

# **Electronic Commerce in New Zealand**

## **A Survey of Business Use of the Internet**

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### **Summary**

The Ministry of Economic Development in August 2000 commissioned a survey, by BRC Marketing and Social Research, covering New Zealand business use of the Internet to provide background information for the Government's ecommerce strategy.

The survey indicates that New Zealand small to medium businesses are ahead of their Australian counterparts in exploiting the potential of the Internet.

Over two thirds (68%) of businesses are using email and one third have their own domain name and/or Web site. Only 7% indicate that they do not use computers at all. Almost all businesses with 20 or more staff (94%) are connected to the Internet and 68% have their own domain name or Web site.

After email, the leading use of the Internet is information gathering and research followed by ordering goods and services and online banking. Just over one in four businesses are using the Internet to sell goods and services.

The survey indicates that, although New Zealand businesses are well prepared, they have yet to come to grips with the implications of ecommerce. While two thirds of businesses claim to be engaged in some type of ecommerce with other organisations already, only about one in ten have integrated this activity with their internal business systems.

Ecommerce is seen as being important for information gathering, developing the customer base and maintaining competitiveness. However, despite the global reach of electronic commerce, only a minority of businesses site growing exports as being a major benefit.

No one issue stands out as inhibiting the take up of ecommerce. Leading factors sited are cost, lack of proven benefits, lack of skilled staff, concern about loss of contact with customers, and security issues.

The survey involved a telephone survey of 504 respondents and has a weighted margin of error of plus or minus 5.8%.

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## A Survey of Business Use of the Internet

### 1. Introduction

A survey of New Zealand businesses was commissioned by the Ministry of Economic Development to provide background information for the Government's ecommerce strategy. BRC Marketing and Social Research conducted a telephone survey of 506 respondents between 25 and 30 August 2000.

The sample was stratified so as to over represent large firms to enable indicative comparisons between small, medium and large businesses. The number of full time equivalent staff (FTES) was used as an indicator of business size when designing the sample. Since the overwhelming majority of New Zealand businesses are small, without this stratification too few large firms would have been included in the sample.

Throughout this report, total sample results have been weighted back to reflect the national distribution of firms by FTES size. All percentages quoted are based on weighted survey results. The margin of error for total results in this survey is plus or minus 5.8% at the 95% confidence level.

Tables 1.1 and 1.2 profile the nature of the sample used in the survey. Note that 'location' is defined as the four main centres compared with provincial centres and rural areas, based on telephone districts.

**Table 1.1: Profile of respondents (size and annual turnover)**

Size (FTES)	Number sampled	Population* %	Annual Turnover	Number sampled	Weighted** %
5 or fewer	217	86	< \$500,000	102	39
6 to 19	135	9	\$500,000 to \$2m	137	31
20 and over	152	5	\$2m and over	172	11
Don't know/refused	2	-	Don't know/refused	95	19
Total	506	100		506	100

\* Actual size distribution of small, medium and large businesses in New Zealand as reported by Statistics New Zealand<sup>1</sup>

\*\* Throughout this report results quoted as percentages are weighted based on the actual size distribution to correct for over-sampling of larger firms

<sup>1</sup> New Zealand Business Demographic Statistics, Statistics New Zealand

**Table 1.2: Profile of respondents (location and business sector)**

Location	%	Business sector	%
Main centres	58	Manufacturing	19
Provincial & rural	42	Construction	8
		Primary sector	2
		Wholesale/Retail	38
		Transport/Storage	9
		Business services	13
		Personal services	4
		ICT	6
		Other	1
Total	100		100

Table 1.3 shows the distribution of firms against location by size. There is a slightly larger proportion of smaller firms in provincial centres and rural areas than in the main centres..

**Table 1.3: Profile of respondents (size against location)**

Size (FTES)	All %	Main centres %	Secondary & rural %
5 or fewer	86.2	84.0	89.3
6 to 19	8.7	10.5	6.3
20 and over	5.0	5.5	4.4
Total	100	100	100

Table 1.4 shows that nearly one in four (23%) of New Zealand firms included in the survey are engaged to some extent with the export of goods or services, with larger firms being more likely to be exporters than smaller ones. Over 50% of firms with 20 or more FTES are exporters. Those business sectors most likely to include exporting firms are 'ICT' (45%), 'manufacturing' (38%) and 'business services' (27%). Main centre businesses are more than twice as likely to be exporters than provincial and rural firms (30% compared with 13%).

**Table 1.4: Profile of respondents (involvement with export of goods and/or services)**

Size (FTES)	% Exporters	Location	% Exporters	Business sector	% Exporters
5 or fewer	20	Main centres	30	Manufacturing	38
6 to 19	37	Provincial & rural	13	Construction	15
20 and over	54			Primary sector	4
				Wholesale/Retail	16
				Transport/Storage	14
				Business services	27
				Personal services	12
Overall	23			ICT	45

## 2. Businesses Connected to the Internet

In Tables 2.1 and 2.2, business use of the Internet as measured in the BRC survey is compared with corresponding figures from an Australian survey published by the National Office for the Information Economy (NOIE) carried out in February of almost 1500 businesses<sup>2</sup>. Inclusion of Australian statistics is useful since Australia is our closest neighbour and largest trading partner and because comparisons are often made of the use of technology and general e-business readiness between the two countries.

The surveys from the two countries are consistent in showing larger firms to be well ahead of their smaller counterparts in use of the Internet generally. Email use is assumed to be a good indicator of a connection to the Internet. Use of email by firms with 20 or more FTES is approaching saturation across all business sectors (above 90%), in both New Zealand and Australia. However, smaller businesses in both countries are well behind the larger firms in their use of email, acquisition of domain names and establishment of Web sites.

Any comparison between the figures should make allowance for the six month gap between the New Zealand (BRC) and Australian (NOIE) surveys because business use of the Internet in both countries is growing rapidly. NOIE notes an increase in connectivity of 20% for small firms over 12 months from February 1999 to February 2000. Assuming this has continued since then, it would be reasonable to project a further 10% increase on the Australian figures to August 2000. On this basis, even allowing for the projected growth, from Table 2.1 it appears that New Zealand firms of comparable size are ahead of their Australian counterparts in the use of email, with 65% for firms with less than 6 FTES and 83% for firms with 6 to 19 FTES, compared with 54% for Australian firms with 19 or fewer FTES.

**Table 2.1: Business use of email and domain names (Australia and New Zealand)**

Size (FTES)	New Zealand (August 2000)			Australia (February 2000)*		
	Internet user (email) %	Own DN or Web site %	Do not use computers %	Internet user (email) %	Own DN or Web site %	Do not use computers %
5 or fewer	65	29	8	54	25	16
6 to 19	83	47	1			
20 and over	94	68	0	92	56	0
All	68	33	7	56	26	15

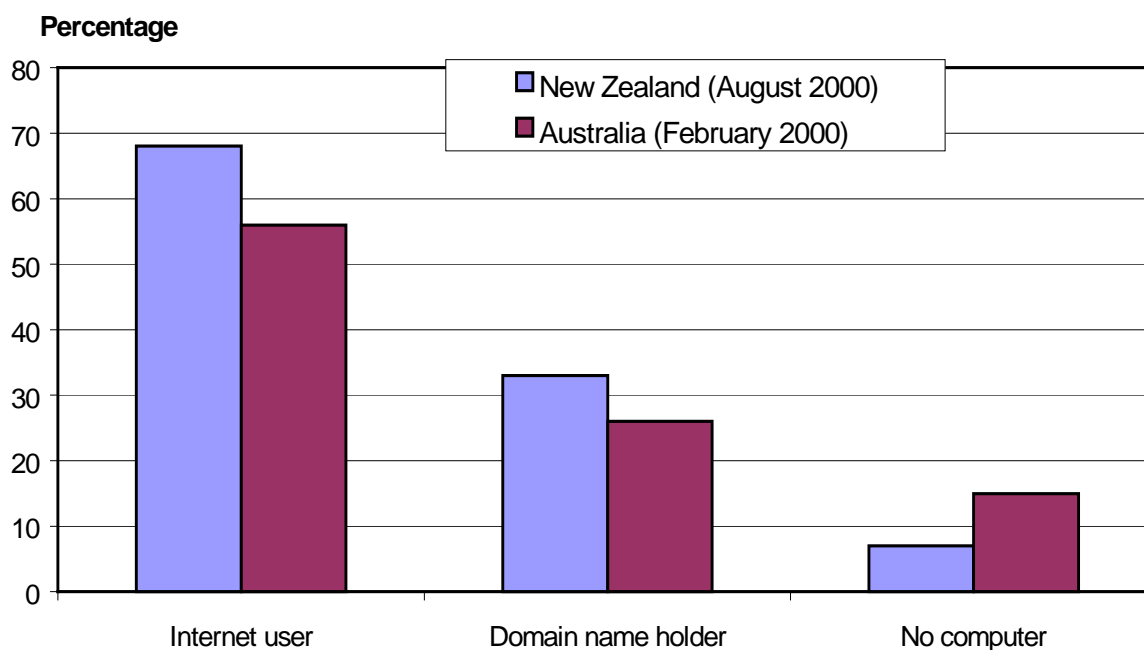
\* Australian data for firms with 19 or fewer FTES are combined

Figures for firms of any size with their own domain name or Web sites are well below saturation level in both countries. Again, as shown in Figure 2.1 and Table 2.1, small and medium New Zealand firms appear to be ahead of their

<sup>2</sup> Small Business Index, June 2000. The National Office for the Information Economy, Canberra, Australia  
([http://www.http://www.pacificaccess.com.au/sbi/sbi\\_reports/sbimay99.pdf](http://www.http://www.pacificaccess.com.au/sbi/sbi_reports/sbimay99.pdf))

Australian counterparts with figures of 29% and 47% for New Zealand compared with 25% for Australia. There is a similarly large difference in use of domain names and the Web by larger firms in the two countries (68% for New Zealand, 56% for Australia).

**Figure 2.1: Business use of email and domain name holders, all firms (Australia and New Zealand)**



In Table 2.2, comparisons of Internet use across business sectors in the two countries reveal similar trends. Note that for New Zealand, numbers of respondents included in some entries in Table 2.2 are too small for differences to be regarded as being significant statistically. They are indicative only. Nevertheless, in the case of small and medium firms (less than 20 FTES), New Zealand firms appear to be making consistently greater use of the Internet compared with their Australian counterparts.

**Table 2.2: Businesses connected to the Internet (by sector, NZ and Australia)**

Business sector	New Zealand (August 2000)				Australia (February 2000)	
	All	Internet user (email)			Internet user (email)	
		%	< 6 FTES	6 to 19 FTES	20 + FTES	< 20 FTES
Manufacturing	66	62	72	86	56	84
Construction	64	59	73	100	49	92
Primary sector	12	0	100	100	*	*
Wholesale/Retail	63	60	87	99	49	92
Transport/Storage	63	58	90	98	59	84
Business services	93	93	86	100	81	96
Personal services	53	50	100	90	57	87
ICT	86	83	100	100	*	*
All	68	65	83	94	60	89

\* Not reported

Despite the differences between the two countries, levels of usage across different business sectors are very similar, although for smaller firms in both countries, 'business services' firms stand out in their use of the Internet. New Zealand small 'primary sector' firms appear to be well behind the others while 'ICT' firms are at similar levels to 'business services' firms (comparable Australian figures are not available for these sectors).

Table 2.3 shows the use of the Internet by location for New Zealand firms only. While there is a small bias in favour of smaller firms in provincial and rural areas, this is probably insufficient to explain the differences observed. It seems that firms outside the main centres are less likely to be making use of the Internet and this is especially the case with domain names or Web sites.

**Table 2.3: Businesses connected to the Internet (by location, NZ only)**

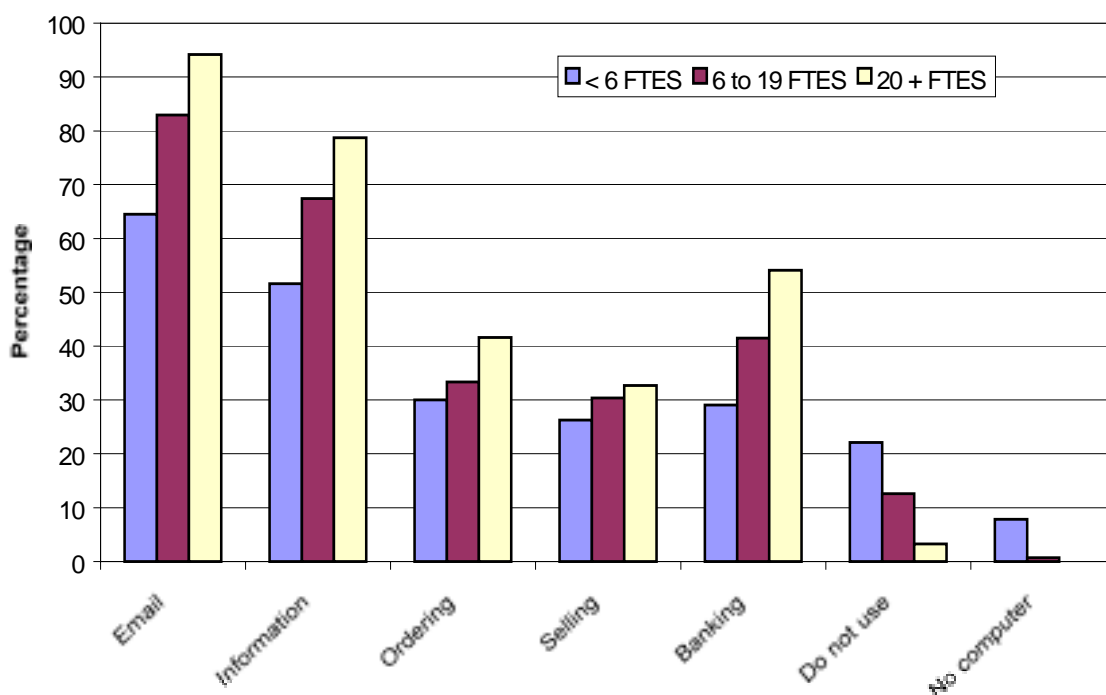
Location	Internet user (email)	Own DN or Web site	Do not use computers
	%	%	%
Four main centres	72	40	5
Provincial & rural	61	24	9
All	68	33	7

### 3. Business Use of the Internet

Use made of the Internet can be roughly graduated from casual through to sophisticated with email at one extreme and the use of interactive and secure Web sites at the other. For each use of the Internet shown in Figure 3.1 and Table 3.1 there is a consistent correlation with the size of the firm. Email is the most used service and is taken here as being a useful surrogate measure of Internet connection. Next in importance is information gathering followed by ordering, banking and selling. It appears that medium (6 to 19 FTES) and larger firms (20 or more FTES) use the Internet for banking more than for ordering or selling goods and services.

As noted above, almost all larger firms (94%) are using the Internet for email now and medium sized firms are approaching this level (83%) however only 65% of small firms (fewer than 6 FTES) are currently using email. Of the identified Internet uses, selling of goods and services to customers appears to be the least important function.

**Figure 3.1 Business use of the Internet by size**



**Table 3.1: Business use of the Internet (by size)**

Size (FTES)	Email	Information and research	Ordering goods or services	Selling goods or services	Online banking	Do not use Internet	Do not use computers
	%	%	%	%	%	%	%
5 or fewer	65	52	30	26	29	22	8
6 to 19	83	67	33	30	41	13	1
20 and over	94	79	42	33	54	3	0
All	68	54	31	27	31	20	7

Note: May total to more than 100% because of multiple selection

Analysis of use of the Internet according to location confirms the impression that the bias in favour of smaller firms in provincial centres and rural areas is insufficient to explain the differences observed between the two groups. Outside of the main centres, firms are making less use of the Internet, are more likely not to be using the Internet, and are more likely to not be using computers at all. (cf Table 2.3)

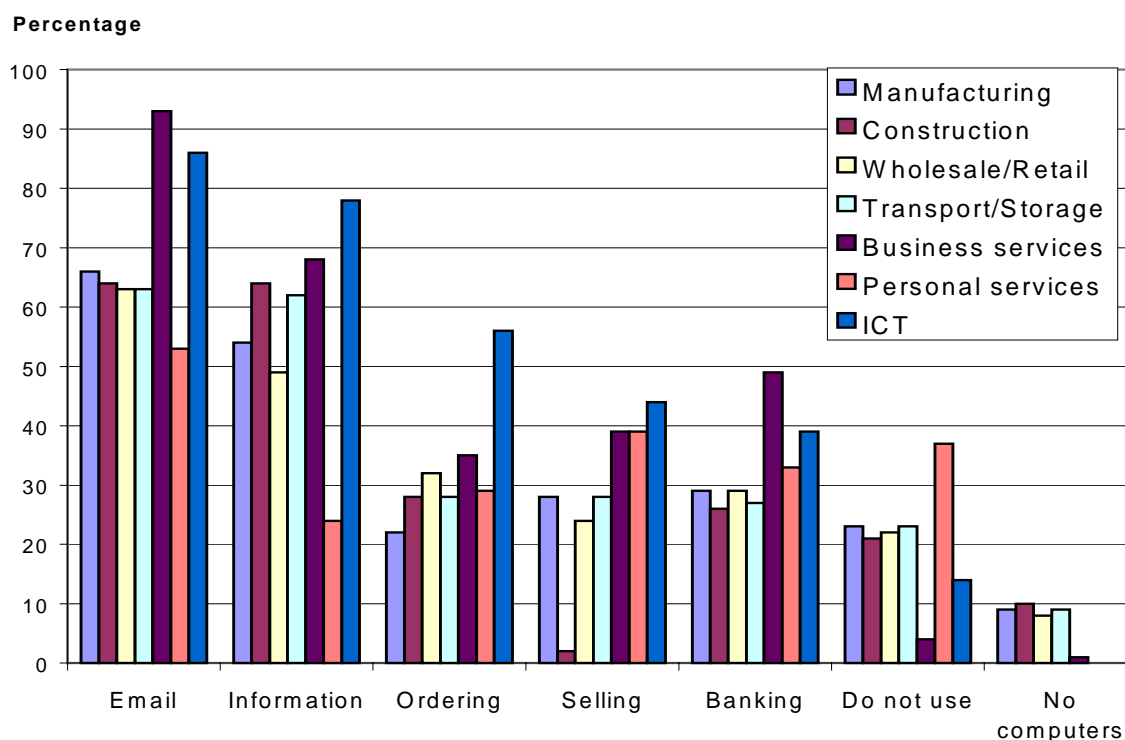
**Table 3.2: Business use of the Internet (by location)**

Location	Email %	Information and research %	Ordering goods or services %	Selling goods or services %	Online banking %	Do not use Internet %	Do not use computers %
Main Centres	72	61	32	33	38	17	5
Provincial & rural	61	45	29	19	22	25	9
All	68	54	31	27	31	20	7

Note: May total to more than 100% because of multiple selection

As seen in Figure 3.3 and Table 3.3, analysis of use of the Internet according to business sector gives broadly similar results in each category with a few interesting variations. The largest variance from the overall pattern is in the 'selling' category where 'construction' firms appear to be low compared with other sectors and 'business services', 'personal services' and 'ICT' are all relatively high, around the 40% mark. Almost 50% of 'business services' firms are using online banking.

**Figure 3.3 Business use of the Internet (by sector)**



**Table 3.3: Business use of the Internet (by sector)**

<b>Business sector</b>	Email %	Information and research %	Ordering goods or services %	Selling goods or services %	Online banking %	Do not use Internet %	Do not use computers %
Manufacturing	66	54	22	28	29	23	9
Construction	64	64	28	2	26	21	10
Primary sector	*	*	*	*	*	*	*
Wholesale/Retail	63	49	32	24	29	22	8
Transport/Storage	63	62	28	28	27	23	9
Business services	93	68	35	39	49	4	1
Personal services	53	24	29	39	33	37	0
ICT	86	78	56	44	39	14	0
All	68	54	31	27	31	20	7

\* Sample size too small

Note: May total to more than 100% because of multiple selection

Table 3.4 relates only to those respondents who indicated that they had a domain name or Web site. The margin of error is very large because of the limited sample and any differences must be regarded as being indicative only.

Around one fifth of firms with their own domain name do not have a Web site and are presumably using their domain name as an email address. For those with a Web site, 62% are using it to provide online information about their business, with just under 30% providing a catalogue of goods and services and a similar proportion providing some sort of sales service to customers. The 'construction' sector appears to deviate from this with only 15% indicating the use of a Web site.

**Table 3.4: Use of Web sites by businesses with domain names**

<b>Business sector</b> (Firms with Domain names)	No Web site (domain name only) %	Information about business & products %	On-line catalogue %	Customer purchase of goods &/or services %	Other %
Manufacturing	18	67	36	33	3
Construction	85	15	5	1	0
Primary sector	*	*	*	*	*
Wholesale/Retail	22	56	40	27	4
Transport/Storage	14	81	27	23	1
Business services	15	71	12	24	7
Personal services	6	65	6	29	0
ICT	15	70	37	42	13
All	21	62	29	28	6

\* Sample size too small

Note: May total to more than 100% because of multiple selection

## 4. Business Use and Perception of E-Commerce

The term 'e-commerce' was defined broadly for the purposes of this survey and includes the use of email between business partners, so that in Table 4.1 the number responding positively to the question "is your firm engaged in electronic commerce with other organisations?" is similar to the numbers indicating they use email (66% compared with 68%, eg Table 3.1). There is a very low level of integration between this aspect of ecommerce and firms' internal business systems (overall, 11%). In this respect, larger firms are clearly much more advanced than their smaller counterparts (9% for firms with 6 or fewer FTES compared with 28% for firms of 20 or more). Firms in the 'businesses services' and 'ICT' sectors have a higher level of integration than the others (27% and 17% respectively). Very few firms claim not to be using ecommerce at all but, at the same time, very few claim to be making maximum possible use (3% in each case).

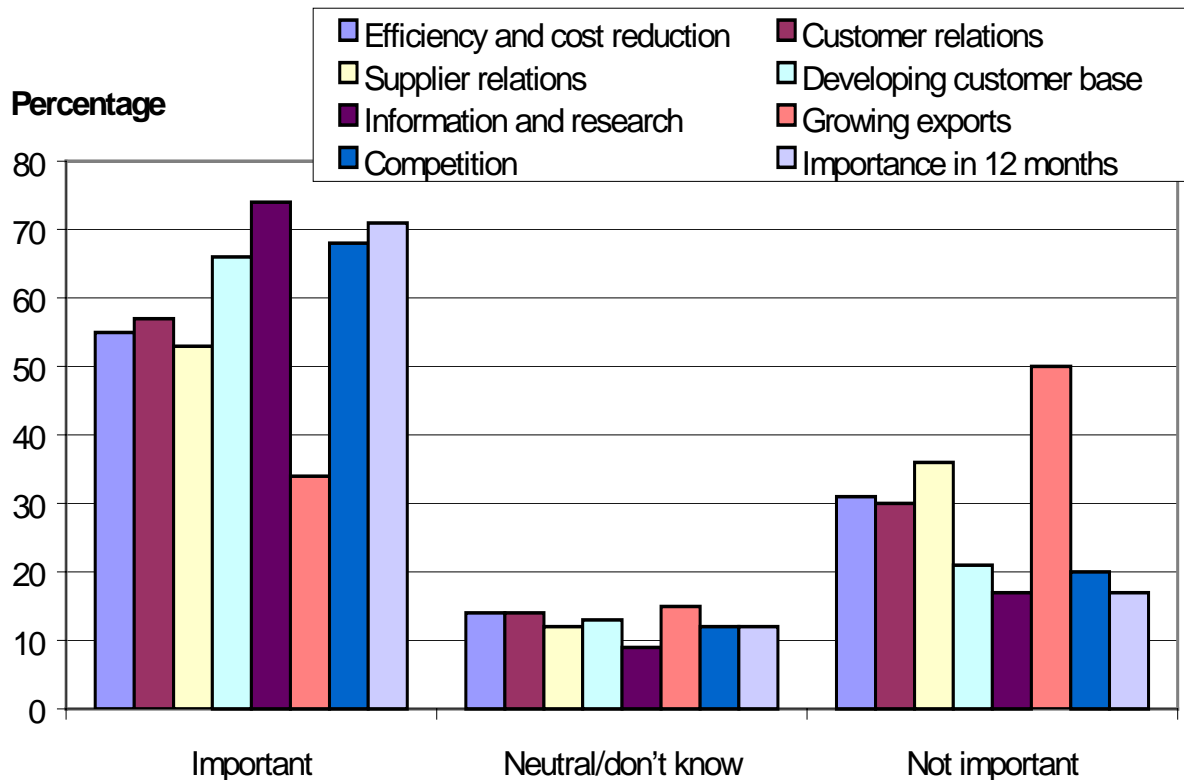
Overall, these results signal that there is great potential for ecommerce use to expand: overall awareness and use at a primary level (email) are high but there is little integration with core business systems. A high level of integration would be an indicator that electronic commerce is a major consideration for businesses and this is clearly not yet the case.

**Table 4.1: Business use of e-commerce systems**

	Has a domain name	Is engaged in e-commerce with other organisations	E-commerce linked to internal business systems	To what extent are you using e-commerce now?			
				Sometimes	Often	Maximum extent possible	Not at all
	%	%	%	%	%	%	%
<b>Size (FTES)</b>							
5 or fewer	29	63	9	39	25	2	3
6 to 19	47	80	15	48	27	8	4
20 and over	68	91	28	48	38	8	3
<b>Location</b>							
Main Centres	40	72	12	41	29	4	3
Provincial & rural	24	57	9	31	22	1	3
<b>Business sector</b>							
Manufacturing	26	66	6	44	19	6	0
Construction	20	57	7	41	18	0	10
Primary sector	1	30	7	27	3	1	0
Wholesale/Retail	32	60	10	40	27	1	1
Transport/Storage	28	63	4	47	20	1	1
Business services	48	86	27	34	49	6	6
Personal services	32	63	0	33	21	0	9
ICT	62	85	17	40	35	2	8
<b>All</b>	33	66	11	40	26	3	3

The survey attempted to gauge business perceptions of how important ecommerce was considered to be, and for what reason. Figure 4.2 and Table 4.2 indicate that opinions on ecommerce are polarised, with very few people having a neutral perspective on ecommerce and the overwhelming majority seeing it as being either critical or important on the one hand, or not important or irrelevant on the other.

**Figure 4.2 Business perception of the importance of ecommerce**



Not important = not important and irrelevant combined  
 Important = critical and important combined

In nearly all cases, ecommerce is seen to be important by many more respondents than see it as not important. 'Developing the customer base', 'information gathering and research', and 'keeping ahead of competitors' are seen as the most important areas for exploiting ecommerce.

'Growing exports' stands out as the one area which respondents overall see as being relatively unimportant. Given the increasingly global nature of commerce and the potential contribution of ecommerce to this, this result seems to indicate a gap in understanding of its potential on the part of many businesses.

Interest in ecommerce is likely to increase with an overwhelming majority of respondents seeing it as being critical or important for their business in 12 months time, with only 17% seeing it as unimportant or irrelevant.

**Table 4.2: Business perception of the importance of ecommerce**

Issue	Critical	Important	Neutral	Not important	Irrelevant	Don't know
	%	%	%	%	%	%
Efficiency and cost reduction	22	33	5	20	11	9
Customer relations	24	33	7	22	8	7
Supplier relations	19	34	6	24	12	6
Developing customer base	30	36	7	14	7	6
Information and research	30	44	5	11	6	4
Growing exports	15	19	6	18	32	9
Competition	30	38	6	13	7	6
Importance in 12 months	36	35	5	11	6	7

Note: May total to more than 100% because of multiple selection

From Table 4.3 it seems that there is generally little difference between smaller and larger firms in their perception of the importance of the contribution of ecommerce in different areas.

**Table 4.3: Importance of e-commerce by firm size**

Issue	< 6 FTES		6 to 19 FTES		20 + FTES	
	Not Important	Important	Not Important	Important	Not Important	Important
	%	%	%	%	%	%
Efficiency and cost reduction	32	53	29	60	14	66
Customer relations	31	55	26	67	21	71
Supplier relations	36	51	31	58	35	54
Developing customer base	21	66	22	67	23	69
Information and research	18	72	14	80	15	82
Growing exports	51	33	46	40	42	39
Competition	21	67	19	76	15	75
Importance in 12 months	19	69	6	88	11	83

Not important = not important and irrelevant combined

Important = critical and important combined

Note: May total to more than 100% because of multiple selection

Table 4.4 summarises factors seen by respondents as inhibiting the take up of ecommerce. Only 10% indicate that there are no barriers to the adoption of ecommerce but no one area stands out as being of overwhelming significance. Cost is the single biggest issue with 39% seeing this as being a major inhibitor. Lack of proven benefits, concerns over loss of contacts with customers, and lack of skilled staff are all seen as important by over one third of respondents. Overall, about half this number (15%) register concern over the readiness of business partners to enter into ecommerce relationships but this seems to be a matter of greater concern for larger firms (26%) than for small ones (13%).

Other differences on the basis of location or size are not statistically significant but could indicate some underlying issues. There may be a slightly higher level of scepticism about the benefits in provincial and rural areas but a lower level of concern about security issues for example, but it runs counter to expectation that main centre firms should be finding greater

difficulty in locating skilled staff than those in provincial and rural areas. On the other hand, there is anecdotal evidence which is not reflected here that obtaining external assistance is a problem in some provincial centres.

**Table 4.4: Factors inhibiting take-up of e-commerce**

Inhibiting factor	Overall %	Location		Size (FTES)		
		Main centres %	Provincial & rural %	< 6 %	6 to 19 %	20 + %
Business partners not ready	15	18	10	13	21	26
Benefits not proven	37	34	41	37	33	43
Loss of contact with customers	36	34	39	37	33	29
Lack of skilled staff	37	41	31	36	36	43
Security issues	34	38	28	34	34	43
Implementation costs	39	39	40	39	41	39
Lack of external assistance	28	28	28	28	26	29
Other	18	18	18	18	16	22
No perceived barriers	10	10	12	10	16	8

Note: May total to more than 100% because of multiple selection