



Analysing the role of Superfast Broadband in enhancing rural community resilience

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Abstract – Superfast broadband services (Internet connections with headline download speeds of at least thirty megabits per second) are becoming a constant presence in marketing and government literature, which often detail the beneficial impacts on individuals’ social and leisure activities, employment options, and overall community well being. This paper presents findings from a multi-phase project examining community-led superfast broadband initiatives in the United Kingdom. It includes methods of analysis of communities prior to obtaining superfast services as well as following a period of connectivity. The framework for assessing effects on rural community resilience of both the superfast broadband adoption, and the presence of community participation in its physical development, is outlined with early indications given. Finally, this paper postulates several transformative facets of digital connectivity and community-based broadband organisations.

INTRODUCTION

Rural communities are highly susceptible to socio-economic and environmental shifts due to factors such as single-industry economies, dispersed populations, limited public service provision, and physical distance to governance institutions. In a global society constantly in flux, this begs the question of what can be done to encourage rural community resilience, or their ability to adapt, develop personal and collective capacities, and thrive into the future. Some studies have examined enhancing local institutions and boosting economic linkages, however this represents a small area of research. In an increasingly digitally focused society, it is important to analyse the potential for superfast broadband to enhance rural community resilience.

This study is being conducted to reveal the relationship between digital connectivity and rural community resilience, seen as the ability of a community to adapt to change (Magis, 2010). Through utilising two phases in the study, pre- and post-connectivity, we are able to analyse exactly what influence digital connectivity has on rural communities; a spatial scale increasingly recognised as crucial to understanding pathways of change (Wilson, 2012).

METHODS

This paper presents findings from the pre-connectivity phase of the broader study and draws links between expectations of Internet use and its overall impact on rural community resilience. The study utilises two rural community-based superfast broadband initiatives in the UK: Broadband for the Rural North (B4RN), and Broadband for Glencaple and Lowther (B4GAL). The project is conducting the two phases of interviews for a longitudinal approach, which aims to reflect the process of resilience. The pre- and post-connectivity phases target two perspectives, the user perspective and the governance or organizational perspective. Within the user perspective, we also allow for business and personal use discussion as well as various adopter types (from keen early adopters to non-adopters of the technology).

The interview data was thematically coded, utilising 4 pre-determined themes for initial analysis and following a grounded approach to identify any sub-themes in the data. The results presented here depict findings from the four broad themes with links to resilience in the pre-connectivity phase.

This research has enabled the development of an analytical framework for assessing resilience within community-based organisations. It depicts the cycle of resilience development through community-based initiative set up and incentivisation, community and external engagement, diffusion of outcomes and thematic impacts. Qualitative research, conducted across the phases of organisation and technology development with key stakeholders as well as technology users provides the most robust understanding of resilience development in this context. This framework of resilience identification within community-based initiatives will continue to be developed throughout the remainder of the study.

RESULTS

Technology Engagement

Internet connectivity in general is considered a pervasive force in modern society and economy. Several strands of enquiry were held, investigating the influence of Internet to employment, personal life, trust and knowledge of technology. With respect to current use, rural users were plagued with slow speeds, unreliable connection and an inability to have multiple users online. Future use of superfast was embedded in being more efficient online, rather than accessing untried web-based technologies. This identifies with a stream of resilience into acting strategically and developing individual resources through online activities. Individual scale resource development is thus present through Internet use. Additional steps, however, need to be taken to as-

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certain whether individual capacities developed through these actions contribute to community level resilience at some stage.

Rural Life

Living and working rurally was a key discussion and several facets of the conversation are relevant here. It was highlighted through the pre-connectivity data that remaining in this loop of inadequate provision in comparison to the growth of urban centres is unacceptable and will quickly lead to the deterioration of rural society. An interesting concept also emerged identifying the Internet as primarily desired for connecting to wider economy and society, not for connections in the rural villages themselves. This allows us to query what resilience can be attributed to superfast Internet at the community scale and the individual scale.

Community Well-being

Most participants were satisfied with their communities' strength and well-being, and felt involved and responsible for the future sustainability of the village. It was identified that when an occasion or crisis arose, the community would band together, creating *issue-based action*. This is linked closely with the dominant discourse of resilience, whereby resilience is the capacity for a community to reorganise following a disturbance and retain similar function and identity (Folke, 2006). This was linked closely with the formation of a broadband specific group to address the challenge of ensuring community resilience.

Interestingly, the research does not highlight the creation of any proactive capacities through the organisation development process, but links to the accessing of redundant resources on a needs basis, which is a crucial element of resilience in a social context (Magis, 2010).

Community-led Broadband Organisation

The development of community-led broadband initiatives created a community of interest, whereby the broadband issue united people across disparate villages and countryside locations. The localised, village-level, community of place, was still evident and a sense of pride in community contributed to involvement levels. There was an added level of confidence in the Internet network since those building it were in geographic proximity to the user. This relates to the ability to access community resources; more confidence in them will increase their proliferation, engagement and potential development.

CONCLUSION

It is clear that the inclusion of superfast broadband technology is perceptibly influential to individual and community resilience in different ways. Technology is embedded in how people live and work and access to high speeds can better enable communication with modern society outside the auspices of the community of place. Community satisfaction was high in rural areas, however it was recognised that

the importance of Internet connectivity was invading that satisfaction. The structural element of community-based broadband development increased confidence in network development and was a source of personal and collective involvement.

This research identifies the links between telecommunications and community resilience. This ultimately provides support for policy guidance on digital infrastructure development. The broad study will provide key benefits to the following research areas: developing the research on resilience theory in a social context and providing an understanding of the actual influence of digital connectivity on rural community resilience.

FUTURE WORK

There are several key areas for future research. Firstly, this paper presents findings from the first phase of a multi-phase project. It is now crucial to conduct post connectivity research to fully comprehend the uses of Internet technology and how that relates to the resilience of individuals and communities. Secondly, we cannot state in a quantitative way what resilience can be attributed to digital connectivity. This is a purely qualitative study and we aim to provide a snapshot of the processes and potential relationships between resilience and digital connectivity. This data does not say conclusively that relationships are felt uniformly across rural communities. This work can be utilised to develop a quantitative model, building on existing quantitative work in resilience such as Skerratt and Steiner (2013). A higher level analysis into methods of internet development is needed to note if any impacts felt from this process of community-led initiatives are transferable to other methods such as large scale commercial roll-out.

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