Toward A Comprehensive Destination Crisis Resilience Framework

Ignatius Cahyanto  
*Black Hills State University*

Lori Pennington-Gray  
*University of Florida*

Follow this and additional works at: [https://scholarworks.umass.edu/ttra](https://scholarworks.umass.edu/ttra)
Toward A Comprehensive Destination Crisis Resilience Framework

Introduction

Resilience is a concept with many different shades of meaning with many disciplines employing their own definition and matrixes (Klein et al., 2004; Folke, 2006; Brown and William, 2015). One common use is in the area of disaster risk management. To confront the increasingly devastating impacts of disasters, the use of the resilience approach is frequently suggested by multiple scholars as the best approach to respond to disasters (Aldunce et al., 2014). Nonetheless, due to the contested meaning of resilience, there is no agreed upon definition of it which has resulted in confusion for practitioners when practically applying it (Djalante and Thomalla, 2011).

The tourism industry is vulnerable to the impacts of major crises and disasters due to its system complexity (Ritchie, 2004; Mair and Ritchie, 2014). While the concept of resilience is widely used in other disciplines, the discussion on resilience in the tourism study is developing scarcely (Tyrell and Johnston, 2007). There is essentially no resilience framework that can be used to guide tourism destinations on how to respond to crises, understand the responses, and measure the level of resilience. Most discussions on tourism crisis and disasters end in the recovery and lessons learned throughout the crisis management (Jiang and Ritchie, 2017). In this regard, the major purpose of this paper, by drawing from multiple methods and models in the diverse literature, is to contribute to the debate on resilience by proposing a conceptual framework of destination resilience for developing indicators that tourism destinations can use to measure their crisis resilience for their tourism industry, for which very little empirical research exists. This framework is intended as a starting point for a wider discussion of factors that contribute to destination resilience and therefore provides the foundation to develop a toolkit of matrixes and approaches.

Literature Review

While there are multiple definitions of resilience, major variants of the resilience concept include 1) ecological resilience which focuses on the response of ecological systems to shocks 2) social ecological system resilience that analyzes responses of social-ecological systems to shocks and the foundation of the perspectives that social and ecological systems are related and 3) disaster resilience that examines responses of social structures and relationships to disasters and natural hazards (Aldunce et al., 2014). In this paper, we focus on crisis resilience and specifically on the response of social structures and relationships to crisis and hazards (Brown and Williams, 2015).

Over the past few years, the concept has gained more attention following the adoption of the United Nation’s Hyogo Framework for Action adopted by 168 countries at the UN World Conference on Disaster Reduction in 2005, which had the goal of “building resilience of nations and communities to disasters.” (United Nations International Strategy for Disaster Reduction (UN/ISDR), 2007). After early scholars such as Timmerman (1981) and Torry (1979) discussed resiliency in their respective papers, the term has evolved to include various approaches, coming from different disciplines, covering broader facets from social to biophysical sciences. Aldunce et al. (2014) in their research discussed the evolution of the definition of resilience within the disaster risk management field. Within the disaster risk management literature, one of the most common references to resilience relates to the capacity of a community to “bounce back,” cope, withstand, resist, and recover quickly from the impacts of hazards (Bruneau et al., 2003; Klein et al., 2003; Mileti, 1999; Timmerman, 1981). Two major ideas can be extracted from the evolution of the definition. The first concept is the speed at which a system bounces back and the bounce back...
itself. The second is adapting to the change, by emphasizing the ability of a system to recover from shock and utilize it as a stimulus for development and improvement or innovation (O’Brien et al., 2010; Paton, 2006). Another relevant point within resilience conceptualization is the ability to prepare in order to mitigate, prevent, and minimize losses, suffering and social disruption (Bruneau et al., 2003; Mileti, 1999). In turn, self-reliance as a means of maintaining resilience has often been discussed as another characteristic of being resilient and is interpreted as the ability to withstand crises without being dependent on external help (Mileti, 1999). Another aspect that emerged pertaining to resilience is self-organization, wherein systems or social groups have the ability to organize themselves when affected by a disaster (UN/ISDR, 2007). Likewise, other scholars also point out that redundancy and interdependence are critical factors for building resilience to disasters (Widavsky, 1991), which both relate to organizational behavior perspectives on resilience. Generally, there is no clear understanding and definition of the construct of resilience, despite the fact that it is gaining popularity within multiple disciplines including disaster literature (Manyena, 2006). Because a major issue related to resilience is the definition, scholars have long argued that researchers need resilience specification (Abramson et al., 2014). Similarly, Sudmeier et al. (2013), also noted that resilience needs to be clearly defined in its scope, context, and temporality according to a specific threat.

While the literature in disaster and emergency management emphasizes community resilience, nonetheless to comprehend community resilience, it is necessary to first understand resilience at the individual organization level because it forms the “backbone” for the functioning of resilient communities (Bruneau et al., 2003, p 736). Organization resilience is concomitant with the capability of the accountable organization to operate critical emergency functions to induce decision making and to take necessary action. It also allows communities to maintain normalcy during a major crisis and recover in a timely manner without excessive damage or loss. This is accomplished through the transmission of resources and shared information. Organization resilience depends on structures, processes, and practices that augment competencies and provide flexible capacity for organizations to manage sudden disruptions (Vogus and Sutcliffe, 2007). From an organizational behavior perspective, resilience has recently been defined as a process rather than an outcome and is characterized by four dimensions: 1) Robustness: The ability of the elements of the system to withstand crisis without significant deprivation or loss of performance; 2) Redundancy: The extent to which the system elements are substitutable and thus adept at satisfying functional requirements when disturbances occur and significant deprivation or loss of function transpires; 3) Resourcefulness: The ability to diagnose and prioritize deprivation and implement solutions by identifying and mobilizing material, monetary, informational, technological, and human resources; 4) Rapidity: The ability to mitigate losses and timely restore functionality to prevent future disruptions (Bruneau et al., 2003, p. 746; Andrew et al., 2013; Jung and Song, 2015; Tierney and Bruneau, 2007). According to Matzenberger (2013) the aforementioned dimensions can be viewed in the context of the relationship between vulnerability and adaptability; with robustness and redundancy as the main component of vulnerability and resourcefulness and rapidity being the main component of adaptability.

Within the sustainable development discipline, resilience is most germane to the Sustainable Livelihood Approach (SLA), which draws attention to people’s capabilities, assets and activities, as well as transforming structures and processes to achieve positive outcomes including higher income and increased well-being. SLA recognizes five assets in the building of resilience: human capital (ability to work, health and knowledge), social capital (networks, groups, and trust), natural capital (land, water, and wildlife), physical capital (transport, shelter, and energy), and financial
capital (savings, credit) (DFID, 2000; Obrist et al., 2010). SLA also provides a conception of “layers of resilience” from individual to community wide level resilience (Obrist et al., 2010).

Likewise, in tourism literature, resiliency is typically found in the discussion of tourism and sustainability. Tyrell and Johnston (2007) proposed a model to understand the interplay between sustainable tourism planning and the role of resilience, which they defined as the ability of social, economic, or ecological systems to recover from tourism-induced stress. It is noteworthy that while the discussion on the relationship between tourism and crises has gained interests in recent years, most tourism disaster models have focused more on managing crises and disasters through the traditional 4R (Reduction, Readiness, Response, and Recovery) stages (e.g. Faulkner, 2002; Ritchie, 2004). Nonetheless, elements of destination resilience can sometimes be found in the discussion on the recovery part of the 4R model of tourism crisis or disaster management (Ritchie, 2008, Maier and Ritchie, 2016). In depth discussions on tourism destination resilience within tourism literature however, are relatively nonexistent.

**Methodology**

An extensive review of literature in multiple disciplines including Sociology, Ecology, Disaster Management, Organization Behavior, as well as tourism pertaining to models of resilience and its associated definitions were conducted to formulate a destination resilience framework. The framework was derived chiefly from several contested models in multiple disciplines. These include the Sustainable Livelihood Approach (SLA) that provides a starting point on indicators of community resilience (DFID, 2000, Obrist et al., 2010); the conceptual framework of resilience activation (Abramson et al., 2014) that was recommended for measuring health outcomes following a disaster, as well as the integrative framework of organization resilience, a conceptual model to measure organization resilience developed by Kantur and Iseri-Say (2012). These conceptual models provide for the foundation and premise of our proposed destination resilience framework for tourism destinations.

**Results**

*The Contributing Factors*

We adopted the SLA as a building block for the destination resilience framework in Figure 1, in which we present five contributing factors that affect destination resilience: Economic Resources, Social and Political Resources, Natural and Physical Resources, and Visitor Resources. Visitor Resources was added to recognize the intricacy of the tourism industry. The first four factors reflect the supply side of tourism.

Economic Resources refers to a destination’s economic resources, which include budget allocations for DMOs, tourism revenue, access to markets as well as hotel KPIs (ADR, OP, and REVPAR). The economic resource element is needed to ensure that tourism destinations have sufficient funds and access to respond quickly to any negative events and therefore will affect whether or not their destination resilience is low or high. For instance, when the hotel KPIs are low, it might suggest that the destination is not resilient and thus when the destination only allocates a small budget for tourism, it may signal that the destination might not be resilient as without sufficient funds, it would take destinations longer to recover.

Social and Political Resources refers to the role of social and political structures within the destination which assist the destination in responding to crises effectively and includes but is not limited to tourism leadership, the role of government in the tourism industry as well as the available
assistance, political will, the existence of crisis/disaster management partnerships, early warning systems, and visitor evacuation plans. Having the aforesaid measures will lead to higher resilience. For instance, without sufficient support or political will from the government, it would be challenging for a destination to prepare, respond to, and recover from a major crisis. Likewise, DMOs need to have strong partnerships and collaboration with other organizations and entities that can be activated following a crisis (Jiang and Ritchie, 2017). Early warning systems are critical to notify both the public and visitors. Several tsunami prone destinations such as Indonesia and Thailand have a warning system to notify the public when a tsunami is probable (Djalante and Thomalla, 2011). The State of Florida has an early warning system in place for hurricanes due to the frequent nature of the storm seasons. Early warning systems will aid in minimizing potential losses following a crisis.

Human Resources focuses on the quality of human aspects including their knowledge as well as crisis experience, crisis awareness, and organizational skills. Knowledge and awareness of crisis/disaster measures are critical to mitigate and respond to crises appropriately. Likewise, people often use past crisis experience to respond to future crises (Cahyanto et al., 2014; Ritchie, 2008), as having associated knowledge and experience will aid the destination to more quickly respond and recover from a crisis. Similarly, having access to critical information regarding impending crises is critical for a destination to handle visitor’s needs (Miller, 2007). This can be achieved by building a stronger partnership with government emergency agencies.

Natural and Physical Resources refers to the quality of the infrastructure needed during crises (Sudmeier et al., 2013). This includes the quality of tourism assets and infrastructure, emergency water supply, communication devices, electricity, shelters, emergency health care, access roads, means of evacuation as well as structural hazard protection. Literature in disaster management indicates that the quality of infrastructure has a significant effect on the resilience of destinations (Fox-Lent et al., 2015). As many visitors travel with pets or without transportation and as such rely heavily on the destination’s capability to provide shelters that allow them to bring their pets or transportation to the shelters, having this resource in place would be critical in the event of a crisis.

The last factor, Visitor Resources, relates to the demand side of the tourism industry, which includes visitor confidence and perceptions. Having a positive destination brand and reputation aids in recovery following a crisis (Coaffee and Rogers, 2008). Often a major crisis leads to the need to rebrand the destination. Coaffee and Rogers (2008) note that the notions of embedded resilience increase the positive reputation of the locale while an external perception of an inability to respond (as so aptly demonstrated during Hurricane Katrina in New Orleans) can suggestively damage a city’s reputation (Gotham, 2007; Gabriel et al., 2014). As such resilience and safety and security have become a key tool in the arsenal of destination marketers as security and marketing and economic development have become necessarily intertwined.

The factors also portray the multiple layers of destination resilience from the local to national levels, such that depending on the level of a destination, municipality, state, or country; the aforesaid factors can be adjusted. Hence, the key indicators in each factor are by no means an exhaustive list.
Figure 1: Destination Resilience Contributing Factors

Framework of Destination Resilience

The next step in our process was to relate the contributing factors to destination resilience. Despite multiple attempts to operationalize the resilience construct, there is no widely recognized measurement scale on resilience. The review of literature on this construct nonetheless implies that organizational resilience has developed dimensions of resilience. Most discussions on resilience operationalize resilience in part from the organization behavior perspective. Because the purpose of the current study is to develop a better understanding of destination resilience as a concept with its contributing factors as its source and the outcome, four dimensions of organization resilience were adopted. The proposed Destination Resilience Framework provides a consequential relationship between the contributing factors and the resilience construct. The threat and hazard construct was added to the framework to recognize the context bound nature of resilience, that is a tourism destination may be resilient to one hazard but not to other hazards. As we envision that destination resilience is a process rather than an end goal or outcome, it is a desired state for destination evolability. In other words, the contributing factors lead to destination resilience, which in turn leads to outcomes that contribute to the evolability of the destination. The outcome of destination resilience is characterized by assertive momentum, turning adversity to advantage, agility, and increased destination innovation. Figure 2 presents our Destination Resilience Framework.
Discussion and Conclusion

This paper is an attempt to better understand destination crisis resilience and present a framework with factors that influence destination resilience as well as the intended outcome of destination resilience. The proposed destination resilience framework aims to provide a synthesis of the growing differing literature on resilience in multiple disciplines and to strengthen our comprehension of crisis destination resilience for richer theoretical and empirical understanding. The framework posits that the five contributing factors need to be strengthened in order to improve a destination’s resilience. While these factors individually influence the emergence of resilience in tourism destinations to various degrees, the combination of these factors will create destination resilience, which in turn will allow the tourism destination to evolve by adapting to changing conditions brought by a crisis, continue functioning and in many instances, generate renewal and innovation.

The next direction for the progress of the framework is the empirical measurement of the proposed framework, as well as to create a set of comprehensive indicators within each contributing factor that can be applied in multiple destinations to allow simulant comparisons. In addition, regarding the paucity of a consensus on the conceptualization and dimensions of the constructs of destination resilience, more qualitative research is needed for a deeper understanding of the concept. Qualitative research can be used to explore the different typologies of crisis resilience in various levels of tourism destinations and the different types of crises (human induced and nature induced). The aforesaid typologies will also result in multiple levels of emphasis of the consequences. While recovery and adaptation are major concerns of destination organizations, renewal and innovation may become a major concern during other times. To conclude, crisis destination resilience research warrants finer theoretical and empirical inquiries in order to enhance the understanding of the concepts and their relationship with appropriate constructs in the broader context of increasing the evolability of tourism destinations. This study offers the first step toward that end.
References


