

Small Firms and the Internet: New Insights on Frequency and Type of Use

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Abstract

Research on small business owners' use of the Internet has treated all firms with fewer than 25 employees as a common homogeneous group and compared these to larger firms. This study looks in detail at Internet use by 190 firms with fewer than 25 employees, finding marked differences in frequency and type of use among different sized. These firms also differ by age. In general a profile results of more frequent and more sophisticated use by firms less than ten years old, with four or more full-time equivalent (FTE) employees, and with intentions for growth in the next six months. Given these new insights, suggestions for further research are offered.

Introduction

According to published statistics, an increasing number of businesses of all sizes and scopes are turning on and tuning in to the Internet. Market opportunities abound... the fact that there are presently over 100 million Internet users signifies that the sheer size of cyber-markets is staggering. The estimate that the number of actual uses, or hits, doubles in 100 days (Gillmor, 1998) gives an idea of the activity and the potential. A recent survey (Deloitte & Touche, 1998) of senior executives of U.S. based businesses with revenues of at least \$1 billion showed 87 percent of the companies now use the Internet for business purposes. Of these, 98 percent use the Internet to provide information about their business and 69 percent reportedly sell products or services via the Internet.

While information is limited on small business use, there are indications that increasing numbers are using the Internet to do things as diverse as search for competitive product information, make purchases, or look for new markets. *Inc. Technology* magazine (1998) recently reported that among small businesses, the Internet was being used for online research, hosting Web sites, Intranets and e-mail. The study separated firms into two sizes: (1) one to forty-nine employees; and (2) fifty to ninety-nine employees. A 1997 survey (Britt, 1997) reported that 22 percent of small businesses purchase products online. This was more common for small businesses as they did not have the formal, centralized purchasing procedures of larger firms. The study also reported that 81 percent do online product research. This study did not indicate the size regarded as "small." A Canadian study (*CA Magazine*, 1996) determined that in 1996, 22 percent of English speaking owner-managers use the Internet, and more than double that were expected to use it within a year. Of those using it, 43 percent use the Internet to seek business information, and 26 percent have a homepage for their business. Again, however, the study did not indicate how "small" was defined.

By thoughtfully implementing Internet marketing strategies, entrepreneurial firms may be able to:

- Gather marketing intelligence on the industry, competitors and their strategies, and potential markets
- Search out information on possible products to offer, new suppliers, fund sources, or basic information on how to do business
- Expand access to markets beyond their immediate geographic area
- Create immediate awareness of their products/services not only through their publishing a Web site, but also through registering the site with search engines, participating in discussion groups, mailing lists and bulletin boards, etc.
- Gain access to key decision makers through bypassing gatekeepers
- Position themselves on equal footing with large, established concerns
- Serve markets that are often ignored by larger competitors (e.g., small in size, hard to reach, geographically remote)
- Implement well-conceived Internet marketing strategies quite affordably. Aside from the \$30 or so monthly Internet Service Provider's access fee, most companies can be in business on the Net for well under \$1,500.

As a result, one finding from a study conducted by the Michigan Small Business Development Center at Wayne State University was that small businesspeople who have had a Web site "remained overwhelmingly optimistic about continuing to use it as an integral marketing and customer support tool" (McCue, 1998). Similarly, Gould and Scovotti (1997) found that 60 percent of the firms included in their study plan to expand their Internet presence over the next few years.

In addition to enhancing "outbound" small firms' marketing strategies, the Internet offers a vehicle for existing firms of any size to market *to* entrepreneurial and start-up organizations. Even while in their conceptual or embryonic stages, such organizations represent a significant market to those offering "new business services"—everything from how to develop a business plan to buy accounting software systems to negotiate with vendors. The U.S. Small Business Administration, for example, has developed the Angel Capital Electronic Network (ACE-Net) to bring together wealthy private investors (angels) and small businesses in need of capital (Blakely, 1997). However, to be an accessible market, these small or new firms must be using the Internet. A recent study indicates that small firms face two problems, which have barred broader use (Lu, 1998). First, the study indicates that only 21 percent of small office businesses are remotely networked, most using analog modems. This presents the second problem, that large firms are able to afford leased line connectivity, with greater speed and reliability. However, the integrated services digital network (ISDN) is reducing costs and increasing reliability to make it more feasible for increased future small business connection.

With all these advantages, we assume the use of the Internet by small firms would be very heavy – yet we have little information on actual use. To those firms trying to serve the

small or very new enterprise through the Internet, such information is essential. Even for the huge population of very small firms such information helps them benchmark their own level of technological competency.

The Study

In the spring of 1998 a descriptive study was undertaken to obtain an understanding of how the Internet is being used by very small organizations. The Center for Entrepreneurship at a regional university has been collecting data from small firms in a four-county region of the western part of the state. A core database for 1500 firms with less than 25 employees was initially developed. Then, every six months a sample of about 300 of these are queried in terms of their expected change in employment, sales volume, and overall business confidence level. They are also asked several questions on a changing specific topic – in the most recent case, their use of the Internet. We asked the primary purposes for which the Internet was used in the business (nominal scale) and the frequency of use (ordinal scale). A total of 190 responses were obtained (63.3 percent). Based on the scales employed in the study and because of the possibility of interval inequalities in the ordinally-scaled question, only frequency distributions have been reported.

Results and Discussion

Data is reported in Tables 1 and 2 by size quartiles, based on total full-time-equivalent (FTE) employment. Note that the survey focuses on very small firms, with the first three quartiles of our database having fewer than four FTE employees. Table 1 indicates that as the size of the organization increases (in terms of number of employees), the likelihood that the organization uses the Internet for each of the tested purposes increases. Still, only 20 percent reported having their own Web site.

Table 1: Use of Internet, by Size
Percent of that size responding affirmatively, by quartile

	Number of Employees			
	< 1.25	1.25 < 2.50	2.50 < 4.00	4.00+
Find info. on competitors	13.16	18.60	14.29	32.61
Look for products and info.	39.47	48.84	63.27	63.04
Have own Web site	0.00	13.95	16.33	19.57
Other	7.89	6.98	14.29	10.87

Table 2: Frequency of Use, by Size

	Number of Employees			
	< 1.25	1.25 < 2.50	2.50 < 4.00	4.00+
Never	47.37	41.86	24.49	23.91
Infrequently	21.05	18.60	26.53	13.04
Once a week	10.53	6.98	18.37	15.22
Daily	21.05	32.56	30.61	47.83
Total	100	100	100	100

These results are somewhat in contrast with those of CI InfoBeads as reported in the *Inc. Technology* article. While their study sorted size of organization into two categories as mentioned above, only the incidences of having homepage and using the Internet for educational purposes were higher for larger sized firms. Use of all other Internet applications (online research, company Intranet, e-mail, electronic data interchange, and electronic commerce) were reportedly either the same or higher among smaller firms.

Table 2 indicates that as the size of the organization increases (in terms of number of employees), frequency of use of the Internet increases. While use of the Internet is not overwhelming at any of these levels (less than two-thirds of respondents reported using the Internet once a week or more frequently), it seems clear that the larger-sized “small” firms (those with four or more employees) are the most regular users.

These gross trends may reflect the growing sophistication of operation, even at the very small firm size that we studied.

To better understand differences between those who use the Internet frequently and those with more limited use, we examined other characteristics of the responding owners. Tables 3 and 4 divide the respondents based on how aggressive they claim to be in three different measures of growth. Respondents were asked a) if they had plans to increase employment in the short or long term, b) whether they expected sales to increase significantly in the next six months, and c) whether they intend to export in the future.

Table 3: Use of Internet, by Growth Expectations
(Number of respondents and percentages shown)

Use of Internet	Expect Sales Change		Expect Employment Change		Plans to Export	
	Yes 94	No 66	Yes 62	No 128	Yes 13	No 176
Find information on Competitors	28.7	12.1	31.2	13.3	46.2	17.0
Look for products or information	61.7	39.4	62.3	47.7	69.2	50.9
Have own Web site	19.2	9.1	19.7	10.2	30.8	11.9

Other	10.6	7.6	14.8	7.8	7.7	10.3
Total	120.2	68.2	128.0	79.0	153.9	90.1

Table 4: Frequency of Use, By Growth Expectations
(Number of respondents and percentages shown)

Frequency of Use	Expect Sales Change		Expect Employment Change		Plans to Export	
	Yes 94	No 66	Yes 62	No 128	Yes 13	No 176
Never	25.5	47.0	19.7	43.0	15.4	36.9
Infrequently	19.2	21.2	16.4	19.5	7.7	19.3
Once a Week	14.9	7.6	16.4	11.7	15.4	13.1
Daily	40.4	24.2	47.5	25.8	61.5	30.7
Total	100%	100%	100%	100%	100%	100%

Table 3 compares uses of the Internet, according to growth expectations. The total uses are higher than 100 percent as respondents could check more than one answer, and these totals are revealing. We see much more activity of any kind among those with growth or exporting plans. Those with plans to export are the highest proportion with a Web site and very different in extent to which they find information on competitors.

Overall, we see a large difference in whether firms use the Internet to look for products and information depending on whether the firm expects to increase sales in the next six months. As noted earlier, these are the specific firms which vendors seek – and apparently can reach successfully according to our results.

In Table 4, we see more frequent use by those with growth or export plans, which is similar to findings reported by Gould and Scovotti (1997). It is interesting to note, however, that as of this writing, the Internet has not proven to be very successful at increasing sales (Fried-Cassorta, 1995; Vassos, 1996; McCue, 1998). Despite this, small businesses may perceive marketing via the Internet to provide one means for decreasing advertising expenditures and improving communications with customers, thereby enhancing promotional processes. Additionally, small firms are getting on the Net in order to establish a lead position and gain a marketing advantage over competition (Fried-Cassorta, 1995). Further, as businesspeople and individuals alike become more accustomed to using the Internet as a source for product information and products themselves, the ability to achieve increased sales as a result of adopting Internet marketing strategies should increase.

Selected demographic differences among firms were also explored. Tables 5 and 6 depict differences among firms according to the reported age of the firm, revealing that firms less than ten years old are more likely to use the Internet for marketing intelligence-gathering purposes, to have their own Web site, and to make daily use of the Internet than older firms.

Table 5: Use by Company Age
(Number of respondents and percentages shown)

Frequency of Use	Firms started 1989 or later (92)	Firms started before 1989 (82)
Never	27%	39%
Infrequently	23	17
Once a Week	10	17
Daily	40	27
Total	100%	100%

Table 6: Uses of the Internet, by Company Age
(Number of respondents and percentages shown)

Use of Internet	Firms started 1989 or later (92)	Firms started before 1989 (82)
Find information on competitors	21%	20%
Look for products or information	62	48
Have own Web site	20	6
Other	7	15
Total	110%	89%

Summary

A picture continues to emerge of a subset of very small firms that are actively using the Internet as a marketing tool – younger firms with growth expectations that may include exporting and that have passed a “critical small size” of about four FTE. These younger firms are more likely to use the Internet for both information acquisition and for presentation of their company, i.e., have their own Web site.

Research has shown the importance of computerization to the organizational development of new firms (Raymond, 1992) and as a tool to maintain competitiveness in a market (Bergeron and Raymond, 1992). He found that while computer-based information systems build capacities of small business managers in planning, control and decision-making, this advantage was not yet seen in the very small firms, which he defined as one or two employees.

Such computerization focuses on internal management and company-specific data. Our study looks at the next generation of computer use – connection to the resources and opportunities of the Internet. Surely small firms must develop a capacity to use the computer for internal organizational development, and increasingly have done so. We now see more clearly

how evolution of Internet we must develop along similar patterns, and how far a sample of small firms have progressed. In looking so closely at very small firms we place emphasis on the insights to be gained by closely examining firms with fewer than twenty-five employees, rather than simply comparing them as a group to larger ones.

Studies of how consumers buy and use technology are already underway. Such market research firms as Odyssey Research and Yankelovich Partners are focusing on the ways consumers use the Internet, while others including SRI Consulting Inc., have focused on using a combination of demographic and psychographic data to predict consumers' technology buying behavior (Judge, 1998). In the future, research opportunities may exist with regard to examining these small business owners' propensities to invest in technology, rate of adoption and replacement/upgrade of various kinds of technologies in their organizations (e.g, computers, cellular telephones, paging services), and assorted demographic variables including age of owner, income, and educational level of owner.

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