less so in the context of the Twin Cities banking market and past research by Russo and Fouts (1997). The latter found that including a firm's environmental rating in a model predicting ROA increased the explained variance by 0.01, a 4% change in the variance explained. The inclusion of media reputation in this paper increased the pseudo R^2 by more than 5%. In their regressions, Russo and Fouts (1997) included control variables appropriate for multi-industry studies (Capon et al., 1990). This paper included bank-specific variables used in past research (Berger, 1995; Mehra, 1996; Reger et al., 1992; Swamy et al., 1996). Analysis of the first derivative indicates that if a Twin Cities bank increased its media reputation by 0.37 (one standard deviation), its relative ROA would increase by .08 percentage points. In a sample where the average ROA was 0.84%, this change of almost 10% could help fund the development of other resources. Such increases in performance can be critical in competitive markets.

Given the promising results for media reputation, an important subject for future research is understanding the determinants of media reputation. Correlation and Granger causality tests did not suggest that size and performance had an important impact, but the relationships between these variables and media reputation may be more complex. Other factors may also have an effect on media reputation. Moreover, these factors may have interactions with size and performance. Future theoretical development and empirical testing is necessary to uncover these determinants and relationships.

Another subject for future research is the intermediary status of media reputation among the concepts of firm action, stakeholder opinion and action, and performance. One important issue is that the media could not report a firm's action without the firm taking the action. For instance, the media couldn't have written about a bank's charitable giving, a common practice among Twin Cities firms (Galaskiewicz, 1997), without knowing about a bank's giving (or lack thereof). And without the actions, their favorableness could not be evaluated. A limitation of this paper is that it did not separate the direct effects of firm actions on performance and the indirect effects of the actions through the reputation process. For instance, the direct effect of charitable giving on performance is negative for it reduces net income. Reputation theory proposes a positive indirect effect because the public favors firms that donate in contracting decisions (Fombrun, 1996). The extent to which the public learns about charitable giving from the media or some other source, such as the firm or a friend, is also an issue. Determining the order, direction, and magnitude of these effects is an important issue for future research.

In the context of the resource-based view of the firm, two properties of a resource that could be addressed better are nonsubstitutability and rarity. Finding variation in the distribution of media reputation is a necessary, but not sufficient, condition for rarity. The challenge of evaluating rarity was raised by Barney (1991). Nonsubstitutability was inferred by assuming that product market positions and past performance reflected bundles of underlying firm resources, consistent with Wernerfelt (1984). As research improves its ability to measure resources, future research could incorporate them as direct controls.

There are many methodological choices for research measuring media reputation with content analysis (Weber, 1990). One choice is the specific media outlets sampled. This study of local business sampled daily newspapers because of past research on how people learn about local business (DeFleur et al., 1992; Stempel, 1991). Other studies of large U.S. firms analyzed television news (Wartick, 1992) and business periodicals (Fombrun & Shanley, 1990). Including other media sources should improve the specificity of the analyses and increase our understanding of media reputation. A second choice is the document coded. This study coded the full text of articles to improve measurement accuracy, but others coded only titles or abstracts (e.g., Fombrun & Shanley, 1990).

A third methodological choice is the type of article. This study sampled all types: news, letters to the editor, editorials, and columns. Certain types of articles may have different impacts, however. To investigate this, a *post hoc* analysis was conducted. As noted in the research design, most of the ratings of banks (86.7%) came from news articles. A coefficient of news article favorableness was calculated for these and substituted in the regression model. The pattern of parameter estimates was similar to those reported in Table 2, and only 4 of 265 observations were lost. Most notably, the coefficient of news article favorableness was positive and significant ($\beta = .23$; SE $= .10$; $p < .05$). For non-news articles, unfortunately, sample sizes dropped by over 80%, and regression estimates were nonsignificant. In sum, future research could investigate the robustness and costs of different content analysis methodologies.

There are limitations to this study that should be investigated in future research. Although this study demonstrated that reputation applies in a sample outside the large corporations rated by *Fortune*, future research could examine if these findings generalize to samples besides Twin Cities banks. Another limitation of this study is that it only used accounting performance because most observations were from privately held banks. An advantage of studying publicly traded firms, like those in the *Fortune* ratings, is that stock market performance is available. A third limitation is spuriousness. Although the research design controlled for many firm-level and contextual variables, there may be other variables that drive the relationship between the coefficient of media favorableness and ROA (Cook & Campbell, 1979; Kennedy, 1985). Fourth, media reputation captures the evaluations of firms made by many different stakeholders, but this measure is relatively coarse in that it captures only those evaluations that are made publicly. Although this suggests these stakeholders have greater urgency (Mitchell et al., 1997), private evaluations by other stakeholders may also be important for competitive advantage. Future research might examine the firm's reputation from the perspective of different stakeholders and investigate their relative importance using other measures. Finally, the assumptions about media coverage are based on research that primarily studied policy issues, not business issues. Future research should examine if such assumptions hold for business issues. The dynamics of such relationships also warrant greater attention.

The finding that media reputation may influence performance has one central implication for managers: they should seek to cultivate positive evaluations by the media. This should not be done just by sophisticated public relations; instead, it should have a foundation in actual actions throughout the firm (Caudron, 1997; Fombrun & Shanley, 1990; Hall, 1993). The *post hoc* analysis of news articles is supportive of this admonition. News stories included reports of firm actions. Some of these actions (like charitable donations) are viewed favorably in reputation research, and others are viewed positively by stakeholders. As research uncovers the determinants of a positive media reputation, further practical implications can be expected.

To conclude, this study expands our knowledge of reputation as a resource. It develops a variant of the reputation concept called media reputation, defined as the overall evaluation of a firm presented in the media. Theoretical analysis of its resource properties and empirical testing of its impact on performance provides evidence that media reputation is a strategic resource.

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Notes

1. These two models were also estimated with net income per employee as the dependent variable (Mehra, 1996). Results (available on request) were similar to those for ROA, which enhances confidence in the results (Venkatraman & Ramanujam, 1986). Model 2 was also run with the number of favorable and unfavorable articles as independent variables, excluding the neutral articles. Both were significant at the $p < .05$ level in the expected directions.

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