2019

Reconceptualizing Responsiveness for Network Governance: Insights from Cross-Sector Efforts to Assist the Displaced Population From Puerto Rico in Central Florida

Safiya Prysmakova
University of Central Florida

RECONCEPTUALIZING RESPONSIVENESS FOR NETWORK GOVERNANCE: INSIGHTS FROM CROSS-SECTOR EFFORTS TO ASSIST THE DISPLACED POPULATION FROM PUERTO RICO IN CENTRAL FLORIDA

by

SAFIYA PRYSMAKOVA
B.A. Stanislaw Staszic School of Public Administration, 2013
M.A. University of Warsaw, 2015

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the Doctoral Program in Public Affairs
in the College of Community Innovation and Education
at the University of Central Florida
Orlando, Florida

Fall Term
2019

Major Professor: Thomas A. Bryer

ABSTRACT

This study further expands current knowledge on responsiveness in the public administration field and examines factors that contribute to more responsive public service delivery networks. This research reconceptualized the concept of responsiveness under the lens of New Public Governance as a legitimate democratic public value and answered the following research questions: What constructs constitute to the concept of public service responsiveness? How can public service responsiveness be measured at the network level? Does the complexity of public service provision affect perceived public service network responsiveness? How do collaborative processes across network partners, community support, and resource munificence affect the responsiveness of public delivery networks? The study utilized a multi-method case study approach. The case of the study is focused on the cross-sector efforts in response to the crisis, caused by the massive displacement of the Puerto Rican population to Central Florida after Hurricane Maria. The data was collected using surveys administrated to the displaced population, and interviews conducted with the managers of service delivery organizations. Using quantitative methods, this study developed a valid and reliable model for measuring perceived public service network responsiveness, which is built on the constructs that include the sufficiency of service provision, dignity, clarity of communication and public engagement. The findings suggested that the displaced population that sought a higher number of low complexity services had a more negative perception of public service network responsiveness. The study suggested that negative perception in low complexity service provision can be caused by the low capability of the public service system and low level of public input, and can be characterized as “consumeristic” approach. The qualitative findings showed that collaborative processes can affect the responsiveness of public service networks. Increased community support proved to be a positive factor for public service network responsiveness, while a lack of flexible funding is a negative factor for public service network responsiveness.

Keywords: responsiveness, public value, network governance, public service delivery

This dissertation is dedicated to my academic advisor Thomas A. Bryer, for his unique ability to inspire genuine empowerment, my husband, David Rivera, who encourages me to pursue my dreams and my family for their endless love and support.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1 Context of the Study

Forced migration is a rapidly growing problem around the globe. In the past, most people fled their home countries to escape wars, seek new economic opportunities, or reunify with families, nowadays more and more people are forced to leave their homes after the massive destructions caused by natural disasters (Durkova et al. 2012). Forced migration is a process by which individuals leave their permanent place or country of residence due to social, economic, or political reasons. Forced migration is a wicked problem that requires multidimensional solutions. Wicked problems are unstructured problems, occurring on different levels of hierarchy and within and between organizations throughout various political and administrative divisions (Rittel, & Webber, 1973; Weber & Khademian, 2008). Forced migration is a simultaneously global, national, and local problem in its dimension. The integration of displaced immigrants is shaped by imbalances of political and economic powers, societal perceptions, and the abilities of immigrants to assimilate to the new host communities. With the changing political environment, immigrants become a target of political oppression, incarceration, drug tests and background checks, which are common tools that are used on people who look or behave like "others" (Bosworth, & Turnbull, 2014; Ewing et al., 2015).

In 1996, Myer noticed that the number of environmental refugees fleeing natural disasters might be exceeding political or economic refugees, who are unable or unwilling to stay at their home country due to the political persecutions or lack of economic opportunities. According to the American Association for the Advancement of Science (AAAS), in the next few years, the number of environmental refugees will reach over 50 million worldwide (cited in Miller, 2013, p.280). Academic literature has shown that there is a correlation between current climate change and increased number and intensity of natural disasters, especially hurricanes (Knutson, Tuleya, & Kurihara, 1998; Holland, & Bruyere, 2014; Shuckburgh, Mitchell, & Stott 2017). Karl, Melillo, and Peterson (2009) claim that "likely future changes for the United States and surrounding coastal waters include more intense hurricanes with related increases in wind, rain, and storm surges (but not necessarily an increase in the number of these storms that make landfall), as well as drier conditions in the Southwest and Caribbean" (p. 1). Florida, which is vulnerable to hurricanes, is neighboring with the Caribbean Islands, which represent one of the highest natural disasters risk areas in the world (Kreft, Eckstein, & Melchior, 2017). The United States is among 20 countries worldwide with the highest level of natural disaster displacements from 2008 to 2015 (Yonetani, 2015). According to the Internal Displacement Monitoring Center (IDMC) (2017, 2018), there have been approximately 1,107,000 internal displacement-by-disaster cases in the United States in 2016, and around 1,686,000 individuals in 2017. In 2017, significant disasters in the U.S. included the Oroville Dam release flood, which resulted in 190,000 Internally Displaces Persons (IDPs), hurricane Irma that accounted for 202,000 IDPs, and tropical cyclone Harvey, which led to 848,000 IDPs (IDMC, 2018).

On September 20, 2017, Hurricane Maria forced hundreds of thousands of Puerto Ricans to flee their home island, as they were left without access to clean drinking water and electricity, housing, jobs, healthcare, and education. In 2018, hundreds of thousands of Puerto Ricans resettled in Florida, with the Orlando Metropolitan Area as the primary destination. There is no exact number of Puerto Ricans who arrived in Florida after Hurricane Maria. However, the approximate number of Puerto Ricans displaced who may be coming to Florida is over 300,000, according to federal and state agencies (Respaut, & Baez. *Reuters*. January 12, 2018; *The Washington Post*, January 19, 2018). At the same time, CNN reported about 200,000 passengers left Puerto Rico by air (Sutter, & Hernandez, 2018). The Disaster Relief Center, established at the Orlando International Airport, has provided support to more than 28,000 individuals, among them 6,000 arrived on a direct flight from Puerto Rico (Orlando International Airport Press, May 2018). In their recent study, Scaramutti et al. (2019) suggest, that individuals who relocated to Central Florida struggled more to adjust and suffered from more depression than in South Florida (Scaramutti et al., 2019).

Numerous federal, state and local agencies together with businesses and nonprofit organizations were involved in Puerto Ricans resettlement. The critical public services that have been identified in the media included housing, education, healthcare, and employment (Orlando International Airport Press, May 2018; City of Orlando, 2018; Delgadillo, N. *Governing*, December 1, 2017). The major organizations that participated in the assistance to the displaced Puerto Rican individuals include the Federal Emergency Management Agency (FEMA), Florida Division of Emergency Management, the Puerto Rico Federal Affairs Administration, the Office of First Lady of Puerto Rico, the Hispanic Federation, Latino Leadership, CASA, Heart of Florida United Way, and American Red Cross. Orlando metro area universities and colleges created programs for educational assistance for students. Local nonprofit agencies put their efforts into helping with a great variety of services for Puerto Rican families.

Lack of access to essential services leaves displaced populations isolated from the rest of the society and prohibits their successful resettlement (Siemiatycki, 2012). Lack of transportation and information about the services in host communities, lack of language abilities and community support very often leaves the displaced population at the edge of deep poverty or homelessness (Pleace, 2010). The landscape of exclusion is exacerbated when municipalities' policies and local service delivery systems' processes are unresponsive to the distinct needs of diverse communities (Siemiatycki, 2012). The resettlement and integration of forced immigrants do not assume only material integration, such as a job or housing acquisition. It is also about democratic, cultural, and religious integration and civic engagement in the new place of residence.

A similar situation was observed with Puerto Rican evacuees in Central Florida. Puerto Ricans were forced to leave their hometowns after Hurricane Maria. The majority of evacuees moved to Central Florida (Orlando International Airport Press, 2018; City of Orlando, 2018). The federal government provided displaced individuals with housing vouchers, expecting other local organization to assist the displaced population with a permanent place of residence and employment. However, as previously suggested, a potential lack of service integration and service accessibility could have made evacuees unable to meet their essential needs and leave them at the edge of homelessness as soon as housing vouchers expired. As the scale and number of disasters are increasing, there is a high need to understand to what extent local service provider networks are responsive to the needs of the evacuees and how the crisis context, in which public service delivery occurred, determines that responsiveness level.

1.2 Statement of the Study Problem

To date, most studies tended to examine responsiveness in terms of efficiency in handling public concerns. There has not been sufficient research in the public administration field that empirically tested the concept of responsiveness as a legitimate democratic public value existing between the public service systems and the public and applied it to various contexts. Healthcare is the only field up to this date where there has been an attempt to examine the responsiveness of whole healthcare systems to patients while focusing not only on the notions of efficiency and prompt attention but also dignity, patients' autonomy and provision of social need (Smith, & Papanicolas, 2013). If we could create a measurement for the concept of responsiveness of public services networks, which is built on the constructs that include not only efficiency in service provision but also democratic values such as dignity, clarity of communication and public engagement, it would be helpful to know how collaboration within public service networks and complexity of public services issues can affect that responsiveness level. This can potentially help to find causes for a particular public service network responsiveness level, understand which collaborative practices lead to a higher or lower responsiveness level, and be prepared to recognize and balance the effects of various contexts on the public service network responsiveness level.

1.3 Aim and Scope of the Study

The purpose of the study is to further extend current knowledge on responsiveness and to identify factors that contribute to more responsive public service delivery networks. Limits of the research are noted from the start. This study focuses on the crisis management case of the displaced Puerto Rican population in the Orlando area, following Hurricane Maria. There is a need to understand that different types of crises would vary in a scale of the event, the involvement of critical actors and require different kinds of resources mobilized. A crisis environment can affect the nature of collaborative relationships due to an urgent need in the mobilization of resources and community support. The study assumes that Puerto Rican evacuees' resettlement situation in the Orlando Metropolitan Area is a crisis management issue, which differs in systematic stability, resource munificence, and community support from an emergency or routine public service management. The literature supports that assumption (Farazmand, 2001; Pauchant & Mitroff, 1992; Shaluf, 2003; Al-Dahash et al., 2016). At the same time, this study suggests that the concept of responsiveness is a universal legitimate public value that should and must be exercised in any crisis or routine service provision. In other words, while the emphasis is on one case, the study helps to broaden understanding on how public service delivery systems can be more responsive to the public in the future crises or routine service delivery.

The study is focused on the local public service delivery network, which formally and informally emerged during the crisis response, and is limited to the most active local organizations that have been identified by the evacuees and other local organizations. The study does not include private sector organizations, or other government or nonprofit organizations that assisted the evacuees as other clients as a part of their routine service.

Finally, this study considers the responsiveness as a process measurement, that seeks to understand to what extent the network of organizations is responsive while assisting the public in meeting their needs, contrary to the literature that measures responsiveness as an extent to which the needs are met, or as the level of satisfaction with the services. The difference between these concepts and justification for the choice is explained in-depth in the literature review chapter of this study.

1.4 The Significance of the Study

The study builds upon the academic literature and makes several contributions. First, the research advances theoretical knowledge on the concept of responsiveness. Few studies reconsidered the concept of responsiveness under the lenses of new public governance and have contradictory arguments (Vigoda 2002; Van den Dool, & Van den Dool, 2005; Farazmand, 2004; Bryer, 2006; Thomas, 2013, Goldsmith, & Crawford, 2014; Liao, 2018). These arguments are further compared and contrasted in the literature review chapter. In his framework of interactions continuum between administration citizens, Vigoda (2002) claims that responsiveness contradicts the nature of collaboration. Responsiveness views citizens as clients, while in collaboration, citizens are partners (ibid.). The current study argues that responsiveness exists at each level of government-citizens or public service organization-citizen relationship but takes different forms. Responsiveness exists and must exist despite the role that government or public service organization and citizens play in their interactions: direct service providers and clients; partners; co-governors or co-producers.

Second, there is a lack of empirical studies that examined the responsiveness of public service systems to its public as a network-level measurement. In his responsiveness theory review, Yang (2007), was the first to ask: “Are the partnerships or networks responsive to the public interest?” (p. 136). Koliba (2011) added that there is a need to examine the governance network as a unit of analysis. This study introduces the concept of public service network responsiveness, defined as a network process that involves the actions of organizational participants collectively through their established service delivery system, and can be evaluated through the perspective of clients, principals and agents (Turrini, 2010; Provan, & Kennis, 2008; Provan, & Milward, 2001).

Third, the literature suggests that there is a gap in research that analyzes networks in different contexts and environments (Cross, Newman-Gonchar, & Fagan, 2009; Provan, & Milward, 2001). This study validates the responsiveness concept applying it in the crisis management setting and examines how specific context characteristics, such as complexity of public service provision, level of collaboration, resource munificence, community support, affect the public service network responsiveness.

Finally the timing of this study allows local organizations in the Orlando area to analyze their response to the recent crisis, it also creates a framework for examination crises responses in other jurisdictions, helps to facilitate a dialog across local partners that can potentially clarify the roles for the crisis response, trigger development of partnerships that strengthen community capacity and responsiveness for the future crisis and routine service delivery processes.

1.5 Research Questions

The study answers the following research questions, the components of which are expounded in the following pages:

1. What constructs constitute to the concept of public service responsiveness to measure the concept at the network level?
2. Does the complexity of public service provision affect perceived public service network responsiveness?
3. How do collaborative processes across network partners, community support, and resource munificence affect the responsiveness of public delivery networks?

1.6 Overview of the Study

This study is organized into six chapters. The first chapter identified the need to study the responsiveness of public service networks, introduced the context and scope of the research, and stipulated the research questions. Chapter 2 discusses the theoretical underpinnings of public service responsiveness as a public value. It reviews further the literature that helps to develop a conceptual framework for measuring public service network responsiveness and identifies factors that may impact the responsiveness of public service networks. Chapter 3 explains the research methodology and design, presents variables, sampling techniques, data collection, and analysis methods. Chapter 4 presents the analysis and results, first, for the quantitative part, and then for the qualitative part of the study. Chapter 5 integrates findings from the quantitative and qualitative components into a comprehensive discussion. Chapter 6 draws theoretical and practical implications from the discussion. Finally, the study sets the agenda for future research.

CHAPTER 2: THEORETICAL FRAMEWORK

This chapter begins by explaining the choice of a normative theoretical approach which guides this study. It reviews the literature related to responsiveness as a networked public value. Then, it revisits the concept of responsiveness under the lens of New Governance and develops a comprehensive measurement to analyze public service responsiveness at the network level. Finally, it explores contextual factors associated with public service network responsiveness. It establishes a conceptual framework that proposes an examination of the effects of the complexity of public service provision, level of collaboration, community support, and resources munificence on public service network responsiveness.

2.1 Normative theory

"Values, like facts, are stubborn things."

Larimer and Smith, 2009, p.14

It is easy to agree that we do not live in a value-free world. However, scientific inquiry in the public administration field often underestimates the role of values (Smith, & Larimer, 2009). Public policies or programs analyzed from the technocratic approach can be frustrating, especially to those scholars and public who eulogize the values of democracy (ibid., p. 14). Normative theory is a social science theory that "explicitly pronounce on what is good, just and desirable" (Bruce, & Yearley, 2006).

In contrast to positive theories, which seek to examine the world and explain how it works in a values-free way, the perspective of normative theories is based on values, about what policies, programs, actions ought to be like or how they ought to work (Velasquez, 2007). Normative theory is a social science theory that “explicitly pronounce on what is good, just and desirable” (Bruce, & Yearley, 2006). It can be descriptive, prescriptive, or proscriptive. The descriptive approach examines whether actions or decisions diverge from normative standards by finding out errors, while prescriptive approach concentrates on the positive outcomes to help to make decisions or take steps in accordance to the normative standards and suggest the ways to overcome biases or errors. The proscriptive approach suggests what ones should not do, focusing on negative outcomes of deviation from the norms (Janoff-Bulman, Sheikh, & Hepp, 2009).

According to Meyer (1995), normative factors are the nature of public administration. The normative analysis helps to understand if the process, output or outcome is genuinely democratic, which cannot be found in a research inquiry that assumes an independent value-free world. Normative factors help to guide personnel in setting priorities and making and implementing decisions to achieve goals. However, understanding the complex world of public administration through normative frameworks is not easy. Sometimes normative choices, “more unpleasant, more dangerous, and less officially successful in an effort to respond to the needs of individuals,” can substitute the pragmatic judgments and face criticism by those who hold formal and legitimate authority (Larimer, & Smith, 2009, p.189). Furthermore, in contrast to rationalists’ approach, which equates market values with democratic ones, the normative post-positivist inquiry is judged by both scientific and democratic values (ibid.). Jorgensen and Bozeman (2007) support that advancing public value research is a challenging task, but even pushing the research incrementally can trigger many other theory developments and practical purposes.

Mutuality is a primary underlying value in normative theory, which takes its origin from the relations between individuals and organizations (Frederickson et al. 2012). “The idea of social justice is the logical extension of mutuality applied to social collectivities and should, therefore, be regarded as the normative premise underlying “aggregate” policy decisions made by and implemented through public organizations” (Harmon, 1981, p.84). Marume and colleagues (2016) suggests that public administration scholarship is in need of theories, that not only focus on predicting probable events, but also on how we can better integrate and sustain social values and norms during these events, how entities across sectors, civil society, and the public, make valid and appropriate decisions that enhance and enlarge societal values and norms.

2.2 Theory of Networked Public Values

“There is no more important research in public administration and policy than public values” (Jorgensen and Bozeman, 2007, p.355). The public value, a concept first coined by Mark Moore in 1995, is increasingly recognized by the public, policymakers, administrators, and scholars (Stoker, 2006). There is no single definition of what public value is, but as the starting point, the public values should be understood as something more than the collective needs and wants of citizenry and producers of public services and goods (Stoker, 2006; Alford, & Hughes, 2008). The public value is the value that is collectively built “through deliberation involving elected and appointed government officials and key stakeholders” (Stoker, 2006, p.42), and should be differentiated from guiding processes principals. The principals, which "are the laws of the universe that pertain to human relationships and human organizations," consist of values, that are “internal and subjective” (Covey, 1990, p.18-19, as cited in Kernaghan, 2003, p. 712). The function of the public values is to meaningfully connect the public to organizational processes, and thus, enhance the effectiveness of organizational systems. “both elected officials and public managers are charged with creating public value so that what the public most cares about is addressed effectively and what is good for the public is pursued" (Bryson, Crossby, & Bloomberg 2014 p. 448).

There has been little progress in research on public values in recent times, especially since the shift from traditional public administration approach to more market-oriented approaches. Most of the public value research has been focusing on identifying and categorizing public values. For example, Jorgensen and Bozeman (2007) identify and differentiate among public values existing in various settings or as the authors called "constellations": public sector' contribution to society; transformation of interests to decisions, relationship between administrators and politicians; relationship between public administrators and their environment; intraorganizational aspects of public administrations, behavior of public sector employees, relationship between public administration and the citizens. Kernaghan (2003) conceptualizes values as subsets, including democratic values, ethical values, professional values, and people values (p. 712). The scholars agree that some values can fall under different categories. They also similarly suggested that public values in each constellation or subgroup can complete or confront one another, for example, the rule of law and citizen involvement. Rutgers (2008) further distinguishes between the hard values, which focus on economy, effectiveness, and efficiency, and the soft values, that are liberty, equality, social equity, and social justice. Values can occur at the individual and personal level and organizational or systems level.

The last constellation, which defines the relationship between public administration and citizens, has undergone a major transformation in the past two decades and is of particular interest to the current research. The authors draw a distinction between four value sets that define the relationship between public administration and the public: legality, equity, dialogue, and user orientation. Each of these sets consists of subgroups. Legality includes protection of rights of the individual, equal treatment, rule of law and justice. Reasonableness, fairness, and professionalism constitute equity. User orientation consists of timeliness and friendliness. Finally, a dialogue is the last subgroup that adheres the idea that the public "learns and develops through contact with the public sector" (p.369). This subgroup includes such values as responsiveness, and its neighbor values: user democracy, citizen involvement, and citizen's self-development (Jorgensen, & Bozeman, 2007). Public administration that adheres to these values becomes a channel for citizen democratic input.

Although network theory developed quite recently, Harmon (1981) started to question the ways to integrate normative values in "social collectivities" in the 1980s and suggested the need for a theory that nowadays can be best presented by network theory. "How to strengthen the natural bonds among people so as to promote a kind of social order that enables, more than it constrains through domination, acts of individual freedom, and social cooperation." (Harmon, 1981, p. 83). Network theory examines relationships that occur among individuals as well as across organizations. Network theory suggests that strong network ties, built on trusting relationships, contribute to organizational density in communities, which enhance communities' cohesion and resilience towards complex social issues (Sampson, 2012). Successful political steering for the long-term development of communities involves partnerships with organizations across sectors, as well as the inclusion of citizen and non-citizen populations in community planning and service implementation. Open democratic processes such as community meetings, deliberative processes, joint advocacy, and learning, lead to safety and development of mutual trust among the public.

More recent studies concluded that the concept of public value has been reformulated under the emergence of new management and governance practices in the public sector (Stoker, 2006; Alford, & Hughes, 2008; Benington, 2011). Networked community governance has revisited responsibility for public value creation from relying solely on the public sector to given more recognition to the legitimacy of private and nonprofit sectors, civil society and citizenry (Stoker, 2006). Stakeholders from all spheres should commit and provide necessary resources for shared public values creation (Benington, 2011). Public value action should be analyzed vertically, horizontally and diagonally across various sectors, levels of government, between different services, between various professions, between political and managerial and civic leadership and processes, between strategic management, operational management and frontline delivery, and finally between producers and users of services (Bennington, 2011, p.15). Among new academic and practitioner functions of public values is the interpretation of new complex relationships in networks, shaping new paradigms for public management and also assisting practitioners in understating and finding ways to manage new challenges and contradictions (Stoker, 2006, p.30).

The public value research is inherently normative. Rather than analyzing what is happening, often taken for granted such values like democracy and legality, the public value scholars should pay more attention to what ought to be in accordance to these values (Jorgensen, and Rutgers, 2015; Smith and Larimer, 2009). Public administration and policy research are about "establishing, following and realizing public values, so we should take them as a starting point rather than as a marginal consideration" (Jorgensen, and Rutgers, 2015 p.4). This study adheres to this normative approach in studying public values, which focuses on understanding how intraorganizational and interorganizational processes are guided by public values and how they can be created and sustained within organizations or systems.

2.3 Responsiveness as a Networked Public Value

Jorgensen and Rutgers (2014) suggest that transformations constantly occurring in public values are not easily detected. New values do not crowd out the old ones, but they increase the value intensity. Responsiveness, as a public value, has undergone a revolution during the shift from the government paradigm to the paradigm of governance. Under Jorgensen and Bozeman public value typology, responsiveness is a value that explains the relationships between public administration and the environment (openness-secrecy values subset), the public (dialog values subset), and politicians (political loyalty subset). Responsiveness went through the transformation from being the hard value with the focus on efficiency in meeting the need of citizens to the soft value by involving democratic practices (Rutgers, 2008). Table 2.1 further illustrates the main changes in the responsiveness concept occurred during this shift in relation to the public administration-public relationship. Therefore, the modern responsiveness concept combines traditions of traditional public management, with the focus on efficiency, new public management, treat the public as consumers, and new public governance, ensuring democratic values.

Since the publication of "Governance without Government: Order and Change in World Politics," written by Rosenau (1992), there have been a large number of studies that established the differentiation between the paradigms of government and governance (e.g., Salamon, 2002; Borras; 2003; Mayntz, 2003; Crawford, & Helm, 2009). In fact, both paradigms represent a system of government regulatory mechanisms through which power is exercised and both aim to preserve the unity of a political system and the implementation of socio-political goals. As the government is shifting from the vertical structures, to the horizontal models of governance, there is a shift in the understanding of the concept of responsiveness as well as the ways responsiveness is exercised in every day public service practices.

Table 2.1 From Government Responsiveness to Responsive Governance

Factors	Government responsiveness	Responsive Governance
Goal	Meeting the needs of the public	Improvement of a quality of interactions between service delivery organizations and the public
Implementation	Unidirectional administrative response specific citizen demands	Response of all actors related to a problem of governance by empowering, enabling and engaging
Principle	Expert- or public-oriented approach	Governance-oriented approach
Role of the Public	Customers	Citizens, partners, coproducers, cogovernors
Criteria for success	*Outcome:* Amount and nature of the administrative response to citizens; Administrative performance control factor	*Process:* Extent towards institutions and processes serve all stakeholders; Individual, Organizational and Network levels

The government paradigm has been formed in the traditional public administration theory of bureaucracy. As in Weber's ideal type of bureaucracy, the concept of government is associated with a high level of specialization; clearly defined hierarchy of authority and lines of responsibility; management, based on the rules that help to achieve goals most efficiently (Salamon, 2002). Under the lenses of *"government paradigm," responsiveness* is the amount and nature of the unidirectional administrative response to citizens' concerns and needs. The evaluation of the "government responsiveness" takes the form of the expert or customer-oriented approach and is one of the primary indicators of administrative performance.

The paradigm of governance means the exercise of power. And "having the power" is to have recognition on the part of those to whom this power is distributed (Salamon, 2002). Theory of democracy assumes participation of mass public with diverse views and interests of stakeholders in rule-making and decision-making processes. In this situation, "governance-oriented responsiveness" defines a continuous process in which all institutions and processes serve all stakeholders within a reasonable timeframe (Van den Dool, &Van Den Dool, 2005; Van Monfort et al., 2014). *Responsive governance* is a response of individuals, organizations and whole networks to a problem of governance, through empowerment, enablement, and engagement (Perry, 1991; Farazmand, 2004; Vincent-Jones, 2006; Goldsmith, & Crawford, 2014).

Few studies reconsidered the concept of public service responsiveness under the lenses of new public governance and have contradictory arguments (Vigoda 2002; Van den Dool, & Van den Dool, 2005; Farazmand, 2004; Bryer, 2007; Thomas, 2013, Goldsmith, & Crawford, 2014; Liao, 2018). In his framework of interactions continuum between administration citizens, Vigoda (2002) claims that responsiveness contradicts the nature of collaboration. In his view, responsiveness views citizens as clients, while in collaboration citizens are partners (Ibid.). The current study suggests that responsiveness exists at each level of relationship between the government or other public service delivery organization and the public. However, it takes different forms. Responsiveness exists and must exist despite the role that public service delivery organization and citizens play in their interactions: direct service providers and clients; partners; co-governors or co-producers. It is the main function and purpose of government to serve its public and be responsive, as so for other public service providers.

> People must come to recognize that government is responsive – and that won't happen unless the government is responsive. People must come to recognize that government exists to meet their needs – and that won't happen unless it does (Denhardt, & Denhardt, 2000, p. 555).

This study differentiates between three responsiveness approaches: expert-oriented, public-oriented, and governance-oriented. Figure 2.2. graphically summarizes the manner in which responsiveness can be reconceptualized throughout the literature review. The first *expert-oriented approach*, also called bureaucratic by Saltzstein (1992), purposive by Bryer (2007), expert-driven by Liao (2018), prioritize professional expertise over the narrow interest and demands of the citizen. This is a rationalist approach, when "efficiency trumps equity" and a technocratic elite have more power in decision making than the public (Smith, & Larimer, 2009, p. 121).

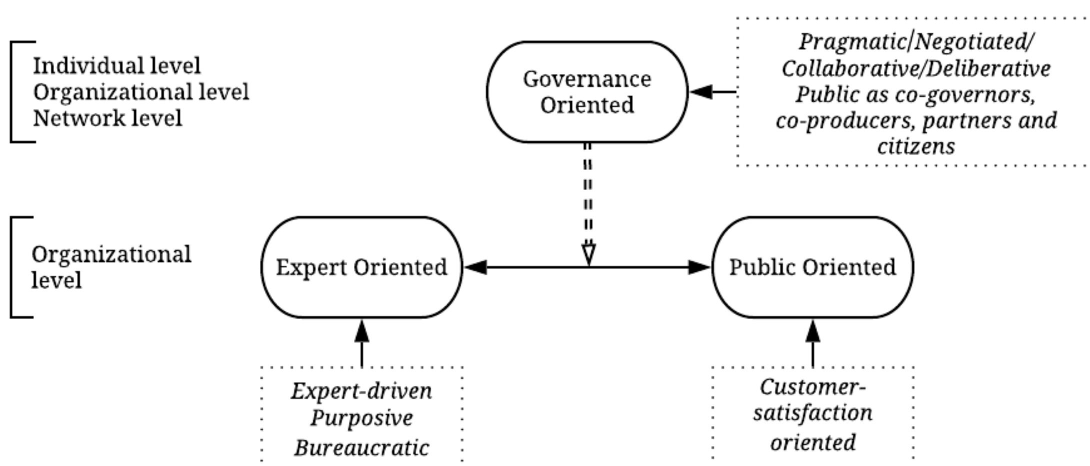

Figure 2.1: Public Service Responsiveness: Theoretical Framework.

The second is a *public-oriented approach*, which "argues that public administrators should fulfill their democratic responsibilities by faithfully carrying out citizen demands" (Liao, 2018, p. 2). It assumes providing high-quality services to satisfy customers' values (Thomas, 2013). Bryer (2007) also calls this approach entrepreneurial, suggesting that "administrators in this environment are encouraged to take risks; they are empowered to do what is necessary to empower customers to get what they want from the government" (p.486). Citizens-oriented responsiveness must understand and recognize the cultural and demographic background of the citizens.

Third, *governance-oriented approach* mitigates the tension between the expert and individual-driven approaches to public service responsiveness and based on the consensus between stakeholders. This approach recognizes service delivery through cross-sector partnerships. The role of the government is to be a negotiator, collaborator among citizens and community groups (Denhardt, & Denhardt, 2000). It views the public as actively civically engaged citizens in political and decision-making processes to address larger community needs (Vincent-Jones, 2006; Thomas, 2013). It recognizes the public as partners that co-govern and coproduce public goods for the community (Yang, 2007). Bryer (2007) calls this approach as deliberative and distinguishes collaborative and negotiated types, based on responding to stakeholders' collaborative consensus and negotiated rulemaking accordingly.

While expert- and public-oriented responsiveness approaches occur at the organizational level and focus on meeting specific citizen demands, governance approach appears on the individual, organizational, and network levels and concentrate on the problem of governance. There is a high need to examine governance-oriented responsiveness at all three levels. Are citizens responsive to the problem of governance? Are organizations responsive to the problem of governance? Are networks responsive to the problem of governance? There is a lack of empirical studies that examined the responsiveness of service delivery networks to citizens as a network measurement. In his responsiveness theory review, Yang (2007), was the first to ask: “Are the partnerships or networks responsive to the public interest?” (p. 136). Koliba (2011) added that there is a need to examine the governance network as a unit of analysis.

Given that a growing amount of literature focuses on what is happening within the networks, and how network structures and processes affect network outcomes (e.g., Weiner et al., 1998; Provan, & Sebastian, 1998; Mitchell et al., 2000; Agranoff, 2003; Juenke, 2005; Mandel, & Keast, 2007), the actual implementation process of networks from a value-driven perspective remains under-researched. Denhardt and Catlaw (2014) argue that there is a high need to evaluate the quality of ongoing interactions between people and the environment. The authors give an example of two issues – justice and freedom – that cannot be defined by some substantive ends, but rather by the extent to which procedures are driven by democratic values. Yang and Holzer (2006) noticed that responsiveness is an important performance aspect; however, it is often neglected in performance management efforts. Drawing upon the normative and public value literature, this study argues that responsiveness is not a performance outcome, but rather a measure that evaluates the value of interaction between the organizations or networks of organizations and the public. Sharp (1981) suggests that responsiveness is best conceptualized as a process rather than an outcome. Network responsiveness to the public can depend on the processes, structures, and capacities of the networks, but it can also have an impact on the overall network effectiveness and performance measurements.

Following Provan and Milward's (2001) framework for evaluating successes and failures of networks; network responsiveness to the public can be evaluated at the organizational, service delivery organizations, or participant level perspective. Different organizations engaged in collaborative networks have different views on measuring networks' successes or failures. The literature on network evaluation suggests that assessment criteria of networks are "an element of value and not a fact" (Raab et al. 2013, p.484). Assessment criteria should include the interest of the researchers and one or several stakeholders involved in the network (Raab et al., 2013). "The goal of most public networks is to enhance client services through improved access, utilization, responsiveness, and integration, while maintaining or reducing costs" (Provan, & Milward, 2001, p.416). This study focuses on the responsiveness of the public service networks to the displaced Puerto Rican population, which is the point of interest of the researcher and stakeholders involved in direct service delivery during the crisis response.

The study also offers a unique perspective by bringing together organizational and participant level perceptions on network responsiveness. Provan and Milward (2001) suggest that networks can be evaluated by three stakeholder groups: "principals, who monitor and fund the network and its activities; who work in the network both as administrators and service-level professionals; and clients, who actually receive the services provided by the network" (p. 416). Their study recognizes that agents can take the role of principals while delivering services. Therefore, networks can be analyzed at the community level, which includes principals and clients' perspectives on whole network performance; at network level among organizations, including the perspective of principals and agents; and, finally, at organizational or participant level, examined by agents and clients' perspective. As Melkas and Harmaakorpi (2011) suggest "public sector service delivery networks must be built and maintained at organizational and network level, but their overall network effectiveness will ultimately be judged by community-level stakeholders" (p.373).

Studying responsiveness of public service networks in mitigating complex societal problems is critical. While agencies remain autonomous actors and may provide multiple services or focus only on the niche services within networks, they should still work together to improve the responsiveness to the public needs. "While not all clients will need all components offered, clients with multiple requirements can receive a variety of services from the network" (Provan, & Milward, 1991, p. 394). Therefore, responsiveness does not mean that the needs will be met (Sharp, 1981). Responsive public service networks allow clients to "enter the system at any point and have access to the system as a whole" (Provan, & Milward, 1991, p. 394), ensures easy access to the critical resources within the network to address their maximum needs. Due to the flexibility of networks, lack of formally established responsibilities, and constantly changing environment that can at any time undermine trust among organizations and lead to network actors dropping out, there is a high need for empirical studies that elaborate tools and measure network responsiveness to the public on a regular basis.

2.4 Conceptualizing Public Service Network Responsiveness

"The value of human action is found in the action itself
rather than in the ends produced by that action."

Denhardt and Catlaw, 2014, p.170

In one of the chapters of the book, *Comparing Local Governance: Trends and Development*, Denters and Klok (2005) begin with the story about a town in the Netherlands, called Tilburg. In the 1970-80s, Tilburg has been considered as one of the best models for local government and has been copied in many municipalities in Western Europe. In 1993, the city government decided to spread the word about the city worldwide and participated in the international contest for the best managed local government in the world, held in Berlin. The city took third place. The Tilburg model was genuinely efficient, with the focus on downsizing government, contracting out, and introducing market initiatives. Unexpectedly, the "Best Managed City" jury deemed third place, due to the City of Tilburg's lack of government responsiveness to the interests and needs of its citizens (ibid.).

Public service responsiveness defines the legitimacy of interactions between public service organizations and its citizens-users, through meeting universal legitimate expectations, ensuring dignity, facilitating citizens role in decision-making processes, clear communication, and information exchange. Vigoda (2002) suggests that responsiveness combines with two dimensions. The first dimension refers to Thomas and Palfrey's (1996) "general responsiveness," which focuses on the accuracy and speed of public services delivery to citizens. The second dimension is citizen satisfaction with service delivery and operation of services. While *sufficiency* in delivering accurate services with prompt attention is indeed essential dimension of the responsiveness (De Silva, 2000; Vigoda, 2002; Darby, et al. 2003), this study argues that there is a need to differentiate between satisfaction and responsiveness. Satisfaction measures the extent to which the needs of citizens being met in accordance with “ideal expectations.” Ideal expectations assume client personal desires or preferred outcomes from service delivery.

Responsiveness is much less influenced by the ideal expectations; it rather focuses on “normative expectations”, on what actually “should or ought to happen” (De Silva, & Valentine, 2000, p.5). The World Health Organization (2000) introduces further the distinction between satisfaction and responsiveness. While satisfaction focuses on the interaction in specific settings, responsiveness evaluates the system as a whole. “Patient satisfaction focuses on medical and nonmedical aspects of care while responsiveness focuses only on the non-health enhancing aspects of the health care system” (De Silva, & Valentine, 2000, p.8). This example can be borrowed to other systems of public service provision. For example, when it comes to housing assistance citizens may be satisfied with the actual outcome of getting the housing, but the responsiveness perceptions can differ if housing assistance agency did not communicate about possible alternative options. The client can be satisfied or not with the quality of employee client interaction; however, “responsiveness” helps to understand whether the clients were treated with dignity and respect if they have been listened to and whether the organization ensured bidirectional communication. Satisfaction is focused on the perceptions of clients only; responsiveness can be assessed through the opinions and experiences of both clients and serving organizations. This is about the way organizations deliver services. “Satisfaction represents a complex mixture of perceived need, individually determined expectations and experiences. Responsiveness evaluates individuals’ perception of the system against legitimate universal expectations" (De Silva, & Valentine, 2000, p.8).

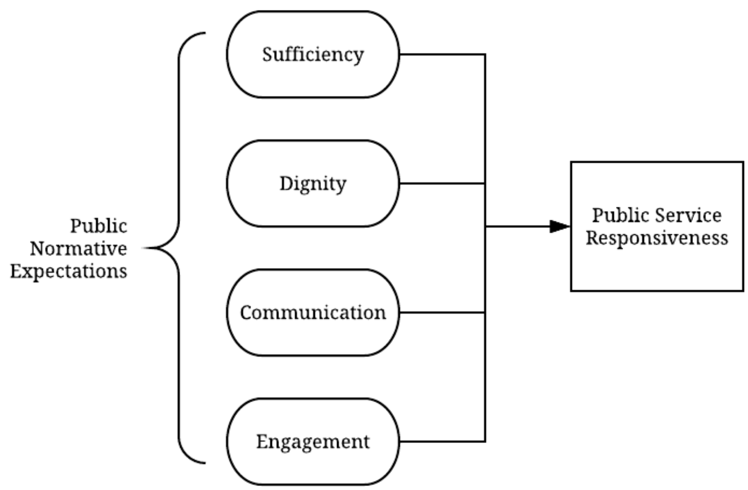

Figure 2.2: Conceptual Framework: Public Service Responsiveness

Treating the public with *dignity* is another core element of responsiveness, which means to protect and augment the universal human rights within all public service provision systems, economic, health, educational, social, political, and cultural. When it comes to crises, Soliman and Rogge (2002) suggests:

> "Studies indicate that survivors of disasters are, in most cases, individuals and families who have little experience with social service organizations and who have generally relied on their own resources. Many survivors of natural and technological disaster may find it difficult to seek help from service organizations because of the social stigma often attached to these agencies and for fear of losing respect, independence, and control over their lives (Rogge, 1995). Social workers must assess how intervention approaches best facilitate

> mutual, respectful relationships with individuals and families in the context of post-disaster intervention." (p.7)

Ensuring *clarity of communication and information exchange* is also a critical factor constituting responsiveness (Darby et al., 2003). Blaug and Lekhi (2009) rightfully noted:

> "in democracy, no public service can afford to *not* to be responsive to the informed opinions of the citizen-users they exist to serve. … An 'intelligent' metric on public service responsiveness would, however, be most revealing. Drawing on existing indicators, it would assess the quality of the interactive process between public service providers and their citizen-users/stakeholders, highlight the success with which service organizations inform public opinion and show how effectively they respond to such opinions" (Blaug, & Lekhi, 2009, p.1).

Darby et al. (2003) suggest that sufficient flow of information is "an excellent tool for the stewards of the system to use to address the imbalances that generally exist" (Darby, et al., 1999, p.3). Sharp (1981) argues that there should an honest communication, especially in the case of the limited resources or "judgments of the efficacy of various deployment strategies, … rather than actions that give the appearance of meeting demands without actually resolving the problem" (p.49).

Engagement relates to the ability of the public to participate in decision-making services and express their opinion regarding the provision of public goods. Sharp (1981) also calls it *access responsiveness,* which examines the ability of the organizations to facilitate citizen input and feedback, analyzes organizational attitudes towards acquired feedback and, finally, examines organizational receptivity on that feedback. According to Babajanian (2015), this allows for greater responsiveness thought a better match between the services and needs of the target population and more accurate allocation of resources. Soliman and Rogge (2002) argues, that for the effective recovery, it is critical to engage disaster survivors in the committees that manage and monitor the recovery processes.

Drawing on the literature, the study suggests that public service responsiveness consists of the following dimensions: sufficiency, dignity, communication and engagement, and exists at the individual, organizational, and network levels. This study tests this concept at the network level and suggests that the measurement scale for the perceived responsiveness of public service networks will consist of the following constructs: (1)‘‘sufficiency”, (2) “dignity”, (3) “clarity of communication” and (4) “engagement”.

2.5 Factors Affecting Public Service Network Responsiveness

Open system theory argues that governmental organizations do not exist on their own but are surrounded by the environment that affects organizations internally and preserves resources, personnel, and information on which organizations depend. Open systems theory assumes that organizations are interdependent systems, that change over time through adaptation and learning, while closed systems are static, mechanistic and incapable of change (Emery, 2013). Similarly, resource dependency theory suggests that organizations are not self-sufficient. They do not possess all the resources needed to survive, making them seek resources in other organizations and the environment. Resources successfully acquired give power, influence, and long-term stability to organizations. However, the need to acquire resources creates interdependencies between organizations and external units. According to network theory, managers try to obtain necessary resources without creating dependencies by building network relationships. Monge and Contractor (2003) suggest two mechanisms that manage the organizational choice and explain the stability of exchange relationship and distribution of power in networks. First is *network extension* by which organizations create new alternatives for resource exchange, and second is *network consolidation* which "decrease the number of exchange alternatives for others by forming a coalition with other resource providers" (ibid., p.215).

Crisis management networks possess a high degree of uncertainty. Networks by themselves are uncertain, and an unstable environment only adds the degree of indeterminacy (Moynihan, 2008). Based on the article by Koppenjan and Klijn (2004), Moynihan (2008) explores three types of uncertainty identified by authors in crisis management environments. Substantive, which is a lack of knowledge about the problem translated into role uncertainty for individual network actors, which exacerbates during the crisis. "The urgency of crises limits the opportunity for responders to develop and rely on trust-based relationships during a crisis" (Moynihan, 2008, p. 356). This exacerbated strategic uncertainty, which is strategic autonomy, and institutional uncertainty, which is the ability to coordinate institutional values, norms, and objectives within networks (ibid.). Therefore, when analyzing networks, it is crucial to include the context and environment in which the network occurs which can affect the processes and outcomes of network activities. As previously discussed, the context in which network organizations serve can define the level of their responsiveness. Responsiveness can be constrained or dictated by rules and procedures (Bryer, 2007). It engages the interests of various stakeholders and networks and, thus, the level and type of interactions among stakeholders can define the shape and strength of responsiveness (Yang, 2007). Responsiveness is shaped by community characteristics, for example, rural/suburban/urban; high income/low income; immigrant/citizen. Fourth, with the rapid development of technologies, responsiveness should be analyzed in online and offline environments (ibid.).

2.5.1 Complexity of Public Service Provision

While public service responsiveness consists of different dimensions and takes various shapes, it also exists in different contexts (see Figure 2). Public service responsiveness varies among the routine, crisis and emergency services. While there is a vast amount of literature that assess the outcomes of routine public services at the organizational and network levels, fewer studies have focused on emergency management (e.g. McGuire, & Silvia, 2009; Hu, Knox, & Kapucu, 2014; Davis, & Robbin, 2015; Daniel, & Moulton; 2017). There is a huge gap in the research on crisis management network outcomes and processes. Emergency management includes preparedness, mitigation, and recovery processes to a local emergency, caused by natural or human-made disasters. Emergency management requires an immediate shift in hierarchical structures, suspension of normal procedures, activation on emergency centers and rapid mobilization of community capacities; crisis management varies by the scale of the event. A crisis can take different shapes and scales: organizational and institutional, societal, economic and political, as well as interpersonal, inter-organizational, local, national and international (Farazmand, 2001). A crisis cannot be managed using normal routine procedures. However, it does not always require the suspension of normal procedures as in emergency management (Booth, 1993). The crisis is about the scarcity of resources and decision-making capacity to respond to the abnormal situation. Some examples of crises include forced migration, unsafe drinking water, sharp economic decline, and nuclear proliferation.

Zetter and Deikun (2010) suggest that “different types of disasters, humanitarian crisis and early recovery situations in urban locations call for different modes of humanitarian action” (p.7). Responsiveness levels can vary between times, locations, areas of public goods provisions, the salience of public services (Wang, 2008; Pandey, & Yang, 2014). Pandey and Yang (2014) suggest that aspects of public service responsiveness should be treated separately and, in more context-specific inquiries. In the current study, responsiveness is examined at one specific time and location. However, perceptions of organizations and service-users on network responsiveness can vary across public service areas due to saliency and complexity of the public service provision.

In times of crisis, public goods can become more salient or less salient depending on the critical need at a certain point of crisis response or recovery. However, networks should be prepared to address a wide range of service needs. This study focuses on examining salient public service needs during the first year of crisis response and recovery, caused by the mass displacement of the population, which include housing, employment, health care, mental health, education, transportation, financial assistance, job training and issuing identifications cards. Issuing identification cards can be a long term process, especially when it comes to displacements caused by natural disasters. These public issues differ in the complexity of their system.

In this study, the complexity value is built upon two ideas. On the one hand, the complexity of public service provision depends on technical, administrative and resource capability of networks to meet specific public service demands. More complex public services require more complex network interactions. The literature suggests that high complexity public problems require organizations and networks to be more adaptive to the frequently changing environment, because “the resources, knowledge, and solutions are spread across many different entities, necessitating a coordinated response from a multitude of organizations in order to adequately serve client needs” (Povan & Lemaire, 2012, p.641). Some scholars also suggest that some public services or social issues that cannot be addressed by the average person can require substantial expertise, specialized knowledge, and training (Gormley, 1986; Eshbaugh-Soha, 2006, p. 227; Bryer 2013).

On the other hand, the complexity of public service provision depended on the complexity of the public service delivery-citizen interaction. Complexity theorists view organizations and individuals as interdependent agents or complex adaptive systems (CAS). Complexity is, therefore, defined as the ongoing dynamic interaction, in which changes in one agent can lead to changes in the whole system (Stacey, 1996; Dolley, 1997; Anderson, 1999; Rhodes, & MacKechnie, 2003; Schneider & Somers, 2006). Alford (2002) argues that service users can take three different roles in the interaction with public service delivery organizations. Theclients, beneficieres and obligates. All three roles differ in the type of contributions expected from a service user. When it comes to clients, the interactions is simple and may only require payment. Benercieries are expected to cooperate. Obligates are expected to comply.

Housing, employment assistance, health care, and mental health can be considered as high complexity public services. These services require a long-term commitment from both service delivery networks, which ensures accessibility of services through the availability of resources, network capacity-building and advocacy, and the public, that meets eligibility requirements for these services. Service-users take a role of beneficiaries and obligates. A displaced individual seeking employment assistance in the host destination should possess proper qualifications, good command of the language. When it comes to housing, there are strict housing eligibility requirements, such as the evidence income and background checks. Accessibility to healthcare or mental health resources depends on the person's verified income, being insured, or qualification for government programs. In a crisis management setting, collective effort and reources are concentrated on meeting basic critical needs of the effected populations, which include housing, health and employement (Soliman & Rogge, 2002). A similar trend can be found in routine service delivery, where government agencies tend to provide funding to more critical public services. Prioritizing these needs by networks of organiations can lead to positive perception of displaced individuals on public service network responsiveness. Building upon this description:

H1: The more a citizen attempts to access high complexity public services, the higher the perception that public service delivery network is responsive.

At the same time, less complex public services are usually determined by the public service network's availability of resources to provide services to the general public and do not involve high commitment from the public. This type of services includes transportation, education, financial assistance, job training, and assistance in the acquisition of identification cards. The serivce users take roles of beneficiaries or clients. The public expects immediate assistance in these service areas, which may negatively affect their perception of the network responsiveness. With a larger number of less complex needs that can overwhelm the public service delivery system, and lead to the negative perception of network responsiveness. In crisis management setting, organizations tend to priortize less services needed for the long term recovery and integration (Soliman & Rogge, 2002). Poorly coordinated activities across public and private organizations create "wasteful redundancy, complicate access to services, or cause some groups to receive delayed or no service", and there fore may cause more negative perception on public service network responsiveness (Ibid., p.16). And, therefore, the study hypothesizes:

H2: The more a citizen attempts to access low complexity public services, the lower the perception that public service delivery network is responsive.

2.5.2 Collaborative Processes

How can collaboration in times of crisis affect service delivery network responsiveness to the public? Collaboration is a collective action among agencies across sectors that aims to address complex social problems and engage in activities interdependently and autonomously According to O'Leary, Gerard, and Bingham (2006), collaborative management is necessary for addressing the issues that cannot be solved by a single organization. Efficient and effective collaboration is less likely to occur if a public organization has a rigid hierarchal structure (Chenok et al., 2013). Stanton (2014) suggests that public organizations should go through the process of redesign, by eliminating the "redundant layers from their organizational hierarchies", which gives more flexibility to organizations, which eventually become more responsive and competitive to the market demands (p.37). The governance structures are decentralized and possess more flexibility, allowing them to work in the mode of negotiation and persuasion with other agencies to achieve set goals. For such collaboration to exist, there should be a shared common goal or mission between the organizations, "capacity to organize working relationships and the capacity to transmit the information efficiently" (Bardach, 1994, p. 4). Networking helps to engage diverse actors interdependently in problem-solving or policymaking. Network relationships also allow for the combination of market mechanisms and informal interaction (Miles, & Snow, 1992, as cited in Monge, & Contractor, 2003, p.219). Informal interactions include information sharing, client referral, coordination and cooperation of joint actions. Formal relationships often involve some extent of structural changes of partnering organizations and include contracts, alliances, consolidations, and mergers. Collaboration can be both formal and informal, based on interdependent, mutually beneficial, and autonomous relationships.

In past decades, governance scholars attempted to establish a link between collaboration, network processes, and outcomes "Research on collaborations and their outcomes has therefore been depicted 'as part of an extended, systematic, learning process' requiring comparative analysis of findings over time and across cases" (Bingham, Fairman, Fiorino, & O'Leary, 2003, p. 336 as cited in Nohrstedt, 2013, p. 139). The empirical study written by Hu, Knox, and Kapucu (2014) which analyzes the Boston Marathon bombing emergency response, concluded that prior established networks, based on joint planning and training, contributed to the effective coordination, communication, and collaboration during the response to this incident. Bodin and Nohrstedt's (2016) study showed that a good fit between collaborative partners and their tasks among collaborators have a greater effect on the whole network performance than prior collaborative experience or professionalization.

However, there is a gap in the research that examines the impact of collaboration on the network responsiveness to the public it serves. Collaboration cannot just emerge by itself; it requires facilitation and capacity among agencies to be able to build strategic partnerships to achieve common public goals (Grubbs, 2000). According to Thomson, Perry and Miller (2007), "collaboration is a multidimensional, variable construct composed of five key dimensions, two of which are structural in nature (governance and administration), two of which are social capital dimensions (mutuality and norms), and one of which involves agency (organizational autonomy)" (p.3). Through the operationalization of five dimensions, the authors test the construct validity of a multidimensional model of collaboration. The results of their study provided the support that all five dimensions are valid and reliable constructs of collaboration.

This current research aims to explore further how five aspects of collaboration, defined by Thomson et al. (2007), can potentially affect public service network responsiveness. In 2008, Thomson et al. conducted a study that established a link between the dimensions and perceived network outcomes. The findings suggest that autonomy is positively related to increased partner interaction; mutuality is significantly associated with perceived broadening of partners' views, increased partner interactions, and the equality of influence among partners; trust is positively correlated with perceived effectiveness and the quality of partner relationships; joint decision making is associated with related perceived quality of relationships and the equality of influence organizations have on each other, and finally, administration dimension is positively correlated with perceived effectiveness in achieving collaboration goals. In their study, the authors claim, that is important to understand how collaborative processes affect collaborative outcomes. This research takes Thomson's et al. (2007) framework further and aims to explore how collaborative processes can affect public service network responsiveness, which consists of constructs: sufficiency, dignity, communication, and engagement. This study makes the following propositions:

Proposition 1: Increase in the level of governance among network organizations can be positively associated with the increase in perceived public service network responsiveness.

Thomson et al. (2007) define *governance or "jointness"* as an ability to make decisions jointly or coming to a consensus while creating structures and rules to solve collective action problems (Bardach, 1998). “Although all networks comprise a range of interactions among participants, a focus on governance involves the use of institutions and structures of authority and collaboration to allocate resources and to coordinate and control joint action across the network as a whole” (Provan, & Kenis, 2007, p. 3). Collaborative networks give a venue for elaborating new joint solutions to the problems that can be handled more productively together (Kapucu, Augustin, & Garayev, 2009). Collaboration with diverse groups and organizations creates a wide spectrum of services, improve service integration and coordination, and enhance the level of network responsiveness. The creation of networks with the private sector organizations can provide high-quality data-mining techniques, shelters, build capacities to deal with mass physical and mental injuries caused by emergencies and crises. While secular nonprofit organizations address the needs common to society, faith-based organizations are more ethnically and culturally specific, which place them among the key actors in addressing diverse multicultural needs, amelioration of mental and physical health issues, occurring during crisis response and recovery (Bielefeld, & Cleveland, 2013). Therefore, governance can allow maximizing network capacities which can enhance the responsiveness of service delivery networks to the public.

Proposition 2: Increase in the degree of administrative oversight among network organizations can be positively associated with the increase in perceived public service network responsiveness.

Thomson et al. (2007) use the concept *“administration”* to describe to what extent network organizations ensure “clarity of roles and responsibilities, communication channels that enhance coordination, and mechanisms to monitor each other’s activities in relation to roles and responsibilities” (Thomson, Perry, & Miller 2007, p. 4). The current research calls it instead as *“the degree of administrative oversight,”* which is expected to better describe the degree of operational procedures among network organizations that are of high importance during crises. Kapucu, Arslan and Demiroz (2010) argue that in the case of emergency management, the leadership should remain “in the center of the network, in order to process and disseminate relevant information to the parties” (p. 459). Establishing clear rules and process transparency, balancing risk and rewards, providing inclusive representation and deliberative practices can facilitate collaborative processes that are more responsive in delivering public goods and services.

Proposition 3: Increase in mutuality among network organizations can be positively associated with the increase in perceived public service network responsiveness.

Proposition 4: Increase in autonomy among network organizations can be positively associated with the increase in perceived public service network responsiveness.

In order to exist, collaboration requires a certain level of trust and interdependence among stakeholders. Scholars also have emphasized power imbalances and a lack of trust as central issues in cross-sectoral collaboration (Ansell, & Gash, 2007; Milward, & Provan, 2000; Bryson et al., 2006; O’Leary, & Vij, 2012). In the current study, mutuality is seen as mutually beneficial interdependencies or “complementarity” (Powell, 1990). However, network collaborators are organizations with their own independent needs and goals, and there might be a conflict between their internal legitimacy or autonomy and external legitimacy – which is interdependence or mutuality (Provan, & Kenis, 2007). When internal legitimacy prevails over external or external over internal legitimacy, that may eventually undermine network processes. Chen (2008) suggests that a decrease in autonomy leads to more effective collaboration. While organizations sacrifice their operating and decision autonomy, they gain long-term benefits from collaboration (Chen, 2008; Provan, Milward, 1995). However, the current study claims that both concepts—autonomy and mutuality—need to be satisfied and balanced for responsive collaboration to exist. A high level of autonomy in collaborative networks allows organizations to perform more efficiently at the organizational level. And therefore, the study assumes that the higher level of autonomy and mutuality between network organizations can be positively associated with public service network responsiveness.

Proposition 5: Increase in trust among network organizations can be positively associated with the increase in perceived public service network responsiveness.

Finally, *trust* is prerequisite for maintaining long-term collaborative partnerships, especially in acute and high-risk situations such as crisis management. Gulati and Nickerson (2008) found that trust has a complementary effect on performance. According to the authors "preexisting interorganizational trust influences the choice of governance and in turn the performance of exchange relationships" (Gulati & Nickerson, 2008, p. 1). Collaborative partnerships between the government and communities contribute to building trust and strengthening community cohesion and resilience necessary for mobilizing a crisis response, withstand external shocks, and return to healthy functioning. Trustful partnerships can allow organizations to rely on each other in times of uncertainty or lack of resource capacity in meeting the needs of the public, which can have a positive effect on network responsiveness.

2.5.3 Resource Munificence and Community Support

When evaluating network responsiveness, scholars may include other network contextual characteristics that can potentially affect the network processes and outcomes. These contextual characteristics include system stability, resource munificence, and community support (Turrini, 2010; Provan, & Milward, 2001; Gou, & Acar, 2005). Since the current study is a one-time analysis, it does not include system stability, a measure that would require a longitudinal study. The research suggests that resource munificence and community support can have an effect on public service network responsiveness and proposes the following:

Proposition 6: Increase in resource munificence can positively impact public service network responsiveness.

"Resource munificence refers to the level of resources available to the network from its environment and reflects the degree of uncertainty the network faces in carrying out its activities" (Turrini, 2010, p.540). The public sector cannot solve large-scale crises on its own. Depending on the scale of an event, the action may require the participation of local government only, or activation of the state and federal level agencies, which are expected to provide more resources and a broader focus on cross-sector partnerships (Kapucu, Augustin, & Garayev, 2009). Each governmental level, federal, state, and local, plays a crucial role in developing capacities and accumulating resources necessary for crisis mitigation, preparedness, response, and recovery. Intergovernmental networks are critical in both coordinating and collaborating activities that leverage and mobilize resources among organizations (McGuire, & Silvia, 2010). The cross-sector collaborative partnerships with businesses, nonprofit organizations, and community groups increase organizational capacities and resources among agencies and help to address the needs of vulnerable communities. Interorganizational networks are flexible structures that allow for faster and easier access to resources in times of uncertainty, informational constraints, and complexity, caused by the emergency crisis (Nolte, & Boenigk, 2013). Empirical studies suggest that the level of local financial resources is positively correlated with network effectiveness (Turrini et al., 2010). Particularly in crises, collaboration can play a vital role in the activation of essential partnerships to attain resources necessary to provide effective crisis response (Kamarack, 2002).

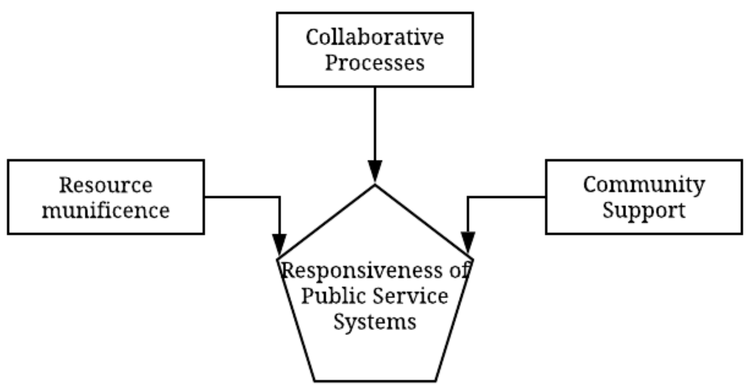

Figure 2.3: Public Service Systems Contexts

Proposition 6: Increase in community support can positively impact public service network responsiveness.

The aspect of community culture and support also plays a crucial role. According to Brown and Kulig (1996), people in communities can be resilient together, but not in similar ways. Norris et al. (2008) observed that while social support is of utmost importance, there are cultural values of support that vary across community sectors and needed to be acknowledged in crisis management. Cultures differ in “reciprocity of norms, relative comfort with kin and non-kin, and modes of expressing emotional support” (Norris et al, 2008, p.145). Crisis changes the way individuals relate to each other. Social support can be either strengthened or deteriorate during recovery, depending on the previously established trust and values in the community (Pfefferbaum et al. as cited in Haas, 2007). Turrini (2010) noted “among contextual characteristics shaping any public network environment, cohesion in the local community (that is, social capital) and local community support and participation in taking care of the problems addressed by the network are critical factors to be focused on in the management of a successful public network” (p.546). Given the literature gap, the study uses qualitative analysis to further explores organizational perspective on how collaboration, resource munificence and community support affected service delivery network responsiveness to the displaced persons from Puerto Rico after the Hurricane Maria.

2.6 Summary of the Chapter

This chapter identified a need for scientific inquiry in public administration that adheres the normative theory approach, that sets the priority in examining the ways public values can be created and sustained within and across organizations. The chapter revisited public service responsiveness as a public value that is shaped by three perspectives: expert-oriented, public-oriented and governance-oriented. The governance-oriented mitigates discrepancy between the expert-oriented perspective, formed in traditional public administration theories, and the public-oriented perspective, shaped by the theories of New Public Management. Governance-oriented perspective views the public is actively engaged in the co-production and co-governance of public services. The chapter also developed comprehensive measurements to analyze the responsiveness of public service networks, which consists of the following constructs: dignity, sufficiency, communication, and engagement. Also, it established a clear differentiation between responsiveness and satisfaction, arguing that responsiveness cannot be measured through customer satisfaction, as satisfaction focuses on the ideal expectations of the customers, in contrast to responsiveness, that should be understood as a normative expectation. The chapter further argued that responsiveness is a measure for network implementation processes, rather than outcomes. This chapter reviewed literature that establishes a potential link between public service network responsiveness and contextual factors, which include the complexity of public service provision, level of collaboration, community support, and resource munificence. The next chapter presents the methodology of the study used to test the hypotheses, and propositions emerged in the literature chapter.

CHAPTER 3: METHODOLOGY

This Chapter is divided into three sections. The first section explains the choice for the multimethod research design. It is followed by two other sections, with each reflecting method applicable to the quantitative and qualitative components of the study accordingly. The quantitative part of the study aims to operationalize the study variables, examine the validity and reliability of public service network responsiveness scale and examine whether or not the increasing number of public service needs affects the perceived public service network responsiveness. The second part of the study begins with descriptive statistics about the most active organizations involved in the response to the crisis. Then the study proceeds with an exploratory qualitative analysis that examines how the context in which organizations operated affected the responsiveness of their collaborative network. The contexts variables include collaborative processes, community support, and availability of resources.

3.1 Research Design

This research is a nonexperimental multimethod single-case analysis. Using the multi-method design have several benefits. Mingers (2001) as a strong advocate a "strong pluralism" in research methods argues that research situations are "inherently complex and multidimensional and would thus benefit from a range of methods" (p.243). By implying multiple methods, this study does not aim to triangulate the results. However, it seeks to achieve robustness in the understanding of the public service network responsiveness, which is critical for the concept that was not empirically tested before. In this study, the responsiveness concept is examined from different perspectives and using different methods by collecting quantitative data from the displaced population and qualitative from the managers in service delivery organizations. Evans et al. (2011) suggest that arguments become much more convincing if the results come from multiple voices rather than one.

Harden and Thomas (2005) suggest that "triangulation tends to reveal is that some methods of data collection and analysis are more reliable than others and that conflicts can be explained by weaknesses in one or more of the methods employed. Thus, using two or three different methods that are weaker than others at answering a particular type of question does not give a more reliable and valid answer." This study uses the strength of each quantitative and qualitative methods and applies them to answer different research questions. Whereas qualitative data analyzes can contribute to a better understanding of a specific context and area of the researched community, the survey method helps to determine the strength of the relationships between variables and prove or disprove the causal relationship (Reason, & Bradbury-Huang, 2013). The quantitative component of the research allows testing whether the measurement for the public service network responsiveness is reliable and valid. It further, tests, whether seeking a higher number of public services of high or low complexity affects the public perception of public service network responsiveness. The qualitative part explores how other factors that include collaborative processes within networks, community support, and resource munificence have an effect on public service network responsiveness.

The results from both components are integrated into the discussion part of the study, that expands the scope of the study, through the comprehensive examination of factors affecting public service network responsiveness and allows obtaining a complete picture of the phenomenon. Gil-

Garcia and Pardo (2006) suggest that a multi-method approach allows discovering new paradoxical factors, confirming unexpected outcomes, and foster future research.

Therefore, the use of multiple methods allows us to gain knowledge on different aspects of the same phenomenon and increase robustness in understanding the phenomenon (Gil-Garcia, & Pardo, 2006). Similarly, to Harden and Thomas (2005) this study utilizes different methods to address different questions that explore various aspects of the phenomenon. Gil-Garcia and Pardo (2006) suggest that the publication pressure is one of the significant challenges of the use of a multi-method approach. Producing two equally strong parts of the study addresses that challenge in the way that both pieces of the study can complement each other but also make its contribution if published separately.

3.2 Quantitative Methods

3.2.1 Sampling Methods

This study utilizes nonprobability purposive sampling of the displaced population from Puerto Rico in Central Florida following Hurricane Maria. The evacuees provided a usable email address for the survey distribution while completing the intake forms collected by the Heart of Florida United Way at the official service center established at Orlando International Airport. 2,727 of intake form have been completed representing 7,050 individuals. Of these, 2,060 emails were sent. 236 individuals responded to the survey. 210 of observations were used in the analysis after the data were cleaned. There is no commonly accepted standard for the minimum sample size for Ordinal Logistics regression which the data analysis model used in this study. Long (1997) argues that the sample size should exceed 100 for logit models. GPower software was used to estimate the minimum sample size for logistic regression models, to achieve the power Beta level of 0.8 with the confidence alpha level of 0.05. The results of the study showed the sample size of 145 responses in order to have 95 percent confidence.

This type of sampling possesses a high risk of sample distortion bias. Since the survey is email-based, the sample may underrepresent the elderly population, a population with disabilities, and persons who lack access to the internet. For that reason, the study analyzes public service responsiveness to the household needs, rather than individual needs of respondents and includes the household characteristics in the analysis. Also, the survey presents the demographic characteristics in order to verify any potential distortion in the sample. There is no other sampling biases based on race, gender, and other significant characteristics, except for the purposive selection of responders by the place of their permanent residence.

Table 3.1. demonstrates the demographics of the Puerto Rican IDPs responded to the survey. About 45.2 percent of the respondents are 30 to 44 years old, followed by 28.9 percent of 45-59 years old respondents. Almost 80 percent of respondent were female. All respondents who chose among races “Other”, identified themselves as Hispanic or Latino, which is ethnicity subgroup of a white race. Therefore, 85.2 percent of the respondents are white. 67 percent arrived with children, 43 with spouse and about 9 percent with their parents. The average household income level in Puerto Rico was under $35,000. Notably, the majority (70 percent) of respondents had a high level of education. According to Vandenabeele (2008), demographic biases demonstrate insignificant impact while applying a correlational analysis and the weighting procedure is not necessary.

Table 3.1 Demographic Statistics

Variables	Categories	Percent	Total N
Gender	Male	19.7%	43
	Female	78.9	172
	Prefer not to answer	1.4	3
Age	18-29	16.4	36
	30-44	45.2	99
	45-59	28.3	62
	60+	8.2	18
Race	White	44.2	95
	Black or African American	3.7	8
	American Indian or Alaska Native	0.5	1
	Asian	0	0
	Native Hawaiian or Pacific Islander	0.5	1
	Other	42.3	91
	Prefer not to answer	8.8	19
Education	Less than high school	0	0
	High school graduate	0.9	2
	Some college	3.2	7
	Bachelor's Degree and another four-year degree	70	152
	Master's degree or Advanced Graduate work and above	0	0
	Other	23	50
	Prefer not to answer	6	2.8
Average household income in Puerto Rico	Less than $20,000	52.86	111
	$20,000-$49,999	34.29	72
	$50,000- or more	6.67	14
	Prefer not to answer	6.19	13
Expected household income after arrival to the US mainland	Less than $20,000	42.36	86
	$20,000-$49,999	29.56	60
	$50,000- or more	13.3	27
	Prefer not to answer	14.78	30
Intent to stay in Central Florida	Stay in CF permanently	63.86	129
	Stay no more than 3-5 years	7.92	16
	Relocate to another part in the US or country	5.94	12
	Do not know	22.28	45
Arrived with	Parents	8.57	19
	Children	66.67	140
	Spouse	43.81	92
Having relatives or friends in CF before arrival	Yes	182	86.67
	No	28	13.33

3.2.2 Data Collection

The quantitative data was collected through the survey that has been distributed to Puerto Rican IDPs in May 2018 and has been open for three months. The data have been cleaned from suspicious entries and incomplete surveys. The response rate of 15% is acceptable to give confidence in findings and conclusions. The survey questions ask about evacuees' household needs upon arrival and as well as their current needs; their financial, housing and employment status before leaving Puerto Rico and currently in Florida; evacuees intend to stay in Florida or the US mainland; evacuees' level of civic and political engagement in Puerto Rico and Florida. The study utilized internet surveys, which increase the response rate compared to mailed questionnaires (Fincham, 2008). Providing a mail or other address-based survey distribution is problematic given the transient nature of the Puerto Rican displaced individuals.

3.2.3 Ethics

As the study analyzes primary sources of data, ethical concerns were of high importance. The research population included adults over 18 years old, who were not pregnant women, prisoners or cognitively impaired. The participants of the surveys were first contacted and provided with the information about the study and the letter of informed consent for the participation in the research. All participants of the study were informed about the procedures and potential harm of the study in the informed consent. The consent documents and surveys for the evacuees have been translated into the Spanish language. All questions regarding the consent form were answered before the data collection. After the participants express their consent, they received an online questionnaire. In about two-week and a month period, the responders received a follow-up questionnaire, which reminded them to complete the survey if they were not able to get it done. Institutional Review Board (IRB) approval to conduct surveys and interviews for organizations and displaced Puerto Rican individuals has been obtained from the University of Central Florida.

3.2.4 Operationalization of the Study Variables

Dependent Variable. There is abundant literature on the political and democratic responsiveness that measures the concept from the policymaking perspective at the macro-level. With the exception of healthcare services, to date, there was no scale developed that measures perceived responsiveness of public service delivery. Vigoda (2000) developed a measurement that allows understanding the responsiveness at micro-level by analysis citizens' perceptions on interaction with street-level public servants and employees. This study developed items partially based on ideas from Vigoda's (2000) public administration responsiveness scale and scale developed by the World Health Organization (Darby et al., 2003). The perceived network responsiveness was measured as a set of 13 items. The statements were scored on a five-point Likert scale, from "Strongly Disagree" to "Strongly Agree".

Table 3.2. represents the overview of items in the study. The average score on the items is 3.322, which is in a higher category of the responsiveness perception. The final scale result was recoded into three categories, with each cut point representing the low, medium, and high level of network responsiveness accordingly.

Table 3.2 Perceived Network Responsiveness

Variable		Mean	Std. Dev.
Dignity			
D1	Employees are courteous and kind.	3.843	.98
D2	I feel agency officials with whom I have communicated understand my cultural background.	3.467	1.15
D3	Organizations are doing all they can to sincerely support displaced Puerto Ricans who need help.	3.124	1.27
Engagement			
E1	I am able to provide criticism and suggestions for improvement of services.	2.995	1.18
E2	I have opportunities to participate in the decision-making process regarding my needs.	3.3	1.14
Communication			
C1	The level of communication is sufficient.	3.243	1.1
C2	The available tools for communication are sufficient.	3.224	1.14
C3	I am able to receive information in Spanish when requested.	3.657	1.11
C4	The amount of information I am provided regarding services and procedures is sufficient.	3.190	1.19
C5	The accessibility of the information I am provided regarding services and procedures is sufficient.	3.148	1.15
Sufficiency of Service Delivery			
S1	Requests are handled in a timely manner.	3.367	1.16
S2	The Spanish language proficiency of employees is sufficient to deliver services to me.	3.343	1.16
S3	The efficiency of employees is sufficient to deliver services to me.	3.519	1.07

Independent Variables. A number of public services of high and low complexity. Based on the literature review, the main public service of high complexity that Puerto Rican IDPs sought since they arrived in the Orlando area included housing, healthcare, mental health, employment. Less complex public services included: job training, transportation, English language training, legal services, identification cards. As the majority of the evacuees sought more than one service assistance, that makes unrealistic the assessment of one particular service on the responsiveness perception. The service areas were first sorted by the high complexity of a maximum of 4 services sought per person, and the low complexity of a maximum six services accordingly. Then each respondent has been assigned the number of high and low complex public services that he or she sought. The distribution of the number of service needs is presented in table 3.3.

Table 3.3 Descriptive statistic: Independent Variables

Variables	**Percent (%)**	**Total N**
Number of high complexity services		
1	8.57	18
2	27.14	57
3	43.81	92
4	20.48	43
Number of low complexity services		
1	10	21
2	16.19	34
3	21.9	46
4	27.62	58
5	15.71	33
6	8.57	13

Control Variables. Since the study examines the collective service needs of the household, rather than the respondent's personal needs, the study controls for the following household characteristics:

1. whether the respondent arrived with children, parents and a spouse,
2. household income before their arrival to the US mainland,
3. anticipated current household income,
4. intent to stay in Central Florida, which may determine the need for particular services.

The study does not include the demographic characteristics of the respondents in the analysis, as this study assesses the household needs rather than individual needs.

3.2.5 Data Analysis

Validity Analysis. The data were analyzed using STATA software. Since the research applies the survey design, first, it is important to test all measurements for internal validity and reliability. Construct validity ensures that the measure for the public service network responsiveness scale measures what it is intended to measure, and not the other variables. First of all, face validity and content validity are verified by stakeholders in order to ensure that the measurements are the accurate assessments. Second, Polychronic correlation matrix is applied to identify whether the items within the scale are correlated. Although the Pearson correlation matrix is a most commonly used technique in studying construct validity, the recent studies suggest ordinal data should be treated with Polychronic correlation test. This test provides a more accurate reproduction of the correlation measurement model (Holgado–Tello, et al., 2010).

Acock (2016) suggests that when examining the correlation matrix of the individual items that constitute a scale, all of the items should be at least moderately correlated. $r<0.3$ reports a weak relationship, $0.3>r<0.5$ is a moderate relationship, and $r>0.5$ shows a strong correlation between items in the scale. Third, the study utilizes a Kaiser-Meyer-Olkin test to measure the sampling adequacy for the factor analysis. KMO give the values from 0 to 1, with 0.8 to 1 indicating that the sampling is adequate to proceed with Factor Analysis.

Cerny and Kaiser (1977) offer the following values on the results:

- .00 to .49 unacceptable
- .50 to .59 miserable
- .60 to .69 mediocre

- .70 to .79 middling
- .80 to .89 meritorious
- .90 to 1.00 marvelous

If KMO result falls between 0.8 and 1, the study proceeds with Bartlett's of sphericity. Bartlett spherical value should be significant with a p-value less than 0,5%. The significant result shows that there is a significant intercorrelation to conduct the factor analysis. There are many different ways that allow factors extraction: "principal components analysis (PCA), principal axis factoring (PAF), image factoring, maximum likelihood, alpha factoring, unweighted least squares, generalized, least squares and canonical" (Taherdoost et al., 2014, p. 338). PCA and factor analysis are the two most commonly used tools. Principal Factor Analysis serves as a data reduction tool. Since this study is not interested in the reduction of items, it proceeds with Factor Analysis. Factor analysis is applied to identify: first, whether each measure or indicator loads on one and only one factor which implies no double loadings. Second, it tests whether there are no correlated errors and whether latent variables are correlated. This is done by, first, running the factor analysis and examining the eigenvalues of the factors. Factors with eigenvalues greater than one will be retained in the study. Second, the factor loadings and uniqueness are analyzed. Loadings with the value higher than 0.4 will remain in the study. The higher the load and the lower uniqueness, the more relevant in determining the factor's dimensionality.

Reliability Analysis. Reliability is an assessment tool that ensures that the measures produce stable and consistent results. The study first utilized the inter-rater reliability test, which assesses the degree to which different raters agree in their assessment decisions. Also, the internal consistency reliability test was applied. The test estimates the degree to which different test items that probe the same construct produce similar results. Internal consistency is typically measured using Cronbach's Alpha (α). Cronbach's alpha ranges from 0 to 1, with higher values indicating greater internal consistency (and ultimately reliability). Items with the coefficient higher than 0.70 retain in the study. If items are in a perfect agreement, which equals 1, two of them should not be included to measure the construct.

Tavakol and Dennick (2011) determined the following values on the results:

- .00 to .69 Poor
- .70 to .79 Fair
- .80 to .89 Good
- .90 to .99 Excellent/Strong.

Ordered Logistics Regression. The proposed study aims to assess the relationship between the number of service needs of high and low complexity with perceived network responsiveness. The latent variable *y* "perceived network responsiveness"* which is measured as an interval scale from 13 to 65 cannot be observed directly. However, this value can be observed if measured as ordered variable *y* from "low" to "high." Score 30 and 47 are the threshold values.

If $y^* < 30$, we observe $y=1$ as low public service network responsiveness,

If $30<y^*<47$, we observe $y=2$ as medium public service network responsiveness

If $y^*>47$, we observe $y=3$ as high public service network responsiveness.

Since the dependent variable is an ordinal measurement that has three outcomes: low, medium, and high perceived network responsiveness, the study utilized Ordered Logistics Regression. Ordinal variables are the ones that have a natural sequence but do not have a natural unit. Both multinomial logit and ordered logit model is a "natural extension of the binary logit model" (Gordon, 2012, p.637). The ordinal logistic model relies on cumulative logits, which are the log of a ratio of two probabilities. However, instead of considering the probability of falling in one category, as in binary logistic regression, the ordinal logistic regressions estimate the probability of falling at or below a particular category to the probability of falling above that particular category.

In order to run the Ordered Logistics Regression, several assumptions should be met. Compared to Multivariate Linear Regression (MLR), logistics regression controls for the most assumption of MLR, such as homoscedasticity and normality. Ordinal logistics regression does not assume a linear regression between the dependent and independent variables. The dependent variable does not need to be normally distributed. And the homogeneity of variance does not need to be satisfied. However, there are two major assumptions that will be taken into consideration. First, there should be a lack of collinearity between independent variables' errors. Variance Influence Test is applied in order to verify the correlation. VIF factor needs to be less than 10. All variable with VIF factor higher than ten will be eliminated from the analysis. The second assumption that there should be no empty cells. The analysis will run empty cells information command. A rule of thumb is applied: goodness of measures' fit will rely on large samples where no more than 20 percent of the cells are less than 5.

The results are interpreted as follows:

- To test the first hypothesis, for a one-unit increase in the high complexity service needs, the log odds of the Puerto Rican IDPs' perception on network responsiveness falling in the higher versus, the lower categories are expected to change by N times, holding any other variables in the model constant. If the result is positive and significant at $p<0.05$, then the first hypothesis will be supported. The comparison here is between above and below the cut point, e.g., the log-odds of having high network responsiveness perception vs. medium or low network responsiveness perception.
- To test the second hypothesis, for a one-unit increase in the low complexity service needs, the log odds of the Puerto Rican IDPs' perception on network responsiveness falling in the higher versus the lower categories are expected to change by N times, holding any other variables in the model constant. The second hypothesis will be supported if the coefficient will be negative and significant at $p<0.05$.

Therefore, the Ordered Logistics Regression Analysis will help to determine the probability of the study participants to have a positive perception about public services network responsiveness, with the increasing amount of service needs of various complexities.

However, there are certain strengths and limitations of this methods approach. Gordon (2012) suggests that since the ordered logit model produces a proportional odds assumption, it simplifies interpretation of the results. "It assumes that the factor changes in the odds when a predictor variable changes are the same regardless of outcome category". At the same time, the author points out the disadvantage of that method. Gordon (2012) notices that a predictor can have a stronger effect on the odds of moving between certain categories, for example, low versus medium network responsiveness and medium vs high network responsiveness. If the proportional odds assumption is inappropriate, the study will consider a less restrictive model, e.g. multinomial logistics regression. In order to verify the goodness of model fit, the study runs Brant's Tests of Parallel Lines. If the results of the test fail to reject the null hypothesis at Prob>Chi2 > 0.05, it means that the model is a good fit and conclude that the assumption holds. Otherwise, the alternative less restrictive models should be considered, such as multinomial logistics regression. Once the relationship between the study variables is determined, the study will proceed to the qualitative part, which, will explore deeper how contextual factors affect the public service network responsiveness to the needs of evacuees.

3.3 Qualitative Methods

3.3.1 Study Group of Organizations

The study group of organizations for the qualitative phase included most active nonprofit, faith-based and public-sector organizations that provided direct services to the displaced population. The study considers the importance of including these three types of organizations in the analysis for the following reasons. First, according to Hu et al. (2014), local governments play a key role in mobilizing and activating agencies and communities to prepare for and respond to the crisis. Government partnerships with local organizations can advance community goals (Pfefferbaum et al., in Haas, 2007). Community and faith-based organizations have a different role. They establish trusting relationships with diverse members of a community and can be more responsive in meeting the need of the public than government agencies. These organizations are a vital tool for building trust and strong social capital among community members, which are necessary for enhancing community resilience (Hu et al., 2014).

The most active organizations involved in the crisis response were identified through non-randomized snowball sampling. Doreian and Woodard (1992) argue that in comparison to other sampling approaches, snowball sampling is more flexible and valuable in responding to a constantly changing network environment. Other sampling methods in network analysis include: "multiplicity sampling; site sampling; targeted sampling; key informant sampling; purposive sampling; strategic sampling; judgment sampling and dimensional sampling" (Rothenberg, 1995, p. 106). Doreian and Woodard's (1992) study showed "that use of a fixed list of agencies produced a network of very different characteristics from that produced by a snowball approach" (Doreian and Woodard, 1992, as cited in Rothenberg, 1995, p.105).

The study began with snowball sampling using the organizations that have been primarily identified in the survey completed by the Puerto Rican population. The evacuees were asked to name all organizations that they sought services upon the arrival and organizations that are currently assisting them. Since, the study is focused only on the local organizations, federal or state agencies have been excluded from the analysis. The most frequently mentioned organizations included: Heart of Florida United Way, Salvation Army, Latino Leadership, Catholic Charities, Shepherd's Hope, Aspire Health Partners and the City of Orlando Hispanic Office for Local Assistance (HOLA) (See table 3.4.). It is important to notice, that this study is only focused on the sample of the Puerto Rican population that has registered at the multi-agency assistance center, which was first established by The Florida Division of Emergency Management at Orlando International Airport, and then relocated and named as Orlando Multi-Agency Resource Center (MARC). There were other evacuees who did not visited the Airport and MARC centers and, therefore, the information on the organizations that assisted them is not available.

Table 3.4 Most Frequently Mentioned Service-Delivery Organizations by the Displaced Population

	Organizations	Upon Arrival	Currently	"Most Helpful"
1	Fl Department of Family and Children	20	10	15
2	FEMA	19	19	13
3	United Way	17	16	7
4	Access	17	7	15
5	Salvation Army	10	0	5
6	Latino Leadership	7	4	6
7	HOLA	3	2	3
8	Catholic Charities	3	1	3
9	Shepherd's Hope	2	2	1

The top managers of identified organizations received a survey, where they were asked to identify all non-profit and governmental organizations in their collaborative network that they consider as the most active and critical in providing assistance to Puerto Rican IDPs. Combining organizations identified by the evacuees with their most active partners, identified by the manager's survey, gave a study group of organizations that have been most engaged in the response. That set the boundaries for the inclusion of network actors in the current study.

Boundaries determination is one of the main challenges in network analysis. According to Drabek and McEntire (2003), the nature of emergency networks makes their boundaries ambiguous and dynamic (as cited in Steelman et al., 2014). This study did not include organizations that do not specially focus on Puerto Rican population among other primary programs. For example, government agencies, churches or other nonprofit organizations that provide services to any client as a part of their routine service, which may include Puerto Rican evacuees, but do not have special services or programs created to address the needs of evacuees were not included in the study. The study group of organizations included six faith-based organizations, five non-religious nonprofits, and four governmental agencies. Among them, ten organizations agreed to participate in the survey, that helped to develop the interview questions. Among them, seven organizations decided to join the interview, which included two governmental agencies, one nonprofit and 4 faith-based organizations. The saturation was reached after five interviews. Creswell (1998) suggested a sample of five to twenty-five is enough for phenomenological studies compared to grounded theory studies, which would require over thirty-five interviews. Schram (2006) and Yin (2015) agree that five to ten interviews are typical for qualitative research; suggesting that large samples can lead to a superficial investigation in case study analysis.

The purposive snowball sampling is a useful method unbiased by any researcher defined population boundary (Scott, & Carrington, 2011). There are limitations of the snowball sampling technique, which include lack of random selection of study participants and, therefore, the inability to determine the sampling error and ensure generalization of the results. However, this second part of the research involved descriptive statistics and qualitative analyses. Although it may not provide the generalization of the results, it gives an in-depth analysis of the case and its study participants and allows for the replicability of the study in other settings or geographical locations.

The study focuses on managers' perceptions as the literature suggests that public leaders and managers are the main facilitators of collaborative cross-sector partnerships (Milward, & Provan, 2006; O'Leary, & Bingham, 2009). Herranz (2006) claims that public managers are "increasingly being held accountable for performance outcomes while being expected to achieve these results collaboratively by coordinating networks involving other governmental, nonprofit and for-profit organizations" (p. 311). Bingham, Sandfort, and O'Leary (2008) refer to that as "collaborative capabilities of managers". The competencies of managers also include designing networks, facilitation of negotiations, oversight, mandating, providing resources, and participatory governance engagement (Koliba, Meek, & Zia, 2010). Morse and Stephens (2012) suggest that managers' responsibilities consist of four phases: assessment, initiation, deliberation, and implementation. Esteve et al. (2012) study support that managers' decision-making plays a crucial role in the effectiveness of interorganizational collaboration, taking into account changing the external and internal organizational environment. Thus, the articles reaffirmed that network leadership and management are overlapping concepts, both playing an important role in improving organizational and interorganizational performance. In this situation, the sample of managers included in the study will have the best knowledge of the collaborative experience of the organization than other employees.

3.3.2 Data Collection

The qualitative data were collected through semi-structured interviews with the managers of the seven most active organizations identified through the snowball sampling. According to Kvale (1996) interviews help to understand both a factual and a meaning level of social phenomena experienced by individuals. A researcher developed an interview protocol that aims to understand the perceptions of managers on the public service network responsiveness in contrast to one described by the Puerto Rican population, and exploring the possible effect of the level of collaboration, community support, and availability of resources on the public service network responsiveness.

The interview questions were designed upon the PSNR scale, validated through the quantitative part of this study. Also, explored further the dimensions of collaboration and their effects on PSNR, which included *governance or "jointness"* – ability of making decisions jointly or coming to a consensus; *the degree of administrative oversight*– clarity of roles and responsibilities, communication channels, and mechanisms to monitor each other's activities; *mutuality* – level of mutually beneficial interdependencies; *trust*– level of trust among network organizations; *organizational autonomy* – the ability to pursue organization's self-interest. *Resource munificence* and *community support* were also explored through the interview questions, which helped to define the environment in which organizations operate during the current crisis. *Resource munificence* understands the change in the funds received by the organization from October until December 2017 when the crisis began, compared to what they would have normally expected for that period. *Community support* understands the change in the number of volunteers working in the organization or financial individual or corporate donors from October until December 2017, compared to what they would have normally expected for that period.

The study utilized semi-standardized interviews. In contrast to the standardized approach, semi-standardized gives more flexibility in reordering question, adjust the level of language, and making clarifications, and allows the researcher to probe beyond the initially prepared questions. At the same time, this approach gives more structured responses compared to unstandardized interviews (Berg, 2007). The interview protocol included mainly introductory, indirect, interpreting and specifying the question.

The participants were offered to choose from two ways of conducting the interviews: face-to-face (N=5), at the participants' administrative office, or over the phone (N=2). Berg (2006) suggests that there is a certain disadvantage of telephone interviews over in-person approach, which can be explained by a lack of the ability to develop full channels of communication between the interviewer and interviewee. There were two people conducting the interview: the interviewer and the notetaker. All interviewees received IRB consent form prior to the interview, that states the interview do not intend to harm a participant in any way. Also, the participants received a sample of interview questions, which gave them an understanding of the interview theme and structure. The interviews took about 45 to 60 minutes on average. The responses were manually recorded by the interviewer and notetaker. Then the responses were combined and sent for clarification to the interviewee when it was necessary. All the material is secured in the password-protected folder on the computer. Only the researcher has access to the data.

In additions to semi-structured interviews, the quantitative descriptive data were collected. The collected quantitative data seeks to provide structured information on the type of organizations that participated in the study, These data were collected through a follow-up questionnaires, that asked respondents about their organizational characteristics, which include sector (public, nonprofit or faith-based); primary services that the organization provides for displaced individuals; size (number of fulltime employees and volunteers); and approximate total estimated budget in the current fiscal year. Table 3.5. shows how the variables were operationalized.

3.3.3 Ethics

The participants of the interviews were first contacted and provided with the information about the study and the letter of informed consent for the participation in the research. All participants of the study were informed about the procedures and potential harm of the study in the informed consent. All questions regarding the consent form were answered before the data collection. Study participants were also informed that they could choose not to answer to the questions they felt uncomfortable and can withdraw at any time. Institutional Review Board (IRB) approval to conduct interviews and questionnaires for organizations has been obtained from the University of Central Florida. All the material is secured in the password-protected folder on the computer.

Table 3.5 Operationalization of Variables

Variable Title	Survey Questions	Data Type	Measurement		Explanation
Organization's Sector	In which sector do you consider your organization to be in?	Nominal	o Government o Nonprofit o Private	o Faith-Based o Other, please specify	Sector in which the organization-responder operates
Organization's Primary Area of Service	What is your organization's primary area of service? Please select all that apply.	Nominal	o Housing o Education/School o Employment o Healthcare o Job Training o Mental Health o Transportation	o Financial Assistance o Legal Assistance o English Language Learning o Identification Documents o Others, please specify___	The primary service area of the organization-responder.
Organization's Areas of Services for Displaced Puerto Rican Individuals	What are your organization's primary areas of service that your organization provide for the displaced Puerto Rican individuals? Please select all that apply.	Nominal	o Housing o Education/School o Employment o Healthcare o Job Training o Mental Health o Transportation	o Financial Assistance o Legal Assistance o English Language Learning o Identification Documents o Others, please specify___	Service areas that the organization offers for displaced Puerto Rican individuals
Full Time Employees	Approximately, how many full-time employees work in your organization? (Please check one)	Nominal	o 1-5 o 6-15 o 16-25	o 26-50 o over 50	Approximate number of fulltime employees currently working in the organization
Full Time Employees	Approximately, how many full-time employees work in your organization? (Please check one)	Nominal	o 1-5 o 6-15 o 16-25	o 26-50 o over 50	Approximate number of fulltime employees currently working in the organization
Number of Volunteers	Approximately, how many volunteers currently work in your organization? (Please check one)	Nominal	o 1-5 o 6-15 o 16-25	o 26-50 o over 50	Approximate number of volunteers currently working in the organization
Total Estimated Budget	Approximately, what is the total estimated budget of your organization in this fiscal year? (Please check one)	Nominal	o $0-$100,000 o $100,001-500,00 o $500,001-$1,000,000	o $1,000,001-$5,000,000 o $5,000,001 o Other (Please specify) o Don't Know	Approximate estimated budget in the current fiscal year

3.3.4 Data Analysis

To increase validity, the study utilized Dedoose software for qualitative data analysis. The study applies a deductive content analysis approach in data analysis. This approach is also called a directive approach to content analysis. Elo and Kyngas (2008) suggest that deductive content analysis involve testing categories, concepts, models, or hypotheses. This study aims to explore the link between collaboration, contextual factors in which collaboration occurs, and public service network responsiveness. It primarily defines and labels coding categories and subcategories based on concepts and constructs developed in the literature review. The top-down coding approach is utilized, which means that a researcher begins with coding based on the theoretical underpinnings developed in the previous studies (Saldana, 2009).

Table 3.6. represents operational definitions of the following subcategories: collaborative dimensions, public service network responsiveness dimensions, resource munificence, and community support. The texted was coded based on these predetermined definitions. The aspects that do not fit the definitions, were used to create new concepts.

To ensure reliability and trustworthiness of the results, a researcher first highlighted text that capture all possible occurrence of each phenomenon that describes the effect of collaborative dimensions, resource munificence and community support on public service network responsiveness without coding. Then all highlighted text was coded based on predetermined categories. The researcher repeated the coding in one week and compared to the previous results. There was 96 percent agreement between the first and second coding.

Table 3.6 Operational Definitions of Subcategories

Category	Subcategory	Definition
Public Service Network Responsiveness	Sufficiency	Ability to deliver accurate service on time
	Dignity	Protecting and augmenting the universal human rights within the public service network
	Empowerment	The ability of the public service networks to facilitate evacuees input and feedback, providing opportunities to participate in decision-making proc processes and express their opinion regarding the provision of public goods
	Communication	Communication tools with which public service networks inform evacuees and effectively respond to such opinions; quality of the interactive processes between public service networks and evacuees
Collaborative Dimensions	Governance	Having established formal or informal agreements on collaboration between organizations; knowing what resources partner organizations bring to collaboration; understanding why organizations belong to collaboration; being able to make decisions jointly or coming to a consensus
	Mutuality	Interdependence on organizational resources, services or support; information exchange that benefits both organizations; achieving goals better while working together than working alone.
	Autonomy	Ability to pursue the organization's self-interest; changes in organizational independence while working with other organizations; changes in organizational integrity while sharing information with partners.
	Administrative Oversight	Having mechanisms that coordinate or monitor collaborative activities, clarify roles and responsibilities, and establish communication channels
	Trust	Ability to count on each other in carrying out responsibilities; level of reciprocity and trust among network organizations
Contextual Factors	Resource munificence	Changes in governmental or non-governmental funding during the crisis response, compared to what normally could be expected for that time of the year
	Community Support	Changes in a number of volunteers and financial individual or corporate donations, compared to what normally would be expected for that time of the year

3.4 Summary

This chapter explained the rationale for choosing the multi-method design of the study. Then it described the quantitative methodology, which included the sampling techniques, operationalization of study variables, data collection, and analysis techniques. The qualitative methodology explained how the study group of organizations was defined, followed by the description of data collection and analysis techniques. The IRB procedures and ethical concerns were also included in this chapter. Next chapter presents the findings of this study.

CHAPTER 4: FINDINGS

This chapter presents the results of the quantitative and qualitative components of the study. The quantitative analysis first runs Exploratory Factor Analysis that tests the validity of the Public Service Network Responsiveness Measurement, followed by the Cronbach's alpha reliability analysis that determines whether the scale for measuring the concept is reliable. After all, measurements are validated, the study proceeds with Ordered Logistics Regression and predicted probabilities analysis. The qualitative part of the study begins with the descriptive statistics of all organizations that participated in the interviews. Then it proceeds with the qualitative content analysis.

4.1 Quantitative Analysis

4.1.1 Exploratory Factor Analysis (EFA)

Before the extraction of the factors, several tests were performed. Polychronic correlation matrix has been chosen over the Pearson correlation matrix since the items are ordinal (Holgado–Tello, et al., 2010). Table 4.1. present the results from the correlation analysis. One item E2 - "criticism and suggestions for improvement" was poorly correlated with three other items at the level lower than 0.3. These items include "employees are courteous and kind," "the Spanish language proficiency of employee is sufficient to deliver services to me," "the efficiency of employees is sufficient to deliver services to me." The item is moderately correlated with other items within the scale. While the majority of all other items show strong correlation at $r>0.5$. Therefore, the item "criticism and suggestions for improvement" is eliminated from the scale. This can be explained that it references the personal ability or agency of an individual to provide criticism and suggestions for improvement, along with opportunities provided by organizations in the network.

The Kaiser-Meyer-Olkin measure of sampling adequacy indicated “marvelous result” of 0. 0.916, and the data is useful for the factor analysis (Cerny, & Kaiser, 1977). The Bartlett’s test of sphericity also showed significant results ($\chi^2(66) = 1686.166$, $p < .000$), and confirmed the items within the scale are related and are suitable for the factor analysis (Tabachnick and Fidell, 2001).

Table 4.1 Polychronic Correlation Analysis of Public Service Network Responsiveness

	D1	D2	D3	E1	**E2**	C1	C2	C3	C4	C5	S1	S2	S3
D1	1												
D2	.605	1											
D3	.535	.497	1										
E1	.335	.325	.527	1									
E2	**.268**	.318	.301	.427	1								
C1	.603	.585	.670	.606	.364	1							
C2	.577	.619	.706	.586	.361	.916	1						
C3	.561	.511	.438	.484	.311	.565	.556	1					
C4	.522	.523	.669	.649	.309	.658	.662	.467	1				
C5	.403	.488	.695	.657	.336	.676	.683	.397	.794	1			
S1	.615	.551	.676	.641	.315	.758	.700	.448	.685	.648	1		
S2	.543	.673	.495	.328	**.292**	.651	.657	.506	.518	.534	.574	1	
S3	.671	.587	.650	.518	**.262**	.741	.716	.502	.617	.606	.709	.718	1

Exploratory Factor Analysis (EFA) was performed through factor analysis methods. According to Kaiser’s eigenvalue > 1 rule, components with eigenvalue over 1 should retain in the interpretation. Graph 4.1. is a visual representation of eigenvalues, conducted using Scree Test. The number of data points above the red break is the number of factors that should be retained in the study.

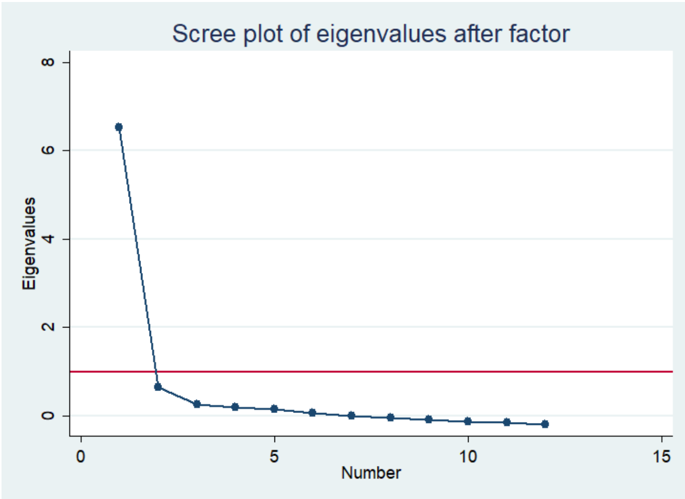

Figure 4.1 Scree Test

The EFA test indicates that all 12 items load well onto a single latent factor with eigenvalue 6.68 and explaining about 90 percent of the variance. The factor loading for all items is over 0.4. All items are retained to measure the public service network responsiveness scale (see table 4.2.).

Table 4.2 Factor Loadings for the Measurement Model

Variable	Factor1	Uniqueness
D1	0.6503	0.5771
D2	0.6535	0.5730
D3	0.7446	0.4456
E1	0.6471	0.5812
C1	0.8639	0.2536
C2	0.8592	0.2618
C3	0.5823	0.6609
C4	0.7627	0.4183
C5	0.7503	0.4370
S1	0.7951	0.3679
S2	0.6825	0.5342
S3	0.7923	0.3722

4.1.2 Cronbach's Alpha Reliability Analysis

In order to test the reliability perceived network responsiveness scale, the study runs Cronbach's Alpha reliability test. Table 4.3. shows the output for Cronbach's Alpha test. Field (2005) suggests that although there is a general rule of thumb on 0.7 thresholds, the Cronbach's alpha should be interpreted with caution. First, the alpha value can vary depending on the number of items that measure the scale. Fewer item can produce a lower alpha value (Pallant, 2013). According to Kline (1999), there are various acceptable thresholds for different kinds of constructs. For more cognitive test 0.8 would be an appropriate cut-point. For a reability test, 0.7 is a necessary cut off point. However, when the constructs measure psychological or perceptional values, the acceptable threshold can go below 0.7. At the same time, Nunally and Bernstein (1995) argue that the reliability of 0.9 is a minimum that should be tolerated. Furthermore, the alpha value can vary depending on the number of items that measure the scale.

The Cronbach's Alpha coefficient is 0.9269 is very strong and acceptable. The results for the item-test and item-rest correlation should be roughly the same across the items. The item test correlation shows the correlation of each item with the total score of all 13 items. The item-rest correlation reports the correlation of each item with the total score of the other 12 items (Acock, 2016). The item "ability to provide criticism and suggestions" reports lower item-rest and item-test correlation score than the total of the corresponding values. The overall reliability scale is very high, and the elimination of the less correlated item improves the alpha coefficient (0.9312).

Table 4.3 Cronbach Alpa for the Measurement Model

Item	Obs	Sign	item-test correlation	item-rest correlation	interitem correlation	alpha
Employees are courteous and kind.	210	+	0.6852	0.6229	0.5003	0.9232
I feel agency officials with whom I have communicated understand my cultural background.	210	+	0.6928	0.6315	0.4992	0.9229
Organizations are doing all they can to sincerely support displaced Puerto Ricans who need help.	210	+	0.7619	0.7119	0.4893	0.9200
I have opportunities to participate in the decision-making process regarding my needs.	210	+	0.6894	0.6277	0.4997	0.9230
I am able to provide criticism and suggestions for improvement of services.	210	+	**0.4773**	0.3897	0.5302	0.9312
The level of communication is sufficient.	210	+	0.8524	0.8192	0.4763	0.9161
The available tools for communication are sufficient.	210	+	0.8491	0.8153	0.4768	0.9162
I am able to receive information in Spanish when requested.	210	+	0.6357	0.5663	0.5074	0.9252
The amount of information I am provided regarding services and procedures is sufficient.	210	+	0.7741	0.7262	0.4875	0.9195
The accessibility of the information I am provided regarding services and procedures is sufficient.	210	+	0.7593	0.7088	0.4897	0.9201
Requests are handled in a timely manner.	210	+	0.8036	0.7610	0.4833	0.9182
The Spanish language proficiency of employees is sufficient to deliver services to me.	210	+	0.7087	0.6499	0.4969	0.9222
The efficiency of employees is sufficient to deliver services to me.	210	+	0.7998	0.7565	0.4838	0.9184
Test scale					0.4939	**0.9269**

Next, the scale was recoded as an ordered variable *y* with three categories from "low" to "high." Score 31 and 41 are the threshold values.

If $y^* <= 31$, we observe $y=1$ as low public service network responsiveness,

If $31<y^*<41$, we observe $y=2$ as medium public service network responsiveness

If $y>=41$, we observe $y=3$ as high public service network responsiveness.

Table 4.4. shows the number of respondents in each category of perceived public service network responsiveness. Almost half of the respondents perceived public service network responsiveness as high. On the other hand, 22 percent of respondents reported low public service network responsiveness. And, finally, 28 percent perceives network responsiveness at a medium level.

Table 4.4 Public Service Network Responsiveness: Frequency

Network Responsiveness	Freq.	Percent	Cum.
Low	47	22.38	22.38
Medium	59	28.10	50.48
High	104	49.52	100.00
Total	210	100.00	

4.1.3 Ordinal Logistics Regression

Before running Ordered Logistics Regression, three assumptions should be met:

- **Assumption #1.** The first assumption is there should be lack collinearity between the dependent and independent variables. As a rule of thumb, a tolerance of 0.1 or less which is equivalent to VIF score of 10 or greater shows high collinearity between variables. Table 4.5**.** presents the results from multicollinearity test. Tolerance scores across all variables are higher than 0.1, at the same time the VIF scores are around 1. This reports that there is no collinearity between the variables.

Table 4.5 Multicollinearity Test

Variable	SQRT VIF	R-VIF	Tolerance	Squared
Public Service Network Resposniveness	1.11	1.05	0.9037	0.0963
High Complexity	1.27	1.13	0.7876	0.2124
Low Complexity	1.33	1.15	0.7546	0.2454
Family/friends in Florida	1.06	1.03	0.9436	0.0564
Spouse	1.15	1.07	0.8668	0.1332
Children	1.09	1.04	0.9172	0.0828
Parents	1.10	1.05	0.9103	0.0897
Intent to stay	1.18	1.09	0.8475	0.1525
Average income in Florida	1.25	1.12	0.7974	0.2026
Average income in Puerto Rico	1.23	1.11	0.8160	0.1840
Mean VIF	1.18			

- **Assumption #2.** The second assumption is there should be no empty cells or small cells. The crosstab between the categorical variables and the outcome variable has been performed. No empty cells or cells lower than 5 that exceed 20 percent has been detected.
- **Assumption #3.** The third assumption is proportional odds assumption, that tests whether the chosen model is valid and equal across the levels of the outcome. It is examined by two

tests: Test of Parallel Lines and Brant's Test. The null hypothesis assumes that the slopes of each value of the outcome variable are equal. The Test of Parallel Lines fails to reject the null hypothesis at chi2(9) = 10.85, Prob > chi2 = 0.2106, and suggests that the model is a good fit. Similarly, Brant's Tests indicates that the proportional odds assumption is not violated, at chi(11) = 15.08, Prob > chi2= 0.179.

As none of the assumptions has been violated, the study proceeds with ordered logistics regression.

The research applied the ordinal logistics regression to examine the relationship between the dependent variable "perceive public service network responsiveness" and independent variables, which determine the number of high and low complexity service needs of the respondents. The choice of the model has defined the categorical nature of the dependent variable.

Table 4.6. presents The Ordered Logistics Regression model outputs. The results showed that with the increase in the number of lower complexity service needs the probability of the individuals to be in a high category of perceived network responsiveness decreases by 0.8 times (z=-2.40). The result is significant at *p-value* < 0.05 and support the second hypothesis. The findings do not support the first hypothesis, about the effect of the number of complex service needs on the evacuees' network responsiveness perception. The odds ratio of having positive responsiveness perception among individuals who came with parents are approximately 4.01 times higher than those who came without parents, at *p value<0.05*. Other control variables, which include the intent to stay in Central Florida, having family or friend in Central Florida before arrival, household income in Puerto Rico before arrival, arriving with children or spouse are not significantly associated with public service network responsiveness perception.

Table 4.6 Ordered Logistics Regression

Public Service Network Responsiveness	Odds Ratio	Std. Err.	z	P>z
N of high complexity needs	.9132	.158	-0.52	0.600
N of low complexity needs	**.7688***	**.084**	**-2.40**	**0.017**
Intent to stay (Stay permanently)				
Stay no more than 3-5 years	1.4294	.753	0.68	0.497
Relocate to another part in the US or country	1.4103	.891	0.54	0.586
Do not know	1.1343	.411	0.35	0.728
Household income in PR (Less than $20,000)				
$20,000-$49,999	.6892	.213	-1.21	0.227
$50,000- or more	.8330	.519	-0.29	0.769
Prefer not to answer	1.0116	.586	0.02	0.984
Family/friends Central Florida	.5887	.258	-1.21	0.227
Spouse	1.3028	.388	0.89	0.374
Children	1.7277	.544	1.74	0.083
Parents	**4.0992***	2.497	2.32	**0.021**
/cut1	-2.4214	.752		-3.894882
/cut2	-1.0818	.735		-2.523081

Note: Values are odds ratios. $p < .05$ *, $p < .01$ **, $p < .001$ ***

Graph 4.2. visually presenting the changes in predicted probabilities of the respondents to be in a particular PSNR category with the growing number of low and high complexity service needs accordingly, holding all other variables at their means. As the previous ordered logistics regression analysis showed, the results for low complexity public service needs are significant at p<0.05. As the study participants had at least one high and low complexity public service needs, the study examines further the predicted probability of the respondents to be in a particular PSNR perception category based on the variation in a number of high and low complexity services. The study uses *margins* command to predict probabilities for ordered logit. All other control variables are held at their means.

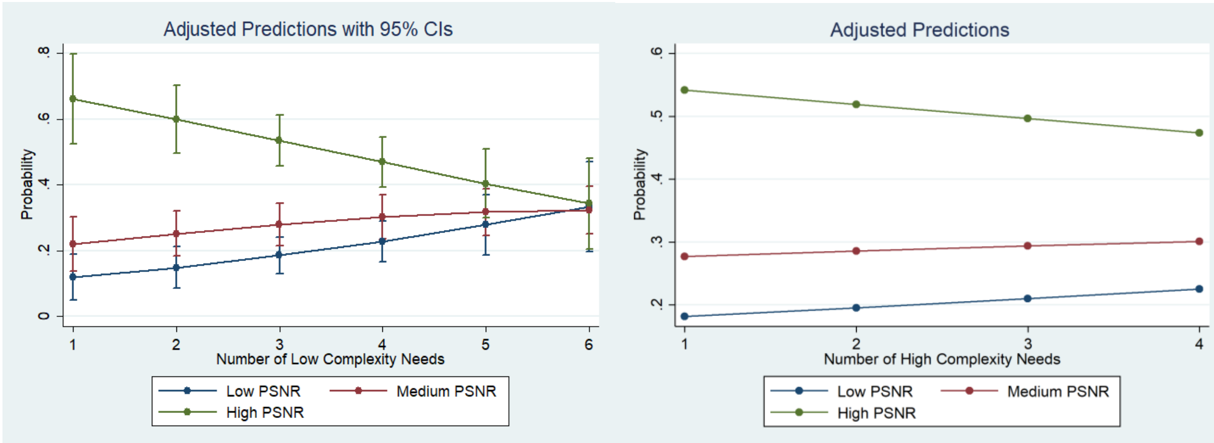

Figure 4.2 Predicted Probabilities of the Respondents to be in a Particular PSNR Category

Table 4.7**.** below illustrates the predicted probability results. First of all, as the number of high and low complexity public services increases, the predicted probability of respondents to occupy a high PSNR category decreases. There is a noticeable difference between how respondents are spread across the categories from being in need of the lowest possible number of service needs (N=2) to the highest possible number of service needs (N=10). There is 60 percent of the respondents in the high PSNR category that sought one low and one high complex public service, compared to 10 percent in the low PSNR category. However, when it comes to respondents with 4 four high complexity public service needs and six low complexity public service needs, the respondents are evenly spread across three PSNR categories, with predicting probabilities ranging from 32 to 36 percent. A person that sought one high complexity public service and six low complexity services has 38 percent chance to be in a high PSNR category, compared to a person with four high complexity and one low complexity public service needs has a predicted probability of 63 percent to be in a high category of PSNR. These results show that an increasing number of high complexity public service needs have a very small effect on the perceived PSNR, moving from 70 percent of the respondent with one high complexity need to 63 percent of respondents with four high complexity needs are predicted to be in high PSNR. There are also 10 percent of

respondents with one public service need of high complexity and 13 percent of respondents with four public service needs of high complexity in a low PSNR category.

Table 4.7 Predicted Probabilities for Respondents with Different Number of Low and High Complexity Public Services, Holding all Other Variables Constant

Number of Services		Public Service Network Responsiveness		
High Complexity	Low Complexity	Low	Medium	High
1	**1**	**.103**	**.202**	**.696**
	2	.130	.233	.637
	3	.162	.263	.575
	4	.202	.289	.509
	5	.247	.309	.444
	6	.300	.321	.380
2	**1**	**.112**	**.212**	**.676**
	2	.140	.244	.616
	3	.175	.273	.552
	4	.217	.297	.487
	5	.264	.314	.422
	6	.319	.322	.359
3	**1**	**.121**	**.223**	**.656**
	2	.152	.254	.594
	3	.189	.282	.530
	4	.232	.304	.464
	5	.282	.318	.400
	6	.337	.323	.339
4	**1**	**.131**	**.234**	**.635**
	2	.164	.264	.572
	3	.203	.290	.507
	4	.249	.310	.442
	5	.301	.321	.378
	6	**.359**	**.322**	**.318**

However, there is a noticeable change in PSNR perception attitudes among with the growing number of low complexity public services among the respondents that sought only one high complexity service. There is a rapid decline in predicted probabilities in being on top category of PSNR perception among the respondents who have one low complexity need, constituting to 70 percent, to 6 low complex need, accounted to 38 percent. Also, a rapid increase in predicted probabilities is noticeable in the low PSNR category. There are ten respondents with one low complexity need, and 30 percent of respondents with six low complexity needs, that occupy this category. These findings provide additional support for the second hypothesis and help to clarify why the first hypothesis is not supported.

4.2 Qualitative Analysis

4.2.1 Descriptive Characteristics

These findings highlight the perceptions of the seven managers from governmental and nonprofit organizations in the public service network responsiveness of the greater Orlando organizations while working collaboratively in responding to the Puerto Rican crisis. There were different kinds of organizations involved in a collaborative effort. Some partnerships have been formed prior to the response, while some emerged during the response. Organizations varied in their sector, size, and their capacities, but each played an important role, which helped to provide a broad spectrum of services in an efficient manner. Five out of seven organizations, that participated in this study, were present at the resource centers established by local and national organizations, that aimed to assists the immediate needs of the evacuees upon their arrival. Initially, the resource center was opened at the Orlando International Airport, and it was later relocated and named – Multi-Agency Resource Center (MARC). These five organization simultaneously provided services at the resource center and their offices. These organizations included two governmental agencies, two faith-based organizations and one nonprofit. Two other faith-based organizations-participants worked in close collaboration with organizations-participants who were apart at the resource center. Table 4.8. presents the characteristics of the participating organizations.

Table 4.8 Descriptive Statistics

Organization	Sector	N Employees	N Volunteers	Annual Budget
A	Government	over 50	6-15	$5,000,000 +
B	Government	1-5	1-5	$100,001-$500,000
C	Nonprofit	6-15	26-50	$1,000,001-$5,000,000
D	Faith-based	over 50	over 50	$5,000,000 +
E	Faith-based	over 50	over 50	$5,000,000 +
F	Faith-based	16-25	over 50	$1,000,001-$5,000,000
G	Faith-based	6-15	16-25	$500,001-$1,000,000

Table 4.8. shows that participants of the study were diverse, representing large and small, public, and nonprofit organizations, which were identified as the most active by the displaced Puerto Rican population and partnering organizations. These organizations widely differ in the number of employees, recurring volunteers, and the total annual budget.

Below are the participants' overall perceptions in a summary form, on the collaborative dimension occurred during the response to the crisis:

Governance. All organizations that participated in this study recognized the importance of making decisions jointly in response to the Puerto Rican crisis in Central Florida. They also suggested that they did not experience any issues in coming to consensus during the collective response.

Administrative oversight. While six organizations suggested that there were sufficient processes established that helped to monitor activities, ensure clarity of goals and responsibilities across organizations, one governmental agency suggested there was a lack of sufficient processes that ensured administrative oversight over the network activities.

Mutuality. While six organizations reported that they agreed about the goals they were pursuing together in meeting the needs of PR evacuees. One organization reported that it does not necessarily agree or disagree with that statement. All organizations suggested that these shared goals benefit their organizations.

Autonomy. None of the organizations reported that their organizational autonomy was constrained while working collaboratively. Three organizations reported that their autonomy has actually increased while working with others.

Trust. All organizations reported that they were able to count on each other to meet their obligations in assisting PR evacuees.

4.2.2 Qualitative Content Analysis

There were 98 codes that described the relationship between dimensions of collaboration and public service network responsiveness. Table 4.9. presents the distribution of codes across the categories.

Table 4.9 Percentage of Codes per Categories of Collaboration Dimensions and Public Service Responsiveness Dimensions

	Sufficiency	Dignity	Engagement	Communication	Total
Governance	29%	11%	5%	9%	54%
Mutuality	6%	8%	6%	2%	23%
Autonomy	5%	3%	1%	1%	10%
Administrative Oversight	8%	0	0	0	8%
Trust	3%	2%	0	0	5%
Total	51%	25%	12%	12%	**100%**

4.2.2.1 How the collaborative dimensions affect sufficiency as a dimension of the responsiveness of public delivery networks?

Governance. Twenty-nine percent of codes described how governance could affect sufficiency as a dimension of public service network responsiveness. All organizations that participated in the study indicated that collaboration allowed them to handle service needs requests in an efficient manner. That was achieved for several reasons. First, a well-developed client referral network allowed organizations to receive assistance from other organizations when they did not have enough capacity to assists all their clients or address individual needs. One interviewee stated:

> We had a packed office. We would refer to other organizations if we were not able to assist all clients.

Another agency manager indicated:

> We never tried to assist everyone. We try to do our part because everybody has got a role to play.

One manager also stated:

> We were acting as another referral agency, but at the same time, we provided services. So, if anyone came for a down payment, we referred them to X organization, but whatever X organizations could not meet, we would assist them with this kind of services: furniture, paying licenses for nurses or teachers, medical bills, or surgeries.

Second, collaboration with smaller size organizations helped with faster cash assistance. One interviewee mentioned that those organizations had more flexibility in providing cash assistance, compared to larger organizations, which would require more processing time for such service. That was especially critical when individuals and families who lost their housing vouchers or were required to pay a deposit in a limited timeframe period. Without rapid cash assistance, these individuals and families could become homeless. From one of the interviews:

> Our grant funding was very structured. We could only pay for the deposit and first-month rent. But also, we did not want people to get out of the hotel into stable housing if they would not be able to afford and maintain that permanent housing. So, we were trying to work with people, to get them first connected to jobs.

There were organizations that established a formal platform that provided rapid cash assistance for the individuals and families, that met specific requirements.

Also, the majority of organizations suggested that collaboration helped with providing sufficient Spanish language proficiency in delivering the services. One partnering organization created flyers with the list of all organizations in the area and their services in the Spanish language. These flyers were distributed across all collaborative partners that assisted individuals and families from Puerto Rico. Some organization was able to request formal documentation, e.g., eligibility forms, in the Spanish language from governmental agencies. At the Airport Assistance Center, organizations would help each other by interpreting if some of them would not have employees speaking Spanish. Only one manager from the organization that provided healthcare services argued that Spanish proficiency was a big issue, which was not addressed through collaboration. The interview stated:

> Spanish proficiency was not good. I would say, one of the biggest weaknesses. In fact, we had none of the Spanish speaking people who came to help us. People were trying to be

> very helpful, but their Spanish language skills were not good. … to have Spanish language capable people as part of the response – I think that's an area of deficits.

At the same time, three organizations stated that a lack of collaboration between Federal Emergency Management Agency (FEMA) and local nonprofit agencies that assisted evacuees with housing services, brought a lot of confusion and significantly decreased sufficiency in response to the housing needs. FEMA's Transitional Sheltering Assistance program provides a short-term lodging assistance for the individuals and families evacuated after disasters and who are not able to the home for and extended time. The initial assistance period is 5 to 14 days; however, TSA can be extended if needed. In an evacuee is ineligible for TSA, this individual is referred to the local agencies for further possible assistance (FEMA, 2019).

Housing was one of the most acute issues, however, not in terms of availability, but eligibility requirements. Three managers suggested that they were able to find housing anywhere in Florida, and help the evacuees to get in. However, these organizations did not have any information on how much time they have before TSA vouchers would expire. Either agency needed to focus on finding immediate shelters or assisted the evacuees with finding proper jobs so that they can afford permanent housing. One interviewer stated that they had a tough time getting in contact with FEMA and getting them to the table. However, once they did, they were requesting and getting in place agreements and protocols to get FEMA's cases transferred over to their organization. Instead, FEMA rejected by saying that their organization has completed their work and they can now drop everything. It took a lot of communication effort to get the most up to date information about who was still coming, who was remaining on receiving TSA and when TSA was going to end.

Autonomy. Five percent of codes described how autonomy could affect sufficiency as a dimension of public service network responsiveness. Three nonprofit organizations suggested that there were no changes in their autonomy that would affect the sufficiency in delivering services to the evacuees. One organization noticed, that when there are many powerful organizations trying to collaborate, they instead share big ideas and fewer actions. However, in response to the Puerto Rican crisis in Central Florida, organizations were able to understand the greater good, and were eager to listen to each other and work together. On contrary, one manager suggested, that autonomy of local emergency management agencies was constrained due to the fact that they have not received any financial assistance from the state or federal government, even though they were willing to assist the evacuees.

Mutuality. Six percent of codes described how mutuality could affect sufficiency as a dimension of public service network responsiveness. Organizations that participated in this study suggested that mutuality helped them to be more sufficient during the crisis response. One manager suggested that the strategy of everybody getting in the room and polling resources was very important. This manager also recalled their meetings with community partners, where all organizations would have shared their financial capabilities. Among the first things that were done during regular meetings with community partners, were to understand what funding each organization has, when it ends and what it can be used for. The organizations will then collectively decide how and in what order this money will be spent. A manager from a faith-based organization describes collaboration that occurred at the resource center at the Orlando International Airport and, later, at the Multi-Agency Resource Center (MARC), as a matter of checking necessary resources with other organizations and working out the solutions collaboratively. A governmental agency manager suggested that everyone "naturally" understood their role in the collaborative network. Another manager stated that sufficiency in service delivery was improved through the ongoing learning about each other programs, sharing resources, and enhancing the client referral network.

Administrative Oversight. Eight percent of codes described how administrative oversight could affect sufficiency as a dimension of public service network responsiveness. Five organizations suggested that having a structure that had a function to oversee the activities of the collaborative network, helped to improve sufficiency in delivering services. Three organizations that were a part of the resource assistance center at the airport stated that each morning organizations were getting the information about when airplanes with evacuees' land, and in the afternoon, they had daily briefing sessions coordinated by FEMA and United Way. During those afternoon meetings, organizations would report share a list everybody present in the assistance center, get phone extensions, and report any issues of concern that would be addressed during these meetings. One of the healthcare organizations stated, that they had to provide a daily report to the Office of Emergency Management on the number of the actual people were seen, their physical and mental health needs. Organizations that were a part of the response at the resource assistance center has a mixed opinion on the efficiency of the center. One manager suggested:

> There was confusion, on what was the role of the resource center, and we were not sure what people at the airport would need, and we didn't see it until the evacuees came to us [organizations].

On contrary manager from the governmental agency stated:

> It was amazing how they were helping people, how everything was handled. They helped a lot of people in the assistance center.

One other manager suggested that outside the resource assistance center, networks were more flexible than structured. Sometimes organizations worked together interdependently on their own. Sometimes some organizations could become lead organizations, and then step down. On the contrary, a manager from faith-based organization, that was not a part of the resource assistance center, stated that they would also meet on a regular basis with administrative directors and case managers from partner nonprofit and governmental organizations. Later they split with the administrators having meetings separately from case managers. Administrators would focus on new information that has come out and deadlines, while case managers would bring cases together, and find resources for managing those cases. Another faith-based organization reported that their organization has been providing training for the churches and put together a plan on how to respond for various crises and disasters, which helped them to prepare and clarify their roles in PR crisis in Central Florida. The interviewee stated that training gave churches an opportunity to plan on what they need to do to protect their property and people, so they can focus on assisting the effected community and not to be concerned about routine services in the church.

Trust. Three percent of codes described how trust could affect sufficiency. One organization suggested that trustful relationships and eagerness to be transparent about ones organizational capacities helped to build a coordinated effort. Even though they did not necessarily have the funding resources, they had the intellectual capacity and ability the same type of strategy they use every day to leverage resources. The interviewer also recalled that funders that had never given money for a particular solution before trusted their solution for the PR crisis response and gave funds. Another manager described that all organizations involved in the crisis response were trying to learn from each other, help each other, and share values that enabled them to become responsive while assisting displaced individuals and families. One interviewer described: “what you cannot do – we can, your strength becomes our strength, and our strength becomes yours.

Table 4.10 Domains Describing Ways Collaborative Dimensions Affect Sufficiency

1. Governance Increase in sufficiency • Staff working with the community before the crisis • Established relationships with community before the crisis • Transparency about financial capabilities during the crisis response • Separation of responsibilities during the crisis response • Organizations with different type of services in one network • Partners with fast cash assistance options • Sharing intellectual capacity • Ability to use the same type of strategy • Bringing new partners • Informing other agencies about service needs • Developing client referral network • Information exchange about available resources and service needs • Establishing coalition focused on assisting evacuees • Creating programs focused on assisting evacuees • Having organizations that lead the effort • Assisting partners in capacity building of their organizations • Understanding service gaps across partners Decrease in sufficiency • Lack of clarity of role of the resource center • Lack of role clarity of certain partners • Lack of quality and ease of communication with federal agencies • Government agencies were not facilitating efforts for affordable housing • Lack of people experienced in rapid housing • Lack of collaboration across county governments • Geographical boundaries • Lack of system capability to absorb all needs	*2. Autonomy* Increase in sufficiency • Working both collaboratively and autonomously • Having own organizational programs Decrease in sufficiency • Information asymmetry • Local emergency management units depending on state and governmental funding *3. Administrative Oversight* Increase in sufficiency • Having regular meetings with community partners • Daily briefing sessions at the resource assistance center • Having disaster response plan that clarifies roles and responsibilities • Providing reports to state government agencies • Activated National Incident Management System *4. Mutuality* Increase in sufficiency • Pulling resources • Sharing goals • Sharing resources • Sharing intellectual capacity • Ability to use the same type of strategy *5. Trust* Increase in sufficiency • Trustworthy relationships • Helping out each other

4.2.2.2 <u>How the collaborative dimensions affect dignity as a dimension of the responsiveness of public delivery networks?</u>

Governance. Eleven percent of codes described how governance could affect dignity as a dimension of public service network responsiveness. All organizations did all what was in their capacity to assist Puerto Rican individuals and families. The manager of that nonprofit organization described the role of collaboration in facilitating the understanding of the cultural background of the displaced individuals and families across organizations that were involved in the crisis response. Along with its partners, this organization established an advocacy coalition, with one of its functions to educate community partners on how to become more culturally sensitive while serving that the displaced population from Puerto Rico. The manager stated:

> We were trying to educate other organizations, how to understand them. That's why our [advocacy organization] was a part of that. That was done to help organizations in understanding on how they [Puerto Rican displaced individuals] think, how they react, how they work, how are the things different in Puerto Rico versus here. Having that kind of a understanding helped a lot of agencies.

Together with other local organizations, this nonprofit organized welcoming events for displaced individuals and families, that were "culturally flavored". Also, local partners provided a series of workshops that aimed to help the evacuees with their cultural integration into a new society:

> We provide them [local nonprofit organizations] with funds, but at the same time we facilitated their workshops in our facilities. Those workshops were basically like welcoming sessions where people could get together culturally, get information related to

> how to integrate to this community. The system where they are living now is different. I mean, at the end of the day we just wanted to make them, to make them feel comfortable, welcomed and oriented.

On contrary, the manager from the governmental organization suggested, that there was no need to discuss cultural background of the evacuees, “since all organizations served with compassion”. At the same time this organization has tried its best to provide culturally sensitive services.

The manager from a healthcare agency noticed, that community partners could have done a better job in the preparation part of their cultural competency to be able to deal with the Spanish language population. There were a lot of evacuees on medication that are not common in the continental United States. This created a lot of confusion and delays in providing the prescriptions for medications. At the same time health agencies where trying their best to assist the evacuees in a fast manner. The manager from another organization that also provided medical services supported:

> we had to write prescriptions and provide consultations immediately after people would get off the plane. They had severe medical conditions and did not have medications with them. And at that time, the major pharmacies hadn't transferred the prescriptions over. Eventually CVS and Walgreens, we're able to access the prescription information from the island. But in the beginning, they weren't.

Mutuality. Eight percent of codes described how mutuality could affect dignity. All organizations recognized the importance of raising the awareness about the traumatized condition of the displaced population across collaborative partners. However, one manager observed lack of understanding and, sometimes, respect in some community organizations on how to deal with traumatized people and honor them. At the same time, another manager suggested that together with their partners they were doing a proactive work that aimed to engage the community organizations into dialogs that help in understanding how to work with dignity with people in transition. A manager from another organization mentioned that during their regular meetings with partners at the resource center "behavioral health came to the forefront". The above-mentioned advocacy coalition had, first, weekly and, later, monthly meetings with community organizations during the crisis response, where they would address an issue of post-traumatic stress disorder among evacuees, and how to manage the situations when organization receive a client with mental health disorders.

Autonomy. Three percent of codes described how autonomy could affect dignity as a dimension of public service network responsiveness. Two organizations reported that their autonomy was constrained by poor communication with FEMA, which consequentially resulted in the decreased ability of organizations to treat the evacuees with dignity they would expect. One manager stated, that due to unclear information about when TSA deadline was, this organization "was not able to give reassurance. We were not able to tell them that they [the displaced persons] are safe, because we did not know when the TSA deadline was". The fact that TSA was extended once again, did not mean that it might or might not be extended again. The interviewer also stated that in order to manage this situation, they took a proactive approach, by providing housing assistance to the traumatized evacuees who were expecting TSA deadline extensions. Other organizations stated that FEMA called themselves as case managers, but they were more case workers. FEMA became a stumbling block to the evacuees who were trying to get access to case managers who would provide them with a system. "We found that things move more smoothly once FEMA was no longer trying to use those case workers out in the field".

Trust. Two percent of codes described how trust could affect dignity as a dimension of public service network responsiveness. One organization suggested that they could count on each other while having issues in assisting the population with post-traumatic stress disorders. "We are dealing with medical and physical conditions. Our partners are doing behavioral health. But say, somebody has a dual diagnosis, you know, there is something physical going on, and they may come to us for counseling and then we try to link them up with behavioral health counseling". Also, this organization recalled that during one of the forums with community partners, "it was a great open discussion about the stressors for both children and the parents and what some of the challenges were specifically."

Table 4.11 Domains Describing Ways Collaborative Dimensions Affect Dignity

1. *Governance* • Holding press conferences • Having federal representation • Shifting from disaster relief to permanent integration services • Workshops with partners that facilitate understanding of cultural background and traumatic condition of evacuees • Spreading awareness about stressors • Having discussions on how the employees should take care of themselves while serving the population with post-traumatic stress disorders. 2. *Autonomy* • Information asymmetry	3. *Mutuality* • Sharing values and experiences on how to work with individuals with post-traumatic stress disorders • Sharing values and experiences on how to work with individuals in transition to new communities 4. *Trust* • Being able to account on each other's assistance

4.2.2.3 How collaborative dimensions affect communication as a dimension of the responsiveness of public delivery networks?

Governance. Nine percent of codes described how governance could affect communication as a dimension of public service network responsiveness. All seven organizations agreed that the collaboration during the crisis response helped to ensure better communication and information exchange with the displaced individuals and families. One organization stated:

> At the Marc center, we could not go 24/7 like we were at the airport response center. We wanted to [educate all entities that were still there]. Everybody had our flyers and knew what to tell the patients. I went over there a couple of time and just check-in and make sure that you know they still had all of our information.

This organization also described how the communication and information exchange was happening at the airport assistance center:

> They [the displaced persons] would check into the United Way table, and the United Way table would hand them a list of all the agencies that were in the room. And then they [the displaced persons] would kind of work from there. The folks would work their way through. As soon as somebody said, I need information about medical care; they would end up at our table. And that is where we would figure out: do they have insurance? Do they not have insurance? And we were prepared to give them everything. So, we had not only to have [information about our organization], but we had all the PCAN clinic information. They take folks with and without insurance. We gave them that information.

> [Name of another organization] was there right next to us. But if it was more behavioral health than we would refer to them.

One of the agencies provided all partner organizations with the laundry list of local social services organizations and their location, which were distributed among the evacuees. A nonprofit organization that participated in this study set up a special news area in their office, so that the displaced persons who visited their organization would have information available on how to connect to different agencies. The displaced persons were also encouraged to follow organizations through social media platforms, like Facebook. That help to communicate information about different types of events to the evacuees. One manager suggested that there was great support from the Spanish speaking community organizations, which enhanced the level of communication and information exchange.

Mutuality. Two percent of codes described how mutuality could affect communication as a dimension of public service network responsiveness. Mutuality helped organizations to develop a strong client's referral and information exchange system, that provide the displaced persons with up-to-date information about the programs and services in other partnering organizations. One organization recalled:

> Many organizations came to us. They gave us presentations and orientations on what their services are, where they are located, and how to connect people to them and through them.

Autonomy. One percent of codes described how governance could affect communication. One agency reported, that the low quality of communication with FEMA affected their ability to communicate the information to the displaced persons. The evacuees would get conflicting information from FEMA and the agency. The agency's manager stated, "People that were working with were saying: ‘well, they told us this thing and now you're telling us this’ or they wouldn't want to come to talk to us because of all they'd already met with FEMA.”

4.2.2.4 How the collaborative dimensions affect engagement as a dimension of the responsiveness of public delivery networks?

Governance. Five percent of codes described how governance could affect engagement as a dimension of public service network responsiveness. Collectively organizations were able to provide services for all immediate needs, but also engage the evacuees in activities that help them in a long-term integration into a new society. Such activities included: citizenship classes, citizenship clinics, English language courses and orientation workshops on cultural and economic integration. Four nonprofit organizations recognized the importance of empowering the displaced individuals in making decisions regarding their needs. It was especially important for organizations that provided case management services.

> We helped individuals put together a plan for what their recovery looks like, whether that plan meant staying here on the mainland or going back to Puerto Rico and trying to repair their home and restart their life down there. It was really very much up to the client what they want to do and then we try to help them find the resources to do that.

Mutuality. Six percent of codes described how mutuality could affect engagement as a dimension of public service network responsiveness. Three organizations suggested, that many of the displaced individuals were in highly traumatized condition, and for that reason, we're not able to make adequate decisions regarding their needs. Some organizations provided workshops for the evacuees on how to avoid scams while looking for housing. Some focused on educating displaced persons, by providing citizenship classes, workshops on how to integrate into the community, get culturally, economically and socially acclimated. Partner organizations would organize special events that would help the evacuees to socialize.

Table 4.12 Domains Describing Ways Collaborative Dimensions Affect Communication and Engagement

<table>
<tr><th>Communication</th><th>Engagement</th></tr>
<tr><td>1. Governance
• Partners providing workshops to evacuees collectively
• Distributing information and flyers on organizational services for evacuees across partners
• Providing evacuees with a laundry list of local agencies and their services
• Well-developed client referral network
• Welcoming sessions for evacuees organized by partners
• Use of social media platforms
• Organizing social events for evacuees
• Engagement of Spanish speaking community partners
2. Autonomy
• Information asymmetry
3. Mutuality
• Well-developed client referral system
• Information exchange
• Exchanging up-to-date information about the programs and services</td><td>1. Governance
• Workshops on integration for evacuees facilitated by community partners
• Organizing social events for evacuees
• Use of social media platforms
• Assisting evacuees in developing a plan and matching them with community resources
2. Autonomy
• Lack of autonomy to waive licenses of evacuees to be able to have a full medical practice
3. Mutuality
• Collectively recognizing the traumatic condition of evacuees
• Collectively recognizing the cultural background of evacuees
• Working collectively on the ways to empower individuals with different mental health conditions
• Working collectively on the ways to empower individuals during their transition to new communities</td></tr>
</table>

Autonomy. One percent of all codes described how autonomy could affect engagement. One organization reported that there were a high number of displaced individuals with medical licenses from Puerto Rico. However, their license does not allow to have full practice on the U.S. mainland. Instead, these displaced people had started with low skilled jobs, in order to wait for their licenses. One of the managers stated that their organization tried to reach out to request the state government to provide a waiver, that would allow individuals with PR license to have a medical practice in Florida. That request was also submitted to other state and federal agencies; however, it never got approved.

4.2.2.5 <u>How resource munificence can affect the overall public service network responsiveness?</u>

Only one faith-based organization reported that they have a dramatic increase in governmental funding during the crisis response. All other organizations reported no change in governmental funding. Two religious organizations stated that have had a significant increase in non-governmental funding, two organizations experienced a moderate increase in non-governmental funding, and three organizations had no change in the amount of non-governmental funding during the crisis response. One manager suggested that organizations could become more responsive to changing needs during the crisis response if they had flexible money allocated for disaster response. One organization noticed that local government agencies were “little bit reluctant to get involved because they didn't have the budget to do it.”

4.2.2.6 <u>How can community support affect the overall public service network responsiveness?</u>

Two organization suggested that they have experienced a dramatic increase in volunteers during the response to the Puerto Rican crisis. One manager suggested that having more than 400,000 Spanish speaking people in Orange County was a great asset as a part of Puerto Rican response. Having the Puerto Rican community and the Spanish speaking people in Orlando volunteering helped evacuees to develop trust with the serving organizations and helped them to integrate. Another manager organization recalled that they had many volunteers who were willing to provide workshops and welcoming sessions to help the evacuees with social and economic integration. had to recruit more volunteers that provided welcoming sessions, workshops, and events to volunteers.

Three organizations had a moderate increase in the number of volunteers. One of them described, although their organization has experienced a modest increase in a number of volunteers, they had staff from different departments who expressed their willingness to volunteer. At the same time, this organization experienced enormous support from the community, which mostly included nonfinancial donations. This organization had to arrange a special space, where they would start excepting donations. That helped them to expand the range of their services and become responsive to some needs that they would not anticipate serving if community support would not have happened.

4.3 Summary

This chapter presented the results of this study. The quantitative analysis showed that the scale for measuring public service network responsiveness is valid and reliable. The model met all assumptions for running Ordered Logistics Regression, which included lack of collinearity between the dependent and independent variables, absence of empty cells or small cells, and satisfied proportional odds assumption. The results from the Ordered Logistics regression supported the third hypothesis at $p\text{-value}<0.05$ and suggested seeking a higher number of public services of low complexity is negatively associated with the perceived public service network responsiveness.

The qualitative analysis showed that four collaborative processes, which included governance, administrative oversight, mutuality, and trust, have a positive impact on sufficiency. Increase in autonomy showed both positive and negative effects on sufficiency. Increase in governance, mutuality, and trust have a positive impact on dignity, while increased autonomy has a negative effect. Mutuality and trust positively affect communication and engagement, while autonomy harms communication and engagement. Increase in community support has a positive impact on the public service network responsiveness, while a decrease in resources munificence negatively affects public service network responsiveness.

Table 4.13 Findings Summary

Research Question	**Proposition/Hypothesis**	**Findings**
1. What constructs constitute to the concept of public service responsiveness to measure the concept at the network level?	*The measurement scale for the perceived responsiveness of public service networks will consist of the following constructs: (1)‘‘sufficiency”,(2) “dignity”, (3) “clarity of communication” and (4) “engagement”.*	Valid and reliable measurement. One item, “ability to provide criticism and suggestions for improvement” is poorly correlated and was eliminated from the scale. Need for cross-validation using random sampling.
2. Does the complexity of public service provision affect perceived public service network responsiveness?	*- H1: The more a citizen attempts to access high complexity public services, the higher the perception that public service delivery network is responsive.* *- H2: The more a citizen attempts to access low complexity public services, the lower the perception that public service delivery network is responsive.*	The second hypothesis is supported, at p-value < 0.05. An increasing number of attempts to access low complexity services is associated with the negative citizens’ perception on public service network responsiveness.
3. How do collaborative processes across network partners, community support, and resource munificence affect the responsiveness of public delivery networks?	*- Proposition 1: Increase in the level of governance, the degree of administrative oversight, mutuality, autonomy and trust will be positively associated with the increase in perceived PSNR.* *- Proposition 2: Increase in resource munificence can positively impact PSNR.* *- Proposition 3: Increase in community support can positively impact PSNR.*	Proposition 1 is partially supported. Increase in the level of administrative oversight and trust is not associated with communication and engagement. Increase in the level of administrative oversight does not impact dignity. All other collaborative processes showed to have a positive impact on PSNR constructs. Few codes identified a positive effect of increased resource munificence and community support on PSNR constucts, and require further exploration.

CHAPTER 5: DISCUSSION

In 1995 Moore proposed a strategic triangle that explains how public values are created and involves three steps: defining public value; creating authorizing environment; and building capacity (Moore, 1995). Building upon Moore's triangle, the creation of a networked public value would, therefore, require the same steps but at the network level. And at each of these steps, the dimensions of collaboration, that include governance, mutuality, autonomy, trust, and administrative oversight become critical. Defining public value at the network level would involve the formulation of the publicly valuable ends collectively by stakeholders. This can be achieved through the facilitation of collaborative efforts and sharing common goals.

Authorizing should engage a sufficient number of stakeholders in aligning their perspectives and goals with the public value or revising the "value-proposition, so that is more in line with their wishes" (Benington, & Moore, 2010, p.5). Benington and Moore (2010) suggest creating an authorizing environment does not necessarily mean that all stakeholders should agree on the public value outcomes. This is where mutuality in achieving public values outcomes and autonomy, which allows revising the public value proposition in line with stakeholders' interests become essential. Operational capacity would involve mobilizing network resources necessary to achieve the desired public value. Mobilizing resources require governance, trust, mutuality, autonomy, and administrative oversight.

The results of this study showed, that although organizations did not set a specific strategic goal to become responsive, the value of responsiveness in public service networks has naturally occurred during the crisis response. The unexpected nature of the event and lack of experience in managing this type of crisis pushed organizations to work together on solutions that could make them more responsive to the needs of the displaced population. The formulation of how public service delivery could become more responsive to the displaced individuals was done during meetings and workshops with community stakeholders, where organizations were raising the questions of how to ensure dignity and engagement while delivering services, establishing clarity in communication with the displaced population, and improving the sufficieny of service delivery network. This was achieved through the means of governance: established relationships with the community; organizations that led the effort; understanding the roles and responsibilities among partners.

Authoring environment occurred when organizations collectively recognized the importance of promoting responsive public service network delivery, which was reached by the ability of organizations to accept the same type of strategy, share values and goals. Mobilization of resources that allowed the collaborative network of organizations to become responsive, involved all five dimensions of collaboration. First, organizations were able to develop trustworthy relationships that allowed them to be transparent about their organizational capacities and be able to count on each other. Second, mutuality was achieved by sharing intellectual capacity, pulling financial and non-financial resources, establishing information exchange, and client referral networks. Daily briefing sessions, reporting system, regular meetings with partners allowed for administrative oversight that aimed to ensure clarity of goals and responsibilities. Autonomy enabled organizations to work both collaboratively and independently, which expanded the range of their services and programs. Finally, managers suggested that bringing new partners, and establishing new programs for resource exchange helped organizations to serve the displaced population in a timely manner and assist a wide range of continually changing service needs. Also, the qualitative results suggested that establishing a coalition with organizations that pursue similar goals, helped to achieve a greater impact in the community, by educating local organizations on the cultural background of the displaced persons.

The study suggested that the model for measuring public service network responsiveness exhibits a good fit, and thus, support the first hypothesis. The findings support that sufficiency, dignity, communication, and engagement are the constructs that explain public service network responsiveness concepts. Vincent-Jones (2006), suggests that responsiveness is a fundamental concept in the current quasi-market provision of public services, which describes the quality of interactions between service providers and citizens and ensure comprehensibility, accessibility, public involvement and the availability to redress (p.94). One item, that described responder's ability to provide criticism and suggestions for improvement of services, was poorly correlated and was removed from the scale. The literature offers two explanations. According to Frederickson et al. (2012), while there is a need for the public sector to be responsive in the way that it ultimately leads to enhanced public engagement, it is yet unclear how networks, that involve both public and private organizations, can ensure the similar democratic effect. Haque (2001) suggest that the current mode of governance, expressed in businesslike reforms, leads to erosion of public values in public services. Osborne et al. (2012) point out that there are flaws in public management theory. First is the focus on intraorganizational processes of public service delivery, while in reality, public services are delivered as the result of interorganizational interactions. Second, the current public management approach derives experience from the private manufacturing sector, ignoring the publicness of public services. Both authors' perspectives only support that there is a high need for studying responsiveness as a public value in networked contexts and understanding the ways democratic values and practices, which include citizens input, can be transferred to quasi-market service delivery. Bryer (2009) adds that there is a need to verify whether responsiveness makes the public more connected to different engagement opportunities.

Blaug and Lekhi (2009) suggest slightly different explanation stating that “responsiveness, however, should not be confused with the extent to which an organization reacts to the public's immediate opinions”. Stivers (1994) points out that responsiveness should be defined as *listening as self-development*, and states:

> The openness of listening – the fact that we cannot pin sounds down, that we are in constant touch with the horizons from which sounds emerge and beyond which it disappears – Encourages our openness to the viewpoints of others and our recognition of the fundamental complexity and unpredictability of the situation in which we find ourselves. Instead of spurring us to reduce every situation to a “type”, listening helps us see situations as unfolding stories and trust that, if we remain open, dialogue may eventually convey to us what we do no know or what is necessary for our self-development (p.366).

Stivers (1994) supports Levin’s (1989) point of view, suggesting that skillful listening is a starting point for the practice of responsiveness. Therefore, one poorly correlated item within the public service network responsiveness scale, that measures the ability of the public to provide criticism and suggestion for improvement, can explain a lack of opportunities provided by network organization that ensure public input in collaborative networks. However, it can be crucial to keep this item in future research and test in a different context. Also, the item may require better formulation because the ability to provide feedback can also depend on the willingness and motivation of an individual to provide such feedback. Instead, the responsiveness should be examined through the ability of organizations to provide opportunities for public input. The qualitative data also showed that managers did not mention that there were any opportunities offered to the evacuees for providing criticism or suggestions for improvement, as a part of their collaborative activities or decision-making processes. However, managers recognized the importance of engaging evacuees in decision-making processes regarding their individual needs. This type of engagement took the shape of empowerment. According to the qualitative findings, most of the individuals suffered from a post-traumatic stress disorder and were not able to make adequate decisions regarding their need. Managers provided them with various types of educational activities that aimed to assist them in finding right solutions and directions. Bryer and Prysmakova-Rivera (2018) caution that there is a thin line between genuine empowerment, where the public is offered with tools for participation in decision-making processes and clearly defined expectations, and manipulation, where the public is misguided about the processes and expectations of their participation decision-making processes regarding their needs. Allen (1993) also admonishes that the perception that the public service worker “possesses superior knowledge about what constitutes problems and desired solutions…does not honor the client's agency and experience in determining the problem or the outcomes so vital to her or his life. A client can end up feeling grateful for the expert effort and help but feel disempowered at the same time" (as cited in Soliman, & Rogge, 2002, p. 9). This leaves this research with a need to further explore opportunities for genuine empowerment as one of the items of public service network responsiveness scale.

All other items in the public service network responsiveness scale are in a perfect correlation. The average perception of evacuees across the items is slightly higher than medium. The highest perception was expressed about the employees being efficient, courteous, and kind, understanding the cultural background of the displaced population, ability to receive information in Spanish when necessary, as well as Spanish language proficiency of employees. Indeed, the interviews support that governance, mutuality, and trust helped organizations to improve sufficiency and dignity of network service delivery. Managers also agreed that administrative oversight had a positive effect on sufficiency in public service network delivery.

Thomson et al. (2008) study suggest that joint decision making, administration, mutuality, and trust are positively related to collaborative outcomes. According to Milward et al. (2009), “trust, and mutual benefit allow both parties to share the risks that come from the uncertainty of unexpected occurrences that affect them both” (Milward et al., 2009, p. 128). These factors become especially critical when it comes to the unpredictable nature of crises. Managers underlined the importance of trust, which is expressed in organizational ability to count on each other in times when organizations exhaust their capacities in assisting the public. Mutually beneficial partnerships allowed organizations to learn from each other on the ways to serve at-risk populations in transition and to work collectively on finding solutions to empower individuals they serve. That gave impetus to greater dignity and engagement in public service network responsiveness. At the same time, the qualitative analysis showed that lack of governance, expressed in the absence of role clarity of individual partners, poor quality of communication across partners decreased the sufficiency of the public service network. Soliman and Rogge (2002) suggest that clear communication with the displaced population is critical for effective recovery. Organizations should ensure that they establish simple procedures for obtaining the information about public services that correspond to survivors’ educational level, life experience and type of disaster and loss (Soliman, & Rogge, 2002, p.16).

Accessibly and amount of information, level of communication, and availability of tools for communication between the displaced population and network organizations scored lower than other items in the PSNR scale by the displaced persons. Indeed, organizations that were involved in the collaboration developed a robust information exchange network that allowed them to provide up to date information about local community programs and services to its clients. However, managers suggested that lack of information and information asymmetry in particular services was mainly caused by an inability to establish clear communication channels with certain organizations that possessed critical information but chose to act independently and autonomously rather than collaboratively. In contrast, Thomson et al. (2008) did not establish a negative link between the increased autonomy and perceived collaborative outcomes, contrary to their expectations. Indeed, their study suggested that increased autonomy is associated with a perceived increase in partner interactions, which contradicts the findings of this study.

This study looked further into how contextual factors affect the public service network responsiveness. Open systems theory suggest that organizations are interrelated systems and continuously influenced by the ongoing changes in the environment and therefore cannot have complete control over their actions (Morgan, 2006). Community support and availability of resources may play a fundamental role in the ability of organizations to mobilize and respond to the needs of the public in a crisis setting. Empirical studies suggest that the availability of financial resources is positively correlated with network effectiveness (Turrini et al., 2010). Particularly during crises, collaboration can play a vital role in the activation of essential partnerships to attain resources necessary to provide effective response (Kamarack, 2002). Some organizations suggested that lack of flexible funding made them less responsive to changing needs of the displaced individuals during the various phases of recovery and integration to the community. Some organizations expressed a desire to be involved in the crisis response; however, the lack of budget allocated for such purposes, prohibited their participation.

Brown and Kulig (1996) found that people in communities can be resilient together, but not in similar ways. Norris et al. (2008) observed that while social support is of utmost importance, there are cultural values of support that vary across community sectors and needed to be acknowledged in crisis management. Cultures differ in “reciprocity of norms, relative comfort with kin and non-kin, and modes of expressing emotional support” (Norris et al., 2008, p.145). Examination of these contextual factors, and the extent to what these factors affect the whole network responsiveness can be another important line for future research. This study’s findings suggest that community support allowed organizations to become more responsive to the displaced individuals, provide greater range of services, and develop greater trust with the evacuees. Soliman and Rogge (2002) support that greater trust between the service delivery organizations and the evacuees enhance working relationship.

The quantitative study showed that the complexity of the public service provision is another contextual factor, that can also affect perceived responsiveness of public service networks. The results support the third hypothesis by establishing a significant negative relationship between the increasing number of low complexity service requests and perceived public service network responsiveness. Also, the results showed that there is an insignificant change in the perception of PSNR with the growing number of high complexity service requests. The results can be explained using self-efficacy theory and service-dominant public management theory.

The delivery of public services of high complexity, such as housing, employment, and healthcare involves combined efficacy of public service systems and self-efficacy of the public service user. Self-efficacy defines “people’s capability to produce designated levels of performance that exercise influence over events that affect their lives” (Bandura, 1994, p.2). The provision of high complexity services requires a higher commitment from the public service user.

Therefore, perceived responsiveness of public service networks involved in addressing complex needs can vary based on both perceived self-efficacy of public service users, and only on the actual level of responsiveness of public service networks. The same public service network can be perceived as highly responsive or not responsive by the same set of individuals who possess high self-efficacy or low self-efficacy, or vice versa.

The provision of public services of low complexity is more straightforward in implementation, less technically complex, and may require less commitment from the public service user. In this scenario, despite the level of self-efficacy of service-user, negative perception can be formed by the low capacity of public service networks and lack of opportunities for public engagement. This brings us back to the earlier discussion of the consumeristic approach in public service delivery and shows a lack of democratic effect in the provision of low complexity public services. Osborne et al. (2012) suggest that this type of product-dominant bias becomes more irrelevant to contemporary changes in public service delivery, and offer possible strategies that can trigger transitioning to the public service-dominant logic, which ensures the public engagement in the service delivery processes (Osborne et al., 2012).

First, there is a need to ensure a strategic orientation as a part of organizational capacity building. Strategic orientation is based on the creation of shared values that are results of the integration of public users' expectations, external environment, and operational service delivery. This approach ensures the engagement of citizens beyond public service users in public services processes. The second approach is based on the idea of relationship marketing, which means that there should be more sustainable competitive environment based on trustful collaborative relationships across public service organizations and service users. The third strategy assumes that coproduction should be an integral part of public service delivery. Active interaction between service users and service staff should bring experiences and knowledge of service users in the service delivery design and implementation. Finally, the authors suggest that there should be an established link between internal operational processes within organization and external service delivery. Improvement in operational management performance can lead to more effective service delivery (Osborne et al., 2012).

Osborne and colleagues' (2012) service-dominant theory is closely linked to core ideas of contemporary scholars that aim to examine the transition of public services from business-oriented approach to public-value-driven approach (Haque 2001; Stoker, 2006; Alford and Hughes, 2007; Jorgensen, & Bozeman; Rutgers, 2008; Osborne et al., 2012), as well as to ideas of this study that aimed to redefine the concept of responsiveness as a democratic public value and understand the strategies for implementing and enhancing responsiveness in public service delivery systems.

CHAPTER 6: CONCLUSION, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

6.1 Conclusion

The aim of this study was to find the factors that contribute to greater public service network responsiveness. To achieve this aim, the study examined the responsiveness of public service networks by utilizing a multi-method case-study approach, which the particular focus on a crisis response of the governmental and nonprofit organizations in Orlando area to the massive inflow of displaced population from Puerto Rico after Hurricane Maria. First, the study developed a measurement scale for the public service network responsiveness concepts, based on the constructs derived from the comprehensive literature review, which included: sufficiency, dignity, communication, and engagement. One of the items in the scale, that aimed to assess the level of public input, has shown to be a poor fit in the model, which is explained by a lack of tools that allow for public input within the service delivery networks, or lack of motivation for public input among citizens-users.

Second, the study showed that an increasing number of service needs of low complexity is significantly associated with a growing negative perception of public service network responsiveness among the displaced population. The association between an increasing number of public service needs of high complexity and public service network responsiveness was not significant. The study suggested that negative perception of public service network responsiveness in low complexity service provision can be caused by the low capability of public service system and low level of public input, and can be characterized as "consumeristic" approach.

Third, the qualitative findings showed that collaborative dimensions, derived from Thomson et al. (2007) framework, are associated with public service network responsiveness dimensions. Increase in governance, mutuality, autonomy, administrative oversight, and trust are positively related to network sufficiency. Administrative oversight did not suggest having an effect on dignity, communication, and engagement. Trust was not mentioned as having an impact on communication and engagement.

Finally, contextual factors showed to have an effect on public service network responsiveness. Increased community support proved to be a decisive factor for the responsiveness of public service networks, while lack of flexible funding is a negative factor for public service network responsiveness.

6.2 Theoretical Implications

This study made the following theoretical contributions. First, it is among a few studies that reconsidered the concept of public service responsiveness under the lens of New Public Governance. Building upon the existing literature on bureaucratic responsiveness and public values, this research pushes these theories further. It recognizes the transformation of the public service responsiveness from being a hard value with the focus on bureaucratic efficiency in meeting public needs to a soft value falling in categories of democratic values, ethical values, professional values, and people values. It proposes a concept of governance-driven responsiveness, that mitigates the tension between the expert-driven, based on bureaucratic expertise, and public-driven, focused on customer-satisfaction, forms of responsiveness.

Second, this study contributes to the literature on collaborative governance, suggesting public service network responsiveness as network processes evaluation measurement. The scale for measuring public service network responsiveness was developed based on the existing literature. It was validated and triangulated using quantitative and qualitative methods, public and managers perceptions. As the results of the analysis indicated, a good model fit for measuring PSNR scale, this research contributed towards a model building for the use of public services network responsiveness measurement. Third, it is the first research that empirically examined the relationship between collaboration and public services network responsiveness and suggested that a higher level of collaboration is potentially linked to a higher level of public service network responsiveness. Finally, the research contributes to the systems theory, suggesting that the complexity of public service provision may affect the level of public service network responsiveness.

6.3 Practical Implications

This research was undertaken with the idea to produce practical recommendations for the local governmental and nonprofit organizations as well as organizations in other jurisdictions. First, the study suggests that evaluating public service delivery outcomes, such as effectiveness, short term, and long-term impacts, is not enough. There is a high need to evaluate processes of public service delivery systems that examine the interaction between public service delivery organizations and the public it serves. There should be proper democratic processes in place in order to achieve certain democratic outcomes. This study developed a scale for measuring public service network responsiveness, that allows organizations to evaluate the sufficiency of public service networks in assisting the public in meeting their needs, whether the public is being served with dignity, whether there are opportunities in place that allow for public input, whether there are tools for clear bidirectional communication and information exchange.

Second, as the study results showed that increasing need in public service of low complexity, which includes education, job training, financial assistance, transportation, and assistance in the acquisition of identification cards, is associated with the more negative perception of public service network responsiveness. Therefore, the study suggests that the interaction between the public service delivery organizations and the public should be closely reexamined in accordance with the principles of dignity, clarity of communication, public engagement and sufficiency.

Third, the study shows that certain collaborative practices increase the network responsiveness to the public. If local service delivery partnerships strive to improve their level of responsiveness, the main efforts should be focused on developing trusting relationships with the community before crisis occurs; creating a plan for crisis response; having organizations that facilitate the crisis response effort; having structures in place that clarify goals and responsibilities; being transparent about financial and non-financial capabilities; assisting partner organizations in their own capacity building; expanding range of services by bringing new partners to the networks; having regular meetings, workshops with community partners that cover the topics not limited to acquisition and allocation of financial and non-financial resources, but also facilitate understanding on how to serve the populations with different cultural background and physical and mental health conditions. At the same time, poor communication among partners, lack of role clarity of certain partners, lack of system capability, lack of collaboration across governmental jurisdictions is associated with the decrease in the level of responsiveness.

Finally, the study suggests that increase community support during the crisis response can expand the range of services, improve quality of communication, and trust with the serving population. Therefore, facilitation of community engagement before or during the crisis response may improve the responsiveness. At the same time, managers should put an emphasize in finding solutions to the issues associated with the lack of financial assistance from governmental and non-governmental organizations for this type of crises and the availability of flexible funding. These two issues are associated with a decrease in public service network responsiveness.

6.4 Limitations

Due to the unpredictable nature of crises, which vary based on public service networks capability, the amount of the resources or number and type of actors necessary for crisis response, there is a lack of generalization of the results. At the same time, this study is exploratory, that suggest that complexity of public service provision, level of collaboration, community support, and resource munificence are indeed the factors that can potentially affect public service responsiveness in other contexts. Responsiveness is a public value that must equally exist in both routine and crisis public service delivery networks, and, therefore, the scale for measuring public service responsiveness that was developed and validated in the study, can be replicable to other contexts.

This study could also benefit from a mixed-method research design, which would allow to collect qualitative data from the displaced Puerto Rican population, and could potentially reveal individuals' factors that can affect perceived public service network responsiveness. While this study comes to the general conclusion that perceived responsiveness of public service network can depend on both network capability and self-efficacy of service-user, it lacks the examination on how self-efficacy of the service user can impact perceived public service network responsiveness.

Also, the study could collect additional quantitative data from the organizations, that would allow to test the relationship between collaborative dimensions and perceived public service network responsiveness, including community support and resource munificence as moderating variables. However, due to a small number of organizations that agreed to participate in this study, the quantitative data analyzes was not implemented.

6.5 Future Research

There is a high need for research that would examine the process of creation of public values on the network level, and ways collaboration can facilitate this process of public value creation and ensure its sustainability. The study created and tested a model for measuring perceived public service network responsiveness, defined as one of the networked public values. As this model was introduced for the first time during this study, it is important to replicate it in various contexts, which includes crisis and routine service delivery, offline/online networks; comparing between organizational versus network-level responsiveness, clients, agents and principals' perspectives. Based on the existing scale, future research may develop a scale that measures actual compared to perceived public service network responsiveness, and further explore the ways in which public service network responsiveness can be created and sustained at the network level, and how collaborative practices can assist that effort.

APPENDIX A: SURVEY FOR THE DISPLACED INDIVIDUALS FROM PUERTO RICO

We invite you to take part in a research study, funded by the Heart of Florida United Way. You are invited because you have been identified as someone who was displaced from Puerto Rico following Hurricane Maria and relocated, at least temporarily, to Central Florida. We cannot promise any direct benefits to you or others from taking part in this research. However, possible benefits include the development of new policies or programs, or the improvement of existing policies and programs, to assist in meeting the needs of Puerto Ricans displaced by Hurricane Maria.

In the survey you are asked to complete, no personally identifiable information will be collected, unless you indicate a willingness to be interviewed. Efforts will be made to limit the use and disclosure of your personal information to people who have a need to review this information. Organizations that may inspect and copy your information include the IRB and representatives of Heart of Florida United Way.

You must be 18 years of age or older to participate in this study. If you agree to participate in this research, you will be asked to complete an online survey that can take up to approximately 30 minutes, though time for completion will vary. You will also be asked in the survey if you wish to be interviewed by a researcher. Participation in research is completely voluntary. You can decide to participate or not to participate. You an leave the research at any time it will not be held against you. If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at thomas.bryer@ucf.edu or 407-823-0410. This research has been reviewed and approved by an Institutional Review Board ("IRB"). You may talk to them at 407-823-2901 or email irb@ucf.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.

- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

May we have your consent to participate in the study?

- ○ Yes, I consent (1)
- ○ No, I do not consent (2)

Q1 *Where are you currently living (location)?*

- Central Florida (Orange, Seminole, Osceola or Lake county) (1)
- Another part of Florida (2)
- Another State in the continental United States (3)
- Puerto Rico (4)
- Another country, not the United States (5)

Q2 *Where are you currently living (housing)?*

- In a house or apartment, I rent with my own money (1)
- In housing supported through FEMA (2)
- With a family member, friend, or colleague (3)
- No stable housing (4)
- Other, please specify (5)

Q6 *Have you ever lived in the continental United States prior to being displaced by Hurricane Maria?*

- Yes (1)
- No (2)

Q7 *How many years have you ever lived in the continental United States prior to being displaced by Hurricane Maria?* ?

- 0-5 (1)
- 6-10 (2)
- 11-15 (3)

- 16-20 (4)
- 21+ (5)

Q8 *At the current time, can you describe your intentions for staying in the continental United States?*

Do you intend to:

- Stay in the continental United States for the foreseeable future (1)
- Stay in the continental United States until I consider conditions in Puerto Rico to be better but not more than a few months (2)
- Stay in the continental United States until I consider conditions in Puerto Rico to be better but not more than 3-5 years (3)
- Relocate to another country as soon as possible (4)
- I do not know what I intend to do at this time (5)

Q9 *At the current time, can you describe your intentions for staying in Central Florida (Orange, Osceola, Lake, or Seminole County)? Do you intend to:*

- Stay in Central Florida permanently (1)
- Stay in Central Florida only until I consider conditions in Puerto Rico to be better but not more than a few months (2)
- Stay in Central Florida only until I consider conditions in Puerto Rico to be better but not more than 3-5 years (3)
- Relocate to another part of the continental United States as soon as possible (4)
- I do not know what I intend to do at this time (5)

Q10 *With whom did you come to Florida after being displaced by Hurricane Maria? Select all that apply.*

- Spouse (1)
- Child or Children (2)
- Parents (3)
- Other Family (4)
- Friends (5)
- Other (6)

Q11 *Did you have family or friends in Central Florida before your arrival here?*

- Yes (1)
- No (2)

Q12 *How many children arrived with you?*

Q13 *What are the ages of your children? Please type the ages of your child/Children.*

Q15 *Did you come with elderly persons?*

- Yes, please specify the number of elderly persons that came with you (1)
- No (2)

Q16 *When you first arrived in Florida, what services or resources did you need for yourself and/or your family? Please select all that apply.*

- Housing (1)
- Education/Schools (2)
- Employment (3)

- Healthcare (4)
- Job Training (5)
- Mental Health (6)
- Transportation (7)
- Financial Assistance (8)
- Legal Assistance (9)
- English Language Learning (10)
- Identification Card (11)
- Other, please specify (12)

Q18 *What services or resources do you need today for yourself and/or your family?*

- Housing (1)
- Education/Schools (2)
- Employment (3)
- Healthcare (4)
- Job Training (5)
- Mental Health (6)
- Transportation (7)
- Financial Assistance (8)
- Legal Assistance (9)
- English Language Learning (10)
- Identification Card (11)
- Other, please specify (12)

Q19 *Which organizations, agencies, or companies do you contact now for assistance in accessing these services or resources?*

Q20 *Thinking about all organizations, agencies, or companies you have contacted since your arrival in Florida, which, if any, do you consider to have been the most helpful to you?*

Q35 *We might be interested in following up with you to ask additional questions. If you agree to be contacted for additional questions, please write your preferred email and phone number.*

Q21 *What is your employment status?*

- ○ Unemployed but seeking work (1)
- ○ Unemployed and not seeking work (2)
- ○ Employed part-time (3)
- ○ Employed full-time (4)
- ○ Self-Employed (5)
- ○ Prefer not to answer (6)

Q22 *Are you currently employed in Florida?*

- ○ Yes (1)
- ○ No (2)

Q23 *What do you do now in Florida?*

Q24 *Who is your employer now?*

Q27 *Were you employed in Puerto Rico?*

- ○ Yes (1)
- ○ No (2)

Q26 *If you are unemployed and not seeking work, what are the reasons you are not seeking work?*

- Retired (1)
- Studying full time (2)
- Ill or disabled (3)
- Taking care of home or family (4)
- Could not find work (5)
- Other, please specify (6)

Q28 *What did you do for employment in Puerto Rico?*

Q29 *What was your total household income in Puerto Rico?*

- Less than $20,000 (1)
- $20,000-$34,999 (2)
- $35,000-$49,999 (3)
- $50,000-$99,999 (4)
- $100,000-$149,999 (5)
- $150,000-$199,999 (6)
- $200,000+ (7)
- Prefer Not to Answer (8)

Q33 *Follows are a series of statements regarding how organizations in Central Florida learn about and interact with you. Please indicate on the scale below, whether you agree or disagree with the following statements.*

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
The amount of information I am provided regarding services and procedures is sufficient. (1)	○	○	○	○	○
The accessibility of the information I am provided regarding services and procedures is sufficient. (2)	○	○	○	○	○
I have opportunities to participate in decision-making process regarding my needs. (3)	○	○	○	○	○
I am able to receive information in Spanish when requested. (4)	○	○	○	○	○
I am able to provide criticism and suggestions for improvement of services. (5)	○	○	○	○	○
I feel agency officials with whom I have communicated understand my cultural background. (6)	○	○	○	○	○

Q34 *Follows are a series of statements regarding how organizations in Central Florida deliver services to you. Please indicate on the scale below, whether you agree or disagree with the following statements.*

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Employees are courteous and kind. (1)	○	○	○	○	○
Requests are handled in a timely manner. (2)	○	○	○	○	○
The level of communication is sufficient. (3)	○	○	○	○	○
The available tools for communication are sufficient. (4)	○	○	○	○	○
The Spanish language proficiency of employees is sufficient to deliver services to me. (5)	○	○	○	○	○
The efficiency of employees is sufficient to deliver services to me. (6)	○	○	○	○	○
Organizations are doing all they can to sincerely support displaced Puerto Ricans who need help. (7)	○	○	○	○	○
All in all, the extent to which the needs of displaced Puerto Ricans are being met is sufficient. (8)	○	○	○	○	○

Q36 *Some people choose to not be involved in political activities. One kind of political activity is voting in elections. Are you currently registered to vote?*

- Yes (1)
- No (2)
- Do Not Know (3)

Q37 *Where are you registered?*

- Florida (1)
- Puerto Rico (2)
- Somewhere else (3)

Q38 *When was the election in which you voted?*

Q39 *How likely will you be to vote in the 2018 elections?*

- Very likely (1)
- Somewhat likely (2)
- Somewhat unlikely (3)
- Very unlikely (4)
- Do Not Know (5)

Q41 *Beyond political participation, such as voting, there are other ways individuals and groups can be involved in their communities or neighborhoods. There is no expectation that, after being forced from your home, that you will start participating in these other ways within a short amount* *of time. The next questions concern these* civic *involvements and your interest in them, even if you have not yet participated in Central Florida.*

Q42 *When you were living in Puerto Rico, in the past year, did you volunteer?*

- Yes (1)
- No (2)

Q43 *On average how often have you volunteered per month?*

- Fewer than 2 hours (1)
- 3-6 hours (2)
- 7-8 hours (3)
- 9+ hours (4)

Q44 *Think about your volunteer experiences in Puerto Rico. With what kinds of organizations have you volunteered? Please select all that apply.*

- With one or more nonprofit organizations (1)
- With my church, mosque, synagogue, or other faith organization (2)
- With a social club, including student group, civic association, or neighborhood group (3)
- With my local government (4)
- With my local police office (5)
- Online (6)
- Other (7) ____

Q45 *Continue to think about your volunteer experiences in Puerto Rico. What kinds of issues have you addressed through your volunteer efforts? Select all that apply.*

- Environmental issues (1)
- Socio-economic issues, such as homelessness, poverty, or hunger (2)
- Educational issues, including tutoring or mentoring of youth (3)
- Cultural issues, such as promotion of arts in the community (4)
- Crime and safety (5)
- Others (6) ____

Q46 *When you volunteered in Puerto Rico, with whom have you typically volunteered?*

- I volunteer alone (1)
- I volunteer with one or two other people, specifically friends of colleagues (2)
- I volunteer with my family (3)
- I volunteer with a large group (4)
- The people with whom I volunteer changes every time (5)

Q47 *Why did you volunteer in Puerto Rico? Select all that apply.*

- To meet new people (1)
- To fulfill a requirement for work or school (2)
- To learn new skills (3)
- To list new experiences on my curriculum vitae or resume (4)
- To spend time with friends of family (5)
- To give something back to my community (6)
- Other (7) ____

Q48 *Since you arrived in Florida, have you volunteered?*

- ○ Yes (1)
- ○ No (2)
- ○ No, but I intend to (3)

Q49 *In the past year, have you made any financial donations to the following organizations or individuals?*

	Yes (1)	No (2)
Nonprofit organizations (1)	○	○
Churches (2)	○	○
Political candidates (3)	○	○
Political parties (4)	○	○

Q50 *In the next year, do you intend to make any financial donations to nonprofit organizations?*

	Yes (1)	No (2)
Nonprofit organizations (1)	○	○
Churches (2)	○	○
Political candidates (3)	○	○
Political parties (4)	○	○

Q51 *Overall, do you feel you are able to be as actively engaged in the community today as you would like to be?*

- ○ Yes (1)
- ○ Maybe (2)
- ○ No (3)

Q53 *What are the barriers that prevent you from being actively engaged? Select all that apply.*

- ○ Language (1)
- ○ Do not know how to get involved (2)
- ○ Lack of transportation (3)
- ○ Lack of time (4)

- Lack of income (5)
- Other (6) ____

Q52 *What is your age?*

- 18-29 (1)
- 30-44 (2)
- 45-59 (3)
- 60+ (4)
- Prefer Not to Answer (5)

Q54 *What is your gender?*

- Male (1)
- Female (2)

Q55 *What is your race?*

- White (1)
- Black or African American (2)
- American Indian or Alaska Native (3)
- Asian (4)
- Native Hawaiian or Pacific Islander (5)
- Other (6) ____
- Prefer not to answer (7)

Q56 *What is the highest level of education you have completed?*

- Less than High School (1)
- High school graduate (2)

- Some college (3)
- Bachelor’s Degree (4)
- 4 year degree (5)
- Master’s Degree or Advanced Graduate work and above (6)
- Other (7) ____
- Prefer not to answer (8)

Q57 Thank you for participating in the survey!

APPENDIX B: SEMI-STRUCTURED INTERVIEW QUESTIONS FOR THE ORGANIZATIONS

Interview Questions on Response to Puerto Rican Crisis in Orlando Region

Note: These are broad questions that may be followed up with prompts based on the responses received.

1. Tell me about yourself. What is your position in this organization and how long have you been in this position?
2. Tell us about primary areas of service that your organization offered to meet the needs of the internally displaced persons from Puerto Rico (PR IDPs)?
3. Describe your organization's preparedness for the PR crisis, internally, in terms of having enough staff members, volunteers, organizational resources, and externally, building partnerships.
4. Where did you seek financial and nonfinancial resources (staff, volunteers, financial resources, transportation, office space, client referral) to better serve the needs of PR IDPs? Can you name any established agreements between the local organizations that allowed for easier excess for the critical resources?
5. Describe any noticeable changes in the number of volunteers working for your organization, financial individual or corporate donors, the amount of governmental and non-governmental funding compared to what you would normally expect for this time of year**.**
6. Describe how collaboration among the local organizations emerged during the response. Did your organization recognize the importance of making decisions jointly? What kind of processes or structures, if any, existed that monitor the activities across organizations, clarify goals and responsibilities? What extent did these collaborative processes benefit

your organization and other organizations in the network? How would you assess the level of trust among organizations in the network? Do you recall any situations when autonomy of your organization was constrained?

7. On average, how would you assess the level of responsiveness of all organizations with how you worked to address the needs of the evacuees? Can you describe the quality of interactions between the evacuees and the network organizations? How did you deliver information about the processes and procedures in your organization to the evacuees? What kind of procedures did organizations have that allowed them to listen to evacuees concerns and assess their needs? Were the evacuees able to participate in the decision-making processes regarding the services they have been provided? Were the evacuees offered opportunities for providing criticism or suggestions for improvement of services? Can you describe the communication tools between the evacuees and network organizations, and the level of Spanish language proficiency?
8. How would you assess the efficiency of network organizations in handling the evacuees' requests? Were their requests handled in a timely manner? Were the workers courteous and kind to the evacuees, and attentive to the cultural background of the evacuees? How would you assess the effort of network organizations in meeting the needs of evacuees?
9. Thinking in terms of your organization, how can you assess your organization's responsiveness to the needs of the evacuees?
10. To what extent have all organizations with whom you work met the needs of the PR IDPs? What were the barriers for more effective response? Can you give any further advice for the local organizations to prepare for the situation like this that may occur in the future?

APPENDIX C: IRB APPROVAL

University of Central Florida Institutional Review Board

Office of Research & Commercialization

12201 Research Parkway, Suite 501

Orlando, Florida 32826-3246

Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Determination of Exempt Human Research

From: **UCF Institutional Review Board #1**

FWA00000351, IRB00001138

To: **Thomas Bryer** and Co-PIs: **Qian Hu, Safiya Prysmakova**

Date: **July 11, 2018**

Dear Researcher:

On 07/11/2018, the IRB reviewed the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	Collaborative Capacity to Respond to Service Needs Related to Puerto Rican Evacuees in Orange, Osceola, Seminole, and Lake Counties, Florida
Investigator:	Thomas Bryer
IRB Number:	SBE-18-14134
Funding Agency:	Heart of Florida United Way
Grant Title:	

Research ID: 1065574

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

This letter is signed by:

Signature applied by Gillian Morien on 07/11/2018 03:59:00 PM
EDT Designated Reviewer

LIST OF REFERENCES

Acock, A. C. (2016). A Gentle Introduction to Stata. 5th ed. College Station, TX: Stata Press

Agranoff, R. & McGuire, M. (2001). *Big questions in public network management research.* Journal of Public Administration Research and Theory, 11(3), 295-326.

Agranoff, R. (2003). *Leveraging networks: A guide for public managers working across organizations*. IBM Endowment for the Business of Government.

Agranoff, R. (2007) Managing Within Networks: Adding Value to Public Organizations. Public Management and Change. Georgetown University Press.

Al-Dahash, H., Thayaparan, M., & Kulatunga, U. (2016, August). Understanding the terminologies: disaster, crisis and emergency. In *Proceedings of the 32nd Annual ARCOM Conference, ARCOM 2016* (pp. 1191-1200).

Alexander, D. (2005). Towards the development of a standard in emergency planning. *Disaster Prevention and Management: An International Journal*, *14*(2), 158-175.

Alford, J. (2002). Defining the client in the public sector: A social-exchange perspective. *Public administration review*, *62*(3), 337-346.

Alford, J., & Hughes, O. (2008). Public value pragmatism as the next phase of public management. *The American Review of Public Administration*, *38*(2), 130-148.

Allen, J. (1993). The constructive paradigm: Values and ethics. Journal of Teaching in Social Work, 8(1/2), 31-54.

Anderson, P. (1999). Complexity Theory and Organization Science, *Organization Science*,10(3), 216-232.

Ansell, C., & Gash, A. (2007). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.

Babajanian, B. (2015). 10. Citizen empowerment in service delivery. *Governance in Developing Asia: Public Service Delivery and Empowerment*, 229.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).

Bardach, E. (1994). Can Network Theory Illuminate Collaboration? LaFollette Institute of Public Affairs, University of Wisconsin-Madison.

Bardach, E. (1998). *Getting agencies to work together: The practice and theory of managerial craftsmanship*. Brookings Institution Press.

Behn, R. D. (2003). Why measure performance? Different purposes require different measures. *Public administration review*, *63*(5), 586-606.

Benington, J. (2011). From private choice to public value. *Public value: Theory and practice*, 31-49.

Benington, J., & Moore, M. H. (Eds.). (2010). *Public value: Theory and practice*. Macmillan International Higher Education.

Berg, B. L., & Lune, H. (2007). Qualitative research methods for the social sciences 6th edition. *Pearson;*.

Berke, P. R., & French, S. P. (1994). The influence of state planning mandates on local plan quality. *Journal of planning education and research*, *13*(4), 237-250.

Bernstein, I. H., & Nunnally, J. C. (1994). Psychometric theory. *New York: McGraw-Hill. Oliva, TA, Oliver, RL, & MacMillan, IC (1992). A catastrophe model for developing service satisfaction strategies. Journal of Marketing*, *56*, 83-95.

Bielefeld, W. & Cleveland, W.S. (2013). Faith-based organizations as service providers and their relationship to government. *Nonprofit and Voluntary Sector Quarterly*, 42(3), 468-494.

Bingham, L. B., Sandfort, J., & O'Leary, R. (2008). Learning to do and doing to learn: Teaching managers to collaborate in networks. *Big ideas in collaborative public management*, 270-286.

Blaug, R., & Lekhi, R. (2009). Demonstrating public service responsiveness. *Parliamentary Brief*. Retrieved from http://ricardoblaug.files.wordpress. com/2009/11/demonstrating-public-service-responsiveness.pdf

Boin, A., 't Hart, P., Stern, E., & Sundelius, B. (2005). *The Politics of Crisis Management: Public Leadership Under Pressure.* Cambridge University Press

Bonilla, Y. (January 19, 2018). How Puerto Ricans fit into an increasingly anti-immigrant U.S. Retrieved from https://www.washingtonpost.com/news/posteverything/wp/2018/01/19/how-the-u-s-will-replace-immigrant-workers-with-puerto-ricans/?utm_term=.2ae37863dbed

Booth, S. A. S. (1993). *Crisis management strategy: competition and change in modern enterprises.* London; New York: Routledge.

Borgatti, S. P., & Foster, P. C. (2003). *The network paradigm in organizational research: A review and typology*. Journal of Management, 29(6), 991-1013.

Borrás, S. (2003). *The innovation policy of the European Union: from government to governance*. Edward Elgar Publishing.

Bosworth, M., & Turnbull, S. (2014). Immigration detention, punishment, and the criminalization of migration. *The Routledge handbook on crime and international migration*, 91-106.

Bowler, W. M. (2006). Organizational goals versus the dominant coalition: A critical view of the value of organizational citizenship behavior. *Journal of Behavioral and Applied Management*, *7*(3), 258.

Brown, D. D., & Kulig, J. C. (1996). The concepts of resiliency: Theoretical lessons from community research.

Bruce, S., & Yearley, S. (2006). *The Sage dictionary of sociology*. Sage.

Bryer, T. (2007). Toward a relevant agenda for a responsive public administration. Journal of Public Administration Research and Theory, 17(3), 479–500

Bryer, T. A. (2009). Explaining responsiveness in collaboration: Administrator and citizen role perceptions. *Public Administration Review*, *69*(2), 271-283.

Bryer, T. A. (2013). Public participation in regulatory decision-making: Cases from regulations. gov. *Public Performance & Management Review*, *37*(2), 263-279.

Bryer, T. A., & Prysmakova-Rivera, S. (2018). *Poor Participation: Fighting the Wars on Poverty and Impoverished Citizenship*. Lexington Books.

Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public administration review*, *74*(4), 445-456.

Bryson, J.M., Crosby, B.C., & Stone, M.M. (2006). The design and implementation of cross-sector collaborations: Propositions from the literature. *Public Administration Review*, 66 (1), 44-55.

Bryson, J.M., Crosby, B.C., & Stone, M.M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 75(5), 647- 663.2

Campbell, C. (2015). Innovations in Governance: Applications to Social Work." Human Service

Organizations, Management & Governance 39 (4):339-347.

Cerny, B. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate behavioral research*, *12*(1), 43-47.

Chen, B. (2008). Assesing interorganizational networks for public service delivery: A process-perceived effectiveness framework. *Public Performance & Management Review*, *31*(3), 348-363.

Chenok, D., Kamensky, J., Keegan, M. & Ben-Yehuda, G. (2013). *Six Trends Transforming Government*. Washington, DC: IBM Center for the Business of Government.

City of Orlando (2018). City of Orlando Relief Efforts to Help Puerto Rico. Retrieved from http://www.cityoforlando.net/city-of-orlando-relief-efforts-to-help-puerto-rico/

Conrad, D.A., S.H. Cave, M. Lucas, *et al*. 2003. 'Community Care Networks: Linking Vision to Outcomes for Community Health Improvements', *Medical Care Research*, 60, 4, 95–129.

Crawford, L. H., & Helm, J. (2009). Government and governance: The value of project management in the public sector. *Project Management Journal*, *40*(1), 73-87.

Cross, J. E., Dickmann, E., Newman-Gonchar, R., & Fagan, J. M. (2009). Using mixed-method design and network analysis to measure development of interagency collaboration. *American Journal of Evaluation*, *30*(3), 310-329.

Cross, J. E., Newman-Gonchar, R., & Fagan, J. M. (2009). *Using mixed-method design and network analysis to measure development of interagency collaboration*. American Journal of Evaluation, 30(3), 310-329.

Daniel, J. L., & Moulton, S. (2017). Beyond Cans and Capacity. *Nonprofit Management and Leadership*, *28*(1), 47-64.

Darby, C., Valentine, N., De Silva, A., Murray, C. J., & World Health Organization. (2003). World Health Organization (WHO): strategy on measuring responsiveness.

Davis, G. L., & Robbin, A. (2015). Network disaster response effectiveness: the case of ICTs and Hurricane Katrina. *Journal of Homeland Security and Emergency Management*, *12*(3), 437-467.

De Silva, A., & Valentine, N. (2000). *A framework for measuring responsiveness*. Geneva: World Health Organization.

Delgadillo, N. (December 1, 2017). Central Florida Already Struggled to Provide Health Care and Affordable Housing. Then Hurricane Refugees Poured In. Retrieved from https://www.governing.com/topics/health-human-services/gov-puerto-rico-hurricane-maria-orlando-florida-government-services.html

Denhardt, R. B., & Catlaw, T. J. (2014). *Theories of public organization*. Cengage Learning.

Denhardt, R. B., & Denhardt, J. V. (2000). The new public service: Serving rather than steering. *Public administration review*, *60*(6), 549-559.

Denters, S. A., & Klok, P. (2005). The Netherlands: In Search of Responsiveness. In Denters, S.A. & Rose, L. E. (2005). *Comparing local governance. Trends and developments*. Palgrave Mac Millan.

Deverell, E. (2010). *Crisis-Induced Learning in Public Sector Organizations.* A Publication of the Crisis Management Europe Research Program. Elanders Sverige, Stockholm

Dooley, K. J. (1997). A complex adaptive systems model of organization change. *Nonlinear dynamics, psychology, and life sciences*, *1*(1), 69-97.

Doreian, P., & Woodard, K. L. (1992). Fixed list versus snowball selection of social networks. *Social Science Research*, *21*(2), 216-233.

Drabek, T. E., & McEntire, D. A. (2003). Emergent phenomena and the sociology of disaster: lessons, trends and opportunities from the research literature. *Disaster Prevention and Management: An International Journal*, *12*(2), 97-112.

Durkova, P. et al. (2012). Climate refugees in the 21st century, Regional Academy on the United Nations. Available at: https://acuns.org/wp-content/uploads/2013/01/Climate-Refugees-1.pdf

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing*, *62*(1), 107-115.

Emery, M. (2013). Open or Closed Systems? Bridging the Gap. *Systema: connecting matter, life, culture and technology*, *1*(2), 03-19.

Eshbaugh-Soha, M. (2006). The conditioning effects of policy salience and complexity on American political institutions. *Policy Studies Journal*, *34*(2), 223-243.

Esteve, M., Boyne, G., Sierra, V., & Ysa, T. (2012). Organizational collaboration in the public sector: Do chief executives make a difference? *Journal of Public Administration Research and Theory*, *23*(4), 927-952.

Evans, B. C., Coon, D. W., & Ume, E. (2011). Use of theoretical frameworks as a pragmatic guide for mixed methods studies: a methodological necessity? *Journal of mixed methods research*, *5*(4), 276-292.

Ewing, W. A., Martinez, D., & Rumbaut, R. G. (2015). The criminalization of immigration in the United States.

Farazmand, A. (Ed.). (2001). *Handbook of crisis and emergency management*. CRC Press.

Farazmand, A. (Ed.). (2004). *Sound governance: Policy and administrative innovations*. Greenwood Publishing Group.

Federal Emergency Management Agency Website (2019). Accessed at https://www.fema.gov/transitional-shelter-assistance

Field, A. (2005) Reliability analysis. In: Field, A., Ed., *Discovering Statistics Using spss*. 2nd Edition, Sage, London, Chapter 15.

Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the Journal. *American journal of pharmaceutical education*, *72*(2), 43.

Frederickson, H. G., Smith, K. B., Larimer, C., & Licari, M. J. (2018). *The public administration theory primer*. Routledge.

Gazley. (2017) The Current State of Interorganizational Collaboration: Lessons for Human Service Research and Management. *Human Service Organizations* 41:1, pages 1-5.

Gil-Garcia, J. R., & Pardo, T. A. (2006, January). Multi-method approaches to digital government research: Value lessons and implementation challenges. In *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)* (Vol. 4, pp. 67a-67a). IEEE.

Goldsmith, S., & Crawford, S. (2014). *The responsive city: Engaging communities through data-smart governance*. John Wiley & Sons.

Gordon, R. A. (2012). *Applied statistics for the social and health sciences*. Routledge.

Gormley Jr, W. T. (1986). Regulatory issue networks in a federal system. *Polity*, *18*(4), 595-620.

Governing (2018). Central Florida Already Struggled to Provide Health Care and Affordable Housing. Then Hurricane Refugees Poured In. Accessed at http://www.governing.com/topics/health-human-services/gov-puerto-rico-hurricane-maria-orlando-florida-government-services.html

Grubbs, J. W. (2000). Can agencies work together? Collaboration in public and nonprofit organizations.

Gulati, R., & Nickerson, J. A. (2008). Interorganizational trust, governance choice, and exchange performance. *Organization Science*, *19*(5), 688-708.

Guo, C., & Acar, M. (2005). Understanding collaboration among nonprofit organizations: Combining resource dependency, institutional, and network perspectives. *Nonprofit and voluntary sector quarterly*, *34*(3), 340-361.

Haas, E. N. (2007). *Handbook of injury and violence prevention*. Springer Science & Business Media.

Haque, M. S. (2001). The diminishing publicness of public service under the current mode of governance. *Public administration review*, *61*(1), 65-82.

Harden, A., & Thomas, J. (2005). Methodological issues in combining diverse study types in systematic reviews. *International Journal of Social Research Methodology*, *8*(3), 257-271.

Harmon, M. M. (1981). *Action theory for public administration*. New York, N.Y. : Longman, c1981.

Hermann, M., & and Dayton, B. W. (2008). *Transboundary Crises through the Eyes of Policymakers: Sense Making and Crisis Management.* Moynihan Institute of Global Affairs, Syracuse University

Herranz Jr, J. (2006). Network management strategies. *Seattle, Daniel J. Evans School of Public Affairs, University of Washington*, 4-37.

Holgado–Tello, F. P., Chacón–Moscoso, S., Barbero–García, I., & Vila–Abad, E. (2010). Polychoric versus Pearson correlations in exploratory and confirmatory factor analysis of ordinal variables. *Quality & Quantity*, *44*(1), 153.

Holland, G., & Bruyère, C. L. (2014). Recent intense hurricane response to global climate change. *Climate Dynamics*, *42*(3-4), 617-627.

Hu, Q., Knox, C. C., Kapucu, N. (2014). What have we learned since September 11, 2001? A network study of the Boston marathon bombings response. *Public Administration Review*, 74(6), 698-712.

Janoff-Bulman, R., Sheikh, S., & Hepp, S. (2009). Proscriptive versus prescriptive morality: Two faces of moral regulation. *Journal of personality and social psychology*, *96*(3), 521.

Jørgensen, T. B., & Bozeman, B. (2007). Public values: An inventory. *Administration & Society*, *39*(3), 354-381.

Jørgensen, T. B., & Rutgers, M. R. (2015). Public values: Core or confusion? Introduction to the centrality and puzzlement of public values research. *The American Review of Public Administration*, *45*(1), 3-12.

Juenke, E. G. (2005). Management tenure and network time: How experience affects bureaucratic dynamics. *Journal of Public Administration Research and Theory*, *15*(1), 113-131.

Kaiser, H.F., 1974. Analysis of factorial simplicity. *Psychometrika* 39, 31–36.

Kamarack, E. (2002). *Applying 21st Century Government to the Challenges of Homeland Security*. Washington, DC: IBM Center for the Business of Government, pp. 1-16

Kapucu, N. (2006). Interagency communication networks during emergencies: Boundary spanners in multi-agency coordination. *The American Review of Public Administration*, 36 (2), 207-225.

Kapucu, N., & Garayev, V. (2011). *Collaborative Decision-Making in Emergency and Disaster Management.* International Journal of Public Administration, 34: 366–375, 2011

Kapucu, N., Arslan, T., & Demiroz, F. (2010). Collaborative emergency management and national emergency management network. *Disaster Prevention and Management*, 19 (4), 452-68.

Kapucu, N., Augustin, M.E. & Garayev, V. (2009). Interstate partnerships in emergency management: Emergency management assistance compact (EMAC) in response to catastrophic disasters. *Public Administration Review*, 69(2), 297-313.

Karl, T. R., Melillo, J. M., & Peterson, T. C. (2009). *Global climate change impacts in the United States: a state of knowledge report from the US Global Change Research Program*. Cambridge University Press.

Kaufman, H. (2001). *Major Players: Bureaucracies in American Government Public Administration Review*, 61(1):18-42

Kernaghan, K. (2003). Integrating values into public service: The values statement as centerpiece. *Public administration review*, *63*(6), 711-719.

Kettl, D.F. (2006). *The Global Public Management Revolution*, Brookings Institution Press

Kilduff, M. & Brass, D. J. (2010). *Organizational social network research: Core ideas and key debates.* Academy of Management Annals, 4, 317-57.

Klijn, E. H., Steijn, B., & Edelenbos, J. (2010). The impact of network management on outcomes in governance networks. *Public administration*, *88*(4), 1063-1082.

Kline, T. J. (1999). The team player inventory: Reliability and validity of a measure of predisposition toward organizational team-working environments. *Journal for specialists in Group Work*, *24*(1), 102-112.

Knutson, T. R., Tuleya, R. E., & Kurihara, Y. (1998). Simulated increase of hurricane intensities in a CO2-warmed climate. *Science*, *279*(5353), 1018-1021.

Koliba, C. (2011). Performance Management in Governance Networks—Critical Concepts and Practices: Editor's Introduction. *Public Performance & Management Review*, *34*(4), 515-519.

Koliba, C., Meek, J. W., & Zia, A. (2010). *Governance networks in public administration and public policy*. CRC Press.

Koppenjan, J. F. M., & Klijn, E. H. (2004). *Managing uncertainties in networks: a network approach to problem-solving and decision making* (Vol. 40). London: Routledge.

Kreft, S., Eckstein, D., & Melchior, I. (2017). Global climate risk index 2017: who suffers most from extreme weather events? Weather-related loss events in 2015 and 1996 to 2015. German Watch.

Liao, Y. (2018). Toward a Pragmatic Model of Public Responsiveness: Implications for Enhancing Public Administrators' Responsiveness to Citizen Demands. *International Journal of Public Administration*, *41*(2), 159-169.

Lipsky, M. (1980). Street level bureaucrats. *New York: Russell Sage Foundation*.

Magsino, S. L. (2009). Applications of social network analysis for building community disaster resilience. *Washington, DC: National Academy of Sciences*.

Mandell, M. & Keast, R. L. (2007). Evaluating network arrangements: Toward revised performance measures. *Public Performance & Management Review,* 30(4), 574-97.

Marume, S. B. M., Jubenkanda, R. R., & Namusi, C. W. (2016). The Concept of Approaches in the Social Sciences, In Particular Public Administration. *Journal of Business and Management*. 18(2), 69-72

Mayntz, R. (2003). From government to governance: Political steering in modern societies. *Summer Academy on IPP*, 7-11.

McCamy, J. L. (1954). Responsiveness Versus Efficiency in Public Service. *The Annals of the American Academy of Political and Social Science*, *292*(1), 30-38.

McGuire, M, & Silvia, C. (2010). The effect of complexity, problem severity, and managerial capacity on intergovernmental collaboration: Evidence from local emergency management. *Public Administration Review*, 70(2), 279-88.

Melkas, H., & Harmaakorpi, V. (Eds.). (2011). *Practice-based innovation: Insights, applications and policy implications*. Springer Science & Business Media.

Meyer, H. D. (1995). Organizational environments and organizational discourse: Bureaucracy between two worlds. *Organization Science*, *6*(1), 32-43.

Miles, R. E., & Snow, C. C. (1992). Causes of failure in network organizations. *California management review*, *34*(4), 53-72.

Miller, D. L. (2013). Introduction to collective behavior and collective action. Waveland Press.

Milward, B.H. and K.G. Provan (2003). Managing the Hollow State. Collaboration and Contracting. *Public Management Review*. 5, 1, 1–18.

Milward, H. B., Provan, K. G., Fish, A., Isett, K. R., & Huang, K. (2009). Governance and collaboration: An evolutionary study of two mental health networks. *Journal of Public Administration Research and Theory*, *20*(suppl_1), i125-i141.

Milward, H.B. & Provan, K.G. (2000). Governing the hollow state. *Journal of Public Administration Research and Theory,* 10(2), 359-380.

Mingers, J. (2001). Combining IS research methods: towards a pluralist methodology. *Information systems research*, *12*(3), 240-259.

Mitchell, S.N. and S.M. Shortell. 2000. The Governance and Management of Effective Community Health Partnership: A Typology for Research, Policy and Practice', *The Milbank Quarterly*, 78, 2, 241–89.

Moe, R. C. (2001). *The emerging federal quasi government: Issues of management and accountability*. Public Administration Review, 61, 290-312.

Monge, P. R., & Contractor, N. S. (2003). *Theories of communication networks*. Oxford University Press, USA.

Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard university press.

Morgan, A. B. (2006). Flame retarded polymer layered silicate nanocomposites: a review of commercial and open literature systems. *Polymers for Advanced Technologies*, *17*(4), 206-217.

Morse, R. S., & Stephens, J. B. (2012). Teaching collaborative governance: Phases, competencies, and case-based learning. *Journal of Public Affairs Education*, 565-583.

Moynihan, D. P. (2008). Learning under uncertainty: Networks in crisis management. *Public Administration Review*, *68*(2), 350-365.

Murphy, B. L. (2007). Locating social capital in resilient community-level emergency management. *Natural Hazards*, *41*(2), 297-315.

Ngai, P. B., & Koehn, P. H. (2005). Organizational communication and globally displaced perimeter populations: A neglected challenge for intercultural communications training. *International and multicultural organizational communication*, 225-267.

Nohrstedt, D. (2016). Explaining mobilization and performance of collaborations in routine emergency management. *Administration & Society*, *48*(2), 135-162.

Nolte, M. I. & Boenigk, S. (2013). A study of ad hoc network performance in disaster response. *Nonprofit and Voluntary Sector Quarterly*, 42(1), 148-73.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). *Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness.* American Journal of Community Psychology, 41(1-2), 127-150.

O'Leary, R., & Bingham, L. B. (2009). Surprising findings, paradoxes, and thoughts on the future of collaborative public management research. *The collaborative public manager: New ideas for the twenty-first century*, 255-270.

O'Leary, R., & Vij, N. (2012). Collaborative public management: Where have we been and where are we going?. *The American Review of Public Administration*, *42*(5), 507-522.

O'Leary, R., Gerard, C., & Bingham, L.B. (2006). *Introduction to the Symposium on Collaborative Public Management*. Public Administration Review 66, 6-9

Orlando International Airport Press (December 13, 2017). After Assisting More Than 28,000 Hurricane Evacuees, Disaster Relief Center at Orlando International Airport Set To Close. Accessed at https://www.orlandoairports.net/press/2017/12/13/assisting-28000-hurricane-evacuees-disaster-relief-center-orlando-international-airport-set-close/

Osborne, S. P., Radnor, Z., & Nasi, G. (2013). A new theory for public service management? Toward a (public) service-dominant approach. *The American Review of Public Administration*, *43*(2), 135-158.

Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).

Papanicolas, I., & Smith, P. (2013). *Health system performance comparison: an agenda for policy, information and research: an agenda for policy, information and research*. McGraw-Hill Education (UK).

Pauchant, T. C. & Mitroff, I. I. (1992). Transforming the crisis-prone organization. San Francisco: Jossey-Bass Publishers.

Pearce, L. (2003). *Disaster management and community planning, and public participation: how to achieve sustainable hazard mitigation*. Natural hazards, *28*(2), 211-228.

Perry, J. (1991). Strategies for building public administration theory. In J. Perry (Ed.*), Research in public administration* (Vol. 1, pp. 1–18). Greenwich, CT: JAI.

Peters, B.G., & Pierre, J. (2012). The SAGE Handbook of Public Administration. 2nd Edition. *Sage Publications*

Pleace, N. (2010). Immigration and homelessness. *Homelessness research in Europe*, 143-162.

Powell, W. W. (1990). Neither market nor hierarchy: Network Forms of organisation, research in Organizational Behavior, Vol. 12. *LL Cummings and B. Slaw (eds.)*, 295-336.

Provan, K. & Milward, H.B. (2001). *Do networks really work? A framework for evaluating public sector organizational networks*. Public Administration Review, 61 (4), 414-23.

Provan, K.G. and B.H. Milward. (1995). *A Preliminary Theory of Interorganizational Network Effectiveness.* Administrative Science Quarterly. 40, 1, 1–33.

Provan, K.G. and J.G. Sebastian. 1998. *Network Within Networks: Service Link Overlap, Organizational Cliques, and Network Effectiveness*. Academy of Management Journal, 41, 4, 453–63.

Provan, K.G., & Kennis P. (2008). *Modes of network governance: structure, management, effectiveness.* Journal for Public Administration Research and Theory 18: 229–52

Provan, K.G., Fish, A., & Sydow, J. (2007). *Interorganizational networks at the network level: A review of empirical literature on whole networks.* Journal of Management, 33(3), 479-516.

Provan, K. G., & Lemaire, R. H. (2012). Core concepts and key ideas for understanding public sector organizational networks: Using research to inform scholarship and practice. *Public Administration Review*, *72*(5), 638-648.

Provan, K.G., Veazie, M.A., Staten, L.K., & Teufel-Shone, N.I. (2005). *The use of network analysis to strengthen community partnerships.* Public Administration Review, 65(5), 603-613.

Prysmakova-Rivera, S., et al. (2018). Practices and Challenges of Citizen Participation in Local Government: Case Studies of Midsized Cities in Russia and the United States. Ketley R., Liddle, J., & Dunning P.T. (eds.) *In the Routledge Handbook of International Local Governments*. 1st Edition. Routledge

Raab, J., Mannak, R. S., & Cambré, B. (2013). Combining structure, governance, and context: A configurational approach to network effectiveness. *Journal of Public Administration Research and Theory*, *25*(2), 479-511.

Reason, P., & Bradbury-Huang, H.(2013). The Sage Handbook of Action Research: Participative Inquiry and Practice, 2nd Revised edn.

Respaut, R. & Baez, A. (January 12, 2018). Florida communities scramble to help displaced Puerto Ricans. Retrieved from http://news.trust.org/item/20180112060034-fu77q/

Rhodes, M. L., & MacKechnie, G. (2003). Understanding public service systems: Is there a role for complex adaptive systems theory?. *Emergence*, *5*(4), 57-85.

Ricken, S. T., Schuler, R. P., Grandhi, S. A., & Jones, Q. (2010, January). TellUsWho: Guided social network data collection. In *System Sciences (HICSS), 2010 43rd Hawaii International Conference on* (pp. 1-10). IEEE.

Ring, P. S., & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of management review*, *19*(1), 90-118.

Rittel, H., & Webber, M. M. (1973). Dilemmas in a general theory of planning. Policy Sciences, 4(2), 155–169.

Rosenau, J. (1992). Governance, Order and Change in World Politics. In J. Rosenau and E. Q. Czempiel (eds.), *Governance without Government: Order and Change in World Politics*, Cambridge: Cambridge University Press. 1-30

Rosenthal, U., & Kouzmin, A. (1997).*Crises and Crisis Management: Toward Comprehensive Government Decision Making.* Journal of Public Administration Research and Theory. *7(2):277-304*

Rothenberg, R. B. (1995). Commentary: Sampling in social networks. *Connections*, *18*(1), 104-110.

Rothenberg, R. B., Potterat, J. J., Woodhouse, D. E., Darrow, W. W., Muth, S. Q., & Klovdahl, A. S. (1995). *Choosing a centrality measure: epidemiologic correlates in the Colorado Springs study of social networks.* Social Networks, 17(3-4), 273-297.

Rutgers, M. R. (2008). Sorting out public values? On the contingency of value classification in public administration. *Administrative Theory & Praxis*, *30*(1), 92-113.

Salamon, L. (2002). *The Tools of Government.* New York: Oxford University Press

Saldana, J. (2009). *The Manual Coding for Qualitative Researchers*. London: Sage Publications

Saltzstein, G. H. (1992). Bureaucratic responsiveness: Conceptual issues and current research. *Journal of Public Administration Research and Theory*, *2*(1), 63-88.

Sampson, R. (2013). *Great American City.* Reprint edition, University Of Chicago Press

Scaramutti, C., Salas-Wright, C. P., Vos, S. R., & Schwartz, S. J. (2019). The Mental Health Impact of Hurricane Maria on Puerto Ricans in Puerto Rico and Florida. *Disaster medicine and public health preparedness*, *13*(1), 24-27.

Schneider, M., & Somers, M. (2006). Organizations as complex adaptive systems: Implications of complexity theory for leadership research. *The Leadership Quarterly*, *17*(4), 351-365.

Schram, T. H. (2006). Conceptualizing and proposing qualitative research. 2nd Ed. Pearson Merrill Prentice Hall, c2006.

Scott, J., & Carrington, P. J. (2011). *The SAGE Handbook of Social Network Analysis*. SAGE publications.

Sehested, K. (2003). *Cross-Sector Partnerships as a New Form of Governance.* In L. Kjaer (Series Ed.) Local Partnerships in Europe: An Action Research Project. Copenhagen: The Copenhagen Center, pp. 89 – 95.

Shaluf, I. M., Ahmadun, F. L. R., & Mat Said, A. (2003). A review of disaster and crisis. *Disaster Prevention and Management: An International Journal*, *12*(1), 24-32.

Sharp, E. B. (1981). Responsiveness in urban service delivery: The case of policing. *Administration & Society*, *13*(1), 33-58.

Shuckburgh, E., Mitchell, D., & Stott, P. (2017). Hurricanes Harvey, Irma and Maria: how natural were these 'natural disasters'?. *Weather*, *72*(11), 353-354.

Siemiatycki, M. (2012). The place of immigrants: Citizenship, settlement, and socio-cultural integration in Canada. In D. Rodriguez-Garcia (Ed.), *Managing immigration and diversity in Canada. A transatlantic dialogue in the new age of migration* (pp. 223–247). Montreal and Kingston: McGill-Queens University Press

Silver, O. (2017). Sunshine Politics: Puerto Rican Memory and the Political in New Destinations Patricia. *Centro Journal*, 29(2), 4-37

Smith, K.B., & Larimer, C.W. (2009). *The Public Policy Theory Primer*. Westview Press

Soliman, H. H., & Rogge, M. E. (2002). Ethical considerations in disaster services: A social work perspective. *Electronic Journal of Social W ork ISSN*, *1537*, 422X

Stacey, R. D. (1996). *Complexity and creativity in organizations*. Berrett-Koehler Publishers.

Stanton, T. H. (2014). *Meeting the Challenge of 9/11: Blueprints for More Effective Government: Blueprints for More Effective Government*. Routledge.

Steelman, T. A., Nowell, B., Bayoumi, D., & McCaffrey, S. (2014). Understanding Information Exchange During Disaster Response: Methodological Insights From Infocentric Analysis. *Administration & Society* 46 (6):707-743.

Stivers, C. (1994). The listening bureaucrat: Responsiveness in public administration. *Public Administration Review*, 364-369.

Stoker, G. (2006). Public value management: a new narrative for networked governance?. *The American review of public administration*, *36*(1), 41-57.

Sutter, J. D., & Hernandez, S. (February 21, 2018). 'Exodus' from Puerto Rico: A visual guide. Retrieved from https://www.cnn.com/2018/02/21/us/puerto-rico-migration-data-invs/index.html

Tabachnick, B. G., & Fidell, L. S. (2001). Principal components and factor analysis. *Using multivariate statistics*, *4*, 582-633.

Taherdoost, H. A. M. E. D., Sahibuddin, S. H. A. M. S. U. L., & Jalaliyoon, N. E. D. A. (2014). Exploratory factor analysis; concepts and theory. *Advances in Applied and Pure Mathematics*, *375382*.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, *2*, 53.

Thomas, J. C. (1995). *Public Participation in Public Decisions*, Jossey-Bass, San Francisco, CA.

Thomas, J. C. (2013). Citizen, customer, partner: Rethinking the place of the public in public management. *Public Administration Review*, *73*(6), 786-796.

Thomas, P., & Palfrey, C. (1996). Evaluation: stakeholder-focused criteria. *Social Policy & Administration*, *30*(2), 125-142.

Thomson, M. A., Perry, J. L., & Miller, T. K. (2007). *Conceptualizing and Measuring Collaboration*. Journal of Public Administration Research and Theory, 19 (1), 23-56.

Turrini, A., Cristofoli, D., Frosini, F., & Nasi, G. (2010). Networking literature about determinants of network effectiveness. *Public Administration*, *88*(2), 528-550.

U.S. Census Bureau (2016). Hispanic Or Latino Origin by Specific Origin. American Community Survey 1-Year Estimates, accessed through https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_B03001&prodType=table

Van den Dool, L., & van den Dool, L. T. (2005). *Making local government work: an introduction to public management for developing countries and emerging economies* (Vol. 1). Eburon Uitgeverij BV.

Van Montfort, C., Michels, A., & Frankowski, A. (2014). Governance Models and Partnerships in the Urban Water Sector: A framework for analysis and evaluation.

Vandenabeele, W. (2008). Government calling: Public service motivation as an element in selecting government as an employer of choice. *Public administration*, *86*(4), 1089-1105.

Velasquez, M. (2007). Normative Theory Versus Positive Theory. *Encyclopaedia of Business Ethics and Society, Thousand Oaks, CA: Sage*.

Vigoda, E. (2000). Are you being served? The responsiveness of public administration to citizens' demands: An empirical examination in Israel. *Public administration*, *78*(1), 165-191.

Vigoda, E. (2002). From responsiveness to collaboration: Governance, citizens, and the next generation of public administration. *Public administration review*, *62*(5), 527-540.

Vincent-Jones, P. (2006). The new public contracting: regulation, responsiveness, relationality. *OUP Catalogue*.

Weber, E., & Khademian, A. (2008). Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. Public Administration Review, 68(2), 334–349

Weiner, B.J. and J.A. Alexander. 1998. The Challenges of Governing Public-Private Community Health Partnership, *Healthcare Management Review*, 23, 2, 39–55.

Yang, K. (2007). Responsiveness in network governance: Revisiting a fundamental concept: Symposium introduction. *Public performance & management review*, *31*(2), 131-143.

Yang, K., & Holzer, M. (2006). The performance–trust link: Implications for performance measurement. *Public Administration Review*, *66*(1), 114-126.

Yang, K., & Pandey, S. K. (2011). Further dissecting the black box of citizen participation: When does citizen involvement lead to good outcomes?. *Public Administration Review*, *71*(6), 880-892.

Yin, R. K. (2015). *Qualitative research from start to finish*. Guilford Publications.

Yonetani, M. (2015). Global Estimates 2014: people displaced by disaster. IDMC.

Zetter, R., & Deikun, G. (2010). Meeting humanitarian challenges in urban areas. *Forced Migration Review*, *34*(5).