

The Use and Impact of the Internet on Local Business: A Summary of Trends 1995-99

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This report summarizes a longitudinal study of trends in the use and impact of the Internet among local businesses in Blacksburg, Virginia (home of the Blacksburg Electronic Village), and environs. The Blacksburg Electronic Village (BEV) designed and implemented three survey rounds, in 1995, 1997, and 1999.

In order to assess trends in the local business community with regard to the Internet, the Blacksburg Electronic Village (BEV) research staff designed and implemented three rounds of a local business. The first round was in summer 1995, the second in summer 1997, and the third in fall 1999. There are two different versions of the survey: one for businesses that are using the Internet, the other for businesses NOT using the Internet. Each year all the questions of the previous round were asked again, and a couple of questions were added.

I. Methodology

In all three rounds, the BEV sent a survey to every viable private company listed on the BEV web page, called the 'Village Mall,' (100 businesses in 1995; 217 businesses in 1997; and 397 businesses in 1999). Among businesses using the Internet, the response rate ranges from 37% (N=37) in 1995 to 17% (N=100) in 1999. BEV sent a survey to the businesses that were members with the local Chamber of Commerce, but were not listed on the 'Village Mall' web site (338 in 1995; 340 in 1997; 327 in 1999). These were assumed to be businesses NOT using the Internet, although some did write to request the Internet user survey. The response rate among businesses NOT using the Internet range from 17% (N=) in 1999 to 24% (N=72) in 1997 and 29% (94 responses) in 1995.

The surveys, together with other feedback from the business community, have helped BEV project designers make adjustments or interventions that are intended to assist businesses in using online resources. For example, in 1996, the Town of Blacksburg contributed roughly \$10,000 in mini-grants (of about \$350 each) to businesses interested in publishing their information online. Moreover, business findings considered together with local consumer feedback, portray an evolving picture of trends and other changes in the relationship and interaction between consumers and producers carried out over a computer network rather than face-to-face or by telephone.

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II. Businesses Using the Internet

Among businesses using the Internet, the majority in all three rounds is made up of small businesses with fewer than ten employees (65% in 1995 and 1997, 58% in 1999). There is diversity in the type of business, although most are in the services sector offering retail, consulting, computer, professional or non-profit services. Most have five or more years of experience with computing (61% in 1995 and 1997; 62% in 1999). An increasing percentage of businesses has more than five computers (30% in 1995, 39% in 1997, 40% in 1999) with the majority using the Windows operating system (86% in 1995, 84% in 1997, 85% in 1999).

Most businesses report having one or two computers connected to the Internet (80% in 1995, 70% in 1997 and 52% in 1999). They use the networked computers up to 20 hours a week (90% in '95, 81% in '97 and 66% in 1999). An increasing percentage of businesses report using networked computers between 21 to 100 hours per week (10% in 1995, 19% in 1997, and 29% in 1999). The majority has dial-up access to the Internet (75% in '95, 67% in '97 and 68% in 1999). The drop in dial-up access is due to businesses shifting to direct connections via Ethernet at such high speeds as 10 Megabits per second or T-1 lines at 1.45 Megabits per second.

As with most businesses in Blacksburg and environs, most respondents using the Internet are small with fewer than ten employees (65% in 1995 and 1997; 58% in 1999). There is diversity in the types of business, although most are in the services sector offering retail, consulting or professional services. Almost two-thirds of respondents have five or more years of experience with computing (61% in both 1995 and 1997; 62% in 1999); a growing proportion have more than five computers in their organization (30% in 1995, 39% in 1997, 40% in 1999).

Table 1

Reasons for Listing Online

	1995	1997	1999
It is free	65%	63%	81%
Interest in technology	70	52	30
To increase contacts:			
with clients	84	78	71
with suppliers	8	13	11

In the first (1995) survey round, only 14% of respondents reported an increase (up to 10%) in contacts (per month) with suppliers and clients, and only 4% reported increases between 11-20%, resulting from the Internet. By 1997, 27% of respondents noted up to 10% increases in contacts per month, and one company, a web distributor of books, noted increases between 41 and 50% in contacts with clients and suppliers. In the 1999 round, table 14 shows increasing percentages of businesses reporting greater contacts per month. The businesses reporting the highest percent increases (41-50%) in 1999 are also web companies.

Table 2

Percent of Businesses reporting Increases in Contacts (per month)

	1995	1997	1999
No increase	82%	70%	25%
1-10% increase	14	27	47
11-20% increase	4	0	9
31-40% increase	0	0	6
41-50%	0	3	13

A similar pattern appears on the revenue side. In 1995, only 5% of respondents reports an increase of up to 10%. By 1997, this had risen to 17%, and by 1999, 37% of respondents notes up to 10% increases in revenue generation per month resulting from their Internet use or presence. The businesses reporting revenue increases between 41 and 50% and 50 - 100% are web-based businesses (e.g., web publisher or distributor).

Table 3

Percent of Businesses reporting Increases in Revenues (per month)

	1995	1997	1999
No increase	95%	80%	43%
1-10% increase	5	17	37
11-20% increase	0	1	7
21-30% increase	0	0	0
31-40% increase	0	0	0
41-50% increase	0	2	3
50-100% increase	0	0	3

While online commercial transactions are not offered as a service to local businesses, the BEV is interested in working with local banks to make such transactions possible in the future. There is evidence of declining interest in

online commercial transactions, dropping steadily from 60% in 1995 to 48% in 1999. Among those reporting they were not interested in commercial exchange online, a third of respondents in both early rounds (32% in '95, 31% in '97. In the 1999 round,) noted that online commercial transactions were not applicable to their business. Only a few companies reported concern about data security (8% in 1995, 11% in 1997, 6% in 1999).

Table 4

Why not interested in Commercial Transactions Online?

	1995	1997	1999
Not applicable to my business	32%	31%	82%
Not big enough market	0	3	6
Security concerns	8	11	6
Other	0	3	6

III. Businesses NOT using the Internet

Among the 92 respondents NOT using the Internet that were surveyed in the first round, most (72%) indicate that they do not list information about their business (on the BEV Village Mall web site) because they do not use computers in their business. The remaining 28% report they do use computers, but they do not have a network connection. Other reasons (listed below) were not a consideration for these businesses in 1995. By 1997, only 6% of respondents noted that they do not use computers in their business; 22% said they use computers but do not have a network connection. In addition, the following factors are noted as reasons why they do not list their business on the Internet:

Table 5

Why No Online Listing?

	1995	1997	1999
Don't use computers	72%	6%	5%
No network connection	28	22	14
Cost	0	14	17
No market application	0	28	10
Too busy	0	3	10
Need technical knowledge	0	3	14
Other	0	24	24

In 1995, almost all respondents (94%) note that technical support and training are important motivating factors for using the Internet in the future. Therefore, in the subsequent 1997 round, we asked businesses if they had trained any of their staff in the previous year. The majority (94%) reported they had sent one to five employees for Internet-related training in the previous year (78% had sent one or two staff, another 16% had sent three to five staff for Internet training). This is comparable to training among businesses reporting they DO use the Internet (95% in 1997 and 88% in 1999 report that 1-5 employees had taken training in the year prior).

In 1997 and 1999, technical support and training were no longer important motivating factors for the majority (less than one third of respondents). The majority of respondents (54%) wanted to see evidence of revenue potential. Other important motivating factors for using the Internet that emerged since 1995 include reduced cost, evidence of a large market base, and lower marketing (advertising) costs (Table 6).

Table 6

Incentives for Future Use

	1995	1997	1999
Tech support/Training	94%	29%	30%
Reduced cost	0	22	19
Large market base	0	25	28
Revenue potential	0	51	54
Lower marketing costs	0	22	14
Nothing	6	10	14

A detailed breakdown of the longitudinal business study is available in hard copy, upon request.