

**THE INFLUENCE OF ORGANIZATIONAL SPEED ON
ORGANIZATIONAL MISHAPS. THE MODERATING
ROLE OF INDUSTRY DYNAMISM***

* I am indebted to Professor Pratima Bansal (Ivey Business School, Western University, London, Ontario, Canada) for her advice and invaluable comments through the development of a preliminary version of this paper.

THE INFLUENCE OF ORGANIZATIONAL SPEED ON ORGANIZATIONAL MISHAPS. THE MODERATING ROLE OF INDUSTRY DYNAMISM

Matilde Morales Raya
Inmaculada Martín Tapia
University of Granada

ABSTRACT

Previous studies have shown the importance of organizational speed for firms' competitive advantage and financial performance. However, more recent studies have also demonstrated that speed can be detrimental for companies. Drawing on the managerial cognitive perspective, we argue that organizational speed can contribute to organizational mishaps. We focus on organizational speed in relation to firms' mergers and acquisitions and strategic alliances. Based on a sample of 331 companies in the United States over the period 2003-2009, our findings suggest that organizational speed has a positive influence on firms' mishaps. Furthermore, we find that this effect is stronger when firms operate in dynamic environments.

Keywords: organizational speed, organizational mishaps, industry dynamism, managerial cognitive perspective, cognitive limitations.

1. Introduction

Globalization has been driven by a vertiginous advent of new techniques and technologies that have amplified the importance of taking fast action (Barkema, Baum & Mannix, 2002). Rankings such as the *Most Respected Fast Moving Consumer Goods Companies* have emerged to reward firms that move fast, and the popular press *Fast Company* magazine counsels on how to speed up (Perlow, Okhuysen, & Repenning, 2002). Organizational speed, which refers to “the frequency (number) of activities in some unit of social time” (Bluedorn, 2002: 104), has also been embedded in scholarly research on decision making (e.g., Baum & Wally, 2003; Forbes, 2005; Kownatzki et al., 2013; Perlow et al., 2002), product innovation (e.g., Atuahene-Gima, 2003; Kessler & Chakrabarti, 1996), post-merger integration (Bauer & Matzler, 2014; Homburg & Bucerius, 2006), and speed of response (e.g., Bansal, 2003; Más-Ruiz, Nicolau-González, & Ruiz-Moreno, 2005; Slawinski & Bansal, 2012).

Some prior studies on organizational speed have shown its positive effect on firms’ financial performance based on first moving advantages (e.g., Eisenhardt, 1989; Baum & Wally, 2003; Judge & Miller, 1991). More recent studies, however, have argued that organizational speed can also be detrimental for organizations (e.g., Forbes, 2005; Perlow et al., 2002; Slawinski & Bansal, 2012). For example, Perlow and colleagues (2002) illustrated that too much speed can lead a company to a “speed trap,” where organizational members believe that they had to make ever faster decisions to survive, but this emphasis on speed eventually resulted in organizational decline. Forbes (2005) showed that bankruptcies were more common among companies with a high decision speed. These studies are insightful because they highlight the downsides of organizational speed. However, in addition to the extreme situations of organizational

decline and bankruptcy, firms experience a wide variety of organizational mishaps that may be influenced by speed.

Organizational mishaps are organizationally induced events that can threaten the viability of organizations (Pearson & Clair, 1998), such as groundwater contaminations, product recalls and boycotts (e.g., Pearson & Clair, 1998), and product tampering (e.g., Greening & Johnson, 1996). Mishaps can result in a loss of profit, injuries, damage, the deterioration of the firm's reputation, or even loss of life (Greening & Johnson, 1996). Prior research on the causes of mishaps have identified that cognitive limitations, such as difficulties in managing information, and the use of heuristics such as knowledge structures and the less careful consideration of alternatives (Bazerman, 2006; Schwenk, 1996) are related to biases and can result in mishaps (e.g., Halpern, 1989; Turner, 1976). This prior work, however, is silent on organizational speed, which can motivate the use of heuristics and be a centerpiece in understanding mishaps.

The purpose of this paper is to address this research gap by empirically examining the effect of organizational speed on firms' mishaps. We rely on a cognitive perspective of mishaps and argue that organizational speed can take managers' cognitive limitations to the limit and accentuate the use of heuristics. As a result, the potential for biases and, in turn, for mishaps could increase. In addition, we suggest that in dynamic environments, managers would rely on heuristics even more heavily because of the unusual time pressure that managers face in these contexts.

In this study, we examined speed at the organizational level of analysis in relation to two strategic processes: mergers and acquisitions (hereafter referred to as M&As) and strategic alliances. We focus on organizational mishaps related to social aspects. We tested our hypotheses on a sample of 331 companies included in 500 S&P

for the period 2003-2009. Our findings show that organizational speed is positively related to organizational social mishaps. Furthermore, the positive effect of strategic alliances on mishaps is stronger in dynamic environments.

This paper makes several contributions. First, our study represents a further step in the identification of the causes of organizational mishaps. Some studies have relied upon aspects of time in connection with mishaps. For example, Salter (2013) argued that there is a positive relationship between CEO short-term incentives and financial misrepresentation. Greening and Johnson (1996) found that firms' acquisition activity was linked to more crises, and CEO turnover helped firms deflect organizational crises. However, the specific notion of organizational speed, which could be a keystone for explaining mishaps, has not been articulated. In addition, most studies on organizational mishaps are theoretical or based on a comparison of case studies. Case studies are insightful, but the generalization of their conclusions is difficult. Our quantitative analysis represents an important step forward in identifying speed as a corporate-level determinant of firms' mishaps and in providing quantitative evidence for a larger sample of companies that also belong to a wide variety of industries. Studying a range of industries also allowed us to identify industry dynamism as one of the factors that strengthens the effect of speed on mishaps. Furthermore, in contrast with previous studies that focus on certain mishaps, we examine a wide range of organizational social mishaps related to corporate governance, community, diversity, employees, the natural environment, human rights, and product issues.

Second, our findings add to the incipient stream of research that highlights the potential pervasive effects of speed. We attempt to understand the effect of speed on organizational outcomes that are different from financial performance and from organizational survival, which has been the focus of prior work.

2. Theoretical Background

2.1. The Managerial Cognitive Perspective

From the managerial cognitive perspective, managers are considered information workers (Walsh, 1995). “They spend their time absorbing, processing, and disseminating information about issues, opportunities, and problems” (Walsh, 1995: 280). Information processing allows managers to interpret their environments and to enable corporate strategy formulation and implementation accordingly.

From this perspective, managers’ interpretation of their environment is influenced by cognitive limitations and heuristics. One of these cognitive limitations is the limited capacity to process information (Simon, 1976; Miller, 1956). “Because of the limits of human intellectual capacities in comparison with the complexities of the problems that individuals and organizations face, rational behavior calls for simplified models” (March & Simon, 1993: 190). Those simplified models are heuristics that consist of simplifying strategies or rules of thumb that help managers process information and make faster decisions (Bazerman, 2006; Schwenk, 1996). Some examples of heuristics include knowledge structures (Walsh, 1995) and the less careful consideration of alternatives (Benson & Beach, 1996).

Although managers are supposed to be sophisticated information processors, they also rely on certain types of heuristics because their information-processing demands are greater and their decisions much more complex. Many times, those efficient shortcuts in processing information lead to efficient decisions (e.g., Bingham, Eisenhardt, & Furr, 2007). Other times, however, such shortcuts can lead to cognitive biases (Tversky, & Kahneman, 1974). Cognitive biases are the inappropriate application

of a heuristic to a situation when making a decision (Bazerman, 2006). Previous studies have examined how some organizational biases can result in dysfunctional decisions and even in organizational mishaps (e.g., Halpern, 1989; Tuner, 1976). We next review the determinants of organizational mishaps that have been related to cognitive limitations, heuristics, and biases.

2.2. Prior Research on the Determinants of Organizational Mishaps from a Cognitive Perspective

In this paper, we define organizational mishaps as organizationally induced events that can threaten the viability of organizations (Pearson & Clair, 1998). We use the term mishaps to include events that have been previously studied as organizational crises or corporate illegality. Most prior work on organizational crises has primarily focused on crisis management (e.g., Antonacopoulou & Sheaffer, 2014; Lin et al., 2006; Pearson, 2010; Pearson & Clair, 1998; Sheaffer & Mano-Negrin, 2003; Shrivastava, 1993; Smart & Vertinsky, 1977). Some research on corporate illegality has assumed that corrupt behavior is intentional (Baucus & Near, 1991; Harris & Bromiley, 2007; Mckendall & Wagner, 1997). Using the umbrella term organizational mishaps, we aim to go beyond these assumptions and focus on a wide range of social mishaps that can fall into any of these categories.

Examples of mishaps include deceptive advertising (e.g., Szwajkowski, 1985), violations of environmental laws (e.g., Mckendall & Wagner, 1997), product recalls and boycotts (e.g., Pearson & Clair, 1998), product tampering (e.g., Greening & Johnson, 1996), and financial misrepresentation (e.g., Harris & Bromiley, 2007). These events can result in a loss of profit, injuries, damage, deterioration of the reputation and image, or even loss of life (Greening & Johnson, 1996). Because we focus on mishaps that are

organizationally induced, financial crises and crisis situations caused by earthquakes, floods, hurricanes, tsunamis, and other natural disasters are beyond the scope of this paper. We next provide an overview of the determinants of organizational crises and corporate illegality from a cognitive perspective.

Prior research on organizational crises has identified cognitive processes and limits as one of the determinants of these crises. For example, Halpern (1989) illustrated a series of cognitive biases that can create errors in decision making; such biases led to a catastrophe in an aircraft carrier of high reliability, the U.S. Navy. Weick (1988, 1989) analyzed the role of sense making and mental models in generating a crisis. He illustrated that commitment, cognitive capability, and expectations adversely affect crisis sense making and the severity of a crisis.

Other researchers have linked shortcomings in the ability to process information to crises and organizational decline (e.g., Turner, 1976; Weitzel & Jonsson 1989). For example, Turner (1976) illustrated how difficulties in handling and grasping disjunct information were precursors of a major disaster in the village of Aberfan, in Wales. In 1966, a colliery tip on a mountainside slid down into the village, engulfing a school and killing people. Although information about the procedures to stabilize tips had been available for many years and there was a document anticipating the causes of the disaster, such information was available only to a small group of engineers. Turner reported that disagreements about the state of the tip and the nature of earlier slips impeded people from seeing the potential danger. Another disaster examined by Turner was the accident between a large road transporter and an express train at Hixon Level Crossing in 1968. In this case, information about the operation of a new automatic rail crossing was widely available. However, individuals in the British Rail department failed to “bring together creatively the information they all had, or had access to, in a

way that would have make clear the danger of the new crossings to a long slow-moving vehicle that was in the middle of an automatic half-barrier crossing when it began to close” (Turner 1976: 386). Weitzel and Jonsson (1989) also looked at the role of information processing in their conceptual framework of organizational decline. The authors showed that because of cognitive biases, leaders did not interpret information that was available and took inappropriate action that led the organization to a crisis.

Cognitive shortcomings and corporate illegality have also been associated with each other. For example, Mishina et al. (2010) argued that biases such as loss aversion predicted illegal corporate behavior. Other studies have shown that cognitive biases and limitations can shape top management team (TMT) decision making and act as the mechanisms that lead TMTs to engage in illegal actions and/or create the conditions for organizational members to act illegally (e.g., Carpenter, Pollock, & Leary, 2003; Chatterjee & Hambrick, 2007).

The above review provides evidence for the role of managers’ cognitive limitations and biases as determinants of organizational mishaps. We next argue that organizational speed can take managers’ limitations to the limit and accentuate the use of heuristics. As a result, the potential for biases and, in turn, for mishaps could increase.

3. Hypotheses

3.1. The Relationship between Organizational Speed and Organizational Mishaps

Organizational speed refers to “the frequency (number) of activities in some unit of social time” (Bluedorn, 2002: 104). The number of strategic renewal actions (Volberda et al., 2001) and the number of foreign expansions (Vermeulen & Barkema,

2002) are some aspects of speed that have been examined in previous studies. Speed can take to the limit managers' ability to process information because it results in information overload and time pressure. To process large amounts of information on time, managers may be forced to rely heavily on heuristics that can lead to cognitive biases and, in turn, increase the likelihood of organizational mishaps. In this study, we focus on two fronts of organizational speed related to firms' strategic processes: M&As and alliances. We argue that organizational speed can contribute to organizational mishaps. We will first establish the link between speed, information overload and mishaps, and then, we will connect time pressure with mishaps.

Organizational speed results in information overload because of the quick succession of M&As and strategic alliances over a period of time. Such quick flow of strategic processes entails that the time to make decisions associated with M&As and alliances is necessarily and inevitably compressed. For example, the acquisition of a company includes many interdependent and complex subprocesses, such as selecting potential targets, exercising due diligence, entering into negotiations, considering financing, and making efforts to integrate (Hitt et al., 2001). Similarly, in the initialization stage of a strategic alliance, firms must negotiate the conditions of the agreement, set the short- and long-term goals, allocate accountability and responsibility, decide on the methods of cooperation and the experience-sharing mechanisms, and prepare the documentation associated with the alliance (Chao, 2011). All subprocesses related to M&As and alliances result in a substantial amount of information. Managers spend their time absorbing, processing, and analyzing that information to detect opportunities and problems and to make profitable decisions. Therefore, M&As and alliances following each other too rapidly can result in an enormous overflow of information. That magnitude of information is enlarged even if there are temporal

overlaps between several mergers, acquisitions and alliances. A wide range of information can increase the accuracy of managers' decisions. However, managers' information-processing capacity can also be exceeded because of information overload. Information overload occurs when "managers are confronted with more information than they can process at a given time" (Baron, 1998: 278).

To facilitate fast information processing, managers use heuristics such as knowledge structures. A knowledge structure is a "mental template that individuals impose on an information environment to give it form and meaning" (Walsh, 1995: 281). These structures can help process information quickly, but they can also limit managers' ability to understand that information accurately. Knowledge structures can be related to liabilities such as stereotype thinking, the ignorance of discrepant and potentially important information, and the inhibition of creative problem solving (Gioia, 1986). Halpern (1989) illustrated how the use of knowledge structures resulted in adverse outcomes by examining the grounding of a US naval carrier. He reported that the captain of the carrier was not able to identify that a flashing red light was signalling hazard because according to his mental map, the hazard of a shoal was well behind them. This misrepresentation of the signal was one of the main reasons that led to the grounding mishap. Thus, organizations that move very fast, through M&As and strategic alliances, may also rely on knowledge structures and increase their potential for biases and subsequent organizational mishaps.

Organizational speed also results in time pressure, which captures the urgency and time constraints associated with fast action. Time pressure can also motivate the use of heuristics, such as the examination of fewer alternatives, the less careful consideration of alternatives, or the simplification of decisions strategies to save time in making decisions (McGrath & Franziska, 2004). Although these heuristics may indeed

be highly efficient in saving time, they also increase the probabilities of disregarding pieces of information (McGrath & Franziska, 2004) that may be crucial to avoiding organizational mishaps. We argue that ignoring key information because of time constraints, derived from a quick succession of M&As and alliances, can result in misinterpreting the environment and in inappropriate decisions that lead to mishaps.

Turner (1976) also offers an example that illustrates how time pressure impeded the consideration of important information and was one of the reasons that led to a major disaster. He analyzed the causes of the fire of a holiday leisure complex at Douglas, Isles of Man, in August, 1973, which killed 50 of the approximately 3000 people inside. The leisure centre incorporated new types of construction materials and was built under time pressure because the second phase had to be completed in time for the tourist season. Turner (1976) reported that information about not using combustible materials was available, but “*work was being pushed ahead in a state of intense activity*” (1976: 390) and “*information was neglected because of pressure of work*” (1976: 392).

Weitzel and Jonsson (1989) also paid attention to the role of time pressure in organizational decline. They argued that in the third stage of their model of organizational decline, organizations are vulnerable to cognitive biases. These cognitive biases derive from the tendency to centralize decision making and to seek information from fewer sources, partly due to time pressure. Thus, information processing is impaired, and organizational leaders pay little attention to warnings from subordinates, which leads to the disagreements and faulty action that precipitate a crisis. Organizations that are more prone to maladaptive decisions at this stage are fast-growing organizations because they have the tendency to act impulsively and can easily make a series of careless decisions (Weitzel & Jonsson, 1989).

In keeping with this argument, Perlow et al. (2002) analyzed how the decision-making process of Notes.com, an Internet start-up that provided lecture notes for college courses through a website, was strongly influenced by the firm's sense of urgency to move quickly. Perlow and colleagues (2002) showed that in decisions such as choosing alliance partners or hiring employees, managers favored rapid decisions at the expense of making the right decisions by gathering additional sources of information and assessing other alternatives. This emphasis on speed over content led the company to experience problems with the firm's website. Similarly, organizations that are involved in a fast sequence of M&As and alliances could rely on heuristics that favour speed over content to economize time in making decisions but could, in turn, result in organizational mishaps.

Therefore, because of information overload, the time pressure derived from speed, and managers' cognitive limits, firms that engage in a rapid succession of M&As and alliances could rely heavily on heuristics, leading the company to experience organizational mishaps.

According to this reasoning, we suggest the following hypotheses:

Hypothesis 1a: *Firms that have a higher number of M&As will experience more organizational mishaps than firms that have a lower number of M&As.*

Hypothesis 1b: *Firms that have a higher number of strategic alliances will experience more organizational mishaps than firms that have a lower number of strategic alliances.*

3.2. The Moderating Role of Industry Dynamism in the Relationship between Speed and Mishaps

Industry dynamism is defined as the rate and unpredictability of change in the environmental context (Dess & Bear, 1984; Simerly & Li, 2000; Wang & Li, 2008). Dynamic environments, also called “high-velocity” environments (e.g., Eisenhardt, 1989), are characterized by unpredictable, nonlinear, and rapid changes in technologies, competitors, markets, and customer needs. In these contexts, successful business models are ambiguous, and the overall industry structure is unclear (Eisenhardt & Martin, 2000).

One of the major challenges for managers is determining how to cope with fast-changing environments. Previous studies have related these environments to a firm’s propensity to engage in corrupt behavior (e.g., Baucus, 1994; Baucus & Near, 1991). Baucus (1994) argued that in these environments, organization members must make up the rules as they go along. Because few rules or procedures exist in these contexts, firms may have more opportunities to behave illegally as an unintended outcome of the firm’s efforts to gain a competitive advantage. Baucus and Near (1991) empirically showed that in highly dynamic, as opposed to stable, environments, firms were 51 percent more likely to behave illegally. In particular, antitrust violations were more likely as the level of dynamism increased.

In dynamic environments, managers also face major challenges in terms of time pressure. Based on limited and possibly conflicting information about competitors, managers have to make decisions quickly to stay ahead of the competition and to ensure the firm’s survival (DeCelles & Pfarrer, 2004). In these environments, firms’ own speed may magnify the perception of time pressure to move quickly and exacerbate the use of heuristics that result in biases and eventually in organizational mishaps.

Perlow et al.'s (2002) ethnographic study of Notes.com, mentioned above, also illustrates how the need for speed can arise endogenously in dynamic environments. The managers' speed in decision making helped the organization reach its initial market goals. However, as the managers' aspirations and expectations increased, so did their commitments and their inability to achieve goals under time constraints. As a result, more speed contributed to bad decisions, which encouraged the firm to seek greater speed to compensate for the mistakes. Notes.com became caught in a "speed trap"—a pathology created by the firm's past focus on speed. Faster decisions enabled faster growth, and in turn, organizational mishaps emerged: The quality of the notes was questioned in a newspaper, some university faculty threatened to sue the company because of copyright infringement, and a number of universities banned the use of Notes.com's services. Notes.com's perceived pressure for fast action not only emerged from the Internet's dynamic environment but also was enlarged endogenously by the dynamics between the firm's own decision speed and the evolving context (Perlow et al., 2002). As a result of the unusual and disproportionately high levels of time pressure to move quickly in the pursuit of growth, Notes.com eventually bankrupted.

In moderately dynamic environments, change is also frequent, but it is roughly predictable and linear (Eisenhardt & Martin, 2000). In these contexts, managers also experience time pressure and try to anticipate competitors' movements to gain competitive advantage. However, because the structure of the industry is clear and competitors, customers and other key players are well known (Eisenhardt & Martin, 2000), managers may experience fewer information-processing burdens and less time pressure in stable than in dynamic environments, even though firms' speed may be high. Therefore, we suggest that firms that are involved in a high number of M&As and

strategic alliances will be particularly vulnerable to experiencing mishaps in dynamic environments.

***Hypothesis 2a:** Industry dynamism moderates the relationship between the number of M&As and organizational mishaps: The relationship is more positive for firms that belong to industries with a high level of industry dynamism.*

***Hypothesis 2b:** Industry dynamism moderates the relationship between the number of strategic alliances and organizational mishaps: The relationship is more positive for firms that belong to industries with a high level of industry dynamism.*

4. Methods

4.1. Sample

Our initial sample included the public companies listed in Standard and Poor's 500 in the year 2003. The choice of our sample was dictated by how we measured the dependent variable. To measure organizational mishaps, we used KLD Research & Analytics, Inc. (hereafter referred as KLD), which has systematically rated the corporate social performance of companies included in S&P 500. Furthermore, because of the data availability over the research period 2003-2009, our final sample consisted of a balanced panel of 331 companies and 2317 firm-year observations.

4.2. Measures

Dependent variable

Organizational mishaps. We used the KLD database to measure organizational mishaps. KLD provides ratings for companies on social corporate behavior in seven major categories: (1) community, (2) diversity, (3) employee relations, (4) natural environment, (5) human rights, (6) product and (7) corporate governance. Each of these categories includes a set of “strengths” and “concerns” ratings. Ratings rely on a binary measure. If the company has a “strength” or a “concern” in one specific issue, it is indicated with one or zero, respectively.

KLD “is the largest multidimensional corporate social performance database available to the public” (Deckop, Merriman, & Gupta, 2006: 334), and it has been extensively used in academic research (e.g., Chatterji, Levine, & Toffel, 2009; Graves & Waddock, 1994; Manner, 2010). Many studies have used KLD as a measure of corporate social performance (CSP) using a net KLD score, that is, subtracting concerns from strengths (e.g., Graves & Waddock, 1994; Griffin & Mahon, 1997; Sharfman, 1996; Waddock & Graves, 1997; Waldman, Siegel, & Javidan 2006). Other studies have used strengths and/or concerns separately (e.g., Chatterji, Levine, & Toffel, 2009; Cho & Patten, 2007; Manner, 2010). Consistently with this literature, we used the sum of KLD concerns as a proxy for organizational mishaps. We included only those categories of concerns that could be considered mishaps according to our definition and that were present in KLD for the entire research period. (See Appendix for a detailed description of the concerns that we considered in each of the seven KLD categories.)

Hypotheses-testing variables

In this study, we focused on organizational speed by looking at firms' M&As and strategic alliances. We collected data on M&As and alliances from Thomson Financial's SDC Platinum database (hereafter referred as SDC). SDC collects data from the U.S. Securities and Exchange Commission (SEC) filings (and their international counterparts), trade publications, wires, and news sources. Although this database has some limitations, it is considered the most comprehensive data source for M&As and strategic alliances, and it has been extensively used in previous studies (e.g., Annad & Khanna, 2000; Li et al., 2012; Sampson, 2005; Tong & Li, 2011).

We used the total number of M&As and of alliances in which each firm was involved. This measure of speed matches our definition of speed and is consistent with previous literature. For example, Volberda et al. (2001) measured speed as the number of strategic renewal actions, and Vermeulen and Barkema (2002) measured it as the number of foreign expansions that a firm undertook in a given period

M&As. We counted every M&A in which each company of our sample was an acquirer at the time of the announcement. We included those M&As whose status in SDC was defined as *completed*, *intended*, *pending* (i.e., the transaction has been announced but has not been completed or withdrawn), or *withdrawn* (i.e., the target or acquirer in the transaction has terminated its agreement, letter of intent, or plans for the acquisition or merger) in the year of observation. We excluded M&As under the status of *rumor* or *discounted rumor* and those for which the status was *unknown* according to SDC. In the literature on M&As, some studies were restricted to transactions that were completed (e.g., Dorata, 2012; Galasso & Simcoe, 2011). This criterion, however, would have deviated us from our research purposes. Our arguments that relate

organizational speed and mishaps rely on the use of heuristics because of the information overload and time pressure that are derived from speed. In the months following an announcement, chief executive officers must make many key operational decisions and justify timely their strategies to shareholders, boards and the investment community (Fubini, 2000). Therefore, we assumed that a company starts to experience the challenges of managing information and time constraints starting on the date of the announcement of a M&A, regardless of whether such a transaction is eventually completed. We lagged this variable by one year.

Strategic alliances. Alliances are enduring agreements between two or more firms involving the exchange, sharing or co-development of products, technologies, and services (Chao, 2011). The number of firms' strategic alliances was also counted at the time of the announcement. Following the same criterion that we used for M&As, we included only alliances under the status *completed/signed, letter of intent, pending, renegotiated, or terminated* and excluded alliances classified as *rumor*. Our measure of strategic alliances includes domestic and international alliances, bilateral and multilateral agreements, strategic alliances that resulted in a joint venture and those that did not, research and development agreements, marketing agreements, manufacturing agreements, and several other types of collaboration agreements. We did not impose any restriction. Due to the same reasons explained above for M&As, we were interested in the overall number of strategic alliances in which a company was involved, regardless the type of alliance. This measure is consistent with our theory and research purposes. This variable was lagged by one year.

Industry dynamism. The dynamism in an industry refers to the level of unpredicted change. To capture this level of unpredicted change, we used industry sales, as other previous studies had done (Nadkarni & Chen, 2014; Baron & Tang, 2011;

Lepak, Takeuchi & Snell, 2003). Data on industry sales were collected from the Compustat North America database and gathered according to the two-digit Standard Industrial Classification (SIC). This measure was calculated by regressing time against industry sales for the five years preceding each year in which the dependent variable was collected (Castrogiovanni, 2002; Dess & Beard, 1984; Keats & Hitt, 1988; Sharfman & Dean, 1991). To conduct each regression, the independent variable was time and was introduced as a dummy over the five preceding years. The dependent variable was industry sales. The value of dynamism was obtained by dividing the standard errors of the regression coefficients between the mean industry sales of the five preceding years. Industry dynamism in our sample ranged from 0.045 to 9.046. Higher values indicated higher levels of industry dynamism.

Control variables

Consistently with the literature, we controlled for firm-level variables (financial performance, firm size, and firm age) and industry differences that may influence a company's organizational mishaps. We lagged control variables by one year.

Financial performance. Financial performance was operationalized as return on assets (ROA) measured as net income between total assets (e.g., Johnson & Greening, 1999). Net income and total assets were extracted from the Compustat North America database.

Firm size. Baucus and Near (1991) and Hill et al. (1992) showed that firm size positively influenced the likelihood of illegal behavior and citations by the Environmental Protection Agency (EPA). Greening and Johnson (1996) also found statistical support, although marginal, for the effect of firm size on firm crises. We used

the logarithm of the number of employees (Nadkarni & Chen, 2014) reported annually in the Compustat North America database to control for firm size.

Firm age. We controlled for firm age because older firms can potentially accumulate more organizational mishaps than younger firms. We measured firm age as the number of years since incorporation (Jayaraman et al., 2000; Kotha, Zheng, & George 2011). The logarithm of firm age was used because it yielded the most normal distribution. Data of the incorporation year were collected from the Mergent Online database.

Industry. The industry in which the company operates may be related to firms' organizational mishaps (Baucus & Near, 1991; Greening & Johnson, 1996; Hill et al., 1992; McKendall & Wagner, 1997). For example, Baucus and Near (1991) analyzed corporate wrongdoing and found that the propensity of engaging in illegal practices was higher for companies that competed in the food, lumber, petroleum refining, and transportation equipment (automobile) industries.

We controlled for potential industry differences by identifying the industries with the highest number of organizational mishaps. To develop this measure, we followed McKendall and Wagner's (1997) approach. First, we calculated the overall mean of the number of organizational mishaps across the total number of companies in our sample. Second, we grouped the sample firms according to 2-digit SIC codes. Third, within each 2-digit industry group, we compared each member firm's number of organizational mishaps with the overall mean that was previously calculated. We found that agricultural production crops (SIC 01), metal mining (SIC 10), petroleum refining and related industries (SIC 29), transportation equipment (SIC 37), railroad transportation (SIC 40), motor freight transportation and warehousing (SIC 42), water

transportation (SIC 44), communication (SIC 48); electric, gas and sanitary services (SIC 49), food stores (SIC 54), and non-classifiable establishments (SIC 99) were the industries that accounted for the highest number of organizational mishaps for five consecutive years over our research period. Finally, we captured this information in a dummy variable called *industry* that took the value of one if the firm belonged to any of the aforementioned industries and the value of zero otherwise. Due to the wide range of industries in our sample (52 unique 2-digit SIC codes), McKendall and Wagner's approach (1997) has the advantage of controlling for possible main industry effects without dramatically reducing the number of statistical degrees of freedom.

4.3. Data Analysis

We tested our hypotheses using a moderated hierarchical regression analysis. We performed a panel-corrected standard errors (PCSE) estimation. Consistent with the characteristics of our panel, PCSE estimation assumes that disturbances are heteroskedastic and contemporaneously correlated across panels (Wooldridge, 2003). Furthermore, PCSE specification produces more robust variances and standard errors than do feasible generalized least squares models (Beck & Katz, 1995; Froot, 1989).

We estimated five models. In Model 1, we included only the control variables. In Models 2 and 3, we added the main effect of M&As and the main effect of strategic alliances, respectively. In Models 4 and 5, we tested the two-way interaction terms. We mean-centered the interaction terms to avoid multicollinearity (Cohen et al., 2003).

5. Results

Table 1 reports the means, standard deviations, and correlations for the variables examined in the study. Table 2 shows the results of the regression analysis. We assessed

potential collinearity among the variables by computing the variance inflation factors (VIFs) connected with each of the independent variables. The minimum VIF score is 1.02, and the maximum is 1.64. These values are below the recommended threshold of 5 or 10 (O'Brien, 2007). These results indicate that multicollinearity was not a concern in our model.

In Table 2, Model 1 presents the baseline model and shows that several control variables were significant. Firm size was positively related to organizational mishaps ($\beta=0.893$; $p<0.001$). This result is consistent with prior literature (Baucus & Near, 1991; Hill et al., 1992; Greening & Johnson, 1996). Industry effects were also statistically significant ($\beta=2.324$; $p<0.001$). This result is also consistent with previous research work (e.g., Mckendall & Wagner, 1997). Firm age was also significant ($\beta=0.096$; $p<0.01$). Financial performance was not significant for our sample of companies.

Hypothesis 1a states that M&As have a positive effect on organizational mishaps. Model 2 and Model 4 shows that the coefficient of M&As is positive and statistically significant ($\beta=0.062$; $p<0.001$). Therefore, the findings offer support for hypothesis 1a.

Hypothesis 1b states that strategic alliances also have a positive effect on organizational mishaps. Model 3 and Model 5 show that the coefficient of strategic alliances is positive and statistically significant ($\beta=0.065$; $p<0.001$). This result suggests that strategic alliances are positively related to organizational mishaps. Therefore, the results support hypothesis 1b.

Hypothesis 2a states that the interaction between M&As and industry dynamism positively influences organizational mishaps. Model 4 shows that the coefficient of the interaction is not statistically significant. Hypothesis 2a is not supported by the data.

TABLE 1
Descriptive Statistics and Correlations

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7
1 Organizational mishaps	2.532	2.489	0	15							
2 Financial performance	0.055	0.105	-2.908	0.503	-0.008						
3 Firm size	52.209	112.628	0.328	2100	0.407***	0.029					
4 Firm age	54.387	39.204	1	202	0.184***	0.092***	0.077***				
5 Industry	0.16	0.367	0	1	0.382***	-0.076***	0.049*	0.007			
6 Industry dynamism	0.438	0.769	0.045	9.046	0.004	0.005	0.003	-0.039	-0.053**		
7 M&As	1.836	2.568	0	27	0.134***	0.077***	0.103***	0.013	-0.126***	-0.08***	
8 Strategic alliances	1.096	2.943	0	51	0.136***	0.051*	0.106***	0.002	-0.063**	-0.079***	0.399***

N=331. Significance levels: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 2
Influence of Organizational Speed on Organizational Mishaps

	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables					
Financial performance	0.157 (0.312)	0.075 (0.320)	0.074 (0.319)	0.075 (0.320)	0.069 (0.324)
Firm size	0.893*** (0.063)	0.865*** (0.061)	0.864*** (0.065)	0.865*** (0.062)	0.863*** (0.067)
Firm age	0.096** (0.029)	0.108*** (0.030)	0.107*** (0.030)	0.108*** (0.030)	0.117*** (0.030)
Industry	2.324*** (0.101)	2.386*** (0.105)	2.364*** (0.101)	2.384*** (0.103)	2.346*** (0.095)
Direct effects					
Industry dynamism		-0.013 (0.035)	-0.011 (0.032)	-0.005 (0.048)	0.039 (0.029)
M&As		0.062*** (0.014)		0.064*** (0.016)	
Strategic alliances			0.065*** (0.013)		0.090*** (0.020)
Moderating effects					
M&As x dynamism				0.011 (0.033)	
Strategic alliances x dynamism					0.099* (0.043)
Constant	-0.999*** (0.124)	-0.960*** (0.127)	-0.950*** (0.132)	-0.958*** (0.128)	-0.960*** (0.137)
R-squared	0.368	0.372	0.373	0.372	0.375

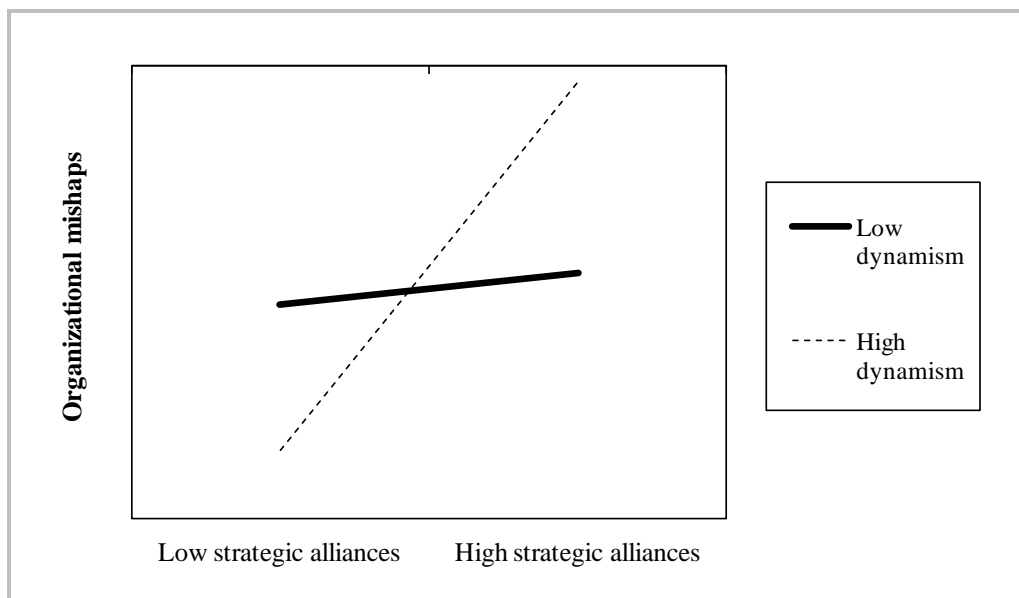
N=331. Observations=2317. Robust standard errors are reported in parentheses.

Significance levels: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Hypothesis 2b states that the interaction between strategic alliances and industry dynamism positively influences firm’s mishaps. Model 5 shows that the coefficient of the interaction term is statistically significant ($\beta=0.099$; $p<0.05$). We plotted the interaction effect in Figure 1. The figure shows that the positive relationship between strategic alliances and organizational mishaps is strengthened in environments with high levels of industry dynamism. Therefore, Hypothesis 2b receives support.

FIGURE 1

Moderated Effect of Industry Dynamism on the Relationship between Strategic Alliances and Organizational Mishaps



6. Discussion

In the current study, we take organizational speed as the centerpiece of the research and pose two questions: What is the influence of speed on firms’ organizational social mishaps? Is the relationship between speed and mishaps affected by industry dynamism? Our findings suggest that organizational speed, related to M&As and alliance processes, has a positive relationship with firms’ mishaps. In

addition, industry dynamism moderates this relationship in the case of strategic alliances, so the positive relationship between alliances and mishaps is stronger in dynamic environments. We do not interpret these results as evidence that organizational speed is detrimental for firms in all circumstances. However, the positive relationship that we found between speed and mishaps highlights the fact that speed has the potential to contribute to adverse organizational social outcomes. These findings have relevant implications for research and practice, which are discussed next.

6.1. Contributions and Implications for Research

This paper makes an important contribution in identifying one of the determinants of organizational mishaps at the corporate level. Quantitative analyses identifying speed-related causes of organizational mishaps have been limited in prior research (Salter, 2013; Greening & Johnson, 1996). We found that M&As were positively related to organizational social mishaps. This result is consistent with Greening and Johnson's (1996) findings. Although these authors did not theoretically articulate the concept of speed and its implications, they found a positive relationship between the firm's level of acquisition activity and the likelihood of human-induced crises in the utility, petroleum and gas, chemical, and food-processing industries. In addition, we found a positive link between a firm's alliance activity and mishaps. Our findings are also consonant with Slawinski and Bansal's (2012) and Vermeulen and Barkema's (2002) conclusions on the negative influence of speed on firms' organizational outcomes. Slawinski and Bansal (2012) studied a set of Canadian companies in the oil and gas industry and found that firms that moved too fast took a fragmented approach to climate change, rather than seeking holistic solutions, which exposed the company to reprimands by stakeholders. In relation to a firm's

internationalization process, Vermeulen and Barkema (2002) showed that too much foreign expansion in a too-short period of time can create time-compression diseconomies.

By identifying organizational speed as a determinant of mishaps, our work suggests that organizational mishaps are avoidable. In the literature on organizational crises, some scholars have assumed that crises are unavoidable and intrinsic to the nature of high-risk technologies, which are interactively complex and tightly coupling (Perrow, 1984). Other scholars, however, have argued that organizational crises are preventable and have studied and theorized on its causes (Greening & Johnson, 1996; Shrivastava, 1993; Turner, 1976). Our findings suggest that managers can indeed prevent organizational social mishaps, and more broadly corporate social irresponsibility, by managing organizational speed properly.

Furthermore, our research investigated the moderating role of industry dynamism. We found that firms with a higher number of strategic alliances were particularly prone to experiencing social mishaps in dynamic, as opposed to stable, environments. Prior research has advocated fast organizational action in dynamic environments to remain competitive (Baum & Wally, 2003) because making decisions faster or developing new products faster than competitors gives firms first-mover advantages, such as the benefit of increases in demand (e.g., Forbes, 2005; Kessler & Chakrabarti, 1996).

However, a few recent studies have found that in the high-velocity industry of the Internet, too much organizational speed can also be detrimental for organizational survival. For example, Forbes (2005) examined 98 small Internet start-ups and found that bankruptcies were more common among companies with a high decision speed. He

suggested that the Internet firms pushed their decision-making practices to such a high speed that the potential positive performance effects of speed (e.g., being a pioneer in adopting a new technology) were suppressed because managers were not able to address issues such as technology-implementation snags or irreconcilable alliance conflicts. Perlow et al. (2002) illustrated how a start-up was caught in a “speed trap” and was eventually bankrupted. Our work contributes to this stream of research by demonstrating, in a more general context (several industries) and based on longitudinal data, that speed can contribute to organizational social mishaps even in dynamic environments.

Contrary to our expectations, we did not find evidence for a strengthening effect of industry dynamism on the relationship between M&As and mishaps. One possible reason for this result may lie in the major complexity of M&A compared to alliance agreements. M&As are complex strategic processes that involve many decisions and organizational members and require sufficient managerial time and attention to be successful. When a company is moving too fast through a number of M&As, managers’ cognitive limitations can be exceeded, and the use of heuristics can potentially result in mishaps, regardless the level of industry dynamism. Another explanation for the lack of support of the predicted hypothesis could be based on a differentiated moderating effect for mergers and for acquisitions. It is possible that the moderating effect of industry dynamism would be different if a distinction between mergers and acquisitions were applied. Unfortunately, we did not have access to information to distinguish between mergers and acquisitions. Future studies in this area could test these possible differences.

6.2. Implications for Managers

This study is relevant for managers for several reasons. First, our study implies that cognitive limitations in information processing may be a key constraint for firms to benefit from non-limited speed. Managers should be cognizant of such cognitive limitations, of the use of heuristics to process information, and of the potential effect of heuristics and biases in creating mishaps. Some mechanisms have been suggested to ensure that information has been gathered from different sources and assessed objectively. Some of these mechanisms include applying different frames of reference to look at a problem, using counterfactual reasoning to imagine improbable or unpopular outcomes, considering organizational members and experts' different points of view carefully even if they are conflicting views, and using models to guide analysis (Choo, 2008).

Second, our study highlights that companies that move too fast may be vulnerable to mishaps. Although companies must respond quickly to meet changes in consumers' preferences and to other unexpected movements in their industry, they must also avoid moving too fast or too slow. Companies that move too fast can fall into a speed trap, where managers favor decision speed at the expense of decision content (Perlow et al., 2002). Moving too slowly can also be detrimental and lead companies to a slow trap, where the quality of content is emphasized at the expense of speed, and slowly planned decisions are continuously reinforced (Perlow et al., 2002). Companies that spend too much time thinking about decisions miss opportunities (Perlow et al., 2002). Altogether, companies should balance the pace of their strategic processes to avoid undesirable organizational outcomes. For example, when a mishap arises, a firm that is involved in a rapid sequence of M&As, alliances, and similar strategic processes may need to reconsider its pace to be able to examine those mishaps and thus lead the

company in the most appropriate direction. Otherwise, managers may be at risk of believing that more speed is the solution to resolving the mishap instead of viewing such mishaps as a symptom of underlying organizational problems.

6.3. Limitations and Directions for Future Research

Although this study makes an important contribution to the literature, it also has several limitations. First, our sample consists of large companies from the United States. The nature of this sample limits the extent to which our findings can be generalized to other organizations. Therefore, our results may not be applicable to medium and small firms. In addition, there are cross-cultural differences in the ways companies perceive time that are reflected in firms' behavior (Levine, West, & Reis, 1980). For example, Levine and Bartlett (1984) demonstrated that the average speed of walking and postal transactions and the accuracy of bank clocks differ across countries. Future research could benefit from exploring the relationship between speed and mishaps in a more heterogeneous sample in terms of size and a variety of countries.

Second, we measured organizational speed in relation to a firm's M&As and alliance activities. Organizational speed can also be reflected in other aspects of organizational life, such as product innovations, a firm's international activity, or speed of integration. An interesting extension of our study could examine these other facets of speed in relation to mishaps.

Third, industry dynamism represents only one aspect of an environmental context. Future research could build on our results to explore the moderating effect of other relevant industry characteristics, such as complexity or the level of rivalry in the industry. Furthermore, many organizations simultaneously face multiple environments such as when an established firm enters a new market or a new firm enters an

established market (Eisenhardt, Furr, & Bingham, 2010). It would also be interesting to examine the effect of these dynamics on mishaps.

Fourth, we based our arguments on managers' cognitive limitations, which may require them to use heuristics to handle information overload and time pressure and result in biases and eventually in organizational mishaps. However, we were not able to directly observe whether these heuristics and biases intervened in the relationship between speed and mishaps. We did not have access to that information. Future research could embrace efforts to identify different types of heuristics that may be interwoven and can result in different types of mishaps.

7. References

- Anand, B. N., & Khanna, T. 2000. Do firms learn to create value? The case of alliances. *Strategic Management Journal*, 21: 295–315.
- Antonacopoulou, E. P., & Sheaffer, Z. 2014. Learning in crisis: Rethinking the relationship between organizational learning and crisis management. *Journal of Management Inquiry*, 23: 5–21.
- Atuahene-Gima, K. 2003. The effects of centrifugal and centripetal forces on product development speed and quality: How does problem solving matter? *Academy of Management Journal*, 46: 359–373.
- Bansal, P. 2003. From issues to actions: The importance of individual concerns and organizational values in responding to natural environmental issues. *Organization Science*, 14: 510–527.
- Barkema, H. G., Baum J. A., & Mannix, E. A. 2002. Management challenges in a new time. *Academy of Management Journal*, 45: 916–930.
- Baron, R. A. 1998. Cognitive mechanisms in entrepreneurship: why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, 13: 275–294.

- Baron, R. A., & Tang, J. 2011. The role of entrepreneurs in firm-level innovation: Joint effects of positive affect, creativity, and environmental dynamism. *Journal of Business Venturing*, 26: 49–60.
- Baucus, M. 1994. Pressure, opportunity and predisposition: A multivariate model of corporate illegality. *Journal of Management*, 20: 699–721.
- Baucus, M. S., & Near, J. P. 1991. Can illegal corporate behavior be predicted? An event history analysis. *Academy of Management Journal*, 34: 9–36.
- Bauer, F., & Matzler, K. 2014. Strategic complementarity, cultural fit, and degree and speed of integration. *Strategic Management Journal*, 35: 269–291.
- Baum, J. R., & Wally, S. 2003. Strategic decision speed and firm performance. *Strategic Management Journal*, 24: 1107–1129.
- Bazerman, M. H. 2006. *Judgement in Managerial Decision Making*. New York: Wiley.
- Beck, N., & Katz, J. 1995. What to do (and not to do) with time-series cross-section data. *American Political Science Review*, 89: 634–647.
- Benson, L., & Beach, L. R. 1996. The effects of time constraints on the pre-choice screening of the decision options. *Organizational Behavior and Human Decision Processes*, 67: 222–228.
- Bingham, C. B., Eisenhardt, K. M., & Furr, N. R. 2007. What makes a process a capability? Heuristics, strategy, and effective capture of opportunities. *Strategic Entrepreneurship Journal*, 27: 27–47.
- Bluedorn, A. C. 2002. *The Human Organization of Time*. Stanford: Stanford University Press.
- Carpenter, M. A., Pollock, T. G., & Leary, M. M. 2003. Testing a model of reasoned risk-taking: Governance, the experience of principals and agents, and global strategy in high-technology IPO firms. *Strategic Management Journal*, 24: 803–820.
- Castrogiovanni, G. J. 2002. Organization task environments: Have they changed fundamentally over time. *Journal of Management*, 28: 129–150.
- Chao, Y. 2011. Decision-making biases in the alliance life cycle Implications for alliance failure. *Management Decision*, 49: 350–364.
- Chatterjee, A., & Hambrick, D. C. 2007. It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52: 351–386.

- Chatterji, A. K., Levine, D. I., & Toffel, M. W. 2009. How well do social ratings actually measure corporate social responsibility? *Journal of Economics & Management Strategy*, 18: 125–169.
- Cho, C. H., & Patten, D. M. 2007. The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, 32: 639–647.
- Choo, C. W. 2008. Emerald Article: Organizational disasters: why they happen and how they may be prevented. *Management Decision*, 47: 32–45.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. 2003. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Mahwah, NJ: Erlbaum.
- DeCelles, K. A., & Pfarrer, M. D. 2004. Heroes or villains? Corruption and the charismatic leader. *Journal of Leadership & Organizational Studies*, 11: 67–77.
- Deckop, J., Merriman, K., & Gupta, S. 2006. The effects of CEO pay structure on corporate social performance. *Journal of Management*, 32: 329–342.
- Dess, G. G., & Beard, D. W. 1984. Dimensions of organizational task environments. *Administrative Science Quarterly*, 29: 52–73.
- Dorata, N. T. 2012. Determinants of the strengths and weaknesses of acquiring firms in mergers and acquisitions: A stakeholder perspective. *International Journal of Management*, 29: 578–590.
- Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review*, 14: 532–550.
- Eisenhardt, K. M., & Martin, J. A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21: 1105–1121.
- Forbes, D. P. 2005. Managerial determinants of decision speed in new ventures. *Strategic Management Journal*, 26: 355–366.
- Froot, K. 1989. Consistent covariance matrix estimation with cross-sectional dependence and heteroskedasticity in financial data. *Journal of Financial and Quantitative Analysis*, 24: 333–355.
- Fubini, D. 2000. After the merger. *The McKinsey Quarterly*, 4: 4–5.
- Galasso, A., & Simcoe, T. S. 2011. CEO overconfidence and innovation. *Management Science*, 57: 1469–1484.

- Gioia, D. A. 1986. *Conclusion: The State of the Art in Organizational Social Cognition: A Personal View*. In H. P. Sims and D. A. Gioia (Eds.), *The Thinking Organization: Dynamics of Organizational Social Cognition*. San Francisco: Jossey-Bass.
- Graves, S., & Waddock, S. A. 1994. Institutional owners and corporate social performance. *Academy of Management Journal*, 37: 1034–1046.
- Greening, D. W., & Johnson, R. A. 1996. Do managers and strategies matter? A study in crisis. *Journal of Management Studies*, 33: 25–51.
- Griffin, J. J., & Mahon, J. F. 1997. The corporate social performance and corporate financial performance debate; twenty-five years of incomparable results. *Business & Society*, 36: 5–31.
- Halpern, J. J. 1989. Cognitive factors influencing decision making in a highly reliable organization. *Organization & Environment*, 3: 143–158.
- Harris, J., & Bromiley, P. 2007. Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organization Science*, 18: 350–367.
- Hill, C. W. L., Kelley, P. C., Agle, B. R., Hitt, M. A., & Hoskisson, R. E. 1992. An empirical examination of the causes of corporate wrongdoing in the United States. *Human Relations*, 45: 1055–1076.
- Hitt, M. A., Harrison, J. S., & Ireland, R. D. 2001. *Mergers and Acquisitions. A Guide to Creating Value for Stakeholders*. New York: Oxford University Press.
- Homburg, C., & Bucerius, M. 2006. Is speed of integration really a success factor of mergers and acquisitions? An analysis of the role of internal and external relatedness. *Strategic Management Journal*, 27: 347–367.
- Jayaraman, N., Khorana, A., Nelling, E., & Covin, J. 2000. CEO founder status and firm financial performance. *Strategic Management Journal*, 21: 1215–1224.
- Johnson R. A., & Greening, E. W. 1999. The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of Management Journal*, 42: 564–576.
- Judge, W. Q., & Miller, A. 1991. Antecedents and outcomes of decision speed in different environmental. *Academy of Management Journal*, 34: 449–463.
- Keats, B. W., & Hitt, M. A. 1988. A causal model of linkages among environmental dimensions, macro organizational characteristics, and performance. *Academy of Management Journal*, 31: 570–598.

- Kessler, E. H., & Chakrabarti, A. K. 1996. Innovation speed: A conceptual model of context, antecedents, and outcomes. *Academy of Management Review*, 21: 1143–1191.
- Kotha, R., Zheng, A., & George, G. 2011. Research notes and commentaries entry into new niches: The effects of firm age and the expansion of technological capabilities on innovative output and impact. *Strategic Management Journal*, 32: 1011–1024.
- Kownatzki, M., Walter, J., Floyd, S. W., & Lechner, C. 2013. Corporate control and the speed of strategic business unit decision making. *Academy of Management Journal*, 56: 1295–1324.
- Lepak, D. P., Takeuchi, R., & Snell, S. A. 2003. Employment flexibility and firm performance: examining the interaction effects of employment mode, environmental dynamism, and technological intensity. *Journal of Management*, 29: 681–703.
- Levine, R. V., & Bartlett, K. 1984. Pace of life, punctuality and coronary heart disease in six countries. *Journal of Cross-Cultural Psychology*, 15: 23–255.
- Levine, R. V., West, L., & Reis, H. 1980. Perceptions of time and punctuality in the United States and Brazil. *Journal of Personality and Social Psychology*, 38: 541–550.
- Li, D., Eden, L., Hitt, M. A., Ireland, R. D., & Garrett, R. P. 2012. Governance in multilateral R&D alliances. *Organization Science*, 23: 1191–1210.
- Lin, Z., Zhao, X., Ismail, K. M., & Carley, K. M. 2006. Organizational design and restructuring in response to crises: Lessons from computational modeling and real-world cases. *Organization Science*, 17: 598–675.
- Manner, M. H. 2010. The Impact of CEO Characteristics on corporate social performance. *Journal of Business Ethics*, 93:53–72.
- March, H., & Simon, H. 1993. *Organizations* (2nd ed.). Cambridge: Blackwell Publishers.
- Más-Ruiz, F. J., Nicolau-Gonzálbez, J. L., & Ruiz-Moreno, F. 2005. Asymmetric rivalry between strategic groups: Response, speed of response and ex ante vs. ex post competitive interaction in the Spanish bank deposit market. *Strategic Management Journal*, 26: 713–745
- McCall, M. W., & Kaplan, R. E. 1985. *Whatever It Takes: Decision Makers at Work*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

- McGrath, J. E., & Franziska, T. 2004. *Temporal Matters in Social Psychology: Examining the Role of Time in the Lives of Groups and Individuals*. Washington, DC: American Psychological Association.
- McKendall, M. A., & Wagner, J. A. 1997. Motive, opportunity, choice, and corporate illegality. *Organization Science*, 8: 624–647.
- Miller, G. A. 1956. The magic number seven plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 64: 81–97.
- Mishina, Y., Dykes, B. J., Block, E. S., & Pollock, T. G. 2010. Why “good” firms do bad things: the effects of high aspirations, high expectations, and prominence on the incidence of corporate illegality. *Academy of Management Journal*, 53: 701–722.
- Nadkarni, S., & Chen, J. 2014. Bridging yesterday, today, and tomorrow: CEO. Temporal focus, environmental dynamism, and rate of new product introduction. *Academy of Management Journal*, 57: 1810–1833.
- O’Brien, R. M. 2007. A Caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, 41: 673–690.
- Pearson, C. M. 2010. Dawn R. Gilpin and Priscilla J. Murphy: Crisis management in a complex world. *Administrative Science Quarterly*, 55: 170–171.
- Pearson, C. M., & Clair, J. A. 1998. Reframing crises management. *Academy of Management Review*, 23: 59–76.
- Perlow, L. A., Okhuysen, G. A., & Repenning, N. P. 2002. The speed trap: Exploring the relationship between decision making and temporal context. *Academy of Management Journal*, 45: 931–955.
- Perrow, C. 1984. *Normal Accidents: Living with High-Risk Technologies*. New York: Basic Books.
- Salter, M. S. 2013. Short-termism at its worst: How short-termism invites corruption... And what to do about it? *Edmond J. Safra Research Lab Working Papers*, 5: 1–70.
- Sampson, R. C. 2005. Experience effects and collaborative returns in R&D alliances. *Strategic Management Journal*, 26: 1009–1031.
- Schwenk, C. H. 1996. Information, cognitive biases, and commitment to a course of action. *Academy of Management Review*, 11: 298–310.
- Sharfman, M. 1996. The construct validity of the Kinder, Lydenberg & Domini Social performance ratings data. *Journal of Business Ethics*, 15: 287–296.

- Sharfman, M., & Dean, J. 1991. Conceptualizing and measuring the organizational environment: A multi-dimensional approach. *Journal of Management*, 17: 681–700.
- Sheaffer, Z., & Mano-Negrin, R. 2003. Executives' orientations as indicators of crisis management policies and practices. *Journal of Management Studies*, 40: 573–606.
- Shrivastava, P. 1993. Crisis theory/practice: Towards a sustainable future. *Organization & Environment*, 7: 23–42.
- Simerly, R. L., & Li, M. 2000. Environmental dynamism, capital structure and performance: A theoretical integration and an empirical test. *Strategic Management Journal*, 21: 31–50.
- Simon, H. A. 1976. *Administrative Behavior*. New York: Macmillan.
- Slawinski, N., & Bansal, P. 2012. A matter of time: the temporal perspectives of organizational responses to climate change. *Organization Studies*, 33: 1537–1563.
- Smart, C., & Vertinsky, I. 1977. Designs for crisis decision. *Administrative Science Quarterly*, 22: 640–657.
- Szwajkowski, E. 1985. Organizational Illegality: Theoretical integration and illustrative application. *Academy of Management Review*, 10: 358–367.
- Tong, T. W., & Li, Y. 2011. Real options and investment mode: Evidence from corporate venture capital and acquisition. *Organization Science*, 22: 659–674.
- Turner, B. A. 1976. The Organizational and interorganizational development of disasters. *Administrative Science Quarterly*, 21: 378–397.
- Tversky, A., & Kahneman, D. 1974. Judgment under uncertainty: Heuristics and biases. *Science*, 185: 1124–1131.
- Vermeulen, F., & Barkema, H. 2002. Pace, rhythm, and scope: process dependence in building a profitable multinational corporation. *Strategic Management Journal*, 23: 637–653.
- Volberda, H. W., Van den Bosch, F. A. J., Flier, B., & Gedajlovic, E. R. 2001. Following the herd or not? Patterns of renewal in the Netherlands and the UK. *Long Range Planning*, 34: 209–229.
- Waddock, S. A., & Graves, S. B. 1997. The corporate social performance financial performance link. *Strategic Management Journal*, 18: 303–319.

- Waldman, D. A., Siegel, D. S., & Javidan, M. 2006. Components of CEO transformational leadership and corporate social responsibility. *Journal of Management Studies*, 43: 1703–1725.
- Walsh, J. P. 1995. Managerial and organizational cognition: notes from a trip down memory lane. *Organization Science*, 6: 280–321.
- Wang, H., & Li, J. 2008. Untangling the effects of overexploration and overexploitation on organizational performance: The moderating role of environmental dynamism. *Journal of Management*, 34: 925–951.
- Weick, K. E. 1988. Enacted sensemaking in crisis situations. *Journal of Management Studies*, 25: 305–317.
- Weick, K. E. 1989. Mental models of high reliability systems. *Industrial Crisis Quarterly*, 3: 127–142.
- Weitzel, W., & Jonsson, E. 1989. Decline in organizations: A literature integration and extension. *Administrative Science Quarterly*, 34: 91–109.
- Wooldridge, J. M. 2003. *Introductory Econometrics: A Modern Approach* (2nd ed.). Mason, Ohio: South-Western.

Appendix. Description of KLD Areas of Concerns

<p>1. Corporate Government</p> <p>1a Ownership Concern. The company owns between 20% and 50% of a company KLD has cited as having an area of social concern, or is more than 20% owned by a firm KLD has rated as having areas of concern. When a company owns more than 50% of another firm, it has a controlling interest, and KLD treats the second firm as if it is a division of the first.</p> <p>1b Other Concerns. The company is involved with a controversy not covered by KLD's other corporate governance ratings.</p>
<p>2. Community</p> <p>2a Investments Controversies. The company is a financial institution whose lending or investment practices have led to controversies, particularly ones related to the Community Reinvestment Act.</p> <p>2b Negative Economic Impact. The company's actions have resulted in major controversies concerning its economic impact on the community. These controversies can include issues related to environmental contamination, water rights disputes, plant closings, "put-or-pay" contracts with trash incinerators, or other company actions that adversely affect the quality of life, tax base, or property values in the community.</p> <p>2c Indigenous Peoples Relations. The company has been involved in serious controversies with indigenous peoples that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples.</p> <p>2d Other Concerns. The company is involved with a controversy that has mobilized community opposition, or is engaged in other noteworthy community controversies.</p>
<p>3. Diversity</p> <p>3a Controversies. The company has either paid substantial fines or civil penalties as a result of affirmative action controversies, or has otherwise been involved in major controversies related to affirmative action issues.</p> <p>3b Other concerns. The company is involved in diversity controversies not covered by other KLD ratings.</p>
<p>4. Employees</p> <p>4a Union Relations. The company has a history of notably poor union relations. KLD renamed this concern from Poor Union Relations.</p> <p>4b Health and Safety Concern. The company recently has either paid substantial fines or civil penalties for wilful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies.</p> <p>4c Other Concerns. The company is involved in an employee relations controversy that is not covered by other KLD ratings.</p>
<p>5. Environment</p> <p>5a Hazardous Waste. The company's liabilities for hazardous waste sites exceed \$50 million, or the company has recently paid substantial fines or civil penalties for waste management violations.</p> <p>5b Regulatory Problems. The company has recently paid substantial fines or civil penalties for violations of air, water, or other environmental regulations, or it has a pattern of regulatory controversies under the Clean Air Act, Clean Water Act or other major environmental regulations.</p> <p>5c Substantial Emissions. The company's legal emissions of toxic chemicals (as defined by and reported to the EPA) from individual plants into the air and water are among the highest of the companies followed by KLD.</p> <p>5d Other Concerns. The company has been involved in an environmental controversy that is not covered by other KLD ratings.</p>
<p>6. Human rights</p> <p>6a Labour Rights Concern. The company's operations have had major recent controversies primarily related to labor standards in its supply chain.</p> <p>6b Indigenous Peoples Relations Concerns. The company has been involved in serious controversies with indigenous peoples (either in or outside the U.S.) that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples.</p> <p>6c Other Concerns. The company's operations have been the subject of major recent human rights controversies not covered by other KLD ratings.</p>

Appendix. (Cont.) Description of KLD Areas of Concerns

7. Product

7a Product Safety. The company has recently paid substantial fines or civil penalties, or is involved in major recent controversies or regulatory actions, relating to the safety of its products and services.

7b Marketing/ Contracting Concern. The company has recently been involved in major marketing or contracting controversies, or has paid substantial fines or civil penalties relating to advertising practices, consumer fraud, or government contracting.

7c Antitrust. The company has recently paid substantial fines or civil penalties for antitrust violations such as price fixing, collusion, or predatory pricing, or is involved in recent major controversies or regulatory actions relating to antitrust allegations.

7d Other Concerns. The company has major controversies with its franchises, is an electric utility with nuclear safety problems, defective product issues, or is involved in other product-related controversies not covered by other KLD ratings.