The enablers and barriers of inter-organisational collaboration in disaster management in Malaysia context

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ABSTRACT

Inter-organisational collaboration is often cited as a factor in effective emergency response to mitigate risks and impacts of extreme events, such as natural disasters (James, 2011; Power, 2017). However, collaboration during times of emergencies is problematic. Moreover, previous research have not paid much attention to the enablers and barriers of such collaborations in disaster settings. This research aims to investigate how barriers and enablers influence collaborative systems in disaster environments in Malaysia.

This study employs a qualitative methodology using a multiple-case study design. Malaysia National Disaster Management Agency was the focal organisation and focused on two floods in Malaysia. By interviewing thirty experienced participants in disaster, the findings detect salient enablers: proficiency of stakeholders in managing relationships, competent leaderships, and preparedness. Absence of these factors hinder collaboration in disaster. This research recommends to academic and practitioners on collaborative nuance to accomplish mutual goals between partners that neither could achieve individually.

KEYWORDS

Inter-organisational collaboration, barriers and enablers of collaboration, natural disaster, disaster management and collaboration processes.

INTRODUCTION

Little is known of how collaboration develops during complex emergencies such as when responding to natural disasters (Astley & Fombrun, 1983; Gray, 1989; Jing & Besharov, 2014). The diversity of membership, different organisational values, authorities and resources make inter-organisational collaboration a complicated endeavour. This qualitative research seeks to answer two primary questions. First, what promote collaboration in disasters? Second, what hinder collaboration in disasters?

INTER-ORGANISATIONAL COLLABORATION IN DISASTER SETTINGS

Collaboration is generally conceptualised as a voluntary activity with mutual benefits to participating entities to solve problems that are too difficult to solve by a single organisation alone (Agranoff & McGuire, 2003; Bardach, 1998). In this study, the operational definition of inter-organisational collaboration is interpreted as *two or more organisations engage actively in a constructive and interactive process towards mutual goals that neither could achieve individually.*

There is a growing awareness that collaboration is instrumental in preparing for, responding to and recovering from a disaster (Janssen, Lee, Bharosa, & Cresswell, 2010; Vakis, 2006), but managing inter-organisational relations is complicated (Cropper, Huxham, Ebers, & Smith Ring, 2009). Literature shows that collaboration is often examined from a theoretical lens of resource dependence (Pfeffer & Salancik, 2003), structural contingency theory (Donaldson, 2013), organisational learning (Aldrich & Ruef, 2006), inter-organisational networking (Biermann, 2008), or leadership and general management practices (Wondolleck & Yaffee, 2000). However, a systematic, academic inquiry into the emerging practice of inter-organisational collaboration in disaster management remains a critical gap in the literature.

An extreme event such as a disaster can trigger cross-sectoral, multi-stakeholder collaboration critically needed by National Disaster Management Organisations (NDMOs). However, the diverse roles, resources and authorities of other organisations (Kapucu, 2008), differences in organisational cultures, authority structures and systems in place (Bharosa, Lee, & Janssen, 2010; Mendonça, Jefferson, & Harrald, 2007), difficulty in coordination and information sharing (Bharosa et al., 2010; Huxham, 1996) and lack of common interoperability tools for effective communication (Daclin, Chen, & Vallespir, 2006; Federal Emergency Management Agency (FEMA), 2010) can hinder the development of inter-organisational collaboration during disruptive events. Thus, disaster management stakeholders find collaboration difficult to develop and maintain (Connelly, Zhang, & Faerman, 2008; Huxham, 1996).

METHODOLOGY

This research uses multiple-case study design (Yin, 2014), an emergent method (Charmaz, 2008; Creswell, 2013), to address the dynamics of inter-organisational collaboration in disaster by using Malaysia National Disaster Management Agency (NADMA) as the focal organisation. NADMA is the central coordinating agency for disaster management in Malaysia. It was established after government overhauled the national disaster management mechanism as a result of a failed official disaster response to a major flooding in December 2014 in the eastern states of Malaysia. NADMA participated in this research voluntarily as focal organisation. The units of analysis are the natural disasters experienced by NADMA and its collaborative partners. Researcher focused on two floods happened in December 2014 and January 2017, in Malaysia. Four decades ago, as a child, this researcher also experienced a flooding evacuation process. Therefore, the researcher conducts this research not as a stranger but as a someone who have experienced disaster first hand.

Participants

Natural disasters require a coordinated response among a triad of actors including government and non-government, established and less-established organisations, to help people in need after a disaster strikes. They are referred to as stakeholders. These include decision makers from the government sector (i.e., 10 participants from NADMA and members of NDMO), non-governmental sector (i.e., nine participants from major local- and foreign-linked non-governmental organisations (NGOs)), United Nations (UN) specialised agencies (i.e., three participants from World Food Programme and UN Humanitarian Response Depot), regional inter-governmental organisations (i.e., three participants from the Association of the Southeast Asian Nations (ASEAN) organisation), and six individuals affected by disaster. These five categories of stakeholders formed the participant groups for this study. However, it is acknowledged that other private organisations, philanthropic organisations, the communities of media, scientific and academic also play important roles in disaster management.

A total of 30 in-depth interviews were conducted with the abovementioned five categories of stakeholders in 2016-2017 in Malaysia and Indonesia. The sampling criteria included preferences of cross-sectoral representation (i.e.: governmental and NGOs), levels of hierarchy (i.e.: central and state-level governmental agencies), disaster management experience (i.e.: disaster aid givers and recipients), and the participants' societal role (i.e.: key strategic and operational decision makers in disaster management and ordinary populations affected by disasters). All participants had hands-on experience in responding to or dealing with disaster.

Data collection and analysis techniques

Semi-structured interviews are the primary method for data collection in this research. Other data were also collected from archival records, governmental and organisational documentation, and news records to supplement the case studies. Each interview took 60-90 minutes. Twenty-four (80%) of these interviews were conducted face-to-face while the remaining six (20%) through video-conferencing. Among them, twenty-four (80%) are Malaysians and six (20%) were foreign nationals. The interviews were conducted in multiple languages: English (70%), Malay (20%) and Chinese Mandarin (10%). The researcher is proficient in these three languages.

In using qualitative research methods, research analysis and data collection are a simultaneous and on-going cycle throughout the research process: the new concepts derived from the analysis become the basis for subsequent data collection (Corbin & Strauss, 2008). Therefore, reflection on memos is useful for subsequent data analysis and theory construction. Researcher employed grounded theory tools such as coding, memoing, constant comparisons and theoretical saturation to study "dynamic phenomena" (Charmaz, 2008, p. 155) prevalent in inter-organisational collaboration in emergencies. The data were organised, sorted and synthesised through qualitative coding and memo writing. Subsequently initial coding followed by focused coding are applied to analyse the data (Charmaz, 2008). Throughout this iterative process, emerging focused codes become explicit.

RESULTS TO DATE

Salient themes emerged intra- and inter-organisationally as a result of data analysis. The findings go beyond the typically perceived reasons where collaborating is mainly to meet specific contextual goals of the collaborative partners (Agranoff & McGuire, 2003; Bryson & Crosby, 2008; McGuire & Silvia, 2010) or driven by its perceived values as symbols of rationality, efficiency and social responsibilities (Bedwell et al., 2012).

The findings to date identifying three enablers promote collaboration. The absence of these three also inhibit collaboration in disaster. Among the prevalent enablers to collaboration, first, the competency of managing relationships amongst partners leads to collaboration. Such skills are crucial in multiplex relationships (Cooper & Shumate, 2012) particularly during disaster response, a complex phase with multiple stakeholders. In summary, a mismatched of investment in managing relationship with different actors resulted different outcome of collaboration as seen in disaster relief operation. However, managing inter-organisational relationships is complicated as evidenced by the different views between a NADMA senior official that *uniformed agencies are very hierarchical in structure...if you have good relationship with bosses, 80% of the job can be done* (male, 57), with that of a staff from an international NGO where it was asserted that *for [her], it is probably been the most difficult country ... to work with.... Overall, it is always a nice and good relationship when we meet with them, but when you are trying to move something forward [in] a more strategic way that...I think we face obstacles* (female, 38).

Second, competent leadership promotes inter-organisational collaboration in uncertainties. The findings reveal that the choice of leadership in managing disaster aftermath is contextual, and hence leading to different collaborative result. Command-and-control and consultative leadership approaches are interchangeably applied, and perceived as necessary. A participant with strategic background from an ASEAN organisation contended on the importance of pragmatic leadership in emergencies as follows:

> *an authoritarian leader give little chance for people to speak. Another one is very democratic. It depends, whether who can bring to finish line. Democratic leader if unable to reach finish line, that's not effective. Authoritarian leader, painful but it brings to finish line, it is effective* (male, 48)

Third, early preparedness or readiness facilitates and stimulates inter-organisational collaboration in disaster. The extent of coordinating and engaging partners, priorities of capacity building inform the understanding of partners about preparedness. Often the understanding is varied. Vast majority of the research participants agreed that preparedness is crucial for effective disaster relief response. An experienced NADMA operational official summarised his views as follows:

> *...because if you prepare the society or the people with adequate information ...they [will] know what to do before flooding or during earthquake, ... so if we educate more to our people, I think we can increase the response efforts that need to be done, ... it takes less effort for our responsibilities to rescue them. So, I think it's more important for collaboration to be done in the preparedness...*(male, 34).

Three salient barriers to collaboration were identified. First, ambiguous organisational roles obstruct collaboration and weaken the collective performance crucial for post-disaster relief operation. The inward-looking eccentricity common amongst public agencies further distanced other collaborative partners. Lacking organisational role clarity made coordination and collaboration difficult not only during normal routines but particularly in times of emergencies as evidenced by the observation of a senior official from NADMA as follows:

> *...[NADMA needs] to come up quickly, policy and SOPs, so we can have a clear path and understand what NADMA's role, and where it is leading to. This should be the first priority... after one year, we still like not having clarity of role. We have to work together, like NADMA have to do this and do that, but that's merely talking, you have to come in and contribute, right?* (male, 57)

Second, the perceptions of lacking a comprehensive organisational legitimacy and asymmetry perception on power and authorities amongst collaborative partners impede collaboration. Over time, collaborative partners were becoming more demanding in their expectation on NADMA to deliver result. However, deficient legitimacy does not warrant respect and efficiency as evidenced by the observation of a legal expert from a Malaysia-based international NGO.

> *there are a lot of different issues that play out because of the lack of a unified framework. ...lack of abilities [as] the national agency to direct focus on what is happening at the local level because they don't have the mandate telling them what to do ...without the ... [emergency] declaration, and legal framework.* (female, 38)

Third, different perceptions on trust hinder the forming of inter-organisational collaboration. The highest level of distrust was between the disaster aid givers and aid recipients. Trust-building is a time-consuming process at times shun by public agencies. Other collaborative partners also experienced different levels of trust between themselves. There were occasions where public agencies aid givers labelled disaster survivors as "*stubborn*" and "*ungrateful*". An example of lacking trust is evidenced as follows as the disaster aid recipient see the world.

> *...being fair in the disaster response and preparedness is critical. If the treatment is not fair among the people here, our community will lose the trust to each other, and to the government. I also think that the unconvincing requirements to receive post-disaster grants is unnecessary and need to be reviewed.* (male, 63)

By identifying three factors on quality relationships, competent leadership and early preparedness alone are insufficient to promote inter-organisational collaboration in disaster. Collaborative partners from different organisations need a common platform for effective information sharing and communication building on advanced information and communication technologies. Timely information sharing and devices interoperability are critical for effective disaster management. When asked about specific area that he will do differently in future disaster response, the participant from the NDMO emphasised on *information sharing and communication because there is still lacking of coordination between locals, state and the federal government* (male, 36). Another colleague from NDMO added that the current Incident Command Systems (ICS) used are subject to further improvement as the following evidence:

> *...depends on the understanding of respective agencies to follow the guidelines, directive...The challenges are [because it involved] so many departments in the ICS. If one single agency has ICS, they can follow it very good. But if there are so many agencies, they have different understanding of ICS, so that's the challenge.... We can learn from other countries, like ICS from USA.* (male, 38)

As a result, the outcome of the collaboration is uncertain as the overall system stability is influenced by forms and processes of a collaborative arrangement (Bryson, Crosby, & Stone, 2006; Sharfman, Gray, & Yan, 1991). Figure 1 illustrates the major enablers and barriers of inter-organisational collaboration in complex environments such as during a disaster response phase based on the findings to date.

CONCLUSION

This paper uncovers that three factors are particularly important to promote collaboration in disaster. The absence of these factors can hinder collaboration. First, capability to balancing investment in managing relationship among partners. Second, leadership and collaborative practice are contextual and constantly change. Third, the attitude of how collaborative partners viewed government organisations. Organisations are likely to learn over time who to collaborate with, when it should start and how to collaborate in emergencies to attain intended mutual goals. Typically, collaborative partners particularly the responsible public disaster administrators and practitioners expect advances of information and communication technologies to offer and support interoperable approach to effective disaster management. Despite all efforts, nonetheless, there are alarming and widening gap between theory and practice for inter-organisational collaboration in disaster environments.

This research hopes to contribute to policymakers, academics and practitioners to managing natural disasters effectively, strengthening the recovery of communities during disaster aftermath and alleviating the suffering of people. The research aim is to stimulate both future practice and research to advance theory development in inter-organisational collaboration in disaster management. An example of such future research is examining how NDMOs balance relationships if not competing with major local NGOs who are increasingly competent and sought-after in post-disaster relief actions.
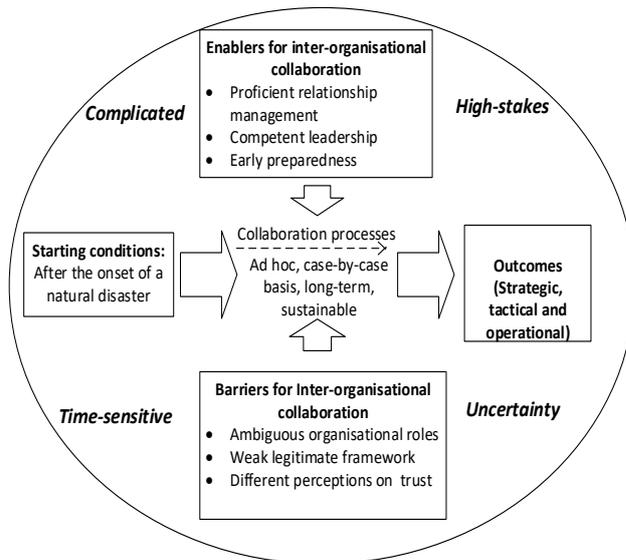
Figure 1: Enablers and Barriers of Inter-organisational Collaboration in Disaster Management

REFERENCES

Agranoff, R., & McGuire, M. (2003). *Collaborative public management: New strategies for local governments*. Washington: Georgetown University Press.

Aldrich, H., & Ruef, M. (2006). *Organizations evolving* (2nd ed.). Thousand Oaks, Calif.: Sage.

Astley, W. G., & Fombrun, C. J. (1983). Collective strategy: Social ecology of organizational environments. *Academy of Management. The Academy of Management Review (pre-1986), 8*(4), 576.

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

Bedwell, W. L., Wildman, J. L., DiazGranados, D., Salazar, M., Kramer, W. S., & Salas, E. (2012). Collaboration at work: An integrative multilevel conceptualization. *Human Resource Management Review, 22*(2), 128-145. doi:10.1016/j.hrmr.2011.11.007

Bharosa, N., Lee, J., & Janssen, M. (2010). Challenges and obstacles in sharing and coordinating information during multi-agency disaster response: Propositions from field exercises. *Information Systems Frontiers, 12*(1), 49-65.

Biermann, R. (2008). Towards a theory of inter-organizational networking: The Euro-Atlantic security institutions interacting. *The Review of International Organizations, 3*(2), 151-177.

Bryson, J. M., & Crosby, B. C. (2008). Failing into cross-sector collaboration successfully. In R. O'Leary & L. B. Bingham (Eds.), *Big ideas in collaborative public management* (pp. 55-78). New York: M.E. Sharpe.

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

Charmaz, K. (2008). Grounded theory as an emergent method. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of Emergent Methods* (pp. 155-172). New York: The Guilford Press.

Connelly, D., Zhang, J., & Faerman, S. (2008). The paradoxical nature of collaboration. In L. B. Bingham & R. O'Leary (Eds.), *Big ideas in collaborative public management* (pp. 17-35). New York: M.E. Sharpe.

Cooper, K., & Shumate, M. (2012). Interorganisational collaboration explored through the bone fide network perspective. *Management Communication Quarterly, 26*(4), 623-654.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles: Sage

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (Vol. 3). Los Angeles: Sage.

Cropper, S., Huxham, C., Ebers, M., & Smith Ring, P. (2009). *The Oxford handbook of inter-organizational relations*. New York: Oxford University Press.

Daclin, N., Chen, D., & Vallespir, B. (2006). Decisional interoperability: Concepts and formalisation. *IFIP International Federation for Information Processing, 224*, 297-304.

Donaldson, L. (2013). Structural contingency theory/information processing theory. Oxford: Oxford University Press.

Federal Emergency Management Agency (FEMA). (2010). Comprehensive Preparedness Guide (CPG) 101: Developing and maintaining emergency operations plans.   Retrieved from http://www.fema.gov/media-library-data/20130726-1828-25045-0014/cpg_101_comprehensive_preparedness_guide_developing_and_maintaining_emergency_operations_plans_2010.pdf

Gray, B. (1989). *Collaborating : Finding common ground for multiparty problems*. San Francisco: Jossey-Bass.

Hatton, T. (2015). *Collaborative approaches to the post-disaster recovery of organisations (Unpublished doctoral thesis).* University of Canterbury, Christchurch, New Zealand.

Huxham, C. (1996). *Creating collaborative advantage*. Thousand Oaks, CA: Sage

Huxham, C., & Vangen, S. (2005). *Managing to collaborate: The theory and practice of collaborative advantage*. New York: Routledge.

James, K. (2011). The organizational science of disaster/terrorism prevention and response: Theory-building toward the future of the field. *Journal of Organizational Behavior, 32*(7), 1013-1032.

Janssen, M., Lee, J., Bharosa, N., & Cresswell, A. (2010). Advances in multi-agency disaster management: Key elements in disaster research. *Information Systems Frontiers, 12*(1), 1-7. doi:10.1007/s10796-009-9176-x

Jing, Y., & Besharov, D. J. (2014). Collaboration among government, market, and society: Forging partnerships and encouraging competition. *Journal of Policy Analysis and Management, 33*(3), 835-842. doi:10.1002/pam.21772

Kapucu, N. (2008). Collaborative emergency management: Better community organising, better public preparedness and response. *Disasters, 32*(2), 239-262.

McGuire, M., & Silvia, C. (2010). The effect of problem severity, managerial and organizational capacity, and agency structure on intergovernmental collaboration: Evidence from local emergency management. *Public Administration Review, 70*(2), 279-288.

Mendonça, D., Jefferson, T., & Harrald, J. (2007). Collaborative adhocracies and mix-and-match technologies in emergency management. *Communications of the ACM, 50*, 44-49.

Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford, Calif: Stanford Business Books.

Power, N. (2017). Extreme teams: Towards a greater understanding of multi-agency teamwork during major emergencies and disasters. Retrieved from http://eprints.lancs.ac.uk/88335/1/POWER_AP_PRE_PRINT.pdf

Sharfman, M., Gray, B., & Yan, A. (1991). The context of interorganizational collaboration in the garment industry: An institutional perspective. *Journal of Applied Behavioral Science, 27*(2), 181-208.

Vakis, R. (2006). Complementing natural disasters management: The role of social protection. *The World Bank Social Protection Paper.* Retrieved from http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Social-Risk-Management-DP/0543.pdf

Wondolleck, J. M., & Yaffee, S. L. (2000). *Making collaboration work: Lessons from innovation in natural resource management*. Washington, D.C: Island Press.

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Los Angeles: Sage.