

Small is Beautiful: The Emergence of New Micro Businesses Utilising Electronic Commerce

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Abstract

This research is part of a larger study investigating the use of ecommerce by SMEs in Australia. SMEs encompass a broad range of businesses and as a result it is often difficult to identify those factors which contribute to a successful implementation of ecommerce strategies and technologies. This study focuses on the use of ecommerce by micro businesses, as a subset of SMEs. The research examines the particular characteristics that micro businesses exhibit after implementing an ecommerce strategy. Many of the barriers that have previously been identified regarding the incorporation of ecommerce, have been overcome by the businesses in this study. By investigating the nature of these businesses and how they proceeded with their ecommerce strategies, we may be in a better position to aid future micro businesses considering adopting some form of ecommerce.

Keywords

AI0102 Case Study, DA0201 Small Business, AI0106 Exploratory study, HA07 Interorganisational systems, HA08 Computer-based Communications Systems

INTRODUCTION

Small businesses are defined as those businesses employing less than 20 full time employees whereas medium businesses are generally defined as those businesses employing between 20 and 200 full-time persons. SMEs contribute immensely to both the Australian and world economies (Poon & Swatman, 1998; Australian Electronic Business Network, 1998; Purao & Campbell, 1998). Current literature acknowledges the specific issues that many SMEs face in order to survive in this dynamic, high risk and competitive business world (Chappell 1999). However, literature regarding micro businesses use of ecommerce is scarce. This report classifies a micro business as a business that employs 5 or less full time workers.

The pressure faced by all small businesses to survive in their business environment is overwhelming. The level of risk is magnified when we examine micro businesses. Typically micro businesses are classified as sole traders or partnerships. The organisational structure is flat with the directive of business operations stemming directly from the owner/managers. Often family members are employed in the business, as is the case with seven of the business participating in this study. Micro businesses seldom survive misjudgments and have to be careful how they utilise their limited resources (Chappell 1999).

However, the emergence of the Internet is attracting a plethora of businesses aiming to exploit the potential benefits from trading digitally. The costs of developing an ecommerce system may be justifiable when the perceived benefits of increasing market share and sales are considered (Kambil 1995). Typically the micro businesses in this study possess basic computing infrastructure comprising of a single desktop computer and modem. Hence they have some form of computing knowledge and infrastructure in place.

Past research has identified many barriers to the adoption of ecommerce amongst SMEs (Centre for Electronic Commerce, 1996, Corbitt et al 1997; Freel 2000).

Typical barriers include:

- Lack of cost effective ecommerce enabled software
- Incompatible systems and software
- General lack of resources
- Complications implementing change
- Lack of technical skills and training
- Computer apprehension
- On going support costs
- Inter-organisational motivation
- Giving priority to ecommerce initiatives

These barriers were ubiquitous in those micro businesses under study. The cases discussed in this report illustrate that problems did arise. Some problems were directly related to the development of the ecommerce application and others were associated with related business processes. Ultimately these businesses overcame those hurdles and successfully implemented some element of ecommerce to their businesses.

METHODOLOGY

An interpretative epistemology was considered the most appropriate perspective from which to gather information about participant's beliefs, actions and experiences with regard to the use of ecommerce in their organisations. A qualitative research method employing multiple case studies design was favored in order to capture the richness of the information, the operational environment and an understanding of the culture of the organisations.

Case Study Approach

A case study approach is considered valid for this research. Yin (1984) and Benbasat, Goldstein and Mead (1987) discuss the merits of using multiple case studies to provide replication logic and rich descriptions of emergent research areas. Multiple case study analysis has been justified and validated by researchers such as Zikmund (1997) who investigated inter-organisational systems. The cases outlined in this paper are drawn from a cross section of industries, retail, manufacturing, agricultural and fishing. Suitable cases were selected by identifying micro businesses that demonstrated dynamic ecommerce capabilities at their Internet site.

The Participants

This research focuses on 13 micro businesses actively utilising ecommerce in their business undertakings and includes five Tasmanian and eight Western Australian businesses. The participating businesses involved in this study are representative of five industry groupings.

Industry	Representative Cases
Agriculture, Forestry & Fishing	2
Accommodation, Cafes & Restaurants	1
Retail Trade	5
Education	2
Communication Services	3

Table 1: Industry representation

Interviews

A series of onsite interviews were conducted with each micro business. A set of semi-structured interview questions was asked to elucidate from the participant, information relating to their use of ecommerce. Each interview was taped recorded and later transcribed for further analysis. The questions outlined in the interview were aimed at the manager/owner of the business.

Initially, participants were asked questions about the business background and demographics. This gave the researchers an understanding of the nature and size of the business and the types of products or services offered. The identification of target markets and customers was also discussed. The business owners were then asked to discuss their reasons for adopting ecommerce, the current use of ecommerce technologies and the impact of ecommerce on their business. Owners were encouraged to describe the development of their ecommerce application and how the systems were supported and maintained. They were also asked to outline the incorporation of their ecommerce strategies within existing business processes and any problems that arose. Explanations describing how barriers were overcome were also sought. This was accompanied by an appraisal of IT/ecommerce skills and resources. The relative success achieved by their ecommerce investment was noted along with any plans for future action.

ANALYSIS

Each interview was tape recorded and later transcribed for analysis. Notes taken at the interview also contributed to the analysis. Coding was utilised as the data analysis technique. The process of coding the interviews began at the sentence level, and, following successive iterations of the coding process, key concepts and themes emerged. As suggested by Neuman

(1994) a final iteration was conducted to identifying cases, which supported, conferred and showed disparity between key themes.

Case Studies

For the purpose of brevity, four case studies representative of the different nature of the businesses within this study, are presented. The case studies highlight the key characteristics of micro businesses included in this study.

Case Study 1:

This business sells fruit trees online in Tasmania. The business has historically sold apples and cherries to local wholesalers for export. Five years ago they recognised an opportunity to sell their rootstock directly to the public utilising the Internet as a trading platform. The virtual business has taken five years to develop in-house.

Under an analogue business model the fruit trees would be sold to wholesale nurseries which would supply the trees to retail nurseries for sale to the public. The business set out to disintermediate entities in the traditional supply chain and sell directly to the public. Their product is aimed initially at the Australian market although there is opportunity to expand their customer base to include other countries in the Southern Hemisphere.

The business has only one computer, which has been used over last few years to develop the business's website. A local ISP has helped the business streamline the transaction component of their ecommerce application. The business handles all orders and payments using Telstra's Surelink ecommerce payment system.

It was a steep learning curve for the owners of the business to develop the ecommerce application and simultaneously develop a suitable distribution process for their product.

Case Study 2:

This business develops and provides scientific software to interpret ocean data from highly sophisticated echo sounders used on research vessels. The software interprets the information from data loggers, which gives representative ocean plots of fish density and population. The business has a niche market with few competitors.

The business was established four years ago and was aimed initially at customers in Australia. Over the last eighteen months the business has attracted many international customers. Two people who rely solely on direct interpersonal sales and marketing operate the business. Ecommerce is used as a platform to demonstrate the product and provide direct communication for sales and product customisation. Compared with the few competing products the Tasmanian software has a better interface, is less expensive and requires less computing power.

The business is run on a virtual basis. All communications with prospective and existing customers are handled via email or phone. Major customers of the software are members of the scientific community where email and the Internet are used as standard forms of communication. Consequently the operation of the business can be efficiently run from a mobile office with little need for a fixed location for demonstration and administration purposes.

The Internet is the backbone to the whole business strategy. Existing users can get their software customised with extra features by emailing and downloading product upgrades from the business's web site. Prospective customers can download software demonstrations and the business is easily contacted 24hrs a day via email.

Case Study 3:

This business supplies primary and secondary schools educational worksheets online. Traditionally schools purchase a workbook and use selected worksheets as required. The entrepreneurs saw an opportunity to use the Internet to promote their worksheets in an electronic format to a global market.

There were substantial benefits for aligning an ecommerce strategy to their pre-existing business model. Ecommerce overcomes the need to print out individual work sheets or work books. The costs of printing are reduced along with other associated production and administration costs. Ecommerce enables the marketing of individual worksheets and customers can obtain particular worksheets on an as-needed basis.

The ecommerce application was developed without external help. It is a sophisticated application that controls the ordering, supply and transaction accounting procedures. It is fully automated and requires little maintenance. The business supplies their product around the nation as well as overseas. There are few competitors in the market presently and the business continues to produce the printed workbooks for existing customers who don't have Internet access. Email is used to communicate with teachers and the site is available for downloads 24hrs a day, seven days a week.

Case Study 4:

This business is an online bookshop located in Western Australia. The business was established five years ago with view to trade solely on the Internet. The bookshop sells books both nationally and internationally. Although the business initially began as a general bookshop, it tends to sell its books to specific niche market segments. Sales are both national and international. There are 2 full time staff running the business from home.

The ecommerce application was developed by an external ISP with the owners of the business contributing to the design of the site. The business has used several ISPs to host their web site, as the service provided by some ISPs has proven less than adequate. Inexperience of early web developers and problems with hosting initially presented myriad problems. Primarily the owners of the business maintain the web site with some external support when required.

Payments for goods are generally made by credit card. There have been a few problems with fraudulent credit card purchases, which have highlighted the need for extra precautions. The business is successfully run in a highly competitive market. Although the business does not have to pay for real estate to display the books, the margins of selling discounted books negate the associated savings from reduced real estate costs. The distribution of the books is handled by Australia Post. Courier companies can deliver to capital cities but are unable to reach customers in outback Australia.

DISCUSSION

There is a growing body of literature promulgating the importance of the Internet to businesses of all sizes. This literature is commonly accompanied by the identification of possible barriers to the adoption of ecommerce. This study has endeavoured to acknowledge factors that may contribute to the effective use of ecommerce by micro businesses, rather than focusing on inhibitors.

Several factors are apparent regarding the use of ecommerce amongst the micro businesses under study. A list of these common characteristics is outlined below.

Description of Characteristic
The predominant driver for ecommerce is the belief that the Internet can increase sales revenue
Ecommerce applications are principally used for marketing, enhanced customer service, Internet commerce, online publishing and product demonstrations.
The owner/manager have an active role in developing, and maintaining the ecommerce application
The owner/manager has an above average understanding of IT
The micro business is run as a sole trader or partnership
Ecommerce is directed at business to consumer transactions
The supply chain is simplistic
The businesses possesses only basic computing facilities
The owners/managers take an active role in maintaining their web sites
The owner/managers are the primary drivers for adopting ecommerce
Ecommerce strategies are considered as long term investments
The owner/managers have a thorough understanding of marketing their business on the Internet
The ecommerce applications are hosted by ISP's.

Table 2: Description of common characteristics of the businesses under study.

The study acknowledges two types of ecommerce enabled businesses. Firstly, businesses that embrace ecommerce to supplement their traditional business models and secondly, those businesses intending to conduct business entirely online. Of the 13 cases examined, five businesses have developed a business and ecommerce strategy to use the Internet as a sole trading platform. In each of these cases there were three or less full-time personnel with businesses contracting extra staff when required.

In all cases management actively plays a vital role in the introduction, direction and maintenance of the ecommerce applications. The owners of the business in six cases were responsible for developing the ecommerce application.

In eight cases, the businesses created their products/services and sold directly to the end consumer. The personal rapport gained with direct access to the consumer allowed a level of customer service and feedback previously unobtainable for many businesses trading under traditional, geographically constrained, methods.

The supply chain is simplistic, in each of the businesses presented in this study. None of the businesses use ecommerce for procurement with their own suppliers. Alternatively, none of the businesses in the study have elected to add a procurement component to their ecommerce application. The fax and phone is primarily the preferred method of conducting business with suppliers.

The participants in this study have essentially embraced an ecommerce policy to enhance business to consumer relations, where the consumer is the end user of the service or product. As a result an overwhelming driver to incorporate ecommerce facilities within the businesses is the desire to increase sales by covering a wider customer base.

The financial resources required to develop and implement an ecommerce strategy are significant for micro businesses and as a consequence many have developed their ecommerce applications internally. They are driven by the belief that the perceived benefits of being proactive with their ecommerce undertakings will be rewarded in the future.

All participants in this study acknowledge that the return on their online investment is long term and thus take a realistic view of the nature of an electronic commerce undertaking. All participants have been proactive with their ecommerce approach anticipating financial gains over competitors by being in a first mover position. A number of businesses admit that the costs attributed to having an online presence still haven't been recouped. Although the costs outweigh the initial benefits many participants hold the belief that ecommerce is an important part of their business. All participants have an underlying commitment to continue maintaining their ecommerce facilities with the belief that the associated long-term benefits will come to fruition.

Interestingly only two business operators had formal IT backgrounds. One of the businesses which has been using ecommerce for the past four years indicated that although they paid an ISP to construct their original web site they now intend to develop a revised edition in-house.

All participants in this study have acquired a knowledge and understanding of the issues faced by adopting ecommerce. They have a realistic view of the likely returns from their ecommerce investment. The environment in which these businesses operate is often volatile and any decision to invest time and money in additional business ventures need to be carefully considered.

It is hoped that by identifying some of the characteristics common to successful ecommerce use by current micro businesses, future micro businesses will be in a better position to undertake rewarding ecommerce ventures. Understanding what has worked is as important as understanding what has not worked, and provides entrepreneurs with a framework upon which they can assess their potential in the digital world.

FUTURE RESERACH

It is noted that many other factors are relevant to the successful utilisation of ecommerce. These factors may include the nature of product or service, the type of industry the business operates in, and the number of competitors in the marketplace. The complexity of the supply chain and the niche markets in which these micro businesses operate also has a bearing on the adoption of ecommerce. This study is of an exploratory nature. Future investigation into the myriad factors affecting successful ecommerce adoption and utilisation in SMEs would be of great benefit to academics and practitioners alike.

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APPENDIX A

Case	Industry	Type of Business	Number of Staff (Full Time)	Age of Business	Use of Internet
A	Agriculture	Cattle Stud	3	80 yrs	Electronic Publishing Market Research
B	Hospitality	Restaurant/Cafe	3	2 yrs	Online Orders
C	Agriculture	Orchardist	4	1 yr	Online Sales Market Research
D	IT	Software Reseller	5	2 yrs	Software Distributor Marketing
E	Fishing	Scientific Research	2	2 yrs	Software Distributor Market Research FTP
F	Retail	Flower shop	1	4 yrs	Online Sales
G	Education	Education Services	2	5 yrs	Marketing Electronic Brochure
H	Education	Education Services	2	1 yrs	Online Trading Communications
I	Retail	Specialist Bookshop	4	6 yrs	Online Trading
J	Retail	Entertainment provider	4	3 yrs	Online Trading

K	Retail	General Bookstore	2	4 yrs	Online Trading
L	Retail	Aromatherapy	1	5 yrs	Online Trading
M	IT	Internet Service Provider	2	2 yrs	FTP Communications Marketing

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