
Framework for Building Skills in Disaster Risk Management for Businesses

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ABSTRACT

Philippine business firms face the challenge of how to be prepared for natural disasters. Due to geographic location, the country is vulnerable to natural hazards, particularly, typhoons, floods, volcanic eruptions, and earthquakes. One way to promote disaster risk management among business firms is to build their capacity by developing a framework on the skills needed for disaster risk preparedness, mitigation, response, and recovery. This study constructed a framework for building skills in disaster risk management to help guide businesses in planning and implementing disaster risk management initiatives. For data gathering and analysis, key informant interviews, review of case studies, and content analysis of related documents were used. Results of the study pointed to implications for adopting a human resource management approach to disaster risk management. The researcher also used the findings of the study for conducting a succeeding action research to further support private sector initiatives in disaster risk management.

Keywords: framework, skills, disaster risk management

INTRODUCTION

To remain viable and stable, business firms need to manage risks from natural disasters. The country is prone to natural hazards, such as typhoons, floods, and earthquakes (Ladrado-Ignacio, 2011; Golez, 2006). Fortunately, the private sector, government, and non-government organizations strive to work together for a comprehensive, national disaster risk management policy and program as part of the National Disaster Risk Reduction and Management Council (NDRRMC) (Republic Act 10121, 2010). The government is mainly responsible for a national disaster risk management program. However, individual businesses are responsible for increasing their capacity for disaster preparedness and resilience.

At the outset, some terminologies may need to be clarified. For example, the terms “disaster risk management” and “emergency management” are often used interchangeably. But based on literature, it appears that “emergency management” generally refers to various types of risks to public safety and health, such as chemical hazards and terrorist threats (Haddow et al., 2011). Similarly, “contingency planning”, “crisis management planning”, and “business continuity planning” often refer to managing risks, in general. But “business continuity planning” has taken a more definite scope. It pertains to “processes used by businesses to prepare for disasters by identifying the risks to their business processes, their facilities, their employees, and their information, and then taking action to reduce that risk” (Haddow, et al., 2011). In contrast, “contingency planning” and “crisis management planning” pertain more to initiatives of

various types of institutions, such as local government units (NDDC, 2007).

The competencies of people have been underscored in disaster risk management experiences (see, for example, the works of Fishcher, 2008; Haddow et al., 2011; Beggan, 2011; Siegel, 1985). Clearly, complex skills are required in disaster prevention, mitigation, response, and recovery.

The human resource view considers people as most important resource and investments (Newstrom, 2011; Greer, 2011). Along this context, businesses can adopt a human resource approach to disaster risk management by planning well for competencies required. The human resource (HR) approach is known as developmental and supportive as it “encourages growth and development of people toward higher levels of competency, creativity, and fulfilment” (Newstrom, 2011, p 12). Building people competencies is needed to secure competitive advantage (Campbell and Goold, 1997).

This conceptual study attempts to link disaster risk management with human resource assessment. Specifically, it offered a framework of skills required in disaster risk management. The resulting framework may be used by businesses to assess and improve their capability to perform disaster risk management.

Statement of the Problem

Crafting detailed plans on disaster risk management for individual businesses is tedious and complex. Businesses need to understand the discipline, guideline procedures, and tools involved in disaster risk management, emergency management, and business continuity planning. In view of the complex institutional and technical issues involved in disaster risk management, one might overlook some important aspects in preparing plans for disaster preparedness. For example, the need for periodic maintenance, update, and testing of existing Emergency Plans and Business Continuity Plans is critical (Haddow et. al., 2011; Doughty, 2010). Changes in the internal and external environment of the firm (e.g., change in company direction, reorganization, technology) could affect a Disaster Preparedness Plan. New or emerging skills need to be strengthened, such as ensuring the psychological well-being of participants and survivors. Also, competencies in coordination, decision-making, and management are crucial due to multiple agencies and different institutions involved to effectively respond to large-scale, multijurisdictional disaster events. It has been observed that often, some “people issues” and “communication issues” are overlooked in contingency plans (Doughty, 2010, pp. 161-163). For instance, Doughty illustrated that “people issues” concerned “management’s ability to provide the staff with basic items for them to work in alternative sites”, while “communication issues” pertained to “management’s ability to notify groups on where to meet during an event”, and “designating a person or department to communicate with the public and the news media” (pp. 161-163).

Businesses, therefore, must identify the critical skills needed in effective disaster risk management. Along this view, this research addressed the following question: What are the core skills in disaster risk management that businesses need to know in order to perform well?

Objectives

The study has two (2) objectives:

- To construct a framework that identified the core skills in disaster risk management which would help business assess potential gaps in human resources; and
- To generate some potential implications of disaster risk management to human resource

management, such as training and development, recruitment, reward systems.

Significance

This conceptual study is a pioneering attempt to relate disaster risk management with human resource management in the Philippine setting. The skills framework constructed in this study might be more useful to small and medium size businesses that tend to rely more on in-house staff than on external consultants to craft their disaster preparedness plan. The study's findings were useful to the author's subsequent action research also related to businesses' disaster risk management initiatives.

Scope and Limitations

The study is exploratory since no prior research had been found specifically focusing on competency assessment for disaster risk management in Philippine businesses. It has a limited scope, the output of which is a framework that identified the skills required in disaster risk management. No detailed explanations were given on the identified skills in the framework. Data gathering did not include other more extensive methods, such as focus group discussions, intensive site observations and longitudinal case studies.

REVIEW OF LITERATURE

This brief review of literature dwelt on related theories, such as the Uncertainty Reduction Theory and the McKinsey 7-S Model, and some field studies on competencies in disaster risk management.

Relevant Theories

The *Uncertainty Reduction Theory* earlier developed by Berger (1979) and Hrebiniak and Snow (1982) implied that organizational members would tend to avoid uncertainty in decision-making. In order to reduce the stress associated with ambiguity, they would tend to work towards a level of agreement of roles and processes within the organization. In turn, this elimination of potential stress associated with ambiguity would tend to increase the effectiveness of organizational members to make appropriate decisions, thereby improving organizational performance.

For this study, the implication of this theory was extended to uncertainties brought by natural disasters, which bring large-scale damage to lives and property. According to the theory, organizational members would seek to reduce uncertainty by agreeing among themselves on specific roles and processes among various parties. By using this assumption, constructing a framework that defines the competencies required among organizational members would be deemed useful.

Another theory found as useful to this study was the *McKinsey 7S model (7S)*. This theory emphasized the interdependencies and proper alignment of seven key elements of an organization -- strategy, structure, systems, skills, staff, style, and shared values – to ensure a coherent and consistent organizational strategy. The comprehensiveness of the McKinsey 7S model served as a broad guide for constructing a framework of skills for various groups involved in disaster risk management.

Field Studies on Competencies in Disaster Risk Management

It seems that disaster-related field research studies, in general, are mostly found in foreign academic institutions, such as in the United States in the light of its experience in large-scale calamities. Haddow et al. (2011) emphasized that emergency management in the U.S. has grown into a discipline beyond the response environment to focus on risk analysis, its mitigation or prevention, communications, and social and economic recovery. Field studies pertaining to development of competencies in disaster risk management appear to call for more opportunities to research improvement on this specific area (Fishcher, 2008; Haddow et al., 2011; Beggan, 2011; Siegel, 1985).

For example, a pilot study by Slepki (2007) underscored a more systematic examination of disaster preparedness and response capabilities among health care providers. Slepki surveyed 200 health care providers composed mostly of physicians and nurses who worked in emergency response during Hurricanes Katrina and Rita in the United States. Results of the study showed that while most respondents felt equipped with skills in medical care, many felt they were least prepared in “specific disaster-response skills” and “systems issues”. Health care respondents suggested training along these management areas, and especially on “facilitating transitioning” due to their experience in the abrupt change from everyday practice to a real disaster incident.

Another survey (Fulmore, 2007) identified the skills and needs of volunteers from a private institution in the U.S. for their potential participation in disaster management in a university. The study identified the following skills as important for volunteer work: food preparation, child care, translator, emergency management experience, first aid, and search and rescue. The volunteers indicated their need for the following types of support and services in order for them to stay in volunteer work: communication with family, communication about what’s happening, transportation, housing on campus, emotional support, and provision of spiritual or religious support.

A case study on Local Emergency Management Agency (LEMA) coordinators in the United States (Fisher, 2007) dwelt on the role of education and experience in disaster mitigation. The study found out that the amount of formal education the LEMA coordinators completed was the only variable that determined whether or not they adopted disaster mitigation strategies. On private sector participation in pre-disaster mitigation, a case study on Federal Emergency Management Agency’s (FEMA) Project Impact dwelt on reducing the damage due to an earthquake that occurred in Olympia in 2001 (Haddow et al., 2011). The study emphasized the role played by private sector partners in developing aggressive business resumption programs. In FEMA’s Project Impact, earthquake safety products were used in the offices of more than 100 large businesses and over 500 small businesses that participated in the pre-disaster mitigation Project.

Institutional preparedness and continuity planning were seen as critical factors during a university’s actual disaster response to Hurricane Ike in Texas, based on a survey and qualitative study by Beggan (2011). The university’s success in responding to the disaster was attributed to human and institutional factors such as the following: adequately prioritizing the recovery effort, effectively addressing communication and financial concerns, fostering administrative empowerment in the decision process, and devoting sufficient consideration to the development of alternative academic calendars. Human resource development for emergency management was also underscored in a broader, institutional study on disaster management by Siegel (1985). The study examined the complex interactions among government agencies, private sector, and third-sector organizations in disaster management. It also offered human resource solutions for putting in place qualified personnel to solve planning and management problems.

In the Philippines, it appears that there is a lack of more systematic, empirical research on private sector's participation in disaster risk management. The approach to numerous accounts of private sector efforts in disaster response, relief, and recovery, which are vital and commendable, has been mostly anecdotal. A research area that needs further exploration concerns the social-psychological well-being of disaster survivors (Ladrido-Ignacio, 2011).

METHODOLOGY

For constructing a framework for skills in disaster risk management for businesses, data gathering for this qualitative study used case studies distilled from the review of literature. In addition, a content analysis was performed on existing tools and guidelines from current references on emergency management, disaster risk management, and business continuity planning. A key informant interview was conducted in person with head of the Private Sector Disaster Management Network (PSDMN), a non-government organization working closely with the National Disaster Risk Reduction and Management Council (NDRRMC), the main agency responsible for disaster risk management in the Philippines. As an additional reference, the study also examined a sample Disaster Management Plan prepared by private college located in Quezon City, Philippines.

RESULTS AND DISCUSSION

A framework was constructed to identify the core skills in disaster risk management useful for businesses, as shown in Figure 1. The framework presents a comprehensive and complex set of skills required to perform disaster risk prevention, mitigation, response, and recovery. Since the notion of skills building inherently involves integrating the various elements of an organization, the construction of the framework made use of McKinsey's 7S model to identify specific skills pertaining to "strategy" (pertaining to management policies); "structure" (pertaining to organizational set-up); "systems" (pertaining to systems and procedures and detailed operational strategies); "staff" (pertaining to training and development of people); "style" (pertaining to leadership and management style); and "shared values" (pertaining to corporate culture).

The framework in Figure 1 shows broad themes of skills set, numbered from one to ten. The skill themes numbered from one to six belong to disaster preparedness and mitigation (considered as "proactive" phase of disaster risk management). The skill themes numbered from seven to ten fall under disaster response and recovery (considered as "reactive" phase of disaster risk management). For each skill theme, the corresponding McKinsey organizational element is depicted. As a whole, the framework contains a combination of technical skills, management-related skills, and human resource management skills, such that training and career development have been also included.

Figure 1. Framework for Building Skills in Disaster Risk Management for Businesses, using McKinsey 7S Model and Disaster Risk Management Measures

Disaster Preparedness and Mitigation Skills ("Proactive" Phase)	Disaster Response and Recovery Skills ("Reactive" Phase)
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I. Increasing Awareness on Disaster Preparedness (“Strategy”)

*Educating company members and their families on preparedness and safety measures during disasters (know what-to-do, what-to-bring in an emergency)

*Assessing the company exposure and vulnerability to disaster risks (using geohazard maps)

II. Committing Top Management Support for Disaster Risk Management (“Strategy”, “Structure”)

*Fine-tuning corporate plans and policies to embrace disaster risk management (allocate budget and resources)

*Organizing a Disaster Control Group/ Emergency Management Group with clear responsibilities and chain of command as the overall in-charge for planning, directing, coordinating, and monitoring all disaster management strategies of the company
 -Establishing an Incident Command Center within company premises and properly equipped with personnel, supplies, and facilities

- Ensuring proper flexibility, active participation from all departments/units

*Preparing and documenting well-crafted and comprehensive Business Continuity Plans for back-up and recovery of vital systems
 -identifying the key business processes for priority back-up and recovery systems through intensive consultations with all department heads/units
 - selecting proper back-up and recovery strategies by balancing low risk and cost-effective strategies for information technology systems, network , telecommunications, records, materials, human resources

*Updating and testing of existing Business

VII. Mobilizing the Emergency Management Team/Disaster Control Team for Rescue and Relief Services (“Structure” and “System”)

*Communicating swiftly with internal members and external agencies/ (local government units, police, hospitals) for immediate rescue and emergency assistance

*Transporting/relocating affected individuals to a suitable shelter site

*Providing adequate food, basic personal care supplies, medicines for persons in shelter site

*Administering first-aid and health care to survivors and maintaining sanitation in shelter site to prevent spread of diseases

*Conducting psychosocial intervention for mental well-being of survivors to move on

***Disbursing quick, emergency funds and supplies to Disaster Control Group (also possible cash loans to employee-volunteers/survivors)

*Communicating proper information to media and to families of employees who remain isolated in the office building to reassure them on safety of employees and avert potential negative perceptions from the public

*Monitoring status and assess impact of disaster to company members and office facilities/ resources (preparing Incident Report)

*Encouraging volunteers to assist in emergency management, retrieval of employee record, communication with families, other functions

VIII. Conducting Recovery and Rehabilitation of Facilities, Systems, Infrastructures (“System”)

Continuity Plans/Manuals periodically to enhance their feasibility in real disaster events (using drills, simulations, walk-through of manuals)

*Adopting long-term policies for a sustainable environment and adaptation to climate change (renewable energy, green technology, waste management)

III. Developing Cross-Institutional Coordination and Mechanisms (“Structure”)

*Coordinating closely and maintaining effective relations with key agencies mandated with disaster assistance (Local Disaster Risk Management Office, police, fire department, local chapters of Philippine National Red Cross, NGOs) for emergency assistance, training assistance, information bulletins)

IV. Ensuring Building Maintenance and Safety Standards (“System”)

*Conducting regular building inspection and maintenance to ensure compliance with government structural engineering and safety standards

*Designing and developing innovative, cost-effective infrastructures that are more resilient to extreme weather conditions

V. Setting up an Early Warning System for Communicating Emergencies (“System”)

*Developing timely and effective alert signals and communication systems to quickly inform all company personnel of potential danger from specific natural hazards (typhoons, earthquake, floods)

VI. Training and Other Human Resource Management Strategies (“Staff”)

*Conducting adequate training for company personnel on disaster/emergency management

*Implementing timely the Business Continuity Plans that include :

- Protection and recovery of power supply and utilities system

- Protection and recovery of information and communication systems

- Protection and recovery of materials and inventory system

- Handling insurance claims for recovery

- Reconstruction of vital records/materials damaged by floodwaters, fire, other natural causes

- Repair and rehabilitation of building infrastructures and facilities damaged by the disaster

IX. Executing Effective Leadership (“Style”)

*Adopting leadership styles that promote decisiveness, swiftness, calmness, and flexibility during disasters or emergencies

X. Implementing Organizational Culture of Courage, Resiliency, and Faith (“Shared Values”)

* Conducting organizational development strategies to deepen people’s faith, courage, optimism, and resiliency, especially among those directly affected by the disaster

*Conducting formal and informal meetings gatherings, events that foster faith, service, and charity to continually support those affected by the disaster

(first-aid, rescue and relief systems,
psychosocial intervention, earthquake drills,
fire drills, emergency systems)

*Developing career promotion and other
reward system to motivate personnel to
participate in company disaster management

CONCLUSION AND RECOMMENDATION

Businesses can enhance their human and organizational capabilities in disaster risk management by identifying the specific skills required for the various people involved. A framework for skills in disaster risk management provides a useful guide. It is suggested that a long-term view of developing skills in disaster risk management should be adopted. This strategic view must focus on a comprehensive training and development of personnel and other human resource strategies to ensure a more sustainable and highly effective disaster risk management.

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