Social entrepreneurship through digital communication in farming

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Abstract

Purpose – Despite the interest in non-profit and sustainable ways of connecting farms to society, less is known about how to conduct this through digital technology and communication. Thus, the purpose of this paper is to discuss how to connect farms to society through digital technology and communication.

Design/methodology/approach – In-depth interviews of 15 Australian farmers were conducted in order to understand their perceptions of how to engage in digital forms of social entrepreneurship and thematic analysis techniques were utilized to understand the content from the interview transcripts.

Findings – The findings suggest that digital social farm entrepreneurship can be categorized into social bricoleurs, social constructionists and social engineers.

Research limitations/implications – This typology helps to understand the contextual role farm entrepreneurs play in rural economies and their place in global societies.

Practical implications – Many Australian farms are in remote locations far from urban centers, which makes digital forms of social entrepreneurship an important way that farmers can promote social entrepreneurial ventures.

Originality/value – This paper highlights how there has been a growing interest in developing social entrepreneurship in Australian farms due to their connection with rural communities and environments.

Keywords Ethics, Values, Social responsibility, Entrepreneurship

Paper type Research paper

Introduction

Entrepreneurship is one of the most important parts of farming as it encourages innovation and proactive thinking about future trends. In farming, there are often seasonal and economic changes that make entrepreneurship a necessity. Korsgaard *et al.* (2015, p. 11) stated "farming is a form of production is prevalent in the countryside for obvious geographic and topographical reasons." Farm entrepreneurs utilize agriculture as a way to develop creative and/or innovative businesses. This involves the blending of risk taking with agricultural-related business ventures that enables economic activity to develop. Farmers are defined in this paper as "those occupied on a part- or full-time basis and engaged in a range of activities that are primarily dependent on the farm and agriculture in the practice of cultivating the soil, growing crops and raising livestock as the main source of income" (McElwee, 2006). In rural locations, entrepreneurs are an important part of the community and link farms to business development. Bryant (1989) suggested that entrepreneurs in the rural environment are key decision makers as they are embedded in the socio-economic environment. However, despite the importance of farmers in rural economies, more farmers are trying to diversify their businesses away from a reliance on one supplier or type of crop.

The definition of an entrepreneur in agriculture has changed from a reliance on the land to include additional value added services such as tourism. McElwee (2006, p. 191) stated that in the past farm entrepreneurs were "synonymous with being a good craftsman while striving for a high level of production and product quality and making efficient use of inputs (labor, nutrients, crop protection and energy)." This has resulted in a farm entrepreneur being different to a farm manager as they focus on developing innovations for the future success of their business. This is reflected in farmers increasingly using new technologies that enable more efficient production methods and less labor intensive activities.

Entrepreneurial activities in rural areas can have positive spillover effects (Korsgaard *et al.*, 2015). This affects farmers who can utilize rural policies around entrepreneurship to develop their businesses. Anderson *et al.* (2015, p. 1) stated "rurality offers an interesting dimension because these businesses face the problem of scattered population, distance from customers and suppliers and cost and delays in communication." This study contextualizes the process of rural entrepreneurship by focusing on the intersection between technology and farm business ventures. Welter (2011) suggested that it is important to contextualize entrepreneurship research because the context helps explain behavior. The importance of entrepreneurship to rural economies is often misunderstood due to negative connotations of the word. This has resulted in there being debates about the merits of entrepreneurship in regional development (Soliva, 2007).

The benefit of digital technologies to rural areas is in the reduction of economic and social inequalities. Current research about farm entrepreneurship offers limited insight into how digital and social business ventures are combined in a rural environment. We argue that research that explicitly discusses digital social farm entrepreneurship will add societal value to the area of rural entrepreneurship.

The structure of this paper is as follows. First, the importance of rural entrepreneurship to society is discussed with a focus on emerging and contextual influences. This leads to the next section on social entrepreneurship that bridges the gap between profit and non-profit motives for farmers in rural economies. The methodology and results are discussed, which lead to the development of a typology for understanding digital forms of social farm entrepreneurship. Finally, suggestions for future research and managerial implications are stated.

Literature review
Digital entrepreneurship
Nambisan (2017, p. 1029) stated digital entrepreneurship is about the "careful consideration of digital technologies and their unique characteristics in shaping entrepreneurial pursuits." There is increasing emphasis on digital entrepreneurship due to the role of new digital technologies in business (Nambisan, 2017). Nambisan (2017) suggested that digital technologies in entrepreneurship involve artifacts, platforms and infrastructures. Hull *et al.* (2007) defined digital entrepreneurship as when material that was physical has been digitized in an organization. Increasingly more organizations are using digital ventures to incorporate information technology. Digitalization can include online marketing, distribution or interactions with consumers (Waker, 2006). Due to the knowledge economy, it is becoming more important for organizations to use digitalization as a business model in order to compete globally (Richter *et al.*, 2015).

Social technologies incorporate digital forms of entrepreneurship through coordinating knowledge and innovation (Segarra-Ona *et al.*, 2017). Nelson and Sampart (2001, p. 31) defined social technology as "how knowledgeable people act and interact where the effective coordination of interaction is key to accomplishment." In digital entrepreneurship, social technology provides a way to create social value through technological innovation. This is important as more people are using digital forms of communication as part of their daily lives (Waker, 2006).

Digital entrepreneurship is a category of entrepreneurship that incorporates the use of information technology in a business manner. There are increasing digital practices used by entrepreneurs aimed at creating social change (Hafezieh *et al.*, 2011). The digital forms of communication enable the reconfiguration of business ventures through the integration of new organizational structures. Due to the ease of using digital technology, more enterprises are viewing online platforms as a way to improve business performance. The advancement of information and communications technology in society has given rise

to more digital businesses (Cohen *et al.*, 2000). Hafezieh *et al.* (2011) suggested that digital entrepreneurship enables the carrying out of a business using electronic commerce, the internet and other social media devices. More businesses are using digital entrepreneurship as a way to compete in the global economy (Gerguri-Rashiti *et al.*, 2017).

Digital technology transcends location disadvantages to increase direction communication with customers. This helps businesses to take advantage of direct selling that can increase overall profitability (Koyana and Mason, 2017). Being in physical proximity to other members of a community is no longer needed as it can occur online. Barrett (2015, p. 183) stated that "social rather than physical proximity is sufficient for the kinds of interaction patterns traditionally associated with place." Thus, digital technology offers opportunity for farmers to create new business ventures that are complementary to the knowledge economy.

Rural entrepreneurship

Rural entrepreneurship involves business ventures developed in large open spaces that are part of the natural environment (Kalantaridis and Bika, 2006). Korsgaard *et al.* (2015, p. 7) stated that rural entrepreneurship involves "the innate (natural, cultural, historical, human, social and/or financial) resources of a place, which the venture needs to support its development." This means that there is a close relationship between the creation of entrepreneurship and the rural location. The spatial context of being in a rural location influences the entrepreneurship process differently compared to urban areas. This is due to rural locations having unique attributes that enable distinctive business ventures to develop that often highlight the reputation of a region.

The businesses within certain regions often play on the name recognition and agricultural environment. Farmers utilize the place of rural regions to provide a contextualized form of entrepreneurship that emphasizes the natural setting. Korsgaard *et al.* (2015) suggested that rural entrepreneurship has the benefit of adding value to other types of entrepreneurship because of the emphasis on location. In the past, many rural locations were geographically hard to get to but this has changed with advances in transportation and the use of communication technologies. This has resulted in farmers playing an important role in rural locations as they link employment to agricultural production.

Communities within rural areas are important in facilitating information exchange amongst members. There are intrinsic associations with a place that are more evident in rural communities (Barrett, 2015). In rural settings, communities enable intimate ties that generate strong feelings of attachment to a place (Markey *et al.*, 2010). This is important in rural areas that have shared expectations amongst community members about courses of action. Often rural areas have a sense of community that provides a way for individuals to share their sentiments about the economic and social progress of a region (Barrett, 2015). Farmers are part of rural communities due to their loyalty to a place but also obligations in terms of economic conditions. The functioning of communities in rural areas has changed with the increased usage of information technology such as the internet for social networking. This has meant that there are more virtual online communities that have replaced traditional conceptualizations of a community (Chayko, 2008).

Rural areas enable the use of a location for meaningful pursuits and connection to community life (Korsgaard *et al.*, 2015). Some entrepreneurs move to rural areas due to their advantages in terms of small city living and closer social ties to the region. This means some rural entrepreneurs are particularly interested in how they are part of the social embeddedness of a region (Fortunato, 2014). For rural entrepreneurs, this enables new combinations of the utilization of resources that can improve the economic conditions of a region. There are location-specific advantages that depend on geographic position and time elements within rural regions. These location-specific advantages enable the utilization of

cultural amenities for business purposes. The material resources of a region in terms of land and type of agriculture will further enable the development of business activities.

Some rural areas are developing more than others due to the increased labor mobility and desire of people to live in rural regions. Rural locations often transform from places of pure agricultural production to mixed usages including creative pursuits aimed at connecting to the social life of a community. Mitchell (2013) discussed how the cultural elements within rural regions are often linked to the historical changes in terms of farming business development. People who set up businesses in rural regions are often interested in pursuing their cultural aspirations without purely thinking about profit motives. This means that rural entrepreneurs engage in resource use within rural locations in a creative manner by building a sense of value from the use of land in rural regions and the engagement of business practices (Williams *et al.*, 2004). There are distinctive opportunities for entrepreneurs to relocate to rural areas to take advantage of the more quality of life concerns.

For rural entrepreneurs to be successful in the long term they need to capitalize on the agricultural potential of rural regions and build up a distinctive product based on the use of local resources. However, the development of rural regions has the potential to exclude some social groups who are less inclined to be involved in business activities. Shucksmith and Chapman (1998) in a study of social exclusion in rural areas found that it was important to encourage the embeddedness of business in local communities. This can be conducted via both personal and digital forms of communication that build a sense of trust in rural economies.

Tontis and Greive (2002) in a study of an Australian rural town found that there is a risk of economic development destroying the cultural heritage of regions. This is due to the increased use of business instead of community interests by rural entrepreneurs. In rural areas, social entrepreneurship provides a way to connect community concerns to business interests. In rural areas, there is often more need to engage in trying to solve inequalities. Social entrepreneurship provides a way to transform society by focusing on finding solutions to community problems.

Social entrepreneurship and innovation
Social entrepreneurship has a way of linking social and environmental resources to economic performance. Farmers are creating socially purposeful digital enterprises that enable the marketing and selling online of socially related products and services. Social innovation is a wide concept that has a range of meanings but is linked to entrepreneurship due to the emphasis on change. At the core of social innovation is the ability to help in a positive way by solving problems that affect a community. The demand for social innovation is growing in society as there is a greater divide between for-profit entities, the community and government services. This has meant that social innovation provides a way to bring together disparate interests to work on finding creative solutions.

There is a need for more innovation particularly around disadvantaged or neglected issues due to the problems increasing in magnitude. Social innovation helps find improvements in the delivery of social services by encouraging the development of entrepreneurial business ventures. Social innovation involves solving problems through new changes in behavior (McKelvey and Zaring, 2007; Mirvis *et al.*, 2017). The advantage of social innovation is that it brings about a way to engage citizens in innovation strategies. In a seminal article by Moulaert *et al.* (2005), they proposed that social innovation incorporated three major dimensions: satisfaction of unmet human needs, social relation changes and empowerment of society. Thus, particularly in disadvantaged areas, social innovation brings about action that can target particular causes (Abazi-Alili *et al.*, 2016). This is important in rural communities that may have unanswered needs that can be addressed through social innovation. Moreover,

the social innovation literature has to an extent ignored the role of rural communities using digital technology (Van der Have and Rubalcaba, 2016).

Murphy and Coombes (2009, p. 325) stated "social entrepreneurship is an effective mechanism for generating value in societal, economic and environmental forms." Digital social entrepreneurship can bridge the gap between farmers typically being located in remote locations to sell their products in an online environment that showcases their unique social elements of being on a farm. Social resources such as environmentally friendly farming methods or sustainable tourism are entrepreneurial business ventures that can be marketed online. This helps build social entrepreneurial opportunities for farmers when they are accompanied by a website discussing the social cause.

Social entrepreneurial discoveries are more likely to occur through an emergent nature when opportunity and resources converge (Murphy and Coombes, 2009). For farmers, the linkage between resources and business is important way by which they can discover more entrepreneurial opportunities. For example, farmers can utilize renewable energy such as solar power as a new business venture that is part of their portfolio of business activities. Social entrepreneurship can enhance wealth by creating new or managing existing ventures in an innovative way (Zahra *et al.*, 2009). This is important for farmers who need to diversify their products and services in order to co-create value.

Social entrepreneurship creates both economic and social wealth that enables creative solutions to persistent social problems. This is helpful to farmers who are part of rural societies and can utilize social entrepreneurship as a way of offering solutions to complex issues impacting communities. In this paper, I adapt the definition espoused by Murphy and Coombes (2009, p. 326) of social entrepreneurship as "the creation and undertaking of a venture intended to promote a specific social purpose or cause in the context of mobilization." This definition is relevant to farm entrepreneurship as social purposes are important to farmers as they usually have a greater connection to a region and community. In addition, the social causes can include the natural environment or disadvantaged groups of society that are part of rural regions. In addition, Santos (2012, p. 335) stated "social entrepreneurs usually starts with small initiatives, they often target problems that have a local expression but global relevance." Thus, social issues in rural areas affect farmers in different ways compared to urban regions due to their connection with the land and agricultural industry.

Normally social entrepreneurial opportunities come from inefficiencies in the market that require new ways of thinking to solve (Austin *et al.*, 2006). In a farming context, social entrepreneurial ideas include the reduction of pollution from farming machines and the use of land for a communities benefit. They can also include environmental change such as the giving of excess product to non-profits or for other uses. There is also social entrepreneurship derived from technological change such as internet sites for community farming projects. Moreover, increasingly there has been more emphasis on technological change affecting the farming sector, which has influenced the growth of digital forms of social entrepreneurship.

Methods
This study took an exploratory approach to understand the role of digital social entrepreneurship amongst farmers. The in-depth semi-structured interviews were conducted with 15 farmers in an Australian rural region. The farmers were identified through purposeful snowball sampling and invited to participate in the interviews. In order to be included in the study, the farmers needed to be actively engaged in their business through direct ties to the agricultural district. In total, 12 of the respondents were men, reflecting the typical gender imbalance in farming communities in terms of management. Two-thirds of the respondents indicated they were actively engaged in establishing entrepreneurial farming ventures. Many of the respondents had taken education courses to learn more about entrepreneurship.

There were 12 open-ended questions included in the interview protocol designed to understand more about the intentions of farmers to utilize digital social entrepreneurship. The questions were designed to understand the motivations and reasons for farmers to engage in digital forms of entrepreneurship. In addition, questions about strategies utilized by farmers in a digital economy were asked in order to understand the environmental context of farming in more detail. The data were collected during face-to-face interviews that typically ranged from 30 minutes to 1 hour in duration. The interview data were transcribed and then analyzed for their content. The data were categorized into specific concepts concerning digital farm and social forms of entrepreneurship. This helped to understand the themes and patterns emerging from the interviews. The responses were grouped together into electronic files then analyzed for patterns emerging from the data. The answers to specific questions were analyzed to see the similarities and differences in response. This process enabled a better understanding about how digital social farm entrepreneurship is perceived and how it affects rural regions.

Results
Digital entrepreneurship
Most farmers interviewed expressed the view that it was increasingly important to include more digital forms of communication about their products and services. This was due to the way consumers are demanding more connection and information about where products are made and more personal information about the farms. Participants stated:

> Not many people know how we farm except other farmers. Having an online presence helps us tell the story of who we are. How we live. Our lives. Our family. I think it is helpful in today's economy to connect online. But for us was hard initially to do this. We are still opening up. Online web sites mean we can market new ideas to different people.

> It is difficult to start an online presence. But it must be done if we are to evolve. We sell a lot to Asia but how are they to known about us unless we tell them? I have started to put more information about the farm online. Sometimes we get emails or messages from customers about the farm. It helps connect us to the world.

Much of the discussion in the interviews about digital entrepreneurship on farms involved the farmers talking about how it was initially hard to set up an online presence but was necessary in the global economy. Some farmers discussed the training programs and information the farmers' federation and government bodies were giving them. These training programs involved focusing on how to engage with customers online and develop online business ventures. One participant stated:

> There are a lot of training programs about online sites. In the town I go to learn about how to create online websites. This is useful but hard work. It makes me think of school again. It helps to get the training though. Some set up the websites for me.

Social entrepreneurship
There was a fair amount of discussion about the importance of highlighting the social aspects of farm businesses in terms of community engagement, connection to the environment and sustainability. There was a general sentiment amongst the farmers that they could improve the performance of their businesses by highlighting the social aspects as part of them being located in rural areas. As one participant stated:

> We are farmers and that means a connection to the land. The ongoing productivity of our region is linked to the land. We need to protect it but also cherish it. I have been trying to use more socially responsible farming methods depending on finances.

Increasingly, farmers were adding to their existing businesses by developing new ones especially via online portals that emphasized the social aspects. Most farmers thought by stressing the social environment in which their products are made, it would help them to export more products. This is due to the perception of Australian farms as being pollution free and in attractive rural regions, which influences the brand image of their products to international markets. This is stated in the quotes below:

> Asia is increasingly our biggest market. But our land is the soul of our production. Many in Asia live in cities and don't come to farms. Due to issues around pollution it is important to see how clean our land is.

> I never thought we could sell products based on my farm. But why not? The land here is beautiful. This can be sold as a story online. The land is the best in the district. It is clean and free of pollution. Compared to other farms in other countries we have the best environment for food production.

Farm entrepreneurship
Most of the participants were new to using digital forms of communication for farm entrepreneurship as they saw it more as a marketing activity. This was reflected in the cultural attitudes toward more traditional forms of communication such as face to face rather than digital forms for selling products and services. Despite this reluctance to come up with new business ideas using online and digital formats there was still a sense of interest in how to bridge the current gaps between business ideas and practicalities. This is evident in the following quotes:

> I prefer to talk to people personally. I use digital communication for email and web browsing. But for creating new business ideas. That is harder.

> We tend to think of online material as marketing rather than as value creation. I am a bit old fashioned when it comes to using Kickstarter, GoFundMe or crowdfunding. I have donated to other projects but are still yet to come up with my own idea and post it in these forums.

Participants tended to see farm entrepreneurship as being linked to tourism and selling products in a personal way rather than through digital forms of communication. This was reflected in the attitudes of some participants who saw digital communication as being not relevant for farms as there was direct linkage to consumers. However, this attitude was changing amongst some participants particularly lifestyle farmers or those who had worked in other areas before or during the development of their farm business. This was due to some receiving information about new markets and the potential to value add to their existing businesses particularly in terms of exporting products and services to Asia, which was seen as an untapped potential market. This is seen in the following quotes:

> We have a lot of Asian tourists coming to the farm. It seems natural that we could use digital technology to communicate with them directly. After the contaminated milk and other food scares they are wanting to know where their products come from. This is good for our farm.

> A lot of the products go to Asia. But we have a long term supply agreement that is hard to get out of. Maybe in the future we can sell directly but let's see. I don't know. But it could increase our profits. But adding some social cause to our products would sell more products. In my opinion that is. I would have to test it in the market though. Let's see.

Overall the participants in the interviewees saw digital, social and farm entrepreneurship as being important for the ongoing sustainability and viability of their businesses. However, the way to combine digital social farm entrepreneurship was less understood and needed probing by the interviewer to see how the participants saw the connection. There seemed to be uncertainty about the term "digital entrepreneurship" as many

answered with reference to online communication rather than the creation of businesses. The next section will further discuss the outcomes of the interviews and how the findings link to the literature.

Discussion

Digital social farm entrepreneurship is practical and relevant to rural communities due to its ability to utilize technological innovation. The findings of this study highlight the importance of farmers investing more resources into digital entrepreneurship especially those having a social value to rural areas. There is more interest in social innovation due to the decline in public spending and growing disparity between different economic classes of society (Van der Have and Rubalcaba, 2016). The results show that digital communication provides a cost effective way for farmers to disseminate ideas about social ventures. Digital entrepreneurship provides a way to decrease barriers to communication between farmers and consumers. Compared to traditional farm entrepreneurship, which is orientated at innovations in the agricultural industry, the more contemporary digital forms of entrepreneurship enable the recognition of technology as an enabler for societal change. Thus, the results of this study complement research by Carrier et al. (2004) who suggested that the use of digital entrepreneurship is a way to exploit business opportunities using digital spaces. Some farmers will not have easy access to digital resources that are required for social entrepreneurship. However, as expressed in the interviews there are government and non-profit agencies trying to help farmers learn more about digital communication. Some farmers are more technologically literate than urban entrepreneurs and do not need financial help but rather education about ideas around social ventures. This supports the work of Ratten and Dana (2017) who found that farmers are interested in entrepreneurship primarily due to market reasons but also sustainability concerns.

Rural governments concerned about farming can focus on the benefits of digital entrepreneurship in expanding markets and increasing profitability. In rural areas particularly in Australia that are geographically located far from other urban areas, digital communication has provided a way to link farmers directly to consumers. As suggested by Pato and Teixeira (2014) there are many different ways to measure rural entrepreneurship and one of the ways is through communication mechanisms. The increased interest in the origins of food and where it is grown provides a way for farmers to better market their products. Business support agencies need to train farmers about the benefits of digital farm entrepreneurship as a way to connect to the knowledge economy. This can include more educational programs tailored to farmers about how to set up websites, utilize online social networking and engage in online blogs about their products.

Local governments can stress the importance of farmers having online presences as a way to connect to international consumers and potential business partners. However, there needs to be more effective delivery of entrepreneurial policies in rural areas (Stathopoulou et al., 2004). Policy makers can emphasize the role of creating an integrated online marketing communications strategy for farmers engaging in digital entrepreneurship. In addition, farmers that highlight the social or sustainable contributions of their products can further differentiate themselves in the marketplace. Based on the interview findings, a typology of digital farm entrepreneurship based on Zahra et al.'s (2009) typology of social entrepreneurship was developed especially for the rural context. This typology as seen in Table I incorporates the main analysis of the interviews based on different views of how social ventures can be utilized by farm entrepreneurs utilizing digital communication.

Management implications

This paper has several implications for the management of digital entrepreneurship in farms and the stakeholders they need to rely on for support. This is due to the increasing

	Social bricoleurs	Social constructionists	Social engineers
Purpose	Develop portfolio of online linked social ventures that are motivated by problems in rural communities	Build different business models that incorporate social issues communicated via online portals	Create online social systems to solve problems of farm entrepreneurs
Social significance	Enables the use of online technology and the natural environment to address social farm needs	Develops regulations and political systems to harness the use of digital technology for relevant social issues confronted by farmers	Redesigns systems to enable social change in rural economies by farmers in an online context
Effect on communities	More locally focused in terms of online communication about farm social ventures	Small to large scale focused on integrating different stakeholders in the development of online social farm ventures	Internationally orientated that seeks to build more online connection about social issues faced by farmers

Source: Adapted from Zahra *et al.* (2009)

need for farmers to emphasize the social advantages of their businesses due to their rural location. In addition, as discussed in this paper, farmers need to embrace the power of digital communication to set up enterprises that can compete in the global economy. The potential of the large international market should encourage farm entrepreneurs to adopt effective digital strategies to help them establish social ventures. Farm entrepreneurs share many of the same characteristics as urban entrepreneurs including being proactive but need to emphasize their closeness to the rural environment as a way to highlight their social business initiatives. As such, farm entrepreneurs might be more susceptible to establishing social ventures that can be marketed through digital communication mechanisms. It might be helpful for farm entrepreneurs to utilize education and training courses to establish online social ventures. This could help farm entrepreneurs better utilize digital technology that enables them to communicate information about their products to a more global audience.

Future research suggestions
There are some caveats on the findings and analysis of this research. There is the limitation of focusing on one geographic area, which means further research would be useful to support the findings. In addition, the conceptualization of digital entrepreneurship in this research is a limitation that requires future studies to examine to see if it is correct in rural settings. Due to the limited research on digital social entrepreneurship in rural environments, future research may try to examine these relationships in more detail. As digital entrepreneurship is an emerging field, there needs to be more longitudinal analysis on the way farmers are creating social innovations.

This paper highlights the need for farm entrepreneurs to embrace the social elements of the natural environment to establish digital ventures. Given that more farmers are being encouraged to market their businesses as being socially relevant, this paper has advanced our understanding about digital social forms of farm entrepreneurship. Future researchers would benefit from studying how Australian farmers are utilizing their country of origin in establishing new ventures. The "Made in Australia" label has an impact on the quantity of farm goods sold particularly in Asia after recent food contamination scandals.

More research is also needed about what social issues consumers are most interested in terms of farm businesses and how these can be integrated into existing products. This is an interesting research avenue as most research has tended to focus on social entrepreneurship

in a rural setting but less about digital forms of this business activity. As there is a large untapped market in consumers wanting more information about farm conditions, more research is needed about how farmers can market their products by including more social connections.

Conclusions

This paper has explored digital social farm entrepreneurship as an emerging form of business important for the sustainability of the agricultural industry. The present study argued that Australian farmers need to focus more on ways to embrace digital farm entrepreneurship in order to capture emerging markets especially those in Asia. Digital farm entrepreneurship is a way farmers can capitalize on their culture and region to diversify existing business practices. Thereby, the social part of digital farm entrepreneurship is a way farmers can connect with their communities. This paper discussed how social forms of digital farm entrepreneurship provide a way to contribute to communities. As more global consumers become interested in locally grown and sustainable farming methods, digital social farm entrepreneurship provides a way for farmers to capitalize on these opportunities. This paper has contributed to the development of farm entrepreneurship by focusing on digital and social innovation. It extends the established literature about entrepreneurship in rural areas by delving deeper into areas about social projects that help farming communities. It is hoped that it serves as a prelude to the growing body of research about the need for more digital and social businesses for farm entrepreneurs.

References

Abazi-Alili, H., Ramadani, V., Ratten, V., Abazi-Caushi, B. and Rexhepi, G. (2016), "Encouragement factors of social entrepreneurial activities in Europe", *International Journal of Foresight and Innovation Policy*, Vol. 11 No. 4, pp. 225-239.

Anderson, A.R., Wallace, C. and Townsend, C. (2015), "Great expectations or small country living? Enabling small rural creative businesses with ICT", *Sociologia Ruralis*, Vol. 56 No. 3, pp. 450-468.

Austin, J., Stevenson, H. and Wei-Skillern, J. (2006), "Social and commercial entrepreneurship: same, different or both?", *Entrepreneurship Theory and Practice*, Vol. 30 No. 1, pp. 1-22.

Barrett, G. (2015), "Deconstructing community", *Sociologia Ruralis*, Vol. 55 No. 2, pp. 182-204.

Bryant, C. (1989), "Entrepreneurs in the rural environment", *Journal of Rural Studies*, Vol. 5 No. 4, pp. 337-348.

Carrier, C., Raymond, L. and Eltaief, A. (2004), "Cyber entrepreneurship: a multiple case study", *International Journal of Entrepreneurial Behavior & Research*, Vol. 10 No. 5, pp. 349-363.

Chayko, M. (2008), *Portable Communities: The Social Dynamics of Online and Mobile Connectedness*, SUNY Press, Albany, New York.

Cohen, S.S., DeLong, J.B. and Zysman, J. (2000), "Tools for thought: what is new and important about the e-economy", Working Paper No. 138, Berkeley Roundtable on International Economies, Berkeley, CA.

Fortunato, M.W. (2014), "Supporting rural entrepreneurship: a review of conceptual developments from research to practice", *Community Development*, Vol. 45 No. 4, pp. 387-408.

Gerguri-Rashiti, S., Ramadani, V., Abazi-Alili, H., Dana, L. and Ratten, V. (2017), "ICT, innovation and firm performance", *Thunderbird International Business Review*, Vol. 59 No. 1, pp. 93-102.

Hafezieh, N., Akhavan, P. and Eshraghian, F. (2011), "Exploration of process and competitive factors of entrepreneurship in digital space: a multiple case study in Iran", *Education, Business and Society: Contemporary Middle Eastern Issues*, Vol. 4 No. 4, pp. 267-279.

Hull, C.E., Hung, Y.F.C., Hair, N., Perotti, V. and De Martino, R. (2007), "Taking advantage of digital opportunities: a typology of digital entrepreneurship", *International Journal of Networking and Virtual Organisations*, Vol. 4 No. 3, pp. 290-303.

Kalantaridis, C. and Bika, Z. (2006), "Local embeddedness and rural entrepreneurship: case study evidence from Cumbria, England", *Environment and Planning A*, Vol. 38 No. 8, pp. 1561-1579.

Korsgaard, S., Muller, S. and Tanvig, H.W. (2015), "Rural entrepreneurship or entrepreneurship in the rural – between place and space", *International Journal of Entrepreneurial Behavior & Research*, Vol. 21 No. 1, pp. 5-26.

Koyana, S. and Mason, R.B. (2017), "Rural entrepreneurship and transformation: the role of learnerships", *International Journal of Entrepreneurial Behavior & Research*, Vol. 23 No. 5, pp. 734-751.

McElwee, G. (2006), "Farmers as entrepreneurs: developing competitive skills", *Journal of Developmental Entrepreneurship*, Vol. 11 No. 3, pp. 187-206.

McKelvey, M. and Zaring, O. (2007), "Co-delivery of social innovations: exploring the university's role in academic engagement with society", *Industry and Innovation*, pp. 1-18, available at: https://doi.org/10.1080/13662716.2017.1295364 (accessed 21 December 2017).

Markey, S., Halseth, G. and Manson, D. (2010), "Capacity, scale and place: pragmatic lessons for doing community-based research in the rural setting", *The Canadian*, Vol. 54 No. 2, pp. 158-176.

Mirvis, P., Herrera, M.E.B., Googins, B. and Albareda, L. (2017), "Corporate social innovation: how firms learn to innovate for the greater good", *Journal of Business Research*, Vol. 69 No. 11, pp. 5014-5021.

Mitchell, C.J. (2013), "Creative destruction or creative enhancement? Understanding the transformation of rural spaces", *Journal of Rural Studies*, Vol. 32 No. 1, pp. 375-387.

Moulaert, F., Martinelli, F., Swyngedouw, E. and Gonzalez, S. (2005), "Towards alternative model(s) of local innovation", *Urban Studies*, Vol. 42 No. 11, pp. 1969-1990.

Murphy, P.J. and Coombes, S.M. (2009), "A model of social entrepreneurial discovery", *Journal of Business Ethics*, Vol. 87 No. 3, pp. 325-336.

Nambisan, S. (2017), "Digital entrepreneurship: toward a digital technology perspective of entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 41 No. 6, pp. 1029-1055.

Nelson, R.R. and Sampart, B.N. (2001), "Making sense of institutions as a factor shaping economic performance", *Journal of Economic Behavior and Organisation*, Vol. 44, pp. 31-54.

Pato, M.L. and Teixeira, A.A.C. (2014), "Twenty years of rural entrepreneurship: a bibliometric study", *Sociologia Ruralis*, Vol. 56 No. 1, pp. 3-28.

Ratten, V. and Dana, L. (2017), "Sustainable entrepreneurship, family farms and the dairy industry", *International Journal of Social Ecology and Sustainable Development*, Vol. 8 No. 3, pp. 114-129.

Richter, C., Kraus, S. and Syrja, P. (2015), "The shareeconomy as a precursor for digital entrepreneurship business models", *International Journal of Entrepreneurship and Small Business*, Vol. 25 No. 1, pp. 18-35.

Santos, F.M. (2012), "A positive theory of social entrepreneurship", *Journal of Business Ethics*, Vol. 111 No. 3, pp. 335-351.

Segarra-Ona, M., Peiro-Signes, A., Albors-Garrigos, J. and De Miguel-Molina, B. (2017), "Testing the social innovation construct: an empirical approach to align socially oriented objectives, stakeholder engagement, and environmental sustainability", *Corporate Social Responsibility and Environmental Management*, Vol. 24 No. 1, pp. 15-27.

Shucksmith, M. and Chapman, P. (1998), "Rural development and social exclusion", *Sociologia Ruralis*, Vol. 38 No. 2, pp. 225-242.

Soliva, R. (2007), "Landscape stories: using ideal type narratives as a heuristic device in rural studies", *Journal of Rural Studies*, Vol. 23 No. 1, pp. 62-74.

Stathopoulou, S., Psaltopoulos, D. and Skuras, D. (2004), "Rural entrepreneurship in Europe: a research framework and agenda", *International Journal of Entrepreneurial Behavior & Research*, Vol. 10 No. 6, pp. 404-425.

Tontis, M. and Greive, S. (2002), "Commodification and creative destruction in the Australian rural landscape: the case of Bridgetown, Western Australia", *Australian Geographic Studies*, Vol. 40 No. 1, pp. 58-70.

Van der Have, R.P. and Rubalcaba, L. (2016), "Social innovation research: an emerging area of innovation studies?", *Research Policy*, Vol. 45 No. 9, pp. 1923-1935.

Waker, H. (2006), "The virtual organization: a new organizational form?", *International Journal of Networking and Virtual Organisations*, Vol. 3 No. 1, pp. 25-41.

Welter, F. (2011), "Contextualizing entrepreneurship- conceptual challenges and ways forward", *Entrepreneurship Theory and Practice*, Vol. 35 No. 1, pp. 165-184.

Williams, A.M., Balaz, V. and Wallace, C. (2004), "International labour mobility and uneven regional development in Europe – human capital, knowledge and entrepreneurship", *European Urban and Regional Studies*, Vol. 11 No. 1, pp. 27-46.

Zahra, S.A., Gedajlovic, E., Neubaum, D. and Shulman, J.M. (2009), "A typology of social entrepreneurs: motives, search processes and ethical challenges", *Journal of Business Venturing*, Vol. 24 No. 5, pp. 519-532.

Further reading

Alsos, G.A. and Carter, S. (2006), "Multiple business ownership in the Norwegian farm sector: resource transfer and performance consequences", *Journal of Rural Studies*, Vol. 22 No. 3, pp. 313-322.

Cresswell, T. (2006), *Place: A Short Introduction*, Blackwell Publishers, Malden, MA.

Harvey, D. (1990), "Between space and time: reflections on the geographical imagination", *Annals of the Association of American Geographers*, Vol. 80 No. 3, pp. 418-434.

Hudson, R. (2001), *Producing Places*, The Guilford Press, New York, NY.

Johnstone, H. and Lionais, D. (2004), "Depleted communities and community business entrepreneurship: revaluing space through place", *Entrepreneurship and Regional Development*, Vol. 16 No. 3, pp. 217-233.

Mitchell, C.J. (1998), "Entrepreneurialism, commodification and creative destruction: a model of post-modern community development", *Journal of Rural Studies*, Vol. 14 No. 3, pp. 273-286.

Niska, M., Vesala, H.T. and Vesala, K.M. (2012), "Peasantry and entrepreneurship as frames for farming: reflections on farmers' values and agricultural policy discoveries", *Sociologia Ruralis*, Vol. 52 No. 4, pp. 453-469.

Ratten, V. and Welpe, I. (2011), "Community-based, social and societal entrepreneurship", *Entrepreneurship and Regional Development*, Vol. 23 Nos 5-6, pp. 283-286.

Tuan, Y.F. (2007), *Space and Place: The Perspective of Experience*, University of Minnesota Press, Minneapolis, MN.

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