E-Commerce

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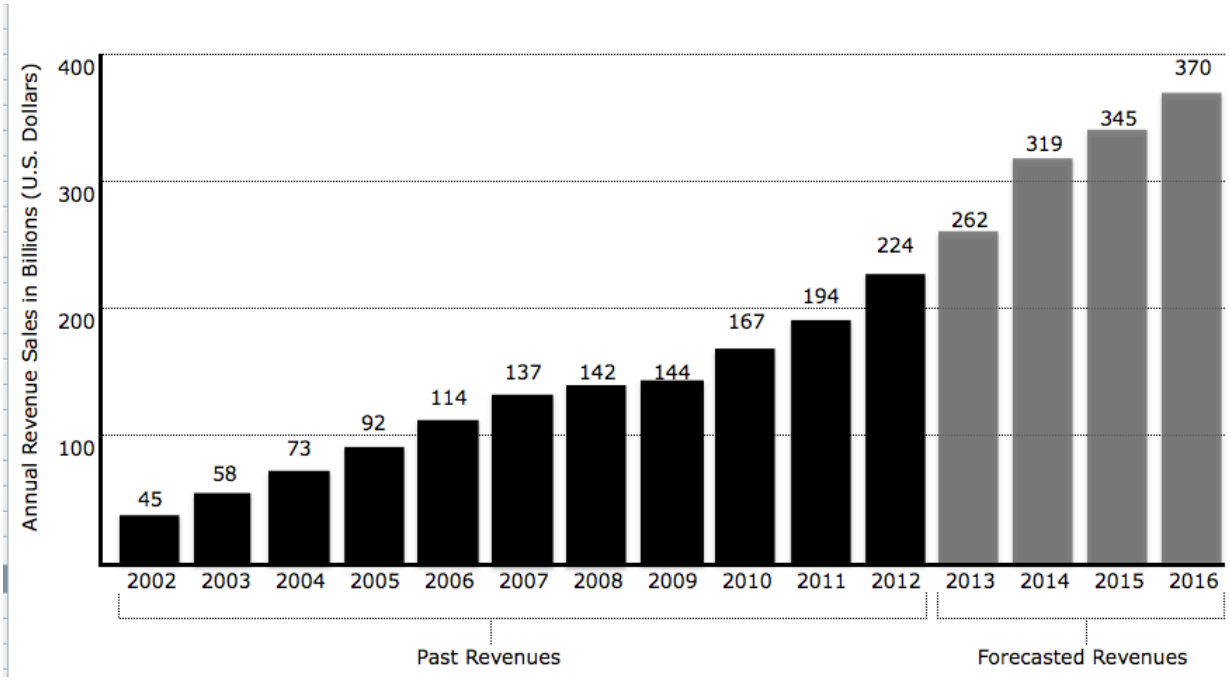
ABSTRACT

Electronic commerce, or "e-commerce" is a medium of shopping in which consumers use the internet to browse, purchase and pay for items. Through the internet, businesses are able to reach their current customers in a more efficient manner by offering more information, options, personalization and convenience. E-commerce also provides a major opportunity for businesses to reach markets that can otherwise not be reached. This paper examines what we know about e-commerce. It also looks for links between e-commerce and materialism and impulse buying and how this will affect marketing.

INTRODUCTION

Electronic commerce, or "e-commerce" is a medium of shopping in which consumers use the internet to browse, purchase and pay for items. Through the internet, businesses are able to reach their current customers in a more efficient manner by offering more information, options, personalization and convenience. E-commerce also provides a major opportunity for businesses to reach markets that can otherwise not be reached. This paper examines what we know about e-commerce. It also looks for links between e-commerce and materialism and impulse buying and how this will affect marketing.

As online shopping technology continues to grow, the industry revenue has been exploding. The following chart shows the annual United States e-commerce revenues from 2002 through 2012, and then the forecasted revenues from 2013 through 2016. The revenues were taken as averages between the U.S. Census Bureau and Statista.



(United State Census Bureau 2013), (Statista, 2013)

In the past ten years the electronic commerce industry revenue has quintupled, even despite the economic downturn. As shown in the above chart, the forecasted revenues of the electronic commerce industry are expected to continue to rise aggressively. In 2013 the revenue has been forecasted to increase by 17%, and then 22% in 2014.

The forecast slows down a bit in 2015 with an increase of 8%, and then again into 2016 with a 7% increase. Although the forecasted revenue does slow down in 2015, it is still a solid increase (Statista, 2013). This slower growth could possibly be due to the increase in mobile commerce revenue, which will be later discussed.

There are two different distinct forms of e-commerce. The first is business to business e-commerce (B2B) in which both the sellers and buyers are businesses. In B2B, e-commerce is used to increase companies' efficiency in transactions. The most common products sold in B2B e-commerce are electronics, utilities, motor vehicles, chemicals, paper and office supplies, food, agriculture and shipping. Another major function of B2B e-commerce is the use of electronic data interchange (EDI), which is the electronic exchange of business information such as orders, requests, invoices, product catalogs, etc. Electronic data interchange is a much cheaper, faster and more efficient than paper and mail based business transactions (Gröblinghoff, 2002).

The other type of e-commerce is business to consumer (B2C). In this type of e-commerce, a consumer is buying from a business electronically. B2C e-commerce has created the need for almost every major retail company to have an online presence. There are also companies that are online only, and have no physical stores for consumers to visit. The most common products sold in the e-commerce industry include computers, televisions, clothing, footwear, accessories, home appliances, sporting goods, toys, medications, and tools (Everett, 2013). Online consumers are able to leave and read customer reviews on retail websites. Other than sales, the internet also provides many free services such as email, video streaming, cloud data storage, online video games, etc. In 2002, 3.3% of all services were conducted online, while in 2012 that percent has grown to 9.4 . This percentage is expected to continue to rise as consumers become more highly computer illiterate. The demand for these online technologies is also becoming stronger.

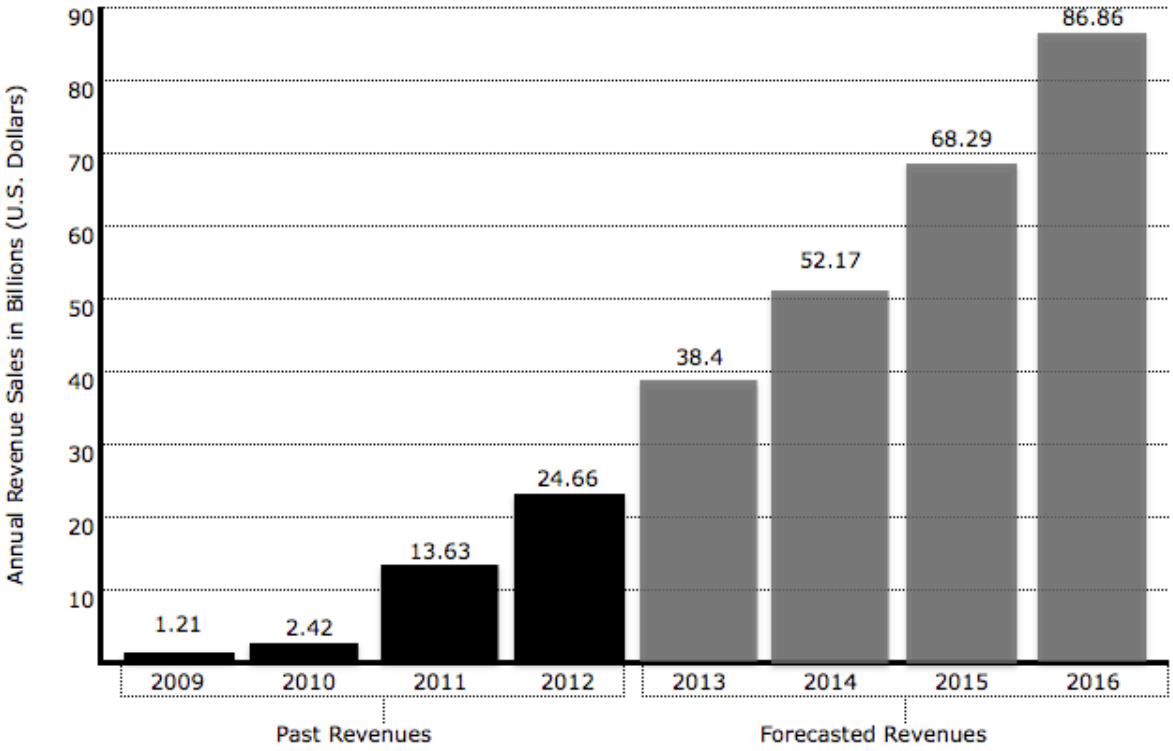
The e-commerce industry leaders are eBay, Amazon and Walmart. While Amazon and Walmart are business to consumer retailers, eBay focuses on consumer to consumer. Together, these three companies hold almost half of the industry market share. Another major sector of the industry market share is made up of major retailers such as Target, Kohl's, Express, Sears, and many, many more. Other than retailers, consumers have been rapidly adapting to online food ordering.

There is a growing popularity of food companies such as Pizza Hut, Dominoes, and Jimmy Johns who offer selection and payment of orders online. Fast-casual and quick-service restaurants are the most likely and common types of restaurants to offer online ordering. In a survey of companies who offer online ordering services, it was found that on average about 10% of a company's orders were being made online. From those companies, 30% said that online ordering has increased their volume of orders. Many companies said it has improved their service and efficiency as a result. Online ordering allows customers to see the full menu, nutritional information if provided, and assure that their order is correct. It also takes away the frustrating process of reading debit/credit card numbers and delivery addresses over the phone. There are many advantages for restaurants to offer online ordering services. Since customers who do not pay with cash have the tendency to spend more, sales can be increased. Frequency can be increased as well, as the restaurants' online websites are able to store customers' credit card information, creating ease for the customer when they order the next time (eMarketer, 2011).

MOBILE COMMERCE

Mobile technologies have had a great impact on the way we communicate and interact. Although, mobile devices are no longer just a communication medium. The rapid growth and innovation of mobile technologies has established a new kind of technology-based commerce known as mobile commerce, or "m-commerce". M-commerce is the use of a mobile smart-phone or tablet to interact in some way through the wireless internet. It has had a significant affect on both consumers and modern businesses- as it improves efficiency, allows for entirely new activities and operations, and provides unlimited opportunities (Haghirian, Madlberger & Tanuskova, 2005).

As consumers and retailers become more comfortable with mobile commerce technology, growth rates will continue to accelerate. With such rapid advancement there is potential for the growth of m-commerce to exceed the growth rate and importance of electronic commerce (Lee & Benbaset, 2003). Although revenues of the mobile commerce industry are only a small percent of those from the electronic commerce industry, they are still growing at a substantial rate. The following chart shows the annual United States m-commerce (including both smart-phones and tablets) revenues from 2009 through 2012, and then the forecasted revenues from 2013 through 2016.



(Siwicki, 2013)

Consumer-targeted mobile commerce made its first major debut in the late 2000's. As shown in the chart above, the m-commerce industry collected about $1.21 billion in revenue in 2009, and twice as much in 2010. Since then, the industry revenue has skyrocketed, beginning with a 563% increase into 2011 and an 81% increase in 2012. M-commerce revenues are forecasted to rise by 56% in 2013, 36% in 2014, 31% in 2015, and 27% in 2016. This forecast reflects the actions of a few different consumer trends. The number of smart-phone users is continually rising, along with their behavioral acceptance and adaptation to m-commerce. As cultures continue to become more fast-paced, consumers have become more dependent on mobile devices due to their reliancy, efficiency and convenience. These two aspects of consumers' behaviors have created a major positive impact for the mobile commerce industry and its revenues (Siwicki, 2013).

The high forecasted future growth revenues also reflect the rapid rise in tablet shopping. The first generation of the Apple iPad was released in early 2010. As aforementioned, the m-commerce industry revenue increased by 563% from 2010 to 2011. This growth was highly impacted by the Apple iPad, and the other following tablets. The larger screens of tablets create more convenience for the shopper to view products, read descriptions and enter personal information. By 2012, more than half of the mobile sales were made from tablets. This high sales volume could even be influenced by people who purchased a tablet in the place of a computer, furthermore contributing to m-commerce revenue rather than e-commerce revenue. As both tablets and smart-phones continue to advance in technology and availability, m-commerce revenues will continue to grow (Siwicki, 2013). Although, there is still a long way before purchasing via a mobile device is seamless.

Trust between the company and the consumers' perceptions is vital to build in order to gain success. Individuals and products differ in trust response. Some people are much more skeptical about giving out their credit card information than others, which is why it is important for companies who engage in m-commerce to express privacy, security and personalization on their mobile apps. Third-party apps have a much more difficult time gaining trust than major companies. Research has also found that an app's design aesthetics greatly affect a users trust (Li, Yeh 2010). It has been suggested that the best way of earning consumer trust is to give consumers some control over their personal information such as opting-in or -out of information exchange policies. These policies sometimes make the user feel as though they are giving out unnecessary information about themselves, or that they will be bombarded with unwanted information later on. Allowing customer reviews on the web page or app is

another great way to earn consumer trust, because it allows customers to see that others who have used the site found it trustful enough to leave a positive comment (Urban, Amyx, Lorenzon, 2009).

There are two different operation modes that can be defined within mobile commerce- "content delivery mode" and "transaction mode", each of which provide numerous different operations. The following two sections explain the two operation modes in further detail including their general purpose, operations, and how they are used.

Content Delivery Mode Mobile-Commerce:

Content delivery mode mobile commerce includes mobile operations that assist in spreading information based on consumer preference or location. In this mode companies provide benefits for the customer by serving them in a much more personalized way than mass marketing. Below explains different ways in which content delivery mode m-commerce is currently used and how it is growing (Mahatanankoon, Wen & Lim, 2005). In some cases an example from an actual business is used to help aid in the description.

For Advertising:

Mobile phone users are continuing to get more attached to their phones as technology advances and dependence on their phone grows. For this reason, mobile advertising, or "m-advertising", may seem like a very efficient way to reach customers, especially specific target markets. Although consumers' attitudes toward m-advertising are generally negative. Unless a consumer has specifically consented or opted-in to a certain wave of mobile advertisements, it often causes them to feel crowded and overwhelmed. As mobile advertisements become more complex, larger, and longer they often slow down the user's phone by taking time to load. The intrusive nature of m-advertisements can be very irritating to consumers, especially when the ad is irrelevant to them (Tsang, Ho & Liang, 2004). The most effective m-advertising techniques are those that are permission-based, meaning that consumers only receive the advertisement if they opt-in to receive it. This way, the ad does not reach people of whom it is irrelevant to, leaving more opportunity to personalize the ad to those that it is relevant to. This can also potentially allow the business to collect demographic information of those who have opted-in, which would help in target marketing and segmenting (Shankar, Venkatesh, Hofacker & Naik 2010).

Finding local deals:

"Deal apps" provide mobile users with deals, specials and coupons from businesses based on their geographical location. These apps have become so popular because they allow the user to see deals from many different businesses at once, rather than having to go to each individual business's websites. These apps raise money by charging a business a marketing fee in order to display their special. The fee is usually based on a percentage of how much income they made off of that specific deal. Groupon, SniffIt and RedLaser are a few of the most popular deal apps, but all operate in a different way.

Groupon offers "deals of the day" for retail stores, restaurants and services in the user's area. SniffIt promotes primarily bars and restaurants' deals in the area. RedLaser, created by eBay Inc., is a more detailed app that helps users find deals around them from retail stores. RedLaser shows a list of "profile pages" for individual stores that show their deals, hours, address, and phone number. The differences in these three top deal apps show how much individual opportunity there is for different companies to be innovative with their mobile marketing.

Foursquare is an example of a social app that has integrated mobile marketing into it. With Foursquare, users "check-in" at locations they visit for their friends and followers to see. They can then leave reviews or comments pertaining to the business. Foursquare also shows deals and specials based on the user's geographic location. Often times a business will require the customer to check-in to receive the deal, or present the mobile coupon at the time of check out. JiWire, a location-based media company, found that just over half of "on-the-go" consumers are willing to exchange the public posting of their location for a mobile deal (Perez, 2011).

Mobile Coupons:

Mobile coupons are very similar to local deals, but are usually used by much larger companies such as Walmart and Target. While deals and specials are available to everyone, mobile coupons require the actual scanning of a coupon from the customer's phone. Mobile coupons help create ease and convenience from the frustration that can come from clipping and organizing paper coupons. Also, by storing electronic coupons on an app you can easily check for upcoming expiration dates. When a company offers mobile coupons they can get faster and more accurate feedback as to how many people viewed the coupon, and how many actually used it.

Rather than supplying mobile coupons, some businesses and restaurants choose to use text-subscription services to reach their customers. In order for a customer to subscribe, they must text a keyword to a short code

number. Then whenever the business decides to send out a mass text message, it will go to everyone who has subscribed to it. This is a great way to use time sensitive coupons, which can be used to target customers during a lower traffic time of the day or season. For example, a fast food restaurant who rarely has customers after 3:00 p.m. on a Friday could send out a text to their subscribers during that time offering half off until 6:00 p.m. Although, text-subscription services often create the fear of spam and unwanted monetary charges for customers (Dickinger, Kleijnen, 2008).

Comparison Shopping:

Mobile commerce can assist in comparison shopping both before the consumer goes on their shopping trip and also while they are in a store. Through certain apps, businesses can send local updates to mobile users' smart-phones when they are near. When the consumers look at the app, they will see all the deals or local coupons nearby, and choose which one they want to use the most. There are also many apps that have been created specifically for the comparison shopping of products. These apps allow the mobile user to scan the barcode of a product, and then using location-based data, it will show how much that product costs at other nearby stores, or online.

Third-party Information Providers:

Each individual airline has their own mobile apps that allow their customers to book flights, check into flights, use mobile boarding passes, view flight statuses, view flight reminders, keep track of frequent flyer information, etc. Many different travel booking websites, such as Expedia, Hotwire, and Kayak have mobile apps as well that allow customers to search and book flights, hotels and car rentals. Although few airports offer free mobile apps, in fact few offer any mobile apps at all. This is because there are many third-party apps that offer mobile users dozens of different airports maps within one app, which is much easier for someone to use rather than having to download a separate app for each airport. Since airlines have their own specialized apps, airports don't find it necessary to use the technology and money to implement their own apps.

Food Industry:

The concept of online food ordering from mobile devices is not widely implemented yet. In 2010, surveys conducted by eMarketer found that people who used their mobile device to access dinning information were only searching for restaurants and looking at menus. Only about 6% of people originally intended to place their order using the mobile app. Although they found that abut 12% of people went on to place an order, showing that the mobile consumers are willing to try this nontraditional way of ordering food when given the opportunity. In the future, restaurant apps are predicted to convert into more transactional mode apps, but as for now consumers remain loyal to traditional ways of ordering food.

To Replace Older Technology:

Allstate DriveWise mobile app measures speed, mileage, safe-braking, and time of day when a customer is driving. That data is then used by Allstate to calculate a discount for safe driving. DriveWise began as a chip or GPS-like box that was inserted into the vehicle, but can now be replaced with a mobile device.

Transaction Mode Mobile-Commerce.

The second operation mode of mobile commerce is known as the "transaction mode" in which companies use the wireless Internet on the customers' phone to run business transactions that are usually done in store or online from a computer (Mahatanankoon, Wen & Lim, 2005). Below gives further descriptions of the ways in which transaction mode mobile commerce is used. In some cases an example from an actual business is used to help aid in the description.

Consumer Mobile Payment Methods

Mobile technology can now allow a smart-phone user to pay in a retail setting using their "digital wallet". This is done by the consumer storing their credit or debit card information on a special payment app on their phone. This eliminates the hassle and time of a customer digging through their wallet or purse for their debit card or cash. In 2011 there were 105.9 billion dollars in transactions of mobile payments worldwide. This was even before some of the more advanced and efficient mobile payment were created. In 2013 there is projected to be $255.8 billion of mobile payments worldwide, and $352.7 billion in 2014 (Yu, 2012).

Some of the major smart-phone applications used as digital wallets include the iPhone Passbook, Google Wallet, Yahoo Wallet, Square Wallet, PayPal and many more. These digit wallet apps use a technology called Near Field Communication (NFC) when in a retail environment. NFC is used by placing the two mobile devices within

four inches of each other, and then the payment is instantly transferred through radio frequency identifications. This technology has not yet been widely spread in the United States, in fact many smart-phones are not even yet compatible with NFC. Although it is very popular in countries such as China who accept it as a payment method for all public transportation. The future of NFC is full of opportunities; research is currently looking at using it in place of traditional keys used for doors and cars (Yu, 2012). The digital wallets can also be used to simplify the checkout process of products purchased on the smart-phone or tablet by automatically using the already stored information. The different apps have many different features, advantages and disadvantages, but in general most allow the user to store loyalty punch cards, discover deals and coupons, and build rewards along with its payment features.

The concept of using a digital wallet for a mobile payment seems rather convenient, although consumers often feel nervous about the complexity of the technology and the potential security risk. Switching to a digital wallet requires a low to medium level of adaptation depending on the individual's technological compatibleness (Mallat, 2007). Along with most technology, there is the consideration that something could malfunction. Perceived trust and security of the consumer has a major impact on an individual's decision to adopt mobile payment methods. If a consumer experiences complications during their early experience of using a digital wallet, they are likely to lose trust for the method and/or stop using it (Mallat, 2007). Especially considering the nature of the activity, involving personal credit card information, consumers can often feel nervous or somewhat uncertain of storing their credit card information on their mobile device. Mobile devices are commonly lost or stolen, and if not protected by a password in some way, the credit card information could be stolen and used. Other concerns include the threat of fraudulent charges and the distribution of personal information to third parties during the actual NFC payment process (Haselsteiner & Breitfu, 2006).

Business Mobile Payment-Receiving Methods

Mobile payment methods are beginning to be adapted by consumers. Although, take a step back and look at what else is currently happening to payment methods. Physical Credit and Debit cards are still rapidly growing in popularity over cash, and it is very important for businesses to not oversee this still-growing fad. For smaller businesses who could not financially accept plastic payment methods, this imposed a major threat in the loss of customers due to their lack of cash on hand.

In 2010, the Square Credit Card Reader made its debut. The Square Credit Card Reader is a small device that can be attached to a mobile device that allows it to scan debit and credit cards. When the debit or credit card is swiped, the app will collect the information and process the payment. Square give the business the option of being charged 2.75% per transaction, or simply paying a monthly fee of $275. This is a very innovative and convenient way for individual sellers and small businesses to process payments. This is also a great method to achieve efficiency in very busy stores that have many sales representatives walking around, rather than having crowded lines at a cash register.

Mobile donations:

Mobile donations through a text message are often used to help raise funds for major disasters. In 2010, donations via text message helped the American Red Cross's Haiti relief efforts raise $43 million (Gahran, 2012). The convenience of donating money just by simply sending a text is what has made this donation medium so efficient. A study done by the Pew Research Center found that donations via text are commonly made on impulse as an immediate response to the media coverage of a disaster. Pew also found that text-by-donation is a great way to reach a younger market who is not very likely to enter credit card information online to donate (Smith, 2012).

Mobile text donations for major disasters and non-profit organizations are set up by a company called mGive. Donors text a keyword to a short code number to make the donation. The information is usually clearly advertised to avoid any confusion to donors, for example: "Text HAITI to 90999 to Donate $10". The amount of the donation is simply added to the mobile user's cell phone bill. The cell phone providers then transfer the donation to mGive. MGive has proven to be able to grasp the power of mobile fundraising (Gahran, 2012).

Retail:

Retail sales made from mobile devices made up approximately 7% of all electronic commerce sales in 2011, and has grown to 11% in 2012. In 2015 mobile sales are predicted to make up 15% of e-commerce sales, and then continue to increase by about 3% each year then after. As covered in the general discussion of mobile commerce, more than half of these sales are made from some sort of tablet. This is due to there larger screen size which creates ease of viewing products, reading descriptions and entering information. Retail sales from mobile devices are usually made from the use of the device's internet browser rather than a specific app. Although many

retail stores have created an app, it is usually perceived as a large hassle by the mobile phone user to download that individual app. In fact many retail store's apps are currently content delivery mode apps only, in which they provide information about the store, its hours, products and such, but don't actually allow purchasing from the app. Creating an app can also be very costly, so its consideration should be strongly assessed before implementing.

Besides content delivery mode and transaction mode mobile commerce, mobile devices can also play a major role in consumer experience while in an actual retail environment. A study done by Retail Customer Experience has found what types of mobile activities retail shoppers with smart phones use the most. They found that 72% had used their mobile phone to call or text someone to ask about a product, and 40% had used their phone to send a photo of a product to someone. They also found that 24% of the people had used their phone to search and compare prices of similar products online, and 15% had used their phone to read product reviews online (Retail Customer Experience, 2009). The use of a smart phone while shopping can highly enhance an experience by creating confidence in consumers' purchases. Although, the use of a mobile phone while shopping can steal the customer's attention away from the retail environment and any advertisements or displays that could also affect their purchase decisions.

Impulsive Buying and Materialism

Materialism and impulsive buying are behaviors that are commonly associated with the shopping industry. Marsha Richins defines materialistic value as "the belief that the acquisition of material goods is a central life goal, prime indicator of success, and a key to happiness and self-definition" (Richins, 2004). In general, materialism refers to the importance that a consumer attaches to a product or possession, and acts as the motivator for the purchase (Ger, Belk, 1995). Impulse buying can be defined as "an unplanned purchase that is characterized by (1) relatively rapid decision making, and (2) a subjective bias in favor of immediate possession" (Rook & Fisher, 1995). The exact definition of impulsive buying can be rather controversial as it can be viewed in many different considerations. For example, if someone is at the store and sees bananas and suddenly remembers that they forgot to write bananas on their grocery list, because it was not on their list, it would be considered an impulse buy.

Materialism and impulsiveness are continually growing as factors that affect the increase of mobile phone usage. James Roberts, a marketing researcher and professor at Baylor University, made a great description of the relationship between materialism and mobile phone usage: "Because when we do so we're signaling that we've got this shiny object, this status symbol, our iPhone or Android or Blackberry, and that we've got important people to talk to or text, who are maybe even more important than the people right in front of us. And that we're so important that we have to talk everywhere and all the time in front of others. And all of that is an expression of materialism" (Mozes, 2012). The continual innovation and advancement of smart phones creates consumer desire for the newest or nicest versions. This has lead to, as Roberts described, the cell phone being perceived as a status symbol.

The motivation to use a mobile device greatly varies between individuals, as everyone has separate lifestyles and personalities. Specifically in terms of materialism; everyone values materialism to a different extent. Some peoples' perceived value of a mobile phone may be the largest motivator, while others may be most motivated by the dependability that a mobile phone provides. The motivation to use a mobile device can also be affected by geographical location. The economic condition of locations has a major effect on if people have, can have, and/or need mobile phones. For example, in underdeveloped regions of our country and the world, cell phones are very rare. While in highly developed regions, almost every single person has at least one mobile phone (Shankar, Venkatesh, Hofacker & Naik 2010). In these higher developed regions there tend to be higher materialistic cultures (Ger, Belk, 1995). Cultural aspects also have an effect on a consumer's impulsive buying behavior.

As the definition of impulse buying can be interpreted in many different ways, researches often look at the normative evaluations of the consumers. A normative evaluation is the consumer's individual judgment about the appropriateness of their "impulse buys" in certain situations (Rook & Fisher, 1995). There are many other factors that influence impulsive buying behavior including the consumer's mood or emotional state, the surrounding environment, who they are with, how much time they have, self-identity, and demographic factors (Kacen & Lee, 2002).

The convenience and availability of online shopping has had a major effect on impulsive buying behaviors. Since consumers are able to browse through so many different items and online stores, they are more likely to find something they decide to purchase that they had originally not planned. Impulsive online purchasing is significantly motivated by affective involvement, meaning emotion and not reasoning (Bosnjak, Galesio, Tuten, 2007). When consumers feel the excitement of finding a low priced item they often engage in impulsive buying. Sometimes people find something so cheap online that they purchase it even if they don't need it because they perceive the deal as "too good to pass up". Websites such as eBay often have an effect on consumers' impulsive buying behaviors.

The bidding-based purchasing method can give a person the mentality that "it doesn't hurt to bid", because there is a medium to high chance that they won't even win. In another aspect, they may want an item so bad that they impulsively spend much more than they were originally willing to.

RESEARCH

So far, this report has been a literature review of the emerging industry of mobile commerce. It has covered topics supporting the understanding of m-commerce including: electronic commerce history and growth, mobile commerce history and growth, content delivery mode mobile commerce, transaction mode mobile commerce, and an overview of the relationship between materialistic and impulsive buying behaviors and how they relate to (online) shopping.

METHOD

The second focus of my report is to analyze consumers' materialistic attitudes and impulsive shopping behaviors, and comparing them with the use of content delivery mode and transaction mode mobile commerce. I have collected primary data for this by administering a survey using Qualtrics. The target segment of my research was college students at the University of Wisconsin- La Crosse. I sent the survey via campus email to 1,000 students which I received from my project advisor. The population was not specific to any gender, age, race or ethnicity. After a two-week span of allowing the survey to be taken, I closed it with 153 responses. The survey collected mostly quantitative data by using validated scales, and limited qualitative data from optional "write-in" boxes.

In my survey I used two validated Marketing scales. The first was the "Materialistic Attitudes: MMA" scale written by Moschis and Churchill in 1978. It measures the materialistic attitude, which they define as "orientations emphasizing possessions and money for personal happiness and social progress" (Moschis and Churchill, 1978). The second validated scale I used was the "Impulsiveness: Buying Impulsiveness Scale" which was written by Rook and Fisher in 1995. This scale measures how strongly one's impulsive buying behavior is (Rook & Fisher, 1995). By both of these behavior based scales being taken by the survey respondents, I will be able to compare them and test for a relationship between the two.

Along with these two validated scales I included a scale asking about their current personal mobile commerce usage. This scale asked them to indicate how often they engage in certain m-commerce activities. There were both content delivery m-commerce activities and transaction mode m-commerce activities. By collecting this information from the survey respondents I could compare their usage rates with both their materialistic and impulsive buying behaviors.

Hypotheses

The intention of the research was to test the following hypothesizes:

Ho1: There is no relationship between a consumers' materialistic attitude and their impulsive buying behavior.
Ha1: There is a relationship between a consumers' materialistic attitude and their impulsive buying behavior.

Ho2:- There is no relationship between the use of content delivery mode mobile commerce and consumers' materialistic attitude.
Ha2: There is a relationship between the use of content delivery mode mobile commerce and consumers' materialistic attitude.

Ho3: There is no relationship between the use of transaction mode mobile commerce and consumers' materialistic attitude.
Ha3: There is a relationship between the use of transaction mode mobile commerce and consumers' materialistic attitude.

Ho4: There is no relationship between the use of transaction mode mobile commerce and consumers' buying impulsiveness.
Ha4: There is a relationship between the use of transaction mode mobile commerce and consumers' buying impulsiveness.

I will be conducting a Chi-Squared Test for Independence separately for each of my four hypothesizes. These tests will indicate whether or not I can reject my null hypothesizes. If I am able to reject a null hypothesis, that will prove that there is a relationship between the two variables. If I fail to reject the null hypothesis, that will prove that there is no relationship between the two variables.

RESULTS

Prior to conducting the tests, I predicted that I would be able to find enough statistical evidence to prove all four of the null hypothesizes wrong- which would mean that there are in fact relationships between the variables in each of my hypothesizes.

Hypothesis 1:

Ho1: There is no relationship between a consumers' materialistic attitude and their impulsive buying behavior.
Ha1: There is a relationship between a consumers' materialistic attitude and their impulsive buying behavior.

My first hypothesis was to test if there is a relationship between an individuals materialistic attitude and their impulsive buying behavior. After running a Chi Squared Test I found a P Value of .051. Since the P value was larger than .05, (.051>.05), I failed to reject the null hypothesis, meaning I was unable to find statistical evidence to prove that there is a relationship between an individual's materialistic attitude and impulsive buying behavior.

Hypothesis 2:

Ho2:- There is no relationship between the use of content delivery mode mobile commerce and consumers' materialistic attitude.
Ha2: There is a relationship between the use of content delivery mode mobile commerce and consumers' materialistic attitude.

My second hypothesis was to determine if there is a relationship between an individual's materialistic attitudes and their level of content delivery mode mobile commerce. From the Chi Square Test I found a P value of .594, (.594>.05), again meaning that I must reject the null hypothesis because I was unable to find statistical evidence to prove that there was a relationship between the two variables.

Hypothesis 3:

Ho3: There is no relationship between the use of transaction mode mobile commerce and consumers' materialistic attitude.
Ha3: There is a relationship between the use of transaction mode mobile commerce and consumers' materialistic attitude.

My third hypothesis was to determine if there was a relationship between an individual's materialistic attitudes and the level of transaction mode mobile commerce of which they use. After running the Chi Squared Test I found a P value of .158, (.158>.05). Once again, the null hypothesis was rejected due to lack of statistical evidence to prove that the two variable were related.

Hypothesis 4:

Ho4: There is no relationship between the use of transaction mode mobile commerce and consumers' buying impulsiveness.
Ha4: There is a relationship between the use of transaction mode mobile commerce and consumers' buying impulsiveness.

My fourth and final hypothesis was to test if there was a relationship between an individual's impulsive buying behaviors and the amount of their transaction mode mobile commerce use. The Chi Square Test gave a P value of .216. The null hypothesis was rejected, again due to lack of statistical evidence to prove that the two variables were related.

DISCUSSION

My hypothesis test results were quite shocking, as not one of the four matched my initial prediction. Of the four sets of matched variables, not one set proved to have a relationship. I was most surprised by my first hypothesis test, which tested for a relationship between an individual's materialistic attitudes and their impulsive buying behaviors. I found this potential relationship to be interesting, as in my literature review I found that both of these behaviors are highly influenced by many different aspects of culture, self-identity, etc., and are so often correlated together. Although my statistics were unable to prove that the two variables were related, it should be considered that the P value was .051. In many instances, a P value of .051 may even be considered close enough to .05 to reject the null hypothesis. I believe that the difficult nature of these two scales may have created a bias, since they are made of questions that can be majorly affected by a factor as simple as the survey taker's mood.

I was also surprised to see that materialistic attitude had no shared relationship with either mode of mobile commerce. I suppose that I may have been considered stereotypes, such as highly materialistic people have the "best apps" and "best products right now", when in reality, highly materialistic people value different products. Just because someone is highly materialistic does not mean they are about their cell phone.

The final hypothesis showed that materialistic attitude is not related to impulsive buying. This scale was also of a difficult nature to answer as it depends on peoples' normative evaluations to answer the questions. I believe that this relationship will grow over time as more people begin to use mobile payment methods. We have seen in the past how debit and credit cards have increased impulsive buying, since the absence of cash can make it appear as if you never paid. The absence in any sort of monetary form, cash or credit card, may increase the rates of impulsive buying. Two people of the 153 survey respondents indicated that they use Apple's Passbook. This was a good example of how new technologies don't just grow overnight.

LIMITATIONS:

A limitation I faced that may have potentially created a bias in the results of my research was that I was rather limited with sample size. Of my 153 survey responders, there were twice as many women than men. Another limitation was that 38 of my 153 respondents did not own a smart phone, which means they automatically do not use any mobile commerce activities. This created an error when I was analyzing my data, because all those who had a smart phone but did not use any mobile commerce operations were given a "0" for each operation they don't use. Those who do not have a smart phone were also given a "0". These two different groups were essentially treated the same, when in reality those who do not have a smart phone do not even have the option to engage in mobile commerce activities.

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