



**REGIONAL
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Domestic and International Practices in Long-Term Economic Recovery

Literature Review

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Introduction

The Regional Australia Institute has commissioned Griffith University to undertake a series of studies on the economic recovery of rural Australian communities following a series of the most expensive and deadly natural disasters in Australia's history. The Victorian bushfires of 2009 and Queensland flood of 2011 together took the lives of over 200 people and caused in excess of US \$11 billion in damages (EM-DAT CRED).

While disasters in developing worlds are more deadly, disasters in the developed world are significantly more expensive as a result of the higher value of the personal and social infrastructure losses in the latter case (Ferris and Petz, 2012). Over the period 2001-2010, OECD countries incurred disasters damages of \$607bn (USD), whilst non-OECD countries experienced damages of \$371bn (USD). Although OECD countries incurred approximately 62% of the total financial damages over the period, of the estimated 1.15M deaths attributed to these disasters nearly 92% occurred in non-OECD countries (Ferris and Petz, 2012).

Case studies from developing countries are instructive regarding general principles and concepts of disaster response, community and individual behaviours and the recovery process. However, the specifics of disaster research from the developing world have limited relevance to Australia. Research and findings from these countries are contextually bound by factors such as weak or developing governance institutions, poor/absent infrastructure and communications, a broad lack of education and basic community services (Cavallo and Noy, 2010). Furthermore, in the absence of a strong state driving the disaster management process, the majority of actors engaged in the process of driving economic recovery are non-state actors such as humanitarian and aid agencies (Regnier et al., 2008). In this context, business recovery is considered livelihood recovery and focuses more on micro-finance and development to lift communities above subsistence poverty (Regnier et al., 2008).

This paper therefore focusses on research and findings from cases that have primarily occurred in developed countries such as the USA, New Zealand and the UK. Despite cultural differences between these countries, there is sufficient similarity in economic, social and institutional structures and conditions to enable the extrapolation and application of lessons learned there to the Australian context (Smart, 2012).

This paper reviews the national and international literature on post-disaster economic recovery, drawing out key themes of relevance to Australia. The concept of recovery is explored, identifying the broad streams within it as well as considering how recovery fits within an overarching paradigm of resilience. A review of the economic impacts of disasters is undertaken, before examining in detail the impacts of disasters on small businesses. This review looks at factors influencing business recovery following a disaster and explores the intricate interconnections between business recovery and community recovery. The problems with business disaster recovery assistance programs are discussed, highlighting unexpected findings regarding the utility of such assistance programs. The paper concludes by discussing the 'mirage' of recovery and the difficulties involved in achieving long-term, sustainable economic recovery after a disaster.

As disasters become more expensive, more severe and more frequent, understanding the drivers of community recovery will only become more important (Ferris and Petz, 2012). In an increasingly networked society, the intrinsic interconnection between community recovery and business recovery should not be underestimated. This paper explores that interconnection and develops concepts to more deeply embed the traditional streams of disaster recovery in a community resilience paradigm (Sherrieb et al., 2010, Norris et al., 2008).

Resilience and the Comprehensive Approach

The comprehensive approach, which advocates a holistic approach to disaster management, underpins the frameworks of Australia and numerous countries internationally (FEMA, 2006, EMA, 2004). Traditionally, the comprehensive approach comprised prevention, preparation, response and recovery (Cronstedt, 2002). In recent years there has been increasing emphasis on the importance of mitigation to reduce potential disaster impacts.

In the USA this is reflected by the incorporation of mitigation as a discrete phase within the framework (FEMA, 2006). In Australia mitigation is generally considered to be part of the preparation phase while in the UK the overall intent of the phases is developing community resilience (Cabinet Office, 2010, EMA, 2004). The New

Zealand government bases its framework on the 'Four Rs'. The first phase is termed 'reduction' and incorporates risk mitigation and prevention activities, with the remaining phases of readiness, response and recovery aligning with the comprehensive framework (New Zealand Government, 2006).

In recent years, the concept of resilience has gained currency in disaster management circles. Originating in ecology and psychology, resilience is both an outcome and the process by which actors, ranging from individuals, to families to communities, positively adapt to changing environments (Norris et al., 2008, Manyena, 2006). In the context of disaster management, the concept of resilience is particularly salient as a community's ability to firstly withstand a disaster shock and secondly rapidly adapt to its impacts will have long term consequences (COAG, 2011, EMA, 2011).

The concept of 'community' is defined quite broadly in this context (Boon et al., 2012). The ecological approach to the concept sees individuals as part of a network that constitutes its environment (Kaplan, 1999, Miles and Chang, 2011, Gallopín, 2006, Manyena, 2006). A resilient community is more than the sum of its parts, in the sense that a group of resilient individuals does not necessarily constitute a resilient community (Norris et al., 2008). Community resilience incorporates a diverse range of factors such as community/social capital, personal wellness and functioning, education and employment, economic diversity, infrastructure resilience, knowledge of risk and hard mitigation measures (Sherrieb et al., 2010, Rose, 2009, Cutter et al., 2008, Cutter et al., 2003).

Numerous resilience models show a disaster-impacted community experiencing a period of interruption followed by a progressive return to an equilibrium point (Cutter, 2009, Norris et al., 2008, Zhou et al., 2010). Positive adaptation in the face of a disaster shock incorporates individuals rapidly recovering their well-being post-disaster, as well as communities returning to a high, or higher, level of functioning. In achieving a high level of adapted functioning post-disaster, communities are able to develop greater resources to mitigate the impact of future disasters (Berkes and Ross, 2012, Zhou et al., 2010).

Recovery as a Concept

Recovery is variously defined as those activities which "assist a community affected by an emergency or disaster in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being." (EMA, 2004, p. 4) and "the co-ordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration of a community following a civil defence emergency" (New Zealand Government, 2006, p. 2). Within the recovery phase, there is a growing awareness of the role that asset and infrastructure betterment post-disaster can play in developing community resilience. Focusing on betterment post-disaster loops into the increased focus on mitigation pre-disaster in efforts to enhance community resilience (COAG, 2011, EMA, 2011).

Although definitions vary from agency and author, they generally identify common strands of recovery; social/community, physical/built environment, natural environment, and economic. The central challenge of disaster recovery is its complexity and inter-connectedness. No community exists in isolation and each aspect within community life is interconnected (EMA, 2011, Boon et al., 2012). Planning for the recovery of one aspect inherently impacts on others. This is particularly true of the relationship between business and community recovery (Regnier et al., 2008, Nigg, 1995, Zhang et al., 2009). As Corey and Deitch (2011, p. 169) note regarding business recovery post-Katrina "business survival is a vital part of community recovery...as businesses provide jobs, goods and services, and tax dollars".

A community recovering from a disaster will generally progress through a series of recovery stages, sometimes simultaneously and sometimes sequentially. Immediately following the disaster, the emergency response phase will start to transition to the recovery phase. This first stage in recovery is characterised by the provision of relief supplies, temporary housing and concerted efforts by authorities to restore basic lifeline utilities such as power, water and sewerage. Once essential services have been restored the emphasis will progressively shift to detailed damage assessments and reconstruction and beyond that into long term economic and social recovery (EMA, 2011, New Zealand Government, 2006).

The New Zealand recovery plan recognises that the recovery process covers an extended period, with differing emphasis in the short to long term. According to the New Zealand Civil Defence and Emergency Management Plan (2006, p. 128):

(5) The aim of immediate recovery activity is to restore as quickly as possible the quality of life of those affected so that they are able to continue functioning as part of the wider community.

(6) In the medium to long term the aim is to seek the regeneration of a community by addressing the economic, social, natural, and built environmental effects of an emergency. This may take a short time or many years, possibly decades.

The Christchurch Recovery Plan proposes a horizon of 10+ years (CERA, 2012). In recovering from the Kobe earthquake in 1995, the Japanese government established a ten year recovery plan (Kobe Government, 1995). 8 years after Hurricane Katrina, New Orleans continues to struggle to recover its pre-impact level of population and economic activity (Vigdor, 2008, Olshansky, 2007, Chamlee-Wright and Storr, 2010). When the recovery process is examined closely, it is clear that there is no linear progression from impact to full recovery. The process of community and business recovery is intricately linked, complex and long-term (Graham, 2007, Xiao and Van Zandt, 2012, Corey and Deitch, 2011).

Economic Impacts of Disasters

Economic impacts are generally categorised as either direct or indirect. Direct costs include damages to fixed assets and infrastructure as well as capital, inventories, stock, crops and materials in addition to injuries and fatalities (Cavallo and Noy, 2010). Indirect costs arise from the flow-on effects of direct damages that impair or interrupt the production, distribution and sale of goods and services. Indirect costs also account for 'work arounds' implemented to accommodate damaged production and distribution chains (Cavallo and Noy, 2010). A third category of intangible damages is also identified, although the costs in this category are particularly difficult to quantify. Intangible damages include the costs arising from the destruction of heritage, loss of visual and public amenity, loss of business confidence and quality of life and the ongoing psychological health impacts on disaster-affected communities (EMA, 2002, Hallegatte and Przulski, 2010).

Calculating the total costs of a disaster is an imprecise activity due to the difficulty in determining the extent of indirect costs (Handmer and Hillman, 2004, EMA, 2002, Hallegatte and Przulski, 2010). This is a boundary problem in the sense that the local impacted area is connected to the broader country's economy, so impacts to the local region will travel throughout the whole country's economy (Boon et al., 2012). The question of estimating the costs of a disaster then depends on at what level of analysis the costs are estimated; from local through to the national level. (Rose, 2009, Zhang et al., 2009). Some studies differentiate impacts on local, state and national economies as a means of highlighting this point, and giving due recognition to real negative impacts locally yet more limited (if any) impacts nationally.

Clearly identifying the scale and timeframe of measurement is important as, at a country level, there is research indicating that disasters do not negatively impact long-term economic growth (Cavallo et al., 2011, Hayashi, 2012). At a country level, "unless a natural disaster triggers a radical political revolution; it is unlikely to affect economic growth in the long run" (Cavallo and Noy, 2010, p. 19). Given the difficulty in estimating disaster costs, this finding is contested (Hallegatte and Przulski, 2010, Baade et al., 2007, Vigdor, 2008). As Xiao (2011) demonstrated regarding the 1993 US Midwest Flood, the overall economy of an impacted region may demonstrate long-run resiliency yet short-term negative impacts on local personal income are significant and there may be long-term impacts on certain local market sectors (see also Albala-Bertrand, 1993). Research conducted regarding the impacts of the Loma Prieta (California) earthquake on small businesses supports this conclusion (Kroll et al., 1991).

Research examining the economic impacts of a range of disasters, such as Hurricanes Katrina and Andrew as well as a series of earthquakes in the US, has identified consistent market trends in the immediate to medium term (Vigdor, 2008, Xiao, 2011, Xiao and Van Zandt, 2012, Dahlhamer and Tierney, 1998, Webb et al., 2002, Corey and Deitch, 2011). In the first 0-24 months after impact, the local construction industry benefits significantly from the disaster. Wholesale/retail and service industries in the immediate impact area generally experience a marked decline, while those in the surrounding areas may benefit after the event by the reduction in competition

(Corey and Deitch, 2011, Runyan, 2006). These findings also apply to the tourism sector. Within all these sectors, those that succeed despite the general sector downturn are businesses which re-open quickly and adapt their offerings to service the reconstruction boom (Runyan, 2006, Corey and Deitch, 2011).

Vigdor (2008, p. 136), assessing “whether the city [New Orleans] will come back”, considered the historic evidence of cities” recovering from disasters. He demonstrated that cities which did recover from disasters were those in a growth phase with inherent economic resilience (Vigdor, 2008). Vigdor (2008, p. 138) argues that disasters “may have little long-run impact in growing cities, but they fundamentally change the fate of declining cities”. Dahlhamer and Tierney (1998), in a study of the impacts of the US Northridge earthquake, reached a similar conclusion that disasters re-enforce existing trends in the local and/or regional economy (see also Zhang et al., 2009).

Disaster Impacts on Small Businesses

The impact of a disaster will disrupt businesses due to a range of variables including (Zhang et al., 2009, Kroll et al., 1991, De Mel et al., 2012, EMA, 2002, Haynes et al., 2011):

- Physical damage to property, stock and inventory loss;
- Loss of lifelines such as power, water, gas and sewerage;
- Destruction of infrastructure affecting supply chains and trading relationships;
- Dislocation of business owners and employees due to personal housing damage; and
- Dislocation of the local population due to housing damage.

The flow on effects arising from these impacts include a loss of employees, loss of market, increased costs due to repair/reconstruction, employee shortages and shortages in supply of goods (Runyan, 2006, Corey and Deitch, 2011, EMA, 2002). Combined with a market that has shrunk in size and buying power, the net effect can be a dramatic loss of cashflow combined with a simultaneous spike in expenses over an extended period of time (IEDC, 2010, Runyan, 2006, Corey and Deitch, 2011).

Unsurprisingly the extent of damage incurred by a business together with the duration of business interruption are strong indicators of the likelihood of recovery. The more quickly a business re-opens, the higher its chances of survival (Dahlhamer and Tierney, 1998, Corey and Deitch, 2011). Factors such as business age and pre-impact financial health have not been conclusively proven to affect survival, with some studies finding they are predictors of survival and others indicating the opposite. Businesses that own their premises have a higher likelihood of survival than those who lease, potentially due to their ability to drive the pace of repair and hence re-opening. Virtually all the research reviewed for this paper highlighted the impact of population displacement on business survival (Zhang et al., 2009, Xiao and Van Zandt, 2012, Corey and Deitch, 2011, Dahlhamer and Tierney, 1998, Webb et al., 2002, Webb et al., 2000). A study of the Loma Prieta (US) earthquake found that the survival of even relatively undamaged businesses was contingent on the degree of harm suffered in the residential areas around the business (Dahlhamer and Tierney, 1998).

The nexus between population displacement and business recovery was explored by Xiao and Van Zandt (2012) who used a spatial analysis to examine the interdependency of business return and population return post-Hurricane Ike in Galveston, Texas. The authors concluded that the return of businesses and housing was mutually dependent, with the return of businesses having a larger impact on the return of local residents than vice versa. This conclusion is graphically illustrated by Vigdor (2008) who estimates that 3 years after Hurricane Katrina, New Orleans had lost of approximately 200,000 people from the city. This represents a de-population of almost 50%. A population flight of this magnitude fundamentally changed the demographics of the remaining population and drastically reduced the economic activity of the city (Vigdor, 2008).

Studies into the effects of the Loma Prieta and Northridge Earthquakes, Hurricane Andrew and Ike have also concluded that the return of displaced populations is a key factor in the recovery of businesses (Xiao and Van Zandt, 2012, Dahlhamer and Tierney, 1998, Zhang et al., 2009, Webb et al., 2002). As Xiao and Van Zandt

(2012) identified, the return of businesses to an area acts as a pull factor to the return of local residents. The problem of population displacement and return and its link to business return post-disaster is a variant of the collective action dilemma in which every individual's choice is influenced by the choices of other individuals (Storr and Haeffele-Balch, 2012). In short, although the return of a business will spur the return of local residents, in the absence of a local population forming a viable market, a business owner is unlikely to return (IEDC, 2010).

Individuals' expectations about government intent and ability to effectively manage the disaster recovery will go a long way towards shaping their final decision to stay or go. Chamlee-Wright and Storr (2010) identified that of residents returning to the Lower 9th Ward in New Orleans, an area almost entirely destroyed, over 80% believed that the government had the capability to assist with recovery but were pessimistic about the likelihood of this occurring. Consequently they chose a return and lobby strategy. Those who were entirely pessimistic about the government's intent and capability generally chose not to return (Chamlee-Wright and Storr, 2010).

The collective action dilemma is also contingent on the duration of displacement. As Chamlee-Wright and Storr (2010) observed "As each day passed that residents were not allowed to return and that basic services were not restored, the expectations of evacuees waiting on the sidelines were more likely to become anchored around the idea that the community would not rebound, making the collective action problem all the more acute." p266. Just as displaced residents 'wait until they see others returning' (Storr and Haeffele-Balch, 2012, p. 296) so too do affected businesses wait to see the behaviour of their potential market before committing to re-open. As the IEDC (2010, p. 13) notes, following a disaster "business owners may be unsure whether to rebuild locally or move to a new community".

The Problems with Business Aid Packages

In circumstances where businesses have lost stock, face significant repair bills and have no cash flow for an extended period of time, businesses do not generally represent a sound investment for a bank. As the IEDC (2010, p. 8) notes, under these circumstances "the market is unwilling to invest with so many unknowns". Despite the willingness of small business owners to use every available source of funding, from credit cards to mortgage offsets to private loans, in the absence of market investment government assistance will be required (IEDC, 2010).

Although there is widespread agreement on the need for post-disaster assistance, various studies of US businesses receiving post-disaster aid found that this aid was, at best, statistically irrelevant to survival and recovery (Haynes et al., 2011, Webb et al., 2000, Dahlhamer and Tierney, 1998). There is some speculation amongst researchers that the negative correlation between the receipt of disaster aid and likelihood of recovery may be because businesses taking aid were more damaged and in a marginal financial position prior to the disaster (Dahlhamer and Tierney, 1998, Webb et al., 2002). It should be noted that this research largely originates from the US, and consequently reflects specific circumstances of dysfunction in governance arrangements. Nonetheless, the lessons from these disasters can be instructive in the Australian context.

- Post-disaster surveys have suggested that government aid was ineffective because of:
- Laborious application processes including excessive documentation requirements when premises destroyed and documentation lost (Lacho et al., 2006, Runyan, 2006);
- Stringent eligibility criteria (Nigg, 1995, Graham, 2007);
- Lack of capital/assets to serve as collateral for loans rendering businesses ineligible for assistance (IEDC, 2010);
- Delays in provision of financing (Dahlhamer and Tierney, 1998, Runyan, 2006); and
- Insufficient funding available to truly assist recovery (Nigg, 1995).

Furthermore, in circumstances where business owners face extensive repairs bills and ongoing interruptions to cash flow, many are reluctant to take on further debt (IEDC, 2010, Dahlhamer and Tierney, 1998). The structuring of the aid package itself, regardless of dollar value or application process, then becomes the reason why it is ineffective.

Driving Business Recovery

Business recovery is a critical aspect of overall community recovery. As previously highlighted, the key challenge faced by business post-disaster is lack of cash flow. Evidence suggests that a multi-pronged approach, incorporating well designed business aid packages, local engagement and leadership, is necessary to effectively drive effective business and community recovery.

Improving Business Aid Packages

The differing stages of recovery, from initial interruption/relief, to reconstruction to restoration all place different burdens on recovery businesses. Effectively structured business aid programs would ideally incorporate the following attributes:

- Quick turn around time from application to disbursement;
- Consistent eligibility criteria; and
- Quick and easily understood application process.

Beyond these program design aspects, consideration should be given to working with banks and finance institutions to develop aid packages that recognise the unique constraints of disaster impacts. Businesses regularly identify the need for assistance/information centres to enable them to access a single source of truth. This access to accurate information is deemed essential for owners to develop and enact recovery plans. One group of businesses suggested that governments engage with businesses through a case management approach, thereby providing accurate, relevant information to enable them to navigate their way through the recovery process (IEDC, 2010).

Providing businesses with confidence in financial processes, along with flexibility in repayment will assist the recovery process. Business recovery assistance that engages a case management approach and is tailored towards the changing needs across the stages of recovery may increase their utility, avoiding the too little, too late, too hard refrain (IEDC, 2010).

Leadership and Local Engagement

A community-led process is regularly identified as the core of recovery (FEMA, 2006, New Zealand Government, 2006, EMA, 2011). Findings from Hurricane Katrina, Queensland's 2011 Floods, Victoria's Bushfires 2009 and the Christchurch Earthquakes 2012 highlight that the process of community engagement needs to be supported by organisations with the institutional capacity to coordinate and lead the recovery (Chamlee-Wright and Storr, 2010, Smart, 2012).

Smart (2012) considered the role of played by government institutions leading the recovery in the Victorian Bushfires, Queensland Floods and Canterbury Earthquakes. Smart (2012) identified that in all three events, the institutional arrangements were effective in managing the response and recovery phases of the disasters. A key aspect of these arrangements was the appointment of a single agency to lead and coordinate government activities (Smart, 2012, Ferris and Petz, 2012). Smart's (2012) study contrasts with the experience of New Orleans where the roles of local, state and federal agencies were unclear and resulted in contradictory goals for the recovery of New Orleans (Storr and Haeffele-Balch, 2012). By way of example, at least 5 strategic recovery plans were developed for New Orleans, leading to extensive confusion amongst local residents and businesses (Storr and Haeffele-Balch, 2012).

Although in Australia and New Zealand this process has largely been led by government agencies, there is certainly no requirement that the organising centre of the recovery network be a government actor (Smart 2012, Storr and Haeffele-Balch 2012). Recent experiences in the US have demonstrated that non-government actors, whether Chambers of Commerce, neighbourhood associations or churches, can play an equally effective role in shepherding community recovery. Coyne and Lemke (2012) take a similar position arguing that private individuals leveraging social capital are better placed to drive disaster recovery. It should be noted that these

arguments are made in the context of the well-recognised failures of the government response to Hurricane Katrina (House of Representatives, 2006). However, they should not be discounted as it reflects another stream of research that argues that a community-led recovery process is the best method to facilitate effective social and economic recovery.

Storr and Haeffele-Balch (2012) observe that the commonly viewed solution to this problem is the provision of government aid and leadership to drive the recovery process and provide a circuit-breaker to the collective action dilemma. However, they note that government involvement should not be seen as a panacea, identifying the bureaucratic coordination flaws, planning oversights, poor communication and lack of social inclusion that undermined the post-Katrina recovery efforts (Storr and Haeffele-Balch, 2012).

In addition to the role that can be played by government in breaking the collective action dilemma, research by Chamlee-Wright and Storr (2010) suggests that communities with high levels of social capital are better placed to overcome this problem (Norris et al., 2008). The inter-connectedness of a community with high social capital enables greater information sharing that will therefore provide individuals with more information of other people's intentions from which they can shape their own decision making (Chamlee-Wright and Storr, 2010, Storr and Haeffele-Balch, 2012).

Regardless of the actor that assumes this responsibility, it is essential that this process brings the community together to develop a shared vision, clearly signals government intentions, and finally involves open and accurate communication. The collective action problem that impedes the recovery process, both for individual households as well as businesses, can be best overcome by the provision of accurate information and developing a shared community vision of what the future looks like (Norris et al., 2008, Chamlee-Wright and Storr, 2010, Storr and Haeffele-Balch, 2012).

Thing Theory and the Recovery Mirage

Following the disaster relief stage, attention generally turns to reconstruction as part of the recovery process. In addition to restoring housing, rebuilding infrastructure is undertaken to provide the basis for functioning business and to spur economic activity in an affected area (Regnier et al., 2008). 'Thing theory', where economic development is presumed to flow from possessing or building things, is most frequently seen in practice in developing countries (Jacobs, 2000). Massive amounts of aid money are funnelled into reconstruction projects following disasters, only to have that money go to companies outside the disaster area (Handmer and Hillman, 2004, Rietveld et al., 2001.). The Boxing Day Tsunami is cited as a classic case of high profile assets being rebuilt without materially improving the economic situation of local residents (Handmer and Dovers, 2007).

The focus on building 'things' tends to drive a significant influx of construction workers to the affected region (Vigdor, 2008). The reconstruction boom often distorts measures of a region's economic performance and obscures the long-term challenges faced in achieving sustained economic recovery (Vigdor, 2008, Hayashi, 2012). Hayashi (2012, p. 190) noted this trend in relation to the 1995 Kobe earthquake recovery, observing Kobe's "economy slid into a long decline, except for the short period during which reconstruction spending provided a temporary boost". New Orleans demonstrated the same pattern, with the construction sector being the only industry sector that did not suffer employment losses after Hurricane Katrina (Vigdor, 2008). The boom of local economic activity driven by reconstruction is frequently a mirage that masks a longer-term decrease in population and broader business performance issues (see Vigdor, 2008, Hayashi, 2012). It should be recognised however that pre-disaster trajectory of a region's economy will powerfully shape the effectiveness of post-disaster recovery efforts. If the affected economy was on a downward trajectory and marginally viable long term then this trend will be difficult to reverse in the short-term disaster recovery phase (Vigdor, 2008, Hayashi, 2012).

Conclusion

Business recovery post-disaster is a complex field of activity nested within an interconnected, interacting network. An extensive body of literature highlights the critical interconnection between business recovery and overall community recovery, yet simultaneously identifies the lack of effective business recovery programs. As Haynes et al. (2011, p. 86) observed “disaster assistance helps individuals recover, but not businesses”. When an individual is inextricably linked to their community and therefore their local economic environment, the failure of business recovery efforts undermines recovery across the board. Traditional perspectives, whilst recognising that recovery ‘streams’ are connected, has failed to appreciate the deeply networked context of community recovery. The research showcased in this review presents a compelling argument to comprehensively review business recovery programs and seek new ways to develop community resilience that explicitly recognises the critical role of businesses in community well-being. Examining the challenges from a network perspective, and engaging businesses in the process, will provide an opportunity to develop programs that address the complex issues faced by businesses in the post-disaster recovery process.

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