



Understanding the context of rural community enterprise for the design of digital tools

Stela Valchovska, Alan Chamberlain and Andy Crabtree¹

Abstract – This study draws upon research that reports on an inadequate uptake of digital technologies by businesses in remote rural areas of the UK. It recognises the specific context of rural communities and associated rural businesses that are at a disadvantage because of the limited economic opportunities and infrastructure, commonplace in such settings. The study is grounded in the current literature relating to rural entrepreneurship. In addition, it utilises a framework for understanding community-based enterprises in less developed nations of the world as a method by which to examine analogous phenomena in rural Britain. This interdisciplinary work provides a detailed understanding of the agency and cooperation of rural community enterprises in relation to local citizens and small businesses. It is used to facilitate the design and introduction of digital tools (Internet-based applications, computer-based applications, and mobile-based applications) that contribute to both the viability and vitality of rural businesses. Preliminary results suggest that the enablers and constraints related to the use of digital technologies can be attributed to the rural context on the one hand, and to the operational and organisational characteristics of rural businesses on the other. Furthermore, specific business organisations, like community-based enterprises, play key role in local development and change and thus represent an important contextual feature in a strategy for digital technology design and development.

INTRODUCTION

The underdevelopment of infrastructure is a persistent disadvantage in rural Britain that has been observed in relation to the outreach and use of digital technologies (Mid Wales Partnership, 2007). More recent studies have also found a lower uptake of digital technologies by small businesses, as well as an increasing adoption for entertainment uses (CDW, 2009; Ofcom, 2010). Furthermore, previous works point to the potential of digital technologies to enhance small business performance and viability (for example, Parker and Castleman, 2007). However, research focusing on the way to achieve this from a business perspective has been scarce. Thus the focus of this research is to identify and discuss the key organisational and contextual characteristics of rural enterprises that can be used in order to inform the development and deployment of digital tools for small businesses in a rural context. This paper is part of the larger *Scaling the Rural enter-*

prise research project which takes a user-led participatory approach to technology design.

METHODOLOGY

Ethnographic and ethnomethodologically-informed design (Crabtree *et al.*, 2012) approaches were employed in order to carry out the empirical investigation (Chamberlain *et al.*, 2012). We focused on the community of a market town in rural Wales where multiple interviews were conducted with local community enterprise initiators, small business owners, local government and other associated stakeholders (see Chamberlain *et al.*, 2013 for a fuller appreciation of applying and adapting different approaches in this context). As well as the local produce market examined by Chamberlain *et al.* (2012), a community-based enterprise emerged as a key organisation with an important social and economic role for both citizens and small businesses in the community. Data relating to agency and cooperation were collected to examine the process of enterprise start-up and operation. They were analysed through interpretivist techniques (Leitch *et al.*, 2010). Links, relationships and interactions between rural community members, small businesses and local community enterprises were analysed to further explicate the appropriate areas for technical intervention and design.

RESULTS

The framework for the analysis and understanding of community-based enterprises (Peredo and Chrisman, 2006) revealed several key characteristics of these organisations that have implications as enablers or constraints for the development and deployment of digital tools.

Among the different objectives of the community enterprise was: *to contribute to the rural community regeneration*, by supporting local independent businesses. This was enhanced by a set of shared community-centred values that prioritised the fulfilment of community needs. This was associated with specific agency based on cooperation with local small businesses in terms of: creation of infrastructure and provision of improved Internet access; improving the promotion of local products and outreach to customers, where the community enterprise provides the opportunity for promotion at a larger scale that allows using a more technology-intense means of promotion.

¹ All authors are from the University of Nottingham, School of Computer Science. E-mail: stela.valchovska@nottingham.ac.uk



The enterprise has been created through entrepreneurial and business management skills provided from within the community. Evidence has also suggested the existence of a strategic compilation of a portfolio of skills (including technology-related) within the community enterprise. These have an enabling role through the availability of expert skills and knowledge that can implement and / or support digital technology deployment.

Unlike an individually owner-managed small business, the community-based enterprise was not a key source of living for any of its members. However, it has provided a meta-level facility for small businesses to exist by:

- Improving the business environment via maintaining and further developing the infrastructure supporting existing market channels;
- Enabling the development of new market channels for local producers to access consumers.

DISCUSSION AND CONCLUSIONS

This research suggested a pathway to enhancing rural community resilience through community-based rural enterprises using digital technology-based tools that can contribute to the support and development of local small businesses. An analysis of the data provided a better understanding of the specific enablers and constraints in regard to the use of such digital tools by rural small businesses and community-based enterprises. It suggested two key roles of community enterprises with respect to the development of digital tools and their 'take up'. Firstly, they support marketing and promotion activities that are readily enhanced by digital tools. Secondly, they have a role as gatekeepers; as administrators of technological facilities that become available to a number of small business users.

The community enterprise facilitated cooperation between small businesses in the locality through a set of shared aims and values. This provides the foundations for the development of a common web-based digital platform (currently in development) that can enhance the relationship between small businesses and their consumers, and is in line with the findings reported by Okamoto (2008) from his studies in rural Japan.

Using predominantly self-financing and human capital resources means that additional initiatives, including technologically based propositions can be implemented and supported in a 'bottom up' manner. This is also in line with evidence, which suggests that a high cost in terms of time and resources decreases the usefulness of more complex technological solutions.

Drawing on our findings about the community enterprise organisation this research has provided a set of useful implications for design for the possible routes that may be taken for a technological intervention. Specific organisational characteristics, like community business objectives, for example, can facilitate the creation of conditions for higher digital technological uptake through supporting the availability, infrastructure and necessity for training. The

results suggested that digital technological development and use can be integrated into wider developmental frameworks for satisfying the different levels of community and business development needs.

Interdisciplinarity represents the main significance of this research. Outcomes from studying a community enterprise start-up and operation are used to inform a strategy for technological development and deployment.

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