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The Influence of Unrelated and Related Diversification on Fraudulent Reporting

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Abstract This study suggests that unrelated diversification has a positive influence on the probability of fraudulent reporting whereas related diversification has a negative influence on the probability of fraudulent reporting. The strength of the influence of these corporate level strategies is contingent on the moral character of the firm. Unrelated diversification provides opportunity for financial innovation within the firm's internal capital market, which can result in fraudulent reporting. This is more likely when the moral character of the firm is driven by a conscienceless financial self-interest motive, as implied by the firm's contempt toward the larger community (in terms of damage inflicted on the interests of people outside the firm). In contrast, related diversification, where product divisions focus on mutual sharing and monitoring of operational activities, can reduce the probability of fraudulent reporting. This is more likely when constituents within the firm view themselves as moral citizens, as implied by the firm's benevolence toward the larger community. Hence, while unrelated diversification focuses the energies of managers within the firm on financial manipulation, related diversification focuses these energies on productive purposes.

Keywords Fraudulent reporting · Unrelated diversification · Related diversification · Community · Corporate social responsibility · Sustainability · Corporate governance · Agency theory · Stakeholder theory

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Introduction

In the last two decades, an increasing number of firms have been exposed engaging in financial statement fraud (Kedia and Philippon 2009; Rezaee 2005). The approximate annual percentage of publicly listed firms (on the NYSE, the AMEX, and the NASDAQ Stock Exchanges) that restated because of accounting irregularities being exposed increased from 0.7 % in 1997, to 3.7 % in 2002, and to 7 % in 2005 (USGAO 2002, 2007). In response to a large number of fraudulent reporting cases (including many famous scandals such as Enron and WorldCom), the Sarbanes–Oxley Act was enacted in July 2002, which made it harder for firms to hide information through financial manipulation and this led to more cases of serious accounting irregularities being revealed. During 1997–2006, cumulatively, more than 20 % of listed firms have announced an intention to restate financial reports that had serious accounting irregularities. Of these, around 8 % of listed firms announced a need to restate sometime during the 1997–2001 period before Sarbanes–Oxley came into effect, and around 16 % of listed firms announced a need to restate sometime during the 2002–2005 period (USGAO 2007).

Fraudulent reporting is defined as the disclosure of financial statements involving accounting irregularities to the public so as to deceive them into perceiving the firm's financial health in a more positive light than it actually is (Brief et al. 1996; Carpenter and Reimers 2005; Kaplan et al. 2009; Kedia and Philippon 2009; Murphy 2008; Rezaee 2005; Shafer 2002; Staubus 2005). Accounting irregularities, such as to "generate an inflated earnings report," involve "hidden action" (Crocker and Slemrod 2007, p. 698). The public is unaware of the fraudulent accounting until the time they are exposed. The external

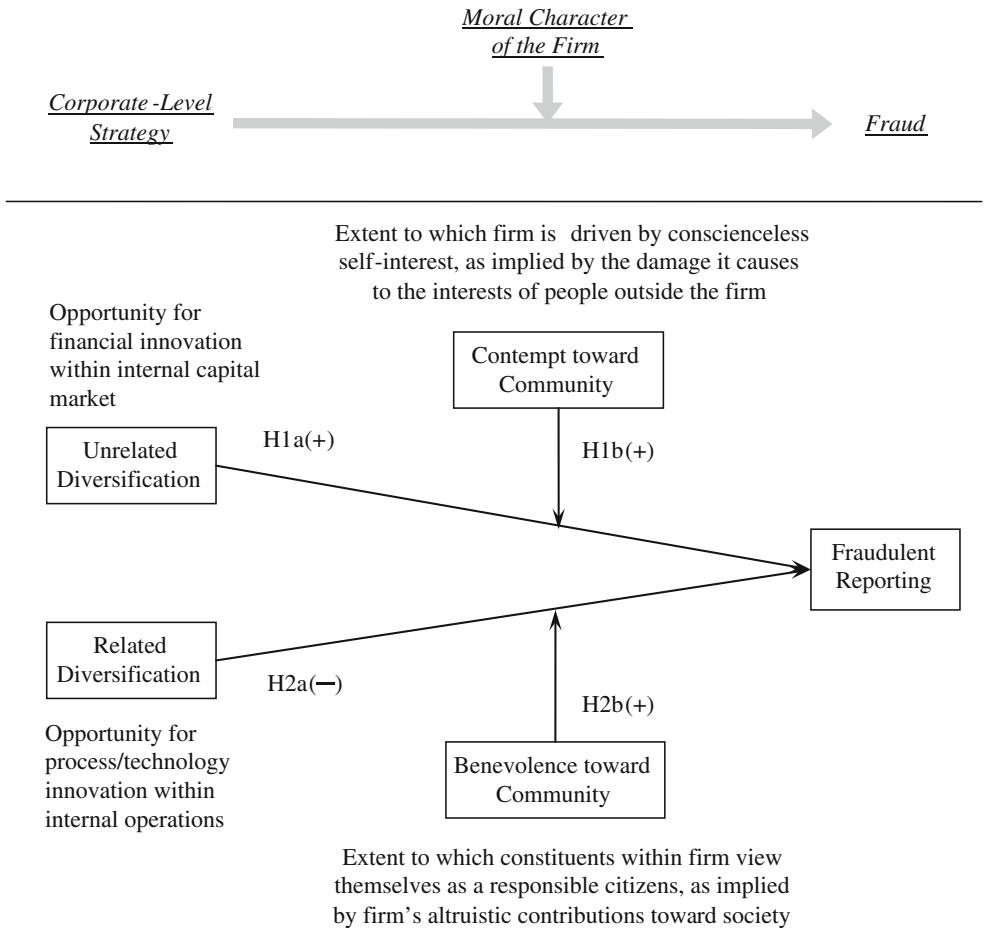


Fig. 1 Theoretical framework

market and public learn about the accounting irregularities when they are exposed by either the firm's auditors, someone in the firm, the SEC, or certain undisclosed parties (USGAO 2002, p. 23). The firm, then, is compelled to issue a public acknowledgment that reporting in the past had involved accounting irregularities and that the firm intends to restate its reports as a correction (Almer et al. 2008). The strategic management literature notes that such "restatements tend to involve intentional actions taken by firm leaders" that "constitute a more direct breach of stakeholder trust" (Arthaud Day et al. 2006, p. 1121).

The purpose of this study is to suggest that the type of diversification, contingent on the moral character of the firm, can influence the probability of fraudulent reporting. There is an increasingly large literature on accounting irregularities and the restatement of fraudulent financial statements (Abrahamson and Park 1994; Arthaud Day et al. 2006; Coffee 2005; Crocker and Slemrod 2007; Davidson et al. 2004; Dechow et al. 1996; Efendi et al. 2007; Graham et al. 2008; Hennes et al. 2008; Jensen 2001, 2003; Karpoff et al. 2008; Kedia and Philippon 2009; Mayhew and Murphy 2009; Murphy 2008; O'Connor et al. 2006; Palmrose et al. 2004; Rezaee 2005; Zhang et al. 2008). However, reviews of the literature suggest that the role of firm diversification as an antecedent to fraudulent reporting has not been investigated (Dooley and Fryxell 1999; Lerner and Fryxell 1988).

Figure 1 illustrates the theoretical framework for this study. At a broad level, it suggests that corporate level strategies can result in fraudulent behavior, contingent on the moral character of the firm (Dooley and Fryxell 1999; Lerner and Fryxell 1988). Corporate level strategies considered in this study are unrelated diversification and related diversification. The moral character of a firm is captured by its contempt toward community and benevolence toward community. The fraudulent behavior under observation in this study is the reporting of fraudulent financial statements.

Specifically, this study suggests that unrelated diversification provides opportunity for financial innovation within the firm's internal capital market, which can result in fraudulent reporting. This is more likely when the moral character of the firm is driven by a conscienceless financial self-interest motive, as implied by the firm's contempt toward community

interests (the damage it inflicts on the interests of the people outside the firm). In contrast, related diversification, where product divisions within a firm focus on the productive sharing of operational activities and competencies, can reduce the probability of fraudulent reporting. This is more likely when the product divisions within the firm view themselves as responsible citizens, as implied by the firm's benevolence (altruistic contributions) toward the community.

Hence, a focus on unrelated diversification can contribute to financial fraud by focusing the energies of managers within the firm on financial manipulation. In contrast, a focus on related diversification can help prevent financial fraud by focusing the energies of managers within the firm on productive sharing of activities and competencies.

This study makes several important contributions with strong implications for the literature. First, it takes an interdisciplinary approach. It integrates the literatures on strategic management, business ethics, and finance/accounting literatures. The integrative interdisciplinary approach enables an explanation of how corporate level strategies—contingent on the moral character of a firm—might influence the probability of fraudulent behavior. Second, the findings suggest a structural fraud prevention solution. Knowledge of what policies increase/decrease the likelihood of fraudulent reporting is important, because this knowledge helps leaders to be vigilant and adopt policies that reduce the probability of fraud. Organizations can be exhorted to adopt policies that emphasize related rather than unrelated diversification and that emphasize benevolent rather than contemptuous actions toward the community.

Finally, while this paper clearly contributes to the understanding of fraudulent reporting, the findings would also be of great interest to the literature on diversification. Results suggest that while financial innovation (a primary incentive for unrelated diversification) can promote fraudulent reporting, innovation for the productive sharing of activities and competencies (a primary incentive for related diversification) can help prevent fraudulent behavior. Unrelated diversification increases the threat of fraud, because its incentive for financial innovation can easily turn into an incentive for fraudulent jugglery of numbers, especially when the firm's moral compass is askew. Related diversification, in contrast, can help detect and reduce the threat of fraud. This is because, in comparison to unrelated diversification where managers focus on financial innovation, managers of product divisions in a related diversified firm tend to focus on finding innovative ways to share activities and competencies. With their attention focused strongly on developing process and technology innovations to make the sharing of activities and competencies more effective, the managers are less likely to worry about having to create value from any sort of financial innovation. The focus on value creation through productive means (rather than through financial manipulation), especially when moral character is strong (as evidenced by firm's benevolence toward the community), helps reduce the threat of financial fraud.

Hypotheses

Unrelated Diversification

Within unrelated diversified firms (conglomerates), product divisions rarely share production and distribution-related activities, because they operate in distinct industry groups. Rather, firms implementing unrelated diversification strategies hope to create value primarily through financial economies among the various unrelated product divisions within the firm (Bergh 1997; Hill 1994; Hitt et al. 2009). Unrelated diversification provides opportunities for financial innovations within the firm in at least three ways. First, there are opportunities for financial innovations through various forms of top-down internal capital allocations from the corporate headquarters to the product divisions (Gertner et al. 1994; Stein 1997). The extent of financial value created depends on the headquarters' ability to allocate financial capital efficiently to the product divisions with different risk profiles within the firm. Second, there are opportunities for financial innovations in the way product divisions borrow and lend financial capital to each other within the firm's internal capital market. Internal borrowing can be more efficient than external borrowing, because there is lesser information asymmetry within the firm (Desai et al. 2004; Dewaelheyns and Van Hulle 2010). Third, there are opportunities for financial innovations through various forms of financial trading of assets, products, and services among the unrelated product divisions within the firm (Colbert and Spicer 1995; Eccles and White 1988). This is similar to the trading among firms from different industries in the external market, but without the regulations that increase transaction costs in the external market. Unrestricted opportunities to trade assets, products, and services among the product divisions (having distinct competencies by virtue of operating in unrelated industry groups) within the boundaries of a single firm can help generate revenues and save costs for the firm (Colbert and Spicer 1995; Eccles and White 1988). Internally, the firm operates like a financial marketplace where it can set its own rules, providing a sense of freedom that is absent in the external market where firms are subject to institutional regulations (Chakrabarty 2009).

External observers and investors have limited access to information internal to a conglomerate (Healy and Palepu 2001). In contrast to external observers and investors, the top management of the conglomerate has more complete and reliable information on actual division performance

and future prospects (Chakrabarty and Whitten 2011; Stein 1997). An implication of greater access to accurate information within the firm is that the internal capital market can allocate resources between investment opportunities more knowledgeably than the external capital market (Gertner et al. 1994). Further, the secrecy about financial innovation occurring among product divisions within a firm can be a source of competitive advantage. Reliance on the internal capital market enables product divisions to safeguard certain information related to sources of competitive advantage that otherwise might be disclosed if the product divisions had to rely on the external capital market for financial capital (Hitt et al. 2009). Further, the unrelated product divisions can trade financial credit, assets, products, and services among each other on preferential terms and at prices that are much cheaper than in the external market. In the external market, expectations of preferential treatment would be controversial and transactions costs would be much higher (Desai et al. 2004; Dewaelheyns and Van Hulle 2010).

The lack of external monitoring of a firm's internal capital market, unfortunately, can turn financial innovation into financial fraud (Fairfield et al. 2008; Scharfstein and Stein 2000; Stein 1989). External investors, with their limited knowledge of what is taking place within large complex firms, find it hard to monitor such firms (Healy and Palepu 2001). While owners have a right to information, disclosure may not be complete and they can be misled or overwhelmed by the complexity of transactions. Consider the example of Tyco, where complex and innovative transactions among various unrelated product divisions resulted in accounting practices that were non-transparent. Tyco's top executives were arrested for fraud (Hitt et al. 2009). Given that financial transactions in an internal capital market lack external monitoring, the opportunities and strong incentives for financial innovation within the firm also create opportunities for fraud.

Fraud can happen in at least three ways. First, there can be fraud at the product division level, where the product division managers, with the aid of complex financial transactions among each other, can mislead the presumably honest top management with fraudulent financial information. This fraudulent financial information reported by the product divisions would be aggregated by the headquarters and reported in the firm's financial statements. Further, given the complexity of managing an unrelated diversified firm, corporate-level managers often focus on financial metrics. Product division managers may be motivated to meet these metrics through any means necessary. Second, there can be fraud at the corporate headquarters level, where the top management can use the complexity and secrecy surrounding the allocation of finances within the internal capital market to falsify financial statements. Third, the unrelated diversification strategy, which is often pursued through aggressive acquisitions and restructuring of unrelated firms, provides ample opportunities to cover up financial fraud. For instance, Fairfield et al. (2008) illustrate that firms engaged in fraudulent accounting have incentives to make acquisitions to conceal or delay the unwinding of fraudulent accounting practices from the past. Hence, while unrelated diversification provides opportunities for financial innovation, it can easily turn into a breeding ground for financial fraud (Anand et al. 2005; Ashforth and Anand 2003).

Hypothesis 1a The influence of unrelated diversification on fraudulent reporting is positive.

Contempt Toward Community as a Reflection of a Firm's Self-Centered Financial Motive

When moral character is weak, the influence of unrelated diversification on fraudulent behavior is likely to be more strongly positive. As per the literature, unrelated diversification can provide strategic benefits (Bergh 1997; Hill 1994; Hitt et al. 2009). The primary benefits are the opportunities for genuine and ethical financial innovation within a firm (Colbert and Spicer 1995; Desai et al. 2004; Dewaelheyns and Van Hulle 2010; Eccles and White 1988; Gertner et al. 1994; Stein 1997). These arguments in the literature have been based on a presumption that the managers across the product divisions and the headquarters of the firm would have a strong moral character. However, that is not always the case (Fairfield et al. 2008; Scharfstein and Stein 2000; Stein 1989). Firms often come across as having weak moral character—they are sometimes driven by a conscienceless financial self-interest motive (Anand et al. 2005; Ashforth and Anand 2003; Murphy 2008).

Weakness in moral character is most often reflected in the extent to which a firm inflicts damage on the interests of people outside the firm—the community. A firm's contempt toward community may be reflected in the form of a variety of controversies. It can range from controversies due to investment practices and controversies having socio-economic impact on the community (including issues related to the pollution of natural ecosystems, waste disposal, disputes over water, deterioration in social and economic well being, etc.) to any kind of controversy that mobilizes community opposition. Contempt toward community has existed among businesses through historical times. For instance, Heald (2005, p. 28) notes that "since business, especially big business, was the most visible interest group, it was widely feared. Business was identified with the technological, economic, and organizational forces, which were remodeling American life. In its very success it had often showed contempt or neglect of moral

restraint, as well as for the broader social consequences of its actions." On similar lines, this study incorporates the idea that firms displaying contempt toward the community can be presumed to have weak moral character.

Of course, financial self-interest is not always immoral or conscienceless. For instance, it can lead to positive entrepreneurship and wealth creation in a capitalist society. In this section, however, the focus is on financial self-interest that is combined with immoral (conscienceless) value judgments. When there is a high level of conscienceless financial self-interest, the unrestricted freedom for financial innovation within an internal capital market of an unrelated diversified firm could be easily misused for fraudulent purposes. The firm can then turn into a breeding ground for fraud. Of course, the extent of contempt toward the community can vary across firms, whereby some firms may land in more controversies than other firms may. When contempt toward the community is higher, the influence of unrelated diversification on the probability of fraudulent reporting would be more strongly positive. The hypothesis is as follows.

Hypothesis 1b Contempt toward community moderates the association between unrelated diversification and fraudulent reporting. The association is more strongly positive when contempt toward community is high.

Related Diversification

Sharing of activities and competencies is common among product divisions within a related diversified firm (Gupta and Gerchak 2002; Hitt et al. 2009). This is because the product divisions, by virtue of operating in similar industry segments, share product, technological, and distribution linkages. Activities that can be shared among the product divisions include inbound logistics (inventory management systems, warehouses, quality assurance, etc.), operations (assembly plants, quality control, maintenance, etc.), outbound logistics (marketing, distribution, sales, service, etc.), and support activities (procurement, human resource management, etc.; Porter and Millar 1985; Whitten et al. 2010).

In a firm with a high degree of related diversification, the product divisions are likely to focus on developing process and technology innovations to make the sharing of activities and competencies more effective (Brush 1996). In contrast to unrelated diversification where managers focus on financial innovation, managers of product divisions in a related diversified firm are likely to focus on finding innovative ways to share activities and competencies (Park 2003). With their attention focused strongly on developing process and technology innovations to make the sharing of activities and competencies more effective, the managers in a related diversified firm are less likely to worry about having to create value from any sort of financial innovation (Brush 1996; Gupta and Gerchak 2002; Hitt et al. 2009; Park 2003). This is the primary explanation of why related diversification would have a negative influence on the probability of fraudulent reporting. The strong focus on value creation through productive means (rather than through financial guile) would help reduce the threat of financial fraud.

There might be other/alternative explanations too. It is well known that, as part of a firm's related diversification, there is sharing of activities and competencies among product divisions that creates tighter interrelationships and/or interdependencies. That is, the destinies of the product divisions become tied together (Brush 1996; Gupta and Gerchak 2002). A byproduct is likely to be the creation of a peer monitoring system, where each product division's fortunes are closely tied with and hence monitored by the other product divisions. This alternative explanation is similar to that in the literature where peer monitoring among actors in a group reduces moral hazard (Holmstrom 1982; Wydick 1999; Zardkoohi et al. 2011). For instance, if two product divisions share production facilities and sales, and one division's revenues decline to a level that it cannot cover the costs of shared production, then the other division's business will be affected. On similar lines, if a poorly performing division manipulates financial information to show positive performance, then the other product division would easily notice the difference between the performance shown on paper and the real situation on the ground. Such peer monitoring, arising from tight production and operational linkages, can help prevent financial fraud.

A counter argument to the logic presented in the above paragraphs could be that in organizations where resources are shared, the opportunity for obfuscating costs and revenues is greater. That is, there is opportunity for illicit ''collusion'' among the tightly linked divisions of a related diversified firm. However, collusion toward obfuscating costs and revenues requires a strong underlying financial motive—a motive to make easy financial gains without having to invest in the improvement of operational capabilities. A fact is that the idea of related diversification is not based on a financial motive, but rather based on a strong motive of taking advantage of and improving upon the sharing of operational activities and competencies among divisions in related businesses/industries (Brush 1996; Gupta and Gerchak 2002; Hitt et al. 2009; Park 2003). Hence, on balance, based on the theoretical conjectures presented above, it seems likely that there would be fewer incentives for financial fraud in related diversified firms. The hypothesis is as follows.

Hypothesis 2a The influence of related diversification on fraudulent reporting is negative.

Benevolence Toward Community as a Reflection of Citizenship and Altruistic Values

Related diversification can provide opportunities to product divisions to focus on productive sharing of activities and competencies among each other. Productive sharing usually requires managers to go out of their way to learn about the needs and capabilities of other product divisions—it requires a certain degree of citizenship and altruism. However, citizenship and altruism do not always come naturally to managers of product divisions, who are usually preoccupied and overwhelmed with matters related to only their own product divisions.

Benevolence toward the community, just like contempt, has existed in varying degrees among businesses through historical times (Tone 1997). Heald (2005, p. 21) explains how firms learned the value of benevolence during the industrial age when big business was often criticized: "as criticism mounted, businessmen began to display a new sensitivity to public opinion—to social and political forces they had hitherto dismissed, for the most part, with mild concern or contempt." A firm's benevolence toward community may be reflected in the form of a variety of activities that support the community by showing sensitivity to public needs. It can include charitable giving, support for nonprofits and economically disadvantaged, international giving, support for housing for the economically disadvantaged, support for economically disadvantaged children's education, support for youth training programs, volunteer programs, and other similarly creditworthy community activities.

Of course, the extent of benevolence toward community can vary across firms—some firms may engage in more benevolent activities than other firms may. Firms, and product divisions within the firm, that show higher levels of benevolence toward the community can be assumed to have higher levels of moral character, where managers have imbibed values of citizenship and altruism to greater extents (Mayhew and Murphy 2009; Murphy and Dacin 2011; Tone 1997).

When moral strength is higher, a firm pursuing a related diversification strategy is more likely to focus on the productive sharing of activities and competencies among product divisions to boost financial health, rather than focusing on financial trickery to put up a facade of financial health. There is also the alternative explanation—that peer monitoring, if any, among product divisions, is likely to become more proactive and sensitive to financial fraud as the product divisions imbibe values of citizenship and altruism by virtue of their parent firm's benevolence toward the community. In sum, the product divisions would positively contribute to each other's operational and strategic success by virtue of the close linkages among the divisions, while simultaneously monitoring and preventing financial fraud that could negatively impact the closely knit collective of product divisions (Holmstrom 1982; Wydick 1999). Hence, a hypothesis is as follows.

Hypothesis 2b Benevolence toward community moderates the association between related diversification and fraudulent reporting. The association is more strongly negative when benevolence toward community is high.

Methods

Sample and Procedure

Data from numerous sources are merged to create a longitudinal dataset for event study analysis. Data for predictor variables (unrelated diversification and related diversification) are obtained from the Compustat Segments database. Data for moderator variables (contempt toward community and benevolence toward community) are obtained from the KLD database.

Data for the dependent variable—fraudulent reporting—are obtained from the USGAO (2003, 2007), which undertook a major initiative to identify events announcing the need to restate financial statements during the period 1997–2006. A restatement announcement is a firm's public acknowledgment that financial statements reported in the past had involved accounting irregularities and that the firm intends to restate its inaccurate reports as a correction. The events identified by USGAO are a result of major accounting irregularities and *not* a result of minor changes or errors in accounting procedures. The USGAO (2003, p. 4) notes that it "focused on financial restatements resulting from accounting irregularities, including so-called 'aggressive' accounting practices, intentional and unintentional misuse of facts applied to financial statements, oversight or misinterpretation of accounting rules, and fraud." The USGAO excluded any restatements that were routine and not a result of serious accounting irregularities. For example, they "excluded restatements resulting from mergers and acquisitions, discontinued operations, stock splits, issuance of stock dividends, currency-related issues, changes in business segment definitions, changes due to transfers of management, changes made for presentation purposes, general accounting changes under generally accepted accounting principles (GAAP), litigation settlements, and arithmetic and general bookkeeping errors" (USGAO 2003, p. 5).

This study uses USGAO data from 1997 to 2006 to identify cases of serious accounting irregularities, and further narrows them down to cases that can be considered "fraudulent," by observing the stock market reaction. This is described later in the "Measures" section.

Matched Sampling

This study's matched sampling procedure is consistent with those that have been widely used in the literature on corporate reporting manipulation (Arthaud Day et al. 2006; Butler et al. 2007; Efendi et al. 2007). The procedure involved selecting (or pairing) a distinct control firm that matches each focal firm exactly in year, four-digit standard industrial classification (SIC) industry code, and stock exchange, and is the closest match in total assets. An advantage of this procedure is that the matched firms will be more similar to the focal firms than unmatched firms (in terms of the matching variables), thereby providing the researcher with a set of comparable firms. The literature notes that "although a matched-pair sampling design has limitations, it is generally considered an appropriate way to study phenomena with a low base rate of occurrence" (Arthaud Day et al. 2006, p. 1125).

For the focal group of firms that engaged in fraudulent reporting, a control group of firms (whose reports were not restated) is created by an exact match in year, primary four-digit SIC industry code, and stock exchange, and then a closest match in total assets. A precondition for firms to be included in both the focal and control group is that non-missing data for all variables constituting the hypotheses should be available. Firms with missing data for one or more of the variables constituting the hypotheses are excluded. The matched sampling steps are as follows: First, a pool of potential control firms is created by including all publicly listed firms (that meet the precondition), but removing firms that are included in the focal group (that reported fraudulently). Second, a one-to-many match is found between each focal firm and a set of potential control firms based on an exact match for the year, primary four-digit SIC industry code, and stock exchange. Third, the selection is narrowed down to a one-to-one match between each focal firm and a control firm (from the set of potential control firms) by choosing a control firm whose total asset size is closest to that of the focal firm. Once a control firm is chosen as a match for a particular focal firm, the control firm is removed from the pool of firms available for matching with the remaining focal firms. This insures that the same control firm is not matched with any other focal firm.

Sample Size and Characteristics

Given that data had to be collected and merged from numerous sources, the sample size is a function of the extent of non-missing data for overlapping firms across the sources of data. The final sample size with non-missing data for all variables in the hypotheses is 342 firm-restatement-years (171 restatement events plus 171 matched controls). The 171 restatement announcement events were by 160 firms (149 firms were exposed reporting fraudulently only once during the 1997–2006 period, whereas 11 firms were exposed more than once—constituting the remaining 22 events). The controls for the 160 focal firms (representing 171 focal events) were 160 matched firms (representing 171 control events, where the event dates are the same as the dates of the restatement events in focal group). The sample characteristics, segregated by focal and control groups, are provided in Table 1.

Measures: Variables in Hypotheses

Fraudulent Reporting

Fraudulent reporting (Kedia and Philippon 2009; Rezaee 2005) is measured as a binary (logit) variable for event study analysis (Arthaud Day et al. 2006; Zhang et al. 2008). The year of announcement (of a firm's need to restate fraudulent financial statements) is the event under consideration. A value of 1 is given to the firm-years associated with events announcing the need to restate fraudulent financial reports. These firm-years (events) constitute the focal group. A value of 0 is given to the matched firms (identified using matched sampling procedures described earlier) that are not associated with any restatement announcements. These matched firms form the control group. Using this binary measure as a dependent variable in an event study analysis would involve logistic regression—it would test for the *probability* of fraudulent reporting. The independent variables are measured for the fiscal year prior to the year of the announcement.

As noted earlier, the restatement announcement events considered in this study were compiled and vetted by the USGAO as being a result of serious accounting irregularities. Two parallel checks were employed to further narrow down the USGAO-identified restatements that could be clearly considered as being "fraudulent." First, consistent with procedures in the literature, 8-K filings, 10-K (annual) and 10-Q (quarterly) filings, SEC investigations, Department of Justice investigations, independent investigations, class action lawsuits, and press releases (from sources such as the SEC filing database, Stanford Class Action Clearinghouse, and the Lexis Nexis news database) were manually reviewed. They were extensively searched to check whether there is merit in labeling the serious accounting irregularities as being fraudulent (Hennes et al. 2008; Palmrose et al. 2004). Second, the stock market reaction was calculated using event study software, to check if there was negative reaction. The literature has established that because stock market investors react more strongly to accounting irregularities that seemingly involve fraud, the stock price is likely to undergo a negative correction when

Table 1 Sample characteristics: focal and control groups

	Focal group (disclosed fraudulent reports)	Control group (always disclosed reliable reports)
Corporate reporting *(1997–2006)*		
Event announcing need to restate fraudulent financial reports	Yes	No
—Average number of events per firm	1.07	0
—Average correction in stock price: market-adjusted abnormal returns, during the (−1, 0, 1) days surrounding event (announcement of need to restate, %)	−6.20	−0.37 (during focal firm's event)
Averages of firm-level data in fiscal year prior to event date		
Unrelated diversification (entropy)	0.22	0.12
Related diversification (entropy)	0.22	0.27
Contempt toward community (KLD rating)	0.05	0.08
Benevolence toward community (KLD rating)	0.08	0.09
Market capitalization (m$)	3,562.84	3,024.15
Total assets (m$)	10,489.75	8,462.60
Earnings before interest and taxes (m$)	346.58	321.44
Sales revenues (m$)	3,312.01	2,231.57
CEO total compensation: salary plus bonus (m$)	1.29	1.41
CEO bonus to salary ratio	0.90	1.17
Distribution of firms by industry *(SIC codes)*:	*(Number of events in parenthesis)*	
(A) Agriculture, forestry, and fishing	0 (0)	0 (0)
(B) Mining	7 (7)	7 (7)
(C) Construction	1 (1)	1 (1)
(D) Manufacturing	48 (52)	48 (52)
(E) Transportation, communications, public utilities	24 (28)	24 (28)
(F) Wholesale trade	2 (2)	2 (2)
(G) Retail trade	21 (21)	21 (21)
(H) Finance, insurance, and real estate	20 (21)	20 (21)
(I) Services	37 (39)	37 (39)
(J) Public administration	0 (0)	0 (0)
Total number of firms	160 (171)	160 (171)

All dollar values are adjusted for inflation with base year as 2000. Sample size $N = 342$ firm-restatement-years (171 restatement events plus 171 matched controls). The 171 restatement announcement events were by 160 firms (149 firms were exposed reporting fraudulently only once during the 1997–2006 period, whereas 11 firms were exposed more than once—constituting the remaining 22 events). *Matched sampling* (allocating firms into control group to match firms in focal group) is done by an exact match in year, primary four-digit SIC industry code, and stock exchange, and then a closest match in total assets. A precondition is that firms in both the focal and control groups should have non-missing data for variables constituting the hypotheses. The controls for the 160 focal firms (representing 171 focal events) were 160 matched firms (representing 171 control events, where the event dates are the same as the dates of the restatement events in focal group)

m$ Millions of dollars

the news of accounting irregularity is disclosed and is deemed fraudulent (Hennes et al. 2008; Kedia and Philippon 2009; Palmrose et al. 2004). In other words, the serious accounting irregularities identified by USGAO can be considered fraudulent if the stock market investors feel cheated by the news of the serious accounting irregularities because of which the stock price falls. For this purpose, the market-adjusted abnormal returns during the (−1, 0, 1) days surrounding the event (announcing the need to restate financial reports) were checked to insure that there was a negative correction in stock price. The results of the parallel checks were fully consistent: the USGAO-identified restatements that were labeled as fraudulent based on manual reviewing of financial documentation were also found to have a negative stock market reaction around the restatement announcement event.

Unrelated Diversification and Related Diversification

Measures for unrelated diversification and related diversification are calculated in accordance with the well-established procedures (Jacquemin and Berry 1979; Palepu 1985). The formulation summarized in Palepu (1985, p. 244) is as follows: "The standard industrial classification (SIC) is used in this study to define related and unrelated product groups. Products belonging to different four-digit SIC industries within the same two-digit industry group are treated as related; products from different two-digit SIC industry groups are defined as unrelated."

Accordingly, SIC industries at the *two-digit* level are treated as the *industry groups*. A firm's product divisions making sales in different two-digit SIC industry groups are treated as *unrelated*. SIC industries at the *four-digit* level are treated as the *industry segments*. An industry group contains a set of related segments. Segments within an industry group are more related to each other than segments across groups. A firm's product divisions are treated as *related* if they make sales in different four-digit SIC industries but within the same two-digit industry group. Data for these measures are obtained from the Compustat Segments database.

Unrelated diversification, which arises out of a firm's product divisions making sales across different industry groups, is calculated as $\mathrm{DU} = \Sigma[S_j \ln(1/S_j)]$, where DU is the unrelated diversification of a firm and S_j is the share of the firm's sales that came from industry group j. Hence, unrelated diversification is the weighted sum of the shares of the firm's total sales coming from distinct industry groups (Jacquemin and Berry 1979, pp. 361–362; Palepu 1985, p. 253).

Related diversification, which arises out of a firm's product divisions making sales across segments that are within the same industry groups, is calculated as $\mathrm{DR} = \Sigma\ [\mathrm{DR}_j\ S_j]$, where $\mathrm{DR}_j = \Sigma[S_{jk} \ln(1/S_{jk})]$. DR is the average related diversification of a firm, arising from aggregation of related diversification DR_j in the j industry groups, weighted by the share S_j of the firm's sales that came from industry group j. DR_j is the related diversification arising out of product divisions making sales in k segments within an industry group j. S_{jk} is the share of sales in segment k out of the total sales of group j. Hence, a firm's related diversification is the weighted average of its related diversification in each of the industry groups in which it makes sales, where related diversification in an industry group is the weighted sum of the shares of sales coming from segments within the group (Jacquemin and Berry 1979, pp. 361–362; Palepu 1985, pp. 252–253).

Contempt Toward Community: KLD Community Concerns

A firm's contempt toward community is measured using KLD's rating of the firm being involved in serious concerns regarding community matters. As described in the KLD manual, the concerns include: (i) *investment controversies*—lending or investment practices have led to major controversies, particularly ones related to the Community Reinvestment Act, (ii) *negative economic impact*—major controversies concerning economic impact on the community, including issues related to environmental contamination, water rights disputes, plant closings, or put-or-pay contracts with trash incinerators; or adverse impact on the quality of life, tax base, or property values in the community, and (iii) *other concerns*—that have led to mobilized community opposition or noteworthy community controversies. The total number of major community concerns, as rated by KLD, is used as the measure of a firm's contempt toward the community.

Benevolence Toward Community: KLD Community Strengths

A firm's benevolence toward community is measured using KLD's rating of the firm's major strengths in community matters. As described in the KLD manual, the strengths include: (i) *charitable giving*—generous in its contributions toward charity, (ii) *innovative giving*—notably innovative and nontraditional giving programs, such as those that support nonprofit organizations, promote self-sufficiency among the economically disadvantaged, and permit federated charitable giving drives in the workplace, (iii) *non-US charitable giving*—substantial effort to make charitable contributions abroad, in addition to the US, (iv) *support for housing*—notable support housing initiatives for the economically disadvantaged, (v) *support for education*—notable support for primary or secondary school education, particularly those that benefit the economically disadvantaged, or support for job-training programs for youth, (vi) *volunteer programs*—an exceptionally strong volunteer program, and (vii) *other strengths*—either an exceptionally strong in-kind giving program or engages in other notably positive community activities. The total number of major community strengths, as rated by KLD, is used as the measure of a firm's benevolence toward the community.

Measures: Control Variables

The summary statistics (Table 1) suggested that firms that have been identified to be fraudulent (focal group) are somewhat larger than the control group in several ways. This gives rise to the possibility of alternative explanations, which need to be controlled for in regressions. Hence, several variables (e.g., firm size, firm performance, market valuation, R&D intensity, and CEO salary) were included as controls in the regressions (Table 3).

Industry and Year Dummies

Industry dummies are included to control for the nature of industries in which firms belong. The industry dummies were calculated using single digit SIC codes. The distribution of number of firms across industries was reported as part of sample characteristics in Table 1. Year dummies are included to control for unaccounted events during the years corresponding to the restatement event dates.

Firm Size

Firm size, measured as ln(total assets), is included as a control, because the matched sampling procedures rely on the closest possible match of total assets (exact match between firms based on assets is very rare). Data are obtained from the Compustat Fundamentals database.

Firm Performance

Firm performance is measured as return on equity, that is, the ratio of net income to shareholder equity. It is included as a control, because research suggests that restating firms usually suffered from poor performance relative to shareholder expectations (Arthaud Day et al. 2006; Efendi et al. 2007; Zhang et al. 2008). Data are obtained from the Compustat Fundamentals database.

Market Valuation

Market valuation is measured as the simple Tobin's *Q* (similar to market-to-book ratio), and is included because research suggests that firms valued poorly on the stock markets may manipulate reports in order to convince investors of growth prospects (Butler et al. 2007; Efendi et al. 2007; Graham et al. 2008). Data are obtained from the Compustat Fundamentals database.

R&D Intensity

R&D intensity is included as a control, because there is variation across firms on the emphasis placed on innovation. It is measured as the ratio of R&D expenses to the book value of common equity as stated in firm's balance sheet. It indicates the extent to which the firm is willing to invest in R&D relative to its net assets (assets minus liabilities). R&D investment is usually geared toward the external product market, rather than the internal operations (Chakrabarty et al. 2008; Green et al. 2007). Nonetheless, there is a possibility of spillover, wherein innovation for product markets external to the firm can spillover into operational innovation and financial innovation within the firm, which are the incentives for related diversification and unrelated diversification, respectively. Data are obtained from the Compustat Fundamentals database. R&D expense is frequently missing from Compustat, because it reported only when it is ''material'' and exceeds 1 % of sales; accordingly, missing values were treated as having zero R&D expense (Durnev and Kim 2005; Griliches 1987, p. 25).

CEO Salary

CEO salary is included as a control, because the literature suggests that CEO compensation can influence corporate diversification strategies and fraudulent reporting (Efendi et al. 2007; Zhang et al. 2008). Data are obtained from the Compustat Executive Compensation (ExecuComp) database. This database has less overlap with the key databases needed for this study (i.e., KLD, Compustat Segments, and USGAO). Hence, only for this variable, missing data are allowed and included after mean substitution. This is because excluding firms with missing data for this variable would reduce the sample size substantially. An alternative would be to exclude this variable altogether, and doing so does not alter the results of this study.

Sarbanes–Oxley

A Sarbanes–Oxley dummy variable is used to control for the Sarbanes–Oxley Act that became effective on 30 July 2002. It has a value of 0 for restatement event dates before 30 July 2002 and a value of 1 for restatement event dates after 30 July 2002.

Results

Table 2 provides the correlations. Table 3 provides the logistic regression results with probability of fraudulent reporting as the dependent variable. The variables are included in hierarchical steps: the control variables are entered in model A1, the predictor variables are entered separately models A2 and A3 and entered together in model A4, the moderator variables are entered in model A5, and the interaction terms are entered separately in models A6 and A7 and entered jointly in model A8. Significance is reported using conservative two-tailed tests—results are reported as significant for $p < 0.10$, which is equivalent to $p < 0.05$ if one-tailed tests were to be used instead.

All the independent variables (control variables and hypothesized predictor variables) are lagged behind the dependent variable by 1 year to reflect the direction of influence suggested by the theoretical arguments (with the recognition that a significant influence does not necessarily prove causality). The independent variables are standardized (with mean = 0) to avoid multicollinearity issues. The

Table 2 Correlations

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variables												
(1) Fraudulent reporting	0.50	0.50	1									
Control variables												
(2) Firm size[a]	2.04	0.22	0.06	1								
(3) Firm performance	0.04	0.43	−0.06	0.20	1							
(4) Market valuation	2.19	1.54	−0.15	−0.44	−0.07	1						
(5) R&D intensity	0.08	0.15	−0.02	−0.32	−0.48	0.31	1					
(6) CEO salary[a]	0.63	0.20	0.04	0.35	0.17	−0.09	−0.03	1				
(7) Sarbanes–Oxley	0.91	0.28	0.00	−0.22	0.05	−0.14	−0.03	−0.03	1			
Predictor variables												
(8) Unrelated diversification	0.17	0.31	0.17	0.23	0.12	−0.17	−0.11	0.15	−0.12	1		
(9) Related diversification	0.25	0.39	−0.08	0.24	0.03	−0.12	−0.03	0.11	−0.03	−0.02	1	
Moderator variables												
(10) Contempt toward community	0.07	0.25	−0.06	0.36	0.10	−0.15	−0.06	0.25	0.00	0.01	0.11	1
(11) Benevolence toward community	0.08	0.34	−0.03	0.36	0.15	−0.05	0.03	0.23	−0.07	0.05	0.16	0.27

Sample size $N = 342$ firm-restatement-years (171 restatement events plus 171 matched controls). All dollar values are adjusted for inflation with base year as 2000. Independent variables winsorized at 1st and 99th percentiles to limit outliers (results are very similar without winsorizing)

[a] Firm size is measured as the natural log of total assets, where total assets are in millions of US dollars. CEO salary is in millions of US dollars

values of variance inflation factors (VIFs) in the regression analyses are well below the rule-of-thumb cut-off of 10, which suggest that there is no evidence of any multicollinearity problems.

The results are largely supportive of the hypotheses. Consistent with Hypothesis 1a, unrelated diversification has a significantly positive influence on the probability of fraudulent reporting ($\beta = 0.368$ with $p < 0.01$ in step A2 of Table 3). It remains strongly significant in subsequent steps, including the final model ($\beta = 0.351$ with $p < 0.01$ in step A8 of Table 3). Further, consistent with Hypothesis 1b, contempt toward community significantly moderates the influence of unrelated diversification on probability of fraudulent reporting ($\beta = 0.332$ with $p < 0.05$ in step A6 and $\beta = 0.345$ with $p < 0.05$ in step A8). As shown in the logistic interaction plot in Fig. 2, the influence is more strongly positive when contempt toward community is high.

Consistent with Hypothesis 2a, related diversification has a significantly negative influence on the probability of fraudulent reporting ($\beta = -0.238$ with $p < 0.05$) in step A3 of Table 3. However, it weakens in significance from $p < 0.05$ to <0.10 when unrelated diversification and other terms are simultaneously included (in steps A4–8 of Table 3). Hence, overall, the support for Hypothesis 2a is weak. Nonetheless, consistent with theoretical arguments of this study, the influence of a firm's related diversification should be interpreted in the light of its interaction with the firm's benevolence toward community. Consistent with Hypothesis 2b, benevolence toward community significantly moderates the influence of related diversification on probability of fraudulent reporting ($\beta = -0.563$ with $p < 0.05$ in step A7 and $\beta = -0.565$ with $p < 0.05$ in step A8). As shown in the logistic interaction plot in Fig. 2, the influence is more strongly negative when benevolence toward community is high.

Post Hoc Analyses

Table 4 provides a post hoc analysis: the frequency distribution of the sample across (i) focal versus control groups and (ii) various levels (zero, greater than zero, and break ups of greater than zero levels) of each type of diversification (unrelated and related). It includes two graphs illustrating levels of either type of diversification on the x axes and the percentage difference in frequency (between firms belonging to the focal group versus the control group) on the y axes. A positive percentage difference indicates that there would be a greater percentage of firms in the focal group rather than the control group for a given level of a given diversification type. A negative percentage difference indicates that there would a greater percentage of firms in the control group rather than the focal group for a given level of a given diversification type.

The information illustrated in Table 4 is consistent with the theory presented in this paper. It suggests that unrelated diversification and related diversification influence the probability of fraud in opposing directions. First, it suggests that unrelated diversification is positively associated with fraudulent reporting. That is, if a firm has higher levels of ''unrelated diversification,'' then one can predict that it is more likely to belong to the focal (fraudulent reporting) group rather than the

Table 3 Influence of corporate diversification strategies and community engagement on fraudulent reporting

	Parameter estimates β for *fraudulent reporting* as dependent variable (logistic regressions)								Support
	A1	A2	A3	A4	A5	A6	A7	A8	
Intercept	−0.006	0.000	−0.007	−0.001	−0.000	−0.007	0.046	0.043	
Controls									
Industry and year dummies	✔	✔	✔	✔	✔	✔	✔	✔	
Firm size	0.041	0.015	0.102	0.042	0.085	0.080	0.066	0.064	
Firm performance	−0.198	−0.220†	−0.207†	−0.229†	−0.207†	−0.219	−0.176	−0.186	
Market valuation	−0.356*	−0.321*	−0.368*	−0.334*	−0.328*	−0.335*	−0.311*	−0.314*	
R&D intensity	−0.088	−0.056	−0.102	−0.072	−0.043	−0.073	−0.043	−0.074	
CEO salary	0.087	0.074	0.097	0.084	0.121	0.155	0.104	0.141	
Sarbanes–Oxley	−0.076	−0.095	−0.091	−0.107	−0.106	−0.171	−0.141	−0.201	
Predictors									
Hypothesis 1a unrelated diversification		0.368**		0.348**	0.342**	0.356**	0.334**	0.351**	Yes
Hypothesis 2a related diversification			−0.238*	−0.206†	−0.201†	−0.203†	−0.245†	−0.226†	Yes
Moderators									
Contempt toward community					−0.158	−0.192	−0.155	−0.207	
Benevolence toward community					−0.033	0.017	0.127	0.194	
Interaction effects									
Hypothesis 1b unrelated diversification × contempt toward community						0.332*		0.345*	Yes
Hypothesis 2b related diversification × benevolence toward community							−0.563*	−0.565*	Yes
Prediction accuracy (% concordant)	57.9	62.1	58.8	62.8	63.6	64.6	64.2	65.1	
Pseudo (Nagelkerke) R^2	0.045	0.078	0.060	0.088	0.094	0.112	0.124	0.141	
Hosmer and Lemeshow goodness of fit test: χ^2	7.85	3.90	9.60	4.11	10.06	7.08	5.98	6.59	
(… Non-significance indicates good fit) p value	(0.45)	(0.87)	(0.29)	(0.84)	(0.26)	(0.53)	(0.65)	(0.58)	

Sample size = 342 firm-restatement-years (171 restatement events plus 171 matched controls). Analysis uses event-study procedures. Independent variables are centered (mean = 0) and standardized and lagged behind dependent variable by 1 year. Max VIF = 2.62, no evidence of multicollinearity. Independent variables winsorized at 1st and 99th percentiles to limit outliers (results are very similar without winsorizing). Dummies for year and industry are included in regressions as controls. Dollar values are adjusted for inflation with base year as 2000. Fraudulent reporting is measured in logistic regression as follows: [1 = event announcing need to restate fraudulent reports, 0 = non-restating matched control firm for event]

** $p \leq 0.01$; * $p \leq 0.05$; † $p \leq 0.10$ (conservative two-tailed tests)

control group. Second, it suggests that related diversification is negatively associated with fraudulent reporting. That is, if a firm has higher levels of ''related diversification,'' then one can predict that it is more likely to belong to the control group rather than the focal (fraudulent reporting) group.

Interestingly, if a firm has no diversification of either type (unrelated diversification, DU = 0.0 and related diversification, DR = 0.0), then the result suggests equivalence—a near null effect. That is, one can predict that there is almost equal likelihood of the firm belonging to either the focal group or the control group. In the future, if this firm moves decisively toward unrelated diversification (DU >0.5, with DR $\sim$ =0), then one can predict a greater likelihood of fraud. Alternatively, if this firm moves decisively toward related diversification (DR >0.5, with DU $\sim$ =0), then one can predict a lower likelihood of fraud.

In addition, post hoc analyses were carried out to test for interactions that were not hypothesized. That is, the post hoc analyses tested whether the probability of fraudulent reporting was influenced by the interaction between (1) benevolence toward community and unrelated diversification, and (2) contempt toward community and related diversification. First, post hoc analysis suggests that benevolence toward community is not a significant moderator of the influence of unrelated diversification on fraudulent reporting—the interaction term has $\beta = -0.030$ with $p = 0.85$. Second, post hoc analysis suggests that contempt toward community is not a significant moderator of the influence of related diversification on

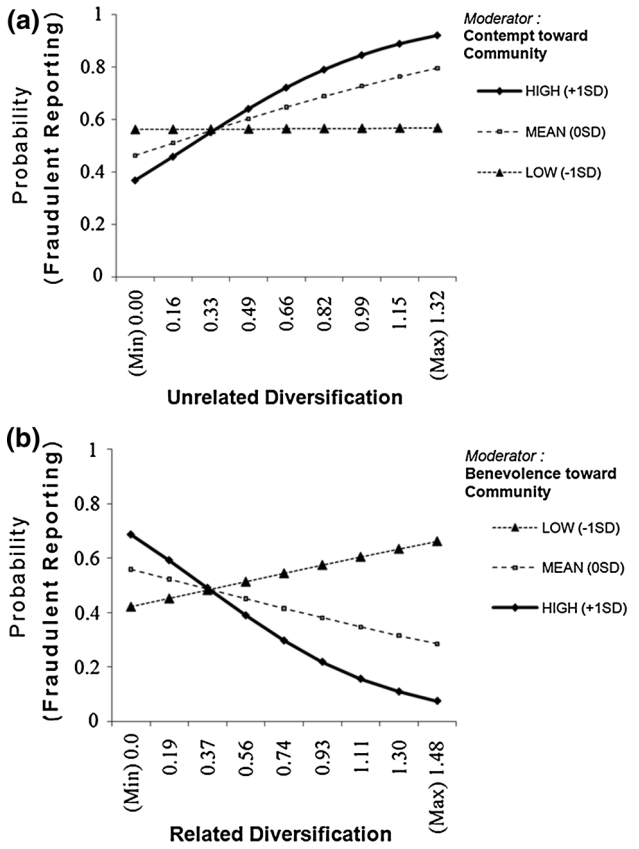


Fig. 2 Logistic interaction plots: probability of fraudulent reporting

fraudulent reporting—the interaction term has $\beta = -0.013$ with $p = 0.93$. These non-significant findings lend further credence to the arguments that were made in this study. It is increasingly clear that contempt toward community is an important moderator of the influence of unrelated diversification on fraudulent reporting, whereas benevolence toward community is an important moderator of the influence of related diversification on fraudulent reporting.

Discussion

Fraudulent reporting remains an intractable and expensive problem for firms, stock market investors, and the society in general. With occurrences of fraudulent reporting increasingly coming to light during the past two decades, individuals responsible for preventing fraudulent reporting, such as management, board of directors, and auditors, need advice on this issue more than ever. Results suggest that unrelated diversification can result in fraudulent reporting. This is more likely when the moral character of the firm is driven by a conscienceless financial self-interest motive, as implied by the firm's contempt toward community interests. In contrast, related diversification can reduce the probability of fraudulent reporting. This is more likely when constituents within the firm view themselves as moral citizens, as implied by the firm's benevolent nature.

Contributions and Implications

This study makes several important contributions to the literature. First, this research study cuts across academic disciplinary lines by combining literatures from strategic management, business ethics, and finance/accounting domains. It examined antecedents of financial fraud in terms of organizational aspects (firm's diversification) and moral aspects (firm's treatment of community) and explained how the corporate level strategy and the moral character of firms interact to influence fraudulent behavior.

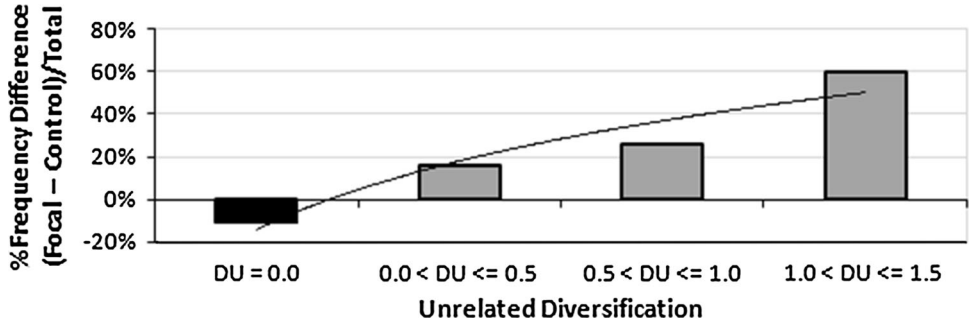
Second, this study showed how and when "innovation" within an organization prevents rather than contributes to fraudulent behavior. Financial innovation within a firm's internal capital market (which is the primary incentive for unrelated diversification) can promote fraudulent reporting, especially when the firm's moral character exhibits contempt toward community. In contrast, a focus on process/technology innovation for the productive sharing of activities and competencies among closely tied product divisions (which is the primary incentive for related diversification) can help prevent fraudulent behavior, especially when the firm's moral character exhibits citizenship/altruism.

Third, this study showed that a greater emphasis on related diversification (and reduced emphasis on unrelated diversification), in conjunction with the development of a benevolent moral character, could act as a fraud prevention method. Fraud prevention is likely to be better sustained when it is embedded structurally as part of the firm's corporate level strategy—an emphasis on related diversification is an appropriate structural solution. The influence of type of diversification on fraudulent reporting is an aspect that was hitherto not investigated in the literature, making the theoretical underpinnings of fraudulent behavior incomplete. This important gap in the literature is addressed in this study, by showing that the type and extent of diversification play an important role in influencing fraudulent behavior.

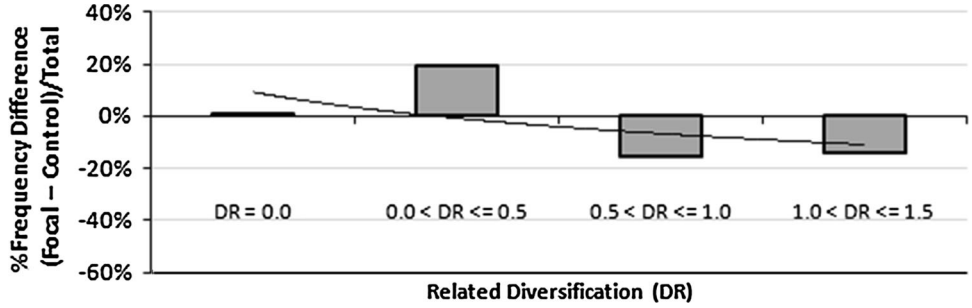
Fourth, while the literature has always maintained that one of the reasons that managers engage in unrelated diversification is to obfuscate poor performance (i.e., averaging out performances across better performing and poor performing divisions), this study adds a nuance to that argument. It suggests that unrelated diversification may also provide an opportunity to engage in fraudulent behavior in order to obfuscate poor performance. The very basis for unrelated diversification, as per the strategic management literature, has been the ability to create value through financial innovation. It has always been believed that this financial innovation within unrelated diversified firms would be done within ethical boundaries, but this study shows that

Table 4 Post hoc analysis: frequency distribution

	Unrelated diversification (DU) Frequency distribution: number of firm-events					Total
	DU = 0.0 (No unrelated diversification)	DU > 0.0 (Has unrelated diversification)	DU > 0.0 distribution			
			0.0 < DU ≤ 0.5	0.5 < DU ≤ 1.0	1.0 < DU ≤ 1.5	
From *focal* group (fraud)	107	64	22	34	8	171
From matched *control* group	133	38	16	20	2	171
Total	240	102	38	54	10	342
Difference [focal − control]	−26	+26	+6	+14	+6	
Frequency difference (% of total)	−10.83	+25.49	+15.79	+25.93	+60.00	



	Related diversification (DR) frequency distribution: number of firm-events					Total
	DR = 0.0 (No related diversification)	DR > 0.0 (Has related diversification)	DR > 0.0 distribution			
			0.0 < DR ≤ 0.5	0.5 < DR ≤ 1.0	1.0 < DR ≤ 1.5	
From *focal* group (fraud)	106	65	31	22	12	171
From matched *control* group	104	67	21	30	16	171
Total	210	132	52	52	28	342
Difference [focal − control]	+2	−2	+10	−8	−4	
Frequency difference (% of total)	+0.95	−1.52	+19.23	−15.38	−14.29	



ethical boundaries may be breached. Unrelated diversification provides opportunity and incentives for financial innovation among product divisions that are weakly linked, which may end up as financial fraud when moral character in the firm is weak. In contrast, related diversification helps focus the energies of managers on value creation from innovations in operational processes and technologies, that is, innovations that help improve the sharing of operational activities and competencies—a need that arises from the tight linkages among the product divisions within a related diversified firm.

Fifth, this study contributes to the literature on corporate social responsibility (CSR) and sustainability. Researchers, especially those relying on the KLD database, have distinguished between CSR (or sustainable practices) and corporate social irresponsibility (or unsustainable practices) and have noted that it is possible for firms to be responsible (in certain aspects) and irresponsible (in certain other aspects) at the same time (Strike et al. 2006). Responsibility/sustainability-related data in the KLD database encompass the extensive gamut of strengths under the categories of environment, community, employee-relations, diversity, governance, and product strengths (Chakrabarty and Wang 2012, 2013). Irresponsibility/unsustainability-related data in the KLD database encompass the extensive gamut of concerns under the categories of environment, community, employee-relations, diversity, governance, and product concerns. In this study, the moderators were solely about the ''community'' category—to reflect moral character of a firm in terms of its focus on conscienceless self-interest (with damage inflicted on the interests of people outside the firm) versus its focus on being a responsible citizen within the larger community. Hence, KLD community strengths (e.g., charitable giving, support for nonprofit, international charity, support for housing, support for education, volunteer programs, etc.) and KLD community concerns (e.g., investment controversies, negative economic impact, etc.) were used as measures. As previously explained, they were used to measure a firm's benevolence and contempt toward the community, respectively.

The results of this study, therefore, allow us to extend the literature on CSR and sustainability. For instance, the results suggest that when the level of contempt toward the community is low, there is a weakening of the deleterious influence of unrelated diversification on fraudulent reporting. Hence, an obvious solution for firms that have high levels of unrelated diversification—and want to keep it that way—is to develop a moral character that is not contemptuous toward the community. Though post hoc analysis suggested that benevolence toward community does not significantly weaken the influence of unrelated diversification on fraudulent reporting, it was clear from the earlier results that contempt toward community significantly strengthens the influence. Hence, at the very least, unrelated diversified firms should work hard to minimize any contempt toward the community. This would weaken the possibility that attempts to create value via financial innovation would end up as financial fraud. At the same time, it would be great if future research can discover alternative methods to weaken the negative influence of unrelated diversification on fraudulent reporting. For instance, future research should investigate if certain compensation incentive mechanisms or institutional regulations can help and ,therefore, supplement the role of CSR.

Finally, there are avenues for future research that can significantly extend this line of research. For instance, recent research suggests that CEOs are more likely to be fired if it is found that the firm had disclosed fraudulent financial reports (Arthaud Day et al. 2006). An avenue for future research could be to investigate the dynamics of changes made to corporate diversification strategies after a CEO is fired due to fraudulent reporting and is replaced by a successor. Further, the US economy and much of the world economy have entered into a sudden and severe crisis in late 2008 and 2009, and this offers another avenue for future research. It is unclear if the economic crises would strengthen or weaken the effects hypothesized in this study, which is a matter that future research should investigate.

Limitations and Future Research

This study has its share of limitations. First, the measure of the dependent variable is limited by what has been exposed in the public domain. Some firms engaging in fraudulent actions may have been clever enough to slip under the radar (i.e., managed to evade being caught/exposed), and, thus, their fraudulent actions would not have been recorded in the public domain. A fact, however, is that fraudulent actions tend to be eventually exposed. As Raju (2009, p. 3), the founder, CEO, and Chairman of Satyam Computers, noted after being exposed for fraud: "What started as a marginal gap between actual operating profit and the one reflected in the books of accounts continued to grow over the years. It has attained unmanageable proportions as the size of company operations grew significantly… Every attempt made to eliminate the gap failed… It was like riding a tiger, not knowing how to get off without being eaten." Hence, as newer instances of fraudulent behavior become known, future research should test the arguments presented in this study.

Second, there may be alternative explanations for the hypotheses suggested in this study (Arthaud Day et al. 2006; Efendi et al. 2007; Kedia and Philippon 2009; Palmrose et al. 2004; USGAO 2007). For example, the leader may increase unrelated diversification to benefit himself/herself (as it has been shown to lead to lower employment risk, higher compensation, etc., for the leaders) and thereby have a personal stake in creating an environment that encourages fraudulent behavior (Hill 1994; Kochhar and Hitt 1998; O'Connor et al.

2006; Park 2003; Zhang et al. 2008). Third, a limitation is that not every element of the theoretical arguments/mechanisms put forth in the paper was measured. Various mechanisms were suggested in the paper as part of theory development, which helped lead to the hypotheses. Much of it was conjecture/speculation, and that is how theory/model building has traditionally been in the social sciences. The lack of measures for the same, however, presents opportunities for future research. Future research should further investigate the intricacies and various alternative explanations of why, how, and when corporate level strategies influence unethical behavior (Chakrabarty and Bass 2013a, b, c).

Conclusion

The corporate level strategies considered in this study were unrelated diversification and related diversification. Results suggest that corporate level strategies can result in fraudulent behavior, contingent on the moral character of the firm. The moral character of a firm was captured by its contempt toward community and benevolence toward community. A focus on unrelated diversification can contribute to financial fraud by focusing the energies of managers within the firm on financial manipulation. In contrast, a focus on related diversification can help prevent financial fraud by focusing the energies of managers on improving ways for the mutual sharing and monitoring of activities within the firm.

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