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Internet Use for Small Businesses: Does It Matter?

Abstract

Should small businesses invest time and effort in online presence strategies? Results from the study reported here indicate that younger and smaller businesses benefit, with higher revenues from implementing an online presence strategy over time. The implications for Extension educators include expanding their digital literacy programming to assist small businesses and entrepreneurs in their communities.

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Literature Review

Internet access, especially broadband (high-speed), is becoming a critical piece of infrastructure in the 21st century. Because 96% of Americans had access to broadband speeds of 6Mbps downstream and 1.5 Mbps upstream (NTIA, 2013) and 85% of U.S. adults use the Internet (Pew Research Center's Internet & American Life Project, 2013), planning and implementing an online presence strategy is a must, especially for rural small businesses, to mitigate place-based disadvantages such as limited access to markets. Online presence strategies range from websites to social media to mobile apps to E-mail marketing and others.

The question becomes: is it worth the time and effort for small businesses to invest in online presence strategies? As Extension educators, knowing the answer to this question is critical to recruit small business owners to participate in community economic development programming, including E-Commerce and Internet applications.

Galloway, Sanders, and Deakins (2011) conducted interviews with rural Internet portal operators in Scotland and their business clients and found that 78% of rural businesses users mentioned its use as "worthwhile." Further, Galloway et al. (2011) found that the rural economy is sustained by locally oriented trade but that Internet portals increase the marketing effectiveness to external sale niches.

While surveying 72 small businesses selling products online, Muske, Yu, and Khoo (2006) identified 40 key variables for website development. The authors concluded that a website is effective only if it can be found by the consumer and should be complemented by fax machines and other channels for customers to place an order. This highlights the importance of implementing online presence

strategies beyond a website presence only.

However, a study conducted by Posciak (2005) found that rural small businesses were not as likely to use broadband compared to their urban counterparts because of fewer employees and higher prices for the technology. Another study conducted by the Small Business Administration (2010) also found that rural businesses do not have the same level of broadband availability, performance (usually slower connection speeds), and price options, thus potentially hindering the adoption of broadband by rural small businesses.

Multiple studies have found that broadband adoption in rural areas among not only small businesses but local governments and consumers results in positive economic impacts. For example, Stenberg, Morehart, Vogel, Cromartie, Breneman, and Brown (2009) differentiated among consumers, communities, and businesses when looking at the value of broadband in rural areas and found that higher levels of growth in wage and salary jobs, non-farm proprietors (entrepreneurship proxy), and private earnings during a 4-year period existed compared to similar rural counties that did not adopt broadband. Likewise, Whitacre, Gallardo, and Strover (2013) found that increases in broadband adoption rates over a 2-year period resulted in higher median household incomes and total employment in rural counties across the nation.

In summary, to reap Internet benefits, small business owners need to implement online presence strategies beyond a website. However, this may be less attractive due to a limited number of employees who can help with the process in addition to not having broadband (high-speed) access and/or the service is too expensive. Thus, is it worth the time and effort to implement online presence strategies? The study reported here attempts to document the impact of Internet use among small businesses and how Extension educators can expand their community economic development programming, including a holistic approach to online presence strategies, focused towards small businesses and entrepreneurs.

Methodology

In an effort to better document how small rural businesses use Internet and how it can benefit them, a survey was designed to capture information on how small businesses in Mississippi are using Internet and if this use correlates with a higher number of employees and/or revenues.

The survey was conducted in two waves. The first wave consisted of emailing the survey link to small business owners in Mississippi. However, the response rate was very low for this first wave. The second wave took place about 6 months later and consisted of hand-delivering the survey among small businesses attending a statewide market conference improving the response rate. Overall, both waves resulted in a total of 263 surveys completed, with the retail trade industry representing almost 47% of those businesses surveyed.

Regarding Internet use and online presence, three variables were used. First, a total of 10 Internet uses for small businesses were provided, and respondents were asked if they used these to no extent, slight extent, moderate extent, or great extent. This variable not only indicates which Internet uses are more popular among business owners, but also how "high" this use is. Businesses were divided into four groups based on their Internet uses: none (reported no usage), low (1-3 uses), moderate (4-

6 uses), and high (7-10 uses).

Second, type of online presence distinguished among not having website or social media, having only a website, only social media, or having both a website and social media. Finally, length of online presence in any of the types discussed previously helps us understand if time involved with online presence strategies makes a difference. The categories used were less than year, 1 to 2 years, or 3 or more years.

The business owner age and educational attainment categories included the following, respectively: 18-29 years, 30-49 years, 50-64 years, and 65 or more; less than high school, high school graduate, some college, college degree, master's degree, and doctoral or professional degree.

Regarding the number of employees (counting the business owner) and revenues, the following categories were used, respectively: 1-4 employees, 5-19 employees, 20 or more employees; less than $50,000, $50,000 to $99,999, $100,000 to $149,999, $150,000 to $249,999, or $250,000 or more. Finally, respondents were asked to rank a list of barriers to expand their e-commerce activities as not a barrier at all, a barrier to some extent, or a barrier to a great extent.

Table 1.

Small Businesses Internet Uses Provided

Code	Description
Email	E-mail
Sell	Sell business products/services
Access_SM	Access social media sites
Blog	Update business blog
Access_Info	Access information about products/services
Access_Res	Access research reports
Access_DIY	Access Do It Yourself information
Access_Fin	Access financial banking (banking, etc.)
Access_Maps	Access online maps
Purchase*	Purchase products/services for the business
* This question was only asked in the second wave of the survey	

Data were analyzed and descriptive statistics were compiled for multiple variables, including business owner age, number of employees, annual revenues, the age of the business, Internet uses, online presence type and length, and perceived barriers to expand e-commerce activities. A bivariate correlation—Spearman's Rho—analysis was conducted to better understand relationships, if any, among the variables. Spearman's Rho coefficient ranges from -1 to +1. The closer the coefficient is to 1, the stronger the relationship; the closer it is to zero, the weaker or nonexistent the relationship. In

addition, a multivariate analysis was conducted to better understand the relationships among business revenue, business size, business age, and length of online presence. Though an ordered/ordinal logistic regression could have been used, a Spearman Rho's multivariate approach was used to see exactly at which value of the variable of interest the relationships remained or were no longer statistically significant.

Results

Descriptive Analyses

Due to lack of space, only the categories with the greatest number of respondents are shown in Table 2. The vast majority of business owners surveyed were between 30 to 64 years old and fairly well educated, with almost 70% having at least graduated from college. Regarding the business characteristics, two-thirds had fewer than five employees, and about three-quarters had been operating for 3 years or more. According to the 2011 Census County Business Patterns, about 92% of total businesses in the state have no paid employees (only the entrepreneur) or have between one and four employees. Thus, regarding business size, the businesses surveyed are not a representative sample of the state's composition. However, the majority of survey respondents did have fewer than five employees.

Almost half of those surveyed reported having both a website and social media presence as well as having an online presence for at least 3 years, as shown in table 2. Finally, almost two-fifths (39.8%) of businesses reported using the Internet for seven or more uses (high use).

Table 2.

Summary of Business and Business Owner Characteristics

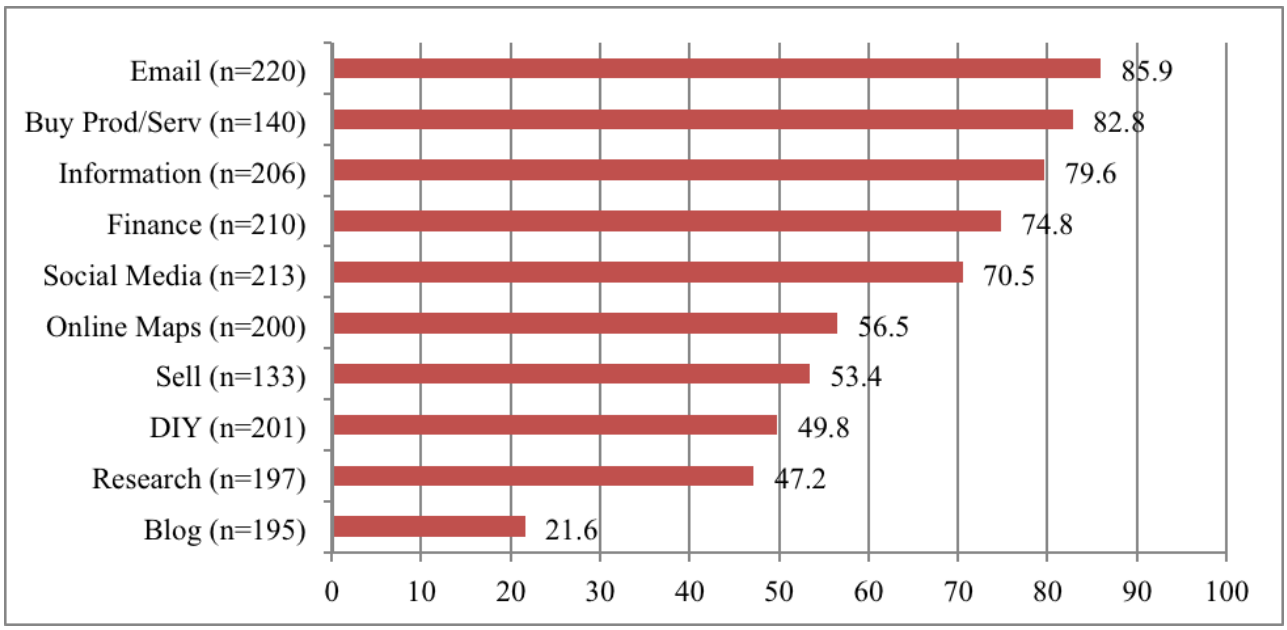
Category	Description	% Respondents	n
Business Owner Age	30-64 years	84.6%	259
Business Owner Education	Bachelor's degree or more	69.3%	257
No. Employees	1-4 Employees	62.5%	259
Business Age	3 or more years	73.4%	259
Business Revenue	Less than $150,000	55.4%	157
Online Presence	Both website and social media	49.8%	235
Online Presence Length	3 or more years	47.9%	142
Internet Use	High diversity	39.8%	226

Figure 1 shows that the most Internet use among small business owners is email, followed by buying

products/services for the businesses, accessing information, and conducting finance-related activities online. Note that 70% of small businesses reporting using Internet to access social media sites, while only 53.4% used their websites to sell online. The least Internet use by small business owners in Mississippi was to update their business blog. Moderate/great extent is only shown because it measures businesses are more active using the Internet. It is worth mentioning as well that online presence length question was added to the second round.

Figure 1.

Small Businesses Internet Uses, Percentages

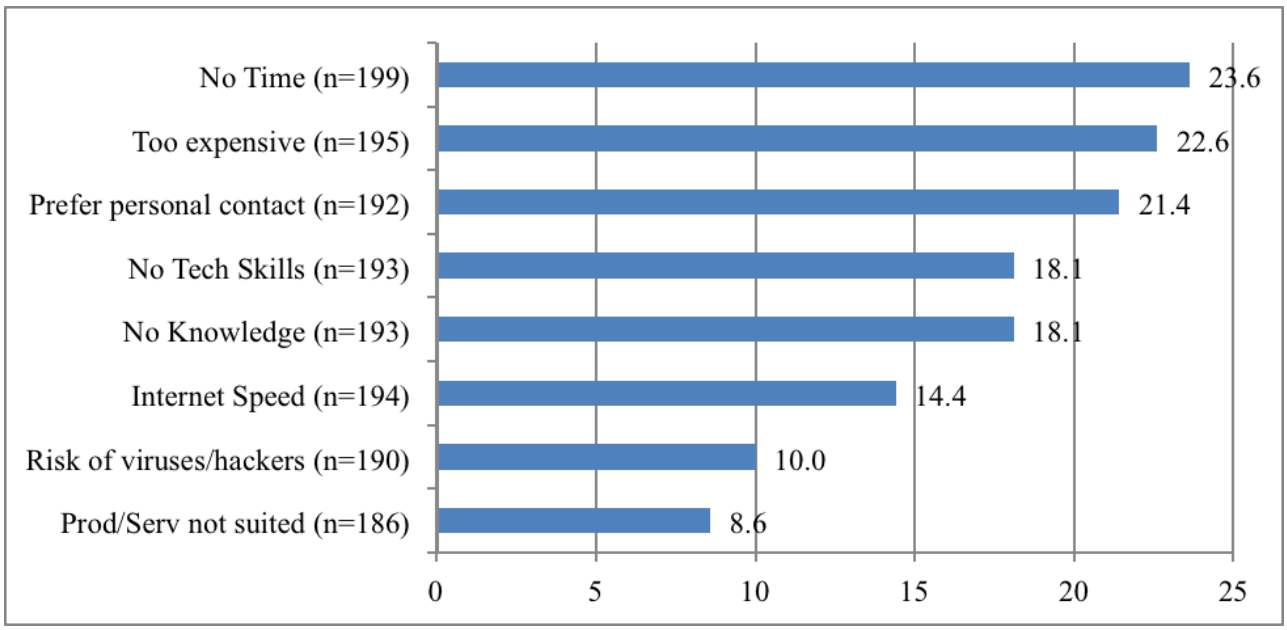


Note: Percentages; shows only "moderate/great extent" responses

Figure 2 shows that almost one-quarter (23.6%) of small business owners reported having "no time" to expand their e-commerce efforts followed by "too expensive," preferring personal contact, and lack of technical skills and knowledge. About 14.4% reported Internet speed as the greatest barrier, and less than 10% said their product or service was not suited.

Figure 2.

Barriers to Expand E-Commerce Efforts, Percentages



Note: Percentages; shows only "great extent" responses

The "no time" as well as the "too expensive" barriers resonate with what Posciak (2005) found, that having fewer staff and the Internet connection being too expensive may restrict small businesses from implement online presence strategies. However, more online platforms are available that make at least having a website easier and less expensive, not to mention that the majority of social media platforms are free. Likewise, as broadband availability continues to increase, stimulating competition, broadband price may decrease.

Bivariate Analysis

This section explores relationships among type of online presence and length of online presence with business owner age and educational attainment as well as business age, revenue, and number of employees analyzed.

Table 3 shows the relationships between types of online presence—no website or social media, only website, only social media, or both website and social media—and specific business characteristics. The fact that the business owner age is negatively correlated (Spearman's Rho = -0.142) and is statistically significant ($p<0.05$) with the type of online presence makes sense. Traditional barriers to adopting Internet include age in that the older are less likely to use Internet. This seems to be the case among Mississippi business owners as well, because even though they may have an online presence, the complexity of it declines as age increases.

Another finding worth discussing is that as the number of employees increase, so does the complexity of online presence (Spearman's Rho = +0.158). In other words, with more staff available, the business may not only have a website but also social media presence. This finding resonates with Posciak (2005) in that fewer employees may limit small businesses in their online presence strategies.

Finally, as the length of time of online presence increases (Spearman's Rho = +0.206) and the more

Internet uses (Spearman's Rho = +0.388), so does its online presence complexity. This makes sense as the business may become more knowledgeable and/or comfortable with different online presence strategies as it spends more time online and uses the Internet in different ways.

Table 3.

Correlation Between Online Presence Type and Specific Variables

Variable	Spearman's Rho Coefficient	n
Business Owner Age	-0.142*	233
Educational Attainment	+0.024	232
Business Age	+0.039	232
Revenue	+0.096	149
No. Employees	+0.158*	233
Online Presence Length	+0.206*	142
Internet Uses	+0.388**	224
** Significant at the p<0.01 level; * significant at the p<0.05 level		

The length of time a business has had an online presence had a positive and statistically significant relationship, with four of the seven variables analyzed, as shown in Table 4. Worth noting is the relationship with the business age and the business revenue. In other words, the longer the online presence, the older the business (Spearman's Rho = +0.534) and the higher the revenue (Spearman's Rho = 0.332). The fact that revenues are higher in businesses that have had a longer online presence is very interesting, justifying the time investment in these strategies by small businesses.

Table 4.

Correlation Between Online Presence Length and Specific Variables

Variable	Spearman's Rho Coefficient	n
Business Owner Age	+0.146	142
Educational Attainment	+0.127	140
Business Age	+0.534**	141
Revenue	+0.332**	134
No. Employees	+0.174*	142
Online Presence Type	+0.206*	142
Internet Uses	+0.111	136
** Significant at the p<0.01 level; * significant at the p<0.05 level		

Multivariate Analysis

Multivariate analyses were conducted to further understand the relationship between online presence length and business revenue. It could be argued that older businesses have larger revenues and more employees compared to younger businesses and that thus the length of online presence does not matter. Therefore, the number of employees and business age will be used as control variables to see if the length of online presence and business revenue remains significant.

Table 5 shows some interesting findings. First, the relationship between length of online presence and business revenue among older businesses (3+ years in operation) did not hold. However, the relationship is even stronger between length of online presence and business revenue for the young businesses (< or = to 2 years). Older businesses may have their markets and reputations defined and thus their online presence is not related to their revenue, while younger businesses that had longer online presences did have higher revenue. In other words, having an online presence for younger businesses did help increase their revenues.

Table 5.

Correlation Between Business Revenue and Online Presence Length
Holding Constant Different Business Age Values

Business Age	Spearman's Rho	n
Two years or less	+0.499**	31
3 to 10 years	+0.029	49
11 or more years	+0.027	54
** Significant at the p<0.01 level; * significant at the p<0.05 level		

Table 6 shows the relationship between length of online presence and business revenue remained only in smaller businesses (1 to 4 employees). Same situation as with older businesses, the length of online presence in larger businesses was not related to their revenue size.

Table 6.

Correlation Between Business Revenue and Online Presence Length
Holding Constant Different Business Size Values

Business Size	Spearman's Rho	n
1 to 4 employees	+0.280*	74
5 or more employees	+0.112	60
** Significant at the p<0.01 level; * significant at the p<0.05 level		

Conclusions and Implications

The study reported here has two major limitations that are worth mentioning. First, survey respondents do not seem to be representative of the businesses in the state. However, the majority of respondents are considered micro and small businesses with fewer than five employees, though not at the same level as seen in the state.

Second, correlation does not imply causality. For example, the relationship between length of online presence and business revenue, the most important of the study, could be a spurious one in that higher business revenue may support lengthier and more diverse online presence and not the other way around. Regardless, the fact that there are statistically significant relationships is important to highlight.

The fact that the type of online presence (none, or website, or social media, or both website and social media) is simpler as the age of the business owner increases makes sense and resonates to research findings regarding Internet adoption. More important, the higher the number of employees, the more likely the business will not only have a website but also a social media presence. In other words, even if the business owner is older, if the business has a larger number of employees, a diversified online presence is more likely. The implication for Extension educators is clear in that more than likely older business owners may need more help with online presence than do younger business owners.

However, another implication for Extension educators is to share the knowledge that the lengthier an online presence, the higher the revenues, especially for "younger" businesses. A potential explanation for this relationship may be that larger and older businesses already have their markets and reputations defined, and thus an online presence only has a marginal impact on their revenues. On the other hand, online presence can help younger and smaller businesses expand their markets, resulting in higher revenues. Regardless of what the reasons may be, future research should focus on better understanding the advantages or disadvantages of small businesses implementing comprehensive online presence strategies because, as argued by Lamie, Barkley, and Markely (2011), a website is the beginning not the end of an E-Commerce strategy.

The implications for Extension educators are multiple. First, the study provides evidence that smaller and younger business in Mississippi that embrace online presence strategies will more than likely have higher revenues than those that do not. This information is very valuable when recruiting clientele to Extension programming in this area. Second, Extension educators should attempt to expand their knowledge regarding online presence through professional development. Finally, the results from the study warrant the possibility of including digital literacy in Extension community economic development programs, beyond E-Commerce.

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