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‘Developing a Regional Resilience Monitor’*

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Developing a Regional Resilience Monitor (RRM)

Introduction

The term ‘resilience’ is much contested and recent writings confirm its ambiguous status. It has been described as ‘a new buzzword’ (Martin and Sunley, 2014); a ‘new catchword’ (Müller, 2010); it remains an ‘ambiguous, or fuzzy, concept’ (Cowell, 2013). Finally, “Superficially, ‘resilience’ is an undoubtedly agreeable ‘motherhood and apple-pie’ notion (White and O’Hare, 2014: 1). Despite definitional challenges, its provenance is agreed upon, particularly amongst those scholars who focus upon economic resilience. It is generally accepted that there are three different approaches to resilience reflecting different disciplinary groundings. Thus, Martin (2012) distinguishes between engineering resilience, ecological resilience and adaptive resilience. The first refers to the ability of a material, or a system, to return to equilibrium after a disturbance. The second refers to the ability of a system to transform itself to a new equilibrium following a disturbance. The third refers to an adaptive system that changes and has the capacity to respond to future shocks. From this perspective the system ‘bounces forward’ rather than ‘bounces back’.

Resilience has been identified as a response to key events such as floods, climate change or bushfires (Pooley et al, 2010); as the capacity of individuals and communities (Buckle et al, 2001); and as the quality of a nation (Conservative Party, UK 2010). Thus, our general definition is:

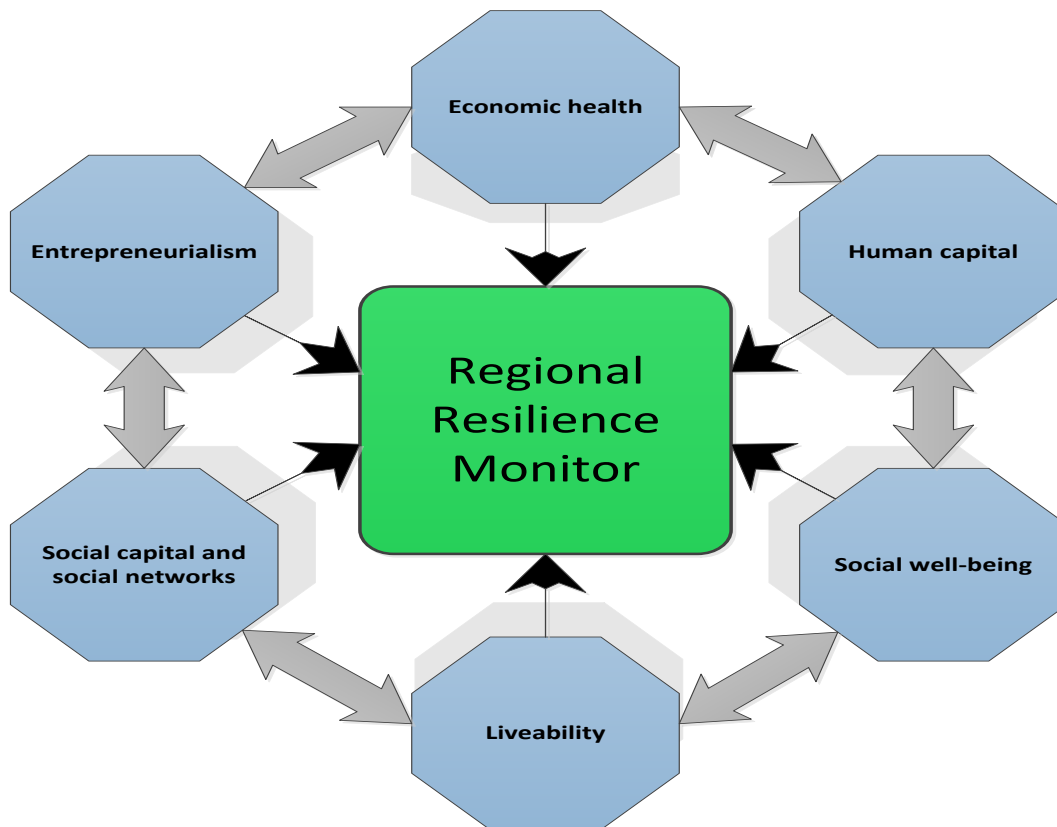
Resilience is the capacity of a community to respond to, and anticipate, economic, social and environmental change and to adapt, plan, and transform itself, for the future.

Resilience, then, is more than simply recovering from a shock or crisis. Communities are dynamic entities, encountering and responding to a range of changes. Therefore resilience needs to be considered in terms of the capacity a community has to anticipate and plan for the future, taking into account how such plans can involve intentional and transformative actions to influence what sort of change takes place (Edwards and Wiseman, 2010).

The Regional Resilience Monitor (RRM)

Recent research points to the significance of a number of factors in the resilience of a community in facing challenges including economic, social, human and environmental and recognises the importance of the strength, nature of, and commitment to, community relations. It will thus depend upon various forms of capital, including human and social (Hunt et al, 2013); the attitudes and beliefs of community members (Hegney et al 2008); health and well-being (Morton and Edwards, 2012); economic development (Sherrieb et al, 2010); community resources (Maguire and Cartwright, 2008); strong networks (Lee and Lee, 2010); and entrepreneurial activity (Williams and Vorley, 2014). Thus, approaches to resilience need to be addressed through interdisciplinary frameworks (Wilkinson et al 2010). This is the holistic approach we adopt and is illustrated in Figure 1;

Figure 1: The Elements of the Regional Resilience Monitor



The Elements and their measurement

Given the lack of agreement in meaning, it would appear problematic to measure the level or extent of resilience. Indeed ‘Clear concepts to operationalize resilience for city and regional developments are...rare’ (Müller, 2010: 6). Similarly, it is argued that there is no single approach to measuring the ‘anatomy’ of regional resilience (Martin and Sunley, 2014). We contend that the individual elements of our RRM can be measured.

Economic health

Economic health is concerned with the extent, and type of, economic activity within a given location. This is made up of different factors including the level of economic resources, the degree of equality in the distribution of resources and the scale of diversity in economic resources. It can be measured by, for example, employment levels, employment diversity, housing values, number and diversity of businesses, income levels and so on. It is considered that the more diverse the economy, and the higher the levels of employment the more resilient the region is likely to be.

Human capital

Human capital refers to the knowledge, skills, competencies and attributes possessed by individuals that facilitate the creation of social and economic well-being. It is linked to the health of the population and underpins the wider community. Thus the more diverse the skill

sets of the workforce, the greater the influx of new skills, the higher levels of education and health are all likely to lead to a more resilient community. It can be measured by education attainment, acquisition and possession of skills, health, language skills and so on.

Social well-being

Community health and well-being contribute to overall well-being and is not determined by income or wealth alone. It can be measured through, for example, the quality of life index, which links subjective notions of life satisfaction with more quantitative data such as average wage, education and life expectancy. It is also dependent upon the quality of health care provided, the extent of drug and alcohol consumption and the level of criminal activity.

Liveability

Liveability is the ease of access to organisations and facilities within a given location accounting for physical/spatial links or networks and the quality of the physical environment. It can be measured by levels of internet access, work-life balances, air quality, and distance to work.

Social capital and networks

Social capital involves the relationships that connect and create meaningful exchanges that form social ties. It facilitates the sharing of information and supports collective action and decision-making. Individuals form groups and are involved in organisations that may strengthen community bonds. Social network analysis is a method that can be used to measure the relationships between groups within a community.

Entrepreneurialism

Entrepreneurialism indicates the level of optimism in a region concerning new business opportunities, encourages a more diverse economic base and is closely linked to innovation. It involves the activities, attitudes and aspiration of the individual entrepreneur (see Global Entrepreneurship Monitor at <http://www.gemconsortium.org/>). Each of these can be measured in different ways. Also of consideration is the climate for entrepreneurial activity eg the extent to which there is government, financial cultural and social support.

Methodology

The development of the RRM focused on the community health and economic performance of Baw Baw, Latrobe City and Wellington Shire councils in the Gippsland region. Given the difficulty of coming up with an absolute measure of resilience we compared our three councils with the Gippsland region average, the Victoria regional average and the state average as a whole. We identified, through literature review and research team consensus, indicators for each of our elements. Thus, six dimensions of Economic Health were measured by eight proxies. Ten dimensions of Human Capital were measured by fourteen proxies.

Thirteen dimensions of social well-being were measured by twenty-nine proxies. Fourteen dimensions of Liveability were measured by twenty-one proxies. Two dimensions of Entrepreneurialism were measured by six proxies from existing data and two dimensions were measured using a newly-developed survey. Seven dimensions of the social capital element were measured by eleven proxies and two dimensions were measured by a newly developed social network analysis. Indicator data were aggregated by selection location for each index, standardised and compared to a selected benchmark represented by a mean value.

Where available we utilised existing data from, for example, Australian Bureau of Statistics, Department of Health and Victoria Police. Where data did not exist eg on entrepreneurial aspirations or social networks, we piloted surveys and a social network analysis to provide additional data.

Conclusion

The Regional Resilience Monitor is a new tool made up of six interlocking elements to measure, comparatively, resilience in regional Australia. Resilience is a dynamic concept and can be measured over time, thus indicating movements in performance. Each element can be given equal weighting or weighted according to their importance as determined by key stakeholders' (local authority, community groups, local leaders etc).

The RRM relies on a mix of existing data and newly generated data. The former is available for different time periods so care needs to be taken in using these data. Newly generated data can be gathered and this will depend upon the extent of the comparisons that are to be made i.e. in our research across Latrobe Valley, the Gippsland region or regional Victoria as a whole.

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