Australian Business After the Dotcom Bubble: Initial Findings

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This study investigates the impact of business-to-consumer electronic commerce on Australian commercial organisations. Five factors which affect the impact of an information system on an organisation were identified from the literature and tested against measures of business performance, customers, information and operating costs. To examine this, a mail survey of 400 Australian businesses was conducted. Business performance and customer increases were found to be most highly associated with electronic commerce. Operating cost reductions were not associated with electronic commerce adoption.

ACM Computing Classification System: K.4 Computers and Society, K.6 Management of Computing and Information Systems.

The attention paid to electronic commerce in the popular media has led to considerable organisational and academic interest. The dotcom bust led many to question the value of these ventures. However, there is a deficit of research on this topic, as commentators and practitioners look elsewhere for the next hot topic. Little is known of the actual impacts of electronic commerce adoption on organisations.

This study investigated electronic commerce after the dotcom bubble had burst. In particular, the study sought to investigate the impact of business-to-consumer electronic commerce on the organisational effectiveness of adoption. Five factors which affect the impact of an information system on an organisation were identified and tested against measures of business performance, customers, information and operating costs (Thong *et al*, 1996; Teo and King, 1996; Ragowsky *et al*, 1996; Chan *et al*, 1997).

To examine this, a mail survey of 400 retailer businesses in New South Wales, Australia was conducted. In addition to geographical location, a requirement for inclusion in the sample was that businesses had a website through which goods could be purchased and that the business also had a physical shop front. The businesses used in the sample were identified from a large local business telephone directory, with each website reviewed to ensure they met the sample criteria.

SUMMARY STATISTICS

In total, about one third of the businesses surveyed responded. The response rate of 31.25% was reasonable and suggested that the topic may be of some interest to businesses. Table 1 describes the broad respondent demographics.

Table 1: Industry Breakdown

Demographic	Percentage
Industry	
Books/Publishing/Stationery	15.7
Information Technology	14.9
General Retail	10.7
Clothing	9.9
Florist/Gifts/Homeware	9.9
Music/Audio/Visual	7.5
Sporting Goods/Outdoor	6.6
Food/Alcohol	6.6
Personal/Medical	5.8
Building/Office/Household	5.0
Import/Export/Distribution	4.1
Automotive/Manufacturing	3.3
Number of Employees	
0–5	43.8
6–10	18.2
11–19	14.9
20–50	10.7
51 or more	12.4
Age of Business	
0–5 years	23.1
6–10 years	19.8
11–15 years	17.3
16–30 years	26.4
31–50 years	13.2

Publishing and Information Technology companies made up the largest industry groups, with general retail also featuring quite prominently. Most businesses had fewer than ten employees, however, the breakdown of respondents was generally evenly spread. Interestingly, more than 10% of respondents had more than fifty staff. In terms of business age, respondents were also evenly spread across most of the groups.

IT Use

Table 2 provides details of the respondents Information Technology characteristics. Most respondents (43.8%) used one to five computers, with only six (5%) using more than seventy-five. Most businesses (40.5%) have been using computers for six to ten years. Unsurprisingly, given the original sample requirements, nearly all organisations used the Internet and Electronic Mail applications in their business.

Table 2: Information Technology Demographics

Demographic	Percentage
Number of Computers	
1–5	43.8
6–15	34.7
16–30	9
31–50	7.4
51–75	0
76 or more	5
History of Computer Use	
Less than 1 year	2.5
1–2 years	4.1
3–5 years	20.7
6–10 years	40.5
11–15 years	20.7
16 years or more	11.6

The Internet and Electronic Commerce

Most of the respondents have had a website in operation for between one and two years. Long-term adopters (11.6%) have had a website for at least four years. Websites were used largely to provide product (79.3%) and pricing (66.9%) information. Many organisations also used their websites to provide company information. Most websites (31.4%) cost between five thousand and ten thousand dollars to develop, with a majority of sites (75.2%) being hosted by an external Internet Service Provider.

EFFECTS OF ADOPTING ELECTRONIC COMMERCE

The prime interest at this stage of the study was the analysis of the adoption of electronic commerce on organisations. The study analysed the impact of top management support, planning, duration of participation, business strategy integration and information systems integration on performance metrics covering business performance, information/decision making, operating costs and customer base size. The data are yet to be thoroughly analysed, however from initial examination the following tentative observations can be made.

Business performance was found to be most highly associated with electronic commerce, while a significant relationship was identified between electronic commerce and customer service improvements, in particular the size of the customer base. Increases in foreign customers appeared marked. Business planning and strategy alignment seemed to improve information usage, through means of enhanced decision making and a greater knowledge of customers. Operating cost reductions were not overly associated with electronic commerce adoption.

The analysis suggested that businesses that planned their implementation and used their website strategically tended to have greater improvements in organisational effectiveness. Interestingly, top management support, duration of participation and information systems integration did not appear to affect greatly organisational effectiveness in the analysis. Further examination of this continues, particularly with regard to differences and similarities between Australia, Asia Pacific, European and North American firms.

Interestingly, few respondents appeared to care about the upheaval in the online industry. Respondents seemed generally confident that the industry downturn would not affect them in the

long run. This suggests that there may exist some survivorship bias among respondents, such that many unsuccessful firms no longer exist in the marketplace. Further analysis of this curious finding continues.

CONCLUSIONS

The continuing discussion and interest in electronic commerce invites further research into the topic, and deeper analysis of this study is being undertaken. A number of research avenues open as a result of this study, particularly within the Asia Pacific region. Given the immaturity of the technology, a similar study in the future may provide a more accurate assessment of the technology market in this region. Additionally, while this study exclusively focused on business-to-consumer electronic commerce, the application of this method to business-to-business electronic commerce may increase the breadth of knowledge in this field. Finally, deeper examination into specific industry segments (such as information technology) will make for interesting future research.

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BIOGRAPHICAL NOTES

Carlo Cappuccio is a senior advisor at KPMG within their Information and Risk Management division. He consults to Government on a range of technology and management issues including application systems and business/IT risks. Carlo completed his Honours in Information Systems at the Australian National University in 2000.

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