Corporate fraud and the value of reputations in the product market

William C. Johnson [a], Wenjuan Xie [b], Sangho Yi [c,*]

[a] Sawyer Business School, Suffolk University, Boston, MA 02108, United States
[b] Peter T. Paul College of Business and Economics, University of New Hampshire, Durham, NH 03824, United States
[c] Sogang Business School, Sogang University, Seoul 121-742, South Korea

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ABSTRACT

We examine the consequences of a damaged reputation for fraud firms in the context of product markets. We generate three direct measures of reputational damage and find evidence that customers impose significant reputational sanctions on fraud firms. Using yearly transactional data to track the business dealings of fraud firms with large customers, we show that customer reputational sanctions result in a decline in the firm's operating performance through increased selling costs, as suggested by previous studies of corporate reputation. We further find that reputational losses estimated from an event study approach reflect the actual decrease in the revenue of a fraud firm, which suggests that the event study approach yields a reliable measure of reputational losses. Finally, we document that these findings are the result of a damaged reputation following the detection of fraud rather than an effect of adverse information revealed upon fraud detection.

1. Introduction

The consequences of a damaged reputation that results from corporate misconduct have been investigated extensively in previous studies (Alexander, 1999; Gande and Lewis, 2009; Karpoff and Lott, 1993; Karpoff et al., 2008a, 2008b). The existence of reputational losses associated with financial stakeholders, such as lenders and investors, is also well documented in the literature (Graham et al., 2008; Murphy et al., 2009). However, there is limited evidence of the imposition of significant reputational losses from financial misconduct by outside stakeholders of the firm apart from lenders and investors.[1]

Several theoretical studies predict that a damaged reputation has real consequences for fraud firms in the context of the product market. For instance, financial misconduct should have a large effect on the firm's contracting with customers (Klein and Leffler, 1981). Customers may be apprehensive in dealing with a firm that has dishonest management, thus, reducing their demand for the fraud firm's products. Hereafter, we refer to this unfavorable change in customer behavior as a customer reputational sanction.[2] This argument leads to the following questions that we will subsequently examine in this paper: Does financial misconduct cause the firm's customers to re-evaluate their business relationships with the firm, leading the fraud firm to

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* Corresponding author. Tel.: +82 2 705 8864; fax: +82 2 705 8180.
  E-mail addresses: wcjohnson@suffolk.edu (W.C. Johnson), wenjuan.xie@unh.edu (W. Xie), yisangho@sogang.ac.kr (S. Yi).
  [1] Where financial misconduct implies a vague notion of wrongdoing related to a firm's financial activities, fraud implies that the firm has made an explicit attempt to mislead for financial gains. While we recognize that there is a difference between financial misconduct and fraud, we use the terms interchangeably in our writing.
  [2] There is anecdotal evidence supporting this argument. For instance, after it was accused of fraud, Splash Technologies disclosed that its "Sales, general, and administrative expenses are … expected to increase in future periods as the Company increases its sales support…to expand its presence in sales channels other than Xerox and Fuji…," both of which were its large customers at the time of the fraud. See Splash Technologies quarterly report, August 14, 2000. http://www.sec.gov/Archives/edgar/data/1020394/000091205700037178/0000912057-00-037178.txt.

lose sales and bear the costs of building new customer relationships? Are these costs significant enough to become economically meaningful for fraud firms?

Previous studies provide incomplete answers to these questions. Most evidence about reputational losses comes from the event study approach that is implicit in Peltzman (1981) and Jarrell and Peltzman (1985), and explicit in Karpoff and Lott (1993). These studies estimate reputational losses as the change in firm value when a fraud is first revealed minus the legal penalties from the fraud.[3] However, there is limited direct evidence on whether the reputational losses imposed by customers and estimated from the event study approach reflect actual increases in the firm's costs or decreases in its revenues.

The investigation of possible reputational sanctions imposed by customers is empirically challenging because these sanctions coincide with the normal business exchange between a firm and its customers. Thus, when customers of fraud firms impose less favorable terms of trade on their fraud firm suppliers (Karpoff, 2010), these changes are typically hard to detect from the outside. Ideally, researchers need access to detailed transaction-level data about a series of business exchanges between the fraud firm and its customer around the time of fraud detection.

To overcome this empirical hurdle, we take a novel approach, which allows us to quantitatively measure the intensity of customer reputational sanctions based on the extensive data on the customer–supplier bilateral trading history. For this purpose, we utilize the COMPUSTAT segment level database, which contains comprehensive information about trading between a firm and its large customers. FAS No. 131 disclosure rules require firms to reveal all the customers that are responsible for over 10% of their annual revenues. The COMPUSTAT segment level database contains detailed supplier–customer data gleaned from these disclosures filed with the Securities and Exchange Commission (SEC), including information on customers that account for more than 10% of sales, along with data on the actual sales to the large customers.[4] This database is extensively used in previous studies, including Fee and Thomas (2004), Fee et al. (2006), and Hertzel et al. (2008).[5]

Based on previous studies examining corporate reputations, including Klein and Leffler (1981), we construct three measures of the intensity of customer reputational sanctions on fraud firms. Our first measure is the likelihood of a break-up in the business relationship between the fraud firm and its large customer after the detection of fraud. We examine this likelihood using a Hazard model to analyze the duration of the relationship as obtained from the firm-large customer match obtained from the COMPUSTAT segment level database.[6] Our second measure is from the perspective of the fraud firm, namely, decreases in fraud firm's sales dependency on its large customers. Our third measure is from the perspective of the customer, namely, decreases in the large customer's cost of goods sold (COGS) attributed to a fraud firm. Throughout the paper, we repeat our analysis using these three measures to ensure robustness of our results.

Our empirical strategy is to calculate these three measures each year and keep track of them over time after the first revelation of the firm's financial misconduct, while searching for any significant changes in customer purchasing policy associated with the fraudulent suppliers' damaged reputation. We are particularly interested in showing that this change in customer behavior is the direct cause of substantial declines in the fraud firm's wealth as found in prior studies. For instance, in our sample of fraud firms, the likelihood of termination of the relationship increases by 5.95% in the year after the detection of fraud and the relationship length is shortened by an average of 0.42 years. In addition, the percent of sales of the fraud firm to the large customer declines by a mean (median) of 4.10% (1.00%) and the percent cost of goods sold to large customers for the firm decreases by a mean (median) of 5.37% (0.03%) after a class action suit is filed. When we convert the aforementioned ratios to a dollar amount, a 1% decrease in the fraud supplier's sales dependency translates to a median loss of $1.23 million in net income. These calculations allow us to compare the estimated dollar costs resulting from these reputational sanctions with the financial penalties imposed by the SEC. Consistent with the prior literature (Karpoff et al., 2005), we find that the reputational costs are large compared to the direct sanctions of the SEC and the Department of Justice (DOJ).

With the help of our three direct measures, we examine several questions related to damaged corporate reputations and customer reputational sanctions. First, we aim to establish the causal relationship between the corporate financial misconduct, customer reputational sanctions, and deteriorating operating performance of the fraud firm.[7] For this purpose, we examine whether significant customer reputational sanctions follow the revelation of financial misconduct by the fraud firm and whether customer reputational sanctions cause a substantial decline in the performance of the fraud firm. Second, we examine whether customers rationally choose the intensity of reputational sanctions by considering the benefits and costs of reputational sanctions. Third, we perform our analysis from the customer's perspective to examine the impact of fraud on a firm's customers. Fourth, we examine whether the reputational losses estimated from the event study approach can be explained by the customer sanctions that result in an increase in firm costs or a decrease in firm revenues.

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[3] The foundation of this event study approach is the observation that the decline in shareholder wealth around allegations of fraud tends to far exceed the financial penalties imposed on the firm by the SEC and the DOJ, which is interpreted as evidence of reputational losses resulting from the misconduct. For instance, Karpoff et al. (2005) state that "over 90% of the penalties imposed on firms committing frauds reflect lost reputation."

[4] We define a large customer as any firm that accounts for more than 10% of the fraud firm's sales, consistent with the disclosure requirements of FAS No. 131.

[5] Our choice of large customers of fraud firms as the subject of analysis for studying the product market's reputational sanctions rather than atomistic customers is justified in the previous literature. First, we choose large customers for whom we can exploit the data available in the COMPUSTAT segment level database. Second, Velikonja (2012) suggests that atomistic customers may be less able to impose effective reputational sanctions since naive atomistic customers may fail to implement an optimal response to the fraudulent disclosure. Sophisticated large customers may be better able to avoid this error.

[6] The use of a Hazard model has wide acceptance in the literature in examining time to bankruptcy models (Hillegeist et al., 2004) and time to relationship termination (Fee et al., 2006; Johnson et al., 2013). Our calculation procedure follows that of several studies, including Fee et al. (2006) and Johnson et al. (2013), which utilize relationship termination rates and the percent of firm sales.

[7] We focus on the operating performance of the fraud firms to avoid several problems of the event study methodology, including contamination from reputational effects across firms (Gande and Lewis, 2009) and the ambiguity of the exact date when fraud information becomes public (Karpoff et al., 2012).