

The Impact of Mobile Apps on Small Business Revenues

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Abstract: Consumers are increasingly using mobile devices, such as smart phones and tablets, for purchasing goods and services. Previous surveys reveal that consumers are using these devices to research goods and services, make purchases (mobile commerce/m-commerce), and check competitors' prices, often while in the retail environment. This study investigates if and how small businesses use the new technology, the impact that the technology has on revenues, and how satisfied the business owner is with these activities. An online sample of 321 small business owners throughout the United States revealed only a small percentage (11.21 percent) use mobile applications. Of those users, just over half (53 percent) reported increased revenues for their use, and over a quarter of those businesses reported an increase of more than 25 percent in their total revenues.

Key words: small business; mobile applications; mobile marketing; entrepreneurship

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1. Introduction

According to Pew Internet Project (Purcell, 2010), 82 percent of people in the United States have cell phones on which 35 percent have applications. A survey of 2,246 small businesses done by AT&T (Rubin, 2011) found that only one-third of these businesses use apps in their operations. A small business and entrepreneurship council reported that apps help save small businesses an estimated 2.34 billion hours and \$56.9 billion annually (Kerrigan, 2011). Several studies have focused on efficiencies gained by the use of mobile apps by small businesses, but at the time of this survey there has been no study that indicates the use of apps as selling tools and the impact on the revenues of small firms. This study uses responses from 321 existing businesses throughout the United States to determine the extent to which small enterprises use mobile applications as a marketing/promotion tool and the impact the use has on revenues.

2. Literature Review

The literature in the area of mobile marketing can be broken out into two distinct groups: Studies that focus on how consumers use mobile devices and studies that focus on how businesses use mobile devices. This review first explores the literature related to how consumers use mobile devices; then, the literature addresses how

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businesses are using mobile devices for marketing/promotion.

2.1 Current Literature Studies of Consumer Use

In 2011, a Mobile Marketing Survey reported by Hipcricket resulted in 607 responses from households in Kirkland, Washington. The survey showed that 86 percent of the households text at least once per week, 70 percent visit mobile websites, 67 percent use mobile applications, and 55 percent use social media. Also, 63 percent of the respondents indicated that they use their mobile phones to check retailer's websites, and 50 percent check a competitor's retail website while in another store. The respondents indicated that the main reason for visiting a retailer's website is to research prices (46 percent); other reasons given were to research for coupons/discounts (36 percent), research new products (28 percent), and make purchases on the website (13 percent).

Another study (Mobile Marketing White Paper, 2011) showed the highest use of mobile devices is in the 18 to 49 age range, with the majority (59 percent) being female. The primary device used was an iPhone/iPad or other smart phone device. The study showed that the majority of the purchases using the smart mobile devices were music/movies/games followed by clothing/shoes/jewelry.

Google performed a survey of consumers in 2012 focusing on apparel shoppers. The survey revealed that 1 in 5 consumers use mobile devices on a daily basis for shopping. The survey respondents use their mobile devices to search retailer websites and get online consumer reviews. Similar to the Hipcricket study, the results showed that the shoppers use the devices to compare prices (56 percent) and find promotions or coupons (44 percent). Another study reported by Miller (2011) found that 37 percent of users of smartphones made retail purchases, and approximately half of smartphone users downloaded shopping apps and used them in a retail store. These trends continue to show that more and more consumers are relying on their smart devices to learn about and purchase goods and services.

2.2 Current Literature Studies of Business Use

Constant Contact (2003) surveyed 1,305 small businesses in the United States in March 2013 to determine their use of mobile marketing and mobile devices. The survey found that 66 percent use mobile devices for text message marketing. The survey found that the largest use for the mobile device centered on social media (such as Facebook) and direct email marketing.

AT&T conducted a small business technology poll in May of 2011 (Rubin, 2011). They surveyed 2,246 businesses and found that one-third use apps in their business. The most prominent use of the apps was for mapping and GPS (48 percent), followed by social media marketing and document management (23 percent). Other uses include mobile credit card payment, travel and expense tracking, and time management.

Husson and Ask (2013) surveyed 65 professionals in 18 countries that were considered to be e-business managers to determine whether their business has a defined mobile strategy and, if not, where the business is in defining and implementing a mobile strategy. The results showed the 11 percent do not have a mobile strategy, 40 percent are just beginning to develop a strategy, 38 percent have had an existing strategy, and 11 percent only recently defined a strategy.

3. Methodology

A survey instrument was designed to obtain various data from small business owners throughout the United States. The survey was tested in a pilot study in March 2012, and edits and modifications were made. The population of interest for the survey was all small business owners in the United States as defined by the Small Business Administration (SBA) based on industry, asset size, and number of employees. According to the United

States Census, for 2008, there were 21,351,320 non-employee firms and 5,911,663 firms with fewer than 500 employees. Using statistical techniques, a sample size between 271 and 384 business owners is needed in order to obtain a 90 to 95 percent confidence interval for survey results relative to the true population. The survey instrument went on-line to 500 business owners across the United States resulting in 321 completed surveys (a 64.2 percent response rate). Using a 95 percent confidence level, the confidence interval on 321 surveys is 5.47 percent. The final survey recipients were obtained from a small business owner panel. The panel meets all sampling survey procedures required for a representative, random sample of the population being studied. The choice of an on-line survey limits findings to comparisons of a population of small business owners with email access.

4. Results

Of the 321 businesses responding to the survey, 56.7 percent were in the service industry and 20.2 percent retail. The majority (87.70 percent) of the firms had 5 or fewer full-time employees. Table 1 provides additional insight into the demographics of the respondents.

As can be seen from Table 1, most (72.6 percent) of the small businesses responding were operated as sole proprietors. As to gender, the respondents were fairly well mixed with 52 percent women and 48 percent men. Most respondents had at least some college exposure (83.8 percent). The bulk of the small business owners were from 36 to 65 years of age (73.6 percent) and were primarily white (92.5 percent).

Table 1 Descriptive Information

What type is your business?	Frequency	Percent	What is the legal form of organization for the business?	Frequency	Percent
Retail	65	20.2%	Sole Proprietorship	233	72.6
Wholesale	10	3.1%	Partnership	15	4.7
Manufacturing	33	10.3%	C Corporation	20	6.2
Distribution	2	0.6%	S Corporation	19	5.9
Transportation	8	2.5%	LLC	20	6.2
Service	184	57.3%	Other	14	4.4
Other	19	5.9%	Total	321	100.0
Total	321	100.0%			
Number of employees Full-time	Frequency	Percent	What is your gender?	Frequency	Percent
0	60	18.7	Male	154	48.0
1	130	40.5	Female	167	52.0
2 to 5	74	23.1	Total	321	100.0
6 to 10	13	4.1	What is the highest level of education you have obtained?		
11 to 20	7	2.2		Frequency	Percent
21 to 50	5	1.6	Less than High School	2	0.6
Greater than 50	12	3.7	High School	50	15.6
Missing	20	6.1	Some College	111	34.6
Total	321	100.0	College Degree	107	33.3
			Graduate Degree	51	15.9
How old are you?	Frequency	Percent	Total	321	100.0
less than 20 years old	1	0.3	Are you:	Frequency	Percent
20–35 years old	29	9.0	American Indian or Alaska Native	4	1.2
36-50 years old	74	23.1	Asian	7	2.2
51-65 years old	162	50.5	Black or African American	13	4.0
66 years of age or older	55	17.1	White	297	92.5
Total	321	100.0	Total	321	100.0

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To assess the use of mobile applications by small businesses, the survey instrument first questioned the existence of a website and whether the website was used for e-commerce. Only 47.6 percent of the businesses (118) had a website, and of those only 48.3 percent (57) use it for e-commerce (see Table 2). A survey by Network Solutions (2011) found slightly higher results with 60 percent of small businesses having a website.

Table 2 Website Use

Does your business have a website?			Does your business use your website for e-Commerce (selling through the website)?		
	Frequency	Percent		Frequency	Percent
Yes	118	47.6	Yes	57	48.3
No	130	52.4	No	61	51.7
Total	248	100.0	Total	118	100.0

The next step was to find out how many of the business owners used mobile phones for business purposes and how many used mobile apps. Table 3 summarizes the results with 34.3 percent of the businesses using mobile phones for business purposes and 63.6 percent of those using apps.

Table 3 Mobile Phone Use

Does your business use smart phones?			Does your business use mobile applications on smart phones/Ipads/etc. for business purposes?		
	Frequency	Percent		Frequency	Percent
Yes	110	34.3	Yes	70	63.6
No	211	65.7	No	40	36.4
Total	321	100.0	Total	110	100.0

Of the 70 businesses that use apps for business purposes, only 36 indicated the use of apps for advertising/promotion. Of the 36 businesses using apps for advertising/promotion, 19 (52.8 percent) indicated that the use improved revenues. When asked the range of revenue increases, 63.2 percent indicated a 5 to 25 percent increase (see Table 4). In addition, of those 19 businesses using the apps for advertising/promotion, 17 were either satisfied or extremely satisfied with the results.

Table 4 Impact of Apps

For what purpose does your business use mobile applications? Select all that apply:			If your business uses applications for Advertising/Promotion, has the use improved sales?		
	Frequency	Percent		Frequency	Percent
Advertising/Promotion	12	3.7	Yes	19	52.8
Payment System	28	8.7	No	17	47.2
Management	31	9.7	Total	36	100.0
Finance/Banking	35	10.9			
Information	39	12.1			
Other	6	1.9			
Missing	309	96.3			
Total	321	100.0			
By how much did the applications improve sales (express increase as a percentage)?			How satisfied are you with your businesses use of mobile application(s)?		
	Frequency	Percent		Frequency	Percent
5% to 15%	6	31.6	Extremely dissatisfied	1	5.3
15% to 25%	6	31.6	Neither dissatisfied nor satisfied	1	5.3
25% to 50%	4	21.1	Satisfied	13	68.3
More than 50%	1	5.3	Extremely satisfied	4	21.1
I do not know the percentage	2	10.4	Total	19	100.0
Total	19	100.0			

5. Conclusion

Husson and Ask (2013) estimates over 1 billion smartphones in consumers' hands. As more and more consumers begin using and relying on mobile smart phones for activities such as purchasing decisions, it is critically important for small businesses to stay competitive with their larger counterparts. In order to be competitive and win consumer mobile business, small business owners must first start with establishing a web presence. The low number of small business owners that indicated having a web presence could be problematic and cause small firms to miss out on selling opportunities enjoyed by their competitors that have a web presence. Additionally, having e-commerce/m-commerce further enables the small business owner to compete on a larger scale and improve revenue potential. Based on the results of this survey, approximately 53 percent of those that do employ mobile technology for advertising/promotion have increased sales as a result. These results are supported by a finding of Network Solutions, LLC (2011) that reports increased business in 84 percent of the small business users of mobile marketing. Additional support is provided in an article in USA Today (Yu, 2013) which highlighted the successful experience of one small business owner who turned to mobile marketing to boost sales during a slump.

6. Limitations of the Study and Future Research

6.1 Limitations

Given that the survey was conducted on-line, trying to extrapolate the findings of this survey to all small business owners would induce bias resulting from the exclusion of business owners without email access. Also, survivorship bias is unavoidable as these are all existing businesses.

6.2 Future Research

There is a lack of research in the area of app usage by small businesses for advertising/promotion. This study was designed as a fact finding study to determine usage of mobile applications for advertising, and the impact the usage had on revenues. Future research could expand the literature by focusing on the types of applications that are successful in increasing revenues, the industries that benefit most from the use of applications, and a cost/benefit analysis related to incorporating applications in the advertising strategy. Technological advances continue to change business models in all industries, and small business owners need to learn how to adapt and incorporate these changes into their operations in order to stay competitive in their respective markets.

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