

CHANGING BUSINESS REALITIES?

**The Implications of
E-commerce Technologies for
Rural Non- Farm Businesses**

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April 2003

PREFACE

This report, *Changing Business Realities? The Implications of E-commerce Technologies for Rural Non-Farm Businesses*, was commissioned by the Australian Business Foundation to examine the opportunities and the threats posed by e-commerce to business capability in rural and regional Australia.

The Australian Business Foundation is an independent, private sector think tank founded and sponsored by the leading industry organisation Australian Business Limited.

The Australian Business Foundation has a single mission—to conduct and disseminate groundbreaking research to advance knowledge and foster well informed debates, new thinking and imaginative initiatives on Australia's business competitiveness, economic growth, prosperity and jobs.

This is what prompted the Australian Business Foundation to commission this investigation, which provides a snapshot into rural Australia to determine the reality of the implications of electronic commerce for rural non-farm businesses. The study was undertaken against the backdrop of current literature where substantial changes to businesses as a result of e-commerce technologies are predicted. The *real* experiences of businesses with e-commerce strategies as illustrated in this report, provide a new account of the impact of e-commerce and its significance for rural Australia.

The study was undertaken by Richard Stayner, Principal Project Director and Judith McNeill, Post-Doctoral Research Fellow of the Institute for Rural Futures at the University of New England in Armidale, New South Wales. The Institute undertakes multi-disciplinary research into issues affecting the future of non-metropolitan Australia. Richard Stayner has conducted a wide range of studies on issues relating to the economy of rural regions. Dr McNeill is an economist with extensive experience in Commonwealth and State bureaucracies as well as in University teaching and regional economic development research. Jonathan Cartledge, the Australian Business Foundation's Research Analyst contributed significantly to the composition of the final report.

The authors and the Australian Business Foundation gratefully acknowledge the contribution of the businesses that participated in this study. The interviews undertaken with these businesses were vital to determine the reality of the impacts of e-commerce as revealed in this report. It is anticipated that this study will assist businesses in rural and regional Australia to determine how best to position themselves to benefit from e-commerce technologies.

This report is just a starting point that looks at the e-commerce experiences of a small number of non-farm rural businesses. The Australian Business Foundation offers it as an invitation for others to tell their stories, so we can build up a richer picture of the way e-commerce technologies are influencing business life in rural Australia.



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EXECUTIVE SUMMARY

Introduction

Substantial changes to businesses as a result of e-commerce technologies have been widely predicted. Threats to certain types of businesses have been foretold, but at the same time, many new opportunities are said to be opening up.

The aim of this study was to assess the current state of play regarding the impact of e-commerce on inland, non-farm businesses in rural regions. These businesses merit special attention because they are already adapting to a range of other challenges such as changes to competition and tax regimes, continuing structural change in agriculture and, especially in inland Australia, the loss of population and services. In this context, the ‘distance-dissolving’ potential of e-commerce could be both the source of further challenge to them and a unique opportunity for them to achieve further efficiencies and build a wider customer base.¹

The study sought to examine how e-commerce technologies are changing or likely to change the way business is being done in rural towns and regional centres. In particular to explore:

- What are the opportunities offered by e-commerce technologies in rural areas?
- How serious are the threats in these areas?
- How are e-commerce technologies changing business costs and efficiencies?
- How is e-commerce changing business products, organisation, markets and processes?

The findings for this report were derived from 53 interviews with rural business people and other relevant informants in six inland towns in northern New South Wales. The towns were Tamworth, Dubbo, Inverell, Gunnedah, Guyra and Uralla.

These towns were viewed as typical of many inland towns with similar recent economic histories, economic structures and relationships to the wider economy. These towns also offered a variety of businesses to interview. The study focused on the impacts of e-commerce on these *businesses* rather than on its impacts on the *towns* as a whole.

The findings describe the reality of the impacts of e-commerce technologies on non-farm rural businesses and alert these businesses to ways of better capturing future benefits.

¹ See Simpson (2001, page v).

Findings

A review of the existing literature on the implications of e-commerce for business identified seven key propositions of relevance to the terms of reference of this study. These issues provide a framework against which to determine the implications of e-commerce technologies for rural non-farm businesses.

The propositions and the findings from this study are summarised as follows:

Business costs

Businesses in rural areas experience a number of cost disadvantages compared with those in metropolitan areas — particularly in transport and telecommunications. There is a resounding view in the literature that e-commerce technologies lead to savings in the costs of some basic business operations and efficiencies in the timeliness, accuracy and ease of other business processes. The findings from this study confirmed these predictions for non-farm rural businesses.

- To the extent that e-commerce technologies are affecting business costs, those technologies that have been most commonly adopted are the simplest, lowest cost applications with the most immediate benefits.
- This study observed significant cost and time savings for rural businesses in mail, banking, information retrieval, document transfer and other administrative and support functions.
- Where cost-saving e-commerce strategies were not taken up, it was often because in certain rural environments, personal contact is seen as an essential feature of business interaction.

Supply chain management

The contribution of e-commerce technologies to the reorganisation and management of supply chains is frequently cited as an area that has the greatest potential for improving business efficiency. Multi-stage supply chains would appear to present numerous opportunities for e-commerce tools to improve information flows, streamline business processes and add value for customers.

This study indicates that rural non-farm businesses are yet to exploit the full capacity of e-commerce in supply chain management.

- There were some examples of more efficient management of links in supply chains by on-line interactions.
- Some sectors, particularly parts of agricultural product chains, appear resistant to

replacing traditional personal interactions.

- The use of e-commerce tools in the comprehensive and integrated redesign of multiple stages of supply chains is not yet common.
- There was no evidence that rural businesses were switching to cheaper sources of supply identified on-line.

Wider geographical markets

E-commerce potentially widens the geographic reach of a rural business without the cost of establishing a physical presence in multiple locations. On-line transactions have the potential to replace physical sites for rural firms. This study found that businesses in rural towns were using e-commerce tools not necessarily to expand their geographic market, but to strengthen existing markets with better, more easily accessible information. E-commerce technologies—through 'clicks and mortar' business strategies—enabled businesses to complement their existing shopfront with an on-line equivalent potentially selling to distant national and international markets.

- There were only a few businesses attempting to expand their existing customer base beyond the local region by the use of on-line tools.
- Businesses that were expanding their market were mainly in either tourism or retail, and their attempts were meeting with mixed success so far.
- Some businesses that already have a wide geographical market, use their Web sites to build market knowledge of their capacities and standing.

Customer value

E-commerce tools allow businesses to change, enhance or even dramatically alter their product to better meet customer needs or to differentiate them from their competitors. This study found that rural businesses were beginning to apply e-commerce tools to add value to products and improve relationships with customers. For example, some firms tailored offers to customers based on their interests, provided on-line after-sales services or added to their product range by alliances with other firms.

- Businesses are enhancing the value of their products and services through the use of e-commerce tools for:
 - relationship marketing;
 - business alliances;
 - databases and tracking systems; and
 - on-line information and advice.
- Some businesses reported that local customers were slow to take up the on-line services offered.

New business opportunities

It has been suggested that e-commerce technologies are likely to result in opportunities for the creation of new types of business enterprises. In particular, location-independent businesses offering information-rich goods or services entirely on-line, e.g. call centres; re-intermediation businesses such as new ‘middlemen’ created to help customers navigate on-line services; and e-commerce support businesses that service the needs of other businesses adopting advanced on-line technologies, e.g. Web designers and software services.

- There were examples of location-independent businesses — businesses whose core product is sold entirely on-line — whose emergence in rural areas was enabled by e-commerce tools.
- The main new business types evident in this study were firms that provide or support e-commerce tools. While, as yet, only a limited demand for these services was reported, many firms claimed that they were about to undertake an e-commerce application, which may stimulate future demand for e-commerce support service firms.
- This study did not identify any examples of ‘re-intermediation’ businesses where new services like warehouses or brokers for on-line services were created.

Specialist and niche products

Those businesses that sell specialist or niche products are particularly well positioned to exploit the capacities of e-commerce technologies. These businesses have products that are readily represented on-line and easily and efficiently transported with the potential to appeal to a global market, e.g. craft, hobby or recreational service businesses.

- The study identified a number of businesses with specialist or niche products that were engaged in successful B2C e-commerce in rural areas. Some of the characteristics that identify these products are as follows:
 - a relatively low density of demand for the product in the local region, but in aggregate the demand is sufficient to justify the creation of a specialist business;
 - the product is often specialist or unique, with well-informed customers who actively seek information on the good or service through on-line ‘communities of interest’;
 - the product has known or standard attributes which can be readily conveyed on-line; and
 - transportation costs are low relative to the value of the product to the consumer.

Business closure

The literature points to the threats of business loss or even closure if rural firms fail to take up e-commerce technologies. It is argued that rural businesses will be by-passed or will lose market share to competitors who use e-commerce technologies to good effect, e.g. to provide better customer service, wider choice, cheaper prices and the like.

These threats, while not dismissed, are not seen as imminent by those interviewed for this study. Nonetheless, some businesses were preparing themselves against such threats by seeking to get the best of both worlds. They were using on-line technologies to reinforce the business opportunities from their local knowledge and existing customer relationships and contacts.

- None of the businesses contacted were aware of losing market share to others as a result of e-commerce technologies.
- A number of businesses in sectors that might be thought to be under threat from on-line competition reported that these threats are not yet evident, and/or that they are developing ways of operating their businesses so as to be complementary with on-line sites.
- This study identified a number of businesses that were adopting defensive e-commerce tools in order to avoid being 'left behind' and possibly losing market share, e.g. on-line help desks, expanding their product range through access to other e-commerce sites.
- Some businesses are being 'pushed' by trading partners and customers to change their systems so as to be compatible with their e-commerce procedures.

Implications

This study found that for rural businesses both the predicted threats and the anticipated boon from the uptake of e-commerce technologies have been overstated. The businesses interviewed in this study were both cautious and experimental in approaching e-commerce technologies. These businesses are taking small steps and making limited investments to learn and to test the possibilities and benefits that on-line tools can bring to their businesses.

Rural businesses are also engaging in some defensive e-commerce actions. They are seeking to pre-empt the potential threats or external pressures they are likely to face in the future as e-commerce technologies deepen their impact on the business world. Such actions include the development of more experimental e-commerce endeavours and new business offers that aim to add value to existing products and services and capitalise on local markets.

The implementation of a 'clicks and mortar' business strategy has been enthusiastically adopted by some businesses both to strengthen existing customer relationships and attract new customers.

The rural e-commerce pioneers have been those firms that sell their product entirely on-line and those businesses with specialist or niche products that can more easily expand with the use of e-commerce tools.

Businesses that were found to be more adventurous in their e-commerce applications shared the following characteristics:

- E-commerce enhanced the current business strategy.
- The business was at a particular trigger point of its development.
- The particular personal qualities of the business leader drove the interest in e-commerce.

The cautious approach to e-commerce technologies evident in this study reflects both natural reticence to the adoption of any innovation and some rural-specific factors. Of particular relevance for the latter was the finding that for rural customers and suppliers, personal contact and the 'touch and feel' factor in their buying decisions were an important part of doing business in rural towns that could not be replaced with e-commerce tools.

In short, this study concluded that while e-commerce technologies are, in fact, changing the business realities of non-farm rural businesses, this is an incremental rather than a revolutionary change.

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1

PURPOSE AND METHOD OF THE STUDY

Background

The Organisation for Economic Co-operation and Development and others have foreshadowed a revolutionary impact of e-commerce on business.² Business processes would be re-organised, and new avenues would open up for technology diffusion and business networking. Workers' roles and skills would be redefined. Closer relationships between businesses and consumers would be created. There was also a warning that some businesses might disappear altogether ('disintermediation'), while new businesses and new products would emerge ('re-intermediation').

One type of business that would appear to warrant special attention is businesses in rural towns. For these businesses, already adapting to a range of other challenges such as National Competition Policy, a new tax regime, continuing structural change in agriculture and, especially in inland Australia, the loss of population and services, the 'distance-dissolving' potential of e-commerce is being seen as both the source of further challenge to local businesses and a unique opportunity for them to become more efficient and to build a wider customer base.³

Aim

This study aimed to provide an understanding of how e-commerce technologies are changing or likely to change the way business is being done in inland rural towns and regional centres by non-farm businesses. It was not intended to be a comprehensive analysis of e-commerce use in rural Australia. Rather it sought to examine first hand the way in which e-commerce technologies are influencing the business operations of a sample of non-farm businesses in typical inland rural towns and regional centres. The factors looked at in this study are based on the most likely transformational effects of e-commerce advanced by existing literature.

² OECD (1999: page 10).

³ See Simpson, R. (2001, page v). *The Internet and Regional Australia*. RIRDC Publication No. 01/087. Rural Industries Research and Development Corporation, Canberra; and NOIE (2000b, page 26).

Terms of Reference

The specific questions explored in this study were:

- What are the opportunities offered by e-commerce technologies in rural areas?
- How serious are the threats in these areas?
- How are e-commerce technologies changing business costs and efficiencies?
- How is e-commerce changing business products, organisation, markets and processes?

Definition of E-commerce

There are both broadly inclusive and narrow definitions of e-commerce. It is clear from the literature that e-commerce functions are now taken to include, but go well beyond, on-line monetary transactions with other firms. Some writers, however, distinguish between *e-commerce*, narrowly construed to refer only to such transactions, and *e-business*, which embraces the broad range of functions that are conducted electronically, including electronic trading, Electronic Data Interchange (EDI), Electronic Funds Transfer (EFT), shared databases and directories, electronic news and information services, customer support, Web-based research and e-mail.

For the purposes of this study the broader definition is adopted, and e-commerce is defined as follows:⁴

Electronic commerce (e-commerce) is the exchange of information across electronic networks, at any stage in the supply chain, within an organisation, between businesses, between business and consumers or between public and private sectors.

As such, e-commerce will potentially impact on:

- business processes, business-to-business interaction and the exchange between businesses of intermediate goods or a wide variety of process information ('B2B'), and
- transaction processes between businesses and their customers in the purchase of final goods or services ('B2C').

⁴ Adapted from NOIE *E-commerce Beyond 2000*. DOCITA (2000c, page 2).

Definition of Rural

'Rural' is commonly understood to refer to all parts of Australia outside the metropolitan areas, where metropolitan is defined as the capital cities and other major urban centres with populations over 100,000, together with their immediate hinterlands. Rural areas contain a highly diverse set of regions, with a wide variety of economic and business functions, covering as they do high growth coastal regions as well as inland areas. There are significant differences between the economic and social contexts of inland and coastal areas, and it was considered that inland areas would provide the context for more interesting investigation of the potential for e-commerce. Therefore, this study focuses on inland towns specifically.

Characteristics of Rural Towns

About 14 per cent of the workforce of rural Australia is employed in agriculture or services to agriculture (compared with only one per cent in the metropolitan areas), while around 8 per cent are employed in the financial services sector (16 per cent in metropolitan areas). Apart from these industry groups, the employment structure of rural Australia is quite close to that of metropolitan areas.

Other relevant characteristics of the economies of these towns include the following:

- There is considerable variation in their direct dependence on agriculture and other primary industries.
- Low densities of population and demand restrict the ability of businesses targeting only local or regional markets to grow significantly.
- The larger regional centres have been referred to as 'sponge cities', because of their increasing ability to attract business and population from smaller towns in their regions through exerting 'agglomeration economies'. The trade catchments for regional centres can be quite large, overlapping those of the smaller towns in their region and beyond.
- A single large private sector employer dominates the economies of some rural towns, and in most towns, public sector entities (hospitals, schools, and local government) also represent relatively important economic players.
- The increasing mobility of rural people, and the increasing geographical diffuseness of their economic and social networks and relationships, means that rural people now relate to a much wider range of rural places than in the past. There is therefore considerable 'leakage' of local customers to businesses in nearby towns as a result of their increased frequency of travel to larger towns in order to access higher level economic and social services.
- There is still, however, often a strong sense of the 'shared local fates' of the community. That is, *place matters* to the residents of rural towns in the sense that they have a perception that their economic and social well-being are dependent on (amongst other things) the capacity of the local business community to remain

healthy. This generates a degree of local support for, and interest in, the fortunes of local businesses.

- One expression of this sense of shared fates is that in many towns there are cooperative or collaborative efforts by economic development agencies or local government authorities to foster business awareness and adoption of e-commerce.⁵

Characteristics of Rural Businesses

Characteristics of rural businesses relevant to the context of the study are:

- Most are small,⁶ and many serve only local or regional markets.
- Because many rural businesses exist to serve local or regional markets, and market expansion is difficult, many either do not have the capacity to grow or do not have a strong desire to grow significantly.
- Others, however, are both growth oriented and capable of significant growth, especially those with innovative or unusual products. They seek wider markets because of the limiting local or regional market, especially if efficient size is not achievable at levels of demand available in their region.
- The importance of national and international brands (franchises, agencies, buying groups) is increasing relative to local brands (such as family-owned stores). These franchises, brands and branches can be conduits for innovation in business processes.
- Growth in the national economy has created a wide range of new business functions and tasks, and this has resulted in an increasing diversity of business types represented in many rural towns. New business types and functions have been added, replacing old ones.

Given the considerable body of research on the use of the e-commerce by *farm* businesses,⁷ this study focused on *non-farm* businesses. Some of these were businesses that deal closely with the farm sector, either as suppliers of goods and services to farm businesses and households, or through the transport and further processing of farm commodities. Some of the businesses interviewed were not actually located within the towns, but in the surrounding countryside. These included some non-farm businesses that were operated by farmers. In this study 'rural businesses' refers specifically to non-farm inland rural businesses.

⁵ In the towns included in this study, these include the Heartland E-commerce initiative in Dubbo (www.dubbo.com.au), Tamworth On-line (www.tamworthonline.com.au/), and Inverell On-line (www.inverell-online.com.au).

⁶ Of all private non-agricultural businesses in Australia around 97 per cent are small (Lattimore *et al.*, 1998, page 9). In rural towns, the percentage is likely to be even higher.

⁷ See for example, a number of studies funded by the Rural Industries Research and Development Corporation, including Groves (1999); Groves and Da Rin (1999a, 1999b, 2000); Papandrea and Wade (2000) and Simpson (2001).

Methodology

Selection of towns

The six towns included in this study are all inland towns, considered to be typical of a large number of other inland towns with similar recent economic histories, economic and business structures and relationships to the wider economy. These towns were chosen because they are likely to contain a good cross section of the businesses found in rural towns. Since the focus of this study is on individual businesses rather than on the towns themselves, differences *between* the towns in terms of business use of e-commerce was not analysed.

Dubbo and Tamworth: These are large regional centres of over 30,000 people and provide a wide range of business and household related functions, including health, education and recreation services. They provide the broadest range of goods, services and functions below the metropolitan centres. Both towns are major transport nodes and have large employers in more than one industry and in the public sector, as well as large numbers of small employers.

Inverell and Gunnedah: Both of these towns have relatively static populations of around 10,000 people. There are large employers in one or two industries, and both have a reasonably broad industry mix, but they are mainly rural service centres. In the past ten years, some of the largest employers in Gunnedah have either closed (meatworks) or contracted (coal mining), while the largest employer in Inverell (an abattoir) is growing again under new ownership after a period of closure during the mid-1990s. Gunnedah, being only 80 km from Tamworth, may be increasingly in its economic 'shadow'.

Guyra and Uralla: Both towns have around 2000 people, but population is relatively static. These towns have lost much of their rural service centre function in recent decades to larger nearby centres (especially Armidale and Inverell). At the same time, they benefit from their proximity to Armidale through being the location for other businesses that serve the Armidale market. There has been significant small business innovation and growth in both places. Many Uralla residents work in Armidale (about 20 km away), and therefore see that as their business and service centre.

Selection of businesses

Businesses were initially selected from three industry groups: agribusiness (businesses supplying goods and services to the farm sector and/or otherwise involved in the value chain for agricultural products), tourism businesses and retail businesses. This was later broadened to include other businesses that appeared to be using e-commerce in ways that would illuminate the terms of reference of the study. Thus, a strictly representative sample of businesses in these towns was not selected. Rather, businesses were sought out selectively to cover those that might have an instructive story to tell. As such, the report provides a 'snapshot' of the experiences of these businesses.

Initially businesses were identified in each town by searching on the name of the town in various search engines, and by scanning lists of businesses in community Web portals and directories. These included Dubbo City On-line⁸, Inverell On-line⁹ and Tamworth On-line.¹⁰ These were supplemented by information collected from local and regional development agencies, local government staff and other local business people, who provided referrals to businesses that were believed to be either actively using e-commerce or were 'e-commerce ready'. The Web sites of dozens of other businesses that were not interviewed were examined. The information gathered from these has also been instructive for the study's purposes. The 53 businesses included in the study are listed in Appendix B.

Interviews and interview protocol

Semi-structured interviews, usually of up to one hour, were conducted with key informants from each of the businesses during the three months from August to October 2001. Respondents were either owner-managers or those with primary responsibility for the implementation of e-commerce in the business. A list of the questions, which served only as a guide in most cases, is reproduced in Appendix A. Most interviews were also tape-recorded. Initial contact was usually made by telephone, followed by e-mailing or faxing an explanatory letter, brief background statement and list of topics to be covered in the interview.

Information was collected on what businesses were doing and had done in the area of e-commerce, and their perceptions of how it was affecting their business, rather than quantitative data on the costs and benefits of their use of e-commerce, as it soon became clear that they did not typically collect and analyse such data.¹¹

Thus, this report focuses on what businesses in rural and regional areas are doing, why, and what their owners and managers judge to be the emerging outcomes. For some businesses, it was too early to tell what the ultimate effects might be. As well, many businesses saw their use of the tools as 'experimental' at this stage, in the sense that they were taking small steps to learn how the technology applied to their particular situations, and were prepared to make small investments in that learning without looking for immediate pay-offs.

Case studies

The information collected in the interviews is treated as a series of case studies that contain lessons on the way a diverse set of rural businesses in Australia is so far dealing with the new technologies offered by e-commerce. The nature of the case study format — in keeping with the aim of this report — is that it provides a 'reality check' on the emerging impact of e-commerce use by rural businesses.

⁸ www.dubbo.com.au

⁹ www.inverell-on-line.com.au

¹⁰ www.tamworthonline.com.au

¹¹ Other researchers have also found that businesses typically do not collect and analyse such data. See Marshall and McKay (2001) and NOIE (2000a).

Structure of the Report

Chapter Two identifies seven key issues in the current literature surrounding e-commerce that provide a framework against which to examine the experiences of the businesses interviewed in the course of this study. Using this framework, Chapter Three presents the findings of the case study businesses and interviews.

Chapter Four discusses these findings in greater detail and specifically discusses the implications, opportunities and threats of e-commerce technologies for rural non-farm businesses. Chapter Four concludes with some predictions of the possible implications of e-commerce tools for rural non-farm businesses in the future.

2

KEY E-COMMERCE ISSUES

Introduction

In 1999 the Organisation for Economic Co-operation and Development (OECD) predicted that e-commerce would change the way business would be done and that it would ‘transform the marketplace.’¹² A large number of subsequent reports reinforced these views, particularly the US report on *The Emerging Digital Economy II 1999* which noted that e-commerce and its enabling technologies are ‘growing and changing at breathtaking speed, fundamentally altering the way Americans produce, consume, communicate and play’. In Australia, two early reports examining the macroeconomic impact of e-commerce predicted an impact on GDP comparable to that of the National Competition Policy reforms.¹³

These reports reflect the generally high expectations that have been held for the adoption and impact of e-commerce. As with any transforming technology, however, it is difficult to identify precisely where the greatest effects will be felt. The theoretical frameworks for explaining and predicting the spread and effects of the technology are relatively underdeveloped.

The impact of e-commerce technologies has been the focus of a large number of reports and newspaper and magazine articles over the last three years.¹⁴ None of this literature has addressed directly the issue of the spatial impacts of e-commerce technologies as they might affect non-farm businesses in rural towns. However, existing literature does suggest seven key propositions of relevance to the terms of reference of this study. These propositions provide a framework against which to examine the experiences of the businesses interviewed in the course of this study.

¹² OECD (1999: page10).

¹³ NOIE (2000b, page 32) and NOIE (2000c).

¹⁴ Included in the key Australian literature are DFAT (1999), DFAT (2001), NOIE (2000a and b), NOIE (2001a and b), Yellow Pages (2001) and Papandrea and Wade (2000). Overseas, OECD (1999) set the scene for a large research agenda now underway. The OECD sponsored Electronic Commerce Business Impact Project (EBIP) has already produced 30 reports on 14 sectors in ten countries, with the aim of providing policy-makers with a better understanding of the e-commerce environment of participant countries (www.oecd.org/electroniccommerce). The early reports from EBIP and also the sector reports from the United Kingdom (see Hawkins and Prencipe 2001, www.ukon-lineforbusiness.gov.uk and www.dti.gov.uk/publications) are informative literature.

The propositions are:

▪ **Business costs.**

Is e-commerce delivering efficiencies in the cost of doing business in rural towns?

▪ **Supply-chain management.**

Are e-commerce tools enabling improved ways of managing supply chains in rural areas?

▪ **Wider geographical markets.**

Are existing rural businesses using e-commerce to attempt to reach a wider geographical market?

▪ **Customer value.**

Are rural businesses adding customer value by exploiting the capacities of e-commerce tools to enhance key attributes of their goods or services?

▪ **New business opportunities.**

Are new business opportunities emerging in rural towns as a result of e-commerce technologies?

▪ **Specialist and niche products.**

Are specialist or 'niche' products, with key attributes readily represented on-line, lending themselves to successful business-to-consumer (B2C) e-commerce in rural areas?

▪ **Business closure.**

Are rural businesses losing market share or closing down as a result of e-commerce technologies?

This provides the background to the areas covered in the case studies described in Chapter Three.

Business Costs

Is e-commerce delivering efficiencies in the cost of doing business in rural towns?

There is a resounding view in the Australian literature that e-commerce technologies lead to savings in the costs of some basic business operations.

As NOIE reports:

*For the majority of participants in the case studies (62%), e-commerce was viewed primarily as an opportunity to improve the efficiency of business operations.*¹⁵

These savings came from electronic communications, using a Web site as a marketing tool, and using the Internet to conduct financial transactions. The communications efficiencies are time and money saved by using e-mail instead of face-to-face discussion, telephoning or faxing. The marketing efficiencies include savings made by businesses using their Web sites to present a wide range of information that can be readily updated. Businesses save printing and postage costs by replacing printed brochures, and save staff time that was taken up in responding to telephone enquires. The financial efficiencies include the savings made by using on-line banking to pay staff and suppliers.

NOIE has attempted to quantify the cost savings on basic business operations attributable to e-commerce for 34 case studies.¹⁶ Ignoring the costs of *establishing* the e-commerce application, the *ongoing* benefits (savings due to using the Web site as a marketing tool, communications savings and other factors), minus the *ongoing* costs (such as maintaining the Web site and answering e-mails) were positive for 28 (or 82 per cent) of the 34 businesses. Of the businesses in that study reporting negative ongoing savings, time spent answering e-mails was identified as the major cost.

Businesses in rural areas experience a number of cost disadvantages compared with those in metropolitan areas. The main cost disadvantages are related to transport and telecommunications costs. Because of the lower density of businesses and government offices in rural Australia, many of the businesses and government agencies that rural businesses have to deal with are not local. This increases the proportion of telephone and fax calls that are charged at STD rates. As well, delivery of goods to and from the capital cities usually takes longer and is more expensive, while the low density of customers makes servicing them by personal visit time-consuming and expensive. E-commerce tools therefore offer the potential for reducing such cost disadvantages to rural business.

In addition to the potential for cost savings in basic business operations, the popular press frequently refers to the potential for sourcing inputs from cheaper suppliers located through Internet search.

¹⁵ NOIE (2001a, page 2).

¹⁶ NOIE (2001a).

Supply Chain Management

Are e-commerce tools enabling improved ways of managing supply chains in rural areas?

The e-commerce literature is increasingly drawing attention to business-to-business (B2B) e-commerce and the reorganisation of business supply chains in particular as the area that has the greatest potential for improving business efficiency.¹⁷ A supply chain refers to the flow of goods, information and services from raw material suppliers through factories and warehouses to the final consumers.¹⁸ A typical example of a supply chain and the information flows that could accompany it in a rural context is as follows:

A buyer for a meat processor buys some sheep in a grazier's paddock. This generates a range of information that is relevant to various parties, which includes the basis for determining the price, transport arrangements, payment details, and so on. These must be communicated to other parties in the chain, such as the meatworks, the stock transport operator, the grazier, animal health authorities, and perhaps others. On arrival at the meatworks, other processes are set in train that generate more information relevant to various parties, and information on the stock, regarding weight, condition and value will be recorded and transmitted to both the grazier and other relevant authorities such as export inspectors. As the carcasses are cut up and packed, information identifying the paddock they came from could be kept with the shipment, so that any problems of product quality through to the final consumer can be traced back to the grower. After leaving the meatworks, numerous other parties enter the chain, including road and sea transport, importers, retailers, and so on. This opens up a large number of business-to-business relationships, where a wide array of information gets exchanged including, but not limited to, information on the exchange of ownership of goods and payments.

All of these information exchanges between parties are areas for potential efficiencies or adding customer value through the use of e-commerce tools.

The Productivity Commission's recent analysis of productivity gains in the wholesale trade sector called it the 'stand out performer of the 1990s' compared with other sectors of the Australian economy, and attributed the gains to how the sector was using electronic communications technologies more effectively:

¹⁷ NOIE (2001b, page 5) state that 'the real impact of e-commerce is in delivering productivity and efficiency benefits through a transformation of business processes and forging savings along the value chains of industry sectors'. This sort of e-commerce underpins the productive growth of the economy and is therefore much more than 'simply putting up a Web site or implementing a system of electronic procurement'.

¹⁸ Turban *et al.*, (2002, page 40).

Bar-coding, scanning and picking technologies, together with inventory management systems, enabled businesses to streamline their operations and move away from storage-based to fast flow-through systems, reducing the need for additional storage (capital) and handling (labour).¹⁹

Reviewing studies of firms' use of ICT in the US and elsewhere, Banks noted that it takes time to achieve productivity gains as new processes, procedures and organisational structures evolve.²⁰ The clear message emerging from the studies, according to Banks, was that:

...generally speaking, the large productivity gains do not come from 'bolting on' ICT to existing modes of production. The gains come from using ICT as part of a process of business transformation. Flexibility and adaptation are keys.²¹

The use of e-commerce tools in the management of agricultural supply chains appears to offer significant opportunities for improved efficiencies, with benefits for the entire supply chain. Possible applications might include improved quality control through the traceability of product throughout the chain, resulting in better transmission of relevant price and quality information back to the farm level, improved inventory management and better scheduling of shipping. Considerable attention is being given to these possibilities in many farm industries.

Wider Geographical Markets

Are existing rural businesses using e-commerce to attempt to reach a wider geographical market?

Electronic commerce widens the market place to national and international markets. Selling on-line removes the expense of setting up a physical presence (requiring retail space and multiple inventories) in every location where a business wishes to sell.

In some of the earlier e-commerce writings, the vision was that on-line retailers would be selling direct to masses of customers all over the world. However, one point on which there is widespread agreement in the more recent Australian and overseas literature is that, in general, on-line sales are still typically only a very small part of a firm's total revenues for pre-existing businesses that established a Web presence.²²

Reaching a wider market is nevertheless still a strong incentive for investing in e-commerce tools. NOIE²³ stated that 38 per cent of businesses rated potentially higher

¹⁹ Banks (2002, pages 9 and 12).

²⁰ Banks (2002).

²¹ Banks (2002, page 12).

²² Hawkins and Prencipe (2001), NOIE (2001b, page 10).

²³ NOIE (2001a, page 2).

sales to new and existing markets as the primary opportunity of e-commerce. Since rural businesses are often at some distance from major markets, and local markets are small, the use of such e-commerce tools might enable businesses with growth aspirations to reach a wider market.

Customer Value

Are rural businesses adding customer value by exploiting the capacities of e-commerce tools to enhance key attributes of their goods or services?

The management literature suggests that ‘nothing has caused so much churn and managerial nervousness’ as the arrival of the capability of doing so much business using telecommunications networks.²⁴ Corporations, small companies and entrepreneurs are all hunting for the same thing: how to find a ‘new value proposition (what one offers to sell or do in exchange for a customer’s cash) in an economy in which networks are transforming how people live and work’.²⁵ The understanding is that new tools, such as e-commerce, allow businesses to change, enhance or even dramatically alter their product. The management texts typically quote the Amazon.com example. Because consumers like to browse through bookstores, often picking up what catches their eye, selling books on-line posed a challenge for Amazon to simulate this interaction on-line.

Amazon.com therefore changed its product mix, and as Cortada writes, the company:

...used technology to provide customers the kind of attention that had begun to disappear from the big chains, such as suggesting other books that a potential customer could buy by relying on software to identify titles. Minimum-wage employees in physical bookstores could not compete against good data mining software. Virtual bookstores stayed open twenty-four hours a day; the traditional stores did not. The major American book chains, such as Dalton, Borders and Barnes & Noble, already in process of traditional consolidation into larger ones, found their market shares challenged.²⁶

In short, one way to induce a customer to buy, on-line, a product which they might have preferred to handle first, is to provide a fast service, mammoth inventory and excellent ‘data-mining’ which enhances the attributes of the product. Information about customers, products and markets is applied to make different products and create improved, more economically attractive services.²⁷ In fact, in both on-line and off-line environments, the ability to differentiate products by attaching information or additional services to them ‘is a differentiator in an age when almost any competitor can build a

²⁴ Cortada (2001, page 13).

²⁵ Cortada (2001, page 14).

²⁶ Cortada (2001, page 12).

²⁷ Cortada (2001, page 37).

reliable product at a competitive price'.²⁸ Nationally, product-service linkage is taking place in Australian manufacturing 'in many and diverse ways'.²⁹ For this, the Internet is an ideal facilitator. Clearly, it will be interesting to explore the extent to which businesses in this study are seeking to become more competitive by adding customer value, through the use of e-commerce tools.

New Business Opportunities

Are new business opportunities emerging in rural towns as a result of e-commerce technologies?

Economic theory predicts that when new technologies are invented and adopted by businesses and governments, a force of 'creative destruction' will begin.³⁰ The changes occur both directly and indirectly. With the use of e-commerce by business, three new business opportunities can be identified as potentially occurring:

Re-intermediation businesses

The first of these opportunities occurs directly through a process of what is termed 're-intermediation'.³¹ Re-intermediation refers to the process of replacing 'middle-men' displaced by e-commerce tools with new intermediaries who respond to new opportunities created by on-line services, e.g., warehousing functions for the fulfilment of on-line purchases. 'Middle-men' might be displaced because producers sell directly to customers without going through distributors, whilst new opportunities might arise because customers, now having to sort through a much wider array of sellers, may appreciate the role of a broker to reduce the complexity and search costs.

Location-independent businesses

A second business opportunity is created through the selling of information-rich goods entirely on-line. A business such as this is not dependent for its success on proximity to customers, suppliers or raw materials. A good example of a location-independent business is a call-centre. Assuming the necessary telecommunications infrastructure and human resources are available, this business can be just as viable in a small town as it would in a larger urban centre.

E-commerce support businesses

A third business opportunity emerges from the creation of businesses to service the needs of other businesses adopting advanced technologies. For example, Internet Service Providers, Web designers and computer hardware and software businesses are businesses that provide these support or service functions. As on-line purchases

²⁸ Cortada (2001, page 37).

²⁹ Marceau *et al.*, (2002, page 9).

³⁰ Schumpeter, J. (1939).

³¹ See, for example, Turban *et al.*, (2002, pages 62 and 423-426).

become more popular, document delivery services may decline, but there may be an increase of demand for couriers, postal services, carriers and freight forwarders, which deliver the goods ordered over the Internet. There are also predictions that the warehousing function in certain strategically located rural towns will increase because of cheaper warehousing costs.³²

Specialist and Niche Products

Are specialist or 'niche' products, with key attributes readily represented on-line, lending themselves to successful business-to-consumer (B2C) e-commerce in rural areas?

A distillation of the reports containing case studies on e-commerce experience in Australia reveals that whilst precise characteristics can not be generalised at this stage, there are certain types of product or service that seem to lend themselves particularly well to e-commerce — particularly using the Internet.³³ Some of the characteristics that seem to identify these products are:

- a relatively low density of demand for the product in the local region, but in aggregate the demand is sufficient to justify the creation of a specialist business;
- the product is often specialist or unique, with well-informed customers who actively seek information on the good or service through on-line 'communities of interest';
- the product has known or standard attributes which can be readily conveyed on-line; and
- transportation costs are low relative to the value of the product to the consumer.

Often, such items can also have a rural flavour. Examples are orchids, indigenous music and the (now famous) *Mick's Whips*.³⁴

This proposition aims to explore whether businesses selling products with niche characteristics in rural areas are experiencing a similar pattern of success in e-commerce transactions to businesses analysed in other studies.

Business Closure

Are rural businesses losing market share or closing down as a result of e-commerce technologies?

Assertions in the e-commerce literature such as: 'those who ignore this trend [to adopt e-commerce] do so at their own peril' and: 'use it and new things become possible, ignore it and new forms of competition eat at a firm's bottom line'³⁵ clearly contain a

³² For example, *Australian Financial Review*, 2 May, 2001, page 3.

³³ See, for example, Papandrea and Wade (2000); DFAT (2001) and NOIE (2001a).

³⁴ *Mick's Whips* founder, Michael Denigan sells high quality handmade leather products from an isolated property 80 km south of Darwin (DFAT 2001, page 100).

³⁵ NOIE (2001a, page v).

threat that firms will lose business if they do not adopt e-commerce. In other words, in the rural context, businesses that do not keep up with the technology may find that clients turn to competitors that do, either in or outside the local region. Whether such a threat is being felt is clearly an important question to ask the businesses in this study.

Coulthard takes this threat further, with a suggestion that irrespective of whether local firms employ the new technologies or not, e-commerce may lead to 'the increased import of goods and services into non-metropolitan regions and the domination of these businesses by large businesses based in urban areas'.³⁶ This is because the economic structures of small rural towns, Coulthard believes, are especially vulnerable to 'disintermediation'. That is, these towns contain many businesses that may be bypassed altogether as a result of e-commerce.

The literature on disintermediation suggests that firms most at risk are those serving principally local or regional markets; have markets that have hitherto been protected by distance; and sell products or services that have key attributes which are readily convertible to digital form. Examples in the rural context would be local retailers of goods such as CDs and videos, local travel agencies, local real estate agents, local livestock agents and the like. Again, investigating whether these threats are yet apparent for the rural businesses in this study, and if they are, how rural businesses are responding, are questions of particular interest.

³⁶ Coulthard, (2001, page 1).

3

FINDINGS AND CASE STUDIES

Introduction

This Chapter details the findings of the research into the impact of e-commerce technologies on rural non-farm businesses. In particular, it explores the opportunities, threats and impacts of e-commerce technologies for rural firms. The findings summarised in this Chapter are distilled from the case studies and interviews undertaken as part of this study. The findings are described against the framework of the key issues as identified in Chapter Two.

Business Costs

Is e-commerce delivering efficiencies in the cost of doing business in rural towns?

- **To the extent that e-commerce technologies are affecting business costs, those technologies that have been most commonly adopted are the simplest, lowest cost applications with the most immediate benefits.**
- **This study observed significant cost and time savings for rural businesses in mail, banking, information retrieval, document transfer and other administrative and support functions.**
- **Where cost-saving e-commerce strategies were not taken up, it was often because in certain rural environments, personal contact is seen as an essential feature of business interaction.**

Types of savings

E-commerce tools yielded cost savings in almost all of the case studies examined or reviewed in the literature. While the types of costs saved often depended on the nature of the businesses and the tasks specific to those businesses, the most common ones were:

- savings on telecommunications costs through using e-mail;
- savings in time spent banking;
- savings in time spent responding to telephone queries, brochure printing and postage by having a Web site;
- time savings in delivery of documents by e-mail; and
- savings in payroll preparation.

Case Study 1: Safefish

Bryan and Helen Singh established Safefish³⁷ in 1997 in Tamworth. It raises and supplies high quality chemical-free table fish to restaurants, the wholesale trade and direct to the public. Its unique aquaculture methods give its fish the qualities Bryan uses as a key selling point. Since high-end consumers have a strong interest in how the fish they eat are raised, detailed information on this is presented on the Safefish Web site along with nutritional information, preparation advice and other information for the trade. The site fulfils a brochure role, although it generates follow-up phone calls from people who need more information. Given the information-intensive nature of the industry, Bryan and Helen have also found the Web site invaluable for giving them access to industry and research information on aquaculture methods and equipment.

Most respondents believed that significant *net* benefits were obtained from relatively simple and low cost applications such as e-mail and on-line banking. Extra costs incurred by e-commerce were identified as related either to time or to implementation. Some respondents mentioned the cost of extra time spent responding to e-mail inquiries generated by their Web site. With respect to implementation, it was observed that cost savings from e-commerce adoption are usually obtained only by incurring certain other costs of implementing and maintaining the tools, such as hardware, software, training, Web development and maintenance and ISP costs.

For example, Emma Goddard, of Goddard Wool Marketing in Inverell, pointed out that standard wool industry software allows the widespread use of Electronic Data Interchange (EDI) to obtain wool test results from the Australian Wool Testing Authority, the receipt of auction results from Australian Wool Exchange, and the sending of invoices and shipping instructions, all of which save considerable time and cost compared with the methods they replace.

³⁷ www.safefish.com.au

Southern Lights Candle Company³⁸ in Boggabri found that electronic banking has made international payments to suppliers easier, and enabled them to service an international customer base better.

Businesses that are part of corporate intranets (those that are branches, franchisees, agencies or members of buying groups) often found that they were able to achieve cost savings through their use of e-commerce tools designed and implemented by the 'parent', and that their adoption was facilitated by the training and support available from that source.

Improving business processes

Apart from the direct cost savings, there was often an improvement in the quality of a task (e.g. accuracy, timeliness, and convenience) as a result of conducting it in an on-line mode. Several businesses noted the convenience and security benefits of not having to handle large amounts of cash. As well, the document delivery capability of e-mail was frequently mentioned as a major boon to businesses that need to send things like complex technical graphics or pictures. For example, Inverell's local newspaper, *The Inverell Times*³⁹ like many others in the region, is printed in Tamworth in order to reap the economies of size of a centralised printing facility. The ability to send page layouts instantly to the printing facility means that editorial and layout functions can still be done in individual communities, and continually revised up to the last minute, as well as allowing late advertisements to be accepted, which adds to revenue.

Business specific savings

An example of cost savings specific to a particular type of business is a law firm that saves on the costs of maintaining a professional library (see Case Study 2). Since most legal firms in rural areas are small, and the relatively fixed nature of these costs weighs more heavily on small firms, this represents a potentially important cost saving for rural legal firms.

Case Study 2: Harris McHugh Lawyers

Harris McHugh Lawyers⁴⁰ is a Tamworth firm who found that, by going on-line for their information services and precedents, they have been able to do away with their expensive and bulky (space-hungry) library. They now have far greater access to legal information services than before. Whereas previously they subscribed to sixteen hard copy services, they now have access to over 150 services through one provider. They also have access to all their precedents on-line, and so avoid having to maintain and update their own precedent database, which was a massive task that incurred significant expenditure. They have also found that the capacity to transmit and receive documents on-line has made it feasible to service clients locally and interstate.

³⁸ www.kidzwax.com

³⁹ www.inverell.yourguide.com.au/home.asp

Another business-specific example of cost savings can be seen in freight forwarding, where Peter Hoffman of Tamex (see Case Study 12) estimated that the three or four paper copies of a consignment note previously generated might have been handled up to twelve times, but on-line documentation has greatly reduced this.

The use of the Web as a research tool was mentioned by a number of other respondents; in particular those businesses for which innovation was a key component of their competitive position (see Case Study 3). This allowed these businesses to remain better informed about developments in their industry, including the actions of their competitors and developments in government agencies and regulatory authorities.

Case Study 3: Ruddweigh

Ruddweigh⁴¹ in Guyra is a manufacturer of electronic livestock scales and other electronic livestock recording systems for national and international markets. Ruddweigh staff use the Web intensively not only to facilitate communication with its customers and suppliers (both of which are geographically very dispersed) but also to remain well informed on product development possibilities and competitors.

The importance of personal contact in rural business

Some cases were identified where e-commerce strategies had not been implemented even where they had the potential to provide cost savings. This was often found to occur because in certain rural environments, personal contact is seen as an essential feature of the interaction between the parties.

Emma Goddard of Goddard Wool Marketing (Inverell) observed some contexts in which personal interaction is still preferred. She noted that there seemed little scope as yet for e-mail to replace much of the personal and phone contact with the woolgrowers they represent: “They still want someone to come out at shearing time and discuss the market with them.” There is also as yet little use of e-mail for dealing with wool buyers, who “... still like to ring up and haggle for a price.”

These comments were frequently echoed elsewhere. Peter Hoffman of Tamex Transport (see Case Study 12) noted that the majority of their customers were rural businesses that “... preferred to use the phone and have a bit of negotiation.”

⁴⁰ www.solicitorsnsw.com

⁴¹ www.ruddweigh.com.au

Supply Chain Management

Are e-commerce tools enabling improved ways of managing supply chains?

- **There were some examples of more efficient management of links in supply chains by on-line interactions.**
- **Some sectors, particularly parts of agricultural product chains, appear resistant to replacing traditional personal interactions.**
- **The use of e-commerce tools in the comprehensive and integrated redesign of multiple stages of supply chains is not yet common.**
- **There was no evidence that rural businesses were switching to cheaper sources of supply identified on-line.**

The Web as a source of suppliers

With regard to the possibility of achieving cost savings through the on-line identification of lower cost input suppliers, the study found no evidence that rural businesses were changing their suppliers to any significant extent as a result of the use of these tools alone. However, Aileen MacDonald of Guyra Rural Services (a feed, seed and fertiliser agent) did mention that she searches the Wesfarmers Web site to find the most efficient source of supply (taking into account both price and delivery costs) within the New England region.

If this study had found that this was happening to a significant extent, it would have raised the possibility that existing local suppliers of business inputs were being bypassed in favour of cheaper non-local sources. In other words, cost savings for one rural business represent a threat for their existing suppliers. While not necessarily changing their suppliers, many rural businesses are using the Web to be better informed about what is available. They have a better understanding of the characteristics of inputs and alternatives available, and are able to be more discriminating customers.

The use of e-commerce in larger supply chains

As noted earlier, this study identified numerous instances where B2B e-commerce interactions between firms in adjacent stages of a supply chain have reduced costs and improved the quality of information flow.

As further examples, some businesses are using on-line tools to conduct the subtle and multi-dimensional interactions required in making purchasing decisions. Some are

using digital photography and other image digitising processes (copies of plans, diagrams and the like in digital form) for sending information on characteristics and capabilities of products and inputs.

Bindaree Beef in Inverell noted the benefit of being able to send a photograph of a needed part to a supplier. Some panel beaters now use digital photographs as substitutes for on-site inspection of damaged vehicles by the insurer's representative, resulting in significant cost savings.

In aggregate, these tools are inevitably improving the efficiency of the supply chains of which they form a part. The term 'supply chain management' however, is usually taken to mean a more comprehensive redesign of entire supply chains using the capabilities of various e-commerce tools. This study did not observe any examples of these in the rural businesses interviewed.

Importance of traditional methods

It seems that as yet some sectors retain a preference for traditional supply chain relationships. The wool industry has a number of on-line selling functions and other applications that would seem to offer means of reducing high transaction costs at various points in the wool supply chain, such as e-wool⁴² and the Australian Wool Exchange's 'eclipse' system.⁴³ Both wool producers and some of the major wool buyers, however, appear to retain a strong preference for traditional selling methods. This is a source of frustration to other businesses in the supply chain, such as brokers, who can see efficiencies in the on-line methods.

Wider Geographical Markets

Are existing rural businesses using e-commerce to attempt to reach a wider geographical market?

- **There were only a few businesses attempting to expand their existing customer base beyond the local region by the use of on-line tools.**
- **Businesses that were expanding their markets were mainly in either tourism or retail, and their attempts are meeting with mixed success so far.**
- **Some businesses that already have a wide geographical market, use their Web site to build market knowledge of their capacities and standing.**

⁴² www.e-wool.com.au

⁴³ www.awex.com.au

Tourism

Most examples of the geographic expansion of trade area were found in the tourism sector. The manager of Country Apartments,⁴⁴ up-market tourist apartments in an off-highway location in Dubbo, believes that his Web site has resulted in very useful expansion of his customer base, because it is linked to and prominently displayed in the accommodation section of the Dubbo City On-line Web site. However, the owner of a motel located on a busy highway in Guyra and relying largely on the 'drive-by' trade, claimed very little impact from his listings in Web-based tourism and accommodation directories.

The key distinctions between these examples may be: the different market segments sought by these two businesses; the accommodation search and booking modes favoured by customers in those segments; and the different types of information presented on the sites. For example, while the product characteristics of budget-priced motel accommodation are fairly homogeneous, the well-illustrated Web site of Country Apartments allows potential guests to become better informed as to its distinguishing features, and seeks to justify the premium tariffs charged. This is a large and diverse sector and the impacts are uneven.

The manager of the Inverell Tourist Information Centre claimed that the Inverell On-line site⁴⁵ had generated significant numbers of overseas visitors who had planned their itineraries from information obtained on that site. As well, Inverell hosted a major tourism event in April 2001, the Tom Roberts Festival⁴⁶, backed up by a very detailed Web site whose information-rich content would seem to appeal to its target audience of arts and culture enthusiasts. The manager of Inverell On-line noted that the site had received a large number of hits. Local tourism interests believe that it attracted 'high yield' visitors, visitors who tend to 'leave more money' in the town.

Retail

In the retail sector, Blowes Menswear is an example of a store seeking to expand its market area. The manager pointed to some of the typical hurdles to be overcome in developing a wider customer base (see Case Study 4: Blowes Menswear).

Narnia Bookshop⁴⁷ in Tamworth is using its Web site to assist in developing a national market for its specialised products. Narnia specialises in children's books, educational texts and study guides, and books on Aboriginal education. While Narnia has been operating for many years, it opened its Web site only recently, so that it is too early to assess the outcome.

⁴⁴ www.countryapartments.com.au

⁴⁵ www.inverell-on-line.com.au

⁴⁶ www.tomrobertsfestival.com.au

⁴⁷ www.edubook.com.au

Case Study 4: Blowes Menswear

A retailer who has sought to expand his existing market area is Brendan Blowes, of Blowes Menswear.⁴⁸ The store has main street locations in both Dubbo and Tamworth. It also has a Web site featuring internationally known Australian ‘country’ brands such as Akubra, R.M. Williams, and Drizabone. Brendan admits that he has not yet found out how to make the site deliver greatly increased sales, in particular because ‘the marketing of the site has been a problem’. Brendan is aware that the characteristics of brand name clothing are widely enough known to overcome the problem of not being able to present the ‘touch and feel’ factor on a Web site. However, he also notes that his Web site competes with the sites of the brand names he is featuring, which may offer discounted prices. The Blowes site has so far generated small but patchy sales from overseas. Brendan intends to persevere and experiment, however. In this he is probably like many other retailers who are learning whether and how the characteristics of their products, markets and customer interactions fit into, or can be adapted to, an on-line environment.

Christine Ball, of the Barking Dog Gallery in Uralla, is a craftsperson who attempted to expand her geographic market through an attractive and award winning Web site. However, she reported that she made very few sales through that site. She found that the ‘touch and feel’ factor was crucial to the sale of her ceramic art, glass and woodworking pieces. The uniqueness of individual items means that few people were willing to purchase from a picture on a Web page.

Building market knowledge

This study found some small businesses that already have a presence in a wide geographical market are using their Web site to build knowledge about their capacities and ‘standing’. It is one way of quickly answering the question: *I’ve heard of this business, but who are they, what have they done, and what can they do?* It can be the first step in building trust and credibility in a business. In other words, a Web site offers a medium by which rural businesses can become better known beyond their local area. Phoenix Foundry (see Case Study 5) is an example.

Case Study 5: Phoenix Foundry

Phoenix Foundry,⁴⁹ a manufacturer of a wide range of cast bronze plaques, insignia and sculptures in Uralla, is a specialist business with relatively low density of demand for its products in the local area. Phoenix already has a national focus, with sales offices in Brisbane and Melbourne. It uses the Web to display its product range, enquiry form and other details about the business, including its history, growth, and staff.

⁴⁸ www.blowesmenswear.com.au

⁴⁹ www.phoenixfoundry.com.au

Uncle Billy's Retreat also uses a Web site to better service its existing non-local market (see Case Study 6).

Case Study 6: Uncle Billy's Retreat

Uncle Billy's Retreat⁵⁰ a 'trophy trout lake and cabins' on a New England grazing property, attracts visitors from Brisbane and South East Queensland. The co-owner, Sue Atkin, says that the best publicity they have had is television lifestyle programs and word-of-mouth, but the Web site fulfils a convenient 'brochure' role for enquirers who become aware of it in other ways. The site does not have a booking function, but Sue says that prospective visitors usually like to telephone anyway to gather further information on local conditions.

Similarly, Print Anything,⁵¹ a screen-printing business in Inverell, had customers as far afield as Geelong and Western Australia even before putting up a very basic and non-interactive Web site, but found that it has generated considerable interest from outside the Inverell region.

Customer Value

Are rural businesses adding customer value by exploiting the capacities of e-commerce tools to enhance key attributes of their goods and services?

- **Businesses are enhancing the value of their products and services through the use of e-commerce tools for:**
 - **relationship marketing,**
 - **business alliances,**
 - **databases and tracking systems, and**
 - **on-line information and advice.**
- **Some businesses did report that local customers were slow to take up the on-line services offered.**

Relationship marketing

One example of a business that is using e-commerce tools to strengthen its relationships with its customers is P.J. Nesbitt & Son of Inverell (see Case Study 7: Nesbitt's Brandhouse). Michael Nesbitt's Brandhouse may be seen an example of 'relationship marketing'. Although the store does not sell on-line, it uses on-line technology to

⁵⁰ www.unclebillys.com.au

⁵¹ www.northnet.com.au/~printany

engage customers in experiences that connect them to the ‘bricks and mortar’ store. It also provides experiences that give young people of Inverell a sense of connection with a broader youth culture. Michael has grasped that there are important dimensions of his product that can be captured by new ways of interacting with his customers.

Case Study 7: Nesbitt’s Brandhouse

Michael Nesbitt, the fourth generation of his family to be involved in P.J. Nesbitt & Son, Drapers & Mercers of Inverell, is experimenting with an imaginative amalgam of ‘bricks and clicks’. Having worked in banking in Sydney for several years, Michael came back to the family business aware of the increasing pressures on department store retailing affecting traditional family department stores in rural towns (as well as the city giants such as Myer and David Jones). These pressures are a result of changing consumer behaviour favouring specialist category retailers. Michael is an enthusiast for the Web. In July he started another physical outlet with a Web presence, Nesbitt’s Brandhouse⁵² in smaller premises nearby. This sells ‘brand-name gear’ aimed at younger customers – clothing, skateboards, accessories, and novelty gifts. New customers are issued with a member’s card, and there are discounts and monthly prizes for members. Winners are announced on the Web site, where members are exposed to announcements of new stock, specials and discounts in store. The site also has a video tour of the store. The Brandhouse site links to the sites of the brand names carried in store, which have a good deal of content that resonates with youth culture – surfing news, clothing and other fashions, reviews of music events, and so on. The aim is to build the Brandhouse name by increasing the interaction between the target customer group and the physical store via the Web site.

Business alliances

Another way of adding customer value is through the development of alliances with other businesses. These alliances widen the range of goods and services that a rural business can offer to its customers. Linkages or alliances with a remote (in these cases international) partner are a common feature of Burnet’s Books (see Case Study 8) and Scrapbook Memories (see Case Study 10). The alliance that Burnet’s Books has formed has greatly expanded the range of titles available to its customers and at the same time, enabled overseas customers better access to its catalogue.

Scrapbook Memories in Tamworth offers its customers access to a wider range of craft materials through an association with a major US catalogue firm, facilitated by on-line communication.

⁵² www.duckinhere.com

Case Study 8: Burnet's Books

Burnet's Books, (formerly Australian Book Collector)⁵³ is a second-hand and antiquarian book dealer in Uralla. About half of its sales originate on-line. The trade has traditionally relied on printed catalogues to inform the market of their stock lists, but the proprietor, Ross Burnet, was quick to see the potential of computerised records and on-line access to reach a wider market more efficiently. Ross made several attempts to develop a centralised site to hold the records of Australian dealers. These attempts were unsuccessful, however, due to the cost and logistical difficulty of managing the software development (being done in Sydney) from Uralla. Before the database could be perfected, however, a US company, Advance Book Exchange⁵⁴ offered a similar but more comprehensive database of around two million titles. Ross now contributes monthly updates of his catalogue to that database for a modest fee. He still maintains his own Web site and on-line catalogue, and is able to offer much improved service to his on-line enquirers through his relationship with Advance Book Exchange.

Databases and tracking systems

Another example of adding customer value is an on-line appointment booking service offered by Pro-Attitude Hair Styling,⁵⁵ a hairdresser in Dubbo. This adds customer value by allowing appointments to be booked when the business is closed. All appointments are confirmed by phone or e-mail, perhaps during less busy times or after hours, which may improve staff efficiency.

Harris McHugh Lawyers of Tamworth have developed a particularly innovative system to allow clients on-line access to their files in order to track the progress of a legal matter in real time, such as checking on the progress of a title search. This is a significant improvement for both solicitor and client over the traditional way of clients phoning the solicitor to see how their matter is progressing. Michael McHugh reports, however, that clients have been slow to use the service.

On-line information and advice

The Mitre10 Hardware⁵⁶ corporate site offers a wide range of on-line information and advisory services, and links to every store. The site offers plans for DIY jobs, discounts on materials if the customer sources the information from the Web site, and a range of other services. This is the kind of information function that seems ideally suited to on-line delivery. Ken McKenzie of the Gunnedah Mitre 10 store said, however, that there seems to be very little interaction of local customers with his store via the Web. Ken suggested that rural customers might be different from metropolitan customers in this respect. In metropolitan areas, there are many alternative sources of supply and customers may find it convenient to use the Web to compare prices and availability of

⁵³ www.ozbook.com

⁵⁴ www.abebooks.com

⁵⁵ www.proattitude.com.au

⁵⁶ www.mitre10.com.au

product. Ken said rural people do not have this choice and in any case, seem to prefer visiting their familiar local store.

New Business Opportunities

Are new business opportunities emerging in rural towns as a result of e-commerce technologies?

- **There were examples of location-independent businesses — businesses whose core product is sold entirely on-line — whose emergence in rural areas was enabled by e-commerce tools.**
- **The main new business types evident in this study were firms that provide or support e-commerce tools. While, as yet, only a limited demand for these services was reported, many firms claimed that they were about to undertake an e-commerce application, which may stimulate future demand for e-commerce support service firms.**
- **This study did not identify any examples of ‘re-intermediation’ businesses where new services like warehouses or brokers for on-line services were created.**

The literature outlined in Chapter Two suggested that the advent of e-commerce technologies was likely to result in opportunities for the creation of new types of business enterprise. In particular, three new opportunities for businesses were identified:

- location-independent businesses selling information-rich goods entirely on-line, e.g. call centres;
- re-intermediation businesses such as new ‘middlemen’ created to help customers navigate on-line services; and
- e-commerce support businesses that service the needs of other businesses adopting advanced on-line technologies, e.g. Web designers, software services and the like.

Location-independent businesses

Electricity21 (see Case Study 9) is an example of a business whose emergence in Dubbo has been enabled by the availability of e-commerce infrastructure and tools. The business opportunity arose because of the complexity of the choices and management tasks facing business consumers of electricity in the newly restructured electricity industry. The function the business performs is highly information intensive.

Case Study 9: Electricity21

Electricity21⁵⁷ is a business in Dubbo that, while its establishment is not explained by the advent of e-commerce tools, operates effectively in a rural location because of these tools. It is operated by Energy Management Services, which negotiates complex supply contracts for heavy consumers of electricity with their energy suppliers. Electricity21 provides the software to check a consumer's accounts against the negotiated contract, evaluates contract performance, and develops the information to be used in future contract negotiations. Its location in Dubbo has little impact on its efficiency, although the proprietor noted that the development of the software became less efficient when a key developer moved to Brisbane. This is a business that deals entirely in goods or services that can be digitised (provided electronically), and so can locate its operations and serve customers from anywhere. The proprietor sees no essential obstacle to servicing, say, North American clients from the Dubbo base. Its customers also benefit from regular updates of information on electricity charges and software.

Aurora Practical Systems⁵⁸ is another information-intensive business whose location in Dubbo is facilitated by e-commerce tools. Aurora conducts a broad range of business development and consultancy activities, including business planning, marketing, public relations, research, human resources management and event management, for clients over a wide geographical area, including internationally. It also has call centre facilities. Because much of its 'stock-in-trade' can be carried out on-line, its rural location is not a significant impediment to its efficiency. This is not a business, however, that can be entirely conducted over telecommunications linkages; personal contact is still essential. Air passenger services from Dubbo meet that need in this case.

Three other businesses that might be seen as relatively 'location-independent' are Orana Originals Needlework Design,⁵⁹ Scrapbook Memories,⁶⁰ and Southern Lights Candle Company in Boggabri.⁶¹ Because these businesses also fit the 'niche products' category, they are discussed in the next section.

E-commerce support businesses

The most common form of new business opportunity appeared to be those that were either wholly or partially involved in providing e-commerce services, such as Web design services, computer sales and service and similar support functions. As expected, these were more evident in the larger towns (Dubbo and Tamworth). They included IT Web Consultants,⁶² E-info,⁶³ Axxis Technology,⁶⁴ Knet Technology,⁶⁵ Tamworth On-line,⁶⁶ Aussie Media⁶⁷ and McDonagh Computer Services⁶⁸. While these firms believed

⁵⁷ www.electricity21.com.au

⁵⁸ www.aurora-ps.com

⁵⁹ www.oranaoriginals.freeservers.com

⁶⁰ www.scrapbookmemories.com.au

⁶¹ www.kidzwax.com

⁶² www.itweb.com.au

⁶³ www.e-info.com.au

⁶⁴ www.axxis.com

⁶⁵ www.knet.com.au

⁶⁶ www.tamworthonline.com.au

⁶⁷ www.aussiemedia.com.au

strongly that e-commerce offered important opportunities for businesses in rural towns, and were attempting by a variety of means to encourage adoption by their customers, they reported that local interest in and adoption of e-commerce had generally been slow and disappointing. This may change, however, as many of the other businesses interviewed said that they were about to 'do more' with e-commerce, or perhaps revive an earlier experiment in creating a Web presence in order to 'do it better'.

Specialist and Niche Products

Are specialist or 'niche' products with key attributes readily represented on-line lending themselves to successful business-to-consumer (B2C) e-commerce in rural areas?

- **The study identified a number of businesses with specialist or niche products that were engaged in successful B2C e-commerce in rural areas. Some of the characteristics that identify this product are as follows:**
 - **a relatively low density of demand for the product in the local region, but in aggregate the demand is sufficient to justify the creation of a specialist business;**
 - **the product is often specialist or unique, with well-informed customers who actively seek information on the good or service through on-line 'communities of interest';**
 - **the product has known or standard attributes which can be readily conveyed on-line; and**
 - **transportation costs are low relative to the value of the product to the consumer.**

Two interesting examples of businesses with niche products using e-commerce strategies are Scrapbook Memories (see Case Study 10) and Orana Originals Needlework Design.

Case Study 10: Scrapbook Memories

Scrapbook Memories⁶⁹ in Tamworth sells specialist stationery and other materials for the rapidly growing craft of 'scrapbooking'. A local woman, who originally sold the goods by mail order from her home, started the business. She acquired shopfront premises to improve the storage and display of stock and to provide an area to hold instructional workshops in the craft. The business appears to have successfully expanded its market reach through a well-designed Web site. Since starting to sell on-line, she has found that on-line sales alone amount to a viable business, but that there are still advantages to maintaining a shopfront as well. She has been surprised by the growth in on-line demand for her products.

⁶⁸ www.mcdonagh.com.au

⁶⁹ www.scrapbookmemories.com.au

Orana Originals⁷⁰ creates needlework patterns of original artworks, including indigenous designs, and sells these entirely on-line, often with the materials for their completion, to individuals and craft shops all over the world. A woman with no previous computer experience started the business, and it has grown well beyond her expectations.

Both of these businesses had low start-up and production costs, together with product characteristics that are readily represented on-line. Their markets are characterised by on-line and off-line global ‘communities of interest.’ These characteristics often apply to businesses serving specific craft, hobby and recreational communities.

Southern Lights Candle Company⁷¹ is another business with some but not all of these characteristics. It is a manufacturer, wholesaler and retailer of beeswax candles in Boggabri (near Gunnedah). Its main customers are gift and craft shops and the general public in Sydney, Melbourne and overseas. An alliance with a US firm has allowed it to add a wide range of products to its own stocks, and to wholesale these to Australian retailers. While Southern Lights still finds that it is necessary to attend Australian and overseas trade fairs in order to develop their overseas markets, maintaining those relationships is facilitated by various on-line tools, including e-mail and its Web site.

Business Closure

Are rural businesses losing market share or closing down as a result of e-commerce technologies?

- **None of the businesses contacted were aware of losing market share to others as a result of e-commerce technologies.**
- **A number of businesses in sectors that might be expected to be under threat from on-line competition reported that these threats are not yet evident, and/or that they are developing ways of operating their businesses so as to be complementary with on-line sites.**
- **This study identified a number of businesses that were adopting defensive e-commerce tools in order to avoid being ‘left behind’ and possibly losing market share, e.g. on-line help desks, and expanding their product range through access to other e-commerce sites.**
- **Some businesses are being ‘pushed’ by trading partners and customers to change their systems so as to be compatible with their e-commerce procedures.**

⁷⁰ www.oranaoriginals.freeservers.com

⁷¹ www.kidzwax.com

Identifying threats

The extreme case of loss of market share is business closure. Because e-commerce can put customers into direct contact with suppliers of goods and services, there is the potential for removing some wholesaling, retailing or other intermediary functions ('disintermediation'). These functions are usually strongly represented in rural towns.

The study did not identify, during fieldwork interviews, any examples of rural businesses closing for this reason alone (and in any case, it is usually difficult to ascribe a business failure to a single cause). Following the completion of interviews for this study, however, a newspaper report attributed the closure of a music retailer in Tamworth to competition from a combination of a discount department store and 'the Web'. It was not clear whether this referred to the downloading of music directly from on-line music sites, or the purchase of CDs from Web-based retailers.

Despite the possibility that bookstores in rural towns could be particularly vulnerable to loss of market share, given the success of on-line retailers such as Amazon.com, the booksellers interviewed did not perceive an immediate threat, and could see opportunities for the Web sites and physical stores to complement each other (see Case Study 11: Angus & Robertson).

Case Study 11: Angus & Robertson

The major bookstore chain, Angus & Robertson, has developed its own corporate Web site, which performs a range of information and marketing functions including order processing. At the moment, orders placed through the corporate site are delivered by mail and not credited to the local store. Potentially this would indicate the threat of loss of revenue for local (physical) stores, however, the proprietor of Angus & Robertson Tamworth noted that customers — perhaps preferring to buy local — ignore the option of ordering on-line and come to his store with printouts of titles from their Internet searches, to order through him. This suggests that at the moment, given a preference for local interaction, the parent company Web site and the local bookstore are complementing each other, and that the availability of on-line search tools may actually be increasing sales through the physical store.

It seems that the seriousness of the potential threat to bookstores will depend upon how each store adapts and exploits the potential complementarities; for example, how quickly the local retailer can arrange delivery of ordered items, and what in-store services (such as product advice and coffee) are emphasised in order to distinguish the in-store from the on-line experiences.

Other examples of rural businesses that could be threatened by sales from the Web sites of parent companies include white goods, for example Retravisation. One Retravisation dealer claimed that this was not yet an issue, because on-line sales are delivered through and credited to the local store. He also noted that even where customers are accessing detailed product information and performance comparisons on-line, such as for audio and video equipment, they are still visiting the physical store to see and hear the equipment demonstrated, and to place their orders.

This is another example of marketing channels operating in a complementary rather than competing way. While the increasing complexity of audio and video goods would seem to give the Web an advantage over local store staff as sources of information on the characteristics of the equipment, personal interaction with store staff and direct experience of product performance (such as in listening rooms) still serve important purposes for most customers.

Defensive e-commerce

The study identified some examples of businesses whose adoption of e-commerce tools could be described as 'defensive' in the sense that it was aimed at forestalling the possible loss of market share by matching, or pre-empting, the actions of their competitors or potential competitors. Peter Hoffman of Tamex Transport was one example (see Case Study 12).

Case Study 12: Tamex Transport

Tamex Transport is an express freight forwarding company employing 80 people, with its head office in Tamworth and branches in Brisbane, Moree, Dubbo and Newcastle. It uses e-mail and Internet banking, and is currently installing a job tracking system. The CEO, Peter Hoffman, believes that adopting e-commerce technologies is an essential step in ensuring his firm's survival because the larger carriers from which Tamex takes some of its freight will be reluctant to use a company that cannot receive data electronically. Peter also noted that if his business did not soon offer its customers on-line interaction, in a few years it would not win contracts against the large national firms.

Similarly, Aileen MacDonald of Guyra Rural Services, a seed, feed and fertiliser merchant said she was keen to keep abreast of on-line methods not only because of the potential cost savings, but to defend against any commercial advantage that a competitor might gain through implementing e-commerce.

Another example of defensive behaviour can be seen in the business strategies of rural newspapers. Classified advertisements for real estate, motor vehicles and employment represent major revenue streams for them. Since these are the kinds of information functions that are already being offered on-line, these Web sites represent potential threats to the 'market share' of rural newspapers. Many, such as *The Inverell Times*, are responding to this potential threat and 'defending their brand' by maintaining Web sites which offer not only classified advertising in these key categories, but news and other information functions. These sites appear to be little used as yet. Editor Ned Makim believes this is because almost everyone receives the local newspaper, but only a minority have an Internet connection, and a printed newspaper has advantages in terms of the convenience of its physical form for the users of classified advertisements.

These businesses tended to describe the defence of their market share in broad terms, along the lines of 'we can see the way things are going, and we don't want to be left behind.' While this might suggest that they did not base their actions on a well-

developed business case (a comparison of benefits and costs), the data for such a case are as yet elusive. Instead, they were taking small, experimental steps along a gradual learning curve, rather than undertaking a major (and possibly risky) investment in e-commerce.

Customer 'push'

In some instances, important customers are requiring that their suppliers conform to their e-commerce procedures. This is pushing those suppliers to adopt e-commerce in order to avoid losing business. For example, some local government councils (such as Inverell Shire) are requiring their suppliers to deal with them on-line. This is likely to stimulate the adoption of e-commerce by local businesses, because local government councils are usually important economic entities in rural towns and are important customers for particular local businesses.

Summary of Findings

In brief, this study provides a 'reality check' on the ways e-commerce technologies are changing the way business is being done by non-farm rural businesses. It found that for rural businesses, both the predicted threats and the anticipated boon from the uptake of e-commerce technologies have so far been overstated.

The findings of this snapshot of the impact of e-commerce technologies shows a cautious and experimental approach by rural enterprises. They are taking small steps and making limited investments to learn and to test the possibilities and benefits that on-line tools can bring to their businesses. There are also some defensive e-commerce actions to pre-empt what rural firms see as potential threats or external pressures they are likely to face in the future as e-commerce technologies deepen their impact on the business world.

Business costs and processes

- To the extent that e-commerce technologies are affecting business costs, those technologies that have been most commonly adopted are the simplest, lowest cost applications with the most immediate benefits. The use of e-commerce in this manner is providing savings for rural businesses in mail, banking, information retrieval, document transfer and other administrative and support functions.
- There were some examples of more efficient management of links in supply chains by on-line interactions. But e-commerce technologies were not being used in the comprehensive redesign and operation of supply chains by the non-farm rural firms interviewed.

- The study found relatively few businesses attempting to use e-commerce to support a deliberate strategy of geographical expansion. The presumed opportunities for local businesses through suddenly being able to sell to the world are not yet evident from most of the businesses interviewed.

Opportunities

- While at an early stage of development, the most explicit examples of e-commerce technologies being used to create new business opportunities and growth came from applying them to add value for customers. This involved using e-commerce to enhance the attributes of products and services to make them more attractive to customers, e.g. tailoring offers to customers based on their interests, diversifying the product range through alliances or providing on-line after sales service.
- The study found that there are significant opportunities in rural towns for businesses that are relatively 'location-independent' and that rely extensively on e-commerce tools. For 'location-independent' businesses, e-commerce technologies serve to minimise some of the disadvantages to their location in a rural town. This was also the case for e-commerce support businesses like software providers or Web designers, to service the likely increasing demand for e-commerce tools by rural businesses.
- New business opportunities enabled by e-commerce technologies were identified in rural towns for businesses that sell specialist or niche products. These businesses have products that are readily represented on-line and easily and efficiently transported and have the potential to appeal to a global market, e.g. craft, hobby or recreational service businesses.

Threats

- With respect to the threats posed by e-commerce technologies, the businesses interviewed did not indicate any imminent threats of loss of market share or business closure from on-line competition. Some businesses, however, appreciated the possibility of increased competition from e-commerce enabled businesses and recognised the need to be prepared for that competition.
- Some businesses appeared to be getting 'the best of both worlds' with a 'clicks and mortar' strategy against potential on-line threats, by marrying local knowledge, existing customer relationships and the value of personal contact with judicious use of on-line technologies.

Overall, the findings of this study indicate that the implications of e-commerce technologies for the businesses interviewed were dependent upon: the size of the business, its products, the stage of development of the business, its strategic focus and the personal characteristics of key staff. These implications will be explored in more detail in Chapter Four.

4

THE IMPLICATIONS OF E-COMMERCE FOR RURAL NON-FARM BUSINESSES

Introduction

The predictions of the impacts of e-commerce, even in the late 1990s, were that it would ‘radically alter economic activities’ and ‘transform market places’.⁷² The breadth of the predicted impacts on the economic structure provided the rationale to investigate the implications of e-commerce for rural businesses today.

This Chapter explores the significance of the findings of this study into the impact of e-commerce technologies on rural non-farm businesses. In contrast to the predictions of existing literature, the picture painted by this study is of a cautious, experimental take-up of e-commerce strategies by rural businesses, rather than transformational change to business behaviour and opportunities. While there were a few businesses for which e-commerce was a key feature of their growth, rural business people did not generally report that they had radically altered their activities or that their market places were rapidly transforming.

This Chapter will discuss firstly, the cautious approach to e-commerce by rural businesses and determine the reasons for this approach. Secondly, this Chapter will outline the factors that operate in conjunction with e-commerce tools in rural towns that result in more experimental applications of e-commerce and in some cases new business opportunities.

A Cautious Approach

The majority of the businesses interviewed in this study indicated a cautious approach to the implementation of e-commerce technologies. For these businesses, e-commerce technology was adopted only where substantial cost-savings and improvements in efficiency could be made with a minimal investment of time and money. Thus, those e-commerce tools that are relatively simple to understand and have clear potential

⁷² OECD (1999).

benefits (for example, email and on-line banking) were found to be quickly adopted by rural businesses.⁷³

When the technology gets more complex and the investment is greater, the majority of the businesses interviewed appeared less likely to employ e-commerce tools. For example, this study did not find any evidence of the use of e-commerce by rural non-farm businesses to re-organise supply chains. The difficulties of using e-commerce in this manner are widely documented in recent e-commerce literature.⁷⁴ Agricultural supply chains can be particularly complex, in terms of the volume and types of information generated, the number of different participants, and their receptivity to replacing culturally ingrained modes of interaction. Major transformations of agricultural supply chains will therefore require substantial investments of time and money. The complexity and cost involved in redesigning entire supply chains to exploit the capacities of e-commerce is a disincentive for businesses to adopt e-commerce for this particular application.

Rural retailers seeking to expand their market encounter other difficulties. Most rural town retailers are little known outside their local or regional markets and may find it difficult to establish national or global markets, until they have established a trusted 'brand' and reputation.⁷⁵ Much is made of the importance of a trusted brand in the B2C literature and this is why the well-known national retailers are said to have an advantage.⁷⁶ For a rural retailer, the process of setting up the necessary financial and logistical infrastructure for national or international sales may be lengthy and costly.

Steinfeld is sceptical of the success of such a strategy for non-metropolitan businesses (in the US):

*Except in special cases, such as when local providers are offering truly niche products unavailable elsewhere, or have already developed a successful off-line business catering to distant customers, targeting distant markets is not likely to be successful for the majority of businesses.*⁷⁷

In spite of a reluctance to pursue more complex e-commerce applications, the broader implications of the adoption of the relatively simple e-commerce technologies by rural businesses can be substantial. For example, this study documented many rural businesses using the Internet as a research tool to rapidly accumulate information on competitors, new products and innovations. As a result of the information retrieved from the Internet, those businesses become better-informed and more demanding customers to their existing suppliers. The literature on regional economic growth⁷⁸

⁷³ The rapid uptake of these technologies can also be seen as indicative of the sensitivity of rural businesses to telecommunications cost disadvantages and the reduced access to branch banking in rural towns.

⁷⁴ NOIE (2001b); Hawkins and Prencipe (2001); OECD (2001b); Cortada (2001, Chapter 5).

⁷⁵ OECD (2001a, page 25).

⁷⁶ Hannen (2002) notes how well placed are the well known retailers, Coles Myer and David Jones, to attract shoppers to the net: 'With their well known and trusted brands and their ability to use existing supply chains to reduce costs it is not surprising that these companies are among the retail survivors'.

⁷⁷ Steinfeld and Klein (1999, page 4).

⁷⁸ See Porter (1990).

shows that demanding customers can stimulate innovation in their (local) supplying firms, with beneficial effects that can be seen in the local economy more generally.

The widespread uptake of basic e-commerce technologies and the reluctance of rural businesses to pursue more complex e-commerce applications such as those in market expansion or supply chain management, are consistent with the insights of Rogers regarding the characteristics of an innovation that explain the likelihood of its adoption.⁷⁹ These characteristics are the degree to which: it offers a clear advantage relative to current methods, its results are observable, it is not complex, and it is 'trialable'. In addition to the justification provided by Rogers for this cautious approach, a number of reasons specific to rural areas and businesses can also be identified.

Reasons for Caution

While the cautious approach to e-commerce by rural businesses is contrary to the 'transformational' expectations of the literature, the case study interviews revealed a number of reasons justifying this approach by rural businesses. Many of these reasons are specific to rural businesses (for example, barriers to learning about e-commerce in rural towns) and therefore not necessarily factored into theories predicting the impact of e-commerce more generally. The distinguishing attitudes and culture of rural businesses as evidenced in this study are pertinent to the evaluation of the impact of e-commerce on these businesses.

Minimal on-line competition and an off-line consumer culture

The literature reviewed in Chapter Two indicated that there was a threat that firms will lose business if they do not adopt e-commerce tools. In the rural context, this literature implies that businesses that do not keep up with e-commerce technologies may find that customers turn to competitors operating on-line either in or outside the local region.

It is important to acknowledge the difficulties inherent in determining the impact of e-commerce on business performance. For example, it may be difficult for a business to determine the extent to which on-line sales into their region from elsewhere are encroaching on their market. An increase in local sales to an on-line competitor is not easy to detect, compared with an increase in business flowing to a local physical competitor. In addition to these considerations, while a fall in sales might be apparent, attributing this to a single cause may be difficult, given the range of factors currently influencing business conditions in rural towns.⁸⁰ Nonetheless, the case studies in this study indicate that there is, as yet, no clear evidence of the threat of loss of market share or business closure from on-line competition.

⁷⁹ Rogers (1995).

⁸⁰ See, for example, Productivity Commission (1999, Chapter 3).

It appears that one of the major reasons why non-local on-line competitors have failed to make inroads into the market share of rural business is that consumers have not yet taken to *purchasing on-line* in sufficient numbers for the impacts on individual businesses to have been noticed. Certainly, the business press and other reports have drawn attention to the fact that uncertainty about security and privacy of transactions is still a major concern.⁸¹ As well, NOIE⁸² reported that only eleven per cent of adult Australians shopped on-line in the twelve months to November 2000, and of these, 67 per cent spent less than \$500 on-line in that time. Compared with the total retail spending of all Australians in that year, it is clear that on-line shopping is not sufficient to represent a general threat to most retail businesses at present. NOIE also reported that while 11 per cent of adults in metropolitan areas shopped on-line, only six per cent of adults in rural areas did so.⁸³

The low incidence of on-line sales provides two reasons justifying the cautious approach to e-commerce by rural businesses evident in this study. Firstly, a low incidence of consumer spending on-line indicates that there are only small (if any) gains in market share to be made through e-commerce. Secondly, those businesses that serve these customers and therefore theoretically compete with rural 'off-line' businesses would not be presenting a threat to these businesses at present.

The question arises as to why rural customers may be slow to switch to on-line modes of interaction. Some of the businesses that mentioned their customers preferred to continue to deal with them off-line said that a high proportion of their customers lived out of town and, they claimed, were either not connected to the Internet or had unreliable connections. Others were 'IT shy,' or for one reason or another simply preferred to deal with them in person or by phone or fax. Because a fax message produces a convenient paper copy, it was mentioned by some respondents as still their preferred form of communication. Other businesses noted their customers' preferences for social contact (the 'social embeddedness' of economic behaviour).

The perception among businesses that rural customers still prefer personal contact could represent a threat in the future if these businesses do not monitor existing trends closely. While this perception may be broadly accurate at present, it may not always be so. The expanding use of the Internet and other aspects of e-commerce by consumers needs to be constantly monitored to ensure rural businesses are able to keep up with the demands of their customers. For example, in the case of Australian farms, ABS surveys indicate that while only 18 percent of farm businesses used the Internet in the year to March 1999 — and only four per cent used it for shopping — the fifteen months to June 2000 saw a 91 per cent increase in Internet usage by these businesses.⁸⁴

The potential for consumers to rapidly switch to on-line methods of transaction, and the potential threat this would present to unprepared businesses, are acknowledged in rural areas. Many of the businesses adopting experimental e-commerce applications, and even those adopting more basic e-commerce tools, see these e-commerce ventures as 'defensive' moves to forestall the commonly predicted threats. Where there is a fear

⁸¹ OECD (2001b, page 13); Kavanagh (2002); Lawson *et al.*, (2001).

⁸² NOIE (2001c, pages 43-45).

⁸³ NOIE (2001c, page 43).

⁸⁴ Australian Bureau of Statistics, *Use of Information Technology on Farms*.

that change is coming, even if its exact nature and timing is uncertain, it makes sense for business to ‘get their feet wet’ and try a few small, low-cost experiments with the new tools and monitor the impacts, so that they will be at least somewhat familiar with the tools when the threat becomes clearer.

Franchiser protection

An additional factor that potentially shields some rural businesses from the impact of e-commerce is the protection offered to franchisees by parent companies. Some franchisees may not yet be feeling a threat from on-line sales from a parent company Web site, because the arrangement they have with the franchiser results in on-line sales from the corporate Web site being credited to the franchisee nearest the origin of the order and delivered through the local physical store. In the case of bulky items, this arrangement may offer savings in inventory and distribution costs as well as removing any potential threat from on-line competition.

‘Experience’ goods—the touch & feel factor

It is clear that there are certain transactions, or aspects of them, for rural businesses that are less satisfactorily dealt with on-line. Those involving ‘experience goods’, whose attributes can be adequately conveyed only by personal inspection (the ‘touch and feel’ factor) such as audio equipment and certain art or craft works, are examples. Customised goods are another. These are goods that the prospective purchaser must inspect directly in order to check multiple design specifications that are not easily codified and represented on-line. Indeed, there are many transactions that require the discussion and negotiation of a range of information other than price and quantity (e.g. delivery schedules, payment details) that are still more efficiently done in person.

While these are not unique to transactions of rural businesses, a specifically rural feature might be the shared knowledge and understanding of the history and context of a transaction, by the parties to it, built up over time and enhanced by social interaction. In these contexts, dealing off-line may actually be more efficient in terms of transaction costs.

This finding would also serve to explain why rural businesses were not switching to cheaper sources of inputs located on-line. It may well be that rural businesses are not inclined to immediately replace an existing local supplier, because there may be important dimensions of the interaction between the two parties that are efficiently done in person and on-site, and are not adequately replicated in the on-line environment.

Barriers to learning about e-commerce technologies

There are some significant barriers for rural business people to learn about e-commerce technologies, presenting additional obstacles to the effective uptake of e-commerce in rural areas.

Relevant *business-oriented* IT skills are often difficult to find and retain in rural areas. Small business people often have difficulty finding and choosing between sources of expertise. The wide variation in the quality of the hundreds of Web sites of rural businesses perused in the course of the study attest to this. It is possible that many rural businesses are getting a misleading perception of the potential of e-commerce through their experience with poorly designed and ineffective Web sites. Some respondents noted that their first Web site was unsatisfactory, and that finding a designer who understood the particular characteristics of the business and its e-commerce potential was often a matter of chance.

Skills in these fields tend to be highly mobile. There were several reports of ‘good people’ who left town or left the business. While some businesses had effective sites developed by non-local people, direct personal contact is important in building trust, especially with unfamiliar technologies. Not having immediate and easy access to e-commerce and IT services locally is therefore a likely barrier to the adoption of on-line methods by rural businesses.

Small non-expanding businesses

Two of the inherent characteristics of small businesses (while not necessarily unique to *rural* small businesses) inhibit the take-up of new business processes. One is that many small business owners are not strongly motivated by the desire to grow the business well beyond its existing scale. This might explain their lack of interest in the potential of e-commerce to greatly expand their scale of operation by changing from a local or regional focus to a national or international one. Growth usually requires taking on either more debt (and its associated risk) or an equity partner, and many small business owners place a high value on retaining control of their business. As well, many small business operators are not necessarily well equipped to meet the demands of creating and managing a large and continually growing organisation.

A second important feature of small businesses is that one or a few people carry out all management functions. These people are spread across various functional areas, such as production, marketing, finance, personnel and IT, in which they are unlikely to be specialists. The increasing number and complexity of management tasks in modern businesses therefore puts heavy demands on their time and attention, allowing little time for regular consideration of strategic opportunities and change. This is borne out clearly by Marshall and McKay.⁸⁵ Many small business managers do not have (or have not yet made time to acquire) a detailed knowledge of e-commerce tools.

⁸⁵ Marshall and McKay (2001).

Experiments in E-commerce: Emerging Opportunities for Rural Businesses

While the findings of this study indicate that rural businesses are justifiably cautious in their approach to e-commerce technologies, there is also evidence of some healthy experimentation in this regard. The findings of this study indicate an underlying interest in the potential importance of e-commerce to the future performance of business in rural areas. Many respondents said that they were about to 'do more' in the area of e-commerce, or perhaps revive an earlier experiment in creating a Web presence in order to 'do it better'. This indicated that they were aware that e-commerce tools might have a role in their business either as a defence against potential threats from on-line competition, or as the means to improve business performance even in the absence of such a threat.

The responses by rural businesses to e-commerce technologies can be understood against the background that rural people have been sensitised to the actual and potential impacts of 'globalisation' on their wellbeing. They perceive that information and communications technologies play a key role not only in delivering those impacts but also as the means by which they might be able to share in the benefits of these changes.

Rural businesses are familiar with the role that 'distance-shrinking' technologies (especially roads and motor cars) have played in the past in changing business location and economic power in rural areas. The rural business sector is therefore not properly seen as static or resistant to change. Instead, rural business people are familiar with change and receptive to the potential role of information and telecommunications technologies in helping them adapt to it.

The willingness by rural businesses to experiment with the potential benefits offered by e-commerce applications was most evident in the use of Web sites and the Internet. There were several businesses interviewed in the course of this study (particularly in tourism and retail) who were using a Web presence to promote their brand, build relationships with new customers, trial 'relationship marketing' and form alliances with complementary businesses to broaden their customer base and product range. For many of these businesses, there was a strong sense that they were in 'experimental mode', testing out new ideas and processes because of a feeling that 'this is the way the world will soon be moving'.

Using home-ground advantage

Rural businesses use their home-ground advantage in conjunction with more adventurous e-commerce strategies to maximise their business opportunities. For example, retail customers who show a preference for visiting local stores—for social interaction or because of a sense of loyalty and shared fates with local businesses—feel the benefits of an enhanced in-store experience (for example, through skilled staff, comfortable chairs or coffee). While the customer is in the store, the business takes the opportunity to demonstrate the added services offered by the Web site, for example in the display of a wider range of goods than is carried in-store and the provision of complementary information.

By playing to their home ground advantage, rural retailers retain for their local customers other advantages of a local presence, namely the convenience of easier returns of faulty products, not having to wait for delivery of the product and access to technical assistance or after sales service. With the use of e-commerce tools in this manner, rural retailers can sustain and strengthen the loyalty of their local customers. For many of these retail businesses—those commonly believed to be most at risk from on-line competition—the ‘clicks and mortar’ business strategy may be the best way to combat the potential threats from competing businesses using e-commerce tools.

These e-commerce experiments undertaken by established rural businesses have contributed to the establishment of a range of IT-related businesses in rural areas. This study found that the most common form of new business opportunities appearing in rural areas were those either wholly or partially involved in providing and supporting e-commerce services to other businesses.

Rural e-commerce pioneers

In this study two types of rural businesses were identified as capitalising on the opportunities provided by e-commerce technologies. These are location-independent businesses and businesses with specialist or niche products. Both types of businesses reflect the increasing importance of information and knowledge-based inputs in the production of goods and services in a modern economy. Both bear out Porter’s contention that business location is now less influenced by proximity to natural resources and/or high concentrations of consumers and more dependent on access to ‘human capital’ (the special skills and capacities of people), local culture and amenity, and ‘hard infrastructure’.⁸⁶

Location-independent businesses

The factors explaining the rural location of some of the location-independent businesses in our study included: the presence in the town of someone with a good business idea, good telecommunications infrastructure and supporting services, and an adequate air service to allow personal interaction with business associates when necessary.

Even for businesses that were not conducted solely on-line, a rural location, while not necessarily an advantage, was not a significant disadvantage. While some of these businesses were involved in the movement of physical goods, transport costs tended to be low relative to the value of the goods. The effects of distance were lessened but not removed — that is, the businesses were not completely ‘distance-independent,’ but relatively so.

An issue attracting some attention is whether existing telecommunications infrastructure in rural areas is sufficient to support the creation and growth of e-commerce dependent businesses, in particular the degree to which access to broadband technologies in these areas is inhibiting the development of e-commerce applications.

⁸⁶ Porter (1998).

While it appears that some IT service firms and the like are already capable of exploiting these technologies effectively, the lack of broadband was not mentioned as an explanation for the lack of adoption of e-commerce applications by any of the other businesses interviewed. While this may be the result of their not having a clear idea of how they might use it, the slow take-up of the broadband services already offered elsewhere in Australia and overseas suggests that effective demand for broadband capacity is lagging its supply.⁸⁷ The successful establishment of some location-independent businesses in rural areas supports this proposition.

Specialist and niche products

Other businesses that were found to be more experimental and at the forefront of e-commerce use in rural areas operated in niche and specialist product areas. For example, event-based tourism, such as the Tom Roberts Festival at Inverell, fulfils many of the attributes of successful on-line niche products: it is a high-end, information-rich product that is unique to a particular place. Similar event-based tourism opportunities have been developed in many other rural towns. E-commerce applications would appear to offer powerful promotional tools for such events.

Further applications for rural businesses with specialist and niche products exist in the food industry. Rising national incomes and the increasing opportunity-cost of time are leading to an increased willingness by consumers to pay for an array of increasingly specialised higher quality 'value-added' goods and services in the food sector.⁸⁸ The bundles of higher quality attributes in which the food industry is specialising include nutritional content, convenience, safety attributes, information on where and how the product was produced including environmental attributes of the production process and what processes and inputs were used to produce it (e.g. pesticides, irradiation, genetically modified organisms and livestock confinement). These trends are making agribusiness value chains highly information-intensive, and would appear to be offering competitive advantages to those firms that can do the information-related tasks well.

E-commerce tools lend themselves particularly well to facilitating the production, marketing and distribution of these sorts of information-rich products. Among other things, they may be used to build demand to a level that makes the investment viable. Moreover, there is evidently no shortage of ideas about value adding in Australian agriculture,⁸⁹ and some value-adding businesses are experimenting with e-commerce tools to develop the markets for their products.⁹⁰

⁸⁷ Lacy, (2002).

⁸⁸ For a detailed exposition of this argument see Antle, J. (1999, pages 993-1010).

⁸⁹ This is demonstrated by RIRDC-supported research currently in progress at the Institute.

⁹⁰ See, for example Papandrea and Wade (2000). As well, in the course of this study a large number of Web sites developed by these sorts of businesses were identified.

Businesses that Experiment — Distinguishing Characteristics

The businesses experimenting with e-commerce technologies in rural areas tended to display one or more of the following characteristics:

- E-commerce enhanced the current business strategy.
- The business was at a particular trigger point of its development.
- The particular personal qualities of the business leader drove the interest in e-commerce.

Compatibility of e-commerce with business strategy

E-commerce uptake by rural businesses was most likely when it readily contributed to achieving current business objectives, or was compatible with an explicit business strategy. This study found several examples of businesses that had an existing strategy for serving markets beyond the immediate locality or region. For these businesses, e-commerce offered tools that changed their business processes to better service that existing geographically diffuse market and possibly to serve more customers in it. In other words, the innovation was attractive because it was compatible with the existing strategy of the business. Compatibility with existing values and objectives is one of the characteristics that Rogers identified as enhancing the likelihood of adoption of new technology.⁹¹

Some of these businesses were in the tourism sector. Tourism businesses already have a focus on and interactions with customers who live beyond their region. They are, therefore, naturally receptive to tools that might be used to make these interactions (such as communication, booking and payment systems) more efficient, and that might be used to expand into new geographical markets. Businesses in other sectors are also using or developing e-commerce tools as part of their existing focus on non-local markets, but they recognise that their value is in the way they complement, rather than replace, other methods of market development.

Trigger point in business development

The businesses that were attempting to develop e-commerce beyond simple cost-saving applications tended to be at some critical stage or 'trigger' point in the life of their business. This may have been at the stage of setting up a new business, developing a new product, responding to government regulations (such as compliance with the GST), a key point in the family life-cycle (such as bringing a younger family member into the management team), or a time of a significant change in their strategic focus for some other reason.

It is at these times that managers are more likely to be consciously reviewing the opportunities and threats to the business, and are therefore more likely to consider the potential roles of e-commerce tools in their planning, and to be particularly sensitised to

⁹¹ Rogers (1995).

the use of any tool that might serve these ends. By contrast, businesses in which there are no explicit ‘triggers’ to consider new ways of doing things might not be as likely to consider the possibilities of e-commerce tools.⁹²

Individual as innovator

Another factor that is contributing to the use of e-commerce in rural businesses is that some rural towns and their hinterlands are becoming the residential choice for mobile and skilled people who bring with them business ideas and energy. These individuals are attuned to the potential of e-commerce tools to assist in the development of their business ideas, and become the drivers of new e-commerce enabled businesses.

For existing businesses, certain characteristics of the manager (and other key personnel) seemed to dispose them to adopt or experiment with e-commerce tools. These included an interest in and capacity for developing IT applications, and what might be called ‘entrepreneurial’ attitudes. Although some interest and skills in IT were often evident, there were also those who had no previous skills in that area, but who nevertheless were able to acquire the necessary knowledge while developing their e-commerce application. Sometimes entrepreneurial attitudes were displayed by a younger employee or family member, or by a manager who had worked in other types of business or places. Such people seemed to share an intrinsic interest in ‘learning by doing.’⁹³

Whether as a result of their personal characteristics, or because they were at a ‘trigger point’ in their business development, these managers appeared to be in a ‘learning’ frame of mind with respect to their e-commerce use. They viewed the efforts they had made to date as experiments, from which they improved their understanding of how to make the technologies work for them. An experimental frame of mind is appropriate in the implementation of e-commerce tools, because most of the factors in the planning environment are changing at once – the nature of the technologies, the behaviour of competitors, and the behaviour of customers and business trading partners. The technologies need to be ‘reinvented’⁹⁴ in each implementation.

Future Directions?

The responses of non-farm rural businesses observed in this study to the opportunities and threats presented by e-commerce can be understood against a background of:

- their existing strategic focus, in particular the distinction between those that currently focus only on local or regional markets and those that already serve national or international ones;
- theories that explain the diffusion of innovations, in particular the ways in which characteristics of an innovation influence its take-up;

⁹² As Eric Bailey of the Inverell Business Enterprise Centre said, ‘Businesses don’t need it until they need it!’

⁹³ Similar characteristics have been identified in a research study (in progress) on farmers who are involved in some form of value adding to their agricultural product.

⁹⁴ Rogers (1995).

- the inherent characteristics of small business and the perspectives of small business owners and managers; and
- important aspects of the rural economic and social context.

The business sectors of rural towns have not yet been transformed by the advent of e-commerce. There appear to have been few dramatic changes in the spatial patterns of trade conducted by non-farm businesses in rural areas. With some notable exceptions, rural businesses are still buying from and selling to the same businesses and customers in the same places as previously. There has, however, been significant use of e-commerce in the processes they are using to interact with those businesses and customers, resulting in efficiencies and qualitative improvements in these interactions.

It is still ‘early days’ with regard to the impact of e-commerce technologies on rural businesses. These are immature technologies that are under continuous development. As well, the economies of rural regions will continue to change as a result of a range of broad structural forces. Given this, some predictions regarding the future impacts of e-commerce on rural non-farm businesses may be made.

Increasing use of e-commerce tools

This study has identified several emerging opportunities for businesses in rural areas as a result of e-commerce technologies. The continuing emergence of the knowledge economy will present additional business opportunities that are enabled by e-commerce technologies. Continuing economic restructuring, and the natural processes of business life-cycles, are likely to produce a steady stream of ‘trigger points’ in the development of businesses. These are the points where businesses are most likely to consider e-commerce tools and increasingly adopt them.

A combination of other factors will further add to the momentum of adoption. E-commerce tools are ‘network technologies,’ whose effectiveness depends on their use by both trading partners. As more businesses use them, having e-mail and even a Web site is likely to become as common as having a phone number, and as necessary. As more businesses have these technologies, the network effect will make it increasingly clear that the tools are pre-requisites to effective business communication.

Increasing learning about e-commerce tools

This study found that there were significant barriers to learning about e-commerce in rural towns. Rural businesses are currently in a learning mode with respect to their use of e-commerce, but this learning may be inefficient, because businesses are not monitoring their experiments very effectively. Local business support agencies have important roles to play in helping businesses learn more from their experiences.

Provided they have access to competent advice, rural businesses will continually learn from their experiences with their existing Web sites. As Web site design improves and becomes more tailored to the specific business needs of individual enterprises, rural

businesses are likely to see greater value in e-commerce tools. A Web presence will be seen as an integral component of the marketing program of rural businesses. Rural businesses will gradually learn how to use e-commerce tools as *complements* to their existing modes of interaction with their business partners and consumers.

Similarly, consumers and business trading partners are also likely to become more comfortable with their use of e-commerce tools. Consumers will change their behaviour as they become more familiar with the tools and more comfortable with security arrangements, and as 'generational change' in the customer/consumer population occurs. The businesses that monitor these trends closely, and find ways of encouraging on-line interaction amongst their customers, will be better placed to exploit opportunities and avoid the threats.

Addressing competitive threats

The most important competitive threats to businesses in rural towns will probably not come from distant businesses selling into the local or regional market, but from existing larger or more diversified businesses in nearby rural towns and regional centres that are already competing with them. These are the businesses that are offering wider product ranges and better service by capturing economies of size.

To the extent that businesses in the larger towns are able to exploit the capacities of e-commerce tools to complement their superior physical presence, then their competitive position will be strengthened. Conversely, to the extent that businesses in the smaller towns find ways of using e-commerce tools to offer wider product ranges and superior on-line service, and to the extent that they can capitalise on their existing social bonds with local customers, then this threat will be lessened.

Businesses that monitor how their competitors in neighbouring towns are complementing their physical presence with e-commerce tools that add value for customers, may be able to match those attributes in spite of their disadvantage in physical size.

This study provides a snapshot into rural Australia to determine the reality of the implications of e-commerce technologies for rural non-farm businesses. Are business realities changing for rural firms because of e-commerce technologies? The reality identified by this study is of a cautious and experimental approach to e-commerce technologies by businesses in rural towns. Perhaps in the future, as e-commerce technologies are more widely adopted, the full potential of these technologies will be realised by these businesses. However, today this remains a possibility and for rural non-farm businesses, the transformative potential of e-commerce technologies is yet to eventuate.

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Appendix A

Interview Questions (Guide Only)

Background Questions

What business functions are currently supported by e-commerce tools?
For example; email, banking, information gathering/research, purchasing, selling, other.

What was the first e-commerce application you took up?

What were the reason(s) you did it?

Where did you obtain the advice, assistance or staff to do it?

What were the main obstacles to overcome?

How did you overcome them?

What *other* e-commerce tools have you taken up since then?

And what has been your experience with them?

What effects has e-commerce had on the geographical spread of your customers and suppliers?

Before you adopted any e-commerce tools:

What proportion of your *suppliers/customers* were local, regional, elsewhere?

What proportion of the value of your *purchases/sales* were local, regional, and elsewhere?

Compared with then:

What is the *current* geographic spread of your customers / suppliers? (proportion who are local, regional, rest-of-Australia, international).

What proportion of the *current value* of your purchases / sales is: local; regional; rest-of-Australia; international?

With what types of businesses have the greatest shifts occurred?

What other impacts has the adoption of e-commerce had on your business?

Costs?

Benefits?

What are you doing now that you didn't do before?

What training courses / packages have you or staff undertaken?

Who delivered them, and where?

Did you consider any local sources of training?

Competitive environment:

Who were your major competitors before you adopted the e-commerce applications?

And who are your major competitors now?

Were you aware (or have you become aware) of any non-local businesses that have begun to compete in your market using e-commerce?

What has been your response?

Have you used the Web to research the actions, product offerings, and prices of your competitors?

Have you been involved in any local or regional efforts to help businesses use e-commerce?

If so, what were/are they?

Relationships with other businesses:

What are the other businesses with whom you have close links?

For example; suppliers, customers, collaborators, alliances, co-operators.

Have you used any e-commerce tools to establish or support closer links with them, or with other businesses in your supply or marketing 'chain'?

Do you use e-commerce applications to *share information* with other businesses in your supply chain?

If so, how, and what?

Appendix B

Names of Businesses Interviewed

Dubbo

Category	Business	Nature of Business
Agribusiness	Fletcher International Exports	Export lamb abattoir
Tourism	Country Apartments	Accommodation
	Pinecrest Bed & Breakfast	Accommodation
Retail	Blowes Menswear	Menswear
	Grace Bros	Department store
	Orana Originals Needlework	Needlework designs and materials
Other	IT Web Consultants	Internet design services
	Electricity 21	Electricity account verification
	E-info	Internet directories and services
	Aurora Practical Solutions	Business/economic consultants

Gunnedah

Category	Business	Nature of Business
Agribusiness	Wesfarmers Landmark	Rural merchandise & stock agents
	Gunnedah Timbers/Austwood	Timber mill
Retail	Mitre 10	Hardware
Other	Gunnedah Shire Council	Local Government
Manufacturing	Pryde's Pty Ltd	Pet food
	Southern Lights Candle Co.	Specialty candles

Guyra

Category	Business	Nature of Business
Agribusiness	John Truscott Rural	Rural merchandise
	Ruddweigh	Electronic weighing systems
	Guyra Rural Services? IAMA	Feed, seed and fertiliser
	Judi Earl	Agricultural Consultant
Tourism	Shiralee Motel	Motel
	Uncle Billy's Retreat	Trout fishing retreat
Retail	Kirks Guyra Pty Ltd	Supermarket & liquor
Other	David Harris Financial Services	Financial Services

Tamworth

Category	Business	Nature of Business
Agribusiness	Safefish	Aquaculture
	Wesfarmers Landmark	Fertiliser and farm services
Tourism	Hannafords Coaches	Coach Tours
Retail	Angus & Robertson	Bookshop
	Retravisision	Electrical goods
	McDonagh Computer Services	Computer sales and service
Other	Harris McHugh	Lawyers
	Scrapbook Memories	Craft supplies
	Burke & Smyth	Real Estate
	Tamex	Express Freight

Uralla

Category	Business	Nature of Business
Agribusiness	Wilson & Croft	Fertiliser, feed & seed
Tourism/Retail	Barking Dog Gallery	Craft gallery
	Australian Book Collector	Second-hand book dealer
Other	Phoenix Foundry	Cast bronze plaques & sculptures
	G&C Foundry	Heavy equipment fabrication

Inverell

Category	Business	Nature of Business
Agribusiness	Bindaree Beef	Export meatworks
	Gwydir Olives	Olive oil manufacturer
	Goddard Wool Marketing	Wool marketing
	Supercoat	Pet food manufacturer
Tourism	Tom Roberts Festival	Cultural event
	Inverell Tourist Centre	Tourism information
Retail	B.K Oliver Home Hardware	Hardware and building supplies
	P.J. Nesbitt/Brandhouse	Clothing and mercery
	Taylor's Furniture	Furniture retail
Other	Print Anything	Screen printing
	Inverell Times	Local newspaper
	Inverell Business Enterprise Centre	Small business advice
	Inverell Shire Council	Local Government

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