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Organizations and Participatory Development: Post-disaster Recovery in Haiti

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Planning, Policy, and Design

by

Santina Len Contreras

Dissertation Committee:
Professor Victoria Basolo, Chair
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2016

DEDICATION

To Bruna Fuentes, Manuel Fuentes, and Leonardo Watts

In your actions and words, you taught me to love, care for others, and stand up for what is good and right. Your spirit guides me everyday and is the motivation for the impact I hope to make in the world.

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ABSTRACT OF THE DISSERTATION

Organizations and Participatory Development: Post-disaster Recovery in Haiti

By

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Doctor of Philosophy in Planning, Policy, and Design

University of California, Irvine, 2016

Professor Victoria Basolo, Chair

Participatory approaches increasingly are being emphasized in post-disaster recovery projects. Many organizations engaged in this work promote the use of a participatory approach as if it were a single solution, even though the ways in which they engage local communities often varies significantly. Research focused on the variation in participatory approaches, especially for post-disaster recovery development efforts, is scarce in the literature and, thus, we know little about the impacts of different approaches on the post-disaster recovery process. In an effort to fill these gaps, the central aims of this study are to better understand the use of participatory approaches by organizations in the post-disaster setting, determine the influence of various participatory approaches on the post-disaster recovery process, and to contribute to development theory and practice. Specifically, this is done by utilizing the capabilities approach, as developed by Sen (1999) and expanded by others in the literature, as an evaluative framework for assessing the impacts of variations in participatory approaches towards post-disaster recovery.

Haiti, near the capital city of Port-au-Prince, was rocked by a magnitude 7.0 earthquake on January 12, 2010, bringing death, destruction and chaos to an already poor and vulnerable

community. A large influx of organizations responded to this disaster shortly after the earthquake. Many of these organizations, as well as more recent groups, continue to work on recovery projects in Haiti. For this reason, the country presents an excellent case for assessing the work of a large number of post-disaster recovery initiatives working in the same context.

This study uses a multi phased, mixed method approach including survey methods, statistical analyses, and interviews with organizational representatives and community members affiliated with organizations working in Haiti after the 2010 earthquake. The research results focus on contributing to the organizations, planning, and hazards literatures in an effort to improve the work undertaken by organizations in the post-disaster setting.

INTRODUCTION

Natural hazards present a serious concern for communities worldwide. Although these hazards pose a significant risk for all types of communities, researchers note that urbanizing areas of developing countries are especially vulnerable to hazard risk (El-Masri & Tipple, 2002). Due to rapid urbanization in many developing countries, increasing populations of people are living in hazard-prone areas. The urban growth in vulnerable areas has resulted in serious impacts as evidenced by the fact that though residents of the least developed countries represent 11% of the world's population exposed to hazards, this accounts for 53% of the casualties occurring from hazard events (Jauregui, Sholk, Radday, & Stanzler, 2011; Peduzzi, Dao, & Herold, 2002).

Many factors can be attributed to more significant disaster impacts in developing countries. In many cases, communities in developing countries lack the physical, economic, and social protections from disasters available in more developed countries. For example, poorer areas tend to experience a substantial number of human fatalities and injuries from disaster related structural failures due to inadequate construction methods, weaker enforcement of building regulations, and corruption (Ambraseys & Bilham, 2011; Kenny, 2012; Meli & Alcocer, 2004). Thus, in many ways, a community's ability to survive and recover from a disaster depends not only on the disaster's physical magnitude, but also on the socioeconomic, political, and environmental conditions in which the people live (Martine & Guzman, 2002). Furthermore, disaster losses can significantly impact development objectives, such as reducing poverty, improving health care, and increasing access to education (Pelling, Maskrey, Ruiz, & Hall, 2004). Therefore, understanding urban development within the context of hazard risks is critical for reducing exposure and harm from future events.

In the wake of a hazard event, local, national, and regional governments as well as civil institutions often face difficulties in adequately addressing the needs of their disaster-affected populations. Impacts from these typically large-scale hazard events frequently result in appeals being made to the international community for multilateral humanitarian assistance (Jauregui et al., 2011). In response, post-disaster response and recovery initiatives are often undertaken by a wide range of parties, including local and national governments, international agencies, and organizations.

Organizations play an important role in the post-disaster process since they are often uniquely positioned to initiate changes that may improve a community's ability to withstand future disasters. The networks available to organizations can assist in rapidly mobilizing support services for communities affected by a disaster (Chandra & Acosta, 2009). Additionally, scholars note that organizations play a critical role in the recovery process due to their ability to provide important recovery resources (Wachtendorf, Kendra, Rodríguez, & Trainor, 2006), impart disaster management knowledge (K. Allen, 2006), and build the capacity of socially vulnerable communities (Khazai et al., 2006). Moreover, the recovery process in Honduras after Hurricane Mitch demonstrated that because organizations frequently become a permanent component of a given community, they can focus more on utilizing participatory approaches during disaster response and recovery efforts (Telford, Arnold, & Harth, 2004). Therefore, organizations that become long-term fixtures in a community are often ideally positioned to work on systemic community issues, such as reducing risk, developing economic resources, and improving social vulnerability, on an ongoing basis (Chandra & Acosta, 2009; Islam & Walkerden, 2015).

The assistance provided by organizations typically includes immediate and longer-term efforts designed to save lives, alleviate suffering, maintain human dignity, and help people

prevent, mitigate, prepare for, and respond to future crises (Good Humanitarian Donorship, 2003). While organizations often serve as an important source of recovery assistance, studies note that there can be negative aspects to organizational response and recovery efforts. For example, organizations have been found to not always utilize resources efficiently due to an emphasis on spending money quickly and satisfying donor requirements (Boano, 2009). Furthermore, scholars argue that the long-term presence of organizations in communities can lead to an overreliance on outside intervention, which ultimately can impede a community's long-term recovery (Rubin, 1991).

To address these issues, post-disaster initiatives should be inclusive of factors that develop a community's ability to reach post-disaster recovery goals. Social factors such as class, occupation, caste, ethnicity, gender, disability, health status, age, immigration status as well as the nature and extent of social networks can impact the vulnerability of individuals or groups and their ability to recover from a disaster (Wisner, Blaikie, Cannon, & Davis, 2003). The significance of social location and linkages to recovery underscores the importance of disaster planning strategies that include greater community involvement. As many hazard scholars argue, to achieve more equitable recovery among affected communities, recovery planning strategies need to include greater local participation in post-disaster development, based on local goals and suitable to local needs (Anderson & Woodrow, 1989; Bates, 1982; Bates & Peacock, 2008; Berke & Beatley, 1997; Oliver-Smith, 1990; Wisner et al., 2003).

The increased focus on participation in hazards work can be linked to changing perspectives towards development. For up until the 1950s, development was frequently associated with the advancement of modernity as achieved by western societies (Schuurman, 1993). In this perspective, development was thought to occur through the transfer of knowledge

from ‘advanced’ countries by the rational planning of experts, often leaving the perspectives of the local ‘non-experts’ out of the development process (Giles, 2001). However, problems were observed with development work undertaken within this perspective; critics began to advocate for the use of more participatory focused work (Chambers, 1983; Freire, 2005). Thus, in the past forty years, the field has seen a shift, as participation has become one of the main tenets of contemporary development theory and practice (Hickey & Mohan, 2005). Scholars note that much of the current discourse and practice in international development now focuses on the assumption that participation is an important element required to create sustainable livelihoods, promote good governance, and alleviate poverty in developing countries (DFID, 2002; Dill, 2009; Evans, 2002; World Bank, 2002).

In light of these findings, there has been a growing awareness among organizations of the importance of utilizing participatory approaches for post-disaster recovery programs. Whether the recovery project is referred to as owner-driven, community based, or assisted self-help, there is evidence of a continued interest in the use of participatory approaches for recovery programs in urban and rural areas (Davidson, Johnson, Lizarralde, Dikmen, & Sliwinski, 2007; Maskrey, 1989; Pearce, 2003). However, many organizations involved in post-disaster recovery work describe their participatory engagements in similar ways, even though the ways in which they engage local communities often vary significantly. Researchers observe that, at one extreme, community members are involved in the projects only as the labor force whereas, at the other extreme, they play an active role in decision-making and project management (Davidson et al., 2007; Nieuwma & Riley, 2010).

Discussions of the variation in participatory approaches are long standing in the literature. As presented in Arnstein’s (1969) well-known “ladder of participation,” a continuum

of approaches for citizen involvement in planning processes exists. Although originally developed in reference to gradations of participation in various programs of the United States Federal Government (i.e. urban renewal, anti-poverty, and Model cities), Arnstein's work has been applied more broadly, including application to participatory work in developing countries (Choguill, 1996). In this work, the highest level of the ladder represents the ideal form of participation, which involves local people and their communities defining and addressing local needs and aspirations and controlling the decisions; thus, this work is contrary to a traditional, top-down development approach (Duraiappah, Roddy, & Parry, 2005). However, scholars increasingly argue that many applications of participatory approaches in the development mainstream fall short of these idealized intentions. They argue that participation is used at times merely as a tool for achieving pre-set objectives, not as a process to empower individuals and communities to assume leadership, envision their futures, and improve their lives (Cleaver, 2001; Cornwall, 2002). From Arnstein's perspective, such approaches tend to fall under the "tokenism" or worse, under non-participation categories of her framework. Therefore, although individuals and communities may become more involved in various stages of development, questions remain as to how different types of inclusion affect development outcomes.

To address this issue, it can be useful to consider alternative methods of assessing participation that potentially allow for an in depth exploration of the impacts of specific types of engagements. One such option is presented by the capabilities framework, which was originally conceptualized by Amartya Sen (1999) and expanded by other scholars. The capabilities approach centers on the key concepts of functionings and capabilities. Functionings represent the various things that people value while capabilities refer to what people are effectively able to do to achieve their desired functionings (Sen, 1999). Although not developed as an evaluative

framework for participation, advancements of the capabilities approach potentially offer a useful tool for understanding differences in participatory engagements. For example, recent operationalization's of the framework, specify that Sen uses the term 'capabilities' with two connotations: sometimes as options and choices; other times the term is used as capacities or abilities to achieve the things people value (Frediani, 2007b; Gasper, 2002). In applying this framework, we are able to see potential differences in the participatory work of organizations working in Haiti, particularly related to the choices and capacity building opportunities provided to community participants by organizations. Therefore, this research applies the framework, derived by Sen and other scholars, to assess the extent to which the level of participation utilized by an organization is consistent with the ideas of the capabilities approach. In this study, this type of participation is described as *Capabilities Approach Participation* or *CAP*.

The main research objective of this dissertation is to better understand the use of CAP by organizations in post-disaster settings. To do so, this dissertation involves two phases of research. In the first phase, the relationships between organizational characteristics and the use of CAP are explored through a quantitative analysis of primary survey data collected from organizations working in post-disaster Haiti. The second phase of the study examines how the use of CAP impacts post-disaster recovery outcomes through an in-depth qualitative analysis of four case studies engaged in post-disaster recovery work in Haiti.

CHAPTER 1: LITERATURE REVIEW

In this chapter, work related to the capabilities approach, organizations, and recovery is reviewed. The first section provides a discussion of the capabilities approach, with a focus on the application of the framework to the assessment of participatory approaches. The subsequent sections present the relevant literature on organizations and post-disaster recovery.

A. Capabilities Approach Framework

This section explores the capabilities approach in greater depth and applies this framework to the context of post-disaster recovery. In this chapter, the capabilities approach literature is reviewed to explain the historical roots, key components, criticisms, and advancements of the approach. Next, a discussion of the relationship between the capabilities approach and participation is provided. Finally, the foundational concepts are operationalized to demonstrate the utility of the capability approach as an evaluative framework for participatory engagements.

a. Background

Perspectives towards development theory and practice have gone through significant changes in the last fifty years. For a long period of time, the goal of development work was understood to be general economic and Gross National Product (GNP) growth (Finnemore, 1997). However, work such as that by Amartya Sen on the Capabilities Approach, has assisted in expanding the focus of development beyond income maximization to the enhancement of individuals' choices, capabilities and freedoms. The progression of the capabilities approach has furthered a broader, multidimensional and more contextual understanding of poverty. Thus, the implementation of the approach, often through the utilization of participatory research methods,

has allowed impacted communities to become active stakeholders in the development process rather than mere beneficiaries of development programs (Chambers, 1995; Streeten, 2000).

b. Historical Roots

The history of the capabilities approach is rooted in the works of early philosophy and economics. Discussions of the foundations of the capabilities framework note that the approach is conceptually connected to Aristotle's theory of political distribution and his analysis of "eudaimonia," or human flourishing (Nussbaum, 1988, 1990; Sen, 1993). Sen has acknowledged strong connections between the capabilities approach and the works of Adam Smith (1776) and Karl Marx (1844). More recently, Sen also has noted Rawls's Theory of Justice (1971) with its emphasis on self-respect and access to primary goods has influenced the development of the capabilities approach (Clark, 2006; Sen, 1992).

The conceptual foundations of the capabilities approach are rooted in Sen's critiques of traditional welfare economics. Theorists in this school of thought, such as Adam Smith, emphasize that economic growth and the expansion of goods and services are necessary for human development. However, Sen aligns with the reasoning of Aristotle who notes that "wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else" (Aristotle, 2009, p. 6). Sen asserts that in judging the quality of life, we should consider what people are able to achieve, as different people and societies typically differ in their capacity to convert primary goods into valuable achievements (Clark, 2006; Frediani, 2007b). Therefore, more useful for identifying need is an approach that focuses on human functions and the capability of people to achieve those valuable functions.

c. Key Components of Framework

The capabilities approach centers on the key concepts of functionings and capabilities. According to Sen, “a functioning is an achievement of a person: what she or he manages to do or to be, and any such functioning reflects, as it were, a part of the state of that person” (Sen, 1985, 2005). Functionings are “beings and doings,” or the various states and activities a person can undertake. These undertakings can include “being” states, such as being well nourished, being housed, being educated as well as “doings,” such as eating, traveling, voting, debating, and other activities. Therefore, functionings is a broad term referring to the resources or activities people recognize as important or what people value.

The other key component of the framework is the concept of capabilities, which refers to a person’s freedom and opportunity to achieve a given functioning. While functionings refer to the doings and beings a person values, capabilities refer to the opportunities available to the person to achieve their functionings. In sum, capabilities are the freedoms people have to achieve the lifestyle they have reason to value (Frediani, 2007b). An important component of capabilities is the individual has the agency and freedom to make choices about what is of value in his or her life from the different options available (Sandars & Sarojini Hart, 2015). The collection of different capabilities a person has available to him or her is the person’s capability set. Sen (1992) notes a distinction between agency freedom (ability to make a choice) and agency achievement (ability to convert a choice into an action). Thus, an individual may have aspirations for a valued doing and being but may not have the freedom or opportunity to achieve the given functioning.

Sen notes that evaluations of well-being should be undertaken within the space of capabilities, not functionings (Sen, 1992). According to this approach, people’s well-being is

judged by looking at the capabilities or real opportunities they have to live a life they value. The commonly utilized illustration of why measurements should be undertaken in this manner is the example given by Sen of the difference between a person who starves as a result of food shortage versus fasting. By focusing on functionings, both persons would be at the same level of deprivation, therefore, the focus on capabilities (or opportunity) would portray a more realistic view of the person's ability to achieve what he or she values (Frediani, 2007b; Sen, 1992).

d. Influence on Development

The establishment of the capabilities approach has significantly impacted the ways in which development is conceptualized. As has been discussed, the capabilities approach focuses on human functioning and the capability of people to achieve those functionings. Thus, instead of being passive recipients of a development program, people are actively involved in the process and have the opportunity to shape their future within this framework. From this view, it no longer becomes sufficient for development initiatives to merely focus on the growth of gross national product, or the rise in personal incomes, as those factors alone do not adequately represent human well-being and deprivation. The primary objective of development work, from the perspective of the capabilities approach, becomes to expand the capabilities of individuals so that they might eventually fulfill the functionings they value.

In light of these shifting attitudes towards development, the framework has contributed to a relatively new development paradigm known as the human development approach. This shift has led to the creation of numerous methodologies for how to apply the capabilities approach to the measurement of poverty and well-being, with the most well-known of these measures being the human development index of the United Nations Development Programme (Clark, 2006). Therefore, the principles of the framework have assisted in shifting the focus of development

work away from income-led approaches to the enhancement of peoples' freedom to achieve the things they value.

e. Criticisms

Despite the wide-ranging influence of the framework, there have been critiques of the original conceptualization of the capabilities approach. Sen has stated that the capability approach is deliberately incomplete (Sen, 1992, 1993). Some have noted that one of the chief strengths of Sen's framework is its flexibility, which allows researchers to develop and apply it in various ways (Alkire, 2002). However, this flexibility has led to criticisms and propositions around how to best operationalize the approach.

The most significant and common critique of Sen's conceptualization of the capabilities approach concerns his lack of a specification of a fixed or definitive list of capabilities. Many authors have criticized Sen for failing to provide a list of capabilities on which to focus (Nussbaum, 1988; B. Williams, 1987). In addition, Sen has been critiqued for not providing guidelines for how to identify and subsequently assess capabilities. In response to these critiques, Sen has argued that specific lists of capabilities ought to be drawn up for a given research or policy context, and the process of choosing capabilities should be left to the individual (Sen, 1993, 1997). Despite Sen's response, scholars continue to argue that the broadness, multidimensionality, and context-dependent nature of the approach potentially prevents it from having large scale practical and operational significance (Sugden, 1993).

f. Expansion of the Capabilities Approach

In an effort to address some of the major criticisms of the framework, significant work has been waged to further develop key aspects of the capabilities approach. In response to the dominant critique of the lack of specified capabilities, many scholars have generated lists of

human capabilities in an effort to apply Sen's framework (Alkire, 2002; Alkire & Black, 1997; Clark, 2002, 2003; Desai, 1995; Nussbaum, 1990, 1995, 2000, 2003; Robeyns, 2003). The range of methods presented by these authors for creating lists of capabilities include everything from the ad-hoc selection of capabilities by experts to the development of procedures for identifying capabilities through the use of participatory approaches (Clark, 2006).

Perhaps the most well-known advancement of the framework can be found in the work of feminist philosopher Martha Nussbaum. However, a notable difference between Sen and Nussbaum's versions of the capabilities approach is the presentation of a definite list of 'central human capabilities' (Nussbaum, 1990, 1995, 2000) (see Appendix A for a detailed description of Nussbaum's central capabilities). Nussbaum argues the list isolates those human capabilities that can be convincingly argued of central importance in any human life, whatever else the person pursues or chooses (Nussbaum, 2000). Although she presents a fixed list of capabilities, Nussbaum has commented that the list is subject to ongoing revision and should emerge through some sort of intercultural ethical inquiry. In particular, she encourages us to encounter and learn from other cultures and societies in an effort to move towards a shared account of the core human capabilities (Nussbaum, 1995).

Although highly influential, Nussbaum's interpretations of the capabilities approach have not been without controversy. The biggest critique waged against Nussbaum's list of 'central human capabilities' has to do with the way her list is created. Some have argued that Nussbaum's list is too universal and does not consider individual and cultural differences (Qizilbash, 2002). In addition, similar to Sen's response, some scholars have taken issue with the determination of a list of capabilities by external individuals and researchers (Clark, 2002; Stewart, 2001).

In response to these concerns, many have advocated for the use of more participatory approaches for determining capabilities. For instance, Sen (1999) has encouraged the utilization of a more direct approach for eliciting information about the formation of human values; his approach emphasizes the constructive role of democracy and the importance of public participation and discussion (Clark, 2006). Sen notes that a fixed list based on theory alone potentially denies the possibility of effective public participation focused on what should be included and why. One attempt to apply Sen's ideas of public participation is presented in the work of Sabina Alkire. Alkire (2002) offers a methodology for applying the capabilities approach at the micro level by utilizing the well-known participatory tools and techniques developed by Robert Chambers (1983, 1997). The goal of this work is not focused on the identification of a specific list of valuable capabilities but to present a systematic approach for how one would identify valuable capabilities. Therefore, the work by Sen and others highlights the use of participatory methods as a useful tool for eliciting information on valued capabilities.

g. Capabilities Approach as an Evaluative Framework for Participation

Although not developed as an evaluative framework for participation, the capabilities approach potentially offers a useful tool for understanding differences in participatory engagements. Recent studies observe that the capability approach literature contributes to the application of participatory methods by providing a comprehensive evaluative framework that aims to overcome the limited application of participatory methods as mere tools (Frediani, 2007a). As noted by Cornwall (2002), much of what is hailed as 'participation' is a mere technical fix that leaves inequitable global and local relations of power in place, and with this, the root causes of poverty are unchallenged (Cornwall, 2002, p. 1). Furthermore, it has been discussed that static, standardized approaches towards participation contradict the original aims

of flexibility and context-specific involvement of local people (Duraiappah et al., 2005). To address these issues, scholars point out the need for participatory methods to be complemented by a theory or framework that explores the nature of people's lives and the relations between the many dimensions of well-being (Cleaver, 2001). Therefore, the capability approach contributes to the participatory literature by providing a comprehensive and flexible theory or conceptualization of well-being that can capture the multiple, complex, and dynamic aspects of poverty (Frediani, 2007b).

In applying this framework to the evaluation of participatory engagements, we see that the type of participation consistent with the principles of a capabilities approach can be very different from what generally may be considered participatory in many cases. For example, participation that engages and enables a community to be involved in the identification and assessment of, as well as the response to, the problems that challenge the ability of community members to achieve their desired functionings would, according to interpretation by many of the previously discussed scholars, be more consistent with a capability approach. Scholars note that participation is consistent with a capability approach when it engages and enables people to be involved in the identification, assessment, and addressing of the problems that challenge their ability to achieve the economic, social, political, and ecological freedoms that define development (Duraiappah et al., 2005). This type of participation contrasts with participation that has less or little focus on developing capabilities to achieve desired functionings of a community. For instance, participation approached in a technical, as opposed to an empowerment-oriented approach, would not be consistent with a capability approach (Duraiappah et al., 2005). This dissertation utilizes the capabilities approach as developed by Sen and expanded by others in the

literature as an evaluative framework for assessing the impacts of variations in participatory approaches towards post-disaster recovery.

h. Operationalizing the Capabilities Approach

In order to use the capabilities approach as an evaluative framework for participatory approaches towards post-disaster recovery, it is necessary to operationalize the key components of the framework. As discussed previously, since the original conceptualization of the framework, significant work has been done to further develop the key concepts of the capabilities approach. Particularly, work by Nussbaum and others has focused on generating methodologies for how human capabilities can be understood and applied (Alkire, 2002; Alkire & Black, 1997; Clark, 2002, 2003; Desai, 1995; Nussbaum, 1990, 1995, 2000, 2003; Robeyns, 2003). The existing expansions of the capabilities approach have been highly influential, but they do not provide an all-encompassing framework that can be used to guide the evaluation of participatory approaches used by organizations in the post-disaster recovery setting.

However, several more recent interpretations of the capabilities approach are particularly useful for explaining how we might utilize the capabilities approach as an evaluative framework for participatory approaches towards post-disaster recovery. First, work by Gasper (2002) clarifies that Sen uses the term ‘capabilities’ with two connotations: sometimes as *options* and *choices* (or functionings attainable by a person); other times the term is used as *capacities* or *abilities* to achieve the things people value (Frediani, 2007b; Gasper, 2002). This dissertation utilizes both connotations in its operationalization of capabilities in an effort to capture the multiple dimensions of the concept.

In their work of applying a capabilities framework to a discourse of participatory design, Frediani and Boano (2012) further specify that the capability space includes both process and

product components. Specifically, process engagement is concerned with people's ability to shape the rules of involvement while product engagement addresses people's ability to determine the design outcome (Frediani & Boano, 2012). Further discussion of the specific operationalization of these components for use in this study is detailed in chapter 2.

B. Organizations

Organizations play an important role in the disaster recovery process. Despite this fact, scholars continue to ask how well organizations contribute to disaster recovery and what options exist for strengthening organizations' contributions to disaster resilience and recovery trajectories (Islam & Walkerden, 2015). One area in which there is little detailed knowledge of the work of organizations concerns their use of participatory approaches. To progress in our understanding of the participatory work of organizations, it is useful to assess the ways in which organizational characteristics can impact programmatic approach. Organizational theorists argue that organizational factors can have a significant impact on the work of organizations (Scott, 2008). Specifically, the classic organization literature identifies key characteristics, including environment, resources, size, age, collaboration, type, and experience, as impacting organizational outcomes. These factors have been found to influence features such as organizational structure, life cycle, work, and approach. Thus, it is reasonable to posit that these characteristics may similarly play a role in an organization's use of a participatory approach. To better understand these relationships, the following section discusses key organizational characteristics in more depth.

a. Environment

One organizational characteristic that has been shown to impact approach is the organizational environment. The environment refers to the external factors that affect an

organization. Every organization exists within the context of a larger environment that includes specific political, economic, technical, physical, cultural, and social forces, all of which have the potential to impact how an organization performs (Scott & Davis, 2007). Specifically, an organizational environment can include markets (clients or customers), suppliers, governmental regulatory bodies, labor unions, competitors, financial institutions, and special interest groups, to name a few (Nadler & Tushman, 1980). Therefore, an organizational environment consists of the elements outside of an organization that have a role in its survival and success.

Different types of interactions occur between an organization and its environment. Typically, the environment can impact an organization in three ways: through opportunities, constraints, or demands (Nadler & Tushman, 1980). In the first type of interaction, the environment provides opportunities that the organization can explore. For example, governmental bodies can create opportunities by instituting legislation that stimulates the demand for an organization's output. The second type of interaction has to do with the environment placing constraints on an organization. An example of an environmental constraint is when, in contrast to legislation creating opportunities, a governmental body institutes regulations that limit an organization's direction. As discussed by Sadler and Barry (1970), an organization typically does not develop in ways which merely reflect the goals, motives, or needs of the organization due to the fact that it often deals with the constraints imposed on it by its relationship with the environment. The last type of interaction has to do with the environment making demands on the organization, such as when the external environment requires certain products at certain levels or quantities (Nadler & Tushman, 1980). In response to these different types of interactions with the environment, an organization will develop and adjust its organizational strategy.

Oftentimes, organizational activities and outcomes can be accounted for by looking at the context in which the organization is embedded (Pfeffer & Salancik, 1978). In some ways, environmental factors will impact all organizations working in the same context in the same way. For instance, organizations working in the same context would have to adhere to the same economic and environmental climates. However, even when existing within the same context, the same environment can have different impacts on an organization. For example, specific government legislation may provide opportunities for some organizations and constraints for others, which can result in organizations modifying their approach. Scholars note that different environmental conditions and varied types of relationships with outside parties require organizations to make different types of structural accommodations so that a high level of performance can be achieved (Child, 1972). Therefore, the external environment can play a critical role in organizational practices and it may be hypothesized that the environment would influence organizational approach.

b. Resources

The resources available to an organization are another characteristic that can impact organizational approach. An organization has a range of assets to which it has access, which can include employees, technology, capital, and information (Nadler & Tushman, 1980). All of these resources can be utilized in different ways by an organization. Resource dependency theory analyzes how resource exchanges with the environment create power-dependence relations among organizations (Pfeffer & Salancik, 1978). This area of study examines the array of tactics organizations use to manage their exchange relations to balance the need to minimize dependence and uncertainty while maintaining managerial autonomy (Scott & Davis, 2007).

Making comparisons between the levels of resource dependency of different organizations sheds light on why organizations often take different approaches in their programs and work.

c. Size

One particular type of resource that can have a significant impact on organizational approach is organizational size. Organizational size refers to the number of participants in the organization, with the frequently utilized measure being the number of full-time, paid members of the organization (Kimberly, 1976). A considerable number of studies suggest that an organization's size significantly impacts its structure. In fact, some researchers note that size can be the most important condition affecting organizational structure (Blau, 1970).

Despite the shared understanding of the important role size plays, there has not been wide spread agreement on the precise impact that size has on an organization. In his seminal study on differentiation in organizations, Blau (1970) found that increasing size promotes structural differentiation, but at a decreasing rate. Similarly, Pugh et al. (1969) found that increased size was associated with greater specialization and formalization. Additionally, Child (1973) discovered that organizational size was related positively to formalization, specialization, and vertical span of control, but negatively related to centralization. In contrast to these findings, other research has criticized size as a determinant of structure by challenging the findings on methodological grounds or arguing that size is a consequence rather than a cause of structure (H. Aldrich, 1972; Argyris, 1972; Geeraerts, 1984; Hall, Haas, & Johnson, 1967; Mayhew, Levinger, McPherson, & James, 1972).

In comparing these studies, it becomes apparent that the relationship between size and structure is unclear. However, based on the literature, it is reasonable to posit that size is related to organizational structure. Thus, if one were to compare two differently sized organizations,

some sort of difference in the organizational structure of the two organizations would be expected. Moreover, differences in the organizational structure could lead to different organizational approaches. For instance, a smaller sized organization will most likely approach a problem in a different manner than a larger organization that has a very different organizational structure. Therefore, differences in size and structure provide additional explanations for why organizations working within the same context may take differing approaches in dealing with the same issue.

d. Age

An additional variable that can impact organizational approach is the age of an organization. The impact of age on organizational life cycle has been studied extensively in the literature. The foundational work of Stinchcombe (1965) discusses the unique problems of new organizations, where he assesses the impact of time and imprinting on organizations. Stinchcombe observes that the environmental influences in existence at the time of the founding of the organization can subsequently shape the organization's internal structures (Stinchcombe, 1965). The concept of the liability of newness describes the different risks an organization experiences during its life course, where risk of failure is high initially but declines as the organization ages (Freeman, Carroll, & Hannan, 1983). Alternatively, the liability of aging discusses the potential for failure increasing with organizational age. The liability of aging notes that as environments change, structural inertia and bounded rationality make it difficult to keep organizations aligned with environmental demands, potentially exposing aging organizations to a risk of obsolescence (Barron, West, & Hannan, 1994; Baum, 1989; Ranger-Moore, 1997). In comparing these studies, it is clear that the relationship between age and organizational life cycle

varies and it may be hypothesized that organizational age influences organizational structure and approach.

e. Collaboration

Organizational collaborations are another condition that may impact the work of an organization. Collaboration (and coordination) among partners is important because it enables organizations to combine their specific knowledge, skills, technologies, experiences and capacities; use resources optimally; and facilitate the replication of successful solutions (Behera, 2002).

A variety of relationships can exist between organizations. Interorganizational networks can be created by exchanges of resources, alliances, and shared directors, to name a few (Scott & Davis, 2007). So, for instance, a network might exist between two organizations because of an interlocking directorate, where shared directors are leading the organizations (Roy & Bonacich, 1988). There also could be an alliance network between two organizations, which could range from a short-term tie for a particular project to a long-term relationship or joint venture (Child, 2005).

Clearly, the relationships among organizations can vary significantly, and this variation is especially present in post-disaster settings. In the wake of a disaster, it can be difficult for a single actor to undertake all facets of relief and recovery, as community needs typically span across multiple recovery sectors (Wentz, 2006). The varied needs often result in a complex network of many different specialized actors, which can include affected governmental entities, militaries, intergovernmental organizations (such as United Nations agencies), international and domestic nongovernmental organizations, and affected civilian populations (Jauregui et al., 2011). The organizational relationships in these types of settings can become so complex that

some scholars describe the field as “an inter-organizational social network with a hyperpluralistic structure and noncentralized authority dispersed among interdependent but quasi-autonomous participants” (Stephenson, 2006, p. 43). Thus, such extreme variations in networks and collaborations likely impact the types of approaches used by organizations in their recovery work.

f. Experience

Experience is an additional variable that may play a crucial role in terms of organizational approach. Organizational theorists have long discussed the importance of institutional memory, particularly in dealing with crisis management. As discussed in the classic work of Karl Weick, individuals can typically only see categories and assumptions stored in a cause map, which is a type of cognitive map that provides a picture of how elements are perceived to be causally and sequentially related (Weick, 1988, 1995; Weick & Bougon, 1986). In cases where these cause maps are varied and rich, individuals should see more, and good institutional memory would be an asset (Weick, 1988). In terms of disaster response programs, loss of institutional memory has been observed to potentially reduce the quality of a program. Furthermore, some scholars note that organizational and individual staff experiences, which often take time to develop, can be key to building working relationships with other aid actors and local communities (Jauregui et al., 2011).

g. Other Factors

In addition to the organizational characteristics discussed, several other elements potentially may contribute to organizational approach. Factors such as organizational area of work have been discussed by some scholars as having predictive power in studies of organizations (Agard, 2011). This may be especially true in relation to whether or not an

organization is working in multiple recovery sectors. Lastly, factors such as organizational origin and board of directors have been found to serve an important role in the post-disaster process and may similarly play a role in contributing to organizational approach.

In conclusion, as discussed in this section, organizations can vary in their approach to addressing a problem, even in situations where they are working within the same context. This variation can potentially be explained by a variety of factors. In this study, these factors are hypothesized to impact programmatic approach. By assessing the impact of these organizational characteristics, this research aims to help expand our understanding of the use of participatory approaches in post-disaster settings.

C. Post-disaster Recovery

The purpose of this section is to explore the post-disaster recovery literature in more depth. In the first part, an overview of the various hazard phases is discussed. The overview is followed by an exploration of the literature on the measurement of recovery, which includes a discussion of organizational and community perspectives towards recovery outcomes.

a. Hazard Phases

Hazard research is typically understood as occurring in four phases, commonly characterized as preparedness, mitigation, response, and recovery (Quarantelli, 1999). It can be difficult to delineate among the various stages; therefore, many scholars suggest thinking of these four phases as working in a circular rather than linear process (Dynes, 1991; Quarantelli, 1999). An example of this circular disaster planning process is shown in Figure 1.1.

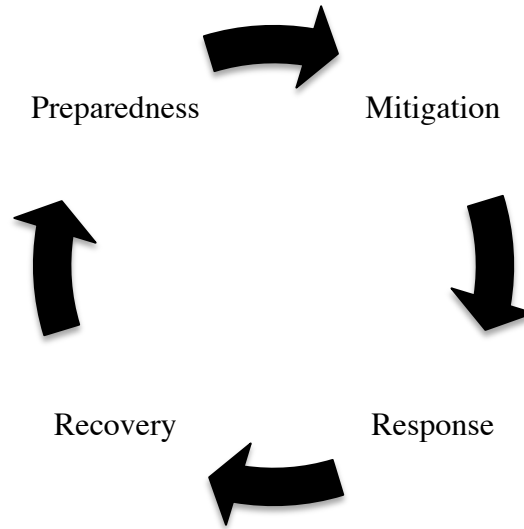


Figure 1.1 Disaster Planning Phases

When using the four-phase classification system, each phase is understood to have its own defining characteristics. The preparedness and mitigation stages refer to activities undertaken before a disaster. The disaster preparedness phase typically focuses on actions that can be undertaken to enable social units to respond quickly and actively when a disaster occurs (Tierney, 1993). The disaster mitigation phase refers to efforts undertaken before a disaster with the intention of minimizing the extent of damage that may result from the occurrence of an event (Drabek, Mushkatel, & Kijianek, 1983). These efforts can include measures such as the application of design and engineering principles, the implementation of land use regulations, or the use of other actions or policies beforehand to prevent the negative impacts of a future hazard event. The response stage focuses on crisis-relevant actions that occur during the disaster and immediately following it, while the recovery phase includes activities undertaken after the crisis-response period is over (Quarantelli, 1999). The recovery phase focuses on longer-term efforts to restore communities that have been disrupted by a disaster. This stage typically includes actions to repair, rebuild, and reconstruct damages that have disrupted the quality of life in an affected community (Tierney, Lindell, & Perry, 2001).

Despite similarities in the response and recovery stages, they represent two distinct disaster planning stages. While the response phase typically involves a shorter time period for providing emergency relief such as food, water, sanitation, medical assistance, and emergency shelter, the recovery phase often lasts much longer and focuses on actions to support the long-term sustainability of a community (Islam & Walkerden, 2014, 2015).

In many cases, the recovery phase only begins after the wave of publicity about the disaster has receded and often occurs outside of the intense public and media attention that surrounds the initial response period. The recovery phase is considered the least investigated and most poorly understood of the four phases of disaster planning (Berke & Beatley, 1997; Berke, Kartez, & Wenger, 1993; Drabek, 1986; Rubin, 1991). However, in the last few decades, scholarly research on disaster recovery has been steadily growing (Rodriguez, Quarantelli, Enrico, & Dynes, 2006; Sapat & Esnard, 2012; G. Smith, 2011). In alignment with the more recent focus of disaster work, this study focuses on the post-disaster recovery phase of the hazard planning process.

b. Post-disaster Recovery Outcomes: Literature

Post-disaster recovery focuses on long-term efforts to restore communities that have been disrupted by a disaster. The topic of recovery has been studied from a variety of perspectives including work from sociology, engineering, policy implementation, political-ecology, systems theory, geography, and urban planning (Mileti, 1999; Olshansky, 2005; Peacock & Ragsdale, 1997; Phillips, 2009). Significant work has been done to develop indicators for assessing recovery. However, due to the fact that the topic has been approached from a wide range of perspectives, a variety of definitions and indicators for measuring recovery exist without universal agreement on the best or best set to use in research and practice.

A good method for addressing the various approaches to studying recovery is to identify recovery indicators across multiple disciplinary perspectives. One study that presents a thorough analysis of this topic is conducted by Jordan (2012). In this study, an in depth content analysis of recovery indicators in four disaster-focused journals from 2000 to 2010 are presented; the relevant articles in these journals include contributions from engineers, social scientists, practitioners, and economists. The second phase of Jordan's study involved a multi-round Delphi survey to obtain expert opinion on the recovery indicators. This process was undertaken to verify the set of indicators identified through the content analysis were significant, as well as to provide a rating of the importance of each indicator. As noted by Jordan, one of the overarching goals of the study is for researchers to use these results as indicators of recovery in future studies. This dissertation research utilizes recovery indicators based on Jordan's work.

Jordan's results show that recovery indicators typically fall into several macro-categories, which other scholars have explored. In their work defining recovery, Smith and Wenger (2006) assert that recovery includes the differential process of restoring, rebuilding, and reshaping the physical, social, economic, and natural environment (G. Smith & Wenger, 2006). Furthermore, Wisner et al. (2003) discuss that in order to achieve sustainable post-disaster recovery, we must consider infrastructural, social, institutional, and economic conceptions that enable communities to recover.

Recovery indicators consistent with the disaster recovery literature are described here within the categories of: infrastructure, social, economic, and environmental. The first category, infrastructure recovery, typically focuses on the built environment and utilizes areas such as housing, public facilities and utilities, and transportation systems as indicators. The second category, social recovery, focuses on capturing the recovery of the social systems of a

community. These systems typically include indicators such as mental health, population return (for communities where large portions of the community were displaced), perceived quality of life, and availability of social services. The third category, economic recovery, focuses on the recovery of the local economy. The most widely cited indicators of economic recovery compare pre and post disaster levels of employment (the rate of people with jobs in a community), household income (the average or median earnings per household), and number of businesses (the number of businesses operating in a community). The last category, environmental recovery, focuses on the recovery of the natural environment. This typically includes indicators for air quality, debris removal, erosion, and water quality. A summary of the most common recovery indicators is shown in Table 1.1.

Table 1.1 Post-disaster Recovery Indicators

Recovery Sector	Indicator
Infrastructure Recovery	Housing Facilities and lifelines Transportation Risk reduction
Social Recovery	Mental health Population return Perceived quality of life Social services
Economic Recovery	Employment GNP/Government revenue Household income Housing values Number of businesses Standard of living
Environmental Recovery	Air quality Debris removal Erosion Water quality

c. Post-disaster Recovery Outcomes: Organizations

In addition to assessing recovery in the academic literature, it is also important to understand how recovery is understood and evaluated by organizations working in the post-disaster setting. As discussed by Ganapati (2013), in regards to housing recovery, the academic literature has not offered a framework for recovery organizations operating in international contexts on how to set goals for post-disaster recovery and monitor and evaluate the results. Furthermore, due to wide ranges in definitions and potential gaps in information dissemination, recovery indicators utilized by organizations do not always align with the academic literature. Therefore, in an effort to fill these gaps, this dissertation assesses recovery based on both literature and organizational defined recovery outcomes.

d. Post-disaster Recovery Outcomes: Community

Incorporating community input into organizational recovery programs is an important element that is often critical to the success of post-disaster response and recovery initiatives. Studies note that organizations have been found to seek out community feedback on recovery in a variety of ways. In some cases, organizations involve community members in the identification of problems in their community and the development of programmatic solutions through the use of techniques such as participatory rural appraisal¹ (Chambers, 1994). Other organizations integrate the input of affected community members into the solution design process, which may involve more of a focus on capacity building or skills development among targeted populations (Nieuwma & Riley, 2010).

¹ As discussed by Chambers (1994), Participatory Rural Appraisal (PRA) is a growing family of approaches and methods to enable local (rural or urban) people to express, enhance, share and analyze their knowledge of life and conditions to plan and to act. PRA typically utilizes participatory and visual techniques to assess group and community resources, identify problems, and prioritize problem-solving strategies.

The increased awareness of the importance of community feedback in the recovery process is due in large part to findings from past disasters showing that lack of input from communities can have significant negative impacts on post-disaster programs. As studies note, social factors such as class, occupation, caste, ethnicity, gender, disability and health status, age, and immigration status as well as the nature and extent of social networks can impact the vulnerability of individuals or groups and their ability to recover from a disaster (Wisner et al., 2003). Thus, the involvement of the community in the process has become critical to the success of recovery programs.

The growing awareness of recovery initiatives needing to be inclusive of the interests of impacted communities has resulted in an increased prioritization of using participatory approaches in post-disaster recovery programs. Studies note that international actors more frequently strive to develop public and private resources to support and facilitate local ownership of disaster response and recovery work (Wentz, 2006). Although there are often differences in naming conventions (owner-driven, community based, community post-disaster reconstruction, assisted self-help, etc.), there is evidence of a continued interest in the use of participatory approaches for recovery programs in urban and rural areas (Davidson et al., 2007; Lawther, 2009; Maskrey, 1989; Méheux, Dominey-Howes, & Lloyd, 2010; Pearce, 2003; Von Meding, Oyedele, & Cleland, 2009).

The importance of using participatory approaches in post-disaster planning has been widely discussed in the literature. Findings from housing recovery programs have shown that when individuals are engaged in the planning of post-disaster housing units, individuals are more likely to be satisfied with their homes, have a stronger sense of ownership, and are less likely to move elsewhere or alter the house design (El-Masri and Kellett, 2001; Snarr and Brown, 1982).

In light of these findings, many hazard scholars argue that the involvement of affected communities is critical to the success of the recovery programs (Bajek, Matsuda, & Okada, 2008; Davidson et al., 2007; Lu & Xu, 2014; Patterson, Weil, & Patel, 2010)

Even though there can be many benefits to using a participatory approach, it is often difficult for organizations to lay out well-developed participatory plans in the post-disaster setting. Community members may be disinterested in being involved with post-disaster programs due to the additional pressures individuals often face in the aftermath of a disaster (Steinberg, 2007). Donor-reporting requirements do not always compel organizations to consider affected populations' perceptions of needs in their program activities (Jauregui et al., 2011). Furthermore, meaningful participation, which typically takes long periods of time to develop, can be difficult to undertake in the post-disaster context, which is typically characterized by extreme time pressure (Ganapati and Ganapati, 2009).

Thus, despite the recognition of the importance of having disaster affected populations guide recovery work, such practices are not universally incorporated into post-disaster relief and recovery programs (Jauregui et al., 2011). Furthermore, these academic and organizational outcomes may or may not fully consider the outcomes valued by disaster-impacted communities. Findings from past studies have shown that the needs and perceptions of affected populations are often not the main focus of response and recovery initiatives (Jauregui et al., 2011). Therefore, it becomes critical to understand community needs and priorities in the recovery process. For this reason, in addition to literature and organization defined recovery, this dissertation also assesses recovery outcomes as defined by the impacted communities.

In the next chapter, an in-depth discussion of the research design for this study is provided. First, the conceptual model and study hypotheses are further explained. Then, details on the methods utilized for each phase of study are presented and discussed.

CHAPTER 2: RESEARCH DESIGN

As discussed in the previous chapter, organizations have been found to serve a key role in the post-disaster recovery process. This is particularly true as it relates to growing efforts by organizations to engage local communities in recovery initiatives. Despite wide spread findings of the benefits of the utilization of participatory approaches in organizational recovery programs, there continues to be variation in the ways in which local communities are involved in post-disaster recovery programs. In an effort to better understand these differences in participatory approaches, in the previous chapter, I characterized the capabilities approach as a framework for evaluating the work undertaken by organizations in the post-disaster setting. To further expand on this discussion, I focus on two main goals in this section. First, I describe the theoretical framework that informs this study. Secondly, I describe the research methods utilized to gather data and assess the questions of interest.

A. Conceptual Model

This dissertation aims to understand the relationships between organizations, participation, and recovery outcomes. Specifically, I investigate these associations through a two-phased conceptual model (see Figure 2.1). In the first phase of the model, I postulate that various organizational factors can impact an organization's use of a participatory approach. Organizational factors include organizational environment, resources, size, age, collaboration, experience, area of work, origin, and board of directors. In the second phase, I argue that different participatory approaches influence post-disaster recovery outcomes.



Figure 2.1 Conceptual Model

B. Study Hypotheses

Several general propositions and hypotheses emerge from the literature review and conceptual model presented in the previous chapter. These propositions address the relationships between organizational factors, participation, and post-disaster recovery outcomes.

The general propositions (P) and hypotheses (H) for this study are:

- P1: Organizational factors will affect the approach towards participation utilized by an organization in its post-disaster recovery work.
- H1: Higher levels of significant organizational factors will result in higher levels of participation utilized by an organization in its post-disaster recovery work.
- P2: Organizational approach towards participation will affect post-disaster recovery outcomes.
- H2: Organizations utilizing higher levels of participation will have made more progress towards post-disaster recovery outcomes.

The research hypotheses described above are tested and discussed in more depth in the subsequent chapters of this dissertation. In chapter 4, I undertake a quantitative analysis aimed at testing hypothesis 1 and then conduct a qualitative analysis of four case studies to investigate hypothesis 2. Additionally, I utilize the qualitative analysis to provide further insights into the relationships uncovered in the results of the quantitative analysis. Ultimately, the purpose of

these two phases of work is to uncover findings that will allow us to describe and explain the ways in which organizational approaches towards participation impact post-disaster recovery outcomes.

As previously mentioned, this study utilizes a two-phased conceptual model. The first phase explores the associations between organizational factors and the use of a participatory approach. Following this analysis, the second phase assesses how these various approaches of participation influence post-disaster recovery outcomes. Details of the research design for each of the phases are provided in the following sections.

C. Phase 1: Survey

The study of organizations and their use of participation in post-disaster recovery begins with an understanding of the organization and its characteristics. Thus, in the first phase of this dissertation, the associations between organizational factors and the use of CAP are explored through a quantitative analysis of primary survey data collected from organizations working in post-disaster Haiti. In this section, details pertaining to the preparation, implementation, and analysis of the organizational survey are provided. First, the variables utilized in the survey are defined and the techniques used for their measurement are described. The next sections review the preparation steps undertaken to initiate data collection, including compiling the organizational data set and developing and piloting the survey questionnaire. Lastly, details of the survey administration are discussed.

a. Study Variables and Measurement

In this section, the key variables used in this study are discussed. Specifically, information on the background and measurement for the dependent and independent variables is

provided. An overview of potential restrictions or limitations in the variable measurement is also presented.

i. Dependent Variable

The dependent variable for this phase of the study is level of participation utilized in the organizations' post-disaster recovery work. For the purposes of this dissertation, participation is measured based on the capabilities approach framework. Before describing the specific details of the measurement of capabilities approach participation in this study, it is important to discuss the conventional participation methodologies and to note potential difficulties that arise in the implementation of these measures.

1. Conventional Participation Measurement

As has been discussed, research-detailing differences in participatory approaches have been well discussed in the literature. This work has focused on providing a continuum of approaches for citizen involvement in planning process in the United States (Arnstein, 1969) and developing countries (Choguill, 1996; Davidson et al., 2007). As is shown in Figure 2.2, in the work of these authors, the highest level of the ladder represents the ideal form of participation, which involves local people and their communities defining and addressing local needs and aspirations and controlling the decisions. Alternatively, when an approach is not focused on enabling people to participate in the planning or conducting of programs, it falls into the non-participation categories of the framework. Despite the usefulness of the ladder for understanding differences in participation, applications of the work have been mostly descriptive. Furthermore, the ladder does not provide specific methodologies for how levels of community involvement should be measured; thus, it has limited use as a method for quantitatively assessing participation.

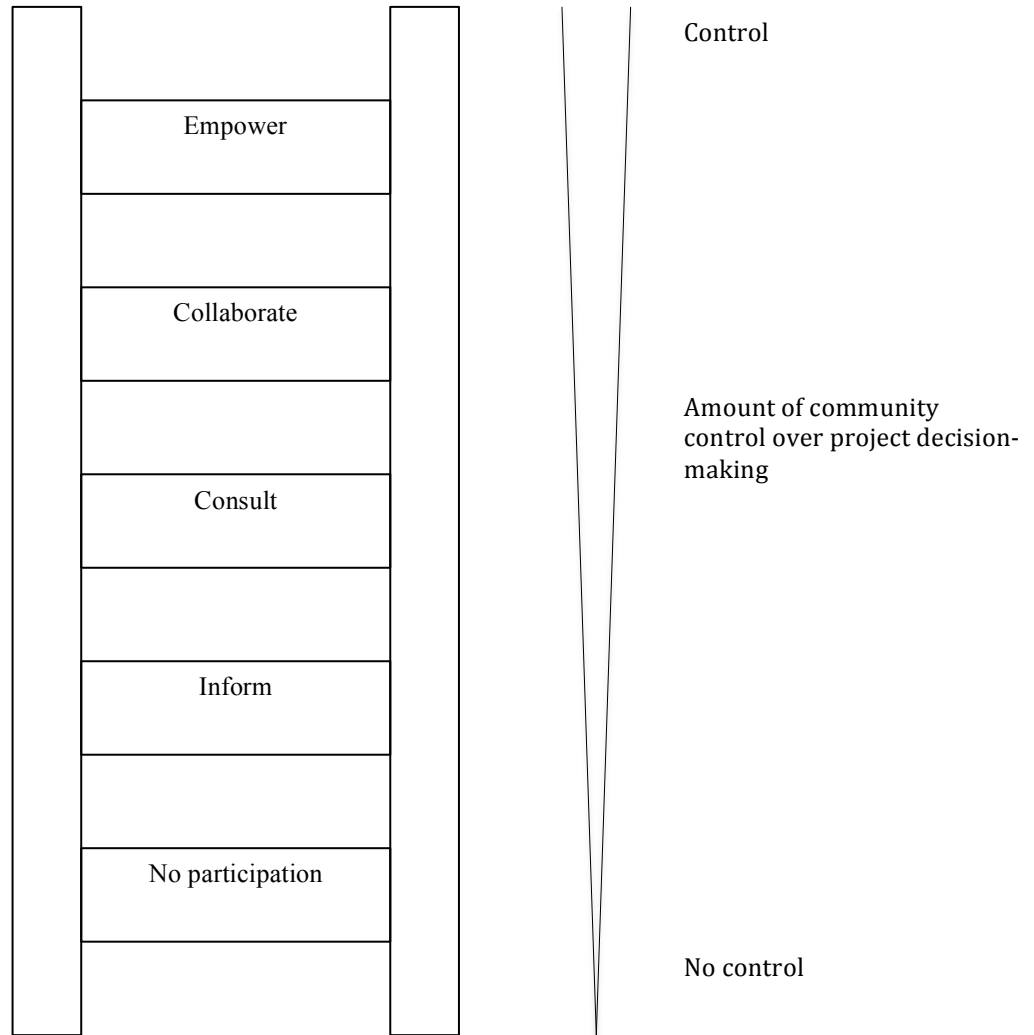


Figure 2.2 Ladder of Participation²

In light of these gaps, researchers frequently turn to alternative methods for assessing participation. These methods typically involve measuring participation based on different types of general participatory related questions. These participation measurement indicators often utilize either single or multiple indicators. In some cases, participation is evaluated broadly through the use of a single question. Alternatively, other studies assess participation more specifically by using multiple participation measures, which frequently include aggregating targeted questions about participation in different project areas. Examples of the types of single

² Adapted from Arnstein (1969), Choguill (1996), Davidson et al., (2007).

or multiple indicators encountered in the measurement of participation can be seen by examining Prokopy's (2005) work assessing participation in water supply projects (Table 2.1).

Table 2.1 Examples of Types of Participation Measures

Study	Location	Measure of Participation
Narayan (1995)	Multiple countries	Multiple measures <ul style="list-style-type: none"> • Overall beneficiary participation • Overall women's participation • Participation in design • Women's participation in design • Participation in construction • Women's participation in construction • Participation in operation and maintenance • Women's participation in operation and maintenance
Sara and Katz (1997)	Multiple countries	Multiple measures <ul style="list-style-type: none"> • Source of project initiation • Informed choice
Gross et al. (2001) and van Wijk-Sijbesma (2001)	Multiple countries	Multiple measures <ul style="list-style-type: none"> • Participation in service establishment and operation • Demand-responsive service
Isham and Kähkönen (2002)	India and Sri Lanka	Single measure <ul style="list-style-type: none"> • Participation in design process
Isham and Kähkönen (1999)	Indonesia	Multiple measures <ul style="list-style-type: none"> • Participation by type and level of service • Participation by water collector • Final decision by households, leaders, outsiders
Prokopy (2005)	India	Multiple measures <ul style="list-style-type: none"> • Contributed toward project • Aware of project prior to construction • Attended planning meeting • Participated in more than one decision • Households supervised construction work • Attended meetings post construction

There also can be differences in how participation is assessed in terms of measurement scale and project cycle area. In regards to scale, studies often vary in the indicator levels used to evaluate participation. For example, Sara and Katz (1997) utilize a dichotomous variable to measure participation. Alternatively, Narayan (1995) scores participation on a one to seven point scale. In addition, studies often vary in terms of what part of the project cycle participation is assessed. Most projects consist of multiple phases, which typically include stages such as planning, implementation, and operation or maintenance. When measuring participation, studies may choose to make assessment during one project phase while others may make participation measurements at multiple project stages.

In addition to issues in the measurement of participation, there has been limited work quantitatively assessing participation in the post-disaster recovery setting, which is especially true in housing recovery work. One exception is presented in the work of Davidson et al. (2007), which uses dichotomous indicators to assess participation in six project areas. These project areas are program initiation (leading role in procuring the master program of reconstruction), project initiation (leading role in starting the project), project financing, design, construction, and post-project modifications-additions (Davidson et al., 2007).

2. CAP Measurement

To overcome the theoretical limitations (discussed in chapter 1) and methodological limitations of conventional participation measures, participation in post-disaster recovery work is measured based on the capabilities approach framework in this study. The previous chapter provides an in-depth discussion of the theoretical conceptualizations of the capabilities approach. This section provides a discussion of how the key components of the framework were operationalized for use in this study.

Recent interpretations of the capabilities approach are used to for establishing an evaluative framework for participatory approaches towards post-disaster recovery. First, Gasper's work (2002) operationalizes capabilities into two components: 1) *options* and *choices* (or functionings attainable by a person); and 2) *capacities* or *abilities* to achieve the things people value (Frediani, 2007b; Gasper, 2002). In addition, Frediani and Boano (2012) further discuss that the capability space typically includes both process and product components. In this classification, process engagement focuses on people's ability to shape the rules of involvement while product engagement centers on addressing people's ability to determine the design outcome (Frediani & Boano, 2012). Thus, this dissertation integrates both of these interpretations of capabilities in an effort to capture the multiple dimensions of the concept.

The described conceptualizations of the capabilities framework were operationalized into four indicators, which were used to assess the extent to which the participation utilized by an organization is consistent with CAP (Table 2.2). Each CAP indicator was scored on a one to seven point scale, with a score of one indicating no participation and a score of seven indicating a high level of participation. A 7-point scale was utilized based on the psychometric literature, which suggests that having more scale points is better, but there is a diminishing return after around 11 points (Nunnally, 1967). Scholars frequently note that using a 7-point scale provides a good balance between having enough points for discernment without overwhelming the respondent with too many options.

The final variable used in the quantitative analysis was constructed by summing the equally weighed scores for each individual CAP indicator. Therefore, the level of CAP ranges from 4-28, with a score of 4 indicating no involvement and a score of 28 indicating high levels of involvement.

Table 2.2 Capability Approach Participation (CAP) Indicators

Process Engagement	Product Engagement
<p>Options/Choices</p> <ul style="list-style-type: none"> Community participants are given a choice in how they can participate in the initiative 	<p>Options/Choices</p> <ul style="list-style-type: none"> Community participants are given a choice in the details of the items created as a result of the initiative
<p>Capacities/Abilities</p> <ul style="list-style-type: none"> Community participants are provided support (such as materials/training) to facilitate their involvement in the decision making process of the initiative 	<p>Capacities/Abilities</p> <ul style="list-style-type: none"> Community participants are provided support (such as materials/training) to facilitate their involvement in creating the items of the initiative

In order to confirm the validity of the use of CAP as an assessment tool for participation, indicators for the traditional participation measures were also created. As discussed in the previous section, widespread agreement on the best way to assess participation does not exist. Therefore, three conventional participation indicators were developed to address the multiple methods of measuring participation. The first conventional participation indicator used a single general question to assess the level of participation of community participants on a 1-7 scale (1= no participation, 7= high level of participation). The second measure similarly asked the respondent to assess the organization’s level of participation with community participants, but assessed it for 12 project areas, with each activity being measured on the same 1-7 scale. Project areas were selected based on categories used in past studies (Davidson et al., 2007) with additions made to make the question relevant to the organizations in the study. The last conventional participation indicator developed utilized the same 12 project areas, but instead of the 1-7 scale, translated Arnstein’s ladder of participation into five indicators (1 = no involvement with participants, 2 = participants receive information from organization, 3 = participants give feedback to organization, 4 = participants are involved in decision making with

organization, and 5 = participants initiate task and bring to organization). For all variables with multiple project areas, the final variables used in the quantitative analysis used the sum of the equally weighed participation scores. A summary of the variables and measurement details for the dependent variable are shown in Table 2.3.

Table 2.3 Phase 1 Dependent Variable Measurement

Variable	Description
Participation: CAP	Level of capabilities approach participation utilized in post-disaster recovery work in Haiti <i>(Scale: 4-28, 4 = no participation, 28 = highest level of participation)</i>
Participation: General, single question	Level of participation utilized in post-disaster recovery work in Haiti, assessed as a general, single question <i>(Scale: 1-7, 1 = no participation, 7 = highest level of participation)</i>
Participation: General, specific project areas	Level of participation utilized in post-disaster recovery work in Haiti, assessed using a general question, for 12 project areas <i>(Scale: 1-84, 1 = no participation, 84 = highest level of participation)</i>
Participation: Arnstein	Level of participation utilized in post-disaster recovery work in Haiti, assessed using Arnstein indicators, for 12 project areas <i>(Scale: 1-60, 1 = no participation, 2 = participants receive information from organization, 3 = participants give feedback to organization, 4 = participants are involved in decision making with organization, and 5 = participants initiate task and bring to organization)</i>

ii. Independent Variables

As previously discussed, in this phase of the study, the main objective is to understand the impact of organizational characteristics on the participatory approach utilized by an organization in its post-disaster recovery work. To undertake this investigation, organizational factors discussed in the literature, such as organizational resources, size, age, collaboration, experience, recovery sector, origin, board of directors, and environment, were selected as

potential predictors for level of participation. Indicators for these organizational factors were developed based on a careful review of the common measures used in past studies of organizations. The following section provides a description of the measurement indicators used for each organizational variable (see Table 2.4. for a summary of variables).

In this study, organizational resources were assessed by collecting data on the organization's average annual budget for recovery work in Haiti (in U.S. dollars). Organizational size was analyzed through the use of data on organizational staff size. Since involvement of the local community was the main area of interest in this study, organizational size was broken down into two variables: 1) number of individuals of Haitian descent employed (paid) by the organizations and 2) number of individuals of non-Haitian descent employed (paid) by the organization. Organizational age was assessed as the number of years an organization has been in operation. Collaboration was analyzed on a 1-7 scale, with a score of 1 indicating no collaboration and a score of 7 indicating a high level of collaboration. Organizational experience assessed whether an organization had been involved in any post-disaster recovery work outside of Haiti, as a dichotomous variable. The recovery sector variable accounted for the number of recovery sectors the organization noted working on in Haiti. The organizational origin variable was used to determine what types of individuals were involved in the founding of the organization. Data was collected on if individuals of Haitian descent, living in Haiti or outside of Haiti (diaspora) were involved in the founding of the organization. Board of directors was analyzed as the percentage of individuals of Haitian descent on the organization's board of directors. Lastly, in assessing organizational environment, it was desired to assess the organizational relationship to the government; therefore, a dichotomous variable was used to

collect data on whether or not the organization was officially registered with the Haitian government.

Table 2.4 Phase 1 Independent Variables

Variable	Description
Resources	Annual budget in U.S. dollars
Size: Haitian	Number of individuals of Haitian descent employed (paid) by the organization
Size: Non-Haitian	Number of individuals of non-Haitian descent employed (paid) by the organization
Age	Number of years organizations has been in operation
Collaboration	Level of collaboration <i>(Scale: 1-7, 1 = no collaboration, 7 = high level of collaboration)</i>
Experience	1 If organization has been involved in post-disaster recovery project(s) outside of Haiti 0 If organization has not been involved in post-disaster recovery project(s) outside of Haiti
Recovery sectors	Number of recovery sectors organization works in <i>(Scale: 1-12)</i>
Origin: Haitian	1 If organization was founded by individuals of Haitian descent in Haiti 0 If organization was not founded by individuals of Haitian descent in Haiti
Origin: Diaspora	1 If organization was founded by individuals of Haitian descent outside of Haiti 0 If organization was not founded by individuals of Haitian descent outside of Haiti
Board of Directors: Haitian	Percentage of individuals of Haitian descent on the organization's board of directors

Environment

1 If organization is registered with the Haitian Government³

0 If organization is not registered with the Haitian Government

b. Compilation of Organizational Data Set

Although there has been substantial involvement by organizations in Haiti, clear and comprehensive records of the organizations working in the country have not been regularly maintained. Many studies have noted the lack of an exhaustive list detailing the names of the organizations formerly or currently working in Haiti (Schuller, 2007). Various funding agencies and institutions have created directories of organizations, but these lists are not comprehensive and provide mere snapshots of collections of organizations. In addition, most of these lists focus on funding sources rather than the details of the work and the characteristics of the programs.

To fill the gaps that arise from using limited individual data sources, a comprehensive data set of organizations working in Haiti was created by compiling data on organizations from multiple publicly available and proprietary sources. Data sources were found using the following methods: 1) utilizing well established data sources for information on organizations in Haiti (Office of the Special Envoy for Haiti/Inter-American Development Bank Civil Society Organization Registry and the Unite de Coordination des Activities des ONG); 2) sourcing data lists cited in recent articles and studies of organizations in Haiti (Sapat & Esnard, 2015; Schuller, 2007); and 3) an internet search utilizing words such as “Haiti,” “organizations,” “list,” “data,” and “database.” A list was created of the data sources that emerged from these searching techniques. In total, 16 sources were identified as having data on organizations working in Haiti after the 2010 earthquake (see Table 2.5). Once a source was identified for inclusion in the study,

³ The Ministère de la Planification et Coopération Externe (MPCE or Ministry of Planning) is the Haitian government entity which oversees the registration and approval of organizations working in Haiti.

the data from that source was compiled into an organization list from the source. After each individual organizational list was created, the 16 individual lists were compiled into one comprehensive organization list. As the data were combined, the originating database for each organization was recorded. In addition, during the process of list compilation, organizations appearing in multiple lists were flagged and duplicate entries were removed. The total of 1540 organizations were included in the final organization list.

Table 2.5 Summary of Sources for the Organization List

Organizational List Source	Number of Organizations
Habitats in Haiti Google Group	34
Disaster Accountability Project (DAP)	183
United States Agency for International Development (USAID) Private Voluntary Organization Registry	234
InterAction Non-governmental Organization Aid Data	47
United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) Haiti 3W - Who What Where and Contact Directory (2013/2015)	276/112
Idealist.org	53
Directory of Development Organizations	385
Unite de Coordination des Activities des ONG (UCAGONG)	219
Guidestar	414
Florida Atlantic University (FAU): Directory of Non- Governmental Organizations Involved in Haiti's Post-disaster Recovery	219
Office of the Special Envoy for Haiti/Inter-American Development Bank Civil Society Organization Registry	448
Jobpaw	19
LinkedIn	46

Inter-Agency Standing Committee E-Shelter and Camp
Coordination Camp Management Cluster 62

Global Shelter Cluster 33

Utilizing all available data sources that could be found allowed for a wide range of organizations working in Haiti to be captured in the data set. For example, utilizing the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) Haiti 3W - Who What Where and Contact Directory provided information on the intergovernmental organizations, bilateral development agencies, large international NGOs, small international NGOs, Haitian government agencies, and Haitian NGOs. Alternatively, using the Guidestar directory provided a list of the United States based nonprofit organizations that have worked in Haiti. Therefore, using lists from multiple sources allowed for a variety of organizations to be captured.

Despite the fact that an extensive effort was made to develop a comprehensive list of organizations, the compiled list likely does not identify every organization involved in the Haitian disaster recovery efforts. Although the data set may not contain every organization working in Haiti, it is the most exhaustive list available of organizations working in Haiti after the 2010 earthquake.

The last step in the compilation of the organizational data set was to confirm organizational contact information. Because the data collection for this phase of research was based on an online survey, which was to be delivered via email, the final requirement for inclusion in the study was a minimum of one email address available for an organization. To check this requirement, extensive effort was extended to retain email addresses for each organization in the data set. Specifically, email addresses were sourced using three methods: 1) using the original information provided from the individual data sources; 2) conducting a search

of the organization's website, Facebook, or LinkedIn account; and 3) utilizing referrals from individuals affiliated with the organization. During the search, any additional contact information that was available, such as first name, last name, and position within the organization, was recorded in the data set.

Upon completion of the email search steps, the data set was organized by organizations with and without email addresses. In the cases where an email address could not be obtained, the organization was removed from the data set. In the cases where one email address was identified, the organization was included in the data set with no further steps required. In the cases where more than one email address was located, all available email addresses were recorded in the data set, in the following order: 1) in-country director or representative, 2) regional director or representative, 3) general organizational representative/staff, 4) no named contact.

c. Questionnaire Development and Pilot

The data used in this study were collected through an online survey of organizational representatives. A questionnaire was sent to representatives at each of the organizations in the compiled list of contacts. The questionnaire included queries about organizational characteristics and asked detailed questions related to the organizations' work in Haiti.

Questionnaire preparation involved several rounds of careful writing and review. The questions were first developed outside of the online interface. Questions were crafted to capture all variables of interest in the study and, to the extent possible, questions and language were similar to past studies conducted on organizations, including the Haiti: NGO Sector Study (Morton, 1997), the National Survey of Economic Development Organizations (Green, 1999), and the Handbook on Non-Profit Institutions in the System of National Accounts (United Nations, 2003).

Once the survey questions were developed, they were loaded to an online survey platform (SurveyMonkey). The design within the online platform was based on Don A. Dillman's Tailored Design Method (TDM). This approach includes: (1) ensuring that questions displayed similarly across different web browsers and user settings, (2) optimizing the questionnaire for use in mobile browsers and apps, (3) creating interesting and informative welcome and closing pages, (4) using a consistent page layout across screens and visually emphasizing information essential to completing the survey, (5) minimizing the number of required responses to questions, (6) evaluating the use of interactive features, (7) avoiding the use of a graphical progress indicator, and (8) allowing the respondent to stop the survey and finish completing it at a later time (Dillman, Smyth, & Christian, 2014, p. 349). The online survey platform was used to facilitate a simple, straightforward survey experience for the respondent in the hopes that it would lead to a higher completion of survey responses. In addition, the online survey records completed survey responses within the program, which eliminates human errors that may occur from the manual transfer of survey responses.

The first draft of the questionnaire in the online survey platform underwent a thorough review of content and survey function. The iterative process of reviewing and revising the questionnaire occurred from October to December of 2015. The questionnaire was first reviewed by faculty and graduate students at the University of California Irvine (UCI). An expert in the field with past experience collecting online survey data on organizations in Haiti then reviewed the questionnaire. Comments made by these reviewers were incorporated into the survey instrument, and this version was used for a pilot survey with organizational representatives outside of the study sample. The purpose of the pilot study was to assess the feasibility and clarity of the questions. Organizational representatives were invited to participate in the pilot

through an email that contained a link to access the survey online. The pilot survey was administered using the same online survey interface as the final survey to provide an opportunity for any technical issues to be noted and addressed prior to the administration of the final survey. Participants on average took approximately 30 minutes to complete the pilot survey. Results from the pilot survey highlighted potential issues with question wording, survey layout, and the online interface. The findings from the pilot were incorporated into the final version of the online survey questionnaire (Appendix B), which was administered to the organizations listed in the contacts database.

d. Optimization of Survey Response

Taking steps to optimize survey response is a fundamental step in survey research. The first step was to determine whether a sample should be drawn from the population, and if so, how large the sample should be. Findings from past studies frequently show low response rates for web and email based surveys (Bachmann, Elfrink, & Vazzana, 2000; Fricker, Ronald & Schonlau, 2002; Fricker, Galesic, Tourangeau, & Yan, 2005; Nulty, 2008; Schonlau, Fricker, & Elliott, 2002). Therefore, knowing the strong possibility of having a lower response due to the mode of administration and because the population was a manageable size ($N = 1540$), the decision was made to send the survey to all organizations in the data set.

The second method to optimize the survey response rate was personalization of contacts with respondents whenever this information was available. Dillman, Smyth and Christian (2014) note that personalizing contacts in web surveys establishes a social connection between the researcher and the respondent and assists in attracting a broader group of respondents. As previously discussed, during the compilation of the organizational contacts data set, significant effort was expended to locate email addresses for each organization. While email addresses were

being sourced for each organization, any available personal contact information, including first and last name associated with the email address, was included in the data set. This information was used for all emails sent to the survey respondent. Specifically, when a contact name was available, the email was addressed “Dear First Name Last Name.” For the cases where a contact name was not available, the email was addressed “Dear Organizational Representative.” This naming convention was also used in the email “To” section along with the email address (i.e. To: First Name Last Name <email address>). These steps were done to offer additional levels of recognition for the respondent and to minimize the email being marked as spam.

In addition to personalization for the respondent, extra steps were taken to professionalize the manner by which emails were sent to potential respondents. As discussed by Dillman et al. (2014), when contacting sample members by email, the text that appears in the “From” field is one of the few sources of information a recipient has to determine whether or not to open the email message. For this reason, it becomes important to send the e-mail requests from a professionally relevant sender and address. Therefore, a university affiliated email account, dedicated solely to the research project, was created and managed by the researcher. The email address (HaitiRecoveryResearch@uci.edu) was used for all emails sent concerning the survey. In addition, to help respondents understand the research and their role as participants, the UCI research address was listed as the point of contact on the research project website, all IRB protocol documents, and the online survey platform. The aim in taking these extra steps was to establish a level of professionalism and legitimacy for the project that would encourage respondents to participate: in other words, optimize the number of completed survey responses.

An issue within web-based surveys frequently discussed in the literature concerns email delivery. Problems may include server rejection, organizational or personal spam filters, and

tracking unopened emails. Dillman et al. (2014) offer suggestions for minimizing these issues, including undertaking steps described above such as sending emails from reputable sources and including the respondent's full name on the email. However, in the cases where these steps are ineffective, an additional challenge becomes how to determine when an email delivery problem has occurred. Gaps in a researcher's knowledge of email delivery issues can have significant impacts on the calculation of the survey response rate (Dobrow et al., 2008). Therefore, it is extremely useful to have information on the delivery status of survey request emails sent to respondents.

For this reason, the decision was made to go through the additional step of sending the survey invitation emails through MailChimp, a web-based application that allows users to create, send, and track emails. Through this program, email survey invitations are sent to respondents in an HTML designed format, which contains an embedded link to access the online survey platform. All emails sent through MailChimp contain a unique ID, which enables the email sender to access detailed information on the delivery status of the email to the respondent. Although the use of a program such as MailChimp can be time intensive, studies show it offers many benefits in the administration of on-line surveys (N. Allen et al., 2011). For one, it enables the researcher to have data on the number of emails opened and unopened, returned (bounced back), and clicked (email opened and interacted with). Therefore, having this additional level of information presents more options for addressing delivery issues of survey request emails, which ultimately assists in the optimization of the survey response rate.

Understanding the characteristics of the sample population is another factor that can play a role in the optimization of survey responses. Language of the potential respondents, especially in contexts where multiple languages may be present, is an important consideration. Preliminary

interviews with organizational representatives and fieldwork revealed that English was the working language of the majority of the organizational staff in Haiti. However, the predominant languages of the country are French and Haitian Creole, so to ensure access to the maximum number of respondents, the survey materials were translated and made available in all three languages. Mailchimp allows for a link to be embedded in the survey invitation email asking the respondent if they prefer to receive the information in French or Haitian Creole. If a respondent clicks on one of those links, then he or she is directed to the research project website where a welcome message and survey link is provided in French or Haitian Creole (see Appendix C). At the close of the survey, only a limited number of respondents had completed the survey in French (5 respondents), and no respondents completed the survey in Haitian Creole.

Lastly, in addition to the steps described above, several other Dillman et al. (2014) survey optimization techniques were utilized in this study. These included: (1) making multiple contact attempts with varying messages; (2) being careful and strategic about the timing of contacts; (3) keeping e-mail contacts short and to the point; (4) getting evaluations, expert review, and pilot studies of the web implementation and procedures; and (5) testing the survey using a variety of devices, platforms, and browsers.

e. Survey Administration

Survey data was collected from January 2016 to April 2016. UCI Institutional Review Board approval was obtained prior to initiating any interactions with research subjects (Appendix D). The administration of the survey consisted of several contact steps. In the first phase, an email was sent to the contact for each organization (referred to as contact 1). The survey invitation email contained a brief overview of the project, the details of the data collection, and appropriate contact information for the research team (Appendix E). The name of the relevant

organization was also included in the survey invitation email to avoid any confusion for respondents who may have worked or been affiliated with multiple organizations in Haiti. Having access to unique identifiers for each respondent through MailChimp had several benefits. First, it enabled the survey settings to be opened so that participants could revisit the survey and complete it in multiple sittings. This feature was helpful and necessary at times, particularly when the respondent did not immediately have all the information needed to answer the survey questions. The second benefit of using the unique identifiers in Mailchimp was it allowed for the tracking of opened, unopened, and bounced emails. Therefore, immediately after the survey invitation email was sent, data were available on whether the email had been successfully received. For the cases where the email delivery was unsuccessful (bounce back), if the organizations had a second email address available, the survey invitation was sent to this second email address (referred to as contact 1a). For the cases where no second contact was available, the organization was removed from the data set because it no longer fell within the target population (organizations working in Haiti and having email access). After two weeks, the opened and unopened rates were checked and email reminders were sent for contacts 1/1a (Appendix F). This process was repeated for three months, with a total of three reminders being sent. The survey was left open for one month after the last reminder was sent to allow for potential respondents to participate. The survey closed in April 2016.

f. Response Rate

A sufficient response rate is critical to any survey research project. Two important issues arise concerning response rates. First, to generalize to the population, the response set must represent that population. In the case of this research, the population received the survey and the responses represent the effective sample. The issue of representativeness, specifically non-

response rate, is discussed in more detail later in this chapter. Second, a low response rate may result in an inability to capture significant effects on the dependent variable due to low statistical power. Before actually calculating the response rate, it is important to assess the best steps for doing so. Researchers note that outcomes rates are commonly cited in survey reports and the literature, but often, the same names are used to describe fundamentally different rates and different names are sometimes applied to the same rates (Groves & Lyberg, 1988). Therefore, as defined by numerous sources, the response rate is defined in this study as the number of complete interviews from reporting units divided by the number of eligible reporting units in the sample (Groves, 1989; Hidiroglou, Drew, & Gray, 1993; Kviz, 1977; Lessler & Kalsbeek, 1992; Massey, 1995).

Dillman et al. (2014) suggest the use of the American Association for Public Opinion Research's (AAPOR) detailed methodologies for the calculation of response rates under different scenarios. Specifically, the AAPOR details six-response rate calculations, which vary based on the level of information known about non-responses and the inclusion of partial responses. For this study, due to the use of the MailChimp platform, detailed information was available in terms of the email delivery and respondent interaction. In addition, in the questionnaire development, questions critical to the analysis of the study were placed earlier in the survey, which allowed for the inclusion of partial responses (questionnaire with sufficient completion to analyze). Based on these assumptions, AAPOR (2015) notes the use of the maximum response rate calculation shown below (RR). Using this equation, the response rate for the study was determined to be 34%. Table 2.6 shows a summary of response data by survey response type.

$$R = \frac{(I + P)}{(I + P) + (R + NC + O)}$$

Table 2.6 Summary of Response Rate Data

Variable	Definition	Value
I	Number of complete interviews	248
P	Number of partial interviews	48
R	Number of refusals/break-offs	26/41
NC	Number of non-contacts	513
O	Other	0

g. Non-Response Bias

Non-response bias or representativeness of the data is an important element to assess in survey research. Therefore, an analysis was undertaken to determine whether survey respondents differed from non-respondents. A logistic regression using response as the dependent variable (1=responded, 0=did not respond) and using the variables available for all organizations in the data set (total number of individual organization lists, name of respondent sent in survey invitation email, and type of email address) as independent variables was run in SPSS (see Table 2.7).

The logistic regression model was found to be statistically significant, $\chi^2(3) = 20.54$, $p < .05$. Of the three predictors, only the estimate for the presence of a respondent name in the survey invitation email was found to be statistically significant ($p=0.002$). The availability of a name in the contacts data set may or may not represent an important characteristic about the organization. For this research, caution should be exercised in generalizing study results to the population.

Table 2.7 Logistic Regression for Survey Response Bias

Variable	Parameter Estimate	p-value
Total number of organization lists (1-16)	.031	.490
Name of respondent in survey invitation email (Name=1, No name=0)	.850	.002**
Type of email address (Personal email = 1, General email = 0)	-.306	.25
Constant	-.823	.00

** $p < .01$.

D. Phase 2: Case Studies

The second phase of this study involves four case studies of organizations participating in post-disaster recovery in Haiti. The goal of this fieldwork is to better understand the impacts of participation on post-disaster outcomes. To accomplish this goal, the research uses a case study methodology, collecting data through interviews with organizational staff and community members; field observations of organizational recovery work in Haiti; and document review of IRS 990 forms, websites, social media, mission statements, newsletters, and published documents. Data from these multiple sources was triangulated to enhance the validity and reliability of the study results. In this section, I describe the case study selection process and the methods utilized for the data collection and analysis.

As previously discussed, research on the impact that different types or levels of participation have on development initiatives, particularly in a post-disaster recovery context, is underrepresented in the academic literature. For instance, it is unclear in the literature whether a specific type of engagement, such as that associated with capabilities approach participation, will have a significant impact on outcomes. Thus, the second phase of this study focused on

addressing the gaps in understanding how differences in participation impact post-disaster recovery outcomes. The research proposition (P) and hypotheses (H) being addressed in this phase of the study are:

- P2: Organizational approach towards participation will affect post-disaster recovery outcomes
- H2: Organizations utilizing higher levels of participation will have made more progress towards theoretical and institutional post-disaster recovery goals.

a. Case Study Design

A case study design was utilized for the second phase of the project because it was found to be the most appropriate methodology for addressing the questions of interest. According to Yin (2009b), case studies are the preferred approach in situations where current places, people, or real-life contexts are being examined. In addition, case studies often attempt to make sense of information that is not easily categorized or quantified. Furthermore, case studies can serve as examples to transfer information and best practices to other cases (Stake, 1995). The deeply contextual, complex, and applicable nature of this study necessitates the use of a case study analysis.

In terms of the specific design, a multiple-case (embedded) design was utilized. As noted by many scholars, the evidence from multiple cases can often provide more compelling and robust results compared to a single case study design (Herriott & Firestone, 1983). Furthermore, an embedded case design can provide additional information on specific phenomenon in operational detail, provide opportunity for clear measures or data, and assist in focusing a case study inquiry (Carroll & Johnson, 1992; Yin, 2009b). To accomplish these objectives, four case studies with embedded subunits were selected for further qualitative inquiry. Similar to the first

phase, the organization remained the overarching unit of analysis for the case study analysis. However, for the second phase, within each case study, the organizational staff and community members affiliated with each organization served as embedded units (see Figure 2.3).

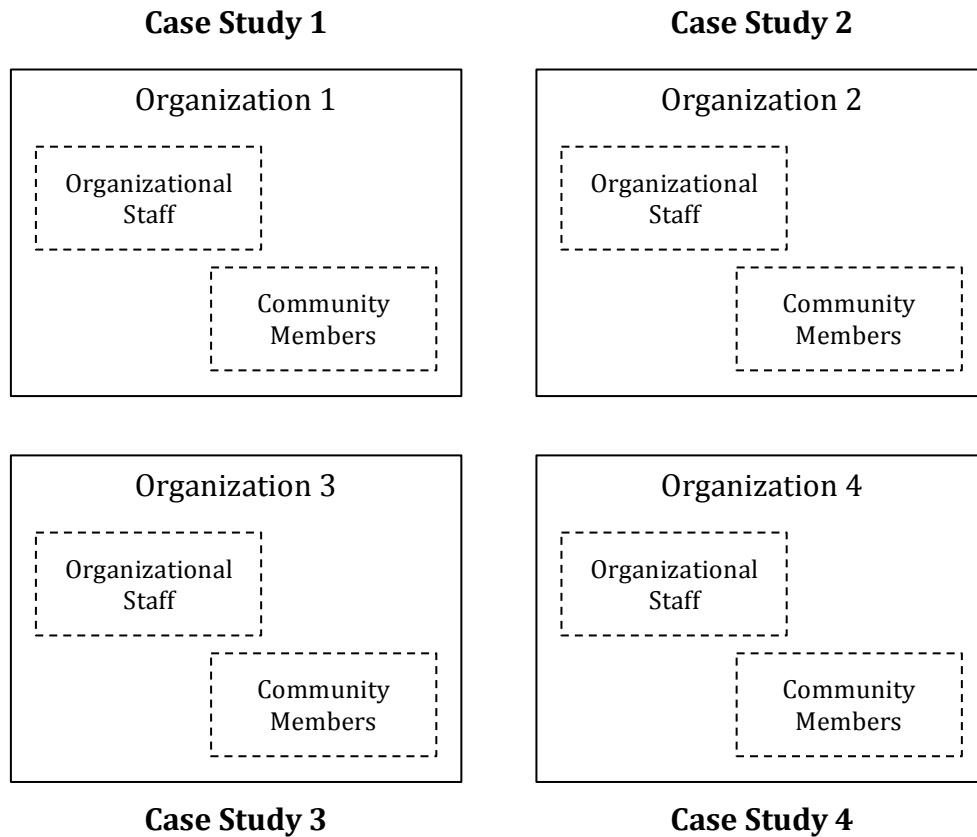


Figure 2.3 Multiple-case (embedded) design⁴

b. Case Selection

Case studies were chosen based on the findings from the first phase of the study. As previously discussed, in the first phase, a survey was administered to a comprehensive data set of organizations working in Haiti to gather detailed information on organizational characteristics and their participatory approaches. These data were used to select case studies based on several key factors. First, since the organizations had to have worked in Haiti to be included in the

⁴ Source: Adapted from Yin, 2009.

survey data set all organizations selected from the pool of completed survey responses had worked in Haiti. Because the selected cases all worked in Haiti in the post-disaster recovery period, contextual differences related to the location or country under study were accounted for in the design.

In addition to verifying the organization had worked in Haiti, it was also important to select case studies based on the timing of the organization's work in the country. Due to this phase of the study being focused on assessing progress towards recovery goals, it was important for organizational case studies to not only have been involved in work in Haiti since the 2010 earthquake, but for organizations to still be actively involved in recovery work in the country. Making this distinction allowed for the most current information on recovery goals to be acquired and for additional data collection options assessing the current state of work, such as field observations, to be part of this phase of study. Therefore, to qualify for inclusion as a case study, the organization had to be currently working in Haiti.

The last case selection criterion was based on recovery sector. Work undertaken by organizations after the 2010 earthquake included efforts in many recovery areas, including physical rebuilding, camp coordination and management, children and youth, economic development, education, environment, food and nutrition, governance and institutions, health, agriculture, WASH (water, sanitation, and hygiene), housing and community development, disaster risk reduction, gender and gender based violence, religion, culture, advocacy, and human rights. The recovery area of focus for this study is physical rebuilding, specifically of permanent housing; thus organizations had to have identified working in this area in their survey responses to be selected as a case study for this phase.

Using the described selection criteria, organizations were purposefully selected to reflect a range of variable levels. The rationale behind utilizing varying cases was that analytic conclusions drawn from differing case studies would be more robust than the results from a single case (Yin, 2009b). Thus, the first (and primary) sampling characteristic used was level of CAP because it was the main variable of interest in the study. The second sampling characteristic was established from the findings of the quantitative analysis (presented in chapter 4). Based on the results of the regression analysis, three variables, number of recovery sectors, collaboration level, and having Haitian founders outside of Haiti (diaspora), were found to be significant predictors of the level of participation utilized by an organization. Of the three significant variables, number of recovery sectors, was the most significant ($p=.001$), for this reason it was selected as the second sampling characteristic. Thus, organizations were selected to have variation on level of CAP and number of recovery sectors. Table 2.8 shows the variation in characteristics across the case studies.

Table 2.8 Case Study Selection Criteria

Variable	Case Study 1	Case Study 2	Case Study 3	Case Study 4
CAP Participation	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>High</i>
Number of Recovery Sectors	5	8	6	9

Qualitative data collection methods were used within the case study design. As scholars describe, the use of qualitative data collection methods allows researchers to uncover in-depth details about a topic or case (Marshall & Rossman, 1989). The specific data collection used for this phase of the study included: 1) semi-structured interviews with organizational staff and community members; 2) field observations of organizational recovery work in Haiti; and 3)

review of organizational documents, including IRS 990 forms websites, social media, mission statements, informational flyers, newsletters, and published media.

c. Interviews

A total of 20 interviews were conducted to provide further information on the use of CAP and its resulting impact on post-disaster recovery outcomes. As previously discussed, for this phase of study, the overarching unit of analysis is the organization, with the organizational staff and community members affiliated with the organization as embedded units of analysis. The purpose of interviewing organizational staff and community members was to better understand the ways in which engagement with communities impacts the accomplishment of post-disaster recovery objectives. Specifically, the interviews with organizational staff were used to gather information on the organization and its work in Haiti. Furthermore, these interviews aimed to collect in depth information on the organization's engagement with community participants and staff perspectives to determine the impact of these engagements on the organization's recovery work. The interviews with the organizational staff also provided an opportunity to ask targeted questions to further assess and triangulate the validity of the self-identified participation data collected from the survey. Similarly, the interviews with community members were used to help validate (or not) assertions of the use of participation from the organization. Lastly, interviews with both the organizational staff and the community members were used as a method for collecting data on organizational and community defined post-disaster recovery outcomes.

i. Interview recruitment

Several steps were followed for the interview recruitment. First, at the end of the organizational survey, respondents were asked, "Would you be interested in being interviewed personally by a member of the research team to expand on your responses about your

organization's work?" Data from this question were analyzed to determine which organizations should be considered for the second phase of the study. From these data, a master list of potential interviewees was compiled. The list was used to contact individuals via email (see Appendix G). In the email message, respondents were reminded that they noted potential further interest when they completed the survey and were asked if they would be interested in participating in follow up interviews and site visits of their organization's work in Haiti. Organizational contacts were informed in the message that the researcher was interested in interviewing any available organizational staff and community members and visiting their project sites in Haiti. In cases where the person who originally participated in the survey was no longer working in Haiti, the survey was forwarded to the current organizational staff member working in Haiti. As individuals reported their availability and confirmed the requirements for participation in the interviews, a schedule of interviews was created for the selected organizations.

ii. Interview process

Interviews were conducted either at the organization's project site in Haiti or over the phone⁵. All interview subjects were 18 years of age or older. The interviews with organizational staff members were all conducted in English. The interviews with community members were conducted in English or Haitian Creole, depending on the respondent's preference. In the cases where individuals chose to do the interview in English, I administered the interview. For the cases where individuals preferred to do the interview in Haitian Creole, an organizational staff member served as a translator for the interview.

The interviews followed the step-by-step process outlined in the approved Institutional Review Board (IRB) documents. First, potential interviewees were asked if they were willing to

⁵ The majority of the interviews were conducted in person, but four had to be conducted over the phone due to scheduling conflicts.

participate in the study and if the interview could be audio recorded. Upon confirmation of participation, I began recording the session and read the participant the approved IRB study information sheet (see Appendix H). After reading the study information sheet, I provided a hard copy of the document to the participant and offered to email a copy of the form to him/her if a digital copy was preferred.

The interviews utilized a pre-established instrument that focused on the key themes of the study (participation and post-disaster recovery). Interviews were semi-structured to allow for follow-up questions based on any relevant information that surfaced during the interview (Merriam, 2009). The interview guides used for interviews with organizational staff and community members are included in Appendix I and J, respectively. Detailed notes were taken throughout the interview process. Upon completion of the interview, the respondent was thanked and encouraged to contact the researcher with any follow up questions or concerns. In addition, after each interview, descriptive notes summarizing the key points and methodological details of the interview were organized in written files. After the completion of all interviews, the audio recordings were transcribed and reviewed multiple times.

d. Observations

In addition to interviews, field observation of the post-disaster work occurring in Haiti was undertaken for each case study. There were several reasons for including observation as a data collection method for the qualitative phase of this study. The first reason for undertaking field observations was to gather additional information on the organization's use of participation. As previously discussed, in depth information about community participation was collected from organizational staff and community members in the interviews. However, these descriptions of participation could vary from the observations of an independent observer. It was important,

therefore, to collect data to confirm (or not) the respondents' views of participation. Therefore, the observations were used as an opportunity to validate organizational and community narratives of participation or to examine discrepancies between interviewees' accounts and field observations.

Another reason for undertaking observation was to collect additional data on post-disaster recovery. A wide range of approaches can be utilized to assess recovery, which can include organization defined recovery outcomes, community defined recovery outcomes, and literature defined recovery outcomes. As previously discussed, a goal of this study is to compare across these different types of recovery assessments; therefore, in addition to collecting data from the organizations and community members on recovery, data were also collected on the commonly utilized recovery measures from the academic literature. Since the recovery area of focus for this study was physical rebuilding, assessments were made based on the commonly utilized indicator for housing recovery, the number of permanent housing units built by time (t) (Ganapati, 2013).

Observational data were collected over a two-week period of fieldwork in Haiti in May of 2016. For each case study, site visits were made to current post-disaster recovery projects. Observations included attending organizational staff meetings, workshops, and outreach activities with community participants and visiting on-site construction work. Observations were recorded through extensive field notes and, when appropriate, digital recording (as is recommended by Lofland, Snow, Anderson, & Lofland, 2006). In addition, an observation checklist was utilized for the analysis of the on-site construction work, which included codes for assessing participation and the infrastructure recovery measures (see Appendix K).

e. Website and Document Review

The last qualitative data gathering procedure involved the review of organizational websites and documents. This step included assessing organizational websites, social media accounts, mission statements, newsletters, IRS 990 forms, and other published documents that could be attained for each case study. There were several reasons for undertaking the website and document review. First, the websites and documents provided another source for gathering information on the organization's use of participation. Analyzing this type of data allows for an understanding of the ways in which the organization publicly describes its engagement with community participants. Descriptions provided in websites, social media accounts, and organizational reports are often the main methods organizations have at their disposal to inform the public and potential donors about their work. Therefore, it is important to understand the ways in which organizations present their participatory approaches in these outlets. In addition, the analyses of these data provided an opportunity to further assess the self-identified participation data collected in the survey. Lastly, the website and document review provided an additional source of data on post-disaster recovery outcomes. Thus, I conducted a content analysis of the relevant websites and documents for each of the four case studies to assemble further information on the organizations' use of participation and gather details on their post-disaster recovery work.

f. Analysis

The goal of the qualitative analysis was to develop an in depth understanding of the study's central areas of interest. Data from multiple sources was triangulated in an effort to enhance the validity and reliability of the study results. As discussed by Lincoln and Guba (1985), triangulation increases confidence in results by having multiple data collection methods

and different sources of data to corroborate the findings. Thus, interview, observation, website, and document data were assessed for codes related to the larger study themes of participation and post-disaster recovery. In addition, all data was coded for additional secondary themes that emerged from the analysis. As data was analyzed, similar codes were collapsed into broader categories, which were then combined into the themes (Strauss & Corbin, 1990). The identified themes are utilized as subheadings in the results chapter of this dissertation. Qualitative coding and analysis were done using ATLAS.ti software. For a full description of the qualitative analysis procedure and preliminary thematic findings, see chapter 3.

In the next chapter, a full description of the data utilized in this study is provided. For the quantitative data, the descriptive statistics and preliminary survey results are presented and discussed. For the qualitative data, the interview, observation, and document data are further explained.

CHAPTER 3: DATA AND PRELIMINARY ANALYSIS

In this chapter, a detailed description of the data used in this dissertation is presented. The first section provides a discussion of the variables used in the quantitative analyses (first phase of the research), including a presentation of the descriptive results from the online survey. In the second section, the background data and preliminary thematic analyses of the four case studies is discussed.

A. Phase 1: Survey

The quantitative phase of this study analyzes the ways in which organizational factors impact organizations' use of a participatory approach in their post-disaster recovery work. Thus, the dependent variable being assessed is level of participation, with participation being measured within the capabilities approach framework. The independent variables are key organizational characteristics that are posited to serve as potential predictors for the level of participation.

An online survey of organizational staff produced the primary data for this inquiry. Survey data was collected through the use of an online platform (SurveyMonkey) and was then compiled into a comprehensive database (see Appendix L for a description of all variables collected from the survey). A subset of variables from this comprehensive database was subsequently used in the analytical models. The statistical program Statistical Product and Service Solutions (SPSS) was used for the quantitative analysis of the relevant study variables. In the next section, an in-depth discussion of the data collected from the survey is provided, which includes a description of the summary statistics and preliminary analyses of the study variables.

a. Descriptive Statistics

The descriptive statistics include information on the range of values for each variable and summary statistics such as the mean and variance (Table 3.1). The results for each variable are detailed in this section. CAP level was found to vary from 4 to 28, with the minimum value of 4 representing an organization that self-reported no participation for all 4 CAP indicators. In addition, CAP level had a mean value of 21.29, signifying that the majority of organizations in the sample self-reported using relatively high levels of participation. The average annual budget for organizations in the study was \$606,808.41 (in U.S. dollars). Organizational budgets ranged from \$0 to \$10,000,000, with the \$10,000,000 budget representing a large multinational organizational outlier. Organizational employees were assessed as the number of Haitian and non-Haitian employees and were found to have mean values of 29.42 and 27.63, respectively. The age of the organizations in the study were found to range from 1 to 119 years old, with the average organization age being 21.1 years. Collaboration level was found to vary from 1 to 7, with a mean of 5.57, indicating that the majority of organizations in the study self-reported using higher levels of collaboration. The number of recovery sectors engaged in by organization was found to range from 1 to 12. The mean number of recovery sectors reported by organizations in the study was 4.762, signifying that the organizations taking part in the survey were typically involved in multiple recovery sectors. In addition, Haitian representation on the board of directors averaged around 31%. Lastly, the mean values for the dichotomous organizational variables showed that 33% of organizations had prior post-disaster experience outside of Haiti, 18% of organizations had Haitian founders, 15% of organizations had diaspora founders, and 45% of the organizations were registered with the Haitian government.

Table 3.1 Descriptive Statistics for Study Variables

Variable	n	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
CAP Level	237	4	28	21.29	6.044	-.751	-.337
Annual Budget	208	0	10,000,000	606,808.41	1,456,456.36	4.591	23.518
Employees: Haitian	273	0	441	29.42	64.252	3.721	15.742
Employees Non-Haitian	271	0	1,000	27.63	119.283	6.346	42.892
Organization Age	292	1	119	21.10	20.290	1.974	4.372
Collaboration Level	246	1	7	5.57	1.558	-.884	-.002
Post-disaster Recovery Experience	257	0	1	.33	.471	.724	-1.488
Number of Recovery Sectors	286	1	12	4.762	2.593	.359	-.654
Founders: Haitian	273	0	1	.18	.381	1.713	.940
Founders: Diaspora	273	0	1	.15	.358	1.969	1.892
Board of Directors: Haitian	223	0	1	.31	.36	.85	-.70
Government Registry	246	0	1	.45	.498	.214	-1.970

In addition to assessing the descriptive statistics, probability plots were analyzed for each variable in order to inspect them for potential problems. This step included undertaking three types of evaluations: 1) checking the plausibility of the range of values for each variable; 2) doing a visual inspection of each variable's distribution (Appendix M); and 3) evaluating each variable's skewness and kurtosis statistics. After reviewing this information, it was determined that several of the independent variables were positively skewed. The skewness value helps to understand the shape of a distribution of a variable of interest. The question that is often raised when evaluating skewness is how large of a skewness value is acceptable in order for the distribution to still retain the general shape of a normal distribution (Abbott, 2017). Researchers utilize different rules of thumb to answer this question. Although there is no agreement on the exact value that constitutes a skewness problem, the classic rule of thumb presented by Bulmer (1979) argues for a skewness threshold around ± 1 . Therefore, in line with this suggestion, for this study, ordinal and interval variables with an absolute skewness value significantly greater than 1 were transformed by logging them using base ten. Appendix M shows the descriptive statistics for the variables requiring transformations.

b. Correlation: Participation Indicators

The dependent variable for the quantitative phase of this study is the level of participation used by organizations in their post-disaster recovery work. A major issue in studies of participation is the lack of a universal (or best) method for assessing participation. Other commonly used measurement techniques include: 1) the single general participation question, 2) the general participation question for specific project areas, and 2) an ordinal scale of the levels of Arnstein's ladder of citizen participation. As previously discussed, this dissertation analyzes the potential application of the capabilities approach as a framework for the measurement of a

particular type of participation. Therefore, it is important to assess how the measure of capabilities approach participation compares to other methods of measuring participation. The concept of participation is somewhat broad and multidimensional. For this reason, it is expected that different participation measures would be associated along some dimension. To explore this expectation, a two-tailed Pearson’s correlation test was conducted for the CAP participation indicators and the three commonly used participation measures (see Table 3.2). The test revealed that there was a moderately⁶ (.311), statistically significant (p=.01) correlation between CAP and the general, single question participation indicator. In addition, there was a moderately (.525), statistically significant (p=.01) correlation between CAP participation and the general participation measure for specific project areas. The analysis also showed a moderately (.535), statistically significant (p=.01) correlation between the CAP and Arnstein participation measure. As was previously discussed, the benefit of using CAP over other indicators is that the capabilities approach offers a framework for capturing distinct elements or dimensions of participation, that are typically not picked up using the general measures. Therefore, for this research, the CAP measure is conceptually the preferred approach.

Table 3.2 Bivariate Correlations for Participation Indicators

	1	2	3	4
1. Participation: CAP	1.00			
2. Participation: General, single question	.311**	1.00		
3. Participation: General, specific project areas	.525**	.493**	1.00	
4. Participation: Arnstein	.535**	.427**	.699**	1.00

** p<.01.

⁶ Researchers suggest that correlations below +30 are “weak,” between +31 and +70 “moderate,” between +71 and +90 “high” and above +90 “very high”(Hocking, McDermott, & Stacks, 2003; Stacks, 2002).

To further assess the various participation measures, regression models were used to evaluate differences in results using different participation measures as the dependent variable. The main quantitative analysis conducted for this study involved specifying a regression model with organizational characteristics as predictors of level of capabilities approach participation utilized by an organization (see chapter 4 for results). In this phase, the results from the main analysis were compared to models with the alternative participation indicators to further evaluate the CAP as a measure for participation. Regression models were specified using the four participation measures as dependent variables (see Appendix N). Regression analyses revealed no conflicts between CAP and the alternative participation measures. Furthermore, the alternative participation models had far less explanatory value compared to the CAP model (see Table 3.3).

Table 3.3 R² of Regression Models

Dependent Variable	R²
Participation: CAP	.216
Participation: General, single question	.122
Participation: General, specific project areas	.124
Participation: Arnstein	.055

It is important to recognize that the development of the CAP measure is exploratory, given it is a newly created measure. However, the CAP measure performed well empirically, and more importantly, is theoretically consistent with this study's framework. Therefore it is the preferred measure for this research.

B. Phase 2: Case Studies

The qualitative phase of this study explores how the use of a participatory approach impacts post-disaster outcomes. Data used to assess this question were gathered from three sources: 1) interviews with organizational staff and community members; 2) field observations of organizational work in Haiti; and 3) a review of organizational documents. These various forms of data were used together to draw a more complete picture of the topic of interest. In the following section a discussion of the case study data is provided, which includes a description of the organizational characteristics for each case study organization.

a. Organizational Characteristics

In the first phase of the study, a survey was administered to a comprehensive set of organizations working in Haiti in order to collect in-depth information on the characteristics and approach of each organization. Upon completion of the survey, the collected data were used to select the case study organizations. Specifically, the organizations had to meet two criteria: 1) the organization had to be engaged in ongoing recovery work in Haiti; and 2) the organization had to be working in the recovery area of permanent housing rebuilding. Using that selection criterion, organizations were purposefully selected to represent a range of variation of the variables of interest in the study. The first sampling characteristic used to select case studies was level of CAP because it was the main variable of interest in the study. The second sampling characteristic, number of recovery sectors, was established from the findings of the quantitative analysis (presented in chapter 4). A summary of the organizational characteristic data for each case study organization is shown in Table 3.4.

Table 3.4 Case Studies: Summary of Organizational Characteristics

Variable	Case Study 1	Case Study 2	Case Study 3	Case Study 4
CAP Level	Low	Low	High	High
Number of Recovery Sectors	5	8	6	9
Annual Budget (in U.S. dollars)	2,000,000	350,000	70,000	375,000
Number of Haitian employees	380	15	15	15
Number of Non-Haitian employees	120	2	0	2
Organization Age (in years)	36	9	12	25
Collaboration Level	High	High	High	High
Post-disaster Recovery Experience	Yes	No	Yes	No
Founders: Haitian (Haitians in Haiti)	No	No	No	No
Founders: Diaspora (Haitians outside of Haiti)	No	No	No	No
Haitian Board of Directors (%)	0	0	14	30
Government Registry	Yes	No	No	Yes

The four organizational case studies were selected based on their variation in the key organizational variables: CAP level and number of recovery sectors. Since case study selection was made on the bases of the significant organizational variables, it was not possible to fully control for the non-significant organizational variables. Despite this fact, selected case studies had similarities across the majority of the organizational characteristics. For example, all case studies were similar in terms of collaboration level, and organizational founding. In regards to differences in organizational characteristics, case study 4 (high CAP organization), had an annual budget of \$375,000, employed 15 Haitians and 2 non-Haitians, had been in operation for 25

years, and had a board of directors that was 30% Haitian. This organization had no previous post disaster recovery experience and was not registered with the Haitian government. Similarly, case study 3 (high CAP organization), employed 15 Haitians, but had no non-Haitian staff, operated with a smaller annual budget of \$70,000, was younger (12 years old), had a board of directors that was 14% Haitian. Lastly, case study 2 (low CAP organization) was also comparable in terms of its non-significant organizational characteristics. The organization had the same number of Haitian employees (15) as case studies 3 and 4, but had 2 non-Haitian employees, had an annual budget of \$350,000, had been in operation for 9 years, and had no Haitian representation on the board of directors.

The organization that was the least comparable to the other case studies was case study 1 (low CAP organization). This case study was a much larger organization in terms of size (380 Haitian employees, 120 non-Haitian employees) and resources (\$2,000,000). Review of the organizations IRS 990 forms revealed that size and budget values reported in the survey were most likely based on the organizations total resources for current work in multiple countries. Therefore, the budget and size values provided here, would be smaller for work in Haiti. Despite this fact, there appears to be a larger pool of resources available to case study 1 than the other organizations (none of the other case studies noted having additional budgets available for work in other countries). Thus, whether this capital is being used for work in Haiti or other organizational activities, it is important to keep in mind that case study 1 appears to have access to a larger amount of resources. Although it was desired to have all four case studies be of similar size and resources, case study 1 was the only organization currently working in Haiti that met the previously outlined selection criteria.

b. Case Study Locations

A map of organizational case study locations is shown in Figure 3.1. As previously discussed, one of the criteria used for case study selection was that the organization needed to be engaged in ongoing recovery work in Haiti. This requirement was stipulated so that it would be possible to collect field observation data on the organizations current recovery operations. The other assessment that was made in terms of location was to confirm that there was no overlap in case study locations. Because one of the goals of this study was to understand the different impact of each of the four case studies, it was important for them to be working separately from one another. Thus, through a visual inspection of the case study locations, it was verified that there was no overlap in where organizational case studies were operating in Haiti.

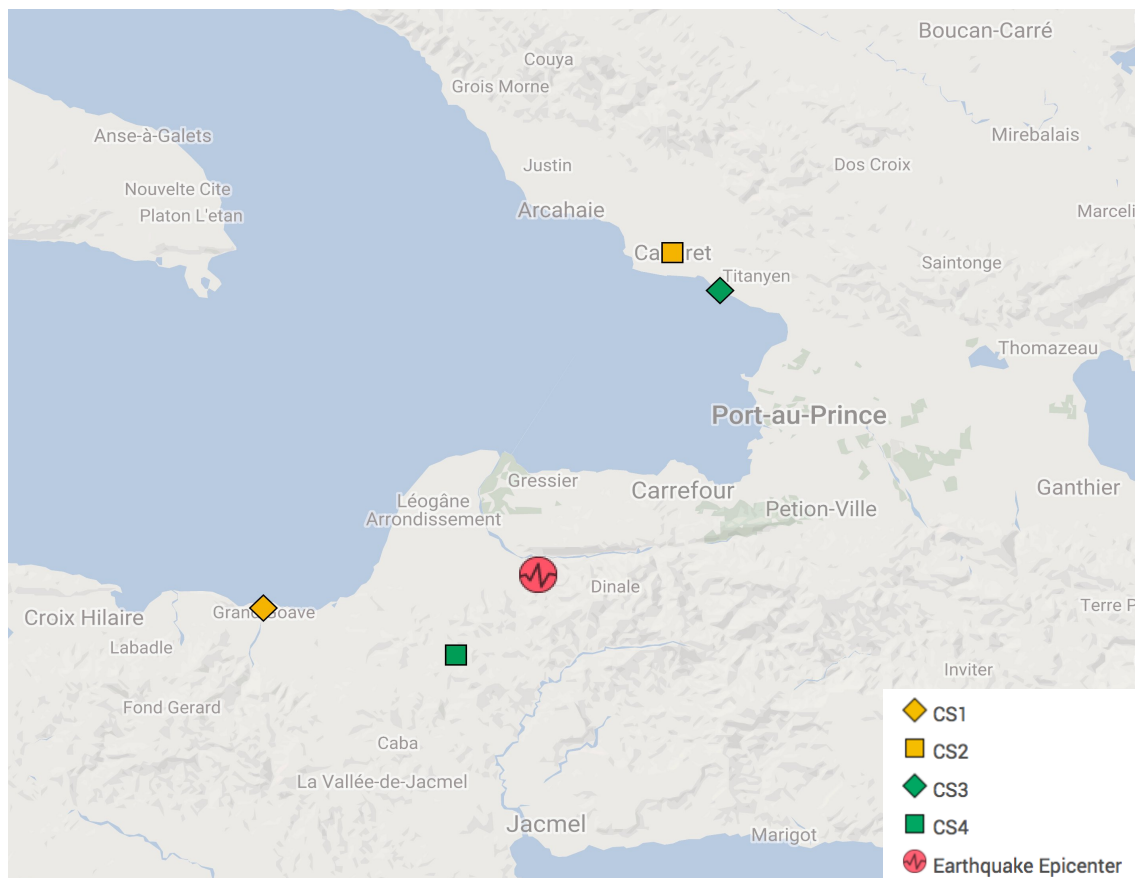


Figure 3.1 Case Study Locations

In regards to the details of the case study locations, it is difficult to retain specific information on the geographical and population characteristics of each location. However, general comparisons can be made of the four case study locations based on the collected observational, website and interview data. All four organizations currently operate in the Ouest department of Haiti with the recovery work taking place in peri-urban areas outside of the capital city of Port-au Prince. The case studies operate in areas within 20 miles of the epicenter of the 2010 earthquake (Leogane, Ouest Department). See Table 3.5 for details on each case studies distance from the earthquake epicenter. Interview and observational data confirmed that the 2010 earthquake similarly affected the four case study locations.

Table 3.5 Case Study Distance from Earthquake Epicenter

Case Study	Distance from Earthquake Epicenter (Leogane, Ouest Department)
CS1	15.7 mi
CS2	20.6 mi
CS3	19.8 mi
CS4	7.06 mi

c. Qualitative Analysis and Thematic Identification

Analysis for phase two of the study involved memoing, coding, and content analysis. These three methodologies were analyzed iteratively following the recommendations of Yin (2009a). The utilization of these multiple analysis techniques provided an opportunity for finding relevant themes, connections, and theoretical contributions (Miles & Huberman, 1994). Furthermore, the triangulation of techniques allowed for the enhancement of the validity and reliability of the study results.

In the first phase of analysis, memoing was used to record reflective notes about what was being learned from the data. The utilization of memoing assisted in uncovering general themes and concepts related to the key study areas. As is discussed by Miles & Huberman (1994), the process of memoing allows for the refinement of ideas and the tracking of thoughts that arise as data is analyzed. Furthermore, the memoing process assisted in the development of initial broad 'open' coding categories.

In addition to memoing, the subsequent phase of analysis involved using coding to organize collected data into broader concepts. Coding provided an opportunity for selecting well-defined categories to classify the various forms of qualitative data (Nachmias & Frankfort-Nachmias, 2007). The constant comparative method described by Glaser's (1965) was used to compare, collapse, and expand initial codes. The resulting organized codes were then used to conduct focused coding of the interview, observation, and website data (Table 3.6).

Table 3.6 Summary of Codes

Code	Description
<u>Participation</u>	
Participation – attitudes towards community	Organizations attitudes towards the community
Participation - attitudes towards participation	Organizations attitudes towards participation
Participation – charity	Discussion of charity giving
Participation – decision making	Haitian involvement in decision-making process
Participation – incentive	Incentives for participating in activities
Participation – individual vs. group feedback	Individual vs. group feedback from community
Participation – leadership roles for Haitians	Leadership roles/responsibilities of Haitians in organization
Participation – training	Discussion of training for Haitians
Participation – type of employment	Employment of Haitians by organization
<u>Recovery Codes</u>	
Recovery – community outcomes	Discussion of community defined recovery outcomes
Recovery – general discussion	General discussion of work undertaken after the 2010 earthquake
Recovery – organization classification	Organizations classification of post-disaster work
Recovery – organization outcomes	Discussion of organization defined recovery outcomes
Recovery – organization vs. community perspectives	Discussion of differences/similarities between organization and communities perspectives of recovery

The next chapter presents the results of the quantitative and qualitative phases of research. It provides the results of the multivariate analysis used to identify the organizational characteristics predicting level of participation. In addition, using the qualitative data, the impact of participation on post-disaster recovery outcomes is analyzed.

CHAPTER 4: ANALYSIS

This chapter presents the analyses results of this research. The first section focuses on phase one of the study, which involves a quantitative analysis of participation level among the sample of organizations working in the recovery period in Haiti. The second section of this chapter presents the analytic results of the second phase of the study. This phase is an in-depth case study of four organizations, involved in post-disaster recovery in Haiti.

A. Phase 1: Survey

The first phase of this study analyzes the relationships between organizational factors and level of participation. The primary research question in this phase is: “What organizational factors are associated with the degree of community participation present in organizations’ post-disaster recovery work?” In an effort to answer this question, a statistical regression analysis was performed on survey data collected from organizations engaged in post-disaster recovery projects in Haiti. The model was run with degree of participation as the dependent variable; the participation variable was developed from the CAP as discussed in chapter 2. Eleven organizational predictor variables, drawn from the organizations literature were used as independent variables.

a. Descriptive Statistics

The descriptive statistics for the variables used in the regression model are shown in Table 4.1. The mean CAP level is 21.41. This value indicates that organizations working in Haiti, on average, describe their work as utilizing a relatively high level of participation in their recovery efforts (maximum CAP participation value is 28, see chapter 2 for more background on the data).

Table 4.1 Descriptive Statistics for Dependent and Independent Variables used in Model

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>
<u>Dependent Variable</u>		
CAP Participation Level	21.41	6.12
<u>Independent Variables</u>		
Annual Budget	5.09	.94
Number of Haitian employees	.85	.78
Number of Non-Haitian employees	.39	.79
Organization Age	1.14	.35
Collaboration Level	5.54	1.54
Post-disaster Recovery Experience	.26	.44
Number of Recovery Sectors	5.05	2.53
Founders: Haitian (Haitian in Haiti)	.19	.39
Founders: Diaspora (Haitians outside of Haiti)	.14	.34
Haitian Board of Directors (%)	.32	.36
Government Registry	.43	.5

b. Bivariate correlations

In the second phase of analysis, bivariate correlations between capabilities approach participation and the organizational characteristic variables were assessed. The results of these bivariate correlation analyses can be seen in Table 4.2. The correlation analysis revealed statistically significant correlations between several of the organizational characteristics and level of capabilities approach participation. Although the correlations tended to be relatively

weak (below .30), it is useful to assess the details of each relationship. Specifically, the analysis showed, number of recovery sectors (.269), collaboration level (.205), and having Haitian founders outside of Haiti (.178) to be positively correlated with level of participation. In addition, a significant inverse relationship with the level of participation was observed for the annual budget (.202) and the number of Haitian employees (.175). The finding of an inverse relationship between annual budget and level of participation is consistent with discussions in the literature noting potential negative associations between increased organizational size or scale and engagement with local communities (Barakat, 2003; Lawther, 2009). Furthermore, the finding of an inverse relationship between number of Haitian employees and level of participations aligns with studies finding that there are often a lack of opportunities for communities to engage with organizations, despite increases in employment opportunities (Davidson et al., 2007; Schouten & Moriarty, 2003).

Table 4.2: Bivariate Correlation Analysis

	1	2	3	4	5	6	7	8	9	10	11	12
1. CAP	1.00											
Participation												
2. Annual Budget	-.202**	1.00										
3. Haitian employees	-.175*	.466**	1.00									
4. Non-Haitian employees	.002	.275***	.169*	1.00								
5. Organization Age	-.015	.290***	.197**	.44***	1.00							
6. Collaboration Level	.205**	.046	.014	.166*	.167*	1.00						
7. Recovery Experience	.079	.004	-.043	.390***	.296***	.128	1.00					
8. Recovery Sectors	.269***	.082	.284***	.034	.139*	.164*	.112	1.00				
9. Founders: Haitian	.028	-.044	.175*	-.265***	.016	.035	-.056	.096	1.00			
10. Founders: Diaspora	.178*	-.158*	-.104	-.179*	-.099	.057	-.061	.068	.003	1.00		
11. Haitian Board of Directors	-.027	.006	.173*	-.283***	.040	.230**	-.008	.116	.515***	.330***	1.00	
12. Government Registry	-.042	.246**	.375	.227**	.208**	.130	.029	.186*	.223	.078	.248*	1.00

* $p < .05$. ** $p < .01$. *** $p < .001$. Significant relationships are identified in bold.

c. Regression Analysis

While bivariate correlations may suggest some potentially important relationships, multiple regression analysis is a better approach for assessing the influence of a set of factors and the relative impacts of these factors on the dependent variable. Thus, in the last phase of the quantitative analysis, a regression model is specified with organizational characteristics as predictors of the level of capabilities approach participation utilized by an organization. Organizational variables used included organizational resources, size, age, collaboration, experience, recovery sector, origin, board of directors, and environment. These predictors are drawn from existing studies in the organizations literature (see chapter 2 for a in-depth discussion of the variable measurement).

Diagnostic analyses were performed to check for heteroskedasticity and multicollinearity, conditions which can bias regression results. The heteroskedasticity analyses assess whether the variance of the errors is constant across observations. The White Test (1980), which allows for the testing of non-linear forms of heteroskedasticity, is used for this purpose. The test involves regressing the Ordinary Least Squares (OLS) squared residuals against the explanatory variables, squares of the explanatory variables, and the cross products of the explanatory variables. The White Test results show no heteroskedasticity in the model. Multicollinearity, high correlation among the predictor variables, can impact the results for individual predictor coefficients. The assessment for collinearity involves checking the variance inflation factors (VIF) for the independent variables. The test involves regressing each independent variable in the model against all other independent variables and comparing the VIF's (derived from the R^2 of these

models). VIF values were under a threshold of 2.5⁷, therefore it was determined that collinearity is not an issue in the model. Table 4.3 displays the results from the OLS regression analysis.

Table 4.3 Multiple Regression Analysis Results

Variable	Unstandardized Coefficients		Standardized Coefficients
	Beta	Standard Error	Beta
Annual Budget ⁺	-.787	.577	-.121
Employees: Haitian ⁺	-1.325 [^]	.732	-.170
Employees: Non-Haitian ⁺	.357	.786	.046
Organization Age ⁺	-.269	1.520	-.016
Collaboration Level	.743*	.319	.187
Post-disaster Recovery Experience	.270	1.174	.019
Number of Recovery Sectors	.719***	.193	.298
Founders: Haitian	2.016	1.443	.129
Founders: Diaspora	3.190*	1.481	.179
Board of Directors: Haitian	-3.032	1.750	-.177
Government Registry	-.435	1.069	-.035

R² = .216, Adjusted R² = .156

F = 3.582***

n = 155

Notes: *p = 0.05, ***p=0.001
[^]p=.10
⁺Logged for positive Skewness

⁷ The threshold value for the assessment of VIF values continues to be a subject of debate. Some scholars suggest using a “rule of thumb” of 10, noting that VIF values above 10 indicate high correlation and begin to introduce substantial issues (Marquardt, 1970, p. 610; R. Williams, 2015). For the purpose of this study, the more conservative level of 2.5, suggested by Allison (2012) is utilized.

The total number of organizations contacted for participation in the survey was 1,540. A total of 296 respondents (34%) completed the survey. Analyses were performed on a final sample of 155, who provided complete responses for relevant organizational characteristic and participation questions. Specifically, the sample was reduced from 296 responses to 155 due to missing values and/or data entry errors. See chapter 2 for a full discussion of the sampling and response rate.

From the regression analysis it was determined that three variables, number of recovery sectors, collaboration level, and having Haitian founders outside of Haiti (diaspora) were found to be significant predictors of the level of capabilities approach participation utilized by an organization. All three of these organizational characteristics were found to have statistically significant positive associations with participation; with the number of recovery sectors being significant at the $p=.001$ significance level, and collaboration level and diaspora founding being significant at the $p=.05$ significance level.

Working in more recovery areas was associated with increased levels of participation and this variable was the most influential in the model (Beta = 0.298). Specifically, findings show that an increase in the number of recovery sectors is associated with a 0.719 increase in the level of CAP utilized by an organization. This result suggests that when an organization works in multiple recovery sectors, there will be higher levels of participation utilized than if the organization worked in a single area. This positive relationship makes sense intuitively as an organization that is working in multiple areas may have more opportunities (or have more of need) to engage with the local community. Conversely, when an organization is working in fewer recovery areas, there may be fewer opportunities and/or it may be less critical for them to use more participation.

Organizational level of collaboration was also found to be associated with the use of more CAP. Study findings suggest that an increase in an organizations level of collaboration is associated with a .734 increase in the CAP level. Although there is lack of scholarly work linking the effects of higher levels of collaboration to participation, this result is consistent with a practical understanding of the process; organizations working more collaboratively would potentially have more opportunities for community engagement through their network of collaborators.

Another important finding concerns the impact of diaspora founders. Findings from this study suggest that the level of participation for organizations with diaspora founders is 3.19 higher in comparison to organizations with no diaspora founders. The significant impact of diaspora founders is consistent with research documenting the critical role the Haitian diaspora population has played in assisting Haiti with relief and recovery efforts following past flood and hurricane disasters (Esnard & Sapat, 2011; Newland, 2010). Furthermore, in comparing this result to the other organizational founding variable, it is important to note that statistically significant relationships were not found for the “founded by Haitians in Haiti” variable. This difference in significance between Haitians in Haiti and Haitians not in Haiti suggests that diaspora communities play a different and potentially more significant role in guiding the participatory work of organizations in the post-disaster setting.

It is also important to assess the variables negatively associated with participation. Specifically, the result for number of Haitian employees⁸ demonstrates that when organizations have higher numbers of Haitian employees they tend to use lower levels of participation. Despite

⁸ Number of Haitian employees was found to be significant at the $p=.10$ level. Although, this is higher than the commonly utilized $p=.05$ significance level, scholars such as, Gerber (2008) note that the use of the .05 significance levels can at times be arbitrary. Thus, due to the importance in understanding the relationship of the number of Haitian employees, the variable results are discussed here, despite the variable having a lower significance level than frequently utilized.

frequent use of number of Haitian employees as a proxy for use of participation, this result suggests that a higher number of Haitian staff does not necessarily mean more participation by an organization. In fact, it may be just the opposite. While the finding of an inverse relationship between number of Haitian employees and level of participation may initially seem counterintuitive to expectations of participatory engagements (as one might expect a larger number of local staff would be associated with more opportunities for community participation), it is in alignment with discussions in the literatures, noting that community members are often employed by organizations as a manual labor force, and are not always provided opportunities to play an active role in the decision making process of the organization (Davidson et al., 2007; Schouten & Moriarty, 2003).

Lastly, it is useful to evaluate other findings of the regression model, such as the standardized coefficients and R^2 . In regards to the standardized coefficients, findings indicate that the number of recovery sectors is associated with a .298 increase in the level of CAP utilized by an organization. This variable was found to have the strongest association with CAP participation, with collaboration level having the next highest association, followed by diaspora founding. In terms of explanatory power, the R^2 for the model indicates that 21.6% of the variation in level of CAP is explained by the independent variables in the model. This lower R^2 suggests that there are likely other variables not included in the model that can be attributed to level of CAP.

In summary, the regression analysis predicts that organizations use of a participatory approach, on average, is influenced by number of recovery sectors, level of collaboration, and having Haitian founders outside of Haiti (diaspora). In the next section results from the case studies are presented. Qualitative data from the cases further inform the relationships between

participation, and organizations, and expand our understanding of participation in post-disaster recovery in Haiti.

B. Phase 2: Case Studies

Phase two of this study examines participation and post-disaster recovery. The specific research question assessed in this phase is: “How does participation impact post-disaster recovery?” This question was addressed through the use of a case study methodology. Drawing on data from interviews with organizational representatives and community members, field observations, and organizational documents, analysis is aimed at better understanding participation by Haitians in their own recovery. The four organizational case studies were selected based on their variation in CAP participation level (2 low CAP organizations; 2 high CAP organizations).

The qualitative data were triangulated to draw conclusions on the ways participation impacts post-disaster recovery. In this section, the results of the qualitative analysis are presented, and include an in-depth description of the key findings organized into two themes: 1) participation and the post-disaster recovery process, and 2) participation and post-disaster outcomes. An overview of the themes, sub-themes, and categories discussed in this section are shown in Figure 4.1.

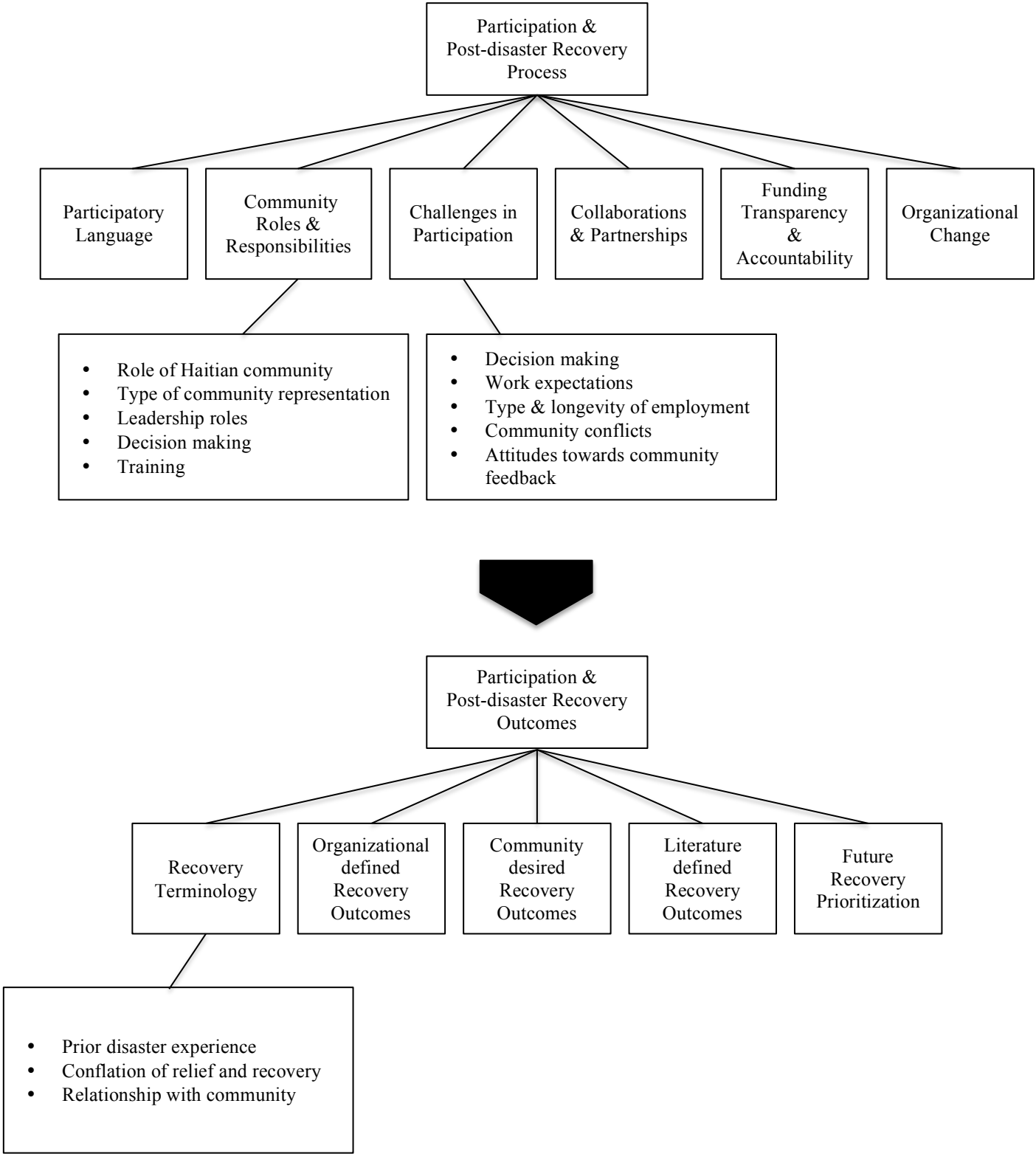


Figure 4.1 Case Study Themes, Sub-themes, and Categories

Participation and the Post-disaster Recovery Process

Participation is a critical component in post-disaster recovery work. Despite a longstanding interest in participatory processes, research on participation in the post-disaster setting lacks systematic analysis using a clear framework. This research employs a framework based on capabilities approach participation to address some of the weaknesses of previous research.

The qualitative data provided key themes and yielded important insights about participation and the post-disaster recovery process. For example, six sub-themes emerged from the qualitative data related to the implementation of participatory approaches in the post-disaster setting. These categories are: 1) participatory language, 2) community roles and responsibilities, 3) challenges in participation, 4) collaborations and partnerships, 5) funding transparency and accountability, and 6) organizational change. An explanation of each subtheme and specific examples taken from the interviews with the organizational representatives and community members are presented below.

Participatory Language

Participatory language refers to the verbal descriptions used by organizations to characterize their connections to the local community. In the use of participatory language in the post-disaster setting, organizations were found to use similar language when describing their work, regardless of the level of participation self-reported by the organization. For example, a high participation organizational representative explained, “*The local Haitian community participating is necessary...we’re all about getting them involved...helping them.*” Similarly, a low participation organizational representative noted, “*what we’re trying to do is we’re trying to develop the people....the goal is to develop the Haitian, Haitians are the ones really running the*

program, Americans come but the Haitians really know what to do.” Organizations’ describing their work using the same participatory descriptions, regardless of their level of participation, suggests that there has been a diffusion of participatory concepts, as it is being used in the everyday language of the organizations working the post-disaster field.

In addition, to parallels in using participatory language to describe an organizations own work, similar language was used by organizations when discussing their relationships to the community in comparison to the efforts of other organizations. For example, a staff representative of one organization commented on how their work compared to that of other organizations and noted, *“we involve the community residents to a much higher level and communicate and help year round...I’ve only witnessed other orgs giving handouts, not empowering the local community.”* A staff representative from another organization had a similar comment when they noted, *“I think generally most of the time when they [other organizations] come in...it’s kind of a show and tell type of thing... where here.....you’re [the respondents organization] involved to empower the Haitians ”*Clearly, there is an impression among the case study organizations’ staff that their organization is engaging in significant participatory work, more so than other organizations, even though the quantitative measure of participation shows different levels between them.

Community Roles and Responsibilities

Despite the usage of similar participatory language among organizations, key differences were found concerning the roles and responsibilities of community members, depending on if an organization self-reported using high or low participation in their post-disaster recovery work. The differences in community roles and responsibilities can be further subdivided into five

categories: 1) the role of the Haitian community, 2) the type of community representation, 3) leadership roles, and 4) decision making 5) training.

Role of Haitian Community

The role of the Haitian community was found to vary based on the level of participation utilized by the organization. For high participation organizations, the Haitian community appeared to be provided more opportunities for involvement within the operation of the organization itself. As an organizational representative at a high participation organization commented, *“For lack of a better word, they’re [local Haitian community] our subject matter experts. They tell us who can and can’t work on our crews, they negotiate acquisition and prices for materials and they’re the ones determining who the houses go to.”* Alternatively, when low participation organizations discussed the role of the Haitian community, they less often mentioned Haitians having a role in the organization itself. For example, an organizational representative at a low participation organization described, *“The main role of the local Haitian community is in the “implementation of projects.... they [local Haitian community] constructed those houses.”*

Type of Community Representation

When working in the post-disaster setting, organizations appear to solicit feedback from the community in different ways. High participation organizations generally utilized groups of individuals to represent the interests of the community. As a staff representative for one high participation organization noted, it is *“never the individual, it’s always the community decision.”* Providing representation opportunities for the larger community can result in complex arrangements. For example, for one high participation organization, community representation to the organization occurs in the following way

“The animators^{9,10} are typically assigned geographically and they have anywhere from two to four or five lakou¹¹ groups...and so they are responsible for leading those groups each of those who have a chef d'equipe,¹².... So they work with the chef d'equipe's and the people, to bring input back to the organization”

Alternatively, low participation groups tended to employ one local Haitian, to represent the local community. In describing, their community representation methods, an organizational representative for a low participation organization commented, *“Pierre¹³ is kind of the boss in Haiti. So Pierre manages all of the Haitians that work for us in Haiti and so our connection to the Haitians is through him.”*

Leadership Roles

Organizations also vary in the leadership roles available to community members within the organization. In the case of high participation organizations, leadership opportunities were often formalized within the organization. For example, one organization explained that they utilize a European model of management, in which there is no individual CEO, but instead they apply group decision-making methodology. As a representative of that organization described, *“the office of the director which is what I'm in....Jean-Louis, Jameson and I are the office of director, which means that the three of us are the CEO, we act in the capacity of the CEO. And I am being replaced [upon retirement] by Emmanuel.”* The respondent then went on to explain

⁹ See Appendix O for a full list of definitions

¹⁰ Animators are the leaders of the project. They technically serve as “hosts” to the people doing work, advising them, getting them energized, and helping them accomplish the work in an ordered manner. The word *animatè* in French means to animate, in English to energize and in Kreyòl to host. Therefore, the use of the word animator for the project leaders functions as both a title and a description of what they do (Winings, 2016).

¹¹ A lakou is a small community consisting of 2-3 houses that are built close together. People in lakous are often related to each other and have shared access to land.

¹² The chef d'equipe is the team leader.

¹³ All names have been changed as per IRB protocol.

that the organization will soon, “no longer have a blanc [non-Haitian] representative.”

Alternatively, for the low participation organizations, leadership opportunities were at times mentioned by respondents, but never in a formalized role within the organization. As an organizational representative described, “*Pierre is on my [emphasis added] board, we don’t have any structure.*”

Decision Making

Decision-making typically occurs at different levels within the organization. For organizational level decisions, organizations with high levels of participation provided frequent opportunities for community member involvement. For example, for one high participation organization, a community member explained that when the organization was establishing its program in Haiti, he first recommended, “*that they have an animator for each habitation and for each lakou.*” Follow up interviews and field observations verified that this recommendation was ultimately incorporated into the organizational post-disaster recovery program. As an organizational representative at a high participation organization explained when describing how organizational level decisions are made,

“I started by saying you guys [community members] can’t force all the decisions to me. You know you guys have got to do it, and of course when you start down that path you have to trust that they will make the right decisions and sometimes they erred, but most of the time it’s been right. Most of the time it’s better decisions than I would have made by myself.”

In addition to organization level decisions, in high participation organizations, community members were also provided opportunities for involvement in project level decision-making. When asked how decisions were made as to who received houses, a representative of a

high participation organization explained, *“I never got involved they decided it all, that was one area where they did not seek my guidance, I just said be fair and make half of them non-xxxx [non-organization affiliated] people.”*

For low participation organizations, opportunities for involvement in organizational level decision making typically was not made available to the larger community members.

Participation was instead frequently incorporated into project level decision-making through the organizations individual representing the community. As a low participation organizational representative explained,

“when it came to priority I would say Daniel, who is next? Who’s in need? We [organizational representative and Daniel] agreed these are the most needy, these are the people who own their own land and these are people who had a house that was destroyed in the earthquake. It’s all we needed.”

Training

Training opportunities for community members are often provided in different ways by organizations in the post-disaster setting. In the case of low participation organizations, the training typically focused on project implementation. For example, an organizational representative with a low participation organization explained, *“[we] work with the locals of the community to train them how to build a house.”* In the case of high participation organizations, training for community members was found to often times extend beyond project implementation. For example, an organizational representative explained, *“It [training] more so happens in the area of leadership development....that’s what I’ve been doing for most of the last three or four years and now that is what Jean-Louis [Haitian] and Jameson [Haitian] are doing for others.”* The respondent went on to note, *“the next leadership development things I’m*

working on as we speak is to teach them how to write reports and do PowerPoint presentations so they can raise their own money.”

Community members associated with the high participation organizations further verified the organizations utilization of training as part of their organizational activities. Community members explained situations in which they started at lower levels of employment and through the use of the organizations training opportunities, were able to transition to higher roles within the organization. As one community member explained, *“Yes, a lot [of training]... he¹⁴ learned how to prepare payroll....and now he does the payroll.”* And when community members were asked about their role in passing on the training to others they noted, *“Yes, he has worked with inspectors, animators, and chef d’equipes. And have taught them how to do the techniques....the same things.”* Community members associated with low participation organizations expressed no such training or experiences.

Challenges in Participation

Although there are many positive impacts of participation, it is important to discuss the potential challenges that can result from participatory engagements in the post-disaster setting. For the purposes of this study, findings related to issues in participation are broken into five categories. These categories are: 1) decision making, 2) work expectations, 3) type and longevity of employment opportunities, 4) community conflicts, and 5) attitudes towards community feedback.

Decision Making

Organizations are providing opportunities more frequently for community members to be involved in various aspects of the decision-making process. Within this work, organizations

¹⁴ Quotes are provided here in the direct wording provided from translators. Due to the use of a translator for interviews with Haitian community members, direct quotes from non-English speaking community respondents utilize third person pronouns instead of first.

often note facing issues in process implementation when community members are tasked with decision-making roles within the organization. Decision-making issues appeared to be especially prevalent for project level decisions, such as who received houses. For example, one organization explained, *“so I sort of saw that there was some nepotism, where this guy’s nephew got one first and someone else’s nephew got one second.”* Another organization observed similar decisions and described their impact on the larger organization, when the representative noted,

“unfortunately the guy [community member in decision making role] just letgraft get in the way and made bad decisions...a whole lot of people were promised this was going to happen, that is going to happen. And I come to town and they say I thought you were coming to my house...I thought you were doing me...and I’m going, I’m sorry but I had no idea”

Organizations typically blamed community decision-making issues on cultural norms. For example, one organizational representative said, *“years of corruption have impacted the social fabric of society and while some want to do good, others are quick to take advantage of the situation.”* Similarly another organizational staff member explained, *“you know you sort of understand that.....that [issues in fairness] is the way the culture works and you don’t try to fight it.”*

Work Expectations

Organizations staff often discussed differences in work expectations between community members and themselves. One organization explained, *“initially you had some guys who wouldn’t work as hard...the guys that we have today we have them today because they are good workers.”* The respondent went on to note, *“we need a guy who will work hard, who will work from early morning until late and do his job.”* Similarly, another organizational representative

noted, *“Sometimes chef d’equipe’s can be troublemakers, sometimes they can be lazy, sometimes they can be superb.”*

Community members working with the organization expressed similar issues with the productivity level of others in the community. For example, when discussing distributing tasks to others, one community member said, *“I do it myself, because I don’t want to send some people and when they come to me it is less than I think it should be, you know, I give them more and they give me less.”*

Type and Longevity of Employment Opportunities

Many organizations employ local community members to work on their post-disaster recovery projects. However, there can be issues in terms of the type and longevity of the employment opportunities that are made available to community members by the organization. Types of jobs may focus more on physical labor and implementation of project activities in the field. For example, when describing the participatory activities of the organization, a representative from one organization explained, *“Projects that were manual labor...they [other post-disaster recovery organizations] engaged the Haitians...so organizations like ours we did the same thing.”* Another organization described, *“in this whole place we employ over four hundred Haitians and they [Haitians] do all of the woodwork or metal work...and ground keeping.... everything.... all of the masons...all of the construction crews those are Haitians. We employ probably another sixty to eight Haitians by the job who are the ones who actually build the houses.”* It is important to understand the types of jobs provided to communities, as scholars note that for participation to lead to sustainable outcomes, participants need to be involved beyond manual work and sweat equity (Davidson et al., 2007; Schouten & Moriarty, 2003).

In addition, to job type, the timing of employment was also found to be a potential issue with the job opportunities made available to community members by organizations. At times community members appear to only be offered jobs on a daily basis, “day/labor”. For example, when a representative explained the organization’s project initiation process, he noted *“I go to Pierre and I say we have twenty today or twenty-two or twenty-five depending on what we got.”* The impact of jobs being offered on only a daily basis results in sporadic opportunities and uncertain income for community members. As one community member observes, *“some of us [community members] have nothing to do till they [organization] come back.”*

A specific type of short-term employment frequently cited by organizations and community members is the use of cash for work (CFW) programs. As has been discussed in the literature, CFW programs have become an increasingly common utilized element of humanitarian assistance in disaster-affected, post-conflict, and food-insecure environments (Adams, Meehan, & Satriana, 2005; Doocy, Gabriel, Collins, Robinson, & Stevenson, 2006; Harvey, 2005). However, as one organizational representative described, *“There are concerns with cash for work programs.”* Another respondent further explained the problem with cash for work programs, *“the people who worked our organization.... really didn’t want to do cash for work. Because....they’d work for two weeks and then they wouldn’t work again for 10 months or more.... and so nobody really wanted to do that.”*

Community Conflicts

Organizational involvement in communities was found to at times create various types of conflicts amongst community members. Organizational staff and community members frequently discussed issues arising when there are not enough jobs available for all interested community members. For example, one organizational staff explained. *“so it’s a tough decision*

and he [community member in decision making role] get's torn because friends, family and this that and the.... what about me.” An example of the conflict that can arise in communities was described by a community member when he explained, *“if they [community members] know they [organization] are coming today, to do this building, fifty or sixty young people will be waiting....sometimes I have to say not everybody working today...And yea I make them mad.”*

Attitudes towards Community Feedback

Organizations and community members often express conflicting attitudes in terms of the solicitation of community feedback. In some cases, particularly when it comes to minor revisions and additions, organizations seem open to hearing and incorporating community feedback. For example, one organization claimed, *“I would like to hear what do you [community members] think....what do I know? I would like to add it or at least consider adding it?”* However, community members in decision-making roles within the organization expressed conflicting perspectives about the community giving feedback to the organization. Some community members described the organization being responsive to community feedback, as one community member explained, *“Sometimes they [community members] ask to repair [house]. Sometimes they ask me to add color in it [house] you know, and we [organization] do it.”* Alternatively, other community members expressed issues with receiving community feedback. For example, one community member described, *“Yea it's their [community member] house, but when they [the organization] build the house for you, I feel like if you come down and build a house for me, you know, I can't ask for many things because I have a house now.”*

Collaborations and partnerships

Organizations frequently discussed the importance of collaborations and partnerships with other organizations in their post-disaster recovery work. For example, one organization

explained, *“it [being successful] is about taking what cost money to build and being as responsible as we can..... and the primary element to that is eliminating overhead through partnerships.....Eliminating duplication of efforts via partnerships.”* Similarly, another respondent noted, *“partnerships allow me to do what we do best.”*

Organizations typically noted two key factors when selecting organizational partners: expertise and trust. In terms of expertise, as one organization explained, *“When we partner with somebody I look for somebody who had a calling or an expertise in something other than what I do.”* Furthermore, in regards to trust, an organizational representative noted, *“we trust them [organizational partner]. It was building the trust that took years, but as we move forward we think they have high integrity. That’s not always the case in Haiti, that’s not how things work out.”*

Additionally organizations offered suggestions for engaging in collaborations and partnerships in the post-disaster setting. Frequently cited recommendations included understanding the past experience of organizations and utilizing networking websites. As one respondent explained, *“if people could sort out and re-sort groups and support those groups, you could then go back and look at their track record and see what they did and some will be a little better than others.”* Similarly another organizational representative noted, *“They should all network, there should be a fantastic networking website. If I had the time and energy I would put the website together tomorrow.”*

Funding transparency and accountability

Issues related to the inefficient and inappropriate use of funding in Haiti has been frequently discussed in the academic literature and mainstream media (Kellett & Sparks, 2012; Louis, 2008; Manilla Arroyo, 2014; Ramachandran & Walz, 2013, 2015). Recent examples of

this include investigations into the American Red Cross's misappropriation of funds (Elliott & Sullivan, 2015). As one organizational representative described, *"there are lot and lots of well meaning people who have, pardon my expression, have screwed the pooch you know just meant well and went through tens of thousands of bucks and got nothing to show for it."*

The frequent occurrence of these issues related to the utilization of funding appears to have made a significant impact on the attitudes and perceptions of organizations, as organizations frequently discussed topics related to transparency and accountability of organizational funds. First, organizations discussed the importance of best utilizing donor funding. For example, a respondent commented, *"you have to have the trust that....you give me a dollar a dollar will get to Haiti. Not if you give me a dollar, .35 cents is going to get to Haiti."* Similarly, another organizational representative explained,

"the most important element that one would bring to efforts over there [Haiti] is the return on donations and how far can I stretch my donors dollars. And ROD¹⁵ as we call it being that a lot of folks forget that even though we don't call it charity we call it self sufficiency and it's not a capitalistic business that we are in, but it's still a business. And it's not all about hugging orphans, or building people new houses, it's about taking what cost money to build and being as responsible as we can"

In addition, organizations frequently discussed having to show accountability for how funding was being spent in Haiti. As one organizational representative described, *"So I think a lot of times it's kind of weird to say but, support, just like monetary support from people in America, helps this place go. So to be able to come and be a part of all the different ministries that they have going....I think that helps an American understand....hey what am I funding you*

¹⁵ Return On Donation (ROD) refers to what the organization is able to do with donated funds. The organization explained that the phrase was adapted from the return on investment (ROI) terminology frequently used in regards to business operations.

know what's my money going to?" When discussing the importance of accounting for how funding is being spent, another respondent noted, *"So you know I like to see that every year I can see that our work is progressing so that we know that money that we are investing is being used."* The respondent then went on to explain,

"You know I always walk around to see who is living in the houses and if I saw a bunch of, you know, well dressed 25 year old men sitting on everyone of those porches I would worry about it. But I saw, you know, young look like women in poverty with their three little kids who are, you know, dirty and have no shoes I feel like somebody worthy got that house.every single time I walked away satisfied with the people that are living in those houses appear to be the people, that we are trying to serve. You know you want to make sure no one is selling the houses, or charging rent for the houses, nothing funny like that going on. You know, you never know what's going on, based on what I saw in that village and probably based on what you saw in the village it's like the people that are there are the target population we were trying to help."

A focus on accountability was also seen in interactions between organizations and the community. Organizations frequently expressed feelings about the need to teach community members about funding, accountability, and investment. For example, an organizational representative explained, *"for a man that had a retirement home for disabled Haitians....I can pay for the rest of his house. But actually I am cutting it back to half the rent to teach him how to go out and raise more money."* Similarly, another organization commented,

"we try to be to help....but everybody has to contribute, like the kids that are in the scholarship program. Even though their sponsors may provide scholarships they don't provide food or uniforms for them. Or if they have to go somewhere like if they have to go

to Leogane for the nursing school, which we have a gal in nursing school. They have to provide their own transportation so it isn't carte blanche, they don't get everything. You got to have an investment. And it means more to them when they have invested.”

Organizational Change

Lastly, organizations frequently provided examples and discussed the importance of making organizational changes or adaptations to post-disaster recovery programs. Some changes discussed by organizations focused on revisions to the outputs produced by the organization. For example, an organization described, *“We are investigating the possibility of the use of true solar, like this time we dropped off solar lights to everyone in the houses in the villages, but in the future we'd like to bring true solar power to each house and to the community center.”* Another organizational representative described similar revisions to the housing when noting, *“To take it to the next level we would transition [from current housing construction materials] to SIP¹⁶ panels.”* Thus, organizations appeared to have a strong interest in making revisions to elements of the housing and infrastructure.

Other changes made by organizations often involved altering the ways the local community was involved in project implementation. As was discussed by one respondent, *“When I first started going with the organization four years ago, we were very hands on and had to show our crew what to do and how to do it. The most recent trip we were much more hands off. They knew what to do and when to do it.”* Similarly, another organization explained, *“In the beginning, the houses were built by Americans. After 19 [houses built] we no longer used any Americans, now it is all Haitian laborers who do everything.”* When explaining how the organization has changed over time, an organizational representative noted, *“The work is*

¹⁶ Structural insulated panels (SIP) are a high performance building system typically used in residential and commercial construction.

evolving for us as well as in the specific way we work with the people, so that we can get to the point where it is self-sustaining.”

In addition to discussing the types of changes, organizations also frequently discussed the importance of organizational change. As one respondent explained, *“I will say it nothing in life should ever be static it should always be an upward spiral approach by doing what you do but only doing it better next time around.”* Similarly, another organization described, *“we don’t for a moment think that we got everything figured out... my business is always about kaizen.... continuous learning.... that’s where we are in our lives, we learn everyday, we fall down, we pick ourselves up, we try not to fall down for the same reasons.”*

Participation and post-disaster recovery outcomes

The other area of inquiry for this study focuses on post-disaster recovery outcomes. Five categories emerged related to the assessment of post-disaster recovery. These categories are: 1) recovery terminology, 2), organization defined recovery outcomes, 3) community desired recovery outcomes, 4) literature defined recovery outcomes, and 5) future recovery prioritization. The following sections provide a discussion of each of these categories.

Recovery Terminology

In terms of classifying organizations, there was a clear avoidance of utilizing recovery terminology to identify organizations or the work they engage in. Overwhelmingly, organizations attempted to distance themselves from being identified as “recovery”. For example, when asked if they would classify their work in Haiti as recovery, an organizational representative answered, *“I would say we’re not a recovery group at all.”* Similarly, other respondents added comments, such as, *“We definitely did not”* and *“No no not really recovery work.”*

Instead of classifying their organization and work as “just recovery”, many organizations offered alternative explanations of their work. As one organization explained, *“I would say that we’re religious, humanitarian, and we do recovery when it’s necessary.”* Similarly, another respondent described, *“I think we’re just a....you know we're Americans who care about those less fortunate. We figured out a way to make a big difference, and Haiti is the place that we chose to do it.”*

Reasons for the disinterest in utilizing the recovery terminology were found to fall into three areas. These categories include: 1) prior disaster presence 2) conflation of relief and recovery, and 3) relationship with the community.

Prior disaster presence

Organizations often categorize their work as different from recovery related organizations or work because of working in the area prior to a disaster event. For example, when asked if they would classify their organizations work as recovery related, one organization explained, *“Yea I would say absolutely not. The same thing that we’ve doing now is what we were doing 2007, 2008, 2009, before the earthquake.”* Similarly, when explaining the difference in their work from that of recovery organizations, a respondent noted, *“The difference in the most simplistic form is we were doing it before the earthquake and not a whole lot has changed after the earthquake.”*

Conflation of relief and recovery

Despite clear distinctions made between hazard planning phases in the academic literature, there appears to be very little distinction between relief and recovery among many organizations working in the post-disaster setting. For instance, relief in the literature typically refers to actions that occur immediately after the earthquake, and its activities are considered distinctly different from longer-term recovery efforts. However, when posing questions about

recovery to organizations, they typically describe any work or activities that took place after the earthquake as not being recovery related. For example, when describing why the work of the organization was not considered recovery, one respondent explained, *“Not really recovery work, because we were here long before the earthquake and when you think of recovery you think of disasters and so forth.”* In addition, organizations regularly interchange the terms, recovery and relief when referencing their post-disaster activities. An example of this can be seen, when an organization was asked if they considered their activities in Haiti, recovery work, to which the respondent explained,

“We were there before the earthquake so I think a lot of folks that are working there now or were working came to Haiti as a result of the earthquake so that would be an emphatic yes if you were asking them. But since we were there for what was it 2010 that is when the earthquake hit....So we were there eight years before the earthquake and so I wouldn't classify what we do now as disaster relief.”

Lastly, when organizations do appear to be engaging in what would identify as recovery in the academic literature, organizations typically classify this not as recovery, but as doing what they did before. For example, one organization described, *“we certainly were in the disaster funnel because we choose to be in that mode, but it was emergency type of disaster relief and then we fell right back into what we do before the earthquake.”* There is no indication that the decisions made by organizations to describe their work as recovery has an impact on their efforts in the post-disaster setting. However, it is important to understand the ways in which hazards research and terminology is being used in practice, in order to best design post-disaster programs and policies.

Relationship with the community

Lastly, organizations often categorize their work as different from recovery related organizations or work because of their history and relationships with the community. As one respondent described, *“you see knowing the culture is something that relief organizations tend to not know. They don't know how far you can go with the people. They don't know what they'll grasp hold of and what they won't. And I'm not saying we're any expert on it, I'm just saying that we've learned that.they just don't know the culture.”* Similarly, another organizational representative explained,

“we have developed a relationship of mutual trust with the Haitian people. When somebody comes in from out of this culture when you're a stranger there is an element of distrust. And they automatically think that because you weren't born and raised here you don't know their culture...they have learned to trust us and that is so important. An NGO any organization coming into a foreign culture if you're going to be working directly with the local community. If you're going to work with the rank and file people they have to begin to trust you. And we have that level of trust because we have proven ourselves that we are here for the long haul. “

Organization defined recovery outcomes

Organizations appear to vary in terms of how they evaluate their post-disaster recovery work. Some organizations, take a macro approach towards the assessment of their post-disaster recovery work. Organizations such as these tend to cite larger goals for their recovery work, such as education and livelihood development. For example, when discussing their organizations post-disaster recovery outcomes, one organizational representative explained, *“It's my feeling and it's what I observed and what the research I hear that what [will] bring Haiti up is the education.”*

Similarly, another organization noted that, *“from a very early period we learned that...that the rural economy is so poor that there is no means of livelihood.”*

Alternatively, for other organizations post-disaster recovery is assessed in terms of a specific measureable project outcome, which is most often related to housing. For example, a respondent noted, *“The number of houses built....that is the only thing we can quantify.”*

Similarly, another organizational representative explained, *“I quantify the numbers of lives that we have touched with the most basic need being shelter.”* Although organizations appear to be more focused on the specific outcome of housing, they often discuss associations between this work and long-term livelihood development. An illustration of this can be seen from an organizational representative, who described, *“Our goal is that with stayed [permanent] shelters they [the community] can focus on food and getting their kids to school. And focus on the other things that are kind of the next steps in their hierarchy of needs.”*

In addition to differences in the ways recovery is measured, organizations also often vary in regards to the level of importance paid to the assessment of recovery metrics. For some organizations, outcome measurement is a critical element of the organizations reporting structure, as it is often necessary for post-disaster funding and program opportunities. As one organization described,

“The outcomes are important because the community uses that to award a special bonus, so for the people who are close to getting a special bonus it is extremely important that we get that measurement, you see. For the board to consider ways to begin to raise money it is important because that’s a new skill that they need to acquire so that the project can continue to thrive..... So it depends on where you are in the organization where you perceive the objectives past and future to be.”

Alternatively, for other organizations, outcome measurements are not seen as important. For example, a respondent explained that their organization does not frequently count the number of houses built, as the organization, *“doesn’t care about that sort of thing.”* Instead the respondent went on to explain that *they “keep track of people and try to quantify the number of lives that they have touched.”* One factor that appears to drive perspectives on outcome measurement is funding source. Analysis of website and financial data showed that organizations receive funding for program activities from different sources, including contributions from organizational staff, donations from individuals outside of the organization, and external grants. Organizations that received funding from sources outside of the organization appeared to place more importance on outcome measurement, in comparison to organizations that relied more on funding from internal organizational staff, which typically expressed less interest in reporting organizational outcomes.

Community desired recovery outcomes

Community members overwhelmingly discussed a desire for the focus of recovery efforts to be on jobs and economic development. For example, one community member explained,

“Our community I can tell you that we have nothing....90% of the people living here live without jobs. Like that means, they need job creation. This is the main thing that I think our people might need right now. Because you see all of the malnourishment is from because most of the parents are not working. I think that this is what our community must need from now.”

Similarly, another community member described, *“a lot of our people have been killed in the ocean trying to go to the United States. Because of the lack of opportunity, do you understand? So we understand that if we come and try to create a jobs that not many of that will [not]*

happen. Yeah so this is one of the reasons why I talk to you about the creating of jobs.....one of the main thing that we need.” In alignment with the community prioritization of job creation, all organizational case studies provide employment opportunities for the local community.

However, as discussed in other sections, the type, longevity, and frequency of the jobs provided to community members by the organizations vary among the case studies.

Literature defined recovery outcomes

In addition to assessing organizational and community definitions, it is also useful to evaluate recovery in term of established literature based outcomes. As previously discussed, the common utilized measurement of housing recovery is number of permanent housing units built by time (Ganapati, 2013). Data on number of housing units built by case study organizations was collected using several different methods. First, during the interviews, organizational representatives were asked how many permanent housing units were constructed by the organization between January 12, 2010 (date of earthquake) and May 30, 2016. Specific housing count values were provided by both high participation organizations. The low participation organizations provided approximate housing count values. The reasons typically given for approximate values were 1) it was difficult to keep an exact count on houses built, once there were a large number of houses constructed, and 2) the outcome metrics used by the organizations were based on number of individuals impacted, not number of houses constructed. For example, a representative noted that CS2 utilizes an individual level unit of analysis, therefore as they explained, *“We [CS2] keep track of people, so if you take 10,400 people divided by 8 people per house you get about 1,300 units.”*

To the extent possible, housing count values provided by the organization were validated through field observations and website data. For the high participation organizations, the housing

counts were confirmed. It was possible to do this because the housing count numbers were reasonably low and constructed in one area. Alternatively, for the low participation organizations, because there was a much larger number of houses, which were spread over a wider area, the housing count values could not be definitely confirmed. A visual inspection was done to validate that the housing count values provided by the organization seemed to be reasonably accurate. In addition, housing count values provided by the organization were also compared against organizational financial and website data. This data could not confirm the exact housing count values because it did not reflect the most up to date housing values. However, it was used to confirm that housing count values noted by the organization were within a reasonable range of what the organization had reported. For example, website data noted CS2 had constructed 1,000 houses by 2015 and tended to build 200 - 300 houses per year, which aligned with the 1,300 housing count value provided by the organization.

In addition to verifying housing count values, data was also collected on the quality of the housing units. During the interviews with organizational staff, questions were asked about the specifics of the housing design. Observation and interview data revealed that the case organizations typically use different materials in their housing design; therefore it was not possible to do a systematic assessment of the construction quality across case studies. However, all organizations reported that their housing units were designed to meet minimum housing standards, which requires being designed to withstand hurricane force winds (approximately 100 mph). The quality of the housing was further verified during the field observations with the researcher completing a visual inspection of the housing materials and construction techniques.

Utilizing this final housing count values, differences in recovery outcomes were compared among the organizational case studies. Data on estimated number of housing units

built by case study organizations and their corresponding level of participation (as measured by the capabilities approach) are shown in Figure 4.2. Based on the results, the low participation organizations appear to have built a larger number of houses than high participation organizations. This result suggests that higher levels of participation are not associated with increased recovery outcomes. Instead, it seems organizations using lower levels of participation are more successful in reaching recovery goals (at least as measure by the number of housing units built).

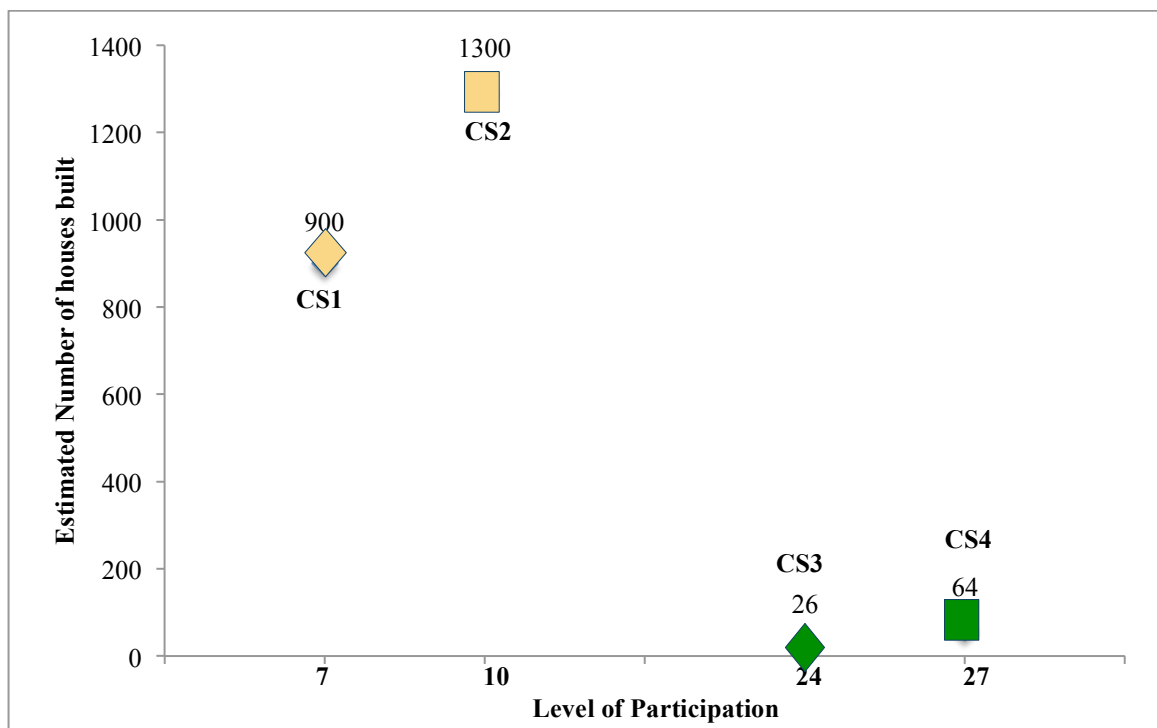


Figure 4.2 Estimated Number of Houses Built and Level of Participation¹⁷

Future recovery prioritization

In terms of perspectives for future work, organizations and community members often differ in term of what the organization should prioritize in their housing recovery program. Some organizations discuss the priority for future work being the inclusion of more features to the

¹⁷ Estimated number of houses built does not reflect differences among case studies in construction type, provision of infrastructure, or cost per unit.

housing provided to community members. For example, one organization explained, *“if we raised more money I think what we would do Santana, we might bump the size of the house a tad bit, but I would add the solar. That is what we are looking to do next; I would add the ability to power their houses.”* However, another respondent explained the dilemma that is often presented in making changes to a housing program,

“I mean I can build them [houses] bigger but it’s going to cost us more and that means less families get a house. Right? bigger houses less people get them, smaller houses more people get them but you can’t accommodate the average size of a Haitian family. Now we’ve been criticized for not putting more size, electricity, not putting water but if I were to get to that \$25,000 per house that’s 30 houses a year that’s all I can do versus 80 houses a year.... to me it doesn’t make sense.”

Similarly, community members frequently noted wanting, *“more people to have a house”* as their priority in the organization’s future work. As one respondent noted when describing community members requesting additions to houses, *“Sometimes they [community members] want it [more done to their houses] and I say well for the money we raised if we are to do it....we can put a little bit more....or build a house with that.”*

C. Summary

The data presented in this chapter, discussed the specific analytic findings of the quantitative and qualitative phases of this study. The first portion of the study used quantitative analysis to determine what organizational characteristics predicted the use of capabilities approach participation. Organizational factors examined included, organizational resources, size, age, collaboration, experience, recovery sector, origin, board of directors and environment. From the analysis it was determined that the number of recovery sectors an organization engages in has

a significant impact on the level of participation used by an organization. Furthermore, other factors such as level of collaboration with other organizations and type of organizational founding were also found to influence an organizations use of participation.

The results from the qualitative research presented in this chapter relate to two areas, participation and the post-disaster recovery process, and participation and post-disaster recovery outcomes. In terms of post-disaster recovery process, organizations were found to use similar participatory language when describing organization goals and in comparisons to the work of other organizations. Despite these parallels, major differences in community roles and responsibilities were observed between low and high participation organizations. High participation organizations were found to provide more opportunities for the participation of community members in terms of community representation, leadership positions, decision-making, and training. Lastly, it was determined that issues often arise in the implementation of participatory approaches in the post-disaster setting around areas such as decision-making, work expectations, employment opportunities, the creation of community conflicts, and attitudes towards community feedback.

Several factors were found to play an important role in the post-disaster recovery process. Organizations frequently discussed the importance of collaborations and partnerships with other organizations in their post-disaster recovery work. They typically noted expertise and trust as important factors in the selection of organizational partners. Organizations offered suggestions for engaging in collaborations and partnerships in the post-disaster setting, such as understanding the past experience of organizations and utilizing networking websites. Organizations also regularly discussed topics related to transparency and accountability of organizational funds.

Lastly, organizations frequently provided examples and discussed the importance of making organizational changes or adaptations to post-disaster recovery programs.

Lastly, in terms of the assessment of post-disaster recovery, organizations were found to have a strong disinterest in utilizing recovery terminology to classify their organization or the work they engage in. Findings suggest that disconnections in the use of the recovery vocabulary is often related to overlaps in the use of relief and recovery language, as well as whether the organization had a prior disaster presence and history in a community. For organizational recovery outcomes, organizations typically utilize either larger macro goals, such as education and livelihood development, or use specific project goals, most often related to housing. Alternatively, community members, frequently express a desire for the focus of recovery efforts to be on economic development. When using the literature defined outcomes for housing recovery of number of housing units built, low participation organizations tended to build a larger number of houses, than high participation organizations. Finally, in terms of perspectives for future work, organizations and community members were found to prioritize either more features to the housing or providing a larger number of houses for community members.

CHAPTER 5: DISCUSSION OF RESULTS

This chapter discusses the results of the dissertation and is organized into four sections. In the first section, the use of the capabilities approach as an assessment tool for participation is discussed. The second section describes the quantitative and qualitative results on capabilities approach participation. In the third section, results related to the relationship between capabilities approach participation and the post-disaster recovery process are detailed. In the last section, a discussion of the impact of capabilities approach participation on post-disaster recovery outcomes is provided. Specific analytical findings related to the relationships between participation, organizations, and post-disaster recovery were presented in chapter 4.

A. Capabilities Approach Participation: Measurement

A key objective of this study was to advance our knowledge of the use of participatory approaches by presenting the capabilities approach as an assessment tool for participation. Findings from this study suggest that the capabilities approach presents a useful framework for examining participatory approaches in the post-disaster setting. Analysis from the quantitative phase of this study found statistically significant correlations between capabilities approach participation (CAP) and participation measures based on more common interpretations of participation. In addition, comparison of regression models revealed that CAP provides an analysis tool with more significance and higher explanatory power than traditionally utilized participation indicators. Although additional studies should be undertaken to further validate the measure, this study provides initial evidence that CAP is a useful conceptualization for participation, and can be operationalized as a composite measure. Scholars have identified a need for participatory approaches to be complemented by a theory or framework that explores the nature of people's lives and the relations between the many dimensions of well-being (Clever,

2001). Therefore, the findings from this research contribute to the literature. Furthermore, studies note that the capability approach literature could contribute to the application of participatory methods by providing a comprehensive evaluative framework that aims to overcome the limited application of participatory methods as mere tools (Frediani, 2007a). Thus, the findings of this study provide preliminary validation of the use of the capabilities approach as an analytical framework for participation and, therefore, advances our understanding of how to best assess the use of participatory approaches.

The capabilities approach is particularly valuable analytically because the key components of the framework allow for the assessment of various facets of participation. The capabilities approach centers on the key concepts of functionings and capabilities, where functionings represent the various things that people value while capabilities refer to what people are effectively able to do to achieve their desired functionings (Sen, 1999). More recent operationalizations of the framework further specify that Sen uses the term ‘capabilities’ with two connotations: sometimes as options and choices; other times the term is used as capacities or abilities to achieve the things people value (Frediani, 2007b; Gasper, 2002). In applying this framework, significant differences in the participatory work of organizations working in Haiti are revealed, particularly related to the choices and capacity building opportunities provided to community participants by organizations. For example, findings from the case studies suggest organizations differ in terms of the choices provided to community members for leadership and decision making roles in the recovery process. Study findings also indicate significant differences in the types of training organizations provided to community members, such as whether training focused on project implementation (e.g., construction training) or higher-level operations in the organization (e.g. leadership development training). These specific differences

in participatory work can be difficult to uncover through the use of more generalized participation assessments. Thus, to reiterate, the usefulness of the capabilities approach is that the analytical components of the framework allow for the detailed assessment of specific dimensions of an organization's participatory work.

Although it appears that CAP provides a useful tool for assessing participation, it is important to recognize what is and is not captured through the use of this measure. First, CAP captures a specific perspective of participation, based on the recent operationalizations of the capabilities approach outlined in previous chapters (Frediani, 2007b; Gasper, 2002). A key element of the measure that makes it valuable is that it provides a method for assessing a concept, which is frequently understood in very broad and general terms. However, CAP is evaluating a particular type of participation, which is specifically being assessed based on the choices and capacity building opportunities provided to community members in the process and product phases of a project. For cases where there is an interest in evaluating different aspects or conceptualizations of participation, CAP may not provide the best assessment tool. In addition, although the CAP measure was created in an effort to capture the multiple dimensions of participation discussed in the literature, it is possible that CAP is not capturing all elements of participation. Because there is no strong theoretical guidance on the assessment of participation, it can be difficult to know definitively what components of participation and level of specificity should be included in a participatory measurement tool. For example, CAP indicators assess broad questions related to decision-making and product development engagement, but do not evaluate specific details of how community members are involved in each of these areas. Thus, although CAP presents a useful tool in the context of this study, it is important to acknowledge that it may have limited range as an evaluative framework for participation.

B. Capabilities Approach Participation: Quantitative and Qualitative Results

One goal of this study was to take a mixed-method approach to understanding the complexities of participation in the post-disaster setting. The quantitative phase of the research focused on predicting the level of participation in the post-disaster setting based on the characteristics of organizations involved in recovery. From this analysis, it was determined that factors such as the number of recovery sectors an organization engages in, the level of collaboration an organization uses, and the type of organizational founders can have a significant impact on an organizations use of participation. These results were further explored through in-depth case studies of organizations working in Haiti. When considering the results from the two phases combined, one can draw several conclusions about participation in disaster recovery in Haiti.

In regards to the number of recovery sectors, in the quantitative phase, it was determined that when organizations work in more recovery areas, they appear to use higher levels of participation. For example, when an organization works on projects in multiple sectors, such as housing, WASH, and education, they potentially use higher levels of participation than an organization working in only the housing sector. To further investigate this finding, the ideal approach would be to examine the impact of number of recovery sectors in the qualitative phase of the study. However, in choosing the case studies for the second phase, there were no available organizations working in a single recovery sector that also met the required selection criteria: 1) engaged in ongoing recovery work in Haiti, 2) working in the recovery area of permanent housing rebuilding, and 3) having high/low participation levels. Thus, it was not possible to assess differences between organizations working in single and multiple recovery sectors in the qualitative phase of the study.

Another variable that was found to be significant in both the quantitative and qualitative phases of the study was level of collaboration. Findings from the survey suggest that organizations working more collaboratively utilize higher levels of participation in their post-disaster recovery work than organizations using lower levels of collaboration. In the case study analysis, organizations frequently discussed the importance of collaborations and partnerships with other organizations in their post-disaster recovery work. However, case study data did not highlight differences between high and low participation organizations, therefore additional research should be undertaken to further assess the relationships between participation and organizational collaborations.

A last variable found to have important connections to the quantitative and qualitative phases of the study was the presence of diaspora founders in the organization. Findings from the survey suggest that organizations founded by Haitians outside of Haiti, use more participation in comparison to organizations with no diaspora founders. At the same time, data assessing participation and post-disaster recovery outcomes showed that higher participation organizations are potentially less successful in reaching recovery goals (as measured in this study). When connecting the quantitative and qualitative findings, one might conclude that organizations with diaspora founders actually have poorer recovery outcomes (i.e., produce a smaller numbers of houses), but caution should be exercised in drawing too simple a conclusion from the findings. For example, a more nuanced interpretation might suggest that Haitians who move outside of Haiti have a different understanding of participation and its function in developing communities. Building a stronger base of leadership skills for the future, rather than merely employing Haitians as physical labor today may be the goal of organizations with diaspora founders. In other words, these organizations may emphasize deeper levels of engagement and capacity

building instead of focusing solely on a target number of structures, a very narrow recovery outcome. This proposition was not directly tested in the dissertation due to data limitations, but can be explored in future research.

C. Capabilities Approach Participation: Post-disaster Recovery Process

One of the two major themes identified in the qualitative analysis concerned the relationships between participation and the post-disaster recovery process. Researchers recognize a growing awareness among organizations of the importance of utilizing participatory approaches for post-disaster recovery programs (Davidson et al., 2007; Maskrey, 1989; Pearce, 2003). Findings from this study confirm the interest in the use of participation in the post-disaster setting, as the majority of organizations in the survey self-reported utilizing some level of participation in their post-disaster recovery work in Haiti. Data from the case study analysis showed that participatory language was frequently used by organizations in their everyday language and rhetoric in the field, further substantiating the widespread recognition of participation. Thus, findings from this study confirm an understanding by recovery organizations of the positive impacts of participation, as frequently discussed in the literature, and reveal these organizations embrace the concept within the post-disaster setting.

Despite the use of similar participatory language, findings from this study suggest that there are often significant differences in how community participants are actually involved in the post-disaster recovery process. This was first observed in findings from the survey that a higher number of Haitian staff was associated with lower levels of participation. This result provided initial evidence that potential differences exist in how Haitian employees participate with organizations. This finding aligns with the work of past scholars who have found that organizations involve local participants in post-disaster projects in a wide variety of ways, often

times as merely a manual labor force (Davidson et al., 2007; Nieuwma & Riley, 2010). However, this past work generally has lacked a nuanced understanding of the manifestation of these differences in implementation of post-disaster recovery. This study identifies some of the specific ways in which participation, in action, occurs in the work of organizations in the post-disaster setting. For example, results from the qualitative data revealed major differences in the role of the Haitian community, the way the community is represented in the larger organization, in the opportunities that are provided to community members for leadership and decision-making roles, and the types of training opportunities that are provided to community members.

In addition to differences in the specific ways community members are involved, findings from this study suggest that the potential challenges that arise in the post-disaster recovery setting are important to understanding participation. It was observed that challenges such as issues in the decision making process, work expectations, type and longevity of employment opportunities provided to community members, and the creation of community conflicts, are often experienced by organizations in their participatory engagements. These results are consistent with research in the participation and development literatures in general and allow for discussions of implementation of participatory projects to be expanded to work in the post-disaster setting.

D. Capabilities Approach Participation: Post-disaster Recovery Outcomes

The other key area of interest for this study was the assessment of the impact of CAP on post-disaster recovery outcomes. In this study, recovery was assessed through the quantitative metric of number of permanent housing units built. Findings from this study suggest differences in the achievement of this recovery outcome based on the level of CAP utilized by organizations in their post-disaster recovery work. Specifically, on average, organizations using higher levels

of CAP appeared to have poorer recovery outcomes in comparison to organizations using lower levels of CAP (at least as outcomes were measured in this study). In other words, for organizations in this study, more participation did not appear to lead to increased recovery. When interpreting this finding, it initially appears to be in contradiction with discussions of the positive impacts of increased community engagement (Anderson & Woodrow, 1989; Bates, 1982; Bates & Peacock, 2008; Berke & Beatley, 1997; Oliver-Smith, 1990; Wisner et al., 2003). However, this finding is in alignment with discussions in the development and hazard literatures, which examine issues in the implementation of participatory projects (Davidson et al., 2007; Schouten & Moriarty, 2003). International development scholars note that despite the increased emphasis placed on the role of participation in development projects, there is little empirical evidence to support the claim that participation has a positive relationship with project outcomes or guarantees project success (Cleaver, 2001; Lizarralde & Massyn, 2008). Additionally, results from past post-disaster recovery projects, such as following Hurricane Katrina, reveal instances of community participation negatively impacting the post-disaster recovery process (D. P. Aldrich, 2012; Henry, 2011). In other words, when organizations utilize more participation, findings from this and past studies suggest, there is a possibility that it will negatively impact an organization's ability to accomplish post-disaster recovery outcomes.

As was previously discussed, the interpretation of the capabilities approach used in this study focuses on specific participatory elements such as providing options and choices, as well as capacities and abilities. Findings from this study suggest that when organizations provide community participants more opportunities for choices and capacity building, it results in reduced recovery outcomes. In interpreting this finding, it is important to consider the additional demands required for engaging in higher levels of CAP. Although there are many benefits to

using higher levels of participation, engaging in this work frequently requires significant investments in time and effort. For example, hazard scholars observe that the use of participation can create increased demands on a post-disaster recovery project (Barakat, 2003; Lawther, 2009). Increased demands brought about by participation, therefore, may end up impacting an organization's ability to accomplish its post-disaster recovery goals.

Relationships between participation and outputs have been frequently discussed in the participatory literature. In this work, there is often a strong case presented for sacrificing potential reduction in outputs for the long-term positive impacts that come from participatory investments in a community. However, it is important to re-assess questions related to participation and output as it relates to the post-disaster context. A hazard event often creates a complex environment (communities require basic needs to be met such as demands for food, water, and shelter for their long-term survival). These basic needs are often discussed in the immediate relief phase, however, findings from this study demonstrate that the demand for these needs often extends into the recovery phase. This finding connects to past studies that discuss the difficulty of delineating between the different disaster phases (Dynes, 1991; Quarantelli, 1999). In other words, the results of this study suggest one possible reason post-disaster phases are often blurred: it may be necessary to focus on the basic needs traditionally understood as the focus of relief work for much longer than the initial response period.

The demand for meeting basic needs in the post-disaster context may take away from the focus and ability of addressing longer-term participatory goals. To better understand the relationships between different types of needs, it can be useful to apply work from other fields, such as the classic Hierarchy of Needs (Maslow, 1943). In this long-standing conceptualization of human needs, a five-tier hierarchical pyramid is used to describe the ways in which people are

motivated to achieve certain needs. In this model, Maslow (1943) describes the different types of human needs with the most basic need being physical survival (e.g., food, water, and shelter) and higher level needs being related to self-actualization (e.g., achieving one's full potential).

Applying this model to the discussion of the work of organizations in the post-disaster setting provides a way of understanding how the needs of a community relate to participation and recovery (Figure 5.1). When organizations use lower levels of participation, they often are focusing on meeting the basic needs of a community, such as housing, which often results in higher recovery outcomes. In these cases, the focus on the physiological needs of a community frequently happens without the deeper levels of participation that are necessary to achieve higher-level goals of self-actualization. Alternatively, when organizations prioritize higher levels of participation and engagement, they are able to better help community members achieve their full potential, even though it often results in reduced recovery outcomes (as measured by number of housing units built).

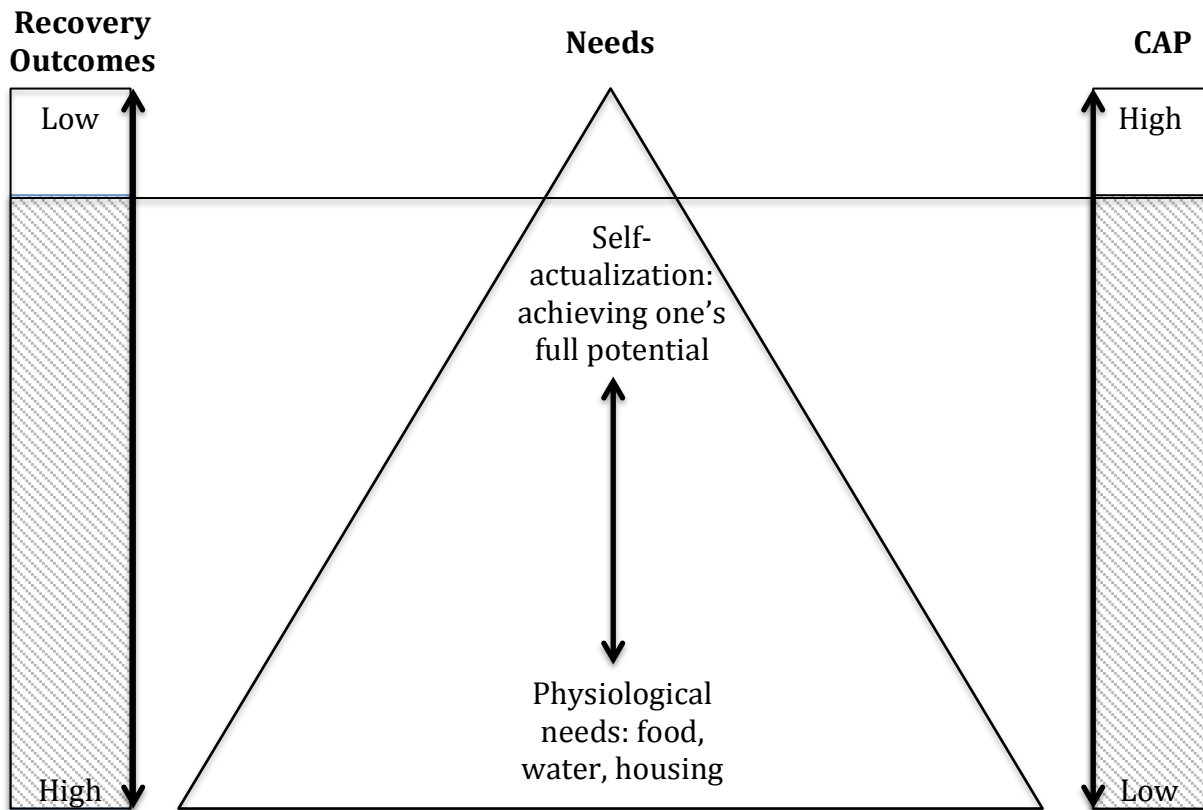


Figure 5.1 Recovery, Needs and Participation

Organizational emphasis on either physiological or self-actualized needs of a community appears to play an important role in their ability to accomplish recovery goals. It is also important to think about how these differences vary for different recovery timeframes. For organizations focused on lower level needs, such as housing, once basic needs are met, opportunities may present themselves later in the recovery process for using more participation, which will allow them to fulfill higher level needs. As was noted by an organizational representative, *“Our goal is that by giving the shelter then they can focus on food and getting their kids to school. And focus on other things that are kind of the next steps in their hierarchy of needs.”* These organizations focusing on lower needs may shift their work to higher participation levels once immediate physiological needs are met. Alternatively, for organizations using higher levels of participation, although in the immediacy they may appear to be accomplishing less in terms of recovery, their investment in the self-actualization of community members may end up

making more of an impact on the long-term recovery process and the development of the community.

E. Study Limitations

The research has several limitations which should be considered in the interpretation of the results. This study explores the relationships between participation, organizations, and recovery in the post-disaster setting. The centrality of participation to this study draws attention to this concept's meaning. It is important to underscore participation was assessed using the capabilities approach as an evaluative framework. This conceptual framework assumes a particular approach to development activities and the role of participation in these activities. The participation measure used in the research was developed to capture participation from this perspective. Bivariate correlation and regression results demonstrated that capabilities approach participation serves as a reasonable measurement indicator for participation, in terms of relationship to existing measures. However, the measure should be considered exploratory and subject to further refinement and validation.

The quantitative analysis showed that number of recovery sectors, collaboration level, and the presence of diaspora founders impacts the level of participation used by organizations in their post-disaster recovery work. While the selection of the organizational predictor variables was grounded in the organizations literature, these findings do not describe specific causal relationships between organizational factors and level of participation. The organizational literature only provides direction to the factors that are associated with organizational approach.

Characteristics of the case studies are important to keep in mind when interpreting the study results. The organizations used as case studies are all small organizations working independently from larger national and multi-national organizations. These smaller organizations

often operate in different ways compared to larger organizations and small organizations tend to be less integrated into wider national and international governmental structures. Thus, it is important to acknowledge that differences in organizational size can significantly impact the ways in which organizations approach participation and their post-disaster recovery work.

An additional potential limitation of this study concerns the assessment of post-disaster recovery. As was previously discussed, in the quantitative phase of the study, the number of recovery sectors was determined to be a significant factor impacting an organization's use of a participatory approach. Although all organizational case studies noted working in multiple recovery areas, these sectors were not uniform across the organizations. For example, one case study may have been working in housing, WASH, and education, while a second case study reported involvement in housing, food- nutrition, and public health. In addition, it was infeasible to collect (and compare) recovery data on all recovery sectors, so one recovery sector was selected to maintain consistency across all four case studies. There is a possibility that one might find different relationships between participation and recovery, when looking at recovery sectors other than housing.

Other conditions not captured in this study could potentially influence results. For example, the source of an organization's funding may have an impact on its use of a participatory approach. Organizations often have various types of funding such as grants and contracts, private donations, loans, and business income. In addition, there are many different entities that may fund an organizations post-disaster recovery work including, bilateral and multilateral development agencies, intergovernmental organizations, government agencies, foundations, corporations, banks and other financial institutions, and individuals. An attempt was made to collect data on the type and source of funding, but these data were not reported by all

organizations. Ultimately, the scarcity of funding data was a barrier to any analysis along these lines. Additionally, differences in organizational structure, such as project management layout and internal organizational network arrangements, were not gathered as part of this study, but could play a role in understanding the use of participation by organizations. Lastly, variation in participation based on factors such as the gender of community residents could not be assessed because there was minimal involvement by women in the projects studied in this research.

A common criticism of case study methods is the inability to generalize the data and results beyond the cases in the study (Lincoln & Guba, 1985; Yin, 2009b). In other words, the limits of case studies often restrict the ability of researchers to generalize from the case and draw inferences about regimes in other locations (Kilburn, 2004). In this case study of Haiti, there are some conditions that are specific to this location, such as the country's history of corruption and foreign involvement. However, there are other characteristics of Haiti, including its high levels of poverty, vulnerability to natural disasters, and developmental patterns that can be found in many countries throughout the world. Therefore, the lessons learned and perspectives drawn from this study may have relevance for other cases. It is important to note that case studies may be generalized to theory (Yin, 2009b). This research provides support for the study of participation within the conceptual/theoretical framework of the capabilities approach.

Lastly, there are several potential limitations related to the contextual nature of the data collection. Data collection took place from January 2016 to May 2016, with the iterative analysis occurring from May 2016 to October 2016. Due to the frequently changing environment in Haiti, it is important to point out that the findings presented in this dissertation are reflective of the context in Haiti during the specific time period of the study.

In this chapter, results related to several key aspects of capabilities approach participation were discussed, including its relationship to measurement, quantitative and qualitative findings, the post-disaster recovery process, and post-disaster recovery outcomes. In addition, details were provided on the potential limitations of the study. In the next chapter, a summary of the research is presented. In addition, the relevant theoretical and policy contributions are detailed and potential lines of inquiry for future research are presented.

CHAPTER 6: CONCLUSION

This dissertation investigated the participatory work of organizations in a post-disaster setting. With increasing frequency, community participation has become a focal point of organizational post-disaster recovery work. However, there continues to be variation in the specific ways communities are involved in the recovery process. Although communities have become more involved in various stages of work, questions remain as to how different types of participation affect post-disaster recovery and development outcomes. For this reason, researchers frequently suggest utilizing alternative frameworks to supplement our assessment of participatory approaches. Therefore, this dissertation presents the capabilities approach as a framework for understanding work undertaken by organizations in the post-disaster setting.

The primary purpose of the dissertation was to analyze the use of capabilities approach participation by organizations working on post-disaster recovery projects. Addressing this question involved a two-phased study, linking participation to organizational characteristics and post-disaster recovery. Thus, the research used mixed methods to: 1) examine the influence of organizational characteristics on an organizations use of participation, and 2) analyze the impact of participation on the post-disaster recovery process and outcomes.

Literature from multiple disciplines was reviewed for the development of the conceptual model and subsequent analyses. The economic and international development literature was used to establish the capabilities approach as a framework for the assessment of participatory approaches. The organizations literature was relied upon for the determination of potential predictors of capabilities approach participation. Lastly, the recovery literature was used for the establishment of outcome assessments of organizational post-disaster efforts.

A. Summary of Findings

This study examined the relationships between organizations, participation, and post-disaster recovery. The first portion of the study used a quantitative analysis to assess how organizational factors affect organizations use of participation in the post disaster setting. Organizational factors in the analysis included organizational resources, size, age, collaboration, experience, recovery sector, origin, board of directors and environment. Findings suggest that the number of recovery sectors an organization engages in has a significant impact on the level of participation used by an organization. In addition, factors such as level of collaboration with other organizations and type of organizational founding, specifically if the organization had diaspora founding (founded by Haitians outside of Haiti), were also found to influence organizations use of participation.

The second phase of the research aimed to understand the ways in which participatory approaches used by organizations impact post-disaster recovery. This question was assessed through the use of a comparative case study methodology. The case studies involved in-depth interviews with organizational staff and community members, field observations of organizational work in Haiti, and a review of organizational documents. Data from these sources were triangulated in an effort to enhance the validity and reliability of the study results. Results from the case studies indicate that organizations use of participation impacts the post-disaster recovery process and outcomes.

Findings from this study concerning the post-disaster recovery process showed consensus in organizational interest and utilization of participation, but differences in the implementation of participatory approaches as it relates to the involvement of community participants in the process. Specifically, through the use of the capabilities approach, this study highlighted key

differences related to the choices and capacity building opportunities provided to community participants by organizations. Findings related to outcomes, demonstrate that recovery results are significantly impacted by differences in the participatory approach utilized in an organization's post-disaster recovery work. It was determined that organizations using higher levels of participation (as assessed through the capabilities approach) appeared to have poorer recovery outcomes in comparison to organizations using lower levels of participation. Thus, suggesting more participation does not necessarily lead to increased recovery outcomes. This finding was further interpreted in light of the types of participation undertaken by the organizations. Participation that involved low skill construction work or day labor appeared to produce more housing compared to participation aimed at building long term capacity in the community which resulted in lower production of housing.

B. Theoretical and Policy Contributions

This study makes several contributions to the academic literature. First, this study significantly expands our understanding of the use of participatory approaches by determining the key organizational characteristics which impact the level of participation. Past studies of organizations have noted that variations in key characteristics can result in differences in programmatic approaches. However, very little is known about these relationships with respect to the work of organizations in the post-disaster setting. Therefore, a major contribution of this study is its expansion of our understanding of the relationships between organizational factors and participation in post-disaster recovery work.

Second, this study advances our knowledge of the use of participatory approaches by presenting an alternative evaluative framework in the capabilities approach. It has been noted that the capability approach can potentially be utilized as a framework within which to evaluate

and design policies and social institutions, for example governmental and nongovernmental policies in poor countries (Wolff & De-Shalit, 2007). Therefore, an additional contribution of this study centers on the utility of the capabilities approach as an evaluative framework, especially in a post-disaster recovery setting.

Lastly, although it is well understood that engagement with the local community is key to successful recovery strategies (Anderson & Woodrow, 1989; Bates, 1982; Bates & Peacock, 2008; Berke & Beatley, 1997; Oliver-Smith, 1990; Wisner et al., 2003), the ways these different types of engagements impact outcomes has been unclear. Thus, this study makes progress in filling gaps in our understanding of the post-disaster recovery process, specifically in terms of our knowledge of the approach and impact of different program initiatives. Therefore, a final contribution of this study is that it expands our understanding of the recovery process, which in turn aims to improve the work governments, non-governmental organizations, and funding agencies undertake in the post-disaster setting.

C. Future Research

Future research should expand on questions left unanswered or insufficiently answered in this study due to data limitations. For example, future research should address the impact of large sized organizations and organizations working under the umbrella of larger agencies and institutions. In addition, it would be beneficial to assess how type and source of funding impacts organizational approach towards participation and recovery. It would be similarly useful to collect data on organizational structure, such as project management layout and internal organizational network arrangements. Lastly, it would be greatly beneficial for data to be collected on multiple recovery areas, in order to get a full picture of the relationships between different recovery sectors and participation.

Inquiries with different methodological approaches should be undertaken in the future. First, this topic would greatly benefit from a longitudinal assessment, in order to better understand the ways organizations use of participation varies over time. Additionally, conducting comparative studies, such as for different types or phases of disasters, would also significantly build upon the work of this study. For example, on October 4, 2016, Hurricane Matthew, a devastating category-4 hurricane¹⁸, struck the southwestern region of Haiti. As disaster relief and recovery efforts are once again being initiated in the country in response to this destructive event, undertaking a comparative study across time and event type would expand our understanding of participation in the post disaster environment.

Finally, the capabilities approach framework in other ways to hazard related studies. For example, scholars suggest using a capabilities-based approach towards recovery assessment, where recovery is measured based on the impact the disaster has on the capabilities of an individual. Researchers argue that the benefit of utilizing the capabilities approach for recovery measurement is that it would capture the overall impacts of a disaster, including both potential benefits and losses, whereas most approaches only measure monetary and utilitarian amounts and losses (Gardoni & Murphy, 2009).

¹⁸ The Saffir-Simpson scale categories the intensity and damage potential of a hurricane, ranging on a scale from 1 to 5 (Simiu, Vickery, & Kareem, 2007; Webster, Holland, Curry, & Chang, 2005).

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APPENDIX A. Nussbaum's Central Capabilities

(Nussbaum, 2013, pp. 33–34)

Life	Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.
Bodily health	Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
Bodily integrity	Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
Sense, imagination and thought	Being able to use the senses, to imagine, think, and reason – and to do these things in a “truly human” way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training. Being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice, religious, literary, musical, and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise. Being able to have pleasurable experiences and to avoid non-beneficial pain.
Emotions	Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; I general to love, to grieve, to experience longing, gratitude, and justified anger. Not having one's emotional development blighted by fear and anxiety.
Practical reason	Being able to form a conception of the good and to engage in critical reflection about the planning of one's life.
Affiliation	(A) Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another. (B) Having the social bases of self respect and nonhumiliation; being able to be treated as a dignified being whose worth is equal to that of others.
Other species	Being able to live with concern for and in relation to animals, plants, and the world of nature.
Play	Being able to laugh, to play, to enjoy recreational activities.
Control over one's environment	(A) <i>Political</i> . Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association. (B) <i>Material</i> . Being able to hold property (both land and movable goods), and having property rights on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers.

APPENDIX B. Survey Instrument



Haiti Recovery Research: Organization's efforts towards post-disaster recovery

Study Information Sheet

You are being asked to participate in a survey that gathers information about your knowledge of your organizations work in Haiti. This research involves an online survey and should take about 30-45 minutes to complete. You are eligible to participate in this study if you are at least 18 years of age or older and you have affiliation with an organization who has been involved in work or a project in Haiti in the past 10 years.

Participation in this study is voluntary. You may refuse to participate or discontinue your involvement at any time without penalty. There is no foreseeable discomfort or risk associated with your participation in this study. You will not receive compensation for participating. There are no direct benefits to you from participating. However, the overall study may provide insights to help improve how post-disaster recovery work is conducted in developing countries.

Your survey responses will be anonymous – a pseudonym will be used for your name in reporting the data. Data will be recorded in an electronic database. Your contact information will be stored in a separate location from the survey responses and it will be destroyed after five years.

If you have any comments, concerns, or questions regarding the conduct of this research, you may contact: Santina L. Contreras, Principal Investigator, Department of Planning, Policy & Design, University of California, Irvine. Email: HaitiRecoveryResearch@uci.edu. Telephone: +1 (949) 431-6770. If you have general questions, concerns, or complaints about the research, or questions about your rights as a research subject, please contact UCI's Office of Research by phone, +1 (949) 824-6662, by email at IRB@rgs.uci.edu or at 5171 California Avenue, Suite 150, Irvine, CA 92697-7600.

*** By proceeding to the next page, you are affirming that you are 18 years of age or older and agree to take part in this research study**

- I have reviewed this information and want to participate
- I do not want to participate at this time

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

Please answer the following questions in relation to your work with the organization listed in the survey invitation.

2. What is the name of your organization?

3. How would you classify your organization?

- Nongovernmental organization
- Government organization (agency/department/office)
- Intergovernmental organization (agency/department/office)
- Bilateral/multilateral development agency
- Private sector/contractor
- Foundation
- Other (please specify)

4. Please specify the type of nongovernmental organization:

- Haitian** nongovernmental organization
- International** nongovernmental organization

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

5. What year was your organization founded?

6. Please specify your organization's country of origin:

7. How many countries does your organization work in?

8. How would you classify your organization?

- Religious organization
- Non-religious/secular organization

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

9. How many persons (including yourself) are employed (paid) by your organization?

Number of employees (Total):

Number of employees (Haitian):

10. How many volunteers are used by your organization in an average month?

Number of volunteers (Total):

11. Does your organization involve community participants* in its work (in any country)?

***Community participants** refers to any individual who lives in the community your organization is serving and is likely to receive direct/indirect benefits from your organization's work/project.

No participation			Moderate level of participation			High level of participation	
1	2	3	4	5	6	7	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Has your organization been involved in work/project(s) in Haiti?

- Yes
- No

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

The next questions refer to the details of your organizations work in Haiti.

13. What specific sector(s) has your organization's work in Haiti involved? (Please select all that apply)

- Physical rebuilding
- Camp coordination/camp management
- Children/youth
- Economic development
- Education
- Environment
- Food/nutrition
- Governance/institutions
- Health
- Agriculture
- Water, sanitation, hygiene (WASH)
- Other (please specify)

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

**14. What specific type(s) of physical rebuilding has your organization's work in Haiti involved?
(Please select all that apply)**

- Temporary housing
- Permanent housing
- Schools
- Other (please specify)

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

15. Does your organization's work in Haiti involve collecting support donations only?

- Yes
 No

16. Does your organization's work in Haiti include the following activities? (Please select all that apply)

- Training
 Community meetings
 Hiring of local Haitians
 Microfinancing
 Incentives for participation
 Local enterprise development

17. Were any items* created as a result of your organization's work/project in Haiti?

***Items refers to things created as a result of your organization's work/project in Haiti (Examples of items can include house, school, water/sanitation products, etc.)**

- Yes
 No

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

18. Does your organization involve community participants* in its work in Haiti?

*Community participants refers to any individual who lives in the community your organization is serving and is likely to receive direct/indirect benefits from your organization's work/project.

No participation			Moderate level of participation			High level of participation	
1	2	3	4	5	6	7	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. How was your organization founded? (Please select all that apply)

- Founded by native Haitians in Haiti
- Founded by native Haitians outside of Haiti
- Founded by individuals outside of Haiti/non-Haitian descent

20. What year did your organization begin working in Haiti?

21. Is your organization currently working in Haiti?

- Yes
- No

22. What year did your organization end working in Haiti?

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

23. How would you rate the level of participation with community participants in the following phases of your organization's work in Haiti?

	No participation 1	2	3	Moderate level of participation 4	5	6	High level of participation 7	N/A
Discussion of problems in community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assessing potential solutions to problems for project development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selection of project site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project scale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Timeline decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funding decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decisions on how community will contribute to project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation of project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervision of work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project modifications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project evaluations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

24. What principal geographic area(s) within Haiti does your organization serve? (Please select all that apply)

- | | |
|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Ouest | <input type="checkbox"/> Sud |
| <input type="checkbox"/> Centre | <input type="checkbox"/> Sud-Est |
| <input type="checkbox"/> Nord | <input type="checkbox"/> Grand'Anse |
| <input type="checkbox"/> Nord-Est | <input type="checkbox"/> Artibonite |
| <input type="checkbox"/> Nord-Ouest | <input type="checkbox"/> Nippes |

25. How many communes (cities/villages) in Haiti does your organization serve?

26. Please specify all communes (cities/villages) in Haiti served:

27. How would you classify the locations in Haiti where your organization works? (Please select all that apply)

- Rural areas
- Urban areas

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

28. Please rate how community participants are involved in specific project tasks:

	No involvement with participants 1	Participants receive information from organization 2	Participants give feedback to organization 3	Participants are involved in decision making with organization 4	Participants initiate task and bring to organization 5	N/A
Discussion of problems in community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assessing potential solutions to problems for project development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selection of project site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project scale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Timeline decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funding decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decisions on how community will contribute to project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation of project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervision of work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project modifications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project evaluations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

29. Has your organization been involved in post-disaster recovery work/project(s) in Haiti after the January 12, 2010 earthquake?

- Yes
 No
 Other (please specify)

30. Has your organization been involved in post-disaster recovery work/project(s) outside of Haiti in the past?

- Yes
 No
 Other (please specify)

31. In the past 10 years, how many post-disaster recovery work/project(s) outside of Haiti has your organization been involved in?

32. What was the average length (in months) of past post-disaster recovery work/project(s) your organization was involved in outside of Haiti?

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

33. Using a scale from 1 (strongly disagree) to 7 (strongly agree), please respond to the following statements:

	Strongly Disagree							Strongly Agree	
	1	2	3	4	5	6	7	N/A	
Community participants are given a choice in how they can participate in the organization/project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community participants are provided support (such as materials/training) to facilitate their involvement in the decision making process of the organization/project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community participants are given a choice in the details of the <u>items</u> * created as a result of the organization/project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community participants are provided support (such as materials/training) to facilitate their involvement in creating the <u>items</u> * of the organization/project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Items refers to things created as a result of your organization's work/project in Haiti (Examples of items can include house, school, water/sanitation products, etc.)

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

34. How often does your organization collaborate with other organizations in its work in Haiti?

No collaboration			Moderate level of collaboration			High level of collaboration	
1	2	3	4	5	6	7	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. Is your organization registered with the Haitian Government (MPCE - Ministry of Plan and External Cooperation)?

- Yes
- No

36. Since what year has your organization been registered with the Haitian Government (MPCE - Ministry of Plan and External Cooperation)?

37. What was your estimated annual budget (in U.S. dollars) for work in Haiti in 2015?

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

38. Does your organization have a board of directors?

Yes

No

39. Please specify the number of members on the current board of directors:

Haitian:

Non-Haitian:

40. Please classify your organization's relationship to the following funding sources:

	No funding received						High level of funding received
	1	2	3	4	5	6	7
Bilateral/Multilateral Development Agencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intergovernmental Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grants/Contracts - Government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grants/Contracts - Nongovernment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private Donations - Foundations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private Donations - Corporations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private Donations - Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loans – Banks/Financial Institutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Income – Sales of Products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

41. Is community participation a requirement of your funders/grants/overseeing organization/other body?

- Yes
 No

42. Please specify what funders/grants/overseeing organization's have imposed a community participation requirement on your organization?

Haiti Recovery Research: Organization's efforts towards post-disaster recovery

43. Contact Details (optional)

Name

Email Address

Phone Number

44. Would you be interested in being interviewed personally by a member of the research team to expand on your responses about your organization's work?

Yes

No

APPENDIX C. Project Website

Haiti Recovery Research

University of California, Irvine

Welcome Bienvenue (French) Byenveni (Haitian) Contact us

Welcome

Thank you for your interest in the 2016 Haiti Recovery Research Project, conducted by the University of California, Irvine. The goal of the study is to understand the work of organizations working in Haiti. By taking a few minutes to share your insights, you will be contributing to our understanding of the work of organizations in developing countries.


The research procedure involves a survey taken online. It will take approximately 5-10 minutes to complete. Participation in the study is voluntary. Your survey responses will be anonymous. Should you have any questions or comments please contact Santina L. Contreras, Principal Investigator, University of California, Irvine. Email: HaitiRecoveryResearch@uci.edu. Telephone: +1 (949) 431-6770.


If you would like to participate, please use the following web link to access the survey


[Click here for survey](#)

Many Thanks.

Haiti Recovery Research Team



 Facebook

 LinkedIn

 Twitter

Haiti Recovery Research

Department of Planning,
Policy and Design
300 Social Ecology I
University of California,
Irvine
Irvine, CA 92697-7075
HaitiRecoveryResearch@uci.edu
edu
(949) 431-6770

Haiti Recovery Research

University of California, Irvine

[Welcome](#)

[Bienvenue \(French\)](#)

[Byenveni \(Haitian\)](#)

[Contact us](#)

Bienvenue (French)

Nous vous remercions de votre intérêt pour le projet de recherche sur la reconstruction d'Haiti 2016, menée par l'Université de Californie, Irvine. L'objectif de l'étude est de comprendre le travail des organisations qui travaillent en Haiti . En prenant quelques minutes pour partager vos idées, vous contribuerez à notre compréhension du travail des organisations dans les pays en développement.

La procédure de recherche implique un sondage effectué en ligne. Il faudra environ 5-10 minutes à remplir. La participation à l'étude est volontaire . Vos réponses seront anonymes. Si vous avez des questions ou des commentaires s'il vous plaît contacter Santina L. Contreras, chercheur principal, Université de Californie, Irvine. Email: HaitiRecoveryResearch@uci.edu. Téléphone: +1 (949) 431-6770.

Si vous souhaitez participer, s'il vous plaît utilisez le lien Web suivant pour accéder au sondage

[Cliquez ici pour l'enquête](#)

Merci beaucoup.

La reconstruction d'Haiti équipe de recherche



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Haiti Recovery Research

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Haiti Recovery Research

University of California, Irvine

[Welcome](#)

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[Byenveni \(Haitian\)](#)

[Contact us](#)

Byenveni (Haitian)

Mèsi pou enterè ou nan pwojè a 2016 Ayiti Recovery Rechèch, ki fèt pa Inivèsite a Kalifòni, Irvine. Objektif la nan etid la se yo konprann travay la nan òganizasyon k ap travay an Ayiti. Pa pran yon kèk minit yo pataje sur ou, ou pral kontribye nan konpreyansyon nou nan travay la nan òganizasyon nan peyi devlope yo.

Pwosedi a rechèch enplike nan yon sondaj pran sou entènèt. Li pral pran apeprè 5-10 minit yo fini. Patisipasyon nan etid la se volontè. Repons sondaj ou yo pral anonim. Ou ta dwe gen nenpòt kesyon oswa kòmantè tanpri kontakte Santana L. Contreras, Chèchè Prensipal, Inivèsite a Kalifòni, Irvine. Imèl: HaitiRecoveryResearch@uci.edu. Nimewo telefòn: +1 (949) 431-6770.

Si ou ta renmen yo patisipe , tanpri itilize lyen ki sou sit sa yo jwenn aksè nan sondaj la

[Cliquez ici pou sondaj](#)

Mèsi anpil.

Ayiti Recovery Ekip Rechèch



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Haiti Recovery Research

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APPENDIX D. IRB Approval Letter

UC IRVINE: OFFICE OF RESEARCH
INSTITUTIONAL REVIEW BOARD (IRB)
PAGE 1 OF 2

April 28, 2015

SANTINA CONTRERAS
PLANNING, POLICY AND DESIGN

RE: UCI IRB HS# 2015-1885 *Organizations and Participatory Development: Post-disaster recovery in Haiti*

The above-referenced human-subjects research project has been approved by the University of California, Irvine Institutional Review Board (UCI IRB). This approval is limited to the activities described in the approved Protocol Narrative, and extends to the performance of these activities at each respective site identified in the Application for IRB Review. In accordance with this approval, the specific conditions for the conduct of this research are listed below, and informed consent from subjects must be obtained unless otherwise indicated below. Additional conditions for the general conduct of human-subjects research are detailed on the attached sheet.

NOTE: Approval by the Institutional Review Board does not, in and of itself, constitute approval for the implementation of this research. Other institutional clearances and approvals may be required (e.g., EH&S, Radiation Safety, School Dean, other institutional IRBs). Research undertaken in conjunction with outside entities, such as drug or device companies, are typically contractual in nature and require an agreement between the University and the entity. Such agreements must be executed by an institutional official in Sponsored Projects, a division in the UCI Office of Research. The University is not obligated to legally defend or indemnify an employee who individually enters into these agreements and investigators are personally liable for contracts they sign. Accordingly, the project should not begin until all required approvals have been obtained.

Questions concerning the approval of this research project may be directed to the Office of Research, 5171 California Avenue, Suite 150, Irvine, CA 92697-7600; 949-824-6068 or 949-824-2125 (biomedical committee) or 949-824-6662 (social-behavioral committee).

Expedited Review: Categories 5,6,7

Elizabeth Cauffman, Ph.D.,
Chair, Institutional Review Board

Approval Issued: 4/28/2015

Expiration Date: 4/27/2016

UCI (FWA) 00004071, Approved: January 31, 2003

IRB Determinations as Conditions of Approval:

Informed Consent Determinations:

1. Waiver of Signed Consent Granted
 - a. Study Information Sheet Required – 1 SIS (English)
2. Use of Translated Language Consent¹ - 2 translated SIS (French, Creole)

¹ In order to consent subjects who are unable to read and speak English, the English version of the consent form must be translated into appropriate languages once IRB approval is granted. Submit the translated version of the current IRB approved consent form to the IRB for stamping, PRIOR to use.

APPROVAL CONDITIONS FOR ALL UCI HUMAN RESEARCH PROTOCOLS

UCI RESEARCH POLICIES:

All individuals engaged in human-subjects research are responsible for compliance with all applicable UCI Research Policies (<http://www.research.uci.edu/compliance/human-research-protections/hrp-policy-library/hrppPolicies.htm>). The Lead Researcher of the study is ultimately responsible for assuring all study team members adhere to applicable policies for the conduct of human-subjects research.

LEAD RESEARCHER RECORDKEEPING RESPONSIBILITIES:

Lead Researchers are responsible for the retention of protocol-related records. The following web pages should be reviewed for more information about the Lead Researcher's recordkeeping responsibilities for the preparation and maintenance of research files: <http://www.research.uci.edu/compliance/human-research-protections/researchers/lead-researcher-recordkeeping-responsibilities.html> and <http://www.research.uci.edu/compliance/human-research-protections/researchers/preparation-maintenance-research-audit-file.html>.

PROTOCOL EXPIRATION:

The UCI IRB approval letter references the protocol expiration date under the IRB Chair's signature authorization. A courtesy email will be sent approximately 60 to 90 days prior to expiration reminding the Lead Researcher to apply for continuing review. For studies granted Extended IRB Approval, a courtesy e-mail will be sent annually to verify eligibility for the continuation of extended approval. It is the Lead Researcher's responsibility to apply for continuing review and in order to ensure continuing approval throughout the conduct of the study. Lapses in approval must be avoided to protect the safety and welfare of enrolled subjects.

MODIFICATIONS & AMENDMENTS:

No changes are permissible to the approved protocol or the approved, stamped consent form without the prior review and approval of the UCI IRB. All changes (e.g., a change in procedure, number of subjects, personnel, study locations, new recruitment materials, study instruments, etc.) must be prospectively reviewed and approved by the IRB before they are implemented.

APPROVED VERSIONS OF CONSENT DOCUMENTS, INCLUDING STUDY INFORMATION SHEETS:

Unless a waiver of informed consent is granted by the IRB, the consent documents (consent form; study information sheet) with the UCI IRB approval stamp must be used for consenting all human subjects enrolled in this study. Only the current approved version of the consent documents may be used to consent subjects. **Approved consent documents are not to be used beyond their expiration date.**

ADVERSE EVENT & UNANTICIPATED PROBLEMS REPORTING:

All unanticipated problem involving risk to subjects or others or serious adverse events must be reported to the UCI IRB in accordance with Federal regulations and UCI policy. See <http://www.research.uci.edu/compliance/human-research-protections/researchers/reporting-of-adverse-events-unanticipated-problems-and-violations.html> for complete details.

CHANGES IN FINANCIAL INTEREST:

Any changes in the financial relationship between the study sponsor and any of the investigators on the study and/or any new potential conflicts of interest must be reported immediately to the UCI Conflict of Interest Oversight Committee (COIOC). If these changes affect the conduct of the study or result in a change in the text of the currently-approved informed consent document, these changes must also be reported to the UCI IRB via a modification request. Research subject to COIOC oversight is not eligible for Extended IRB Approval.

CLOSING REPORT:

An electronic closing report should be filed with the UCI IRB when the research concludes. See <http://www.research.uci.edu/compliance/human-research-protections/researchers/closing-a-protocol.html> for complete details.

April 22, 2016

SANTINA CONTRERAS
PLANNING, POLICY AND DESIGN

RE: HS# 2015-1885 *Organizations and Participatory Development: Post-disaster Recovery in Haiti*

Electronic Modification Request # 18700

The following modification(s) for the human subjects research protocol referenced above has/have been approved by the UC Irvine Institutional Review Board (UCI IRB). Below is a summary of the approved changes requested via e-modification request number 18700**:

Add/Remove Research Procedures:

Add: Surveys/Questionnaires/Interviews/Oral Histories

Reason: The approved project consists of two phases of data collection. Phase 1 is an organizational survey that is closing at the end of April (IRB renewal for completing this phase was submitted on 3/29/16, e-CPA application #12466). Phase 2 as is laid out in the approved protocol narrative is interview based. This e-mod is providing the outreach and interview materials for phase 2 of the approved project. The procedures and data collection plan for phase 2 remain the same as is laid out in the approved protocol narrative, the purpose of this e-mod is to submit the outreach and interview materials that were not available at the time of the initial IRB approval.

**The IRB may not have approved all changes proposed in the e-modification request. Review the above summary of approved changes and any revised documents provided with this letter. If a requested change does not appear in the summary or in the revised documents, the IRB did not approve that change. Please consult with an IRB Administrator for further information. Changes to approved protocols may not be made without prior approval by the IRB.

Note: If the approved modification(s) includes changes to the informed consent document, the approved stamped consent form is enclosed with this letter. Please discontinue use of any previous versions of the informed consent document and use only the most updated version for enrollment of all new subjects. Questions concerning approval of this study may be directed to the UC Irvine Office of Research, 5171 California Avenue, Suite 150, Irvine, CA 92697-7600; 949-824-6068 or 949-824-2125 (biomedical committee) or 949-824-6662 (social-behavioral committee).

Level of Review of Modification: Expedited Review

Elizabeth Cauffman, Ph.D.
Chair, Institutional Review Board

Approval Issued: 4-22-16
Expiration Date: 4-21-17

(FWA) 00004071, Approved: January 31, 2003

APPENDIX E. Survey Invitation Email

Is this email not displaying correctly?
View content in browser: [English](#),
[French](#), or [Haitian](#).



Dear << Test First Name >> << Test Last Name >>,

I am writing to ask for your help with the 2016 Haiti Recovery Research Project, conducted by the University of California, Irvine. The goal of the study is to understand the work of organizations operating in Haiti. Your organization, << Test Organization >>, is one of a small number of organizations that have been chosen for this study.

The research procedure involves a survey taken online. It will take approximately 30-45 minutes to complete. Participation in the study is voluntary. Your survey responses will be anonymous. Should you have any questions or comments please contact Santana L. Contreras, University of California, Irvine. Email: HaitiRecoveryResearch@uci.edu. Telephone: +1 (949) 431-6770. [Website](#).

Thank you in advance for your consideration and response.

Santina L. Contreras
Doctoral Candidate
Department of Planning, Policy, and Design
University of California, Irvine

Victoria Basolo, PhD
Faculty Sponsor
Department of Planning, Policy, and Design
University of California, Irvine

[Click here for survey](#)

Survey powered by [SurveyMonkey](#)

Copyright © 2016 University of California, Irvine, All rights reserved.
You are receiving this email because of your special expertise in working in disaster recovery in Haiti.

Our Mailing Address is:
University of California, Irvine
300 Social Ecology 1
Irvine, CA 92697-7075

MailChimp

APPENDIX F. Survey Invitation Reminder Email

Is this email not displaying
correctly?
View content in browser: [English](#),
[French](#), or [Haitian](#).



Dear *IFNAMEI* *ILNAMEI*,

We recently sent you an email asking for your participation in the 2016 Haiti Recovery Research Project, conducted by the University of California, Irvine. Your organization, << **Test Organization** >>, is one of a small number of organizations that have been chosen for this study.

The research procedure involves taking a 30-45 minute survey online, which can be accessed by clicking on the link below. We hope you will consider taking part in this study aiming to understand the work of organizations currently and previously operating in Haiti.

If you have any questions or comments please contact Santana L. Contreras, Principal Investigator, University of California, Irvine. Email: HaitiRecoveryResearch@uci.edu. Telephone: +1 (949) 431-6770. [Website](#).

We appreciate your consideration and response.

Santina L. Contreras
Doctoral Candidate
Department of Planning, Policy, and Design
University of California, Irvine

Victoria Basolo, PhD
Faculty Sponsor
Department of Planning, Policy, and Design
University of California, Irvine

[Click here for survey](#)

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Irvine, CA 92697-7075

MailChimp

APPENDIX G. Interview Invitation Email

Subject: Haiti Recovery Research: Follow up Interview

Dear [FirstName] [LastName],

I hope this email finds you well. You recently participated in the 2016 Haiti Recovery Research Project conducted by the University of California, Irvine. We wanted to thank you again for taking the time to participate in the survey.

As part of the survey you noted that you might be interested in participating in follow up interviews with our research team. We are really interested in learning more about [OrganizationName]'s work in Haiti, so I am writing to see if you would be interested in participating in a follow up interview and/or site visit of your organization's work in Haiti.

I will be in Haiti in May 2016 to learn more about several organizations that participated in the survey. Specifically, it would be great if I could interview you or any other available staff and community member affiliates working in Haiti and potentially visit any project sites in Haiti. We would be using the information collected to get a more in depth understanding of the work currently taking place in Haiti.

We hope you will consider participating, as the study would greatly benefit from your insights and perspectives. If you would be interested in participating or have any questions, feel free to

get in touch with me via email at HaitiRecoveryResearch@uci.edu. Thank you in advance for your time and consideration.

Many thanks,

Santina L. Contreras
Doctoral Candidate
Department of Planning, Policy and Design
University of California, Irvine

Victoria Basolo, Ph.D.
Faculty Sponsor
Department of Planning, Policy and Design
University of California, Irvine

APPENDIX H. IRB Study Information Sheet



Study Information Sheet

Haiti Recovery Research: Organizations efforts towards post-disaster recovery

You are being asked to participate in an interview that gathers information about your knowledge of the work of organizations in Haiti. This research procedure involves an in-person or over the phone interview and should take about 45-60 minutes to complete. You are eligible to participate in this study if you are at least 18 years of age or older and you have had involvement with an organization who has been involved in work or a project in Haiti in the past 10 years.

Participation in this study is voluntary. You may refuse to participate or discontinue your involvement at any time without penalty. There are minimal foreseeable discomfort or risk associated with your participation in this study, as you may feel uncomfortable with the questions asked during the interview and there is a potential for breach in confidentiality. You will not receive compensation for participating. There are no direct benefits to you from participating. However, the overall study may provide insights to help improve how post-disaster recovery work is conducted in developing countries.

Your interview responses will be anonymous – a pseudonym will be used for your name in reporting the data. Your contact information will be stored in a separate location from the interview data and it will be destroyed after five years.

If you have any comments, concerns, or questions regarding the conduct of this research you may contact:

- Santana L. Contreras, Lead Researcher, Department of Planning, Policy & Design, University of California, Irvine. Email: HaitiRecoveryResearch@uci.edu. Telephone: +1 (949) 431-6770.
- Victoria Basolo, Faculty Sponsor

If you have general questions, concerns, or complaints about the research, or questions about your rights as a research subject, please contact UCI's Office of Research by phone, +1 (949) 824-6662, by email at IRB@rgs.uci.edu or at 5171 California Avenue, Suite 150, Irvine, CA 92697-7600.

APPENDIX I. Interview Questionnaire – Organizational Staff

Read the “Study Information Sheet” to interviewee
Enter the following information about the interview:

Name: _____

Organization: _____

Date: _____

Place: _____

Time begin interview: _____ minutes

Time end interview: _____ minutes

Total time of interview: _____ minutes

Other instructions:

//Background Questions//

To start I'd like to ask you some general questions about your **organization**

1. What is your job title with the organization? What are your job responsibilities?
2. Please tell me about the organizations itself
 - a. Could you give me some background on the history of your organization? How was your organization established?
 - b. What is the overarching goal of your organization?
3. Please tell me about your organizations program in Haiti
 - a. How did your organizations program in Haiti start?
 - b. How long has your organization been working in Haiti? Continuous or interrupted?
 - c. What are the objectives of your organizations work in Haiti?
 - d. Who are the target beneficiaries of your organizations work in Haiti?
 - e. How did your organization decide what part of Haiti to work in?

//Recovery Questions//

Now I would like to ask you some questions about the **recovery** process

1. Do you consider your organizations work in Haiti post-disaster recovery work? Why/why not?
2. How does your organization define/measure recovery?
 - a. PROBE: For each measure described, ask what the value is (numeric, high/low, etc.)?
 - b. PROBE: How do you rank the described measure?
3. How does involvement from the local community impact the recovery process/recovery goals?
4. Please tell me about your organizations **housing** work [**Housing Recovery**]
 - a. How many permanent housing units has your organization built as of May 1, 2016?

- b. How many permanent housing units are built by your organization per week/month/year?
- c. When did your organization start building permanent housing units in Haiti?
- d. How does your organization determine eligibility for permanent housing units?
- e. Can you provide some details on the housing that this constructed (type of dwelling/size/layout/number of rooms/material/etc.?)
- f. How did your organization decide on the housing design/size/layout/etc.?
- g. Do all individuals receive the same house? If no, how are changes determined?
- h. Have you noticed any changes/modifications being made to the housing? If yes, what kinds of changes?
- i. How did your organization acquire the land for the housing units? Do community members own or rent the completed housing units?
- j. Is your organization the only one providing housing in this community? If no, what other organizations are also working in this community?

I'm now going to ask you some questions about the community where your organization works

5. What is access to water like for local Haitians in the community where your organization works? Distance? Quality? Quantity? Water drainage systems? [**Infrastructure Recovery**]
 - a. What about waste water removal in the community? Toilets? Available per household or community?
 - b. What about availability of electricity? Access to transportation?
 - c. How many houses have this infrastructure? Does your organization provide it? If no, who does?
6. How have jobs/income/standard of living changed for local Haitians in the community where your organization works? [**Economic Recovery**]
 - a. What is the employment percentage/rate like in the community? How many jobs for local Haitians has your organization created?
7. Is there any disaster preparedness or response training for the local Haitians in the community where your organization works? [**Risk Reduction**]
 - a. How many households receive this training? Does your organization provided the training? If no, who does?
8. What are community facilities/amenities like for local Haitians in the community where your organization works (such as schools, churches, healthcare, etc.)? [**Social Recovery**]
 - a. How many community facilities/amenities are there? Did your organization provide them? If no, who did?

//Participation Questions//

The next set of questions asks about the **process** of establishing your organizations program in Haiti

9. Who was involved in the establishment of your organizations program in Haiti (i.e., board members, local government, local community)?
10. What sorts of assessments were undertaken of the area prior to establishing your organizations program in Haiti (i.e. survey of local community needs, etc.)?
11. How did the local Haitian community participate in the establishment of your organizations program in Haiti?

12. Were community participants given a choice in how they could participate in the organization/project? If yes, how? **[CAP Area 1]**
13. Were community participants provided support (such as materials/training) to facilitate their involvement in the decision making process of the organization/project? If yes, how? **[CAP Area 2]**
14. What sort of positions do local Haitians hold in your organization?
15. What role did community values/preferences factor into the establishment of your organizations program in Haiti? Were there any differences between community values/preferences and organizational goals?
16. Are there any other factors that you feel played an important role in the establishment of your organizations program in Haiti?

Now, I'd like to ask you some questions about the **specific activities** of the organizations program in Haiti

17. What are the main activities that make up your organizations work in Haiti?
18. Does the local community participate in these program activities? If yes, how?
 - a. Is the local community trained with the necessary skills to participate in program activities? If yes, how?
 - b. What sorts of choices do the local community have in terms of participating in the program activities?
 - c. Were community participants given a choice in the details of the housing created by your organization/project? If yes, how? What sorts of choices (i.e. design, location, etc.)? **[CAP Area 3]**
 - d. Were community participants provided support (such as materials/training) to facilitate their involvement in creating the housing? If yes, how? **[CAP Area 4]**
19. Could you describe what your experience using community participants in your work in Haiti has been like? Positives/Negatives?
20. Is community participation a requirement of any funders/grants/overseeing organizations/other body? If yes, what body? Please describe.
21. Does your organization's work in Haiti provide incentives to local Haitians for participating in program activities? If yes, what kind of incentives? What was the reasoning behind utilizing an incentive based program?
22. Does the organizations work in Haiti involve any local enterprise development? If yes, what kind of enterprise? How was this established?
23. Can you tell me about your organizations volunteer/visit program?
 - a. What do volunteers/visitors do? Stay?
 - b. What motivated your organization to establish a volunteer/visit program?
 - c. What is the fee for participating? How does the fee compare to the actual cost of the participant? How much from the fee is going to support the program?
 - d. What do you feel the community gains from the volunteers/visitors?
 - e. What do you perceive to be the strengths/weaknesses of this type of travel?

//Outcome Questions//

The next set of questions has to do with **outcomes** of your organizations work in Haiti?

24. What are the expected outcomes for your organization's work in Haiti?
25. Does your organization have any benchmarks for success of its work in Haiti? If yes, please describe them and how your organization is achieving them.

26. Do you have an estimate of the number of beneficiaries reached by your organizations work in Haiti? How does this number compare to what was planned?
27. What is your organization's estimated annual budget (in U.S. dollars) for work in Haiti in 2015?
28. Please describe the monitoring/evaluation process for your organizations work in Haiti
 - e. What kind of monitoring/evaluation does your organization carry out? How often?
 - f. Who is involved in the monitoring/evaluations (external experts, donor representatives, HQ staff, local staff, beneficiaries, etc.)?
 - g. What do you do with the results of the monitoring/evaluations? How do you build them into program/project changes?
 - h. Do you monitor/evaluate individual input/satisfaction with housing? How about occupancy rates?
 - i. Does your organization publish situational reports/program evaluations? If yes, could you share copies?

//Other Questions//

The last few questions have to do with your organizations relationship to other entities.

29. Could you talk about your organizations experience **collaborating** with other organization in Haiti? Does your organization pass money to partner organizations? If yes, how are the partner organizations selected?
30. Can you describe your organizations relationship with governmental entities (i.e. local, national, etc.)? How often do you engage with them? Do they place restrictions on your work?
31. Can you describe your organizations management structure (see organization chart)?
32. Is there anything important that we didn't ask about that you would like to share?

//Conclusion//

That completes the interview. Thank you very much for your willingness to participate in our study. We appreciate the time you have given us, as your experiences are very valuable to our research.

APPENDIX J. Interview Questionnaire – Community Member

Read the “Study Information Sheet” to interviewee
 Enter the following information about the interview:

Name: _____
 Affiliated organization: _____
 Date: _____
 Place: _____
 Time begin interview: _____ minutes
 Time end interview: _____ minutes
 Total time of interview: _____ minutes
 Other instructions:

//Background Questions//

To start I’d like to ask you some questions about your connection to the organization

1. How did you first learn about this organization?
2. What are the main activities the organization does in the community?
3. What sorts of things have you received from the organization? (i.e. housing, water filtration systems, etc.)
4. Have you received a job from the organization? If yes, what kind of job? What are your job responsibilities?
5. Have you received any kind of training from the organization? If yes, what kind of training?

//Recovery Questions//

Now I would like to ask you some questions about recovery in the community

6. Do you live in the community where the organization works?
7. How long have you been living in this community? Were you living in this community before the earthquake?
8. What did you want the organization (or other organizations) to work on in your community after the earthquake? Did that work happen?
9. Are you happy with the speed and quality of recovery in your community?
10. How could recovery have been made more successful?
11. How do you feel about community participation in the recovery process?
 - a. PROBE: Important/not important? Does it improve recovery process?
12. What do you feel is the most important thing to have restored in your community after a disaster?

Recovery Area	Most Important
Housing	
Environment	
Water	
Power	
Jobs	

Recovery Area	Most Important
Disaster Preparedness	
Schools	
Churches	
Healthcare	
Other:	

//Participation Questions//

Next I'm going to ask you about your **participation** with the organization

- 13. How have you (or others in the community) participated in the organizations work in the community? Please describe.
- 14. Were you (or others in the community) given a choice in how you got to participate with the organization? Please describe. **[CAP AREA 1]**
- 15. Did the organization consult you (or others in the community) before starting their work in the community? Please describe.
- 16. Did you feel like the organization listened to your input (or the input of others in the community)? Please describe.
- 17. Did you receive anything in return for participating in the organizations activities? If yes, what did you receive? How do you feel about getting incentives for participating?
- 18. Were you (or others in the community) provided support materials or training to help you participate in the decisions made by the organization? If yes, what kind of materials/training? **[CAP AREA 2]**

//Housing Questions//

The last set of questions has to do with housing received from the organization

- 19. Did you receive any housing from the organization?
- 20. Were you (or others in the community) given a choice in the details of the housing created by the organization? If yes, what kind of choices? **[CAP AREA 3]**
- 21. Were you (or others in your community) provided materials or training in housing construction? If yes, what kind of materials/training? **[CAP AREA 4]**
- 22. How satisfied are you with the following:

	Not satisfied	Very satisfied	If yes, how?
House size			
House layout			
House external color/style			
House inside color/style			
House is culturally appropriate			
House location			
Hoses access to services			
Overall is the house meeting your needs			

- 23. Have you made any changes to the house you received from the organization? If yes, what kind of changes?
- 24. Do you own or rent your home?
- 25. Is there anything important that we did not ask about that you would like to share?

That completes the interview. Thank you for participating!

APPENDIX K. Observation Checklist

Organization: _____

Date: _____

Place: _____

	Code	Value
Participation		
Haitians working with organization: manual labor (housing construction)	No = 0 Yes = 1	
Haitians working with organization: middle management (field manager)	No = 0 Yes = 1	
Haitians working with organization: higher positions (executive positions)	No = 0 Yes = 1	
Housing		
Housing units appear to be good quality	No = 0 Yes = 1	
Any housing with modifications to style (color/aesthetics)	No = 0 Yes = 1	
Any housing units with modifications to structure (add-on/extensions)	No = 0 Yes = 1	
Number of houses built		
Other notes:		

APPENDIX L. Survey Dataset Codebook

METADATA

Survey Item	Variable Name	Values
Respondent number from survey monkey	Respondent_Num	String of numbers
Respondent ID from survey monkey	Respondent_ID	String of numbers
Collector ID from survey monkey	Collector_ID	String of numbers
IP Address	IP_Address	String of numbers
Custom Data	Custom_Data	String of numbers/letters
Study Information Sheet	SIS	No = 0, Yes = 1
Date survey was conducted	Survey_Date	mm/dd/yyyy
Survey start time	Survey_StartTime	hh:mm:ss
Survey end time	Survey_EndTime	hh:mm:ss
Organization name	Org_Name	Organization name

Q3 – Organization: Classification

Survey Item	Variable Name	Values
How would you classify your organization?	Org_Type	NGO = 1, Government = 2, Intergovernmental = 3, Development Agency = 4, Private Sector = 5 Foundation = 6 Association = 7 Other = 8
Nongovernmental organization	Org_Type_NGO	No = 0, Yes = 1
Governmental organization	Org_Type_Gov	No = 0, Yes = 1
Intergovernmental organization	Org_Type_Intergov	No = 0, Yes = 1
Bilateral/multilateral development agency	Org_Type_DevAgency	No = 0, Yes = 1
Private sector/contractor	Org_Type_PrivSector	No = 0, Yes = 1
Foundation	Org_Type_Found	No = 0, Yes = 1
Association	Org_Type_Assoc	No = 0, Yes = 1
Other (please specify)	Org_Type_Other	No = 0, Yes = 1

Q4 – Organization: Type of nongovernmental organization

Survey Item	Variable Name	Values
Please specify the type of nongovernmental organization?	Org_Type_NGO_InterHaitian	International NGO = 1 Haitian NGO = 2 Not NGO = 3
International NGO	Org_Type_NGO_International	No = 0, Yes = 1
Haitian NGO	Org_Type_NGO_Haitian	No = 0, Yes = 1

Q5 – Organization: Founded (year)

Survey Item	Variable Name	Values
What year was your organization founded?	Org_Founded_Year	yyyy
Organizational Age	Org_Age	Numerical Value

Q6 – Organization: Country of Origin

Survey Item	Variable Name	Values
Please specify your organization's country of origin	Org_Founded_Country	USA = 1, Haiti = 2 UK = 3, Denmark = 4 Italy = 5, Sweden = 6 Belgium = 7, Switzerland = 8 Guatemala = 9, Spain = 10 Canada = 11, Germany = 12 India = 13, Norway = 14 France = 15, Ireland = 16 Netherlands = 17 Dominican Republic = 18 Mexico = 19, Israel = 20 Multiple countries = 21
Country of Origin - USA	Org_Founded_USA	No = 0, Yes = 1
Country of Origin - Haiti	Org_Founded_Haiti	No = 0, Yes = 1

Q7 – Organization: Number of countries working

Survey Item	Variable Name	Values
How many countries does your organization work in?	Org_Work_NumCountries	Numerical Value

Q8 – Organization: Religious/non-religious

Survey Item	Variable Name	Values
How would you classify your organization?	Org_Type_Religious	Non-religious/secular = 0 Religious = 1

Q9 – Organization: Employees

(How many persons (including yourself) are employed (paid) by your organization?)

Survey Item	Variable Name	Values
Haitian	Org_Employees_Haitian	Numerical Value
Non Haitian	Org_Employees_NonHaitian	Numerical Value
Total	Org_Employees_Total	Numerical Value

Q10 – Organization: Volunteers

Survey Item	Variable Name	Values
How many volunteers are used by your organization in an average month?	Org_Volunteers_Total	Numerical Value

Q11 – Participation: General (Any Country)

Survey Item	Variable Name	Values
Does your organization involve community participants in its work (in any country)?	Participation_General_AnyCountry	1 = No participation ... 7 = High level of participation

Q12 – Organization: Working in Haiti

Survey Item	Variable Name	Values
Has your organization been involved in work/project(s) in Haiti?	Org_Work_Haiti	No = 0, Yes = 1

Q13 – Haiti: Work sector

(What specific sector(s) has your organization's work in Haiti involved?)

Survey Item	Variable Name	Values
Physical rebuilding	Haiti_Sector_Rebuild	No = 0, Yes = 1
Camp coordination/camp management	Haiti_Sector_CCCM	No = 0, Yes = 1
Children/youth	Haiti_Sector_Child	No = 0, Yes = 1
Economic development	Haiti_Sector_Econ	No = 0, Yes = 1
Education	Haiti_Sector_Edu	No = 0, Yes = 1
Environment	Haiti_Sector_Env	No = 0, Yes = 1
Food/nutrition	Haiti_Sector_Food	No = 0, Yes = 1
Governance/institutions	Haiti_Sector_Gov	No = 0, Yes = 1
Health	Haiti_Sector_Health	No = 0, Yes = 1
Agriculture	Haiti_Sector_Agr	No = 0, Yes = 1
Water, sanitation, hygiene	Haiti_Sector_WASH	No = 0, Yes = 1
Disaster Risk Reduction	Haiti_Sector_DRR	No = 0, Yes = 1
Gender/Gender Based Violence	Haiti_Sector_GenderGVB	No = 0, Yes = 1
Religion	Haiti_Sector_Religion	No = 0, Yes = 1
Culture	Haiti_Sector_Culture	No = 0, Yes = 1
Civil Society/Organizations	Haiti_Sector_CivilSocietyOrg	No = 0, Yes = 1
Community Development	Haiti_Sector_ComDev	No = 0, Yes = 1
Advocacy/Human Rights	Haiti_Sector_AdvocacyHuman	No = 0, Yes = 1
Other (please specify)	Haiti_Sector_Other	No = 0, Yes = 1

Q14 – Haiti: Type of physical rebuilding

(What specific type(s) of physical rebuilding has your organization's work in Haiti involved?)

Survey Item	Variable Name	Values
Temporary housing	Haiti_Sector_Rebuild_Temp	No = 0, Yes = 1
Permanent housing	Haiti_Sector_Rebuild_Perm	No = 0, Yes = 1
Schools	Haiti_Sector_Rebuild_School	No = 0, Yes = 1
Churches	Haiti_Sector_Rebuild_Church	No = 0, Yes = 1
Hospital/Clinics	Haiti_Sector_Rebuild_HospitalClinic	No = 0, Yes = 1
Orphanages	Haiti_Sector_Rebuild_Orph	No = 0, Yes = 1
Public/Community buildings	Haiti_Sector_Rebuild_PublicC	No = 0, Yes = 1

Infrastructure	Haiti_Sector_Rebuild_Infrastructure	No = 0, Yes = 1
Other (please specify)	Haiti_Sector_Rebuild_Other	No = 0, Yes = 1

Q15 – Haiti: Support Donations Only

Survey Item	Variable Name	Values
Does your organization's work in Haiti involve collecting support donations only?	Haiti_Work_Donations	No = 0, Yes = 1

Q16 – Haiti: Participatory Activities

(Does your organization's work in Haiti include the following activities?)

Survey Item	Variable Name	Values
Training	Haiti_Work_Training	No = 0, Yes = 1
Community meetings	Haiti_Work_ComMeetings	No = 0, Yes = 1
Hiring of local Haitians	Haiti_Work_Hiring	No = 0, Yes = 1
Microfinancing	Haiti_Work_Microfi	No = 0, Yes = 1
Incentives for participation	Haiti_Work_PartIncIncent	No = 0, Yes = 1
Local enterprise development	Haiti_Work_LocalEnterp	No = 0, Yes = 1

Q17 – Haiti: Item creation (house, school, water/sanitation products, etc.)

Survey Item	Variable Name	Values
Were any items created as a result of your organization's work/project in Haiti?	Haiti_Work_ItemsProduced	No = 0, Yes = 1

Q18 – Participation: General (Haiti)

Survey Item	Variable Name	Values
Does your organization involve community participants in its work in Haiti?	Participation_General_Haiti	1 = No participation ... 7 = High level of participation

Q19 – Haiti: Organization founders

(How was your organization founded?)

Survey Item	Variable Name	Values
Haitians in Haiti	Org_Founders_Haitian	No = 0, Yes = 1
Haitians outside Haiti (Diaspora)	Org_Founders_Diaspora	No = 0, Yes = 1
Individuals outside of Haiti/non-Haitian descent	Org_Founders_NonHaitian	No = 0, Yes = 1

Q20 – Haiti: Work begin (year)

Survey Item	Variable Name	Values
What year did your organization begin working in Haiti?	Haiti_Work_Start	yyyy

Q21 – Haiti: Currently working

Survey Item	Variable Name	Values
Is your organization currently working in Haiti?	Haiti_Work_Currently	No = 0, Yes = 1

Q22 – Haiti: Work end (year)

Survey Item	Variable Name	Values
What year did your organization end working in Haiti?	Haiti_Work_End	yyyy
Time spent working in Haiti	Haiti_Work_TotalTime	Numerical Value

Q23 – Participation: General, for specific project areas (Haiti)

(How would you rate the level of participation with community participants in the following phases of your organization’s work in Haiti?)

Survey Item	Variable Name	Values
Discussion of problems in community	Participation_General_ProjectArea 1	1 = No participation ... 7 = High level of participation
Assessing potential solutions to problems for project development	Participation_General_ProjectArea 2	1 = No participation ... 7 = High level of participation
Project design	Participation_General_ProjectArea 3	1 = No participation ... 7 = High level of participation
Selection of project site	Participation_General_ProjectArea 4	1 = No participation ... 7 = High level of participation
Project scale	Participation_General_ProjectArea 5	1 = No participation ... 7 = High level of participation
Timeline decisions	Participation_General_ProjectArea 6	1 = No participation ... 7 = High level of participation
Funding decisions	Participation_General_ProjectArea 7	1 = No participation ... 7 = High level of participation
Decisions on how community will contribute to project	Participation_General_ProjectArea 8	1 = No participation ... 7 = High level of participation
Implementation of project	Participation_General_ProjectArea 9	1 = No participation ... 7 = High level of participation
Supervision of work	Participation_General_ProjectArea 10	1 = No participation ... 7 = High level of participation
Project modifications	Participation_General_ProjectArea	1 = No participation ...

	11	7 = High level of participation
Project evaluations	Participation_General_ProjectArea 12	1 = No participation ... 7 = High level of participation
Total	Participation_General_Total	0 = No participation ... 84 = High level of participation
Other (please specify)	Participation_General_Other	Open ended

Q24 – Haiti: Geographic areas served

(What principal geographic area(s) within Haiti does your organization serve?)

Survey Item	Variable Name	Values
Ouest	Haiti_Ouest	No = 0, Yes = 1
Centre	Haiti_Centre	No = 0, Yes = 1
Nord	Haiti_Nord	No = 0, Yes = 1
Nord-Est	Haiti_NordEst	No = 0, Yes = 1
Nord-Ouest	Haiti_NordOuest	No = 0, Yes = 1
Sud	Haiti_Sud	No = 0, Yes = 1
Sud-Est	Haiti_SudEst	No = 0, Yes = 1
Grand'Anse	Haiti_GrandAnse	No = 0, Yes = 1
Artibonite	Haiti_Artibonite	No = 0, Yes = 1
Nippes	Haiti_Nippes	No = 0, Yes = 1

Q25/26 – Haiti: Communes (cities/villages) served

Survey Item	Variable Name	Values
How many communes (cities/villages) in Haiti does your organization serve?	Haiti_Communes_TotalNum	Numerical Value
Please specify all communes (cities/villages) in Haiti served:	Haiti_Communes_Names	Open ended

Q27 – Haiti: Rural/urban areas

(How would you classify the locations in Haiti where your organization works)

Survey Item	Variable Name	Values
Rural areas	Haiti_Work_Rural	No = 0, Yes = 1
Urban areas	Haiti_Work_Urban	No = 0, Yes = 1

Q28 – Participation Arnstein, for specific project areas (Haiti)

(Please rate how community participants are involved in specific project tasks)

Survey Item	Variable Name	Values
Discussion of problems in community	Participation_Arnstein_ProjectArea1	1 – 5 (below)
Assessing potential solutions to problems for project development	Participation_Arnstein_ProjectArea2	1 – 5 (below)

Project design	Participation_Arnstein_ProjectAre a3	1 – 5 (below)
Selection of project site	Participation_Arnstein_ProjectAre a4	1 – 5 (below)
Project scale	Participation_Arnstein_ProjectAre a5	1 – 5 (below)
Timeline decisions	Participation_Arnstein_ProjectAre a6	1 – 5 (below)
Funding decisions	Participation_Arnstein_ProjectAre a7	1 – 5 (below)
Decisions on how community will contribute to project	Participation_Arnstein_ProjectAre a8	1 – 5 (below)
Implementation of project	Participation_Arnstein_ProjectAre a9	1 – 5 (below)
Supervision of work	Participation_Arnstein_ProjectAre a10	1 – 5 (below)
Project modifications	Participation_Arnstein_ProjectAre a11	1 – 5 (below)
Project evaluations	Participation_Arnstein_ProjectAre a12	1 – 5 (below)
Total	Participation_Arnstein_Total	0 – 60
Other (please specify)	Participation_Arnstein_Other	Open ended

- 1 = No involvement with participants
2 = Participants receive information from organization
3 = Participants give feedback to organization
4 = Participants are involved in decision making with organization
5 = Participants initiate task and bring to organization

Q29 – Organization: Experience in recovery (in Haiti after earthquake)

Survey Item	Variable Name	Values
Has your organization been involved in post-disaster recovery work/project(s) in Haiti after January 12, 2010 earthquake?	Org_Recovery_Haiti	No = 0, Yes = 1
	Org_Recovery_Haiti_Other	Open ended

Q30 – Organization: Experience in recovery (outside of Haiti)

Survey Item	Variable Name	Values
Has your organization been involved in post-disaster recovery work/project(s) outside of Haiti in the past?	Org_Recovery_OutsideHaiti	No = 0, Yes = 1
	Org_Recovery_OutsideHaiti_Other	Open ended

Q31 – Organization: Experience in recovery, number of projects (outside of Haiti)

Survey Item	Variable Name	Values
In the past 10 years, how many	Org_Recovery_OutsideHaiti_Num	Numerical Value

post-disaster recovery work/project(s) outside of Haiti has your organization been involved in?		
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Q32 – Organization: Experience in recovery, length (in months) of projects (outside of Haiti)

Survey Item	Variable Name	Values
What was the average length (in months) of past post-disaster recovery work/project(s) your organization was involved in outside of Haiti?	Org_Recovery_OutsideHaiti_Length	Numerical Value

Q33 – Participation Capabilities Approach (Haiti)

(Using a scale from 1 (strongly disagree) to 7 (strongly agree), please respond to the following statements)

Survey Item	Variable Name	Values
Community participants are given a choice in how they can participate in the organization/project	Participation_CAP_ProjectArea1	1 = Strongly Disagree ... 7 = Strongly Agree
Community participants are provided support (such as materials/training) to facilitate their involvement in the decision making process of the organization/project	Participation_CAP_ProjectArea2	1 = Strongly Disagree ... 7 = Strongly Agree
Community participants are given a choice in the details of the items created as a result of the organization/project	Participation_CAP_ProjectArea3	1 = Strongly Disagree ... 7 = Strongly Agree
Community participants are provided support (such as materials/training) to facilitate their involvement in creating the items of the organization/project	Participation_CAP_ProjectArea4	1 = Strongly Disagree ... 7 = Strongly Agree
Total	Participation_CAP_Total	4 - 28

Q34 – Organization: Collaboration

Survey Item	Variable Name	Values
How often does your organization collaborate with other organizations in its work in Haiti?	Org_Collab	1 = No collaboration ... 7 = High level of collaboration

Q35 – Organization: Registered with Haitian Government

Survey Item	Variable Name	Values
Is your organization registered with the Haitian Government (MPCE-Ministry of Plan and External Cooperation)?	Org_GovReg	No = 0, Yes = 1

Q36 – Organization: Date registered with Haitian Government (year)

Survey Item	Variable Name	Values
Since what year has your organization been registered with the Haitian Government (MPCE-Ministry of Plan and External Cooperation)?	Org_GovReg_Year	yyyy
Length of Government Registry	Org_GovReg_Age	Numerical Value

Q37 – Haiti: Annual Budget (in U.S. dollars)

Survey Item	Variable Name	Values
What was your estimated annual budget (in U.S. dollars) for work in Haiti in 2015?	Haiti_AnnualBudget	Numerical Value

Q38 – Organization: Board of Directors

Survey Item	Variable Name	Values
Does your organization have a board of directors?	Org_BoardofDirec	No = 0, Yes = 1

Q39 – Organization: Board of Directors (Size)

(Please specify the number of members on the current board of directors)

Survey Item	Variable Name	Values
Haitian	Org_BoardofDirec_Haitian	Numerical Value
Non-Haitian	Org_BoardofDirec_NonHaitian	Numerical Value

Q40 – Organization: Funding sources

(Please classify your organization's relationship to the following funding sources)

Survey Item	Variable Name	Values
Bilateral/Multilateral Development Agencies	Org_Funding_DevelopAgenc	1 = No funding received 7 = High level of funding received
Intergovernmental Organizations	Org_Funding_Intergov	1 = No funding received 7 = High level of funding received
Grants//Contracts - Government	Org_Funding_GrantContr_Gov	1 = No funding received 7 = High level of funding received
Grants//Contracts -	Org_Funding_GrantCon	1 = No funding received

Nongovernment	tr_Nongov	7 = High level of funding received
Private Donations - Foundations	Org_Funding_Donations_Found	1 = No funding received 7 = High level of funding received
Private Donations - Corporations	Org_Funding_Donations_Corp	1 = No funding received 7 = High level of funding received
Private Donations - Individuals	Org_Funding_Donations_Indiv	1 = No funding received 7 = High level of funding received
Loans – Banks/Financial Institutions	Org_Funding_Loans	1 = No funding received 7 = High level of funding received
Business Income – Sales of Products	Org_Funding_BusIncome	1 = No funding received 7 = High level of funding received
Other (please specify)	Org_Funding_Other	Open ended

Q41 – Organization: Participation requirement

Survey Item	Variable Name	Values
Is community participation a requirement of your funders/grants/overseeing organization/other body?	Participation_Required	No = 0, Yes = 1

Q42 – Organization: Participation requirement (who)

Survey Item	Variable Name	Values
Please specify what funders/grants/overseeing organization's have imposed a community participation requirement on your organization	Participation_Required_Name	Open ended

Q43 – Contact Details

Survey Item	Variable Name	Values
Name	Contact_Name	Open ended
Email Address	Contact_Email	Open ended
Phone Number	Contact_Phone	Numerical Value

Q44 – Contact Interview

Survey Item	Variable Name	Values
Would you be interested in being interviewed to expand on your responses about your organization's work?	Contact_Interview	No = 0, Yes = 1

APPENDIX M. Descriptive Statistics and Transformations

Figure M.1 Capabilities Approach Participation

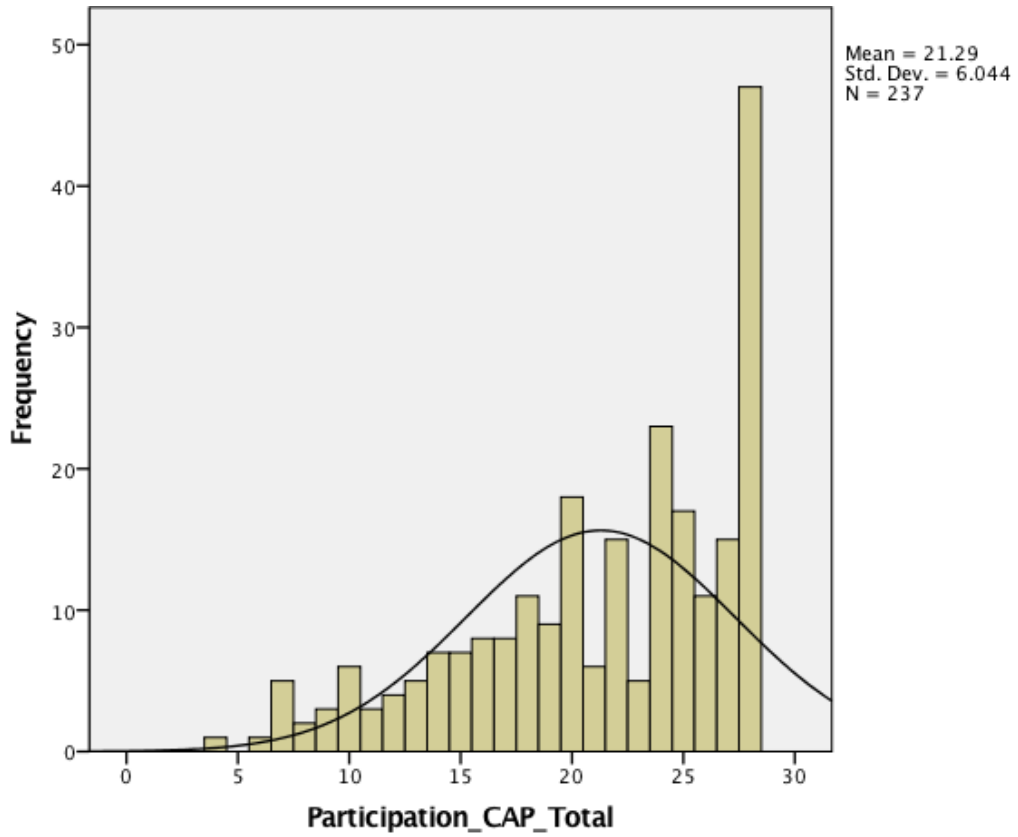


Figure M.2 Annual Budget in U.S. Dollars Before Transformation

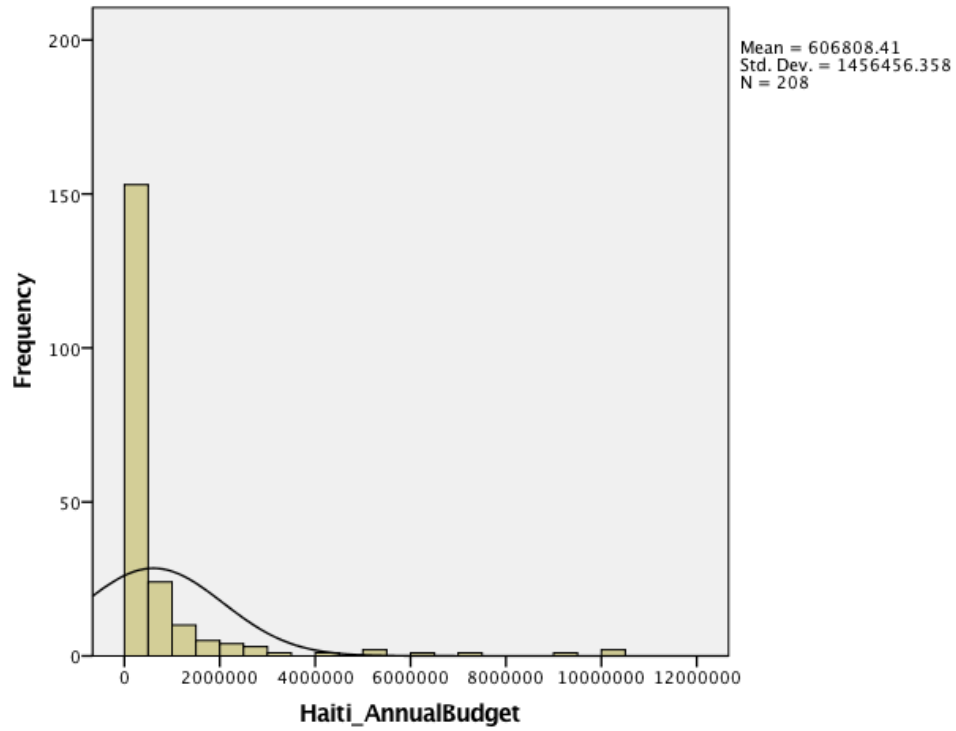


Figure M.3 Annual Budget in U.S. Dollars After Transformation

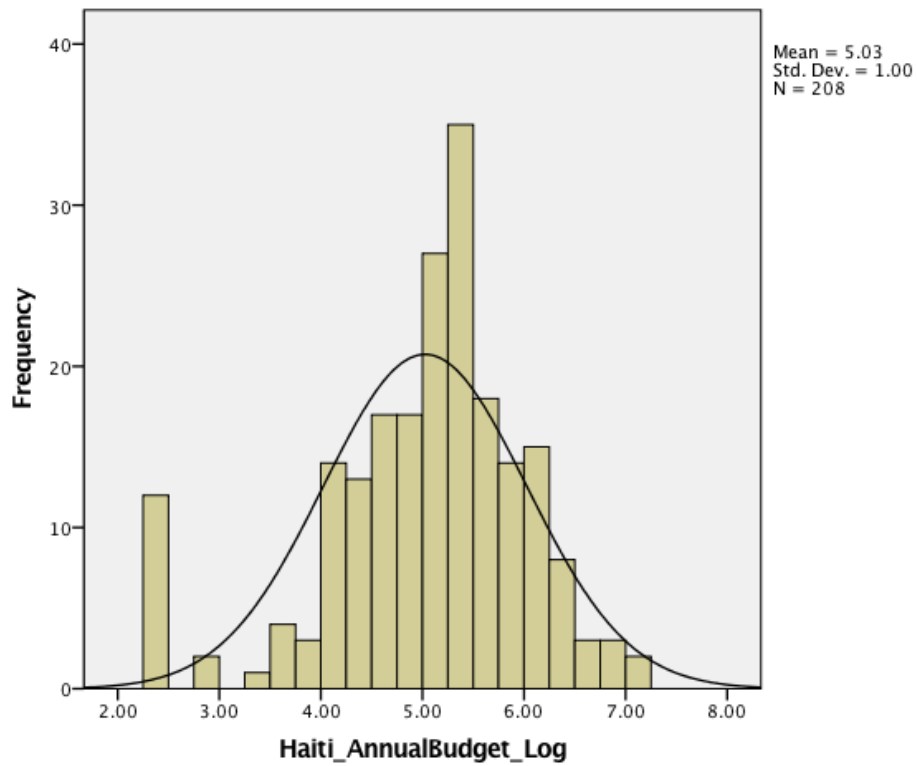


Figure M.4 Number of Haitian Employees Before Transformation

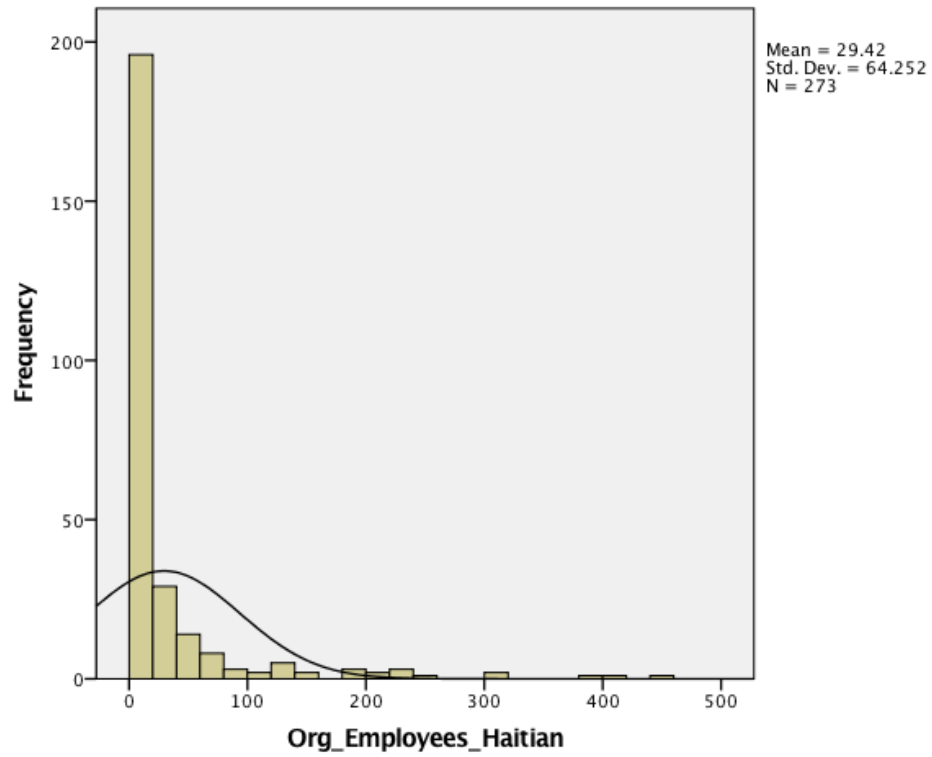


Figure M.5 Number of Haitian Employees After Transformation

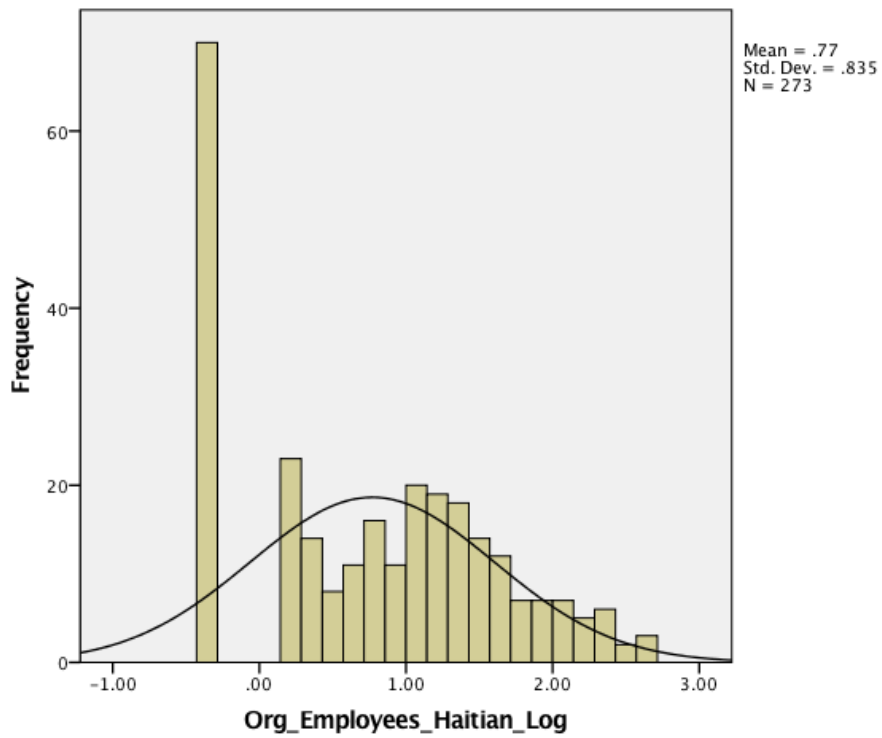


Figure M.6 Number of Non-Haitian Employees Before Transformation

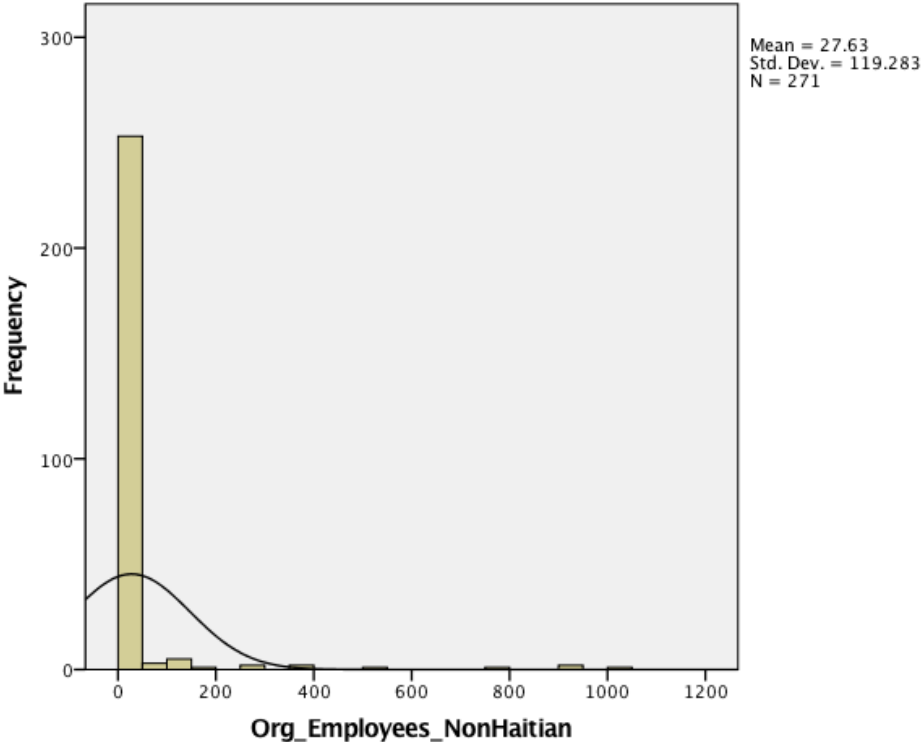


Figure M.7 Number of Non-Haitian Employees After Transformation

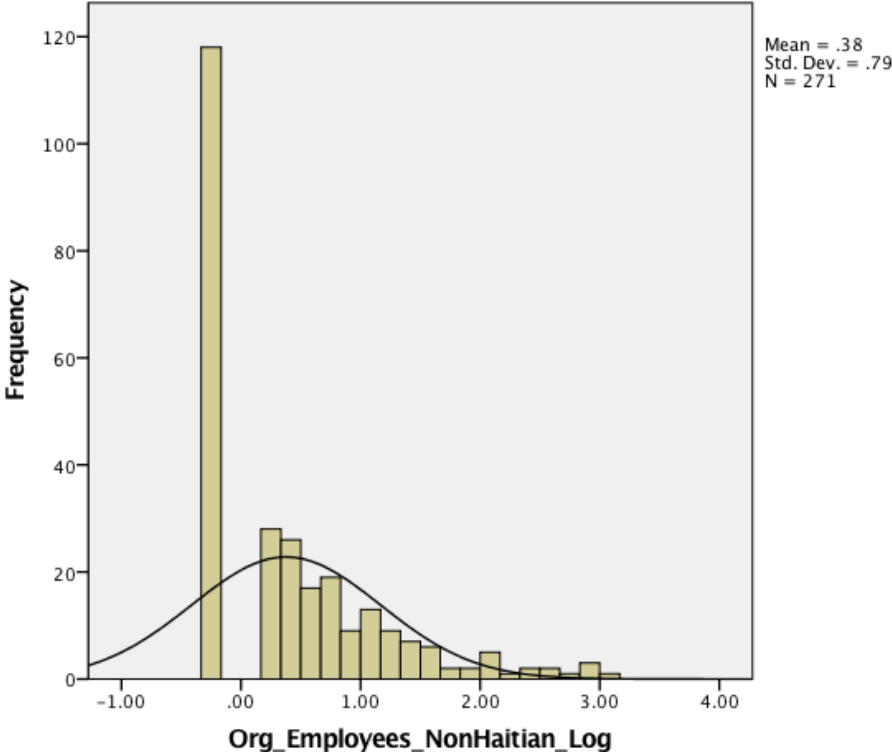


Figure M.8 Organization Age (in Years) Before Transformation

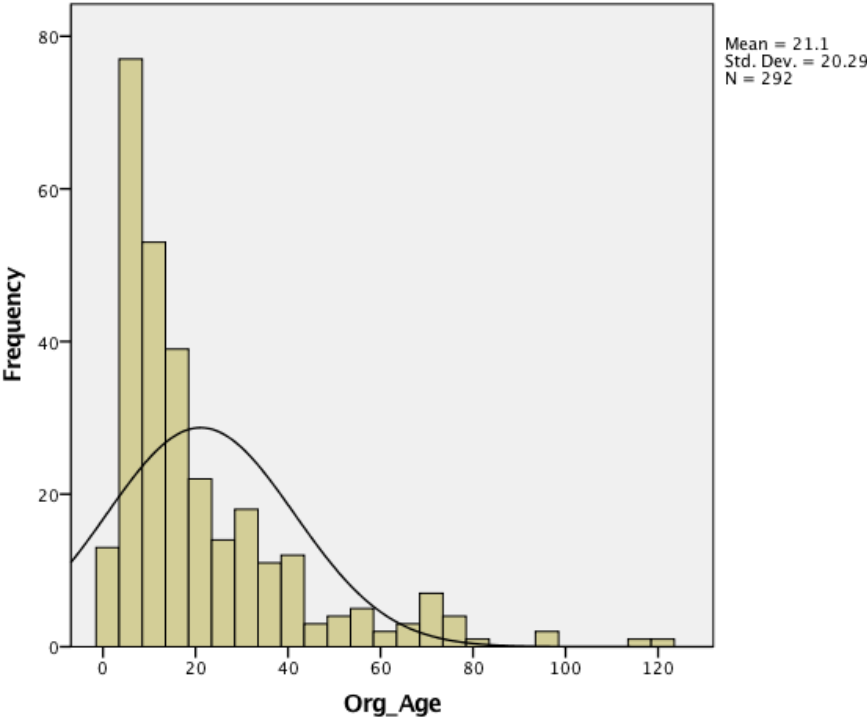


Figure M.9 Organization Age (in Years) After Transformation

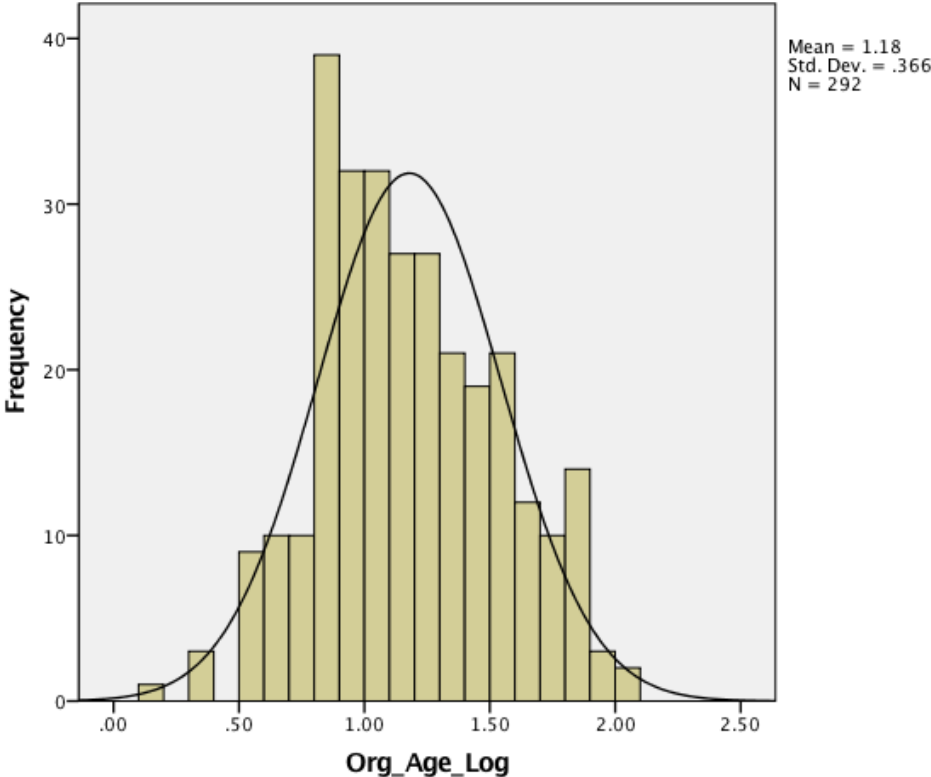


Figure M.10 Collaboration Level

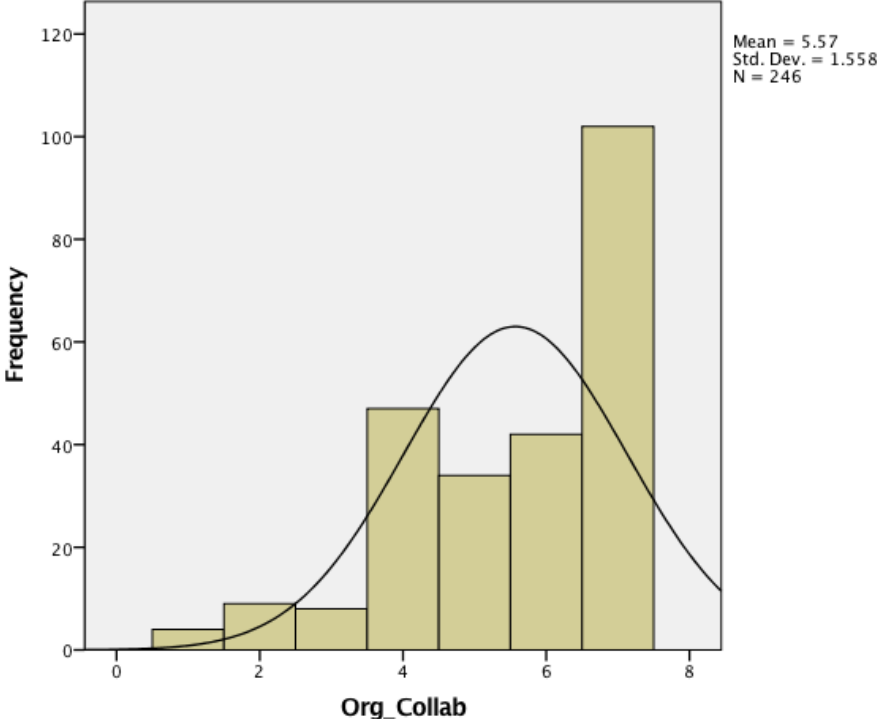


Figure M.11 Post-disaster Recovery Experience

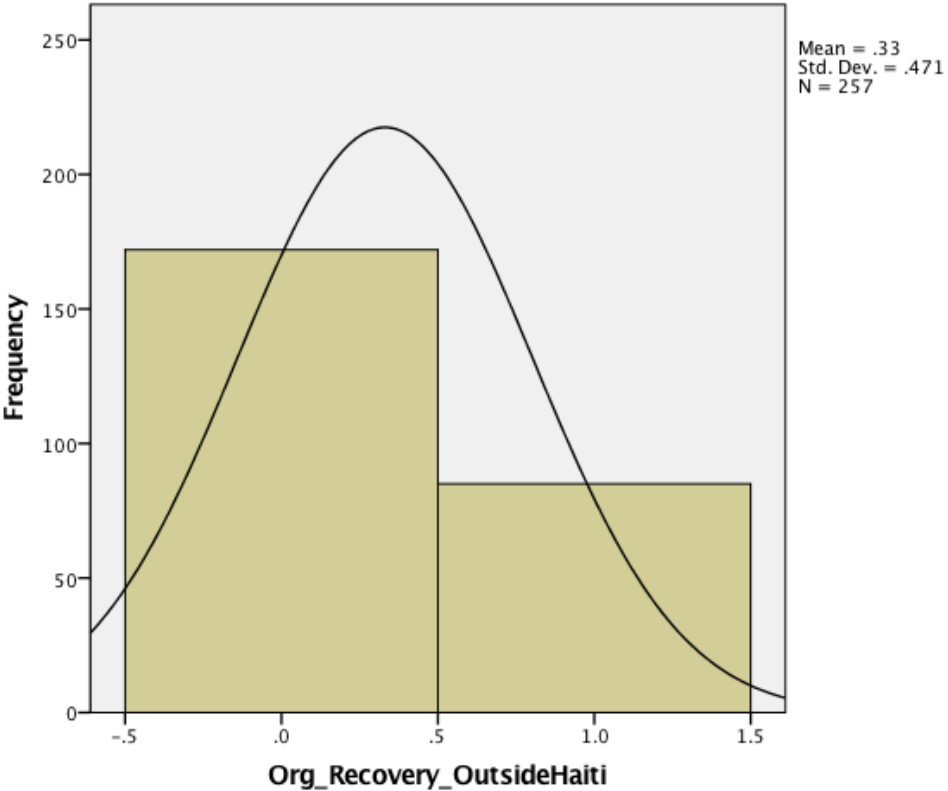


Figure M.12 Number of Recovery Sectors

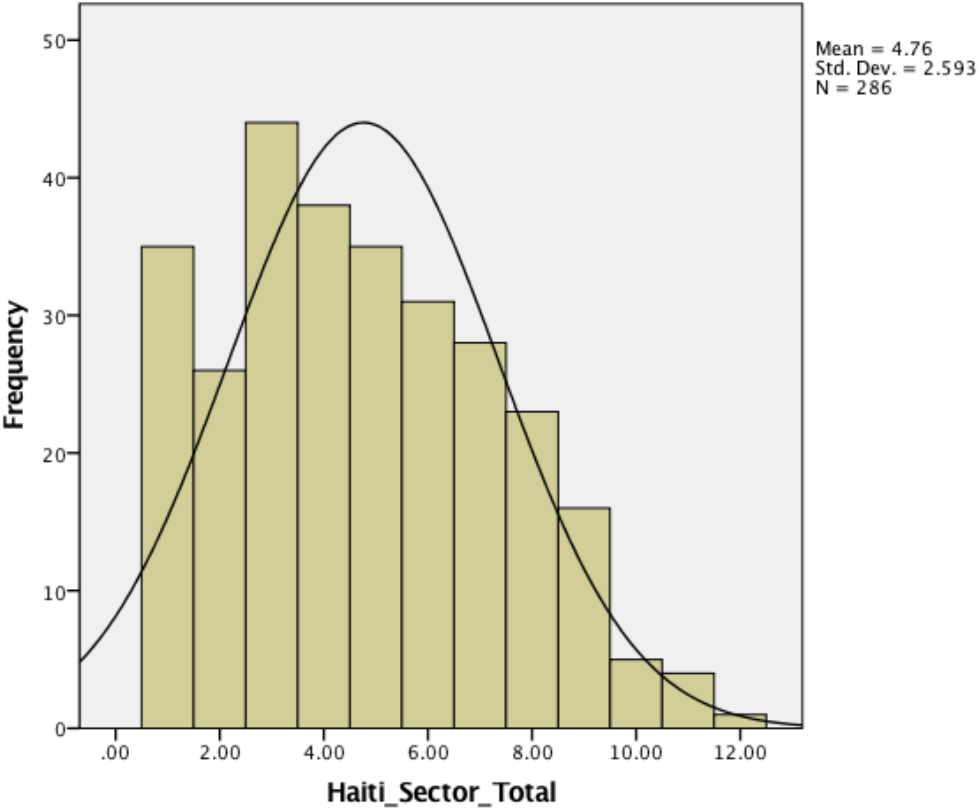


Figure M.13 Organization Founders: Haitian (Haitians in Haiti)

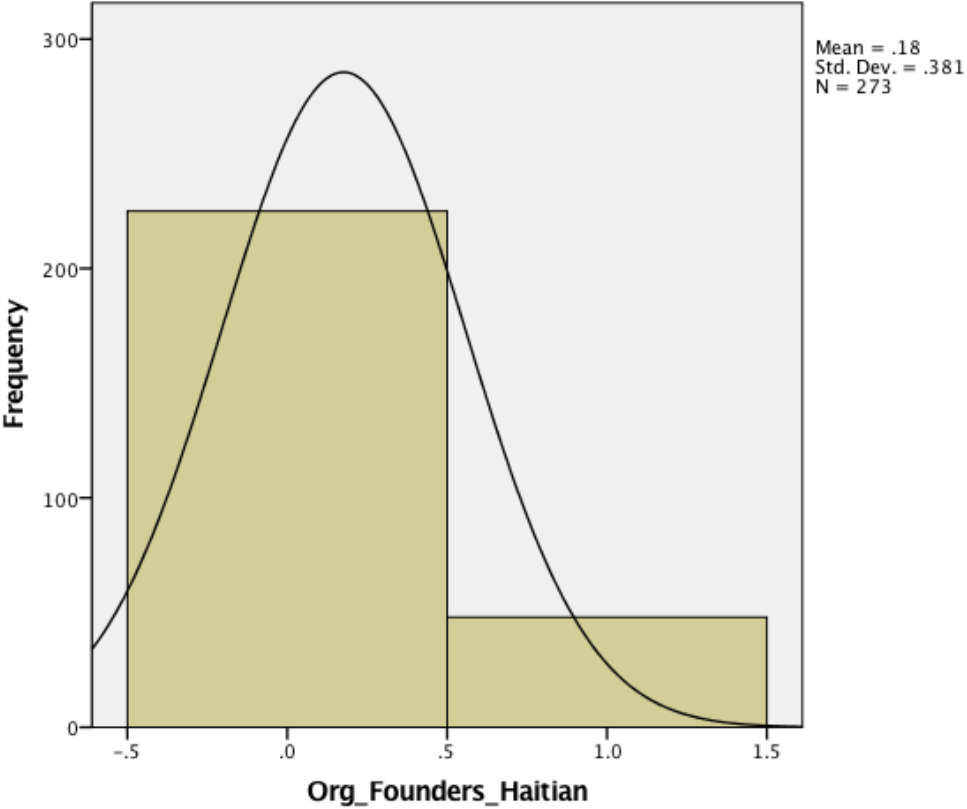


Figure M.14 Organization Founders: Diaspora (Haitians outside of Haiti)

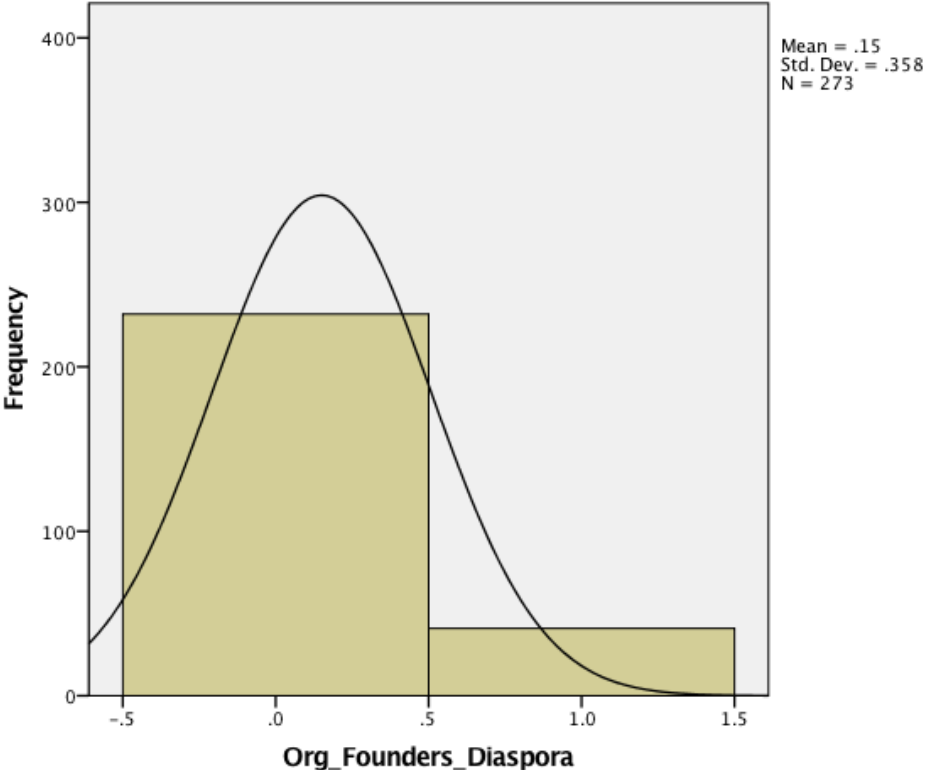


Figure M.15 Percentage of Haitian Board of Directors

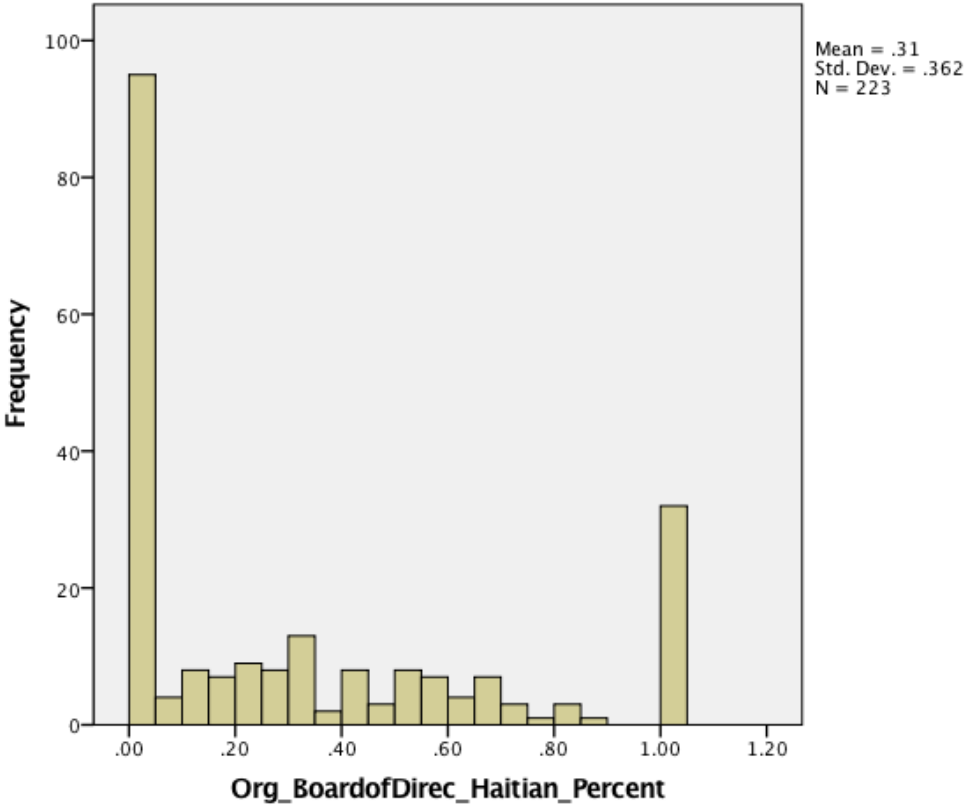
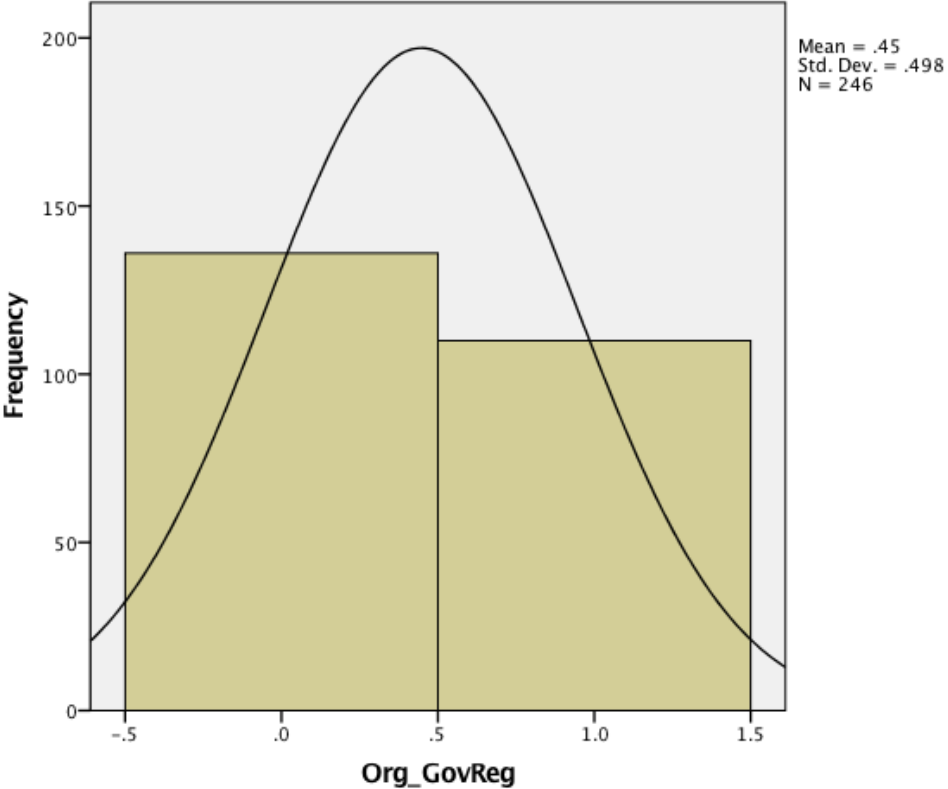


Figure M.16 Government Registry



Descriptive Statistics for Study Variables after Transformations

Variable	n	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
Annual Budget (log)	208	2.40	7.00	5.03	.999	-.851	.934
Employees: Haitian (log)	273	-.30	2.64	.770	.835	.188	-1.007
Employees Non-Haitian (log)	271	-.30	3.00	.377	.790	1.208	1.042
Organization Age (log)	292	.18	2.08	1.179	.366	.195	-.504

APPENDIX N. Regression Results for Alternative Participation Measures

Dependent Variable	CAP		General Participation (single question)		General Participation (multiple project areas)		Arnstein Participation	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE
<u>Independent Variables</u>								
Annual Budget ⁺	-.787	.577	.192	.123	1.563	1.727	1.054	1.210
Employees: Haitian ⁺	-1.325 [^]	.732	-.143	.155	-.566	2.171	-.889	1.448
Employees: Non-Haitian ⁺	.357	.786	.170	.163	.752	2.296	-.461	1.654
Organization Age ⁺	-.269	1.520	-.113	.325	-1.437	4.490	-1.352	2.995
Collaboration Level	.743*	.319	.079	.065	.841	.915	-.259	.605
Post-disaster Recovery Experience	.270	1.174	.240	.245	.909	3.471	.526	2.327
Number of Recovery Sectors	.719***	.193	.076 [^]	.041	1.635**	.571	1.013**	.387
Founders: Haitian	2.016	1.443	.277	.307	3.063	4.303	.102	2.821
Founders: Diaspora	3.190*	1.481	.202	.308	9.838*	4.313	.763	2.805
Board of Directors: Haitian	-3.032	1.750	-.176	.367	-5.698	5.155	-9.33	3.390
Government Registry	-.435	1.069	.325	.224	2.888	3.142	1.175	2.113
		R ² = .216	R ² = .122	R ² = .124			R ² = .055	
		F = 3.582***	F = 1.890	F = 1.930*			F = .757	
		n = 155	n = 161	n = 161			n = 154	

Notes: ⁺Logged for positive Skewness *p = 0.05, **p=0.01, ***p=0.001, [^]p=.10

APPENDIX O. Definitions

Animator	Haitian project leaders They technically serve as "hosts" to the people doing work, advising them, getting them energized, and helping them accomplish the work in an ordered manner. The word <i>animatè</i> in French means to animate, in English to energize and in Kreyòl to host. Therefore, the use of the word animator for the project leaders functions as both a title and a description of what they do.
Chef d'equipe	Haitian team leader.
Lakou	A small community consisting of 2-3 houses that are built close together. People in lakous are often related to each other and have shared access to land.
Return on Donation (ROD)	The term return on donation refers to what the organization is able to do with donated funds. The organization explained that the phrase was adapted from the return on investment (ROI) terminology frequently used in regards to business operations.
Structural insulated panels (SIP)	High performance building system typically used in residential and commercial construction.