BARRIERS TO SMALL BUSINESS INNOVATION IN RURAL AUSTRALIA

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ABSTRACT: This paper examines barriers to innovation by small businesses in rural Australia. A qualitative methodology is employed involving focus group meetings with small business owners in six cotton communities. The findings reveal common as well as unique barriers to business innovation. Common barriers include poor infrastructure, skill shortages, resource dependence, lack of access to finance and political uncertainties. Some communities were more affected by the small size of their local markets than others. The quality of local leaders, conservative attitude of residents, and high cost of living had greater impact as barriers in some communities than others. Infrastructure development using resource taxes as well as decentralising responsibility for development to regional leaders can help address the innovation barriers in these communities.

KEY WORDS: Innovation, Barriers, Small Business, Regions, Australia.

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1. INTRODUCTION

The economic growth of a country is the sum of the growth of its local economies or regions. As such, a country's economic position is dependent on the economic strength of the individual regions that comprise it (Karlsson and Dalherg, 2003; Friar and Meyer, 2003). Consequently, governments must pursue policies that enable regions to contribute their full potential to the national economy. Australia's rural regions account for almost three-quarters of its annual export earnings but hold only a third of its population (Australian Government, 2012). Rural Australia is therefore critical to Australia's economic growth and it is expected to become even more important as economic growth in the

Asian region creates opportunities for production and export (Australian Government, 2012).

Contributions to national economic growth vary across regions and are dependent on the opportunities and resources available to each region in relation to the threats encountered (Fritsch and Mueller, 2004; Friar and Meyer, 2003). The 'one size fit all' regional development policy pursued over a significant period in Australia's political history has therefore been largely ineffective in maximising outcomes from Australia's rural regions (Stimson, 2011). Recognising the differences in opportunities and challenges encountered and outcomes delivered among Australia's regions, the Gillard government embarked on a regional development policy that tailored development to each regional area. A tailored development policy encourages regions to specialise in what they do best. For rural Australia, this centres on primary production and mining. However, dependence on resources with limited value adding leaves rural regions vulnerable to the adverse effects of climate change, unfavourable terms of trade and fluctuations in currency movements.

The non-agricultural small and medium-sized enterprise sector (SMEs) could provide the diversification required to see rural regions through periods of economic hardship brought on by reliance on raw material production. In particular, the innovative activities of individual SMEs would enhance global competitiveness of these regions (Madrid-Guijarro *et al.*, 2009). Innovation in the SME sector is therefore critical to development of rural Australia but rural SMEs have received limited attention in the literature (Siemens, 2010). The study investigates barriers to small business innovation in Australia's rural cotton communities. It draws attention to interventions that could enhance the small business sector in these communities.

This paper comprises six sections. A description of the cotton industry and its impact on cotton communities in the next section is followed by the literature review in section three. The research methodology is described in section four and the findings reported in the fifth section. The findings are discussed in the sixth section which also covers recommendations for reducing the barriers.

2. THE COTTON INDUSTRY

The Australian cotton industry contributes an annual average of $A1 billion in exports. There are 1 500 cotton farms covering an average of 705 hectares. The majority are small to medium-sized family-owned with an average of 8 employees (Cotton Australia, n.d.). The industry also generates employment through its agribusiness and marketing segments. It provides indirect employment through businesses in the secondary and tertiary sectors dependent on cotton specifically and the agricultural sector in general for their incomes. Cotton therefore plays a critical role in economic development at both the national and local levels. There are 30 cotton growing communities located in New South Wales and Queensland which depend on cotton to varying degrees.

Cotton output is affected by a number of factors, especially water availability, prices on the global market and the exchange rate of the Australian dollar. The industry experienced significant falls in output in the last decade due to the severe drought of 2001 to 2009. Several cotton communities were adversely impacted and suffered declining socio-economic conditions. Diversification of the economic base of these communities would help absorb some of the risks associated with their dependence on cotton. A vibrant SME sector could play an important role in this process. To do so, SMEs must innovate and adopt innovative practices. These call for attention to innovation barriers for SMEs located in cotton communities. We investigated barriers to innovation in a diverse range of Australia's cotton towns, identifying common barriers and those that are unique to each town. The findings are relevant to the industry body and to governments at various levels seeking to increase cotton output and improve economic conditions in these towns.

3. INNOVATIONS IN SMES

The importance of innovation to employment, wealth generation and economic growth at local, state and national levels explains the attention it has received in the literature (Demirbas *et al.*, 2011; Griffith *et al.*, 2009; Commonwealth of Australia, 2009). Madrid-Guijarro *et al.* (2009) emphasised the close links between innovation and competitiveness at both micro and macro levels. Innovation is important in an era of intense global competition, shortened product life cycles and fast changing consumer taste. Madrid-Guijarro *et al.* (2009) suggested that businesses can take advantage of the technological capabilities available generally to innovate in order to survive, become competitive and grow.

Despite the critical role of innovation to economic development and national competitiveness, there is no clear consensus on its definition (Johanssen *et al.*, 2001; Bhaskaran, 2006). Innovation has been traditionally linked to new technology and/or new knowledge that are radically different from anything in existence (Dewar and Dutton, 1986; Huang *et al.*, 2002; Freel, 2000). Other writers have focused on product and process innovation with commercial outcomes (Kelm *et al*., 1995). However, authors such as Johanssen *et al*. (2001) extended the boundaries of the definition to cover any changes that business owners or managers perceive as new. Innovation therefore includes improvements to existing products, services and processes; pursuit of new markets; use of new sources of supply; and development of new organisational forms (Damanpour, 1996; Bhaskaran, 2006). The Australian Bureau of Statistics (ABS) (2012) has added a qualifier to improvements that can be considered innovation, describing innovation as new or significant improvements. The ABS (2012) also noted that an activity undertaken with the intention to innovate can be regarded as an innovation even where the intention is not realised or where the innovation is abandoned.

Innovation is closely linked with the SME sector through new venture creation as well as improvements initiated in various operational areas of existing businesses. Freel (2005) found a positive association between innovative capacity and growth of the SME sector. Nonetheless, compared to large firms, where innovations tend to be radical in nature (Johanssen *et al*., 2001), innovation in SMEs tends to involve continuous and incremental changes to various aspects of operations (Avermaete *et al*., 2003).

Innovation in SMEs can be traced to factors internal and external to the business. Internal determinants include access to resources, especially financial, human and knowledge resources (Madrid-Guijarro *et al*., 2009; Mohen and Roller, 2005; Baldwin and Lin, 2002; Hewitt-Dundas, 2006). Owner/managers' risk aversion and openness to change, qualifications, technical competency and managerial skills are other internal determinants of innovation (Garcia and Briz, 2000; Hadjimanolis, 1999). Together with the quality of formal training and development provided to employees, they determine the quality of human capital available to the business (Gray, 2006). External determinants of innovation cover economic performance at the local, state and national levels (Kotey, 2006) as well as the technological, legal and political conditions at these levels (Avermaete *et al*., 2003; Link and Scott, 2012). Specifically, lack of government support, inadequate infrastructure, insufficient information on markets and technology, and inability to find suitable partners are identified as barriers to innovation for SMEs (Freel, 2000; Frenkel, 2003; Hewitt-Dundas, 2006; Mohen and Roller, 2005). According to Hadjimanolis (1999) reduction in red tape and improvement in technical education would benefit innovation. In Australia, skilled labour shortage, lack of access to finance, government regulation and compliance requirements, cost of new product development and uncertainty regarding demand for new products and services are the major barriers to innovation for SMEs (Department of Innovation, Industry, Science and Research, 2011).

Differences in innovation outcomes for SMEs have been attributed to differences in their locations. Battisti *et al.* (2010) found an innovation gap for SMEs in rural locations which they attributed to distance from customers, suppliers, research institutions and universities. They noted that rural-based small enterprises lack the relevant human and knowledge capital, infrastructure and financial resources for innovation. Siemens (2010) explained that small enterprises in rural locations face challenges with respect to market size, access to labour, proximity to urban centres and poor infrastructure. She found that rural small businesses rely on themselves, their families, businesses and communities to overcome these barriers. McAdam *et al.* (2004) traced the low innovation outcomes for rural SMEs to culturally-based barriers, especially entrenched traditional management practices of owner / managers that encourage inertia.

In response to the innovation gap for SMEs in rural areas, Buhalis and Main (1998) recommended improving interconnectivity between rural SMEs and universities, cluster networks and industry associations. Similarly, Siemens (2010) called on governments to provide programs that support economic development of rural areas in order to enhance growth of the SME sector. Various antidotes have been prescribed for dealing with the innovation gap for SMEs in rural regions. However, the diverse economic conditions that exist in rural Australia (Baum *et al.*, 2008) require that solutions are tailored to each region. Cooke (1996) recommended regionalisation of innovation policies. Segarra-Blasco *et al.* (2008) also argued that innovation policies should be tailored to the specific resources and characteristics of a region. McAdam *et al.* (2004) noted that regionalising innovation policies will enable region-specific interventions that cannot be achieved by national innovation policies. Moreover, it is more effective to manage regional and rural problems at the regional level than by national policies (Segarra-Blasco *et al.*, 2008). Regionalising innovation policies requires identifying common barriers to innovation across regions. This will shorten the learning curve for regional development agencies responsible for implementing solutions, while drawing attention to barriers that are specific to each region.

Cotton towns illustrate the common as well as unique deterrents to innovation that call for tailoring of innovation policies. While common barriers to innovation have been identified for SMEs in general and for businesses located in rural regions, studies that ascertain the common from the unique problems are rare but are necessary to strengthen the case for decentralised innovation policies.

Common and unique barriers to small enterprise innovation are identified for cotton towns and programs to address them are recommended. The findings will benefit the cotton industry in its quest for global leadership in cotton quality and production efficiency. A diversified and thriving small enterprise sector can help absorb some of the variations in socio-economic conditions in cotton towns caused by their dependence on primary production. It will also enhance access to resources, especially human capital.

4. RESEARCH METHOD

The study employed an interpretivist paradigm and a qualitative methodology involving focus group meetings with small business owners in six cotton towns: Warren, Wee-Waa, and Moree in New South Wales (NSW) and Emerald, Dalby and St George in Queensland. Cooksey (2008) and Creswell (2003; 2007) advised that since the philosophical assumptions of researchers predispose them to particular research approaches, types and methods it is important that they clearly state their assumptions. The position that knowledge exists in the context of the investigation was assumed (Cooksey and McDonald, 2011). The researcher acted as an outsider trying to understand the barriers to innovation from the perspective of rural small business owners.

Sample of Cotton Towns

The towns investigated were representative of the diverse characteristics of cotton towns in Australia. For example, Emerald and Moree were relatively large towns while Warren and Wee-Waa were small towns (Table 1). Agriculture was the major industry in Warren, Wee-Waa, Moree and St George while Emerald and Dalby had diversified economies with significant secondary and tertiary sectors. Cotton output was also different among the communities. Wee-Waa, Moree and Warren produced more cotton than St George, Emerald and Dalby. However, agricultural produce was more diversified in St. George than the cotton producing towns of NSW. Finally, location in different states meant access to water and related policies also differed among the six communities. Table 1 presents the average incomes for unincorporated small businesses in the six towns between 2004 and 2009. It shows that income increased each year on average for unincorporated businesses in

Australia. In contrast, income for similar businesses in predominantly agricultural communities such as St George and Warren fell significantly in 2007 and 2008 when the lowest cotton output was recorded. Incomes held up in the more diversified Emerald which experienced a significant drop in 2009 when workers were laid off in the mining industry.

Table 1. Average Own Unincorporated Business Income of Statistical Local Areas.

SLA	2004	2005	2006	2007	2008	2009	2011 Pop
Emerald	10 622	11 869	15 598	15 495	15 409	11 347	16 666
Dalby	13 939	13 315	8 456	1 789	14 389	13 221	12 299
Moree Plains	8 726	20 223	13 954	20 854	1 693	19 062	13 429
St George	-815	14 410	13 904	- 4 800	-27 211	15 964	3 292
Warren	15 651	17 429	3 184	- 3 111	-3 078	9 475	1 599
Narrabri (Wee Waa)	12 531	19 427	12 967	11 099	10 699	10 974	2 089
Australia	16 538	16 868	16 997	17 974	18 962	19 286	

Source: Compiled from the National Regional Profiles: Australia Bureau of Statistics.

Participants

Chamber of commerce executives in each town were contacted to nominate business owners for the meetings. Each nominated business owner was telephoned to schedule the meeting on a day and time convenient to the majority. Although between 8 and 10 participants were nominated in each town, the actual number of participants who attended the meetings ranged from 4 to 7. Some participants dropped out to meet important commitments on the day of the meeting. In all 32 owner / managers participated in the focus group meetings. The small sample size enabled in-depth analyses to identify individual as well as collective perceptions (Charmaz, 2005). Participants were asked to complete a questionnaire covering their personal and business details and three open-ended questions on innovation. These included what they perceived as barriers to innovation. Answers to the open-ended questions were compared with information from the focus group discussions to check for social desirability effect (Creswell 2007). The written answers were consistent with what participants shared in the discussions.

Two-thirds of the participants were male and the majority (87%) were aged between 40 and 59 years. One participant was over 60 years and three were in the 30-39 age-group. About 75% of the participants were high school or year 10 graduates, 6 had university degrees and 2 had TAFE qualifications. A large majority of participants owned one business, four owned two businesses each and two owned three businesses each. Equivalent full-time employee numbers ranged from 2 to 18 with an average of 7 employees per business. About 90% of participants were dependent on the agricultural sector for 20% to 100% of their markets. Several industries were represented including real estate, car dealership, agricultural machinery sales, construction and engineering, commodity brokerage, mechanics, hardware, clothing retail, grocery shop, gift shop, accounting services, transport, and pharmacy.

Focus Group Meetings

The focus group meetings centred on a number of questions including barriers to innovation. The researcher acted as a facilitator, probing relevant issues and refocusing the discussions when necessary. Ethics procedures were followed and participants assured that information provided will be treated confidentially. The meetings ranged from 1.5 to 2 hours and were recorded with the permission of participants. The recorded discussions were transcribed and analysed for major themes.

5. FINDINGS

Nine themes on barriers to innovation were identified. They are: size of local markets, access to human capital, industry structure, access to finance and cash flow situation, technology, infrastructure, socio-cultural trends, political and legal conditions, and international issues. Each barrier is discussed below.

Size of Local Markets

Participants in both St George and Warren identified the small populations of their towns and limited local markets as barriers to innovation. They were also concerned about preference among residents for goods and services from big towns such as Dubbo and Toowoomba. In all six towns, the internet was seen as the invisible competitor. A participant from St George was of the view that the internet could serve as a platform for exposing businesses within the community to the outside world. This will give some businesses the opportunity to build markets beyond their local areas. The issue of markets was not as prominent in Moree and Emerald as in St George and Warren. The owner of a construction firm in Moree extended sales to nearby towns. In Emerald, the concern was with price competitiveness. The high cost of operating in a mining town required that businesses pass on some of the costs to consumers. This meant their goods and services were dearer than in neighbouring towns like Rockhampton, leading to loss of customers. Participants in Wee Waa promoted and sold goods and services to customers in neighbouring towns, especially Narrabri. In all the towns, business closures were visible in the central business districts, especially in Warren. Participants explained that several businesses had closed shop due to loss of customers.

Human Capital

Human capital was mentioned as impacting innovation. The sub-themes in this area centred on quality of local leaders, skill shortage, attitude of employees and access to business support services. Participants identified that the quality of local leaders, especially their ability to access resources, promote the town, and induce population growth affected business innovation. Participants in Wee Waa suggested that their proactive economic development officers, councillors and chamber of commerce executives encouraged businesses to find solutions to problems and to innovate in response to challenges posed by the drought. In Emerald, participants criticized their councillors and leaders for allocating contracts for redevelopment of the main street to businesses in Brisbane, leaking out potential income to local businesses. In Warren, the absence of an economic development officer or a similarly funded position for business development and advice was seen as a barrier to innovation. Participants noted that the situation was aggravated by poor communication between the chamber of commerce and the local council. The difficulties business owners faced in accessing information on markets and other relevant issues as a result of tensions between the two organisations deterred innovation. The long-serving mayor and council members were also blamed for the general inertia that impeded progress and business innovation. In Moree, delays in infrastructure development due to extensive red tape and divisions among community leaders were recognised as barriers to business development and innovation.

In contrast, Dalby portrayed a proactive engagement between the business community and the local council. A committee of local council members and chamber of commerce executives met regularly to address issues relevant to businesses in the town. Issues discussed in these meetings included infrastructure development, adequacy of transport facilities, concern for the environment, management training, and information technology (IT) development. A business gap study was undertaken as part of the economic development plan to identify opportunities for local businesses. The importance of information to business innovation was acknowledged through the development of systems for collecting and compiling information on various aspects of the region. This was made available to businesses. Included in the economic development plan for the town were initiatives for assisting local businesses to develop the structures, processes and systems necessary to gain access to opportunities from the emerging energy sector. The council had compiled a database of businesses so that alliances and partnerships could be formed to source the capacity and capabilities necessary to pursue opportunities beyond the capacity of individual businesses. A participant explained that the amalgamation of councils benefited business innovation by reducing red tape, improving services to all towns in the shire and providing a united voice for the shire. Despite this positive image, divisions within the community from opposition to coal seam gas mining deterred innovation.

In all six towns, participants stated that the shortage of skilled labour was a major constraint to innovation. However, the causes of the problem varied among the towns. In the NSW cotton towns, participants noted the out-migration of residents with the relevant skills following the drought and associated retrenchments. They explained that it was difficult to attract these skills from other regions because the poor social amenities and distance from the major cities discouraged prospective employees from relocating to the towns. A participant in Warren had to put his business expansion plans on hold, although he had secured the required finance. This was because he could not source the necessary skills. The skill shortage was severe in the mining towns of Emerald and Dalby where participants discussed that local businesses were unable to compete with the high-paying mining companies for skilled workers. They explained that small businesses lost their skilled employees to the mining companies and found it difficult to attract new employees. The high cost of living rendered the location less attractive to prospective employees. In St George, a participant observed that the inability to access skilled labour was particularly prominent among businesses unwilling to take on workers on fulltime basis. Another area that concerned participants, especially in Moree, was the work attitude of Generation Y employees. It was suggested that employees in this age group desired instant gratification and quick promotion although they lacked the relevant skills, qualifications and experiences.

In many of the towns, participants spoke about the chamber of commerce business excellence awards for innovative businesses. They noted that it encouraged innovation since nominees had to demonstrate evidence of continuous improvement in various areas of their businesses. The nomination process enabled businesses to review their innovations and exposed other businesses to innovative practices. In St George, a participant pointed to gaps in the process of selecting winners. Since the accuracy of claims in the submissions was not verified, quality of submissions rather than real business improvements was emphasised.

Lack of access to professionals, particularly accountants, was also a major setback to innovation in all the towns. Some participants were concerned about the high cost but low quality of business services. In Emerald, participants completed regulatory requirements themselves but paid high fees to accountants and solicitors for oversight functions. Plans were being made in Wee Waa for monthly visits by government agencies to assist businesses with services such as registration and compliance with various legislative requirements. In St George, a participant observed that franchisees had a competitive edge over independently owned businesses because of the business support services provided by their franchisors. A participant in Emerald made reference to industry benchmarks, suggesting that they were used by franchisees to assess performance and improve their businesses. He explained that these resources would be valuable if available to independently-owned businesses. He enquired about the availability of industry benchmarks to businesses in general and recommended provision of such benchmarks with resources such as business planning kits online for all businesses.

Industry Structure

The major industry sector in each town such as agriculture and/or mining, presented both opportunities and challenges for innovation. In all six towns participants depended to varying degrees on the dominant industry for markets or supplies and were vulnerable to the state of these industries. Participants in the NSW cotton towns affirmed that they were forced to innovate to remain viable during the period of the drought, as population and disposable incomes shrunk, dragging down markets for their products and services. They also referred to automation of production processes in the agricultural sector and consequent reduction in labour requirements on farms. They elaborated that this necessitated innovative responses to the resulting lost markets of agricultural workers, especially cotton chippers.

In Moree, participants suggested that the sale of small family farms to large corporate bodies took markets away from local businesses. According to them, small farms were more stable and predictable than the corporate farms. Small farm owners purchased supplies and invested their excess cash in the community. In contrast, the corporate farms were owned by outsiders who siphoned monies for investment outside the community. They purchased supplies in bulk at low cost from sources outside the towns. In this respect, economic opportunities were leaked out of the towns. In the predominantly agricultural communities of St George, Warren and Wee Waa, participants felt that the relocation or start-up of two or more big businesses in non-primary sectors would provide the industry diversification necessary to spur innovation and growth in the small business sector. A tyre recycling and carbon capture business was proposed for Warren. The impact of an orange juice processing business and a tourism industry based on spring water were discussed in Moree. New retail buildings in Emerald were expected to bring in new businesses although there was scepticism about the ability of the local market to sustain more retail stores.

Businesses in mining communities such as Emerald saw the high cost of labour and rent as a deterrent to innovation. In contrast, rent in the satellite cities was highly subsidised for mine workers. Since these satellite cities were located away from the town, mine workers bought their food and other needs from sources outside the town. This took potential income away from businesses in the towns. One participant lamented that if the 20% to 30% of itinerate mine workers in the satellite cities were located in the town, they would add significantly to business income. It was noted that although opportunities were available to small businesses from the mining companies, the cost of restructuring business operations to take advantage of these opportunities deterred local businesses. Businesses that availed themselves of these opportunities established a two-price system. They charged the mining companies higher prices than local businesses to cover the additional cost of dealing with mining companies.

Access to Finance and Cash Flow Situations

Lack of access to capital also deterred innovation. In all six towns, participants noted that the tightening of credit to small businesses following the global financial crisis (GFC) reduced capital to the sector.

In Emerald, it was explained that with no collateral to back loan applications, small businesses were perceived by bankers as too risky. Businesses servicing the agricultural sector were further adversely affected by the tightening of credit to farmers and the declining output on farms from the drought. Without adequate financial resources, farmers were unable to pay their debts including those owed to their small business suppliers. A participant from Emerald questioned the efficacy of processing loan applications outside the region by officers with limited knowledge of local conditions. He suggested that loan decisions were based on postcodes and not the potential returns from the proposed investments.

Participants from Emerald complained about the long lead time for payment of invoices by mining companies, a situation that worsened their tight cash flow positions. A participant stated that while one mining company required its customers to pay invoices within 7 days, it delayed payments to its suppliers by up to 90 days. In the majority of towns, participants stated that customers stretched their credit, leaving businesses in tight cash positions.

Technology

Participants suggested that it was necessary for businesses to take up new technology in order to be innovative and that this required training employees to use various technologies. In St George, a participant illustrated the efficiency gains from using new technology by comparing a current model cotton picker that required one operator to an older version requiring six employees. He made reference to the reluctance of small businesses to invest in new technology and explained that the uptake of new technology need not be expensive. Small businesses did not have to purchase new machines outright but could lease or hire them. They could also outsource their business functions to contractors with the technology and capacity to undertake them at lower cost.

Preference for traditional methods of operation, especially paper-based transactions among the older generation was seen as a barrier to innovation in Dalby. Although there was evidence of increasing use of email within the community, few businesses had a web presence, a situation attributed to poor communication infrastructure. In Wee Waa, Dalby and St George, participants identified the need for satellite dishes or broadband network systems to improve access to the internet and ensure effective use of devices such as global positioning systems.

Infrastructure

In all six towns inadequate infrastructure and poor social amenities were identified by participants as barriers to innovation. In places like Warren and St George, basic facilities such as medical centres, shops and schools were inadequate. Local businesses lost customers to Dubbo and Toowoomba where residents shopped when they visited for medical attention or to see their children in boarding schools. In Emerald, Dalby and St George, participants drew attention to the poorly serviced road and rail networks as well as the inadequate air freight services that linked their towns to the major cities. They explained that these restricted access to distant markets. While mining companies contributed to infrastructure development in Dalby and Emerald, they were also the major causes of the rapid deterioration in infrastructure. The distance of St George from the major cities and the cost of transporting supplies over long distances were identified as barriers to innovation. A participant complained that he was unable to serve his customers on time due to delays in receiving supplies. In contrast, the Gwydir and Newell highways which link Moree directly to Sydney, Queensland and Victoria encouraged innovation.

Socio-Cultural Trends

When probed on social issues, participants agreed that certain social attitudes in their towns deterred innovation. In Moree and St George, participants drew attention to the general apathy among business owners to chamber of commerce and local council events. They reported that owners were reluctant to spend on improving their businesses. In Warren and Wee Waa initiatives were implemented to attract in-migrants in order to grow the population and market for local businesses. A participant was concerned about poor customer service in some businesses which he said could tarnish the image of the town and its businesses. The negative media portrayal of the Indigenous population in Moree was identified as a deterrent to population growth and business innovation. In Wee Waa, a cohesive, optimistic and resilient population was seen as a major strength of the town that saw residents through the difficult period of the drought. Residents were willing to help when called upon and responded positively to campaigns to buy local and invest in the town. However, high crime levels in the town deterred innovation in small businesses.

The conservative and risk averse attitudes of rural dwellers compared to their urban counterparts was raised in Moree. Participants mentioned that locals preferred to save rather than invest their excess cash, starving the community as a whole of capital for innovation. In Warren and Moree participants noted that a number of progressive businesses were owned by immigrants while locals were less willing to invest in business opportunities. In both towns, participants felt that an outside investor was needed to provide the boost necessary to generate business opportunities.

Political and Legal Issues

In the area of politics, participants in the majority of the towns identified that uncertainties, such as those created by the federal elections, were barriers to innovation. Business owners were unable to predict changes to policies and legislation and their impact on their businesses. The prolonged period of change from the Rudd to Gillard government and uncertainties surrounding negotiations with the Independents created barriers to innovation. Participants in all six communities also mentioned uncertainties regarding water policies and the impact on the farming sector as a deterrent to innovation in small businesses dependent on the agricultural sector.

Participants in Warren referred to the rising compliance requirements and costs as well as red tape and bureaucracy as constraints to innovation. Some participants felt that urban policy makers had limited understanding of issues in rural Australia so that they imposed disruptive policies on rural communities.

International Issues

Participants in all six towns emphasised that small businesses dependent on the major industries directly or indirectly for their incomes were exposed to trends in the global market. Participants in Wee Waa, Moree, Warren and St George discussed the impact of the drought and cotton or agricultural output while in Emerald the performance of the mining companies was a major issue. Issues associated with both primary production and mining were raised in Dalby. Participants revealed that the impact of the GFC was delayed for rural businesses because the government's rescue package sustained demand for their goods and services. Furthermore, the delayed response from financial institutions favoured rural businesses. As a result, they experienced the consequent tightening of credit a year after their counterparts in the urban regions.

The barriers to innovation in small rural businesses identified above are summarised in table 2 below. The table shows that competition from internet businesses, skill shortage, access to finance, stretched credit periods, inadequate infrastructure, political uncertainties and adverse effects of the dominant industry including global impact were common to all the communities. However, there were differences among the communities in the underlying causes of some of these barriers. For example, the causes of skill shortage differed between mining and agricultural towns. Barriers such as the small size of local markets were most severe in the small and remote towns of St George and Warren. Price competitiveness and high cost of living were unique to the mining towns, especially Emerald as was the leakage of opportunities from mining. The need for a diversified economic base was raised, particularly in the predominantly agricultural towns of Warren, Moree and St George while the problem of corporate farms was most relevant to Moree.

Table 2. Summary of Innovation Barriers in Each Community.

Innovation Barrier	**Wee Waa**	**Warren**	**Moree**	**St George**	**Dalby**	**Eme-rald**
Size of markets		x		x		
Price competition						x
Internet	x	x	x	x	x	x
Leadership	+	x	x		+	x
Skill shortage	x	x	x	x	x	x
Generation Y			x			
Access & cost of services						x
Dominant industry effect	x	x	x	x	x	x
Corporate farms			x			
Absence of larger diversified businesses		x	x			
High cost of living						x
Leakage of opportunities						x
Tight credit conditions	x	x	x	x	x	x
Stretched credit periods	x	x	x	x	x	x
Relunctance to invest in new technology		x		x	x	
Infrastructure	x	x	x	x	x	x
Apathy / conservatism of business owners	+	x	x	x		
Political uncertainties	x	x	x	x	x	x
Red tape and compliance	+	x				x
x = identified as problem + = identified as a strength						

Source: the Authors.

Local leadership was perceived as a barrier in certain towns while other participants praised their leaders for proactive solutions to local problems. Similarly, a culture of apathy and conservatism was discussed in some towns while participants in Wee Waa presented as a cohesive community where residents were willing to assist where needed. Finally, access to business services, red tape and bureaucracy were voiced as barriers in Emerald and Warren while in Wee Waa participants discussed actions taken to deal with these barriers.

6. DISCUSSION

The study investigated the barriers to small business innovation from the perspectives of small business owners in six Australian cotton communities. It found that some barriers were common to all six towns while each town also had its set of unique barriers. The common barriers were associated with the shared characteristics of the rural locations such as inadequate infrastructure; lack of access to resources (skilled labour, technology and finance); and uncertainty about government policies, especially in relation to water. In contrast, the unique barriers were associated with the dominant industry (agriculture vs. mining), remoteness (population size), local leadership (proactive vs. reactive) and social capital (apathy vs. cohesion). Some of the problems were complex and beyond the capacity of local businesses and leaders. They required attention from higher levels of government. Others could be resolved by better planning, management and initiatives in the businesses affected as well as by businesses acting collectively and in conjunction with local council leaders. We discuss each of the problems in turn.

It is well documented that sparse populations of rural areas limit the size of local markets (Griffin *et al.*, 2012; Alam and Nandan, 2010). Businesses must therefore look beyond the communities in which they are located to expand their markets. Initiatives such as selling in neighbouring towns, developing alliances with businesses in the big cities to supply them with unique local produce and selling on the internet can be used by individual businesses to increase sales. Business and local council leaders can assist by providing support and training to businesses willing to establish an internet presence. Infrastructure development such as road, rail and airfreight services that enable access to big markets in the major cities at reasonable transport costs can also assist local businesses to address the problem of access to markets.

A number of sub-themes were mentioned under human capital. Local leadership can be strengthened through the ballot and also by requiring leaders to improve their leadership skills through various governance and leadership training programs. It is important that people elected to local government positions have the relevant leadership qualifications and experiences. Networking with leaders in other towns and in the bigger cities will help local council leaders to find opportunities for businesses located in their towns (Caffyn and Dahlstrom, 2005). Local business leaders must also work with their local council leaders to find solutions to business problems.

Lack of access to skilled labour is another characteristic of remote towns associated with their sparse populations. Rural locations are often thought of as boring (Yarwood, 2005), therefore the majority of the population prefer to live in the cities. The high cost of living in mining towns also adds to the problem of skill shortage (Garnett, 2012). Addressing the problem requires initiatives from the individual businesses affected as well from all levels of governments. The 457 visas and immigration points for work in rural Australia helped to alleviate some of the problem. However, it is known that these workers do not remain in the rural locations and relocate to the cities once their residency status is established. Business initiatives that can help gain access to the relevant skills include providing remuneration and incentives commensurate to those from the bigger firms. At the local and state levels efforts can be made to increase the population and therefore skills through in-migration programs. These can take the form of improvements to social amenities, programs to make in-migrants feel at home, selling the location advantages to city dwellers, and providing incentives to encourage locals who leave to study in the bigger cities to return to work in the communities and fill some of the gaps in skills. The problem of access to professionals can also be addressed through technology. Local businesses can use cloud-based systems to access these services from other locations. The ensuing competition will push local providers to improve their services. Again the internet can help businesses to access information relevant to their operations from various web sites including those of their industry associations. These require improvements in communications technology infrastructure in rural locations, a state and federal government responsibility.

The problem of resource dependence and its impact on rural locations is also well covered in the literature (Tonts *et al*., 2012). Solutions centre on diversifying the economic base of the communities and should be led by local council leaders. Some local leaders refuse applications from big businesses seeking to locate in their towns on grounds of environmental impact. While it is good to pursue the ‘green’ agenda, this must be balanced with socio-economic outcomes. Decentralisation of regional development policies will induce competition among the regions that ultimately benefit socio-economic performance in rural Australia. State governments can also help by allocating some of the resource rent taxes they collect from output from the major resources in the rural areas to developing these areas. The Royalties for Regions initiative of the Western Australian government that returns 25% of all royalty incomes from mining to non-metropolitan regions (Tonts *et al*., 2012) is a good example.

It is true that finance to the small business sector has been tightened following the GFC (Ralston, 2009). Nonetheless, banks like all businesses must act to protect their bottom line. Lack of sufficient information on small businesses increases the risk of lending to the sector. Businesses can act to improve their access to credit by attending to their finances and developing long-term relationships with their banks. Relationship banking is often used by banks to mitigate the risk of lending to the small business sector (Chakrabortya and Mallick, 2012). Improving access to business support services, as discussed above, can help businesses enhance their financial positions and access to credit. Businesses must assess the cost of selling on credit to customers with high credit risks against pursuing new markets to improve their cash flow positions.

Strategies for addressing problems associated with technology and infrastructure development have been addressed. State governments can draw on resource rent taxes to support developments in these areas (Blackwell and Dollery, 2013). Where such monies are allocated to the regions, it must be accompanied by appropriate accountability and governance systems to ensure effective use.

Socio-cultural issues are well entrenched in rural communities and cannot be ignored when considering development programs (Brennan *et al*., 2008). According to Brennan *et al*. (2008), culture is the basis of community identity and solidarity that motivates its members to come together to address problems in the community. Socio-cultural issues differ among communities and require local solutions. However, there are opportunities for learning from communities with similar problems. For example, it was shared at the meetings that the St. George local council was networking with Moree to learn about successful Indigenous employment programs. Clear demonstration of progress through regular reporting to community members can help local leaders to break the apathy in their communities and encourage involvement. Delegating responsibilities to community groups and acknowledging and rewarding outcomes will entice other members to become involved. Local events and celebration of achievements can be used to build and maintain a sense of community and sustain social life.

It is well documented that rural and remote dwellers share a sense of loss of control over markets for their produce and decisions that affect them. This external locus of control arises because most of the output from their towns is sold in distant markets (globally and nationally) where local producers tend to be price takers (Stafford Smith 2008). Located far from the centre of government, locals are unable to have input into institutional policies that affect them. These policies are often made without considering their impact on rural dwellers. Local lobby groups can help address this problem to some extent by lobbying governments to address local issues. The onus is therefore on local leaders and residents to ensure their voices are heard.

Exposure to climatic conditions, trends in foreign markets, and fluctuations in currency movements can be addressed by diversifying the economic base and encouraging businesses in other sectors to establish in the rural areas. Federal and state governments can help by providing tax breaks or other incentives to businesses located in rural areas. The incentives must be attractive – it must enable businesses to cover the additional cost of operating in these locations, especially transport costs.

The barriers to innovation identified above therefore require efforts at all levels. Individual business owners can act proactively to reduce the adverse effects of some of the barriers on their businesses. They can also work collectively with business and local council leaders to address local issues. Networking with other rural and urban towns can provide solutions to some of the problems. It is clear that solutions to some of the problems are beyond local capabilities and capacity and require state and federal government support. These include access to technology, improvements in infrastructure and increase in human capital. All stakeholders must therefore work together to find solutions to the identified problems. The strength of local leadership has significant impact on how these barriers are addressed. It was evident from the research that issues identified as problems in some communities provided opportunity for leaders in other communities to be proactive.

Care must be taken in extrapolating the findings to other rural communities in Australia because of the limited sample size and restriction to cotton communities. Future research should include a wider selection of rural communities.

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