Governance with Government: Cross-Sectoral Organizations' Willingness to Collaborate to Plan for Disaster Preparedness[1]

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Abstract

This paper explores the significant predictors or indicators of cross-sectoral organizations' willingness (unwillingness) to collaborate for disaster risk reduction and management (DRRM) planning. It took inspiration from, enhanced and expanded Ajzen's Theory of Planned behavior to initially build the default structural model. Bootstrapping technique was used (N=500 bootstrap samples) to 100 randomly selected respondents to the survey. They are all decision-makers from local government units, for-profit and non-profit sectors in Iloilo City (Philippines) and its adjacent municipalities. The approach uses structural equation modeling to assess and identify simultaneously the relationships among exogenous and endogenous variables; and measure the fitness of the structural model of willingness to collaborate.

Keywords: *cross-sector collaboration, willingness to collaborate, inter-organizational collaboration, intersectoral collaboration*

1. Introduction

During turbulent times natural and human-induced disasters cost loss of lives and damage to property with which the exponential effects have been felt in all dimensions of development – economic, social, political and technological. However, troubled times also offer opportunity. The public-private divide had softened, if not crumbled, as the state hollowed out, the private contracting of public work expanded, and myriad non-governmental organizations emerged to fill the gaps (Goldsmith and Eggers, 2004; and Kettl, 2002). With the complexity and cost of the tasks it has to perform, government often finds that its skill, will, and wallet fall short to figure out a solution to solve its problems and get it done; and scaling up the standard governmental solutions might not be the best answer to the problem.

Agencies at all levels face a range of opportunities to collaborate with private actors to achieve public goals more effectively than government can on its own. Collaborative governance

[1] This paper presents the results of the data analysis in one of the three research areas in the author's doctoral dissertation.
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is believed to be a force multiplier to resolve the challenges that confront us. Although structural, political, and cultural impediments to crossing these divides still endure, an increasing demand for cross-boundary collaboration continues to fuel the growth and experimentation with collaborative governance arrangements that makes collaboration one of the most important issues in the research area of contemporary public management.

Collaboration is an interactive process among organizations that involves negotiation, development and assessment of commitments, and implementation of commitments (Thomson, Perry and Miller, 2008:97). It also involves shared norms and mutually beneficial interactions (Thomson and Perry, 2006:23). Cross-sector collaboration is increasingly assumed to be both necessary and desirable as a strategy for addressing many of society's most difficult public challenges (Agranoff and McGuire, 2003; Goldsmith and Eggers, 2004; Kickert, Klijn, and Koppenjan, 1997; Mandell, 2001; Rethemeyer, 2005) such as preparedness to disaster due to the occurrence of natural or human-induced calamities. Thus, public administration had entered in a generation that is in great need of more cross-sector collaborations (Gadot and Vigoda, 2003).

Collaborative governance via cooperative networks of public and private actors *(governance with government)* (Grande and Pauly, 2005; Zürn, 1998) in disaster management and risk reduction is a strategy to enable people overcome the culture of disasters and transform it to a culture of resiliency and adaptability through the combined efforts of the government, private, and non-government organization (non-profit) sectors. Furthermore, although governments play a crucial, coordinating role, emergency management involves a broader community of interest, populated by public administrators, private-sector managers, non-profit organizations, military personnel, academics, and some interested members of the public, each of which brings expertise and resources to the policy table (Henstra, 2013).

Ideally, collaboration is viewed as a governance strategy to solve large and complex problems. In reality, organizations are still independent actors who generally cannot be compelled to work with one another. In addition, participating actors to collaboration with completely different organizational cultures, preferences, and views about how to deal with the situation at hand further slowdown the negotiation processes. It is at this point that the Theory of Planned Behavior (TPB)[3] provides a solid framework for exploring cross-sectoral organizations' willingness to collaborate to plan for disaster preparedness.

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[3] Human behavior is guided by three kinds of consideration, "behavioral beliefs," "normative beliefs," and "control beliefs." In their respective aggregates, "behavioral beliefs" produce a favorable or unfavorable "attitude toward the behavior"; "normative beliefs" result in "subjective norm"; and "control beliefs" gives rise to "perceived behavioral control."

In combination, "attitude toward the behavior," "subjective norm," and "perceived behavioral control" lead to the formation of a "behavioral intention (Ajzen, (2002)." In particular, "perceived behavioral control" is presumed to not only affect actual behavior directly, but also affect it indirectly through behavioral intention.

This paper took inspiration from, Ajzen's Theory of Planned Behavior; by enhancing and expanding its framework, this study primarily seeks to answer this main research question: *To what extent are cross-sectoral organizations willing to collaborate to plan for disaster preparedness?* To further explore this willingness to collaborate, the following questions were investigated:

a) *What behavioral construct(s) of organization will more likely be able to predict/determine cross-sector organizations' willingness to collaborate to plan for disaster preparedness?*
b) *What is the best-fit model for cross-sectoral organizations' willingness to collaborate (in the context of disaster preparedness)?*

Using Structural Equation Modeling (SEM) approach, it generally aims to assess cross-sectoral organizations' willingness to collaborate and contribute to existing literature in behavioral theories of organizations, collaborative governance and network studies particularly at the early stage of sealing the terms and conditions of collaboration by identifying the best-fit model for, and assessing the relationships among variables to determine the significant predictors of cross-sectoral organizations' willingness to collaborate to plan for disaster preparedness. The approach involves the assessment of the organization's predisposition tendencies toward collaboration, the external influences, or social incentive/pressure to collaborate, and the perceived control over factors that might facilitate/impede the partner's ability to collaborate.

2. The Philippine DRRM and the Challenges in forging Cross-Sector Collaboration

The Philippines is one of the world's most disaster-prone countries. The exposure of the Philippines to disasters can be attributed to its geographical and physical characteristics. Over the years, the country has experienced its fair share of natural disasters ranging from typhoons as it absorbs the full strength of typhoons that develop in the Pacific Ocean, earthquakes and volcanic eruptions because the country is within the Pacific Ring of Fire.

Republic Act (R.A.) 10121 provides a legal and institutional basis for Disaster Risk Reduction and Management (DRRM) which reflects some key dimensions of [cross-sector] collaboration. The law serves as basis for the development of policies and plans, implementation of actions and measures pertaining to all aspects of DRRM, including good governance, risk assessment and early warning, knowledge building and awareness raising, reducing underlying risk factor, and preparedness for effective response and early recovery. It likewise promotes the involvement and participation of all sectors and all stakeholders concerned, at all levels, especially the local community.

RA 10121 repealed Presidential Decree (P.D.) 1566 that created the National Disaster Coordinating Council (NDCC). This changed from the NDCC to the National Disaster Risk Reduction and Management Council (NDRRMC), a multi-sectoral body composed of the heads of the different executive departments of government, government institutions, local government associations, civil society organizations, and the private sector that oversees the DRRM system in the Philippines (Sections 5 and 6) which emphasizes strengthening local governments and the importance of local communities and institutionalizes the participation of civil society organizations (non-profit sector) and the private for-profit sector.

This law adopted and adhered to principles and strategies consistent with the international standards set by the Hyogo Framework for Action – a comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities, and national development (DRR Knowledge Centre, 2014). It also acknowledges among other things, the need to adopt a disaster risk reduction and management approach that is holistic, comprehensive, integrated, and proactive in lessening the socio-economic and environmental impacts of disasters including climate change. It aims to promote the involvement and participation of all sectors and all stakeholders concerned, at all levels, especially the local community (Section 2, R.A. 10121). The DRRM Act transformed and reformed the way the country should deal with disasters. It shifted to the idea that impacts of disasters can be reduced by addressing the root cause of disaster risks and government's focus from disaster response to disaster risk reduction.

The Local DRRM Councils (LDRRMC) are found at the provincial, city, and municipal levels. The Barangay Development Council (BDC) shall assume the powers and functions of the council at the barangay level. The LDRRMC is composed of multi-sectoral and multi-agency members. LDRRMCs oversee the implementation of the Local DRRM Plans (LDRRMPs) formulated by Local DRRM Offices (LDRRMOs) (Section 11).

DRR stakeholders (government, business sector, academe, civil society organizations, and media) have developed and implemented DRR programs and initiatives with their distinct roles and expertise but still not yet well coordinated among the stakeholders. In their study, Lorenzana and Sario (n.d.) noted that DRR stakeholders were able to identify specific areas of collaboration for sharing and mobilizing their resources, expertise, and information for various DRR activities. These activities focused on building DRR alliance network and making it functional through a Technical Working Group. While the government is more advance in resources and network and linkages, civil society organizations have more developed DRR programs for the communities; the business sector has more resources but they have not yet fully developed DRR programs. The academe is specialized in educating and providing DRR capacity building. The media is specialized in providing timely information on DRR. However, they further found out that in the implementation of DRR programs, various stakeholders perceived that the need to harmonize plans, policies, and strategies among stakeholders is still a major

challenge for collaborating. Moreover, small businesses lack concrete DRR plans. Hence, they recommended that there is a need to develop an orchestrated DRR plans among DRR stakeholders and utilize the framework of collaboration for developing a comprehensive DRR agenda and plans of the organized DRR alliance network.

When decisions are to be made by a certain agency or coordinating body, it is crucial to have a comprehensive mechanism that would facilitate and enhance decision-making process through various administrative, structural, and behavioral changes and adjustments (Raiffa, Richardson, and Metcalfe, 2002). These organizational needs, adjustments, and management techniques have varied in terms of several aspects.

Sectoral differences also impact the collaborative decision-making process. This factor similarly affects the extent to which the organizations involved in response operations would engage in collaborative decision-making. The decisions they would approve would be proportional to their goals, paving the way to a sometimes less cooperative decision-making environment. Thus, it is challenge to reconcile the different approaches and arrive at common though not-cursory decisions in regard to complex and urgent situations during emergencies (Kapucu, and Garayev, 2011: 371). In addition to this, the randomness of the situation and actors in emergency situations resulted to have participating actors with completely different organizational cultures, preferences, and views about how to deal with the situation at hand. This is problematic because such varied groups of actors hardly agree on critical issues, thus slowing down the negotiation and decision-making processes.

Although organizations increasingly rely on collaboration to achieve their goals and large and complex problems, collaborating organizations are still independent actors who generally cannot be compelled to work with one another. Instead, potential partners interact, learn about one another, and weigh the costs and benefits of affiliating with other parties before agreeing to work together. There is a wide cultural gap between private sector managers and public-sector officials. Their organizational cultures, standards, and languages are different. There are too few opportunities and minimal motivation to build relationships and trust. Building the trusting relationships necessary for collaboration requires the mutual understanding of the motivations and needs of stakeholders. Once trust and collaborative relationships have been developed, there is a need to nurture them constantly. Sustainability of collaboration is dependent on collaborators trusting that the collaborative structure and strategies are correct, on their familiarity with the strengths and resources of the collaborative network, and on their commitment to collaboration for the long haul (National Academy of Sciences, 2011).

3. Towards the Development of Cross-Sectoral Organizations' Willingness to Collaborate Default Structural Equation Model

This study stands in the idea that organizations and groups have their own interests, beliefs, values, preferences, perspectives and perceptions. Organizations, at the same time, treated as systems of interdependent activities embedded in and dependent on a wider environment wherein a system is an organized collection of parts united by prescribed interactions and designed to accomplish of specific goals or general purposes. In relation to this, organizational culture has to do with the informal norms and values that evolve and become important for the activities of formal organizations. Also, collaborating parties see the mutual benefit and value of the alliance by identifying their mutual learning intent that requires acknowledging dependence upon the other group, sector, or organization.

In governance studies, the formation of collaborative networks is considered as the way of accomplishing policy objectives that could not otherwise be solved by way of a single agency or sector (Agranoff and McGuire, 2003; van Bueren, Klijn and Koppenjan, 2003; Connelly, Zhang and Faerman, 2008). Networks bring together multiple actors to combine resources to address complex problems. Recent organization theory has likewise expanded the concept of organizational boundaries with useful implications for understanding cross-sectoral collaboration, particularly, organizational boundaries have been conceived as junctures for decisions (Williamson, 1991). The essential elements in various modalities of collaborations such as collaborative network, collaborative governance and network governance essentially support the belief that the attractiveness of networks as a form of collaboration for public managers is based on the assumption that other organizations, in the private sector or the "non-profit" sector, (or both), have something of value to offer government in developing and delivering public services that are superior to what government could provide alone.

The initial conceptual framework for cross-sector organizations' willingness to collaborate to plan for disaster preparedness was developed, primarily by borrowing the underlying ideas in group and organizational theories from social psychology – specifically Azjen's Theory of Planned Behavior. The theory predicts the occurrence of a specific behavior provided that the behavior is intentional. In some cases, the model has been compared with competing theories, and deconstructed for further study. While this theory measures the behavioral intention of an individual, social thinkers including Karl Mannheim, Karl Marx, and Emile Durkheim support the idea that within groups or organizations there is presence of *shared attitudes, cultural perspectives and beliefs* that constitute the group or organization's norms and beliefs system (Bar-Tal, 1990), which in their totality perform important functions in a group's existence (Borhek and Curtis, 1975; Parsons, 1951).

Henneman, Lee and Cohen, (1995) also mentioned that "willingness of the team of professionals to work collaboratively depends on factors such as professional education, previous experience in similar situations and personal maturity." At the same time, prior partnerships or

existing collaborations is believed to be important because it is often through these collaborations and networks that partners judge the trustworthiness of other partners and the legitimacy of the key stakeholders (Bryson, Crosby and Stone, 2006).

Additionally, Lewin (1947) has pointed that it seems to be impossible to predict group behavior without taking into account group goals, group values, and the way a group "sees" its own situation and that of other groups. Thus, Organizations' maturity and partnership and collaborations experiences and the notion of "shared beliefs" form part of the essential constructs that determine their willingness to collaborate for disaster preparedness. Lastly, Aldrich (1979) and Alter and Hage (1993) affirmed that similarity in values and attitudes make the formation of inter-organizational linkages more probable and make these linkages more stable over time. A common belief system, including norms, values, perceptions, and worldviews, provide the principal "glue" to hold together networks of actors.

The initial conceptual framework of this study that adopted, enhanced and expanded the theoretical propositions of Ajzen's *Theory of Planned Behavior* proposes that, in order to achieve a meaningful cross-sector collaboration, cross-sectoral organizations should have a significant positive level of willingness to collaborate. This willingness to collaborate is determined by the organizations' intention and perceived group/organizational behavioral control. Moreover, the organizations' intention is determined factors such as shared attitude, organizational cultural perspectives, perceived group/organizational behavioral control and trust where each factor is in turn generated by a number of beliefs and evaluations and demographic variables such as number of years the organization exists and number of partnership/collaboration experiences.

4. Methodology

The results in this study is based on one of three study areas covered in a larger study. To gather the data for this study, structured questionnaire that involved precise wording of questions in a fixed order was utilized. There are 100 randomly selected respondents participated in the survey. They are decision-makers in the sectoral organization they represent, which are all based in Iloilo City (Philippines) and its adjacent local government units. Moreover, bootstrapping[4] technique was applied using IBM® SPSS® AMOS version 21 (N=500 Bootstraps). Each item required respondents to choose an answer from a number of alternatives presented to them.

[4] Bootstrapping allows assigning measures of accuracy (defined in terms of bias, variance, confidence intervals, prediction error or some other such measure) to sample estimates (Efron and Tibshirani, 1993). This technique allows estimation of the sampling distribution of almost any statistic using random sampling methods (Varian, 2005).

To satisfy the objectives of this study, the following procedures were observed by the researcher:

1. Questionnaire with a six-point discrete visual analog scale (DVAS) items were created, reviewed and piloted for validity and reliability. When pilot test was conducted, the instrument used in this study obtained a 0.933 Cronbach alpha reliability test result using IBM® SPSS® version 21. Hence, a higher level of consistency in all the items included in the instrument is assured before the actual conduct of the survey.
2. After the completion of the survey, the researcher proceeded to recoding the questions, developed appropriate scales, generated statistics and analyzed the data using IBM® SPSS® AMOS version 21 statistical software for simultaneous regression and path analyses, and assessment of the fitness of the structural equation model.
3. Although not part of Ajzen's (2006) model, scholars were also able to identify "trust" as one of the motivational factors for collaboration, along with institutional (or organizational) capacities and past institutional relationships. Studies show that trust depends on competence – skills and knowledge – and on experience. Hence, to further explore the effects of *"trust"* to organizations' *"intention"* and *"willingness to collaborate"* to plan for disaster preparedness, variables such as *"number of years the organizations exist," "type of organization,"* and *"number of collaboration experiences"* were also tested.

5. Extent of Cross-Sectoral Organizations' Intention and Willingness to Collaborate and Analysis of the Default Structural Equation Model

a) Extent of Cross-Sectoral Organizations' Intention and Willingness to Collaborate to Plan for Disaster Preparedness

One of the objectives of this study is to describe the extent of cross-sectoral organizations' intention and willingness to plan for disaster preparedness. The results of the descriptive data analysis revealed that, in a scale of 1 to 6, organizations have higher intention ($\bar{x}$=5.2167; s.d.=0.66722) and more than willing ($\bar{x}$=5.2650; s.d.=0.66079) to collaborate for DRRM planning across sectors and jurisdiction.

This suggests that organizations across sectors have higher intention and more than willing to take part, share ideas, and collaborate to develop a plan for disaster prepared with their counterparts from other sectors, beyond the local boundary-limits.

Table 1 shows the results of the descriptive analysis of the extent of cross-sectoral organizations' intention and willingness to collaborate to plan for disaster preparedness.

Table 1
Extent of Cross-Sectoral Organizations' Intention and Willingness to Collaborate to Plan for Disaster Preparedness

	Mean	Standard Deviation
Cross-Sectoral Organizations' Intention to Collaborate	5.2167	0.66722
Cross-Sectoral Organizations' Willingness to Collaborate	5.2650	0.66079

b) Analysis of the Default Structural Equation Model

The analysis of the data revealed a significant positive standardized path coefficient both between "*trust"* (as predictor variable) and *"organizations' intention to collaborate"* (0.465) ($p<0.001$; c.r.=5.221); and *"trust"* and *"willingness to collaborate"* (0.631) ($p<0.001$; c.r.=8.086). However, the results of the regression analysis revealed a significant inverse relationship between the *"number of collaboration experiences"* and *"trust"* (-0.358) ($p<0.001$; c.r.=-3.452) among the three exogenous variables (***See: Table 2)***. Moreover, the *"number of years the organizations exist"* and *"number of collaboration experiences"* are found to be significant covariates ($p<0.001$) to *"trust."*

Table 2
Regression Weights (Maximum Likelihood Estimates of variables presumed to have significant influence with *trust*, as observable predictor variable to *Organizations' Intention and Willingness to Collaborate*)

			Estimate	C.R.*	P**	Label
Trust	←	Number of Years the Organizations Exist	0.143	1.182	0.237	Not Significant
Trust	←	Type of Organization	-0.034	-0.295	0.768	Not Significant
Trust	←	Number of Collaboration Experiences	-0.358	-3.452	***	Significant
Cross-Sectoral Organizations' Intention to Collaborate	←	Trust	0.465	5.221	***	Significant
Cross-Sectoral Organizations' Willingness to Collaborate	←	Trust	0.631	8.086	***	Significant

*c.r.>1.96 (<-1.96); **p<0.05; ***p<0.001

Having obtained favorable results from simultaneous multiple regression and path analyses between *"trust"* and cross-sectoral organizations' *"intention,"* and *"willingness"* to collaborate, thus, *"trust"* was finally integrated to default structural model ***(See: Figure 1)***.

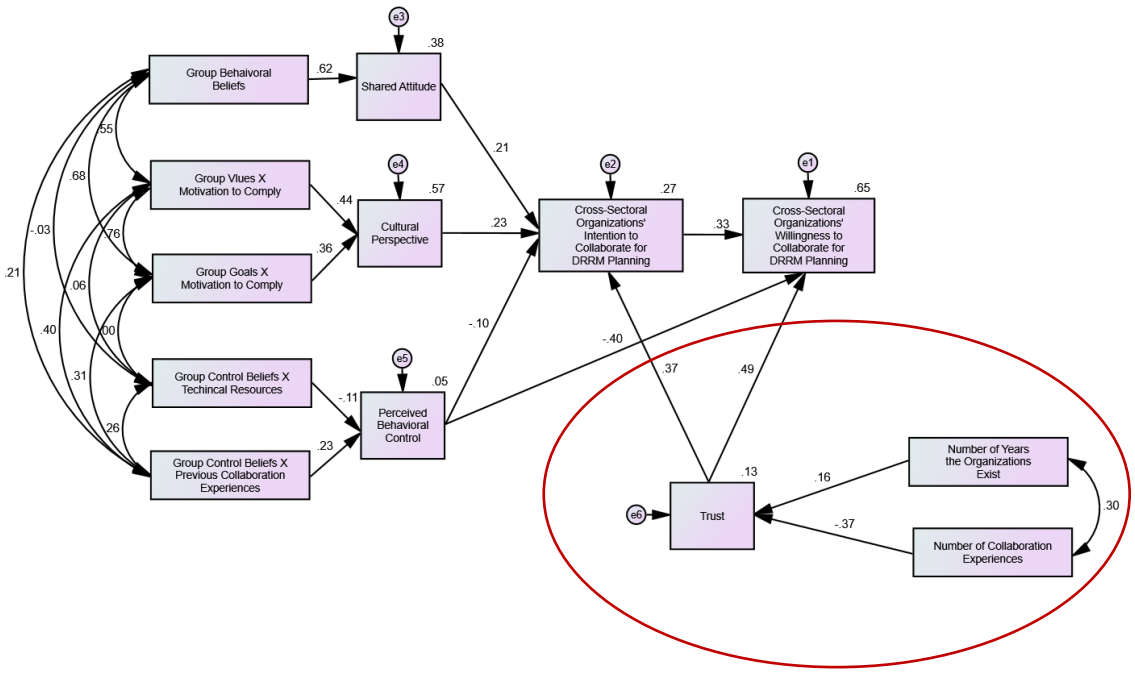

Figure 1. ***Overall Structural Model Path Coefficients (Integrating Trust)***

One of the many advantages of structural equation modeling compared to multiple regression is, the structural equation modeling's strategy of comparing alternative models to assess relative model-fit[5] makes it more robust where regression is highly susceptible to error of interpretation by misspecification (Maruyama, 1997). In this study, the analysis of the overall goodness-of-fit of the default structural model was done through four model-fit measures – Root Mean Square Error of Approximation (RMSEA), Normative Fit Index (NFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) using AMOS. The simultaneous multiple regression and path analyses, with direct and indirect predictors of cross-sectoral organizations' willingness to collaborate to plan for disaster preparedness default model, revealed a non-satisfactory overall over-all fit of the structural equation model ***(See: Table 3)***.

[5] Fit refers to the ability of a model to reproduce the data (usually the variance-covariance matrix). A good-fitting model is one that is reasonably consistent with the data and so does not necessarily require re-specification.

Table 3
Model-fit Measures Baseline Comparison (New Structural Model Integrating Trust)

Measures of Fit	Recommended Value	Value of the Structural Model	Label
RMSEA	≤0.07	0.198	Poor Fit
NFI	≥0.90	0.642	Poor Fit
TLI	≥0.90	0.531	Poor Fit
CFI	≥0.95	0.681	Poor Fit

6. Modified Structural Equation Model: Identifying Significant Predictors of Cross-Sectoral Organizations' Willingness to Collaborate

6.1 Model Modifications and Model-Fit Analysis

In structural equation modeling, when the structural equation model fails to satisfy the recommended fitness value of measures of fit, it has been a common practice to modify the model by using Wald statistics[6], and by looking at the Lagrange Multiplier Test indices *(AMOS uses the term modification index to assist in this process and analysis)*.

Lagrange Multiplier Test indices (or Modification Indices), which reported the values of the minimum amount that the chi-square statistic is expected to decrease if the corresponding parameter is freed, helped the researcher to conduct a sequence of model modifications. At each step, a parameter is freed that produces the largest improvement in the fit, and until the adequate model-fit is reached.

Simultaneous multiple regression and path analyses using AMOS revealed three insignificant path coefficients in this model – paths between *"perceived behavioral control"* and cross-sectoral organizations' *"intention to collaborate"* (p=0.230; c.r.=-1.199), *"control beliefs x technical resources"* and *"perceived behavioral control"* (p= 0.274; c.r.= -1.094), and *"years that organizations exist"* and *"trust"* (p= 0.096; c.r.=1.666). These paths in the model were deleted and subsequent paths were freed based on the AMOS' reported modification indices which were supported by theories in collaborative governance, network theories, coalition theories, and theories in socio-cultural psychology of the organizations. New paths were added based on the examination of modification indices.

Paths from *"control beliefs x previous partnership/collaboration experiences"* and *"group goals x motivation to comply"* to *"trust"* were added. Collaboration and network scholars support the addition of these paths. It is believed that prior partnerships or existing collaborations is important because through these collaborations and networks that partners judge the trustworthiness of other partners and the legitimacy of the key stakeholders (Bryson,

[6] Wald test is a way to find out if explanatory variables in a model are significant. "Significant" means that they add something to the model; parameters that are not significant in the model may be removed from the model to improve the fit.

Crosby and Stone, 2006). Also, several researchers have begun to recognize that, by definition, collaborative systems comprise individuals and organizations with both common and diverse goals (Huxham and Beech, 2003; Mizrahi and Rosenthal, 2001; Ospina and Saz-Carranza, 2005). Accordingly, trust holds individuals and groups to work together toward realizing a shared vision and attaining common goals. Trusted relationships collaborate to move groups forward positively to achieve major initiatives and goals for the best of all stakeholders. However, it is important to note also that as organizations make changes to their aspirations and realign their goals over time the underlying role of trust may change (Nielsen, 2004). The results demonstrate a significant positive path coefficient between *"control beliefs x previous partnership/collaboration experiences*" and *"trust"* ($p=0.001$; c.r.=3.273) and *"group goals x motivation to comply"* and *"trust"* ($p<0.001$; c.r.=3.877). The findings suggest that when the organizations' beliefs based on their, and their would-be co-collaborators' previous partnership/collaboration experiences, and their motivation to comply with their goals are increasingly positive, their trust to other organizations will also positively increase.

Since balanced representation is an indicator of diversity – not only in terms of the [would be] participants at the table, but also in terms of the ideas, beliefs, and perspectives relevant to collaboration, paths from *"cultural perspectives"* and *"shared attitude"* to *"perceived behavioral control"* were also drawn. Cultural perspective of the organization may positively or negatively affect their perceived behavioral control to willingly take part in collaborative undertaking. O'Leary and Bingham (2007) argued that conflicts are likely caused by structural or cultural differences among organizations. Different organizational cultures and perspective, conversely, can lead to conflicts. Even partners to collaboration arrived at full agreement on which direction counts as forward on each dimension, still there are chances where controversy will rise, particularly on how much weight to accord in different dimensions. Hence, with the presence of organizational boundaries, typically collaboration may be limited. But it does not always end there; these boundaries can also take forms that could accommodate the need of the organization to participate in some collaborative effort. Relaxation of a boundary can be a possible strategy for the organizations, represented by the board members, to identify common concerns and plan collaborative actions (Greenwald, 2008). The results show significant relationships in both paths – *"cultural perspectives"* and *"perceived behavioral control"* ($p<0.001$; c.r.=5.6710), and *"shared attitude"* and *"perceived behavioral control"* ($p=0.009$; c.r.=4.270). This suggests that cultural perspectives and shared attitude are significantly related to perceived behavioral control. These perspectives and shared attitude are maybe reflected in their organizations' constitution and by-laws or embedded in their respective organizational philosophies.

A path from *"control beliefs x previous partnership/collaboration experiences"* to *"cultural perspectives"* and *"willingness to collaborate"* were also added. This path is supported by Gazley's (2008) proposition that at the manager's level of bureaucratic discretion, institutional capacities, the nature of the joint effort, and past institutional relationships with a potential

partner will all contribute to the perspective of the organization towards collaboration. Studies by both Zhang (2003) and Faerman, McCaffrey, and Van Slyke (2001) also found that, in the long run, collaborative systems need to build the diversity of the collaboration to match the diversity of the constituents who are affected by the collaboration. Moreover, Henneman, Lee and Cohen (1995) advanced the prevailing idea that willingness to work collaboratively depends on several factors; one of those is experience in similar situations. The results of the regression analyses show significant relationships between *"control beliefs x previous partnership/collaboration experiences"* and *"cultural perspective"* ($p<0.001$; c.r.=3.932), and *"control beliefs x previous partnership/collaboration experiences"* and *"willingness to collaborate"* ($p=<0.001$; c.r.=4.385). This means that the beliefs of the organization based on their, and the would-be co-collaborators' previous partnership/collaboration experiences has significant positive effect to their cultural perspective towards collaboration and their willingness to collaborate.

Principled engagement occurs iteratively over time. It enables people with differing substantive, relational, and identity goals to collaborate across their respective institutional, jurisdictional, or sectoral boundaries to solve problems, resolve conflicts, or create value together (Cahn, 1994; Cupach and Canary, 1997; Lulofs and Cahn, 2000). Hence, the path between *"group goals x motivation to comply"* and cross-sectoral organizations' *"intention to collaborate"* was considered. Cross-boundary collaboration represents the predominant mode for conduct, decision making, and activity among autonomous participants who have come together to achieve some collective purpose defined by one or more target goals, thus, though AMOS does not suggest that the path may be freed between *"control beliefs x technical resources"* and cross-sectoral organizations' *"intention to collaborate,"* the researcher argues that the beliefs of the organizations on their capacity to collaborate affects their intension to do so. The results show a significant relationship between *"group goals x motivation to comply"* and *"intention to collaborate"* ($p<0.001$; c.r.=7.283), and *"control beliefs x technical resources"* and *"intention to collaborate"* ($p=0.006$; c.r.=2.733). The findings suggest that if the organizations have positive motivation to comply with their goals and maintain positive beliefs, whether they have or limited technical capacity to collaborate, they are more likely to have a positive intention to collaborate.

Lastly, a path between *"shared attitude"* and *"cultural perspectives"* was added. This is supported by the idea of Donahue and Zeckhauser (2011) that in collaborative public management, perhaps, the most fundamental condition for success in cross-sectoral undertakings is a reasonably close alignment of interest between the public at large and the private actors engaged in a collaborative enterprise. Also, they said, "collaboration has the best chance to flourish when all agree that it serves a worthy goal" (Donahue and Zeckhauser, 2011). This means that when cross-sectoral organizations share a positive attitude toward a specific collaborative effort, relaxation of a boundary may be a possible. The result of the data analysis shows a significant relationship between *"shared attitude"* and *"cultural perspectives"*

(p=0.009; c.r.=2.607). This suggests the positive shared attitude within the would-be partner organizations to a collaborative undertaking is significantly related to their cultural perspective.

Overall, the path analyses of the model modification in the structural equation model showed significant improvement. All the recommended values of model-fit measures used in this study were also satisfied. Table 4 shows the measures of model-fit and reported values.

Table 4
Model-fit Measures Baseline Comparison of the Modified Structural Equation Model

Measures of Fit	Recommended Value	Value of the Structural Model	Label
RMSEA	≤0.07	0.05	Good Fit
NFI	≥0.90	0.933	Good Fit
TLI	≥0.90	0.974	Good Fit
CFI	≥0.95	0.985	Good Fit

6.2 Predictors of Cross-Sectoral Organizations' Willingness (Unwillingness) to Collaborate

Simultaneous multiple regression and path analyses of exogenous and endogenous variables in the modified structural equation model for cross-sectoral organizations' willingness to collaborate to plan for disaster preparedness revealed that *"trust"* (p>0.001; c.r. 6.652), *"intention to collaborate"* (p=0.001; c.r.=3.229) and *"group control beliefs x previous partnership/collaboration experiences"* (p<0.001; c.r.=4.385) have significant relationship to *"willingness to collaborate,"* while *"perceived behavioral control"* has significant inverse relationship towards *"willingness to collaborate"* (p<0.001; c.r.=-7.537). Looking into these significant predictors of cross-sectoral organizations' willingness to collaborate, it can be observed that the standardized path coefficients between *"trust"* and *"willingness to collaborate"* (0.447), and *"group control beliefs x previous partnership/collaboration experiences"* and *"willingness to collaborate"* (0.306) are relatively higher than the standardized path coefficient between *"intention"* and *"willingness"* to collaborate (0.258). The results imply that, though the organizations' intention to collaboration is a good indicator, the trust they give, their and their would-be co-collaborators' previous partnership/collaboration experiences are considered strong indicators of willingness to collaborate, particularly in DRRM planning. However, it is equally important to note that the organizations' perceived behavioral control is a significant factor to also consider, if one would like to look into a possible indicator that would impede the willingness of the organization to collaborate. The standardized path coefficient between *"perceived behavioral control"* and *"willingness to collaborate"* is -0.460. This path indicates that though organizations are willing to collaborate with other sectoral organizations, national policies political, legal and social considerations, and their organizations' constitution

and by-laws are limiting and controlling their decision to take part in the collaboration. Moreover, it should be noted that the standardized path coefficient between *"perceived behavioral control"* and *"willingness to collaborate"* (-0.460) is stronger than the standardized path coefficient between *"trust"* and *"willingness to collaborate"* (0.447). Hence, while trust positively affects the organizations' willingness to collaborate, but if they think that the perceived behavioral control is stronger, these organizations cannot easily decide to take part in collaboration. Hence, its willingness to collaborate may be compromised.

Further analysis on trust of the organizations to other would-be collaborators indicated that *"group goals x motivation to comply"* ($p<0.001$; c.r.=3.877), and *"group control beliefs x previous collaboration experiences"* ($p=0.001$; c.r.=3.273) are significantly related to *"trust."* The results of the analysis also revealed, however, that the *"number of partnership/collaboration experience"* has significant inverse relationship to *"trust"* ($p=0.010$; c.r.=-2.570). This means that as their collaboration experiences increase, their trust to other [sectoral] organizations can be negatively affected. This may be attributed to the dynamics that they have observed and experienced with their previous collaborating partners. However, if organizations maintain higher goals and motivations to comply them, and have more positive previous collaboration experiences, still, they will give higher trust rating to would-be collaborating organizations coming from other sectors in a new collaborative undertaking, such as in DRRM planning. Hence, they will still be willing to collaborate.

Figure 2 shows the structural model for cross-sectoral organizations' willingness to collaborate.

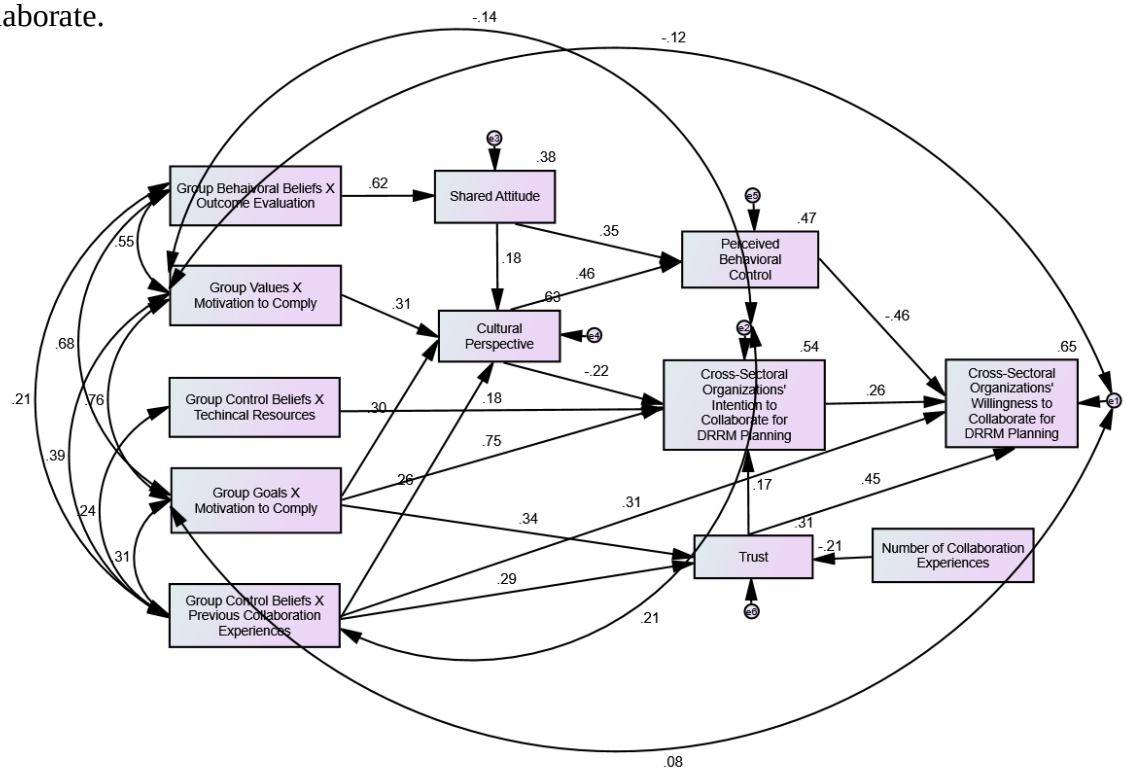

Figure 2. ***Overall Standardized Path Coefficients of the Modified Structural Equation Model***

7. Major Findings and Conclusions

Forging collaborations across sectors is a complex endeavor, especially those that carry ambitious projects. Collaboration, as a process, brings public and private stakeholders together in collective forums with public agencies to engage in consensus-oriented decision making (Ansell and Gash, 2007). Forrer, Kee and Boyer (2014) presented a set of rationales for why public, non-profit, and private sector managers might want to engage in cross-sector collaboration (CSC). These rationales are pragmatic, economic, and strategic. According to them, cross-sector collaborations occur for very pragmatic reasons – perhaps a public problem or service delivery issue that cannot be easily solved by one sector, so finding collaborators in another sector makes sense. At some point, sectors are better able to address certain problems or deliver certain services because that sector may have the skills, market know-how, capabilities, or contacts necessary to do so. Hence, another sound reason for CSC revolves around the concept of comparative advantage (economic reasons). Finally, since all sectors are increasingly trying to examine how CSC might address the long-term success of their organizations, thus, they are beginning to address this issue in a more strategic fashion (Forrer, Kee and Boyer, 2014:31).

In cross-sector collaboration, however, it is important to note that sectoral differences also impact the collaborative decision-making process. This affects the extent to which the organizations would involve and engage in collaboration. Hence, this study on willingness to collaborate is designed to deepen our understanding about the indicators of, or the factors we need to consider in forging cross-sector collaborations in order to reduce the possibilities of partnership and collaboration failure which often caused by deeply embedded frames (Yaziji and Doh, 2009), identity chasms (Brickson, 2007) and problems associated to free-riders that trigger clashes in their prior logics and expertise (Bryson, Crosby and Stone, 2006) and surfaces inherent fragilities and incompatibilities that eventually would direct the network to premature failure (Macdonald and Chrisp, 2005).

It is the aim of this study to understand the willingness to collaborate in the context of inter-organizational and intersectoral behavior, specifically in DRRM planning. The ultimate goal is to establish a structural model explaining the interactions of the indicators or constructs that lead to willingness (unwillingness) to collaborate of these sectoral organizations.

The results of the study suggest that structures built within the organization and other unique circumstances in the new public governance will negatively and positively influence the actions of decision-makers of these organizations and their motivations to collaborate. Generally, organizations across sectors are willing to collaborate in DRRM planning because they have more trust to the would-be partners in the collaboration; not because these organizations have been engaged to several forms of collaboration, but because they have more positive previous partnership/collaboration experiences. Also, organizations that are maintaining higher goals and

keeping greater motivation to comply them, will more likely be willing to collaborate with other sectoral organizations.

While relevant statutes primarily address questions of process from the individual agency or organization, they appear to be silent in terms of how to design the processes that allow organizations and institutions across sectors to collaborate meaningfully and well. Moreover, there are various models of collaboration; some national policies allow and encourage network governance through public-private partnerships, but others impede the willingness of these would-be collaborating organizations. Still, those policies encouraging cross-sectoral collaboration seems underutilized because of political and social considerations, and problems associated to transparency, accountability and efficiency that are always heard and read over the news headlines. The results of the study proved that these issues and factors have significant negative effect significant to organizations' willingness to collaborate.

Additionally, further analysis of the best-fit model revealed *that "group values x motivation to comply"* and *"group goals x motivation to comply*" are significant covariates to the residuals (or unaccounted data) of the *"intention to collaborate."* This means that though the structural model is a good-fitting model for cross-sectoral organizations' willingness to collaborate, particularly in DRRM planning, there is still enough data that could possibly explain that an *"x indicator or factor"* has a positive or negative effect to *"intention."* Hence, the author supports and recommends to explore what Gazley (2015) has proposed, that cross-sector collaboration scholars should incorporate the realms of cognitive, behavioral, and social network theory in their studies. The disciplines of psychology and sociology are likely to offer very useful frameworks for explaining how managerial attitudes about collaboration are defined both by personality and by direct or indirect experience (Gazley, 2015:50).

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