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Nonprofit Websites: Prevalence, Usage And Commercial Activity

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Abstract

This paper investigates the extent to which nonprofits have websites and how they are used. Our empirical analyses of 1,000 nonprofit organizations indicates *substantial* differences in website presence and use among mission categories - conservation related, arts and cultural, religious civil rights, and science and technology. We find that while asset level and mission have statistically significant main effects on predicting website presence, interactions between them are also important. Our estimates suggest that at any particular asset level the increase in probability of having a website with each unit increase in assets is greatest for civil rights organization (compared to religious, conservation and cultural organizations) and least for scientific organizations.

Keywords: Logistical analysis, Nonprofit, Internet, Commercial Activity, Websites, Resources

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INTRODUCTION

The dramatic increase in Internet utilization by the public, government, and business has been widely reported in the popular media. The percentage of the U.S. population using the Internet rose from 6.7 percent in 1995 to 58.5 percent in January 2002 (nua.net). Consumer online purchases were estimated to have increased 92 percent in one year alone to $29 billion in 2000 from $15 billion in 1999 and over 17 million shoppers were reported online in 1999 (US Department of Commerce, 2002). It was also estimated that over 82 percent of college graduates search for careers and employment information online (www.internetindicators.com/facts.html). People have used the Internet for such diverse interests as starting new romantic relationships, making major investment decisions, starting new hobbies, and assisting themselves to deal with illness. (Newsweek, 2002) The most recent and widely replicated statistics indicate that worldwide users reached 533 million by 2001 (www.c-i-a.com/pr032102.htm); with 149 million users in the United States alone. In 2001, consumer online advertising grew by 25%, while email and promotions grew 100% and 38%, respectively, and e-commerce exceeded $1.2 trillion (Forrester.com). Statistics from Iconocast.com indicate that 1 billion pages exist, 100 million+ commercial web domains, 175 million paying subscribers worldwide, $7.7 billion advertising revenue, and 29,084,042+ websites.

Examples abound of industries exploiting the Internet to reach and expand their customer base. E-mail continues to be the major application of choice but websites are used for advertisements, dissemination of information, solicitation of customers, direct sale of products and services, and education. Total e-tailing sales were expected to top $39 billion for 2002, and the evidence suggests that people enjoyed this medium – online shops got a 77 percent satisfaction rating during the holiday season, as contrasted with a 74.8 percent rating for traditional retailers (Green, 2002). Similarly, in July of 2002, Business.com, a leading website search engine, listed 22,877 web links for business-to-business (B2B) and supply chain applications (www.business.com/search/). These and other statistics on volume of use and growth in utilization indicate that the Internet is a widely used tool for sharing information and facilitating trade.

Hoffman and Novak (1996) conducted the earliest academic study of usage and prevalence of the Internet for commercial activities. Lottor (1996) highlighted challenges in measuring usage and penetration of Internet access. Napoli et al. (2000) studied factors affecting the adoption of the Internet in the public sector. However, no academic studies have been done on Internet usage by nonprofits. Individual nonprofits recognized the value of the Internet, but data on how widespread the utilization is by the nonprofit sector are not available. Anecdotal information suggests Internet usage by religious nonprofits lags while use by universities and hospitals is comparatively high, however a systematic study to understand the current stage of website prevalence and usage by nonprofits is warranted.

This paper presents findings from a national study of the extent to which, and how, nonprofits use websites. We begin with a brief analysis of Internet usage and discuss the pros and cons of constructing a website from a nonprofit's perspective. We present information on the extent to which nonprofits have websites and engage in online commercial activities and propose the hypothesis that the probability of a nonprofit having a website is affected by its wealth level, mission, and the interaction between the two. The unique national sample, methodology and modeling approach are presented, followed by the findings on the pervasiveness of Internet websites, their use, and the prevalence of commercial activity. Our analyses indicate that asset level and mission of nonprofit organizations are consistently statistically significant in predicting the probability of having a website and the interaction of mission and wealth are also important. The paper ends with a discussion of how nonprofit use of the Internet may change over time.

PREVALENCE AND USAGE OF WWW BY NON-PROFITS

The Benton Foundation website provides examples of Internet use by nonprofits to end domestic violence, defend women's rights to access to reproductive choices, deliver technical assistance to families with children with disabilities, connect smokers with cessation programs nationwide, and evolve a museum website. It also offers advice to nonprofits interested in starting an Internet site (www.benton.org/Practice/Features/commercialefforts.html). Some nonprofits have started to use the Internet to collect charitable contributions and a January 2002 study by Forrester

Research found that 2.2 million people made a first-time charitable online donation and 1.9 million indicated a willingness to use this mode again. Pitt et al. (2001) studied motivations driving charitable giving behavior on the Internet. In a somewhat different context, a 2001 study by Independent Sector and Cisco Systems prepared by Princeton Survey Research Associates found that 79 percent of the nonprofits in a survey of human service nonprofits had e-mail and 63 percent used it every day (www.independentsector.com). In contrast, only 49 percent had a website in spite of the fact that, among human service nonprofits, 86 percent of the reporting organizations used some form of information technology. In the next section we discuss factors determining the decision to build an Internet website.

DECISION TO HAVE A WEBSITE

Given the relative newness of the Internet, the rate at which a website – an innovation – is adopted or accepted is influenced by numerous factors, including how a potential adopter perceives the performance, value and benefit of an innovation. The perceived relative advantage of the product or technology, compatibility with values and objectives, perceived product complexity, observability of an innovation, fulfillment of felt need, effort involved and risk in trying the innovation (Mowen, 1990). These models may be useful in describing how readily organizations assimilate the Internet into their environment.

The Advantages of a Website For a Nonprofit

Nonprofit websites can be an important communication tool for reaching the general public and the constituencies served (Maddox and Mehta, 1997), providing information that enables dissemination of missions, member and donation solicitation (Pitt et al. 2001), and creation of greater public understanding of activities. The global reach of the Internet provides a powerful and cost effective way of soliciting interest in programs and in creating rallying points for coalescing membership in cyberspace. Available software programs make it feasible for nonprofits to enroll new members quickly and efficiently, as well as to involve visitors to their site in meaningful interactive dialogues.

Tuckman and Chang (2003) cite several areas where nonprofits can reap gains from the web including the ability to offer products financially impractical to sell in the past, to bring services to individuals previously excluded from receiving them due to geographic barriers and/or to create rapid interactive communication with members, to outreach to clients on a global basis, to sell byproducts of their operations, to engage in interactive research, and to outsource activities such as fundraising, event planning, and accounting services. Nonprofits can also provide links to similar organizations that offer complementary information and activities, enhancing their own ability to serve their constituency at a nominal cost (e.g., the United Cerebral Palsy Association's Internet Resources for Nonprofits, www.ucp-utica.org/uwlinks/helpful.html). Particularly attractive are the reduced mailing and printing costs that nonprofits can achieve by sending informational materials at very low cost over the Internet (Maddox and Mehta, 1997). Hoffman et al. (1996) suggest that decision makers who feel that there is a need for their organizations to have an Internet presence to project a favorable corporate image and create stronger brand identities with their members are more inclined to adopt the Internet. However, these benefits can only be realized if the nonprofit organization recognizes that a critical mass of its member base are early adopters of the technology and use the Internet and WWW. Science and technology organizations are more likely to attract members whose demographics represent that of the average Internet user (higher income and better educated) and hence more likely to have online presence. This leads us to propose:

> H1: The probability that a nonprofit organization has a website will be significantly influenced by its mission; organizations with science and technology mission are more likely to have a website compared to others.

The Costs of a Website

Cost plays an important role in the decision to create a website. The price of the computer equipment needed to operate online has fallen enabling most nonprofits to afford at least a modest computer. But, the costs of building a website, creating and maintaining an ability to service users, and updating a website can be substantial. One option for defraying these is to use a portal site that provides a custom web page, but for low resource

nonprofits even these may be unaffordable (Williams, 2002). For nonprofits with staffs that possess limited computer skills, external consultants or employees with new skills are needed to create, maintain, and upgrade a website. Inadequate computer skills in existing staffs may also result in a lack of initiative in championing a website. Moreover, some nonprofits serve constituencies either lacking computer literacy or unable to access the Internet, making it infeasible for these organizations to deliver their services via a website. Research in the product diffusion literature has demonstrated that not all people will adopt an innovation at the same time (Mowen, 1990). Innovators and early adopters tend to be risk takers and are generally better endowed compared to non-adopters. Wealthier organizations are more likely to have or be able to recruit personnel in-house or on contract to build and maintain their online presence. Non-adopters may also perceive the Internet to be expensive and complicated to use, and feel a degree of discomfort in making capital outlays and technology-related decisions since the Internet is a relatively new innovation and its effectiveness as a marketing communication tool has yet to be fully evaluated (Napoli et al., 2000). Accordingly, we propose that:

H2: There will be positive relationship between the presence of a website and the wealth of the organization.

The perceived complexity of using the Internet has a significant effect on the adoption of WWW as a marketing tool. This suggests that there is still some uncertainty amongst NPOs as to the usefulness of the Internet in marketing their services. In some instances, web-based delivery of a product may be viewed as inferior to direct personal contact; e.g., the reaction of the university community has been distinctly mixed with respect to the use of distance learning to deliver education with strong advocates and strong opponents. Similarly, Internet delivery of services may be inadequate, as in the case of psychological counseling where face-to-face meetings aid in the delivery of treatment, or in the case of alcoholics anonymous which relies on support groups to keep members from drinking. While decision makers recognize that the Internet is a cost-effective communications tool, usage of this medium is perhaps constrained by the nature of the services they provide or

by their limited experience and knowledge on how to do so effectively. This leads us to our third hypothesis:

H3. The effect of organization wealth on likelihood of having a website is moderated by the organization's mission.

Rationale For Commercial Activity

Weisbrod (1998) notes that nonprofits are becoming more dependent on commercial activities and less on private and government sources with substantial differences among the different mission categories. Likewise, a study done by the *Chronicle of Philanthropy* in 2000 indicated that nonprofits generated at least $61 billion of tax-exempt revenue from business activities in 1998 and noted that the Metropolitan Museum of Art produced commercial revenues of $96.6 million, an amount three times larger than its next largest source of income (New York Times, 2002). This rise in commercial activity reflected several things: pressures to find a replacement for declining revenues from donations and government, a desire to capitalize on previously unexploited opportunities (e.g., use of a highly regarded nonprofit name to market to the public), a need for capital for expansion purposes, a desire to build equity balances against future revenue shortfalls, and/or a chance to take advantage of new technologies to open new markets for information and products. It also reflected the ability sell some products and services previously not feasible to sell, using the Internet to surmount geographic constraints.

Definition of Commercial Activity

What is the best way to define commercial activity? Economists focus primarily on sale of services. Weisbrod (1998) examines "sales" or program service revenues. Tuckman and Chang (2003) present four alternative definitions involving whether sales are made, whether these are central to mission or not, whether an activity is similar to that of a for-profit enterprise, and whether the entity produces consistent profits. In contrast, Hoffman et al. (1996) define commercial activity on the Internet as activities and processes used to build and maintain customer relationships through the online medium to facilitate the exchange of ideas, products, and services that satisfy the goals of both parties. Similarly,

Dholakia and Rego (1998) suggest a framework for analyzing Internet commercial activity as shown in Table 1.

[Table 1 Here]

Which definition to use depends on the uses to which the definition will be put. For present purposes, we use the Weisbrod approach. If a nonprofit makes commercial sales on its websites, whether for mission-related or unrelated goods or services, we consider the site as engaged in commercial activity.

THE SAMPLE AND METHODOLOGY

The Data

We use the May 2000 IRS Business Master File (held by the National Center for Charitable Statistics at the Urban Institute) of 724,400 nonprofits (the reported U.S. population of 501(c)(3) organizations at that point) to create our sample. We randomly select a sample of 1,000 nonprofits; 500 drawn from the entire sector and five samples of 100 each drawn from five mission specific categories. The latter are chosen because a number of empirical analyses have revealed that the nonprofit sector is heterogeneous and that many differences can be attributed to mission (Tuckman and Chang, 1993; Weisbrod, 1998). For this reason, we select five samples of 100 nonprofits each from the following categories: conservation related missions, arts and cultural missions, religious missions, civil rights missions, and science and technology missions.[2]

An Internet search is then conducted by the researchers using two search engines to locate a website address for each nonprofit in the sample. Each website is visited and specific information developed on the types of usage found on the website. If no website could be found this was duly noted. Similarly, if the website indicated the presence of any

[2] The National Taxonomy of Exempt Organizations (NTEE-CC) classification codes that consist of 26 categories are used in this analysis.

sale of materials this was coded as either mission-related or non-mission related.[3] The new data were matched with information on wealth level (measured by gross assets) and mission information obtained from the master file. [4]

Following Tuckman and Chang (2003), we separate the types of commercial activities into two categories: mission-related and unrelated. Mission related sales involve products or services consistent with a nonprofit's mission (e.g., books, pamphlets, and mission-related service sales by health institutions, such as asthma management or medical advice or goods such as African art sales). Mission-unrelated items include any sales not directly related to the nonprofit's core mission. Sales of consulting services are included since some nonprofits have developed goods, services, and programs that can be sold to other entities (e.g., sale of consulting services for the management of children hospitals.) Ticket sales are included since arts and other cultural organizations raise performance revenue online.

For our descriptive analyses of types of usage on website, an organization is classified as engaged in advocacy if it provides a political message on its website, political or advocacy information for specific causes, and/or encourages individuals to articulate a specific cause. This may include specific requests to support legislation, attend advocacy events, etc. A website provides chat room activities if members have a place to communicate online, especially if it has the software to enable group discussions on particular points of information. A website solicits donations if it has an online mechanism for providing payment, takes a name online and follows up manually, or provides an address to which donations can be sent. It provides referrals to other sites if has specific links to external websites; offers references if it provides members with specific names of books, articles, or information sources; has member registration if a person can register online; allows for job applications if it provides a place for site visitors to register for a job

[3] Several situations can bias the estimates of the percentage of nonprofits with websites downward. A nonprofit's name on the master file may be different from the one used on its website or the master file name may be entered incorrectly, or it may be a holding company for a number of other entities with separate websites and URL addresses, or it may have a for-profit specifically setup for commercial activities possessing a different name.

[4] In addition to gross assets we also tested gross revenues. Because the results were similar, we reported only the former findings in this paper.

online; provides a schedule of activities if it has an updated calendar of events; and engages in B2B activities if it has online links with other businesses for the purpose of buying or selling services.

The Model

Let *WEBSITE* be a binary variable indicating whether a non-profit organization has a website (*WEBSITE*=1) or not (*WEBSITE*=0). Let *P* represent the likelihood of having a website. *P* is modeled as a logistic probability model in which mission category and asset are the predictors:

$$\log(P/1-P) = \alpha_0 + \alpha_1 * CIVIC + \alpha_2 * CONSERVATION + \alpha_3 * CULTURE + \alpha_4 * SCIENCE + \alpha_5 * ASSET \quad (1)$$

where *CIVIC*, *CONSERVATION*, *CULTURE* and *SCIENCE* are dummies corresponding to mission categories. The baseline probability corresponds to religious organizations. We expect $\alpha_4 > 0$, since we hypothesize in H1 that science and technology NPOs are more likely to have websites compared to religious organizations. We do not specify any directional hypotheses for nonprofits belonging to other mission categories. Based on the discussion for hypothesis H2, we expect $\alpha_5 > 0$ since larger the asset level of the nonprofit the more likely it will have a website. Interaction effects are tested based on the hypothesis H3 that the effects of a given increase (or decrease) in wealth (as proxied by gross assets) may vary depending on a nonprofit's mission; e.g., a $100 increase in wealth may increase the probability of having a website for science nonprofits more than for religious organizations. The modified model includes interaction terms for the asset variable with each mission dummy.

$$\log(P/1-P) = \alpha_0 + \alpha_1 * CIVIC + \alpha_2 * CONSERVATION + \alpha_3 * CULTURE + \alpha_4 * SCIENCE + \alpha_5 * ASSETS + \alpha_6 * CIVIC * ASSETS + \alpha_7 * CONSERVATION * ASSETS + \alpha_8 * CULTURE * ASSETS + \alpha_9 * SCIENCE * ASSETS \quad (2)$$

ASSET represents the asset levels found in the most recent tax return recorded in the IRS Business Master File. The raw value of asset is divided by 10^6 to scale the magnitude of the *ASSET* variable. This scaling serves to adjust the magnitude of the associated parameters, α_5 …, α_9 in both models by altering the scale on which the variable is measured, without impacting model fit.

RESULTS AND DISCUSSION

Website Pervasiveness

Table 2 contains the findings for the entire sector and five mission groupings of nonprofits. It shows that roughly 27 percent of all nonprofits have a website but less than 10 percent of all nonprofits have a website used for commercial activities. Individual analysis of the five mission samples suggests *substantial* differences in website use. The percentages (row two) range from a high of 60 percent for science and technology nonprofits to a low of 24 percent for religious nonprofits. The 36 percentage point difference between these two categories raises a question about the advisability of generalizations about the nonprofit sector as a whole, and it suggests the value of mission-specific studies in determining pervasiveness of Internet use.

[Table 2 Here]

Commercial Activity

From Table 2 we note that in the sector sample, slightly less than 10 percent of all nonprofit websites are involved in commercial activity. The mission category percentages range from a low of 4 percent for conservation-related nonprofits to a high of 18 percent for civil rights organizations. If we look only at the percentage of nonprofits with websites and then calculate the percentage with commercial activity, about 36 percent of those with websites use them for commercial activities with the highest percentage (35 percent) in civil rights and lowest in the conservation (12 percent). These figures indicate substantial room for growth in nonprofit website use and imply that relatively few nonprofits have decided to earn revenues on the Internet.

[Table 3 Here]

Overall, online commercial activity of nonprofits exists at a modest level. As Table 2 reported, approximately 36 percent of the nonprofits with websites used these for commercial activity. The sector sample in Table 3 shows that 21 percent of nonprofits engaged in mission-related sales and another 20 percent of the sales were mission-unrelated. Approximately one quarter of the organizations that had websites and were engaged in commercial activity offered consumers the ability to buy books, 17 percent sold publications and 16 percent sold clothing. Only 6 percent allowed consumers to buy tickets to events, while only 3 percent sold consulting services. The most important substantive difference between the sector and mission samples lies in the percentage of nonprofits engaged in sales unrelated to mission. The nonprofits in the individual mission categories reported unrelated sales of 5 percent or less, perhaps reflecting fears that substantial use of websites for this purpose may endanger a nonprofits' 501 (c)(3) status, or it may be that nonprofits have not yet fully recognized the marketing opportunities gained from collaboration with for-profits.

Types of Usage on The Website

Table 4 presents types of usage data only for nonprofits with websites. (Please note that our methodology does not enable us to capture information on e-mail use.)

[Table 4 Here]

The percentage of websites used for advocacy varies widely among types of nonprofits, ranging from 50.1 percent in the case of civil rights nonprofits to 8.3 percent for religious institutions, which rank about the same as scientific and technical nonprofits (10 percent). Both are slightly below the sector sample (16.5 percent). Surprisingly, the percentage of websites in the five mission categories providing direct chat room opportunities is less than 5 percent, much less than the sector average percentage of 10.5 percent. Publicity has been given to the limited number of nonprofits using web-based charitable contributions but the vast majority of nonprofits did not engage in website based

solicitations. Only civil rights groups come close to a 50 percent figure while less than 1 in 4 organizations in the other mission categories use websites for this purpose. Events scheduling is an important activity for nonprofits. The results show that in excess of 50 percent of the nonprofits use their websites to make their schedules available. In the sector sample, the figure is 68.4 percent.

Referrals to external nonprofits enable visitors to move across websites in a seamless search for information. Close to half the websites provide for a link of this sort and the same is true for textual references to other nonprofits. In contrast, neither member registration nor job registration (both important means for carrying out internal integration) are conducted online by a majority of nonprofits. In the former case, website use ranges from a low of 8.5 percent for religious nonprofits to 30.8 percent for the sector sample; in the latter, from 5.9 percent for the conservation sample to 30 percent for the science and technology nonprofits. Finally, roughly 22 percent of the nonprofits in the sector sample use websites for business-to-business purchases and the percentages are substantially lower for the five mission categories.

Apparently, external integration of website activities has not found widespread acceptance within the nonprofit sector and, viewed in total, these results suggest that most nonprofits provide virtual access to the public but are particularly weak in transacting through their websites. Less than a third engage in interactive core activities such as member registration.

Tests of Hypotheses: Wealth and Website Use

This section presents results of the model investigating the relationship between a nonprofit organization's mission, wealth and their interaction on likelihood of having a website. [5] Table 5 shows parameter estimates for those variables that achieve statistical significance in at least one of the models (standard deviation of estimated coefficients are in parentheses). For estimation purposes, 90 observations are used from each mission category as calibration sample and 10 are retained as holdout observations. Table 6 also

[5] Gross Assets are used as a proxy for wealth since most nonprofits do not incur debt to purchase assets but rather receive them as donations or buy them from the surpluses they accumulate. Nonprofits with limited resources are unlikely to have significant resources while a strong correlation exists between gross revenues and assets.

reports model log-likelihood for the holdout sample of NPOs without recalculating any parameters and U^2 =1-[log{maximum likelihood(alternative model)}/log{maximum likelihood(null model)}]. The table shows parameter estimates for variables that achieve statistical significance in at least one model and standard deviation of estimated coefficients are in parentheses. The results as evidenced by fit statistics support the selected model's predictive ability.

[Table 5 Here]

Both models are similar with regard to the main effects. To obtain meaningful coefficients for the main effects, the independent variables in the models are standardized. Consequently, the coefficient of each of the independent variables represents its typical effect on the dependent variable; that is, its effect when the other independent variable is at its mean, and the magnitude of the coefficient represents the change in the dependent variable associated with a change of one standard deviation in the independent variable. Specifically, a nonprofit's mission has a statistically significant effect on its decision to have a website (α_0,α_1, α_2, α_3 and α_4 all statistically significant) and this effect differs across mission categories, thus supporting the hypothesis that mission affects the decision to have a website. Religious organizations are least likely to create a website as reflected by their baseline probability of 0.22 (α_0= -1.258), while organizations with science and technology mission are most likely (among those examined in this research) to have a website 0.59 ($\alpha_{science}$= 0.3719). The baseline probabilities for civil rights, conservation, and culture mission categories are 0.48 (α_{civil}= α_0 + α_1= -0.0839), 0.33 ($\alpha_{conserve}$= -0.721), and 0.47 ($\alpha_{culture}$= -0.1289).

We also find support for the hypothesis that the asset value of a nonprofit has a statistically significant and positive relationship (α_5 =.2215, p<0.01) with the probability of having a website; organizations with relatively larger financial assets are more likely to have a website compared to those with fewer assets. The odds of having a website increase by a factor of 1.248 for each $1,000,000 increase in the asset value of religious, conservation and cultural organizations. In model two, a given increase in assets depends on mission for scientific and civil rights organizations; the interaction between mission

category and asset is negative and significant for scientific or technological non-profits and positive and significant for civil rights organization. The null hypotheses that the interaction coefficients are zero are rejected, $\chi^{2(1)}=4.39$, $p<0.01$ for civil rights organizations and $\chi^{2(1)}=3.2$, $p<0.01$ using a likelihood ratio test. Interaction effects are not statistically significant for the religious, culture, conservation and environmental groups.

[Figure 1 Here]

Figure 1 plots the probability of having a website at different wealth levels for organizations in each of the five mission categories. At a given level, the probability of having a website for cultural organizations is higher than for religious, conservation and civil organizations, this probability rises rapidly with wealth tapering off as it approaches a probability of one. In contrast, scientific nonprofits start with the highest probability of having a website but the probability of having a website grows with wealth in a manner more like that of the religious, conservation, and civil rights groups. The former finding can be explained by the fact that the benefits to the civil rights nonprofits may exceed those to the religious nonprofit for any given wealth level; e.g., greater use may be made of the Internet for facilitating information flows, meetings, and advocacy. Because scientific nonprofits are more likely to have staff able to develop and maintain a website, the costs of creating a website may be comparatively less to these entities. This would cause these entities to have a higher probability of having a website initially and to lessen the importance of wealth in affecting this probability.

The shape of the curves in Figure 1 is important because it indicates substantially different beginning, ending, and rate of growth probabilities (relative to wealth) for the nonprofits in the five categories. Several categories – cultural and religious and conservation – begin at low probabilities and show linear and modest growth as wealth increases.[6] Scientific nonprofits start at a higher level and experience linear and less modest growth. In contrast, civil rights nonprofits start at a somewhat higher probability and this rises nonlinearly with wealth tapering off as it approaches one, reflecting the fact that it is incrementally more difficult to reach a probability of one as factors come into

play. These may include the fact that websites may be viewed as inferior or undesirable for the delivery of some types of service; e.g., some formers of advocacy do not lend themselves to cyberspace.

IMPLICATIONS OF THIS RESEARCH

The results of this study provide an insight into website prevalence, usage and commercial activity in nonprofit organizations. One might reasonably conclude from the above analysis that wealth is an important factor affecting the decision to adopt a website, but its impact can be overstated. The materials presented above indicate that large increases in the assets of nonprofits will not necessarily result in the universal adoption of websites in a given sector and that a given amount of additional wealth added to one sector (religious) will not necessarily have as great an impact as the same amount added in another (civil rights). Increases in the overall wealth of the nonprofit sector cannot alone be counted on to create major increases in Internet usage by the sector and are unlikely to remove the large gap in Internet use among the mission categories. Additional studies are needed to understand the choice factors that create such large differences in Internet use among categories. Without such information, it is difficult for policy makers to decide whether it is useful to encourage more members of the sector to take advantage of the web and how best to do so; e.g., it may be better to fund construction of websites than to provide funding for this purpose. This is especially true for nonprofits that lack the internal staff to champion website construction. The findings above suggest that money alone would seem likely to foster an increase in website use.

There are many new uses of website technology and some of these are currently available at the more sophisticated websites: search engines, member registration programs, online signup for events, video and audio streaming, and the ability to provide video imagery of events, activities, and services. Interestingly, some of these can be obtained at low cost through various shareware sites (www.helping.org/nonprofit). It seems likely that large nonprofits take advantage of these new developments, perhaps widening the digital divide within the sector. It is important that small nonprofits have easy

[6] Recall that these probabilities are calculated at mean values of the other variables in the equation.

and low cost information on the technologies available to the sector and on the experiences of those that adopt them. Efforts such as those of the Benton Foundation website which promote information on the accomplishments of the sector should be fostered and encouraged.

In its largest sense, these findings have important strategic implications for nonprofits. Since websites can affect the ability of nonprofits to compete, those with a web presence may have a distinct advantage over those without one. This may not seem to be a high priority to small nonprofits struggling to survive in the short run, but it is doubtful that they will thrive over time without finding ways to reduce costs through web delivery of products and services.

One final implication should be noted. Periodic reports of commercial activities by such successful entities as the Museum of Modern Art have continued to shape the conventional wisdom that this type of activity is pervasive, but the rhetoric is not congruent with the reality. Relatively few nonprofits had websites engaged in commercial activity (less than 10 percent) and, of those that do, only 20 percent had commercial sales unrelated to mission. Despite the efforts of nonprofits to reach out for new revenue sources, large amounts of commercial nonprofit do not appear to exist online.

Table 1 Typology of Commercial Activities at Websites	
Type of Website	**Summary Description**
Advocacy	Content at website tries to convince online consumers to accept the firms position on some issue.
Brand Image	Content at website tries to create a positive portrayal of given brand(s) of consumer product(s) and / service(s).
Comparative	Content at website makes indirect or direct comparisons between brands.
Corporate	Content at website promotes the firm's mission and philosophy.
Direct Response	Content at website seeks an immediate response to the message from the online consumer.
Index	Content at website serves as an index or cover page to other links within the firm's Website.
Political	Content at website tries to persuade online consumers to elect.
Public Service	Content at website serves social needs, promotes social causes and/or educates online consumers.
Retail Sale	Content at website has a clear intent to sell the product or service of the company. The page may be linked to an order form.

Table 2
Mission, Website Use, & Commercial Activity

	Category	Sector Sample	Conservation Sample	Cultural Sample	Religious Sample	Civil Rights Sample	Sci. & Tech Sample
A.	**Number of Nonprofits in Sample**	**500**	**100**	**100**	**100**	**100**	**100**
B.	**Percentage and (Number) of nonprofits in Sample with Websites** (Line B/LineA)	**27% (135)**	**34% (34)**	**48% (48)**	**24% (24)**	**51% (51)**	**60% (60)**
C.	**Nonprofits in Sample Engaged in Commercial Activity**	**48**	**4**	**12**	**8**	**18**	**9**
D.	**Commercial Activity Websites as a Percentage of all Nonprofits in Sample** (Line C/Line A)	**9.6%**	**4%**	**12%**	**8%**	**18%**	**9%**
E.	**Commercial Activity Websites as a Percentage of Nonprofit Websites** (Line C/Line B)	**35.5%**	**11.8%**	**25.0%**	**33.3%**	**35.3%**	**15%**

Table 3
Types of Commercial Activities Conducted
Nonprofits With Websites

Percentage of Websites with Users With This Type of Commercial Activity

Commercial Activity	Sector Sample	Conservation Sample	Culture Sample	Religion Sample	Civil Rights Sample	Sci & Tech Sample
Mission Related Sales	21.0%	11.8%	14.6%	20.8%	23.5%	15.0%
Unrelated to Mission	20.0%	0.0%	0.0%	4.2%	3.9%	5.0%
Sale of Books	26.0%	2.9%	8.3%	25.0%	9.8%	11.7%
Sale of Publications	17.0%	5.9%	14.6%	8.3%	9.8%	15.0%
Sales of Clothing	16.0%	2.9%	2.1%	4.2%	9.8%	10.0%
Sales of Consulting Services	3.0%	0.0%	0.0%	8.3%	1.9%	3.3%
Ticket Sales to Events	6.0%	0.0%	8.3%	0.0%	1.9%	5.0%

Note some sector percentages may exceed those of the five samples since they include nonprofits from the 26 mission categories.

Table 4
Types of Website Usage by Nonprofits

	Percentage With Websites With This Activity					
Type of Website Usage	**Sector Sample**	**Conservation Sample**	**Culture Sample**	**Religious Sample**	**Civil Rgts Sample**	**Sci & Tech Sample**
Advocate On Behalf of Mission	16.5%	26.5%	14.6%	8.3%	50.1%	10%
Provide Chatroom Opportunities	10.5%	2.9%	4.2%	0%	1.9%	1.67%
Solicit Donations	16.5%	20.6%	10.4%	16.7%	49.0%	23.3%
Provide Schedule of Activities	68.4%	50%	58.3%	54.20%	62.8%	51.7%
Offer Referrals to Other Sites	42.9%	64.7%	33.3%	66.7%	64.7%	56.7%
References	47.0%	58.8%	27.1%	54.2%	54.9%	45.0%
Allow for Job Applications	21.8%	5.9%	10.4%	13.0%	21.6%	30.0%
Engage in B2B Marketing	21.8%	3.0%	2.1%	0.0%	5.9%	0.00%
Member Registration	30.8 %	20.6%	16.7%	8.5%	23.5%	30.0%

Table 5

Hypotheses Test: Probability of A Nonprofit Having a Website

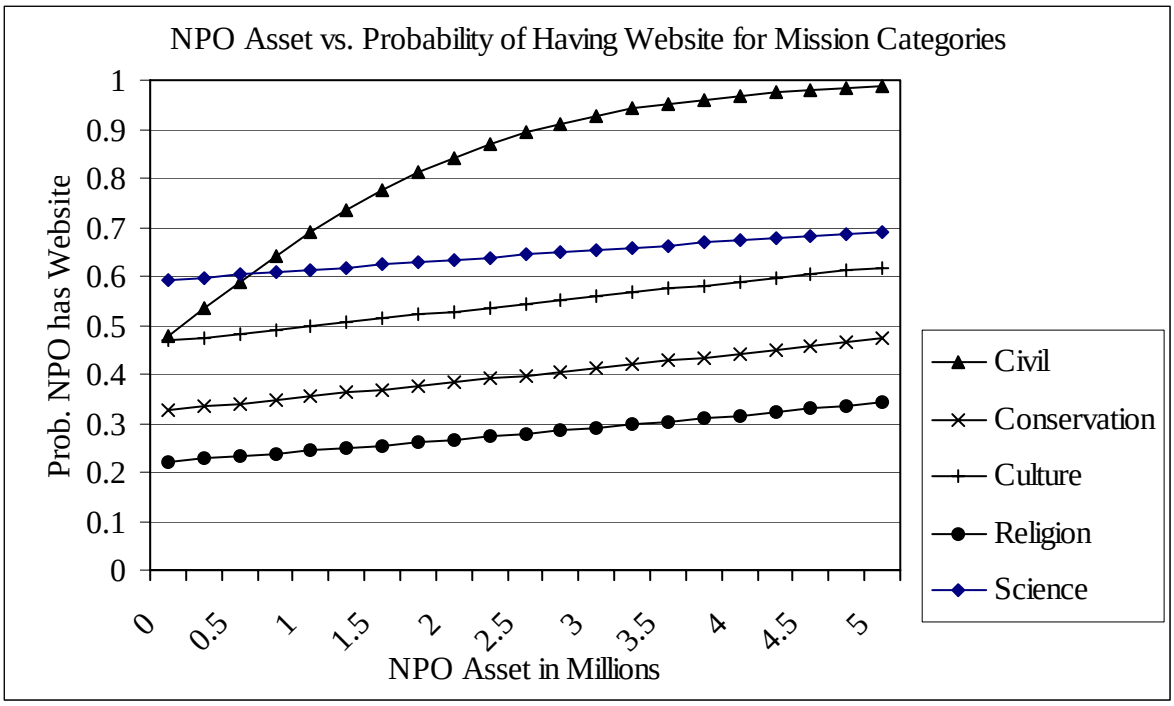
Model	**Linear effect of Mission type and Asset**	**Selected Model: Linear effect of Mission type, Asset and Mission-Asset interaction**
Intercept (α_0)	**-1.2290** (0.2391)	**-1.2576** (0.2519)
Asset (α_5)	**0.0321** (0.0151)	**0.2215** (0.0475)
Mission Categories		
Civil (α_1)	**1.2106** (0.3112)	**1.1737** (0.3273)
Conservation (α_2)	**0.5236** (0.3177)	**0.5366** (0.3328)
Culture (α_3)	**1.1154** (0.3113)	**1.1287** (0.3252)
Scientific (α_4)	**1.5494** (0.3136)	**1.6295** (0.3270)
Asset - Mission Category Interaction		
Civil * Asset	-	**0.7565** (0.1723)
Scientific * Asset	-	**-0.0343** (0.0107)
Fit Statistics		
Log-likelihood	- 591.423	-512.629
U^2	0.132	0.247
AIC*	597.423	520.629
BIC*	600.309	522.515
Holdout Log-likelihood	-127.146	-118.054

Null model: logL= -681.602, AIC= 683.602, SBC= 687.812

AIC=(-LL+k), BIC=-LL+0.5k+log N, where k is the number of parameters, N is sample size.

Coefficients in **bold** are significant at 0.01 or higher.

Figure 1.


NPO Asset vs. Probability of Having Website for Mission Categories
Prob. NPO has Website
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
NPO Asset in Millions
Civil
Conservation
Culture
Religion
Science

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