

Amazon kindle case study



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Business Problem Paper The Amazon Kindle is a wireless, " convenient, and portable reading device with the ability to download books, blogs, magazines and newspapers" from almost anywhere in the United States (Amazon, 2008). Michael Lewis, the author of Moneyball and Liar's Poker predicts, " this (the Amazon Kindle) is the future of book reading. It will be everywhere. " (Amazon, 2008). This report will determine whether the current \$399. 00 price tag is reasonable to successfully support and sustain the sale of the Kindle. It will clearly define the dependent and independent variables of the study, state the null and alternative hypotheses, and the methodology used to test the hypotheses. It will compute the sample size required which will provide clear support for the criteria used. The samples that are selected and produced are described, including the methodology used to collect the data and a description of the survey instruments. A final recommendation is offered regarding whether the Kindle is a good buy at \$399, or if Amazon needs to alter the price or product. What is the Amazon Kindle? The Kindle is Amazons version of an eBook reader. It has been in the making for three years, first offered to the public in November 2007. It uses elnk, a screen that offers non-glare viewing, and no backlighting which mimics a traditional paper publication feel. Using Whispernet technology and the Sprint network, the Kindle uses wireless access at no cost to the consumer. It offers over 120, 000 eBooks that range from \$. 25 to \$2, 386. 80, with the average eBook costing \$9. 99. There are 10 national newspapers available for a monthly fee of \$5. 99 to \$13. 99 (for the New York Times), as well as 333 blogs, and 15 magazines. See Table 2 for a list of specifics. The Kindle has a QWERTY thumb-keyboard on the top, and holds like a folded book. Other interesting features include the long battery life, adjustable reading fonts,

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the ability to hold more than 200 titles at a time, and it only weighs 10.3 ounces (Amazon, 2008). Independent Variables Independent variables are the presumed cause, stimulus, "predicted from..." manipulations, and predictors (Cooper, 2003). The focus group for this study was interested in the relationships between the independent and dependent variables. The primary independent variable for this study was consumer age. Age seems to indicate other independent variables, such as income levels, available disposable income, and the current interest level. For example, the \$399 price plus monthly subscription fee could be perceived as high to some consumers with limited incomes, such as students, or lower income families. On the other hand, for avid readers the price may be justifiable for their budgets. In the eBook market, the Kindle's price is comparable to its competition, particularly considering the features it offers. For example, the Pepper Pad 3 is currently selling for \$659, while the Nokia N810 Portable Internet Tablet and Cybook Gen3 readers' sale for \$397 and \$449 respectively (Amazon, 2008). See Table 2 for a list of the current competition. Other independent variables to consider are gender, location and occupation. One important independent variable is the wireless availability of the Kindle. Amazon offers wireless access via their optimized technology called Whispernet in conjunction with Sprint's national high-speed (EVDO) data network. This allows the user wireless access to search, download, and read on the go (Amazon, 2008). This means the Kindle is currently only available in the United States excluding Alaska and Montana. There are "dead spots" throughout the country which limit Whispernet access; however, coverage near all major cities is excellent. Amazon has the opportunity to control a key independent variable, the sales promotions

for the Kindle. Since Amazon owns the Kindle technology and design, it has the latitude to advertise the product on its website. Consumers who visit the website will find the Kindle front and center with a link to more detailed information. Further, there is a FAQ page, and feedback page on the website for Kindle aficionados to gather or share information.

Dependent Variables

The dependent variable is a "variable whose value is the result or is a function of the control or independent variables" (Lind, 2004). "They include the presumed effect, response, consequence, measured outcome, and criterion" (Cooper, 2003). In our research the primary dependent variable was consumer satisfaction, or projected satisfaction, with the performance of the Kindle. Based on consumer feedback on Amazon.com, there are currently 2,772 customer reviews rated on a scale from 1 to 5, with 5 being the best rating. "Of the 2,772 reviews, 1,397 rated the Kindle at a 5, while 552 gave it a 4. The overall star rating is 3.88" (Amazon, 2008). Other dependent variables of interest are as follows: First, increased feedback on the website which may affect whether a new consumer might purchase the Kindle. Second, the available "free" time to read publications on the Kindle. Finally, what is the likelihood of loyal customers purchasing proprietary Amazon products?

Null and Alternative Hypothesis

There are several benefits to owning a Kindle. The electronic-paper display provides a sharp, high-resolution screen that looks and reads like real paper. "There are no cables, so wireless connectivity enables you to shop for over 120,000 books from the Kindle Store regardless of where you are" (Amazon, 2008). However, this convenience comes at a steep price considering each Kindle unit costs \$399. Despite the costs, the Kindle has done fairly well in sales since its market launch in November 2007. Over 189,000 units have been

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sold and Citi Corp analyst Mark Mahaney is predicting " 2. 2 million will be sold in the next 2 years with profits growing to \$750 million by 2010" (Gizmodo, 2008). Because the \$399 cost could be considered high for some people, Team B set out to validate a hypothesis associated with current cost of the Kindle and the projected increase in units sold. The null hypothesis states that there is a relationship between the cost of the Kindle and the age group willing to buy it. A Contingency Table will be used to simultaneously summarize two nominal-scale variables of interest. The chi-square statistic will test for a relationship between those variables to the . 01 significance level. An alternative hypothesis using the same Contingency Table and chi-square statistic is that there is no relationship between cost and age.

Primary and Secondary Data Primary data will be collected from individuals of various age groups who have not purchased a Kindle unit. People will be chosen at random in malls, book stores, and university campuses. Those selected will be educated on the Kindle, and then questioned if they would be willing to purchase the Kindle at the \$399 point of sale. The polling responses will be tallied on the Contingency Table according to age and response - yes or no. Secondary data will be collected from customer reviews on Amazon. com. This information will be helpful in determining if current customers are happy with the Kindle and its features. **Computing the Sample Size** As previously discussed, the increase of consumers purchasing the Kindle is predicted to surpass 2 million units within a year and a half. This would be impossible to sample based on time, geography, and cost.

Therefore a random sample of the population was chosen to survey regarding their likelihood to purchase a Kindle. The sample was divided into four age groups of adults. Those groups are; less than 25 years old, 25 — 40,

40 — 60, and 60 and over. The survey utilized the stratified random sampling method which is where “ a population can be clearly divided into groups based on some characteristics” (Lind, Marchal, & Wathen). This guarantees that each group is properly identified and sampled. The sample size included 100 individuals, with 25 individuals per group. Ensuring an unbiased sample was selected was imperative for the data to be accurate and reliable.

Data Collection and Methodology The primary form of data collection was a questionnaire. This questionnaire only contained age, gender, survey location, and occupation as the defining descriptors about the individuals completing the survey. Also, to allow for further anonymity, the questionnaire was written rather than verbally administered by the surveyor. That allowed for more honest, accurate data to be collected. Again, the sample was conducted at shopping malls, university campuses, and book stores. These locations were chosen due to the fact that they were public where there was no predominant preference to either the Kindle or standard books. The chi-square statistic was tested for a relationship to the . 01 significance level between the survey responses of yes and no. See Table 3 for the data.

Final Recommendations Based on team B’s research, the null hypothesis appears to be a true statement if you are a pessimist. The p-value is . 4995. When reading the Kindle 5 star customer feedback ratings, 70% of the respondents rated the eBook reader as 4 stars or higher. This 70% positive feedback score is, in itself, enough to buy into the prediction of 2. 2 million Kindle sales within the next two years. However, when looking at the Amazon FAQ page questions begin to arise. Since November 2007 Amazon has sold 189, 000 units or an average of 27, 000 units a month over the past 7 months. Not bad for a new product launch. However, to reach the

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2. 2 million units sold goal within 2 years, Amazon needs to increase sale to over 122, 871 units a month using a 15% projected growth rate during the final 12 month period of the projected 24 months! This appears to be an inflated projection based of the data collected by team B. See Table 4.

When reviewing Table 3 in the Appendix the strongest yes answers came from the 25 thru 60 age categories. Further data collection is recommended in these three initial groups. For best results, break the age categories down into smaller ranges. This will enable better identification of generational data. The current data suggests that the 25 — 40 age group has the strongest interest in the Kindle. When addressing the data by the location it was gathered from, the trend appears to be college students and business people who use the Kindle. The data demonstrates that college students purchase Kindles with their scholarships, loans, or grants. This allows them to download their textbooks onto a single eBook reader, which may simplify their life. Business people tend to have more disposable income and disposable time via a life spent in airports and train stations. They want simplicity and ease when traveling. Another advantage for business travel is the opportunity to download industry journals, reports, and newspapers onto the Kindle. Conclusion According to Team B's data, the Kindle has a 50/50 shot of being successfully sold. Age does appear to affect the buying decision with the older generation not interested, the middle aged generation finding novelty in it, and the younger generation being pushed into the eBook technology. The final Kindle stand is this: If you want it and can afford it, buy it. Appendix Table 1: Customer Reviews Average Customer Review: 3. 88 Stars (on a scale of 1-5, with 5 being the best) Total Customer Reviews: 2, 772 5 Stars 1, 397 4 Stars 552 3 Stars 269 2 Stars 200 1 Star

354 Table 2: Competition of the Kindle Brand/Model Screen Size Cost

Comments Amazon Kindle 7" \$399 Available Pepper Pad 3 7" \$659 Available
 Nokia N810 Portable Internet Tablet 6" \$397 Available Cybook Gen3 6" \$449
 Available Franklin eBookMan-911 \$165 Discontinued, only used available
 Hanlin eReader V8 6" \$299 Available iRex iLiad 8" £ 649 EUR Available, in
 Europe Sony Librie EBR-1000EP 6" ¥ 41, 790 yen Available in China Sony
 PRS-500 Reader 7" \$359 Available Microsoft Tablet PC Discontinued Kolin
 eBook Reader Discontinued Hiebook Korean Discontinued MachSpeed Oasis
 Discontinued Many others....

Table 3: Contingency Table: Whether or Not to

Buy a Kindle Chi-square Contingency Table Test for Independence Yes No
 Total Less than 25 12 13 25 25 up to 40 16 9 25 40 up to 60 14 11 25 60 and
 older 11 14 25 Total 53 47 100 2. 368 chi-square 3 df . 4995 p-value

Table 4:

Generic Kindle Sales Forecast Generic Kindle Sales Forecast Assumptions 1

27, 000 189, 000 units sold in 1st 7 months 2 27, 000 54, 000 27, 000 units

average per month 3 27, 000 81, 000 4 27, 000 108, 000 2. 2 million units

projected to sale over 24 months 5 27, 000 135, 000 91, 666, 67 units

average per month 6 27, 000 162, 000 7 27, 000 189, 000 \$400 unit cost 8

21, 600 210, 600 9 35, 100 245, 700 30% growth rate for 1st 12 months 10

28, 080 273, 780 5 -10% growth rate for remaining 12 months 11 45, 630

319, 410 Projected Totals 12 36, 504 355, 914 1, 904, 229 15% growth 13

35, 591 391, 505 2, 112, 715 16% growth 14 39, 151 430, 656 15 43, 066

473, 722 16 47, 372 521, 094 17 52, 109 573, 203 18 57, 320 630, 523 19

63, 052 693, 576 20 69, 358 762, 933 21 76, 293 839, 227 22 83, 923 923,

149 23 92, 315 1, 015, 464 24 101, 546 1, 117, 011 25 111, 701 1, 228, 712

26 122, 871 1, 351, 583

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