



Small business and the use of technology: why the low uptake?

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Abstract

Technology in the form of electronic communications has become part of everyday life for most people in first world countries. It has also transformed how businesses operate, with the internet being the most common medium for many business exchanges. Large business has fully embraced technology, however the figures for small business are less convincing. Indeed at the very lowest level of enterprise, micro or home-based business, the uptake of e-business in this sector is less than half. Given all the hype surrounding the benefits of conducting business virtually the question that needs to be asked is why the low rate of uptake?



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Introduction

Technology, in the form of increased sophistication of electronic communication has been posited as extremely advantageous to business. The ability to develop global networks and conduct virtual business has been seen to be of real advantage to many Australian businesses who have previously been disadvantaged by the tyranny of distance. The internet has also been thought to have leveled the business playing field to a certain extent, although it could also be argued that it has merely increased competition thus negating any advantage thought to have been gained.

For large businesses and government agencies technology has been embraced and incorporated into most operations (ABS, 2003), however for smaller businesses this enthusiasm has not been quite so vigorous. At the opposite end of the size spectrum very small businesses, be they micro businesses or home-based businesses, the uptake of e-business is less than half (ABS, 2003; SMERC, 2002). Furthermore there is a significant proportion within these non adopters that also indicate that they have no immediate plans to embrace e-business via the internet (Goode, 2002).

The question that therefore needs to be asked is why? The Y2K drama was essentially a watershed for bringing all businesses to some level of rudimentary technology and what should have emerged was a business community that was technologically up to date, at least at a very basic level. However since 2000 little has been progressed for very small businesses in the way of keeping up to date with current technological trends (NOIE, 2002).

The initial cost of implementation would be an obvious factor. However the problem is perhaps deeper than that in that the actual concept and importance of using technology has not been really understood by some business operators, especially very small businesses.

Literature Review

Small Business in context

The economic importance of small businesses both to the Australian economy (Howard, 1997) and the world economy is well documented (Frank & Landström, 1997; Storey, 1994). This is because of the contribution small business makes both to employment and the revenue it generates. In Australia small business employs 38% (3.2 million) of the total workforce (ABS, 2002). Micro-businesses, in particular contribute \$20,193 million to industry gross product and employ over one third of small business employees (ISR, 2000). The different size definitions used in this paper are the standard Australian Bureau of Statistics classifications, which are micro business being 0-4 persons, small business being 5-19 persons and medium being 20-200 persons (ABS, 2002).

Given that in Australia as elsewhere there has been a change over time from a manufacturing /primary producing base towards a service orientated base, it is vital that all businesses can compete in an increasing e-enabled world. This is especially true for small businesses as they are often considered the 'feeders' to larger business (Beaver, 2002; Scase, 2000). What does need to be recognised is that even though small businesses are vital to all economies, "small firms are not just scaled-down versions of large ones". (Burns, 1996, p4). This means that whereas most large business have embraced technology and electronic business practices, many small businesses have not. At the very small or micro level many of these businesses are home-based, which as a sector are the biggest cohort and also the fastest growing.



Home-based businesses

Home-based businesses (HBBs) constitute 58% of all businesses in Australia and the sector has an annual growth rate of 16%, compared to 11% for small business overall (ABS, 2002a). The size of this business group and its growth rate may explain why there has been renewed interest in home-based businesses, even though they are hardly a new phenomenon. The growth of this sector can be attributed to four major factors, industrial restructuring; environmental pressures; entrepreneurial values and emerging new technologies (Deschamps, Dart & Link, 1997; Walker, 2002). It should be noted that these reasons are not just restricted to home-based businesses, as they are also similar to the factors mentioned for the rise in self-employment *per se*, however home is often the location from where new businesses initially start.

Industrial restructuring, in particular downsizing and the casualisation of the workforce, correlates strongly to the environmental pressures (Feldman & Bolino, 2000; Jurik, 1998). General industry restructuring has led to less secure paid employment for most workers, which therefore exacerbates an overall need for both income and job security to be gained from alternative sources. Environmental pressures are also impacting on households and as Rowe, Haynes & Bentley (1993, p. 384) point out, "It now takes two workers in a family to maintain a decent standard of living, consequently more than 60% of all US households depend on two incomes". They further hypothesize, "... home-based work provides an effective way in which to balance the demands of paid employment and family responsibilities, particularly for women". Both of these factors make owning and operating a business from home an attractive proposition.

When coupled with Australia's entrepreneurial values, Australians have always displayed a tendency to be both innovative and entrepreneurial. This could well be a reflection of Australia's geographic isolation but given the large proportion of self-employed people, the tradesman with a ute and the dog on the tray are the epitome of a large proportion of the Australian workforce. The Australian "give it a go" philosophy is very much entrenched in the work culture (Walker, 2002).

Given these factors mentioned and the effect of rapidly increasing technological advances which make it much easier to work from home, it could be assumed that small businesses would embrace electronic communication as there is a good fit between small business and general business to business electronic commerce.

Opportunities for small businesses and e-business - Business to business electronic commerce

Business to business electronic commerce includes supply chain management, virtual alliances, virtual trading partners, disintermediation and reintermediation (NOIE, 2000). The National Office of the Information Economy (NOIE, 2000) in Australia has confirmed that business-to-business e-business activity is greater than business-to-consumer or business-to-government electronic commerce. NOIE found no reliable figures giving an exact breakdown of business-to-business compared to business-to-consumer electronic commerce. However, it was found that of total e-business activity business-to-business electronic commerce shows dominance over both business-to-consumer and business-to-government electronic commerce.

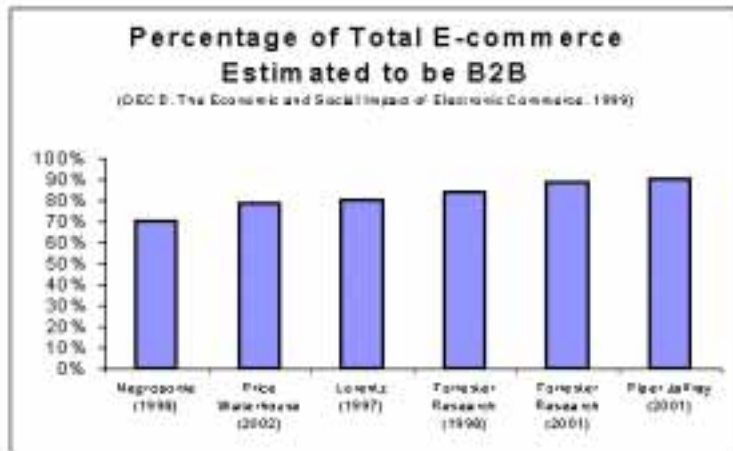


Figure 1 Business-to-business electronic commerce (NOIE 2000)

Business-to-business e-business is a growth area for all Australian businesses (see figure 1 above). Small and medium enterprises (SMEs) can take advantage of this form of electronic business by forming virtual alliances and online trading partners. However recent Australian Bureau of Statistics results show that whereas most SMEs have a computer and the majority have internet access, only a third of small businesses have a web presence, with an even lower figure of 15% for micro businesses (ABS, 2003).

Why the lack of uptake of technology by SMEs

The primary reason given for lack of continuous improvement in technology amongst many small businesses is that they see no real benefit in having a web presence, that is they perceive their businesses to be too small, or they had not factored in the on-going maintenance of webpages (ABS, 2003; van Bevernen & Thomson, 2002). Fear of the unknown and lack of skills have also posed as reasons why the uptake of technology is less for small businesses (Barry & Milner, 2002; Darch & Lucas, 2002; Lewis, 2002).

Lack of skills would appear to be a significant barrier, which may well appear to be easily addressed, that is training can be tailored to meet the needs of the target market, however as Billet (2001, p. 416) points out “given small business reluctance and resistance to participate in structured VET programs, the task of increasing participation remains a particularly difficult request; a hard ask”. It would appear that many SMEs do not have a good understanding of even the concept of e-business.

Another issue for small operators is security of the Internet. Users of the Internet remain uncertain about the security of using and transacting on the Internet. Particular concerns that have been identified include: security of sensitive personal information disclosed over the Internet; uncertainties about how personally identifiable information may be used or disclosed to third parties; concern about receiving unsolicited advertising material, spamming and hackers or other intruders interfering with websites (Freehill 2000 ,p.2). The American Federal Trade Commission stated that:

the proliferation of readily available personal information...also could jeopardise privacy and facilitate fraud and deception. These risks make consumers reluctant to use the Internet or participate in online transactions and therefore could prevent consumers from obtaining the benefits promised by online commerce (Federal 2000, p.28).



Opportunities for Australian SMEs to engage in e-business initiatives are available and ready to be exploited. Media exposure has provided awareness for SMEs of such opportunities (DCITA 2000). Concomitantly the media has also created an additional barrier for SME adoption of e-business initiatives with saturation coverage of dot com crashes during 2001. It has also been suggested that Australian SMEs are deliberately ignoring e-business opportunities and alienating whole market segments. One such segment is the high income earning bracket who represent 22 per cent of the Australian population and have 47 per cent of discretionary spending power (DCITA 2000, p.5). It is estimated that 80 per cent of higher income earners are connected to the Internet and it will seriously disadvantage SMEs to ignore this market sector.

The effect of low uptake of technology

An outcome of this lack of adoption is that small businesses could well be disadvantaging themselves, as many large organisations and government agencies are working towards e-procurement as their principal interface with suppliers.

It has been suggested that up to 20% of Australian SMEs will fail if they do not adopt e-business practices and integrate these practices into their business strategies and planning processes (DCITA 2000). As SMEs are integral to the Australian economy and employment growth a 20% failure rate would have a serious negative impact on the fiscal health of the nation. This 20% failure rate is in addition to the current 8% of all small businesses and 5% of medium businesses that fail (Bickerdyke, Lattimore et al. 2000). The impact on employment rates of business failure based on the current failure rates causes up to 160,000 employees per annum to lose their jobs (Bickerdyke, Lattimore et al. 2000 p.38). When multiplied by a possible additional 20% SME business failures, unemployment rates could increase exponentially. An outcome that would have a detrimental effect on the Australian economy. This study seeks to address how Australian SMEs can maintain and enhance both profitability and efficiency by successfully adopting and engaging in e-business practices.

The Small Business Index (SBI 2001) stated that SMEs have not yet fully established the connection between use of the Internet and transacting business on the Internet. This concept is supported by a recent ABS survey, when it was found that micro businesses had a lower level of IT adoption than other sized businesses. The ABS compared 3 indicators, ownership of a computer, access to the internet and a web presence. 79% of Micro businesses used computers, 65% had access to the Internet and only 15% had a web presence (ABS 2003). Given that micro businesses make up the majority businesses in Australia, this is certainly cause for concern (ABS, 2002).

The above statistics suggest are that many SMEs using the Internet are not e-business ready and are in need of further information and assistance to make the transition to online trading. With further research on e-business opportunities, barriers and strategies, SMEs may gain the necessary knowledge to make the leap from e-business readiness to e-business enabled (Bode & Burn 2002).

This study reports the findings of two recent empirical studies of small businesses, one study being of home-based businesses and the other of all businesses in one geographic area and their uptake of technology. This paper also discusses why some SMEs are not only not e-enabled, they also have no immediate desire or intention to become e-enabled. This decision has serious policy implications, as government communication with stakeholders, in this instance SMEs, is unlikely to be fulfilled if the very group that governments seek to communicate with, simply do not have to tools to facilitate the dialogue.



Methodology

The principal research questions were:

- Is there a relationship between size of business and the uptake of technology?
- What are the main barriers to technology uptake?

For the home-based business study 454 surveys were sent out. There were initially 160 surveys returned and after a reminder postcard was sent out, a further 38 surveys were received. This gave a total of 198 responses, of which 194 were useable, thus giving an overall response rate of 43%. The vast majority of the businesses were micro businesses (95%) with the remainder employing between 6 and 25 staff.

The data presented here is only part of a more extensive study, however the results are sufficiently noteworthy to warrant discussion.

For the businesses located in the one geographic area, the survey instrument was personally administered. In total 450 surveys were delivered of which 196 were completed, giving a response rate of 44%. Many businesses either declined to respond, were too busy to respond at the time and agreed to fill in and post back and some businesses were not available at all at the time of contact. The majority of these businesses were micro businesses (67%) with 25% having between 6-20 employees only 8% having more than 20 employees.

Both individual response rates would be considered good response rates, given that SMEs are notoriously difficult to elicit responses from (Goode, 2002; Walker, 2002).

The data from both surveys was analysed using SPSS version 11. In order to verify the quantitative responses focus group sessions were also conducted with both groups to round out the findings. There was one focus group for the general businesses survey which was attended by 8 participants, representing various different industry sectors, however 7 out of 8 were micro businesses. Three separate focus groups were conducted for the home-based business study.

Results

In order to give some background to the two different samples the industry classification (see Table 1) and the age of the business owner (see Table 2) are provided.

Table 1 industry classifications

	HBB	General
business services	14%	5%
Personal services	15%	1%
Trades people	49%	25%
Retail and wholesale	13%	16%
Transport	4%	5%
manufacturing	2%	23%
Automotive	0%	16%
Other	3%	9%
Total	100%	100%



Even though there were differences with the type of businesses being operated, the small sample size of both groups and the number of different industry types, did not allow for any definite results to be produced.

As can be seen from table 2 below, most of the business owners were over 40 years of age and a third in both samples were over 50 years of age.

Table 2. age of the business owner

	HBB	General
<30	5%	10%
31-40	26%	19%
41-50	32%	37%
51-60	26%	24%
>60	11%	10%
Total	100%	100%

In relation to use of technology (see Table 3) the results are somewhat different to the most recent ABS data on business use of technology (2003), and it should be noted that both the business size and the questions asked are not mirrored. For example the ABS data refers to internet access, rather than an actual business email, however an assumption is made that if a business has internet access it is likely to also have an email, however this could explain why the sample has a lower number of micro businesses with business emails. The current sample was segmented by number of employees, using the categories micro (0-4) small (5-19) and then because of the small number of responses grouping all other businesses together, which includes both medium and large (more than 20). The ABS has 4 categories in total, the first 2 being the same as the sample categories, followed by 20-99 and then 100 or more persons. The majority of respondents in this sample were micro sized businesses (118) followed by small (57) with only 18 medium to large business participating.

Table 3. Use of technology

	Business email			Business webpage		
	General business	Home-based	ABS	General business	Home-based	ABS
Micro	48%	61%	65%	23%	19%	15%
small	83%		80%	43%		34%

What the current two data sets show are that the businesses located in one geographic area are different from the ABS figures, although the home-based businesses are comparable.

When age of the operator and use of technology are cross tabulated a clearer picture emerges. Not surprisingly younger business operators are more likely to have both a webpage and have an email address compared with older business operators and older business operators more likely to have an email address but not a webpage. The figures from both studies support the premise that size does matter and in this instance that larger the business the more likely they are to be e-enabled. The question therefore is why are very small businesses not e-enabled?

Reasons for not being e-enabled.

The main reasons given for not having a website was that the business did not have an internet connection, that the business owner had not made the effort and that their business type did not need



it, which was also linked to the respondents preference for 'personal' contact with suppliers and customers. In addition some HBB respondents stated that they did not have broadband access (these were business operators living out in a semi-rural area) which make electronic communication both costly and difficult.

Similar questions were asked about technology in all focus group sessions and given that the results in relation to whether the business had internet access or a webpage were similar, that is that the size of the business appeared to be a more significant factor rather than location, the comments made by the participants are not differentiated by location.

During the focus group sessions the aspect of technophobia was discussed. It should be pointed out that the majority of the participants in all the focus groups were over 40 years of age which may well be a determining factor in some of their opinions. The consensus of the groups were that whereas they acknowledged that technology and especially electronic communication was becoming all pervasive, they somehow felt immune from it. It was something that was applicable to other businesses but not their own. A typical comment was:

"I know that a lot of businesses in my line are getting on the net and stuff, but I don't think the people I deal with are that interested, anyway it's as quick to talk to people on the phone".

A more forthright comment was as follows:

"Bloody computers they are a hassle, always breaking down, I am too busy to have to worry about that aspect of the business".

This comment prompted discussion about how comfortable the group felt about using computers. One comment which seemed to resonate with the whole group was as follows:

"I really am not that comfortable using the computer, my young lad just gets on there and does stuff, but I think I must be getting old as its all too hard really"

When asked about their technological competence, in the general business focus group 2 of the group said that they were reasonably competent, half of the group said that they could 'manage' but didn't actually like 'fiddling' about on the computer and the remaining 2 stated that they were not competent and left that aspect of the business to either someone else in the business or their spouse.

People in the home-based business focus groups were different in that some of them were conducting their businesses predominantly using technology, ie a graphic designer who communicated almost exclusively via the Net. However there were also home-based business operators in the group that did not even have mobile telephones.

The aspect of training was also discussed. Of the people who stated that they were not competent, they acknowledged that they did need to up-skill, but that time was the critical issue. As one respondent said:

"Look I would really like to know how it all works but when am I ever going to find the time to learn? Anne (his spouse) does all of the bookwork and she's pretty good, so I suppose between us we manage".



This would seem to indicate that technology has not actually past them by, rather that the pressures of operating a small business mean that there is little time to engage in activities other than core business. It could be argued that learning how to become more effective, via electronic commerce should be considered core business, however training is often seen as a financial impost rather than a benefit.

Discussion and conclusion

The research questions were answered in that size does effect the up-take of technology. It can be stated quite clearly that of the SMEs surveyed in this study the smaller the business and in particular micro and home-based businesses, the less likely they were to be e-enabled or to even consider the benefits of engaging in e-business. This finding supports the outcomes of the ABS study (2003) on business use of technology. More importantly is the latter question in regard to the barriers to technology uptake by the smaller end of industry players. The data suggests that the smaller the business the less comprehension there is on the advantages of e-business.

A more lateral way at looking that these figures is to see a business opportunity for web designers, who are often small businesses themselves, to market their skills to this business sector. More could be done to encourage small businesses to help themselves and there is also an opportunity for training providers, who other than government entities such as the VET sector are also often small businesses.

A number of issues have been identified that impact on these findings including micro and small business fear of technology (technophobia), lack of skills and no 'champion' to take a mentor role for this industry sector. Both State and Federal Government departments produce documentation and advertising extolling the virtues of e-business for the SME sector and also imply that multitudes of small business who fail to heed these benefits may well not survive in business. Yet, it could be asked, what is really being done of a practical nature to assist the small player in achieving e-enabled technology uptake?

This research forms part of a larger ongoing project into SMEs and e-business uptake focusing on training providers. Concomitant research explores the value of an online training course for SMEs and e-enabled technology and future research will take these findings into an Australia wide study exploring the best practice options for upskilling this industry sector and circumventing the threat of economic failure that lack of compliance suggests.



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