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John A. Parnell
University of North Carolina at Pembroke

William "Rick" Crandall
University of North Carolina at Pembroke

Richard E. Crandall
Appalachian State University

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John A. Parnell, University of North Carolina at Pembroke
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ABSTRACT: A crisis refers to an unpredictable event that can seriously threaten an organization. Crisis readiness is an integral part of the crisis management process and refers to the level of preparedness an organization possesses in response to a potential catastrophic event. Findings from a survey of 275 managers in the United States revealed that top managers with production/engineering and general management backgrounds reported higher degrees of crisis readiness capabilities than did their counterparts with other backgrounds. Likewise, higher levels of crisis readiness were reported in larger, manufacturing organizations than in smaller, service organizations.

A crisis refers to an unpredictable event that can threaten the organization and its stakeholders. Both the occurrence of crises and the diversity of business crisis types have increased in recent years (Coleman, 2004; Lalonde, 2007a; Robert & Lajtha, 2002). Crisis readiness refers to the level of preparedness an organization possesses in response to a potential catastrophic event. Although much is known about the larger field of crisis management, how organizations address these catastrophic events—research on the status of crisis readiness is still emerging.

Certain individual and organizational characteristics can influence how prepared an organization will be in its crisis readiness. Perceptions of crisis readiness could be influenced by factors such as one's managerial level in the organization or one's functional background. Perceptions could also be affected by organizational factors such as size of the firm and industry composition.

At the organizational level, perceptions concerning crisis readiness could also be influenced by the generic strategy employed by a business, an area that has received relatively little attention in the literature. Discussions of business strategy often revolve around Porter's generic strategies (focus, differentiation, and cost-leadership) or the Miles and Snow framework (prospector, analyzer, defender, and reactor).

It is logical to suggest that an organization's strategy should be linked to its degree of crisis readiness. Calls have been made to position an organization's crisis management planning with its long-range strategic planning (Chong & Park, 2010; Somers, 2009). A current crisis management framework (Crandall, Parnell, & Spillan, 2013) has even embedded strategic planning into its crisis management planning. Within this context, this paper examines the construct of crisis readiness within the crisis management framework proposed by Crandall, et al. (2013). Specifically, we look at the relationship of managerial level, managerial position, industry domain, size of the firm, and strategy type with crisis readiness.

This paper begins with overviews of the crisis readiness construct and a crisis management framework. Research questions are presented next, followed by methods, findings, and discussion sections. The paper closes with conclusions, limitations, and opportunities for future research.

LITERATURE REVIEW

Crisis Management

A crisis can seriously threaten the organization's performance (Coombs, 2007). Hence, crisis events are low-probability, high-impact events that are often unexpected (Pearson & Clair, 1998). Crisis management, how an organization responds to a crisis can dramatically affect its reputation, financial performance, and ultimately, its survival (Coombs & Holladay, 2006). Roux-Dufort (2007) conceptualizaed crisis management as the management of exceptions. Others have proposed a broader perspective and have considered the long term effects of a crisis, links to competitive strategy and a deeper understanding of underlying causes (Coombs & Holladay, 2006; Elsubbaugh, Fildes & Rose, 2004; Evans & Elphick, 2005).

Crisis events are potentially costly (Newkirk, 2001). They can be highly damaging (Irvine & Millar, 1997 and usually require quick, decisive action (Barton, 1993; Marra, 1998; Seeger, Sellnow, & Ulmer, 1998). The response decisions concerning a crisis can dramatically affect a firm's reputation, financial performance, and even survival (Coombs & Holladay, 2006). Advances in scholarly research have emerged from multiple perspectives, given the interdisciplinary nature of the field (Piotrowski, Watt & Armstrong, 2010).

The notion of crisis management infers that leaders should take action before, during, and after a crisis in order to manage it effectively. Avoidable crises should be averted, the negative effects of others should be minimized, and leaders should ensure that organizational learning occurs after the event. Organizations should develop crisis management capabilities and specific crisis management plans prior to addressing a crisis event (Circa & Corrigall, 2010; Jacques, 2010). Organizations with established crisis management teams (CMTs) exhibit a greater awareness of and concern for possible crises as compared to those without CMTs (McCartney, Crandall, & Ziemnowicz, 1999). Degrees of uncertainty and vulnerability determine the priority, time and energy given to crisis planning. Hence, organizational members require salient and accurate information throughout the crisis management process (Crandall, Parnell & Spillan, 2014). Indeed, all employees should be aware of their specific responsibilities and should be empowered to take appropriate action to manage the crisis in their own departments (Areiqat & Zamil, 2011).

Crisis planning involves a number of key issues, including the types of crises that are of greatest concern to the organization and the level of experience with such events (Caponigro, 1998). The recognition of potential crises enables management to take steps to minimize the likelihood that the crisis will occur (Pauchant & Mitroff, 1992; Somers, 2009). Moreover, if potential crises events are identified, crisis preparation is likely to be higher. Managers who lack sufficient information about the crisis are not in a good position to address it (Wester, 2009). Consider the on-site death of an employee. This type of situation should be managed in a professional and dignified manner, and planning is essential to ensure that this will occur. Beyond the tragic part of the crisis, if the deceased worker was instrumental to important functions in the organization, a qualified replacement must be identified in short order (Wnek, 2000).

Crisis Readiness

The general notion of crisis readiness—a focal point of the present study—is gaining traction in the literature (Elsubbaugh & Rose, 2004; Sheaffer & Mano-Negrin, 2003). A key part of preparation and readiness is the establishment of a crisis management team (CMT) (Clarke & Varma, 2004; Pearson & Clair, 1998). An effective team is responsible for crisis planning before a crisis occurs, and for making key decisions during an emergency (Crandall, Parnell & Spillan, 2013). The development of worst-case

scenarios applicable to an organization's particular situation and standard operating procedures (SOPs) to provide guidance to organizational members during a crisis are also key parts of the pre-crisis stage.

Crisis readiness is a sub-area of the broader discipline of crisis management. Pearson and Mitroff (1993) offered an early academic conceptualization of what this construct involves. Their term, crisis preparedness, focuses on the two phases of signal detection and preparation/prevention. First, signal detection scans for cues that can lead to or cause a crisis. Hence, crisis preparedness involves being cognizant to those events or conditions that can cause a crisis to occur in the first place. Second, preparation/prevention involves doing everything possible to prevent a crisis, and mitigating the ones that do occur. In practical terms, this step necessitates the formation of the crisis management team (CMT) and the writing of the crisis management plan. The charge of the CMT is to lead the organization in planning and implementing its crisis management plan as well as directing responses if and when a crisis strikes.

In more recent years, Rousaki & Alcott, (2007) developed a scale to measure the construct of crisis readiness. Simply stated, an organization's crisis readiness defines its ability to address crisis events when they occur. However, it is important to distinguish among crisis readiness and two related constructs, crisis concern, and crisis management.

Crisis concern refers to the extent to which managers are worried about the likelihood of a particular crisis event and its potential impact on the organization. A higher crisis concern often translates into greater preparation and readiness, but this is not always the case (Parnell, 2011; Rousaki & Alcott, 2006). Managers could report high crisis concern when considerable crisis preparation has already occurred because that preparation can raise both crisis readiness and crisis awareness. High crisis concern could also lead to groupthink in organizations where leaders do not share information freely and vigorously debate alternatives (Herek, Janis & Huth, 1987). The intuitive nexus between crisis readiness and crisis management effectiveness notwithstanding, it is well also established that effective crisis management is a function of both preparation and improvisation (Quarantelli & Dynes, 1977). Following this logic, a high level of crisis readiness is viewed as a necessary but insufficient prerequisite for effective crisis management.

The Crisis Management Framework

Various frameworks exist in the crisis management literature that can help the reader understand the crisis management process from a more holistic perspective. Such frameworks are not meant to take the place of theoretical models, but instead, provide perspectives on how to view the process of crisis management. A recent framework offered by Crandall, Parnell, & Spillan (2013) looks at crisis management as a four-stage, sequential process. Figure 1 depicts this framework.

The framework depicts crisis management as a four-stage process with two dimensions to consider, the internal and external landscapes. The internal landscape encompasses the processes that exist within the organization while the external landscape involves those activities that occur outside of the organization. The first two stages, landscape survey and strategic management take place in preparation for an organizational crisis. The stage, crisis management, actually occurs as the crisis is unfolding. Organizational learning takes place after the crisis is over and management determines how it can respond differently in the future (Crandall, Parnell, & Spillan, 2013).

This present study focuses on the first two stages of the crisis management framework, the landscape survey and strategic planning. The landscape survey will be described in terms of the managerial characteristics of level and functional area while the strategic planning phase will be examined with regard to size of the firm, industry sector and strategic type. The analysis of strategic type will be accomplished by delineating the four strategies within the Miles and Snow strategy framework. Although

the Miles and Snow framework is well grounded and has been widely discussed in the strategy literature, calls have been made to further its empirical extension to other industries and settings (Conant et al., 1990; Desarbo, et al., 2005; Hambrick, 1984). The field of crisis management is one area where empirical research is sparse with regard to strategic orientation.

FIGURE 1
THE CRISIS MANAGEMENT FRAMEWORK

	Landscape Survey	Strategic Planning	Crisis Management	Organizational Learning
The Internal Landscape	What is the current status of crisis readiness within the organization?	What is the current status of crisis readiness in regards to strategic decisions?	How does the firm manage its employees during a crisis?	What can the firm learn from this crisis?
The External Landscape	What is the current status of crisis readiness across industries?	What is the current status of crisis readiness across a range of business strategies?	How does the firm manage its external stakeholders during a crisis?	What learning is taking place outside of the organization in relation to the type of crisis just experienced?

Crisis 

Adapted from - Crandall, W.R., Parnell, J.A., & Spillan, J.E. (2013). *Crisis Management in the New Strategy Landscape (2nd ed.)*. Thousand Oaks, CA: Sage Publishing, pg. 12.

Landscape Survey

According to the original crisis management framework, the internal landscape represents those areas that are under the control of the organization. Crandall, et al., (2013) maintain that it incorporates the organization's strengths and weaknesses, the SW combination of the familiar SWOT analysis. It also encompasses the human resources of the organization, and hence, its management staff.

Identifying the management level with the greatest crisis readiness capabilities has been a key concern to crisis management scholars. An organization may actually possess a high degree of crisis readiness, but the knowledge of its crisis readiness procedures may not be widely known by manager across all levels. For example, top managers may initiate and promote crisis readiness throughout the organization, but this information may not permeate all levels of management. Lower level managers are focused on operations and delivering the goods and services. Middle management is usually charged with matters related to strategy execution, while top management is tasked with formulation and should be directly concerned with crisis readiness. While crisis readiness is not only a top management concern, it is a greater concern to top managers than to those at middle and lower levels of the organization (Köseoglu, Parnell, & Ocak, 2011).

H1: The level of perceived crisis readiness will be highest among top managers.

Interest in the impact of one's functional background on one's approach to management is not new (Govindarajan, 1989; Gupta & Govindarajan, 1984; Hambrick & Mason, 1984; Norburn, 1989; Randel &

Jaussy, 2003; Thomas, Litschert, & Ramaswamy, 1991). While some scholars have emphasized the strengths of a given functional background, others have focused on the likelihood that managers with given functional backgrounds will rise to the level of top executive or direct a firm differently (Canella, Park & Lee, 2008; Koyuncu, Firfiray, Claes & Mamori, 2010; Kurtz, Boone, & Fleenor, 1989; Murray, 1989).

Arguments linking various functional backgrounds to strategic or organizational success have been proposed. Traditionally, individuals with backgrounds in finance and accounting have accounted for a high percentage of top executives (Litchfield, 1990). Those with marketing backgrounds are purported to have ideal characteristics as well, including stability, self-sufficiency, self-confidence, goal-directedness, decisiveness, and the ability to make quick decisions (Boone & Milewicz, 1989). Others have noted that managers with production and engineering backgrounds are best equipped to address quality concerns, especially in a manufacturing enterprise (Koyuncu et al., 2010; Sashkin & Kiser, 1992). Still others have argued that general managers are more likely to possess a diverse background and understand the complex workings of the firm (Kotter, 1982).

Regarding crisis readiness, the question is, which group of managers is most privy to the concerns of crisis related matters? Since general managers must work across all functional areas, we propose that they have the most knowledge of crisis readiness, given that they must also view the big picture of the firm and reject a silo mentality, a mindset that could impede strategic diffusion of crisis readiness.

H2: The level of crisis readiness will be highest among those working in general management, as opposed to accounting/finance, marketing/sales, or production/engineering.

Strategic Planning

In the crisis management framework, strategic planning refers to those efforts involved in planning for and mitigating crisis events. Crandall, et. al., (2013) incorporated crisis preparation into the regular strategic planning activities of the company, and not viewing crisis preparation as an activity that should be delegated to a small functional department within the organization. Instead, it was to be a visible, ongoing activity that was incorporated in the firm's strategic plan.

Crisis preparation can be costly (Newkirk, 2001); resources are an essential component of effective crisis readiness. Larger organizations tend to be more prepared than smaller organizations and those whose managers have faced a serious crisis tend to be more crisis-ready in the future than those that have not encountered a serious event (Parnell, Köseoglu & Spillan, 2010; Spillan, Parnell & de Mayoro, 2011).

H3: The level of perceived crisis readiness will be highest in larger organizations.

In manufacturing organizations, stages of production can often be readily identified. In service organizations, however, what is being sold cannot always be easily seen. Managers in service organizations must address a more complex environmental than do their counterparts in manufacturing organizations (Leiponen, 2012; Orberg Jensen & Petersen, 2012). Hence, ceteris paribus, managers in manufacturing industries should report greater crisis readiness than those in service industries.

H4: Managers in manufacturing organizations will report greater crisis readiness than will their counterparts in service and hospitality industries.

Business strategy typologies have been employed as a theoretical basis for identifying strategic groups, and are frameworks that define multiple generic competitive strategies available to business units (Zahra & Covin, 1993). By focusing on group level of analysis, it is possible to compare the attributes of businesses employing one generic strategy with those employing another. A number of generic strategy

typologies have been proposed, but those of Porter (1980) and Miles and Snow (1978, 1986) have received the most initial scholarly attention (Veett, Ghobadian, & Gallear, 2009). The Miles and Snow framework is utilized in this study.

Miles and Snow (1978) identified four generic strategies. Prospectors focus on innovation, creating new markets and enacting uncertain environments (Miles & Snow, 1986). In contrast, defenders emphasize cost controls in stable environments, concentrating their innovative efforts on process issues. Analyzers represent a middle ground between prospectors and defenders, building a firm foundation in efficiency but continue to pursue incremental innovation through flexibility. Reactors do not possess a cohesive strategy. They seek to comply with environmental pressures and they are generally unsuccessful (Brunk, 2003; Jennings, Rajaratnam, & Lawrence, 2003; Moore, 2005; Slater & Olson, 2001; Snow & Hrebiniak, 1980). Most research on the typology has been supportive (O'Regan & Ghobadian, 2006; Parnell & Jusoh, 2008; Parnell & Wright, 1993).

Two links between business strategy and crisis readiness are anticipated. First, because defenders strive to reduce uncertainty, it is expected that they will exhibit the highest crisis readiness. Second, because reactors lack a coherent strategy, it is expected that they will exhibit the lowest crisis readiness.

H5a: Managers in defender organizations will report the highest level of crisis readiness.

H5b: Managers in reactor organizations will report the lowest level of crisis readiness.

The hypotheses tested in this study within the landscape survey and strategic planning components of the crisis management framework outlined in figure 1. Figure 2 overviews the hypotheses with regard to the framework.

METHODS

A survey instrument containing the crisis readiness scale and items to classify organizations along the Miles and Snow typology was administered to 275 managers enrolled in three post-graduate institutions in the United States. Only individuals employed as managers were included in the sample. A variety of management levels (e.g., lower, middle, and top managers), backgrounds, industries and firm sizes were represented. This sample provides a cross-sectional gauge of management perceptions from individuals who have been exposed to a wide variety of crises and strategic considerations. Its inclusion of middle managers also informs the analysis because they have begun to play a greater role in recent years in both strategy formulation and implementation (Balogun & Johnson, 2004; Raes, Heijltjes, Glunk, & Roe, 2011).

The crisis readiness scale developed and validated by Rousaki and Alcott (2007) was utilized in the study. The eleven items were arranged on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale is relatively new and hence, a confirmatory factor analysis was conducted to assess the validly of the construct as delineated in the scale. Support was very strong. The eleven items loaded into a single component with an eigenvalue of 8.003, explaining 72.8 percent of the variance. The Cronbach's alpha for the scale was .962. All eleven questions were retained in the study. The questions for the scale can be found in Appendix A.

The businesses in which managers work were categorized along the Miles and Snow typology utilizing a self-typing scale proposed by James and Hatten (1995), and based on the original work of Shortell and Zajac (1990). Respondents read descriptions of each of the four strategies and selected the one that best fit their organizations. Item wording is provided in Appendix B. This approach identified 70 defenders, 110 prospectors, 54 analyzers, and 41 reactors in the sample.

FIGURE 2
CRISIS MANAGEMENT FRAMEWORK AND HYPOTHESES

Landscape Survey	Strategic Planning
Hypothesis 1 – Level of Management Low level Middle level **Top level (predicted highest)** **Hypothesis 2 –** Functional Position of Management Accounting/finance Marketing/sales **General Management (predicted highest)** Other Production/engineering	**Hypothesis 3 –** Size of the firm Micro: < 10 employees Small: 11-50 employees Medium: 51-250 employ **Large: 251+ employees (predicted highest)** **Hypothesis 4 –** Industry Sector **Manufacturing (predicted highest)** Hospitality Service Other **Hypothesis 5 –** Strategic Type Defenders **Prospectors (predicted highest)** Analyzers **Reactors (lowest)**

RESULTS

A total of 275 respondents completed the survey. Table 1 provides the results of a one-way ANOVA performed on multiple variables and a summary of the hypotheses tests. All of the ANOVA results were subjected to a Tukey follow-up test to determine which means were different among the groups.

Hypothesis 1 was supported with top managers generating higher means than lower level managers (means = 3.522, 3.000, respectively and significant at the .019 level.)

Hypothesis 2 was partially supported with general management generating higher means than accounting/finance staff (means = 3.665, 2.336 respectively and significant at the .000 level). Production/engineering managers actually scored the highest in the sample and were statistically greater than their counterparts from accounting/finance and marketing/sales (means = 4.008, 2.336, 3.042 respectively and significant at the .000 level). In addition, the category labeled "other" generated higher scores than did the accounting/finance category(means = 3.556, 2.336 respectively and significant at the .000 level). Marketing/sales managers outscored accounting/finance managers (means = 3.042, 2.336 respectively and significant at the .002 level). General management outscored marketing/sales managers (means = 3.665, 3.042 respectively and significant at the .04 level).

Hypothesis 3 was partially supported. Large firms outscored both micro firms (means = 3.657, 2.652 respectively and significant at the .001 level) and small firms in terms of crisis readiness (means = 3.657, 3.080 respectively and significant at the .007 level).

Hypothesis 4 was fully supported. Manufacturing firms outscored both hospitality and service firms in terms of crisis readiness (means = 3.770, 2.968, 2.996 respectively and significant at the .000 level).

Hypothesis 5 was partially supported. Prospectors outscored reactors with regard to crisis readiness (means = 3.463, 2.765 respectively and significant at the .006 level). Although managers in defender organizations were expected to display the highest level of crisis readiness, this was not the case.

TABLE 1: SUMMARY OF HYPOTHESES TESTS

Hypothesis	Categories (n)	Mean	F-value	Significance and Tukey follow-up test	Hypothesis supported?
H1 – Managerial Level	Low level (n=55) Middle level (n=113) Top level (n=107)	3.000 3.180 3.522	4.394	**.019** Top>Low	Full
H2 – Functional Background	Accounting/finance (n=68) Marketing/sales (n=48) General Management (n=97) Other (n=17) Production/engineering (n=45)	2.336 3.042 3.665 3.556 4.008	25.699	**.000** GenMgt>Acct/Fin Prod/Eng>Acct/Fin Prod/Eng>Mkt/Sales Other>Acct/Fin **.002** Mkt/Sales>Acct/Fin **.04** GenMgt>Mkt/Sales	Partial
H3 – Size of the Firm	Micro: < 10 employees (n=24) Small: 11-50 employees (n=78) Medium: 51-250 employees (n=88) Large: 251+ employees (n=85)	2.652 3.080 3.255 3.657	6.400	**.001** Large>Micro **.007** Large>Small	Full
H4 – Industry Sector	Manufacturing (n=102) Hospitality (n=69) Service (n=109) Other (n=2)	3.770 2.968 2.996 3.091	10.679	**.000** Mfrg>Hospitality Mfrg>Service	Full
H5 – Strategic Type	Defenders (n=70) Prospectors (n=110) Analyzers (n=54) Reactors (n=41)	3.223 3.463 3.357 2.765	3.806	**.006** Prospector>Reactor	Partial

DISCUSSION

The present study examined five sets of organizational variables that are linked to crisis readiness. In this discussion, we probe the implications concerning each variable.

Managerial Level

As expected, top managers reported the highest degree of crisis readiness. This does not necessarily mean that lower level managers work at firms with lower degrees of crisis readiness. Rather, a firm may have a high level of crisis readiness, and yet top level managers, because of their proximity to the crisis readiness process, report higher scores than lower level managers. Hence, the diffusion of crisis readiness knowledge throughout the firm may not be consistent but instead, focuses primarily on the top management level. At a minimum however, we advocate that consistent information on crisis readiness be communicated throughout all levels of the organization.

Functional Background

Interestingly, production/engineering staff scored the highest in their assessment of crisis readiness at their firms, followed by general managers. This may be attributed to the fact that many crisis events result from issues related to product design and product defects. In addition, workplace safety is another domain that may come more directly under the scope of production/engineering managers who must oversee the workplace design of product manufacturing.

One result that cannot be overlooked is the low score reported by managers with backgrounds in accounting and finance. The low degree of crisis readiness may not be indicative of their actual organizations, but perhaps of the nature of the functional areas. A silo mentality along with a general lack of communication of crisis readiness initiatives may explain the low score of this group, although this is not clear. Crisis readiness policies should be communicated across functional departments.

One's perception of crisis readiness is likely influenced by one's understanding of the types of crisis that are most likely to occur. Managers with backgrounds in production or engineering might have a better understanding of crisis because of their direct link to the production function. Alternatively, the marketing function is often associated with crisis response (e.g., crisis communication and public relations) more than with crisis preparation. Although the intricacies of the relationships are complex, a link between management function and crisis readiness is logical.

In a similar vein, engineers and production managers focus on systems and processes and create functional products. They are specifically trained to avoid anything that could create problems associated with product quality, including what are readily perceived as crises. Their counterparts in marketing and sales are charged with the task of moving these products through channels and generating revenue for the organization. Their worldview assumes the existence of a functioning product ready for delivery. As such, they might be less likely to spend time preparing for prospective crises.

Size of the Firm

As expected, respondents from the largest firms reported the highest degrees of crisis readiness. This finding is consistent with the trend that larger organizations hold larger quantities of resources, which generally translates into greater crisis readiness capabilities. Respondents from micro level firms scored the lowest on crisis readiness. This finding is understandable, given that the employees of these firms are busy running other functions related to the management of the company. In addition, smaller firms have

less need for formal crisis management procedures since they tend not to show up on the radar of stakeholders in the public arena who may cause publicity problems.

Larger firms are more vulnerable to a crisis and a follow-up public relations crisis due to their scope, visibility, and in some cases, success. The size of their scope makes them more vulnerable to problems because of the higher geographical coverage and market expansion. In short, greater size engenders more risk. Visibility is also a magnet for crises, as larger firms are simply noticed more than smaller forms. Larger firms that are successful may be more vulnerable to product sabotage and extortion attempts (Crandall et al., 2013).

The notion that crisis readiness might not be as important in smaller organizations as in their larger counterparts should be tempered. While additional size can promote certain crisis risks, managers in larger organizations tend to be more experienced and capable of addressing a crisis. In this respect, small organizations are vulnerable. Moreover, they may not have the resources necessary to survive when a crisis strikes.

Industry Sector

Crisis readiness was the highest in respondents employed in manufacturing organizations. Such organizations are vulnerable to a number of crisis events including product defects and product sabotage. Crises in manufacturing organizations often appear to be more visible because they are associated with physical products. For example, the effects of damage from a fire at a production facility can be visualized more easily than those from a power outage. While not all production-related crises are more highly visible than other crises, this might be the case for many of them.

Although the precise explanation for the link between sector and readiness is elusive, it underscores a potential misunderstanding. Crises are not necessarily more common in manufacturing organizations. Service organizations can be equally vulnerable. Airplane crashes, food poisoning at restaurants, and electrical malfunctions on cruise ships are but a few examples. The lower reported crisis readiness in service organizations (including hospitality organizations) may be linked to a general perception that crises are less common and/or less damaging in service firms. If true, this suggests the need for greater emphasis on crisis preparations in service firms.

Strategy Type

Not surprisingly, respondents in reactor organizations displayed the lowest degree of crisis readiness. Although we predicted that defenders would display the highest degree of crisis readiness, this group was actually outscored by prospectors. However, follow-up Tukey tests did not identify any significant differences among defenders, prospectors, and analyzers, although the difference between prospectors and reactors was significant.

Managers in reactor organizations appeared to be the least cognizant of crisis readiness preparations. Indeed, this seems consistent with the general lack of preparation and consistency associated with reactors. Managers in prospector, defender, and analyzer organizations were largely similar with regard to crisis readiness. This suggests that crisis readiness is not a function of generic strategy per se, as long as the strategy employed by the organization is coherent and viable.

CONCLUSIONS AND FUTURE DIRECTIONS

The findings reported herein suggest that top managers in the production/engineering and general management areas perceive higher degrees of crisis readiness capabilities. From a broader industry perspective, respondents in large manufacturing firms reported the highest levels of crisis readiness.

Certainly, firms in the service and hospitality industry are not immune to organizational crises. Indeed, a number of high profile crises have occurred in these sectors. We advocate that that crisis readiness become part of the strategic mindset of firms in these industries as well.

A key limitation of this study should be acknowledged. It was based on perceptions of crisis readiness among individuals from a variety of different firms. It relied on managerial perceptions. While the notion of readiness is—to some extent—a perception, there is no assurance that managerial perceptions are *directly* associated with actual preparedness. For example, an organization might have made a variety of crisis preparations but might not have communicated this information well throughout the organization. In this respect, the notion of low crisis readiness would reflect the individual respondent and possibly the functional area in which he or she resides, not the organization.

A number of future research opportunities exist. Replicating this study in single, narrowly defined industries can delineate how crisis preparation varies across industries. Moreover, collecting data from managers in different functional areas but in the same organization would help identify the source of differences in crisis readiness.

With the heightened effects of globalization, it is important to assess how managers in emerging nations view crisis management and why their perceptions may differ from those in developed economies, with an aim toward offering suggestions for improving crisis planning (Parnell, Köseoglu, & Spillan, 2010; Spillan, Parnell & de Mayoro, 2011). The present study only considered managers in U.S. organizations. Future research could compare and contrast crisis readiness perceptions in the U.S. to that in other nations.

Evidence suggests that perceptions about and previous experience with organizational crises are key determinants in the steps managers take to prepare for them (Herbane, 2013). The present study did not ask managers about any previous experience with crisis planning or with actual crisis events. Future studies that assess crisis experience can identify any links between such experience and crisis readiness.

Finally, crisis management is an interdisciplinary field, with scholarly contributions from a variety of disciplines. (Paraskevas, 2006; Piotrowski, Watt & Armstrong, 2010). The challenge of crisis decision-making is a key concern, which often requires leaders to render rapid decisions in environments of high uncertainty and complexity. However, decision-makers often lack rationality and consistency (Carone & Di Iorio, 2013; Diacon, Donici, & Maha, 2013). Indeed, high crisis readiness is viewed as a necessary but insufficient prerequisite for effective crisis management (Parnell, Köseoglu & Spillan, 2010; Rousaki & Alcott, 2006). The link between crisis readiness and subsequent decision-making effectiveness deserves additional attention in the literature.

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APPENDIX A
THE CRISIS READINESS SCALE

Item	Factor Loading
1. I have high accessibility to crisis management resources.	.892
2. The organization has an adequate budget in its strategic plans in case of a crisis situation.	.887
3. The organization has an adequate crisis management plan.	.864
4. I am well informed about the resources and tools allocated for crisis response.	.854
5. The organization views crisis management as a corporate goal.	.845
6. The members of the organization are trained to handle a crisis situation.	.801
7. The organization will recover quickly after a crisis situation.	.885
8. The organization rewards employees for their part in detecting and reporting potential crisis signs.	.877
9. Key employees of the organization are well informed about the resources and tools allocated for crisis response.	.866
10. I am authorized to use the budget of the organization in order to cope with a crisis.	.719
11. The organization's culture will encourage its ability to manage a crisis.	.878

Eignvalue – 8.003
Percent of Variance Explained – 72.753
Cronbach's Alpha - .962

APPENDIX B
MILES & SNOW SELF-TYPING ITEM

Which of the following paragraphs most closely describes the strategy of your business?

A. We've attempted to locate and maintain a secure niche in a relatively stable product or service area. We've tried to offer a more limited range of products or services than our competitors and we've tried to protect our domain by offering higher quality and superior service. We may not be at the forefront of developments in the industry but have attempted to concentrate instead on doing the best job possible in our market.

B. We've tried to operate within a broad product-market domain that undergoes periodic redefinition. We've wanted to be 'first in' with new products and market areas even if not all of these efforts have proven to be highly profitable. We've tried to respond rapidly to early signals concerning areas of opportunity, and these responses have often led us to a new round competitive actions.

C. We've attempted to maintain a stable, limited line of products or services, while at the same time have tried to move out quickly to follow a carefully selected set of the more promising new developments in the industry. We are seldom "first in" with new products or services but by carefully monitoring the actions of major competitors in areas compatible with our stable product-market base we try to be 'second in' with a more cost-efficient product or service.

D. We've not been able to have a consistent product-market orientation. We have not been able to be as aggressive in maintaining established products and markets as have our competitors and we have not been able to take as many risks as they have. We have been forced to respond to environmental pressures.