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***The Influence of Facebook on the Purchase Decision Process***

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**I. Executive Summary**

Facebook is currently rated the number one social networking sight on the Internet, and its usage and effects on business continue to grow. According to eMarketer, U.S consumers spent 15% of their online time on Facebook during September 2010, but Facebook is expected to capture only 6.4% of total online ad spend this year. Facebook’s pitch is that advertising on the site builds brand awareness, and companies are shifting marketing efforts to this site because it is where the customers are.

After reading about the affects that Facebook claims to have on consumers, we also wanted to know whether or not there was a difference between its affects on female consumers versus male consumers. From these questions we derived the following research objectives:

* Do Facebook users feel that Facebook is a good tool for researching products?
* Has Facebook itself or a referral from a Facebook friend ever influenced your personal purchase of a product or service?
* Is there a difference between age groups when it comes to Facebook’s influence on the purchase of a product or service?
* Is there a difference between genders when it comes to Facebook’s influence on the purchase of a product or service?

My group and I first created a questionnaire that consisted of questions regarding Facebook usage and influences of Facebook and Facebook friends on the purchases of products and services. We decided to administer our questionnaire in the form of a computer-administered survey because it is faster, error-free, captures data in real time and is often less threatening to respondents because they can fill it out on their own time.

Due to the fact that we used nonprobability sampling to gather our sample, we were not able to gather a true representation of the population; therefore the results from this survey cannot be used to make inferences or assumptions about the population parameters.

Overall, Facebook itself and recommendations from Facebook friends does not influence an individual’s purchase of a product or service. In addition, there is no statistically significant difference between Facebook’s influence over purchasing decisions between males and females. It is important for marketers to know this information when deciding whether or not to invest in ads on Facebook.

**II. Introduction**

Facebook is currently rated the number one social networking sight on the Internet, and its usage and effects on business continue to grow. As a member of Facebook myself, I have always been interested in the effects that Facebook has on business, specifically its effects on marketing and consumer behavior. Facebook is currently making big strides in getting big brand marketers to advertise on their site, stating that it provides businesses with an opportunity to connect with millions of people around the world, or the thousands of people in the particular niche product that the business is trying to sell. According to David Fischer, Facebook’s ad chief, marketing has always been about storytelling, and Facebook provides companies with a unique way to tell their stories and participate in the conversation online. Facebook is also currently providing better insights to marketers about the impact that their investment in Facebook is having on consumers (Hof, 2011).

According to eMarketer, U.S consumers spent 15% of their online time on Facebook during September 2010, but Facebook is expected to capture only 6.4% of total online ad spend this year. Facebook’s pitch is that advertising on the site builds brand awareness, and companies are shifting marketing efforts to this site because it is where the customers are. eMarketer expects that Facebook’s ad revenues will reach $2 billion in the U.S by the end of this year, and that 61% of the world’s 100 largest companies will have a presence on Facebook. It is evident that Facebook is continuing to make valiant efforts toward persuading marketers that the reach provided by Facebook is unmatched by any other technique (Steel & Fowler, 2011).

Although Facebook feels that they are changing the marketing playing field marketing, is their influence on consumers really as evident as they claim it is? Due to new and improved technologies, marketers have much more information about potential consumers than ever before. Professional data-miners use electronic data to create a detailed picture of what online consumers have bought in the past and how they bought it. From this information they can draw consumers’ attention to other products that they may be interested in. Marketers also know that one of the most powerful persuaders is peer pressure, and that social media has dramatically increased marketers’ ability to start “social epidemics” through viral marketing ("Business: Hidden persuaders," 2011). This type of marketing technique is often used on Facebook.

According to data from Compete, 55.8% of Facebook users say that Facebook pages have influenced their purchase decisions and that 56.3% of consumers visit a retailer’s Facebook page to stay up-to-date on sales and promotions. Facebook pages are a low-cost marketing tool used to deliver information and to develop deeper relationships with consumers (Hahn, 2011). The demographics of Facebook are changing as well, with teenage users no longer being the largest demographic. According to a report by Inside Facebook, during 2010 only 11% of Facebook users was made up of 13 to 17 year olds (Chiang, 2010). From this data it can be concluded that the age demographic of consumers is mostly over 17 years of age, and this age demographic is most likely to be the consumers that are making purchases, whether it be online or in-stores.

**III. Research Objectives**

My group and I were fascinated by the amount of information that we were able to compile regarding Facebook and its influences on marketing and consumer behavior. However, we were not entirely convinced that Facebook affects the purchasing decisions of consumers as strongly as the social media site claims. After reading about the affects that Facebook claims to have on consumers, we also wanted to know whether or not there was a difference between its affects on female consumers versus male consumers. From these questions we derived the following research objectives:

* Do Facebook users feel that Facebook is a good tool for researching products?
* Has Facebook itself or a referral from a Facebook friend ever influenced your personal purchase of a product or service?
* Is there a difference between age groups when it comes to Facebook’s influence on the purchase of a product or service?
* Is there a difference between genders when it comes to Facebook’s influence on the purchase of a product or service?

In addition to these research objectives, we also compiled data to answer the following questions in order to gain additional data for clarification when answering our research objectives.

* Is there a relationship between gender and Facebook usage?
* Are you more likely to recommend a product since becoming a Facebook fan?

**IV. Method**

My group and I first created a questionnaire that consisted of questions regarding Facebook usage and influences of Facebook and Facebook friends on the purchases of products and services. There were 19 questions in our survey, including 1 screening question, 3 warm up questions, 10 core questions and 5 classification questions. The screening question was used to be certain that our respondents had met the qualifications that were necessary to be a part of this survey, specifically making sure that they had or previously had a Facebook page. The warm-up questions were used to show the respondents that taking this survey would not be difficult, and the core questions were the main questions asked that would provide us with the necessary results to answer our research objectives. The classification questions were used to classify the respondents by different demographics including age, gender, ethnicity, education, and income. Classifying the respondents by gender helped us to determine if there was a difference between males and females when it came to Facebook’s influence on purchasing decisions. We decided to administer our questionnaire in the form of a computer-administered survey because it is faster, error-free, captures data in real time and is often less threatening to respondents because they can fill it out on their own time. We posted the survey on Facebook and sent it to various email list-serves throughout the Pace community. We had a total of 123 respondents, which we felt was a decent amount of respondents compared to what other groups had experienced. The kind of sampling we conducted was nonprobability sampling, because the chances or probability of selecting members of the population into the sample are unknown. All of the data and analyses we conducted were done through using SPSS.

**V. Results**

**Objective Question 1: Do Facebook users feel that Facebook is a good tool for researching products?**

**Table 1: Independent Samples T-Test**

| **Group Statistics** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | Do you have a Facebook? | N | Mean | Std. Deviation | Std. Error Mean |
| Do you consider Facebook to be a good tool for researching products? | Yes | 115 | 3.0522 | 1.02464 | .09555 |
| No | 8 | 2.8750 | .64087 | .22658 |

**Independent Samples T-test, \*p<.05**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean Diff. | Std. Error Diff. | df | T |
| Facebook Users | .17717 | 0.36800 | 121 | .481 |
| Good Tool | .17717 | 0.24590 | 9.692 | .721 |

In order to answer our first objective question, “Do Facebook users feel that Facebook is a good tool for researching products?”, we conducted an independent samples t-test in order to determine if actually having a Facebook influences whether or not an individual believes that Facebook is a good tool for researching products. In the *Group Statistics* table, the mean of 3.0522 is higher than 2.87550, therefore supporting the fact that those who do have a Facebook are more likely to support the statement of “Facebook is a good tool for researching products.” When observing the *Independent Samples T-test* table, there is no difference between the mean score and the t-statistic for Facebook users is .481, while the t-statistic for Facebook being a good research tool is .721. Neither difference is statistically significant.

**Objective Question #2: Has Facebook itself or a referral from a Facebook friend ever influenced your personal purchase of a product or service?**

**Table 2: Paired Samples T-test**

| **Paired Samples Statistics** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Would a referral from a Facebook friend make you more likely to buy a specific product or visit a certain retailer? | 3.2276 | 123 | 1.02280 | .09222 |
| Has Facebook ever influenced your personal purchase of a product or service? | 2.7073 | 123 | 1.05373 | .09501 |

**Paired Sample T-test, \*p<.05**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean | SD | df | t |
| Would a referral from a Facebook friend make you more likely to buy a specific product or visit a certain retailer? - Has Facebook ever influenced your personal purchase of a product or service? | 0.52033 | 1.21 | 122 | 4.768 |

We wanted to determine if the purchase decision process of Facebook users has ever been influenced by Facebook itself or by Facebook friends. In order to determine this , we needed to know if there was any difference between the mean scores of whether or not Facebook has ever influenced a personal purchase as compared to whether or not a Facebook friend has ever influenced an individual to purchase a product from a certain retailer. We conducted a paired sample t-test in order to test the two mean scores. When observing the statistics, the mean score of, “Would a referral from a Facebook friend make you more likely to buy a specific product or visit a certain retailer?” (3.2276) is higher than that of, “Has Facebook ever influenced your personal purchase of a product or service?” (2.7073). However, the second question has a higher standard deviate, meaning that there is more variability in the responses to that question. The results of this test show that the difference in the mean is not statistically significant with a t-statistic of 4.768.

**Objective Question 3: Is there a difference between age groups when it comes to Facebook’s influence on the purchase of a product or service?**

**Table 3: ANOVA**

|  | | | | | |
| --- | --- | --- | --- | --- | --- |
| Has Facebook ever influenced your personal purchase of a product or service? | | | | | |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 1.385 | 4 | .346 | .305 | .874 |
| Within Groups | 134.078 | 118 | 1.136 |  |  |
| Total | 135.463 | 122 |  |  |  |

The next objective was to determine whether or not there is a difference between age groups when it comes to Facebook’s influence on the purchase of a product or service. We conducted an analysis of variance (ANOVA) test in order to compare the means of these groups. We expected that there would be a difference between age groups and influence of Facebook on personal purchases because the only individuals that would be making these purchases would be those old enough to own a credit card or bank account, and therefore would be less likely to purchase impulsively. According to the f-statistic value of .305, the difference between these groups is not statistically significant.

**Objective Question 4: Is there a difference between genders when it comes to Facebook’s influence on the purchase of a product or service?**

**Table 4: ANOVA II**

| Has Facebook ever influenced your personal purchase of a product or service? | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .072 | 1 | .072 | .064 | .801 |
| Within Groups | 135.392 | 121 | 1.119 |  |  |
| Total | 135.463 | 122 |  |  |  |

Similar to the previous objective, we also wanted to determine whether or not there is a difference between males and females when it comes to Facebook’s influence on the purchase of a product or service. We expected that there would be a difference because we have always believed that females are more “emotional” purchasers and are more easily influenced by outside opinions, and therefore would be more likely to be influenced by Facebook to make a purchase. As shown in Table 4, the f-statistic is .064, which shows that the difference is not statistically significant, but is not far off from being so.

Additional Results:

*Is there a relationship between gender and Facebook usage?*

**Table 5: Crosstabulation**

|  | | | | |
| --- | --- | --- | --- | --- |
| Count | | | | |
|  | | Do you have a Facebook? | | Total |
| Yes | No |
| What is your gender? | Female | 38 | 5 | 43 |
| Male | 77 | 3 | 80 |
| Total | | 115 | 8 | 123 |

As shown in the cross-tabulation above, of the 43 females that took the survey, 38 have a Facebook (88%). Of the 80 males that took the survey, 77 have a Facebook (96%). The 96% seems to indicate that more males have a Facebook than females, but this is only representative of the population that actually took our survey, which happened to be more males than females. Of the total population, 115 individuals have a Facebook, or 93% of the total sample population.

**Table 5a: Chi - Square Test**

| **Chi-Square Tests (SPSS)** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Value | df | | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | | Exact Sig. (1-sided) |
| Pearson Chi-Square | 2.854a | 1 | | .091 |  | |  |
| Continuity Correctionb | 1.706 | 1 | | .192 |  | |  |
| Likelihood Ratio | 2.693 | 1 | | .101 |  | |  |
| Fisher's Exact Test |  |  | |  | .126 | | .098 |
| Linear-by-Linear Association | 2.831 | 1 | | .092 |  | |  |
| N of Valid Cases | 123 |  | |  |  | |  |
| a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.80.  b. Computed only for a 2x2 table  **Chi-Square Test (Simplified)** | | | | | | | |
|  | | | | **χ2** | | | df | | |
| What is your gender? Do you have a Facebook? | | | | .091 | | | 1 | | |

After conducting the cross tabulation to determine whether or not there is a relationship between gender and Facebook usage, we also conducted a chi-square test in order to assess nonmonotonic associations in Table 5. In other words, we are testing to see if two variables (gender and Facebook usage) are associated, but only in a very general sense. When a chi-square analysis identifies a relationship with a significance level of .05 or less, it can be concluded that there is a statistically significant association between gender and having a Facebook. However, In Table 5a, the chi-square value is .091, which is greater than .05. Therefore, it can be concluded that there is not a significant association between gender and Facebook usage.

*Are you more likely to recommend a product since becoming a Facebook fan?*

**Table 6: Descriptive Statistics**

|  | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | N | Min | Max | Mean | Std. Deviation |
| Are you more likely to recommend a product since becoming a Facebook fan? | 123 | 1.00 | 7.00 | 4.5854 | 1.86392 |
| Valid N (listwise) | 123 |  |  |  |  |

|  | | | |
| --- | --- | --- | --- |
|  | Mean | Std. Deviation | N |
| Are you more likely to recommend a product since becoming a Facebook fan? | 4.5854 | 1.86392 | 123 |
| Do you have a Facebook? | 1.0650 | .24761 | 123 |

According to the descriptive statistics tables above, the mean in the first table is 4.5854, with the minimum value being 1 (very likely) and the maximum value being 7 (very unlikely). Although the mean does not sit strongly in either direction, it is closer to the maximum value of 7, therefore supporting the fact that individuals are less likely to recommend a product since becoming a Facebook fan. As shown in the second table, having a Facebook has a mean of 1.0650, therefore supporting that most people are very likely to have a Facebook. There is also greater variation in the responses to the question, “Are you more likely to recommend a product since becoming a Facebook fan?”

**Table 6a: Correlations**

|  | | | |
| --- | --- | --- | --- |
|  | | Are you more likely to recommend a product since becoming a Facebook fan? | Do you have a Facebook? |
| Are you more likely to recommend a product since becoming a Facebook fan? | Pearson Correlation | 1 | -.012 |
| Sig. (2-tailed) |  | .894 |
| N | 123 | 123 |
| Do you have a Facebook? | Pearson Correlation | -.012 | 1 |
| Sig. (2-tailed) | .894 |  |
| N | 123 | 123 |

Table 6a shows that there is a weak correlation between having a Facebook and recommending a product to another individual after becoming a Facebook fan. The correlation coefficient of -.012 shows that there is a highly negative correlation between these two variables.

**VI. Limitations**

Due to the fact that we used nonprobability sampling to gather our sample, we were not able to gather a true representation of the population; therefore the results from this survey cannot be used to make inferences or assumptions about the population parameters.Because the survey was only distributed to Pace students or to our Facebook friends, the results do not reflect the behavior of the population as a whole. There were significantly more males than females that took the survey, which means that we did not compile an accurate amount of information regarding the differences between males and females. In addition, many of the survey respondents did not fill out the entire questionnaire and would leave certain questions blank, resulting in inaccurate data and missing values.

**VII. Conclusions**

After conducting an in-depth analyses of the previous information, it can be concluded that there is not any type of statistically significant information to support the fact that Facebook influences the purchasing behavior of males or females. Overall, Facebook itself and recommendations from Facebook friends do not influence an individual’s purchase of a product or service. In addition, there is no statistically significant difference between Facebook’s influence over purchasing decisions between males and females. It is important for marketers to know this information when deciding whether or not to invest in ads on Facebook.

**VIII. Appendix 1**

**Survey**

1. Do you have a Facebook account?

a) Yes

b) No

1. If you are active on Facebook, how many minutes do you spend each day that you visit? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ minutes

3) What are the primary reasons that you join a fan page? Please check all that

apply.

a) To let my friends know what products I support

b) To receive coupons and discount offers

c) To stay current on available new products

d) To learn more about the organization or company

e) To meet with people who have the same interests similar to mine

1. Do you consider Facebook to be a good tool for researching products?
2. Strongly Agree
3. Agree
4. Neutral
5. Disagree
6. Strongly Disagree
7. Using Facebook as a tool for researching products is …

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Very Much | Somewhat | Neither | Not at all |
| Helpful |  |  |  |  |
| Informative |  |  |  |  |
| Ineffective |  |  |  |  |
| Expensive |  |  |  |  |
| Accurate |  |  |  |  |

1. Would a positive referral from a Facebook friend make you more likely to buy a specific product or visit a certain retailer?
2. Strongly Agree
3. Agree
4. Neutral
5. Disagree
6. Strongly Disagree
7. Who makes up the majority of your Facebook friends?
8. Males
9. Females
10. Please indicate on a scale of 1 to 5 (1 for the most influential) whose opinion you find to be the most influential when making a purchase.
11. Male Facebook friends
12. Female Facebook friends
13. Coworkers on Facebook
14. Celebrities on Facebook
15. Family Members on Facebook
16. Are you a fan of the following Facebook pages? Please check all that apply.
17. Fashion & Apparel
18. Technological Products
19. Food or Beverage
20. Sports
21. If you are a fan of any of the previous Facebook pages in the previous question, please

specify which pages that you are a fan of.

1. Has Facebook ever influenced your personal purchase of a product or service?
2. Strongly Agree
3. Agree
4. Neutral
5. Disagree
6. Strongly Disagree
7. Are you more likely to purchase a product from a specific company after becoming a fan of the company’s Facebook page?
8. Very likely
9. Likely
10. Somewhat Likely
11. Undecided
12. Somewhat Unlikely
13. Unlikely
14. Very Unlikely
15. Are you more likely to recommend a product since becoming a Facebook fan?
16. Very Likely
17. Likely
18. Somewhat Likely
19. Undecided
20. Somewhat Unlikely
21. Unlikely
22. Very Unlikely
23. Please rank the following from 1 to 5 on their importance when you are researching a product.
24. Magazines
25. Television/News Media
26. Blogs
27. Facebook
28. Other review websites
29. What is your age?
30. Below 18
31. 18-24
32. 25-40
33. 41-54
34. 55+
35. What is your gender?
36. Male
37. Female
38. What is your ethnicity?
39. Caucasian
40. African American
41. Hispanic
42. Chinese
43. Pacific Islander
44. Asian other than Chinese
45. Other:
46. What is the highest level of education that you have attained?
47. Below high school
48. Some high school
49. High school diploma
50. Some college
51. Associate’s degree
52. Bachelor’s degree
53. Master’s degree and above
54. What is your annual income?
55. Less than $20,000
56. $21,000-$40,000
57. $41,000-$60,000
58. $61,000-$80,000
59. $81,000-$100,000
60. $100,000+

**IX. Appendix 2**

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