DIFFUSION OF LOCATION BASED SERVICES AND TARGETING

U.S. HISPANICS: A CASE STUDY

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This study reviews factors that identify U.S. Hispanics as being an ideal target market for adopting Location Based Services (LBS). By using the diffusion of innovation theory, an observed pattern of Hispanics’ adoption of technology, advertisements, smartphones and various smartphone value-added services reveals U.S. Hispanics to be more likely to adopt LBS than non-Hispanics. The study also identifies the top U.S. cell phone wireless providers and analyzes their marketing position towards U.S. Hispanics. AT&T, Sprint, T-Mobile and Verizon are noted as marketing their services to U.S. Hispanics via in-culture messages and campaigns. The four wireless providers also utilize LBS as a profitable tool and market LBS to their customers, regardless of ethnicity.
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CHAPTER I

INTRODUCTION

Previous studies have investigated the diffusion and adoption of mobile marketing among mobile phone users in the U.S. and around the world (Cross-Tab Marketing Services & Telecommunications Research Group, 2011; Dickinger & Kleijnen, 2008; Priporas & Mylona, 2008), yet literature exploring the diffusion and adoption of mobile marketing, particularly location based services (LBS), among important ethnic groups in the U.S. is needed. The purpose of this study is to contribute to existing literature about diffusion and adoption of LBS, and also to investigate if U.S. Hispanics are an ideal target market for adopting LBS.

The fast pace, constantly on-the-go lifestyle people have today might seem to create a challenge for advertisers to reach consumers. However, new media has evolved the way advertisers communicate and interact with consumers. Media is digital, interactive and mobile, and the Internet and mobile phones have revolutionized the way advertisers can reach a target market. Advertisers can now reach a large target market not only by print, radio, television, and the Internet, but also by LBS, mobile advertising or mobile marketing.

Definition of Terms

The Mobile Marketing Association (MMA) defines LBS as “A range of services that are provided to mobile subscribers based on the geographical location of their handsets within their cellular network. Handsets have to be equipped with a position-location technology such as GPS to enable the geographical-trigger of service(s) being
provided LBS include driving directions, information about certain resources or destinations within a current vicinity, such as restaurants, ATMs, shopping, movie theaters, etc. LBS may also be used to track the movements and locations of people, as is being done via parent/child monitoring services and mobile devices that target the family market" (Mobile Marketing Association, 2008, p. 20). Mobile advertising is defined as “a form of advertising that is communicated to the consumer/target via a handset.” Some examples of mobile advertisements are short message service (SMS), multimedia messaging service (MMS), mobile web banner, and mobile video ads (Mobile Marketing Association, 2008, p. 21). The MMA defines mobile marketing or m-marketing as “the use of wireless media as an integrated content delivery and direct response vehicle within a cross-media or stand-alone marketing communications program” (Mobile Marketing Association, 2008, p.22).

Over the past few years, sending an advertisement to a mobile phone via SMS, Bluetooth, or LBS has been seen by advertisers as an advertising opportunity. As of December 2010, wireless penetration was at 302.9 million or 96% of the United States population (CTIA, 2011). With such high penetration, advertisers are presented with a medium to advertise that is “always-on-always-with you” (Direct Marketing Association, 2009).

Marketing Screens

Television was the first screen used by marketers to send information to consumers. Then the computer became a second screen where marketers could send relevant messages about products and services to consumers. Computers and the
Internet allow marketers to track a user’s movements within the World Wide Web, thus presenting marketers with a consumer’s location, interests, and purchasing behavior. In 2001, the second screen was seen as possessing “such capabilities, it looms as a potential substitute or complement for all of the major categories of existing media and appears capable of serving a wide range of communications objectives for a broad array of advertisers” (Silk, Klein, & Berndt, 2001). Years later Internet users have become bombarded with messages and advertisement clutter (Ha & McCann, 2008).

Now, the third screen for marketing is the mobile phone. Marketers and scholars alike have taken note that third screen marketing is a viable medium to reach consumers. Marketing experts consider the mobile phone as an extremely promising marketing tool to overcome the major challenges of getting the time and attention of consumers (Pousttchi & Wiedemann, 2006). Advertising via a mobile device provides an opportunity to target consumers in a more efficient way than existing mass media (Barwise & Strong, 2002).

Reaching consumers via a mobile phone has been available for several years. An article that investigated text message (SMS) advertising, response rates and branding effectiveness found SMS was an effective tool for advertising communication either used alone or in conjunction with print, television or poster advertising (Rettie, Grandcolas & Deakins, 2005). In London, England, Bluetooth-enabled advertising has been successfully used to promote products such as a new CD and fragrance launch (Tsiantar, 2006). Targeting consumers based on the consumer’s current location or past locations is a relatively new technology that advertisers and marketers find appealing. Via Location-Based Services (LBS), advertisers can directly target a consumer at
optimal times, such as at the point of purchase. Vice President of research at Borrell
Associates, Kip Cassino, stated in an interview “what used to be called point-of-
purchase is now called mobile advertising” (Patel, 2010).

Uses of Location Based Services

Along with the MMA’s definition of LBS, LBS is also described as being enabled
when a mobile phone is aware of its geographical location, or “services that integrate a
mobile device’s location or position with other information so as to provide added value
to a user” (Spiekermann & Berlin, 2004, p.10). A user’s location can be determined a
few ways. Most mobile phones are equipped with embedded receivers of global
positioning system (GPS), which allows a mobile phone to be located. With GPS a
subscriber must change settings within the mobile phone that enables GPS to gather
geographic data and services (Verizon, 2010a). The United States government has
been using GPS since the 1970s, however in the 1980s GPS was made available to
industries around the world free of charge (Spiekermann & Berlin, 2004). Today, many
industries utilize GPS to create products and services, such as navigation systems in
cars and applications for mobile devices. Mobile phones can also be located by
collecting directional signals from cell phone towers or tracking Wi-Fi network signals
from transmitters (Privacy Rights Clearinghouse, 2011).

Military and Government Use of Location Based Services

The use of LBS has typically been used by the military/government, emergency
services, and the commercial sector. In 1996, the Federal Communications
Commission mandated Enhanced 911 (E911) to improve emergency responses to
wireless 911 calls by providing a caller’s longitude and latitude (Junglas & Watson, 2008). The FCC required manufacturers to include location-tracking components on cell phones, and mandated commercial wireless carriers to pinpoint their customer’s location within 100 meters; thus enabling the call to be transmitted to the closest emergency station. Both wireless carriers and manufacturers had to comply with this deadline by October 2001, however the deadline was not fully met and the FCC relaxed the order. It is expected to take several years for E911 to reach full potential (Privacy Rights Clearinghouse, 2011; Spiekermann & Berlin, 2004).

Industry and Commercial Use of Location Based Services

Another use for LBS is in the industry/commercial sector. Technology has allowed companies to effortlessly collect data on consumers for years. For example, tracking cookies on the Internet expose what sites a consumer has visited. This information enables advertisers to send sophisticated messages to micro-targeted audiences, instead of broadcasting (Federal Trade Commission, 2008). Mass messages can be a hit or miss with consumers, however targeting a consumer armed with interest data or location data can be more efficient and result in a purchase or action. Location-based advertising via a mobile phone can “serve advertisements to consumers not only at the right time, but in the right place” (Federal Trade Commission, 2008, p. 21). For example, such companies exist like Placecast that create a “geo-fence” around a retail location. Once a consumer opts-in to participate, the consumer will receive “FYI’s” or offers via text message if they are in a location within a determined radius. In a four month study conducted by Placecast in the fall of 2009, consumers that opted-in for the advertising messages were surveyed about their experience. Clothing
retailer American Eagle and quick service restaurant chain Sonic were the clients of Placecast. In this study, 79% of the participants said the geo-fencing program increased their likelihood to visit stores and 65% said they made purchases (Patel, 2010).

LBS gained popularity the past few years through mobile phone applications. In an online survey prepared by Cross-Tab Marketing Services and Telecommunications Research Group in December 2010 for Microsoft Corporation, 1,500 respondents from five countries (U.S., United Kingdom, Germany, Canada, and Japan) were surveyed about LBS. Out of the U.S. participants that use LBS, the most common location apps were GPS at 71%, weather apps at 50%, shopping/coupons/ special offers at 33% and social networking at 18% (Cross-Tab Marketing Services & Telecommunications Research Group, 2011). Even though this report notes using LBS as a social networking tool as a low percentage, new apps have been created that allows a consumer to share their location.

LBS apps use GPS technology that allows mobile phone users to share their location by “checking-in” places. For example, one popular LBS platform is Foursquare. Foursquare was officially launched in March 2009, and as of April 2011 claimed 10 million users worldwide, 3 million check-in per day and over 400,000 businesses using the Merchant Platform (Foursquare, 2011). Foursquare users are “checking-in” places via a smartphone app or SMS, thus sharing their location with friends and also collecting points and virtual badges. The more a person patronizes a business or location, the more points or badges he or she will obtain. According to Foursquare’s website, “merchants and brands leverage the foursquare platform by utilizing a wide set of tools to obtain, engage, and retain customers and audiences” (Foursquare, 2011).
Foursquare is just one of many platforms that utilize LBS and “check-ins” for points or prizes. Gowalla, Facebook Places, CheckPoints, Loopt, Twitter and Google Places are all LBS platforms (Hornshaw, 2011; Quinton, 2011; Techtree, 2010).

A survey by Cross-Tab Marketing Services noted LBS has had the longest widespread availability in Japan, but awareness of LBS was highest in the U.S. and the U.K. Of the U.S. survey participants, 35% used LBS several times per week, 20% shared their location with others, and 22% said they have seen a location-based advertisement. Participants from all countries seemed to agree LBS to be “very” or “somewhat valuable” at 80%. Regardless of country, 46% had taken action (redeemed a coupon or visited a store) after seeing a mobile advertisement (Cross-Tab Marketing Services & Telecommunications Research Group, 2011).

In the same survey by Cross-Tab Marketing, it was reported that the participants were more likely to first adopt LBS that were “practical” and “beneficial” to the user. Such LBS usage includes emergencies, locating children/family members, and directions. Among the U.S. participants, 60% used LBS several times per week to locate a person, which is nearly three times higher than Japanese and Canadian participants (Cross-Tab Marketing Services & Telecommunications Research Group, 2011). The industry sector, particularly wireless cell phone providers, have taken note to the demand of tracking other’s location and offer such services for additional fees. Wireless carriers Verizon and Sprint offer family locator plans, Verizon Family and Sprint Family, that allow parents to monitor a child’s location, set geographical boundaries for children and allows parents to be notified by SMS or email of a child’s location (Mobile Tracker, 2006; Sprint, 2010a; Verizon, 2010a). AT&T offers AT&T
Navigator, a tracking service (AT&T, 2010b) and recently, T-Mobile in partnership with Location Labs developed FamilyWhere, which is similar to Verizon Family and Sprint Family (Parsons, 2011).

The number of LBS users increased from 12.3 million users in 2009 to 33.2 million in 2010 (Elkin, 2011). In 2007, LBS accounted for 51% of the $118 million generated in revenue by downloadable mobile applications (Nielsen Mobile, 2007). In 2009, ABI Research was predicting that off-deck LBS apps downloaded were going to reach 260 million in 2010 and 2 billion by 2014 (ABI Research, 2009b). An off-deck app, also known as “off-portal,” is defined by the Mobile Marketing Association as “point of sale/access on the mobile network, but outside of the carrier’s “walled garden”/portal/deck, where consumers can access/purchase information and mobile products/content/utilities” (Mobile Marketing Association, 2008). Even with the growth in LBS and location based advertising (LBA), ABI Research notes “without counting the likes of Google and Facebook, LBA for free applications will have grown to almost $1.5 billion in 2016. This will keep many an app developer happy, yet it still represents less than 20% of the overall market” (ABI Research, 2011).

LBS on mobile phones have been the latest topic in the past few years. As seen in Table 1, ABI Research expected LBS revenues to grow from $1.7 billion in 2008 to $2.6 billion in 2009 and by 2014; ABI Research expects global LBS revenues will surpass $14 billion (ABI Research, 2009a). LBS on mobile phones are expected to continue to develop and turn into an accessible marketing tool, but who is adopting LBS technology on mobile phones?
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<td>2008</td>
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<td>2009</td>
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<td>2014</td>
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Source: ABI Research (2009a)

Cell Phone Penetration and Usage in the United States

As previously mentioned, wireless penetration in the U.S. as of December 2010 was at 96% (CTIA, 2011), and a report by Pew Internet in 2010 found that among U.S. adults (18 years and older) cell phone ownership has remained stable since 2009. However, in 2010, users were utilizing non-voice data services more so than in 2009 (Smith, 2010a). In the Pew report, adult Americans used their cell phone to send/receive a text message, access the Internet and record video more in 2010 than in 2009 (Smith, 2010a). The data in Figure 1 suggests that cell phone users in 2010 were adopting new services provided by cell phone carriers and distributors.
Pew Internet also found that among all cell phone users, 23% accessed social networking sites via a cell phone, 11% purchased a product via a cell phone, and 10% had used their phone to access a social network platform such as Twitter (Smith, 2010a). However, when it comes to U.S. cell phone users, not all are adopting non-voice data services equally.

Studies have shown that Hispanics outpace the general market in terms of cell phone ownership and technology usage (Nielsenwire, 2011; Smith & Zickuhr, 2010). When it comes to owning a cell phone, 87% of U.S. adult Hispanics own a cell phone, compared to 80% of Caucasians (Smith, 2010a). As of December 2010, 31% of all mobile cell phone owners were an owner of a smartphone (Nielsenwire, 2011). However, smartphone penetration is higher among U.S. Hispanics compared to Caucasians at 45% and 27% respectively (Nielsenwire, 2011). Here U.S. Hispanics are being compared to the majority ethnic group in the U.S., Caucasians (Humes, Jones, and Ramirez, 2011). Figure 2 depicts the penetration of smartphones among Hispanics and Caucasians starting in the fourth quarter of 2009 through the fourth quarter of 2010.
Figure 2. Smartphone penetration among Hispanics and Caucasians: U.S. Q4 ’09-Q4'10 (adapted from: Nielsenwire, 2011).

Hispanics are also more receptive to advertising that is integrated within new media. In one report, 40% of Hispanics said they were likely to use their mobile phone to access coupons or special offers while shopping compared to 28% of non-Hispanics (Rodriguez, 2010). Hispanics are more likely to show interest in the following media experiences compared to non-Hispanics:

- Take recommendations from websites based on past online behavior or purchases: Hispanics 38%, non-Hispanics 28% (Rodriguez, 2010)
- Checking in using location based mobile phone apps to broadcast to friends and their network: Hispanics 32%, non-Hispanics 20% (Rodriguez, 2010)
- Interested in online banner ads tailored to their interests: Hispanics 31%, non-Hispanics 19% (Rodriguez, 2010)
- More likely to recall seeing an advertisement on a mobile phone: Hispanics 41%, non-Hispanics 30% (Real Estate Marketing, 2009)
- More likely to respond to an advertisement on a mobile phone: Hispanics 22%, non-Hispanics 13% (Real Estate Marketing, 2009)

For LBS, Pew Internet reported in May 2010 that only 4% of online adults use LBS to share location with others (Smith & Zickuhr, 2010). By November 2010, 7% of adults who went online with a mobile phone used a location-based service, and 10% of online Hispanics used LBS while only 3% of online Caucasians used LBS (Smith & Zickuhr, 2010).

Hispanic Population in the United States

Many reports depict a positive outlook when it comes to marketing towards Hispanics via online platforms and mobile phones due to their rapid growth. Figure 3 depicts the population growth of U.S. Hispanics as noted by Census data. Between 2000 and 2010, the Hispanic population grew 43%, while the non-Hispanic population grew at a slower rate at about 5% (Humes, Jones, and Ramirez, 2011). The Hispanic population continued to increase each decade and between 2000 and 2010 the Hispanic population increased by 15.2 million (Humes, Jones, and Ramirez, 2011). Over the same decade, the non-Hispanic White population increased from 194.6 million to 196.8 million and “its proportion of the total population declined from 69% to 64%” (Humes, Jones, & Ramirez, 2011, p. 3). Additional data, such as race and ethnicity, was set to be released to each state by April 1, 2011; data products, such as demographic profiles and reports, were released on a flow basis starting in April 2011 through September 2013 (U.S. Census Bureau, 2010).
The purchasing power of Hispanics is also growing from year to year. A market report by Mintel International Group Ltd. in 2010 stated that the purchasing power of U.S. Hispanics was approximately $1 trillion; the report also named Hispanics as spending more on telephony than any other group in the U.S. (Mintel International Group Ltd., 2010). The projected purchasing power of U.S. Hispanics is set to reach $1.3 trillion by 2015 (Portada, 2011).

Data suggests an ideal consumer to market and advertise to via LBS is U.S. Hispanics (Portada, 2010a; Rodriguez, 2010). With growth in population, purchasing power, technology use and use of LBS, marketers should turn their attention to this ever evolving minority group. In April 2010, Portada, a source of Latin marketing and media, stated “with 40% of U.S. Hispanic adults accessing the Internet on their mobile phones and only 20% of marketers utilizing the channel to reach Hispanics, mobile marketing
represents a unique opportunity combining near-complete reach with unparalleled engagement” (Portada, 2010a).

Many industry articles and reports depict a positive outlook for LBS as an advertising tool. A report by eMarketer.com suggests that mobile carriers are taking the necessary steps to insure LBS as a common application for consumers. As marketers explore and utilize LBS, it will consequently affect users of LBS. With further exploration of LBS, the incentives to “checking-in” will be new and different. The report suggests that users of LBS see the most value in “checking-in” not to share one’s location, but rather for deals and promotions. The report states that even though LBS’ use as a marketing tool is still in the early stages, the technology “will drive increased engagement and, ultimately, produce measurable bottom-line results… Make no mistake: Location is a key component in marketing’s future” (Elkin, 2011).

Purpose

In summary, LBS is gaining popularity and catching the attention of advertisers as a means to target consumers. Many studies have investigated the adoption of mobile marketing, however most of the studies focus on SMS and Bluetooth marketing. Few studies investigate the diffusion of LBS as an advertising tool. As evident, both the governmental sector and the industry sector have shown interest in LBS. Reports suggest an increase in smartphone ownership, accessing the Internet via a mobile phone, and LBS. Although LBS is still in an infancy stage, industry reports suggest marketing to consumers based on their location will continue to expand and evolve.
This study contributed to the literature covering mobile marketing in that it further explores the opportunity that mobile phones have on marketing to U.S. Hispanics. This study explored whether U.S. Hispanics are an ideal target market of LBS and questions if U.S. Hispanics are more likely to adopt LBS than non-Hispanics. Hispanics are significant cell phone owners, overindex in cell phone usage, welcome mobile couponing, and have tremendous purchasing power. These factors should relate positively in their potential adoption of LBS.
CHAPTER II

LITERATURE REVIEW

This study utilized the theory of diffusion of innovations and examined the marketability of location based services (LBS) to U.S. Hispanics. Diffusion theory does not take ethnicity into account as an influence in adoption rate (Rogers, 1995). However, research notes socioeconomic variables such as income or education can influence adoption rates of communication technology (Hacker & Steiner, 2002). Rogers (1995) notes that in diffusion theory “earlier adopters have more years of formal education than later adopters and earlier adopters have higher social status than later adopters” (p. 269).

In Rogers revision of Internet diffusion in the U.S. he noted, “the main social problem with the widespread diffusion of the Internet, however, is that it has not spread evenly to everyone, creating a digital divide in which the considerable benefits of the Internet only accrue to certain, already advantaged individuals, leaving other individuals relatively more disadvantaged” (Rogers, 2001, p.98). Rogers (2001) further explained the Internet’s digital divide as “digital divide dealt with disparities in access to the Internet on the basis of socioeconomic characteristics, such as income, education, race and so forth” (p.100). Rogers explained that socioeconomic factors such as language and income did contribute to the diffusion of the Internet. Many individuals did not own a computer, nor had access to a computer at work. Therefore a connection to the Internet was not available to individuals who did not have the income to purchase a computer nor had a job that allowed them access to a computer/Internet.
The factor of language also effected the diffusion of Internet. In the early years of the Internet most web pages were in English, so to non-English speaking citizens or less acculturated citizens this would create a barrier in the diffusion process. As noted by Dupagne and Salwen (2005, p. 23), “if these socioeconomic variables are not proxies, the challenge for researchers is to identify relevant predictors that can explain the relationship between adoption of communication technologies and ethnicity.”

Diffusion of Innovations Theory

Diffusion of innovations is a theory that “concentrates on the final stage of the adoption or rejection of an innovation” (Severin & Tankard, 2001, p. 207). Unlike other communication theories that focus on how an individual receives and spreads information, diffusion research focuses on the actual diffusion of an innovation. Rogers defines an innovation as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers, 1995, p. 11). Rogers describes the decision to adopt an innovation as “full use of an innovation as the best course of action available” (Rogers, 2003, p. 177). Rogers views the act of diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5).

Generally associated with diffusion of innovations is the S-shaped curve of adoption. The S-shaped curve starts at a slow adoption rate with only a few adopters then rises quickly as more adopters utilize the innovation, and finally the levels begin to stabilize towards the end of the diffusion process (Gatignon, Eliashberg & Robertson, 1989). The literature has noted the existence of different adopter groups according to
the rate of adoption (Bass, 1969; Rogers, 1995). Adopters can be classified by the following terms according to the timing of adoption (see Figure 4): innovators, early adopters, early majority, late majority and laggards (Rogers, 1995; Severin & Tankard, 2001).

![Figure 4. Adoption rate classification (adapted from: Rogers, 1995).](image)

According to diffusion theory, people adopt media technology at different rates. Rogers notes there are five attributes that act as predictors of the rate of an adoption of an innovation. These are described as:

- Relative advantage- an innovation has an advantage over other innovations or current practices (Rogers, 2003). Rogers described a positive relationship between perceived relative advantage of an innovation and adoption rate as “the greater the perceived relative...
advantage of an innovation, the more rapid its rate of adoption will be” (Rogers, 2003, p.15).

- **Compatibility-** means that an innovation is compatible with existing values, beliefs, and the needs of potential adopters (Rogers, 2003). For an innovation to be adopted, compatibility is extremely important, more so than relative advantage. If the innovation conflicts with the values and beliefs of a social system, it will not be adopted.

- **Complexity-** is associated with the degree of difficulty to understand and use the innovation (Rogers, 2003). Unlike relative advantage, Rogers associated complexity and adoption rate in a negative direction. If a social system finds the innovation complex or difficult to understand, the adoption rate will be slow or rejected. However, if the innovation is found to be easily understood and easily used, the adoption rate will be quick.

- **Trialability-** is when a social system can try an innovation on a limited basis before complete adoption (Rogers, 2003). When a social system has the opportunity to try an innovation, less uncertainties arise and thus the innovation can be adopted rather quickly. Rogers also noted that trialability is not always personal use of an innovation. Late adopters can experience trialability by being “surrounded by peers who have already adopted the innovation” and “these peers act as a kind of vicarious trail for later adopters” (Rogers, 2003, p. 258).
- Observability- occurs when an innovation offers observable results (Rogers, 2003). Observability is positively related to adoption rate, in that if a social system can easily see the results of an innovation, they are more likely to adopt the innovation. Rogers suggested that technology has two components (hardware aspect and software aspect) and if an innovation is software based, being less observable, it results in a slower adoption rate (Rogers, 2003, p.259)

Other literature has expanded Rogers’s list to include characteristics such as financial cost, social cost, return on investment, risk associated with the product and the efficiency to save time and avoidance of discomfort (Fliegel & Kivlin, 1966). Literature has also described an innovation adoption in terms of being either symbolic or technological (Hirschman, 1981). Hirschman (1981) describes a symbolic innovation as having a different social meaning than it had previously and a technological innovation as possessing some tangible feature never before existing. In studies that examine technological innovations, it is noted that technological innovations “offer increased functional performance” and can be “expected to have greater financial cost and smaller social cost than symbolic innovations.” (Dickerson & Gentry, 1983, p. 226)

Technological innovations are described as being discontinuous innovations or less compatible with consumers’ backgrounds and/or experiences; while symbolic innovations are described as being continuous innovations (Hirschman, 1981). Symbolic innovations tend to be easy to use, easily observed, and due to their low cost easy to try; while technological innovations tend to be more difficult to understand, to use, and often costly (Hirschman, 1981).
Roach (2009) explored consumer perceptions of mobile phone marketing. Three of the five characteristics (relative advantage, compatibility, and complexity) of innovation were tested to see what influenced the consumers to accept mobile marketing. The study surveyed 254 students and found that the “perception of the relative advantages and compatibility associated with mobile phone marketing significantly influenced consumers’ intention to accept (or adopt) communication sent via this channel” (p.214). The study also found that a consumer’s involvement with their mobile phone showed a weak relationship to their adoption of mobile phone marketing.

The mobile industry and uses of a mobile phone are constantly evolving and researching the diffusion of mobile telephony can be complex. Wirth, Von Pape and Karnowski (2008) note “mobile communication can no longer be identified as a single innovation because it constitutes a bundle of rapidly evolving services and functionalities” (p.594). Mobile phones and their functions are constantly evolving. Rogers and Kincaid (1981, p.6) suggest “uncertainty implies a lack of predictability, of structure, of information.” With uncertainty come consequences, and Rogers noted that consequences are simply changes that occur in a social system due to the adoption or rejection of an innovation (Rogers, 2003). To reduce uncertainties, individuals that are adopting an innovation should be fully aware of its advantages and disadvantages.

Influencing Factors of Acceptance

Academic research over U.S. consumer’s acceptance of LBS has been somewhat limited, however studies dealing with short messaging systems (SMS) and Bluetooth advertising in the U.S. and overseas has been conducted. In a study
conducted in Greece, 40 students were interviewed about their acceptance of SMS as a business communication tool. Results showed that young consumers viewed the acceptance of SMS as a positive tool. Since the students were familiar with SMS and used SMS on a daily basis, they found it practical for enterprises to communicate information to them via SMS (Priporas & Mylona, 2008). In the U.S., companies have seen SMS used as a tool to communicate product information and services to consumers. A manager of Coca Cola said “we’re seeing it (text messaging) as an important enabler for communication with teens and young adults” and a manager at Procter and Gamble stated “it is about bundling what consumers’ needs and desires are with what is possible in new communication technology” (Pool, 2003, p.9).

In a study conducted in Austria, 370 mobile phone users were surveyed on their attitude towards, perceived control of, and intention to redeem mobile coupons. Results showed that having a favorable attitude significantly affects redemption rate. The participants’ attitudes were positively affected by the economic benefits of the mobile coupons, while redemption effort of the mobile coupon had a negative effect on attitude (Dickinger & Kleijnen, 2008). While most research over innovation depicts the characteristic of relative advantage as the predominate attribute in a consumer’s evaluation, (Kleijnen, de Ruyter & Wetzels, 2007; Rogers, 2003), this particular study found that in terms of mobile couponing, redemption effort is the main determinant of attitude (Dickinger & Kleijnen, 2008). In short, if the consumers found the coupon to be useful, he or she had a positive attitude towards mobile coupons, and if the consumer found the coupons difficult to use, he or she had a negative attitude.
Research has shown that major factors in the adoption of mobile telecommunications are an individual’s characteristics, innovativeness, knowledge of technology, and technology progress, which allows pricing of mobile telecommunication technology to decrease and performance to increase (Gruber, 2005; Gruber & Verboven, 2001; Yang, 2005). Personality characteristics also factor into the success of an innovation (Grewal, Mehta & Kardes, 2000). The success depends on the innovativeness of the individual and how the innovation is introduced into a society or the opinion leader. The opinion leader is noted as being an important variable and contributes to the success of an innovation (Grewal, Mehta & Kardes, 2000). Rogers explained an innovator or innovativeness as the extent to which a person or unit of adoption is early in adopting new ideas before other members of a society (Rogers, 1995).

Studies found that younger demographics are quicker to adopt new technology, tend to use technology for longer periods of time and for a wider variety of tasks (Sultan & Rohm, 2005; Thompson, Lim, & Lai, 1999). In a study conducted over Bluetooth marketing, 210 participants were surveyed. The results showed 61% of the participants used Bluetooth, with 79% using it to transfer files, and 6% using it for commercial reasons (Leek & Christodoulides, 2009). The study also found that 94% were aware of mobile marketing, nearly half (46.7%) of the participants were willing to receive marketing messages once a week, and 58% liked receiving advertisements on their mobile phones and found mobile advertisements as common (Leek, & Christodoulides, 2009). A similar study conducted about SMS advertising targeting young consumers found 51% of the respondents were very satisfied to receive tailored and relevant
messages, 84% stated they would recommend such a service to a friend, 81% did not delete the SMS advertisement without reading them, and 63% claimed to have replied or taken action as a result of receiving the SMS advertisement (Barwise & Strong, 2002).

In summary, mobile marketing incentives can motivate consumers and encourage them to accept mobile marketing (Yaniv, 2008). A consumer’s familiarity with technology can affect the adoption of mobile advertising (Bauer, Barnes, Reichardt & Neumann, 2005; Luxton & Ferraro, 2009). Other factors that consumers take into consideration of accepting mobile marketing are entertainment and credibility which can add increased customer loyalty and affect consumer’s attitudes (Chowdhury, Parvin, Weitenberner & Becker, 2006). As Rogers explains, early adopters of new communication technology tend to be younger, well educated and have higher income than late adopters (Rogers, 1995). These observations have been proven to be significantly related in research examining the diffusion of VCR’s (Reagan, 1987), personal computers (Danko & MacLachlan, 1983; Dickerson & Gentry, 1983) and the Internet (Atkin, Jeffres & Neuendorf, 1998). Other literature also points out that technology adoption is greater when a similar function is already in existence (Ettema, 1984).

Advantages of Mobile Marketing

Mobile phones are emerging as a significant marketing medium in that they offer products and services on a customized level, and direct interaction with consumers anytime and anywhere. Advertising literature has long emphasized the positive relationship between location and advertising effectiveness, specifically on point of
purchase advertising, point of sale, impulse buying (Lollat & Willett, 1969) and site selection of stores (Huff, 1964). LBS can reach buyers at the right time and place, and can pinpoint a target market. Unlike traditional advertising methods which may only have one way to reach a targeted audience (Yaniv, 2008), mobile marketing can be interactive. “The true benefit of mobile marketing is realized when brand-consumer communications and interactivity takes place at the more personal, contextual and location-based levels” (Sultan & Rohm, 2005, p.85).

Since consumers are constantly on the go, mobile marketing has the opportunity to not only collect location information, but also track information such as why the consumer is there (Sultan & Rohm, 2005). For example, a mother might frequent a certain location at the same time five days a week. The exact location is revealed to be an elementary school, which could lead to the distribution of discount alerts for children’s apparel, grocery store items, or restaurants near the parameter of the school.

Interactivity also acts as an important factor in mobile marketing. Sultan and Rohm (2008) describe traditional media as being “lean-back” advertising that involves little interactivity. For example, television viewing is seen as a passive activity. On the other hand, the authors note new media as being “lean-forward” advertising, which might require an individual to make a conscious decision to access an advertisement by clicking on an Internet ad, or reading a coupon sent via SMS. Sultan and Rohm (2008) also mention the dimension of location as being a positive for mobile advertising. As seen in Table 2, traditional media advertising (print, radio and television) are independent of location in that a consumer can see or hear an advertisement and not be anywhere near the point-of-purchase. However new media advertising, like mobile
marketing, can be either independent or dependent of location. “The unique value of mobile marketing is that it enables both brand-consumer interactivity and location specificity that cannot be achieved with other approaches” (Sultan & Rohm, 2008, p.85).

Table 2

<table>
<thead>
<tr>
<th>Location Dependence</th>
<th>Interactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>TV, Print, Radio, Web-based</td>
</tr>
<tr>
<td></td>
<td>TV, Print, Radio, Billboards</td>
</tr>
<tr>
<td>High</td>
<td>Billboards, Mobile Marketing</td>
</tr>
<tr>
<td></td>
<td>Mobile Marketing, Web-based</td>
</tr>
</tbody>
</table>

Source: Adapted from Sultan and Rohm (2008)

The authors, Sultan and Rohm, state that mobile marketing “enables frequent consumer involvement and interaction through repeated content downloads and online games and contests” (p. 86). This notion can be proven by the usage of Foursquare which awards virtual badges and points to users who frequently check into the same location (Foursquare, 2011). Merchants that utilize Foursquare are in constant contact with customers even if s/he does not make a purchase, they will still receive those virtual points and badges.

Personalization is also a major advantage that mobile marketing has over traditional forms of advertising. Location based advertising is highly personalized and “would be more effective than blanket advertising employed by the existing broadcast media” (Gopal, & Triphahi, 2006, p.4). Like third screen advertising, it has been said about second screen advertising that “the customization capability of Internet sites gives Web merchants the ability to target multiple segments with different appearances and offerings” (Cooper, 2007, p.172). Research has found personalization is important and does affect a consumer’s attitude towards mobile advertising (Xu, 2006). Consumers
would like content delivered via mobile services to be customized to their interests (Robins, 2003). Scholars have noted “the opportunity to reach customers in a more personal and unique way is even more critical given the incidence of audience and media fragmentation” (Luxton & Ferraro, 2009, p.2). However, since a cell phone is seen as such a personal device (Sultan & Rohm, 2008), receiving such personal messages from unknown marketers can be a challenge (Luxton & Ferraro, 2009). Mobile marketing can present key personal information such as shopping habits, needs, and history of mobile purchases (Rao, & Minakakis, 2003; Van, Wang & Wei, 2004).

In summary, this literature review revealed adoption rates of new communication technology can be influenced by socioeconomic variables, age, and personality characteristics. This literature review notes that individuals are willing to adopt mobile forms of advertisements and welcome personalized advertisements. A technological innovation might be more difficult to observe than a symbolic innovation. However, if it is positively related to relative advantage, compatibility, and complexity, adoption rates will be high.

Upon review of the diffusion of innovations theory, academic literature of mobile marketing, industry data and reports concerning LBS and U.S. Hispanics, it is apparent no other research focuses on the diffusion of LBS by ethnicity. In order to investigate the adoption of LBS by U.S. Hispanics, the following research questions were formulated to guide the analysis.

RQ 1: Will Hispanics be more likely to adopt LBS than non-Hispanics?

RQ 2: How are businesses and companies actively trying to market LBS to U.S. Hispanics?
In the following chapter, the methodology implemented in this study is explained. The methodology was executed to specifically answer the research questions. Sufficient contextual information about LBS and U.S. Hispanic media technology consumption is provided.
CHAPTER III

METHODOLOGY

To answer the research questions, the qualitative research method of a case study will be used. A case study “uses as many data sources as possible to systematically investigate individuals, groups, organizations, or events” (Wimmer & Dominick, 2005, p.136). Detailed information covering location based services (LBS) can be difficult to find since LBS is still in its infancy. When deciding to use a case study Yin states, “There’s no formula, but your choice depends in large part on your research question(s). The more that your questions seek to explain some present circumstance (e.g., “how or “why” some social phenomenon works), the more that the case study method will be relevant” (Yin, 2009, p.4). Yin (2003) also notes that a case study can be used when researching a group or social phenomena among other topics, and also notes the ability to answer “how” and “why” as an advantage of conducting a case study.

Wimmer and Dominick (2005, p. 137-138) list four characteristics of a case study as: particularistic (focusing on a particular situation, event, program or phenomenon), descriptive (detailed description of topic), heuristic (allows new interpretations and perspective on an innovation) and inductive (generalizations or principles that appear as a result of case study). Wimmer and Dominick (2006) also note that executing a case study typically involves five distinct stages: design, pilot study, data collection, data analysis, and report writing. The research design in this study is focused on the topic of LBS and the suggestion that U.S. Hispanics are an ideal target market for LBS. The study also focuses on particular characteristics U.S. Hispanics demonstrate in terms of
media technology adoption and the revision of how companies and businesses are enticing U.S. Hispanics to adopt LBS.

Multiple sources were used for the data collection portion of this study. A wide range of evidence was analyzed including industry documents, government papers, and academic studies from Hispanic Cyber Study, Consumers Like Mobile Shopping Sites and Apps, A Detailed Look at Apple’s Letter to the US Government about Location Data Collection, data from the U.S. Census Bureau, Privacy Rights Clearinghouse, MIT Sloan Management Review, Omega, and the International Journal of Mobile Marketing. Additional industry related data was gathered by wireless companies and geo-location marketing companies such as Sprint, Verizon, T-Mobile, AT&T, Foursquare, Shopkicks and Placecast. Another collection technique that can be used in a case study is the utilization of observations, participation or comments made about the topic as a source of data (Wimmer & Dominick, 2005). This technique was utilized in the form of gathering comments from blogs and Internet articles related to the research questions.

To evaluate the question of U.S. Hispanic’s adoption rate of LBS, this study explored indicators in the adoption rate of other media technology by U.S. Hispanics. In this study, smartphone ownership patterns, pre-existing usage of related new media such as Internet advertising, online shopping, short messaging system (SMS) coupons and mobile entertainment usage among U.S. Hispanics was analyzed. Along with advertising preferences and habits, demographic information such as income and age was also explored.

In regards to how companies and businesses are actively trying to market LBS to U.S. Hispanics, the study mainly focused on the top wireless companies and specific
programs they offer that specifically target Hispanics. Businesses that utilize or offer LBS were also examined to determine their level of involvement of marketing LBS to U.S. Hispanics. A complete list of indicators employed in this case study is available in Table 3.

Table 3

**Media Ownership, Advertising Adoption, Demographic Information, Company and Business Variables**

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media Ownership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smartphone ownership and usage</td>
<td>Smartphone ownership and usage among U.S. Hispanics</td>
<td>[1] [2]</td>
</tr>
<tr>
<td>New Media ownership and usage</td>
<td>Ownership and usage of other media technology or new media</td>
<td>[1]</td>
</tr>
<tr>
<td><strong>Advertising Adoptions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Advertising and shopping</td>
<td>Adoption of online advertising and shopping by U.S. Hispanics</td>
<td>[1] [2]</td>
</tr>
<tr>
<td>SMS &amp; MMS Couponing</td>
<td>Adoption of SMS and MMS couponing</td>
<td>[2]</td>
</tr>
<tr>
<td><strong>Consumer Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Companies &amp; Business</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wireless Companies</td>
<td>Wireless companies offering LBS or Hispanic centered plans</td>
<td>[2] [4]</td>
</tr>
<tr>
<td>Utilization of LBS</td>
<td>Companies and businesses utilizing LBS and the overlap with U.S. Hispanic purchasing habits</td>
<td>[2] [4]</td>
</tr>
</tbody>
</table>
The data analysis process for a case study differs from other quantitative methods. Unlike other methods there are no specific rules or guidelines for the data analysis stage in a case study, consequently this stage can be challenging for researchers (Wimmer & Dominick, 2005). Despite the uniqueness of this process, Yin (2003) notes that pattern matching, explanation building and time series can be three analytic strategies for a case study.
This study employed the pattern matching strategy. Through the data analysis process, this study attempted to predict an empirical pattern of Hispanics’ adoption of the variables to draw a conclusion that they have the potential of being early adopters of LBS. Through the collection and revision of data from multiple sources and observations, this pattern was tested.

In the explanation building strategy, an investigator drafts a statement about a process or outcome, and then compares it to previous case studies regarding the same topic. Since studies regarding Hispanics’ adoption of LBS are not readily available, this strategy was not utilized.

The time series analysis strategy is utilized when an “investigator tries to compare a series of data points to some theoretic trend that was predicted before the research or to some alternative trend” (Wimmer & Dominick, 2005, p. 140). Again, due to the limited data available regarding the adoption of LBS this strategy was not utilized.

The following chapter presents results from the data gathered from multiple sources regarding characteristics Hispanics exhibit that would lend them to be innovators or early adopters or LBS and also how wireless companies are targeting Hispanics. The data gathered was examined by referencing readily available data and creating patterns between Hispanics’ adoption of smartphones, new technology, openness to online advertising and shopping. The data was also compared to current trends that regard Hispanics’ growth in the U.S. and emerging trends in marketing to Hispanics by wireless companies.
CHAPTER IV
RESULTS
Impact of Media Ownership Among U.S. Hispanics

New Media Ownership and Usage

New media ownership and technology adoption is typically higher among Hispanics than the general market. With 27% of Hispanics considering themselves to be early adopters of technology versus 13% of the general market, “compared to General Market users, online Hispanics are more adventurous and eager to try new media communication formats and technologies. They also keep up with the latest tech news and like to help friends and family with their purchases” (Bloom, Pousa, Resnick & Rodnick, 2010, p 16). Hispanics also outpace the general market in being considered a technology expert by peers and family with 36% Hispanics reporting they are technology experts verses 22% of the general market; some 33% of Hispanics report they keep up with the latest technology while only 24% of the general market say they do (Bloom, Pousa, Resnick & Rodnick, 2010). Hispanics are embracing new technologies and are seen as early adopter regardless of their acculturation level. Despite stereotypes, ‘Hispanic Dominant’ Hispanics tend to outpace ‘U.S. Dominant’ Hispanics as being early adopters (Bloom, Pousa, Resnick & Rodnick, 2010) (See Figure 5).
In 2010, Google commissioned Ipsos OTX MediaCT to conduct an independent study to gain insight in the behavior of Spanish Dominant, Bilingual and English Dominant U.S. Hispanics and their use the Internet. The study reported that “electronics are the most popular technology item purchased by Hispanics” at 78% right behind the general population at 79%, 48% of Hispanics prefer wireless or cell phone service compared to 45% of the general population and television service is at 41% among Hispanics and 42% for the general population (Ipsos OTX MediaCT, 2011b p. 5). The study also noted that “while Hispanics are less likely to own as many electronics as representative, they are more likely to own an MP3 player, video camera or tablet” (Ipsos OTX MediaCT, 2011b p10) (See Table 4). Often times technology purchases are associated with males, however reports have shown “women are most likely to adopt new technology when its social and relevant…that is, when it seamlessly improves their day-to-day lives” (Bergeron, 2011). For example, in 2007, 10.1% of
Hispanic women ages 18-34 years old owned a DVR, however by February 2011 DVR penetration was at 32% (Bergeron, 2011).

Table 4

*Ownership of Media by Hispanics*

<table>
<thead>
<tr>
<th>Media</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television</td>
<td>83%</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>71%</td>
</tr>
<tr>
<td>DVD or Blu Ray Player</td>
<td>65%</td>
</tr>
<tr>
<td>Desktop Computer</td>
<td>62%</td>
</tr>
<tr>
<td>Laptop Computer</td>
<td>62%</td>
</tr>
<tr>
<td>MP3 Player</td>
<td>60%</td>
</tr>
<tr>
<td>Gaming System Console or Handheld</td>
<td>52%</td>
</tr>
<tr>
<td>Digital Video Camera/Camcorder</td>
<td>39%</td>
</tr>
<tr>
<td>DVR</td>
<td>29%</td>
</tr>
<tr>
<td>Netbook</td>
<td>14%</td>
</tr>
<tr>
<td>Tablet</td>
<td>8%</td>
</tr>
<tr>
<td>eReader</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Adapted from Ipsos OTX MediaCT (2011b)

Hispanics are more sophisticated when it comes to technology and connecting to the Internet with 23.6% of Hispanics accessing the Internet via their smartphone (Hispanics, African Americans, Asians more digital-savvy than Caucasians, 2010). Hispanics also connect to the Internet via gaming devices more so than the general market at 18% and 11% respectively (Bloom, Pousa, Resnick & Rodnick, 2010). Both Hispanics and the general market connect to the Internet via a PC equally, however 32% of Hispanics connect via a mobile device compared to 20% of the general market (Bloom, Pousa, Resnick & Rodnick, 2010).

Hispanics connect to the Internet via numerous platforms and once logged on, they are very social, with 29% of online Hispanics reporting they use the Internet as “a new way for me to socialize or meet people” (IAB Hispanic Research Working Group 2011). The IAB Hispanic Research Working Group (2011) found that 48% of Hispanics
have an online social network profile, which is 55% more likely than Caucasians. It has also been reported that minorities’ use of social media differs from Caucasians. For example, “minority Americans were very active using social technologies to share information during the 2008 election campaign…minority Americans are also relatively likely to use digital technologies to keep up with what’s happening in their neighborhoods” (Smith, 2010b). In 2010, Hispanics were nearly four times more likely than non-Hispanic whites to have a Twitter account (Smith & Rainie, 2010; Vann, 2010). Figure 6 depicts the largest social networking sites among all Hispanics by reach.

![Figure 6. Top social networking sites among U.S. Hispanics by reach (Hispanic Fact Pack: Annual Guide to Hispanic Marketing and Media, 2011)](image)

**Smartphone Ownership and Usage**

In determining whether U.S. Hispanics are more likely to adopt location based services (LBS) than non-Hispanics, the group’s vast adoption and usage of smartphones can be considered a variable. In the U.S., ownership patterns of cell phones with app-based and web-enabled operating systems are higher among young minorities.
(Nielsenwire, 2011). Smartphone ownership is highest among Hispanics (45%), Asian/Pacific Islanders (45%) and African-Americans (33%) (Nielsenwire, 2011). In a report by Nielsenwire (2011) of the Caucasians that purchased a cell phone in the last six months, 42% of them chose to purchase a smartphone over a feature phone while 56% of Hispanics chose a smartphone as seen in Figure 7.

A report by Pew Internet noted that 87% of English-speaking Hispanics and African Americans own a cell phone while 80% of Caucasians own a cell phone (Lenhart, 2010). Pew Internet also reported that English-speaking Hispanics “use their handset more intensively” than Caucasians. Fourteen percent of English-speaking Hispanics make or receive more than 30 calls a day from their mobile device, while only 4% of Caucasians noted making and/or receiving 30 calls in a day. English-speaking Hispanics also send/receive 10 text messages in a typical day, while Caucasians send/receive five text messages a day (Lenhart, 2010).
With a high penetration of web-enabled smartphones, Hispanics also over-index in cell phone internet usage (Smith, 2010a). Fifty three percent of Hispanics access the Internet via their smartphone and 16% of English-speaking Hispanics are cell-only wireless users compared to 10% of Caucasians. Hispanics don’t stop at smartphone Internet usage; English-speaking Hispanics “take advantage of a much wider array of their phones’ data functions compared to white cell phone owners” (Smith, 2010a p. 3) (see Table 5). Another activity that Hispanics utilize their smartphones for is online searches as 70% of Hispanics use their smartphone to search online (Ipsos OTX MediaCT, 2010).

Table 5

Use of Smartphone Functions by Race/Ethnicity in Percent

<table>
<thead>
<tr>
<th>Function</th>
<th>All Adults</th>
<th>White, non-Hispanic</th>
<th>Hispanic (English-speaking)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take a picture</td>
<td>76%</td>
<td>75%</td>
<td>83%</td>
</tr>
<tr>
<td>Send/receive text messages</td>
<td>72%</td>
<td>68%</td>
<td>83%</td>
</tr>
<tr>
<td>Send/receive instant message</td>
<td>30%</td>
<td>23%</td>
<td>49%</td>
</tr>
<tr>
<td>Access Internet</td>
<td>38%</td>
<td>33%</td>
<td>51%</td>
</tr>
<tr>
<td>Send/receive email</td>
<td>34%</td>
<td>30%</td>
<td>47%</td>
</tr>
<tr>
<td>Play game</td>
<td>34%</td>
<td>29%</td>
<td>46%</td>
</tr>
<tr>
<td>Record video</td>
<td>34%</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>Watch video</td>
<td>20%</td>
<td>15%</td>
<td>33%</td>
</tr>
<tr>
<td>Post a photo or video online</td>
<td>15%</td>
<td>13%</td>
<td>25%</td>
</tr>
<tr>
<td>Use social networking site</td>
<td>23%</td>
<td>19%</td>
<td>36%</td>
</tr>
<tr>
<td>Use a status update service</td>
<td>10%</td>
<td>8%</td>
<td>15%</td>
</tr>
<tr>
<td>Purchase a product</td>
<td>11%</td>
<td>10%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Adapted from: Smith (2010a)

Along with smartphone adoption and usage, Hispanics are pacing right along all adults and smartphone owners in social location based services. Twenty-eight percent
of all cell owners use their phone to “get directions or recommendations based on their current location,” five percent of cell owners “use their phones to check in to locations using geosocial services such as Foursquare or Gowalla” and nine percent of all internet users use automatic location-tagging on posts via services such as Facebook, Twitter or LinkedIn (Smith & Zickuhr, 2011). As these services increase in popularity and usage, certain groups have “higher-than-average rates of location service usage,” such as smartphone owners, younger users and non-Whites (Smith & Zickuhr, 2011). It has been reported that 12% of smartphone owners have used a “check-in” service such as Foursquare or Gowalla and 55% of smartphone owners have utilized LBS (Smith & Zickuhr, 2011). As previously mentioned, U.S. Hispanics do over-index in smartphone ownership and usage. Hispanics do tend to outpace non-Hispanics in geosocial services but slightly lag behind non-Hispanics in location-based directions and information (Smith & Zickuhr, 2011) (See Table 6).

Table 6

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Geosocial Service</th>
<th>Location-based directions and information</th>
<th>Total (Individuals who have used at least one of these services)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Hispanic</td>
<td>7%</td>
<td>59%</td>
<td>59%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>17%</td>
<td>53%</td>
<td>59%</td>
</tr>
<tr>
<td>Hispanic (English and Spanish-speaking)</td>
<td>25%</td>
<td>44%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source: Smith and Zickuhr (2011)

Impact of Advertising Adoption Among U.S. Hispanics

Online Advertising

With Internet usage comes online advertising and U.S. Hispanics are receptive to online advertising. IAB Hispanic Research Working Group (2011 p.21) states “It has
been well documented that Hispanics enjoy advertising and are more curious about the product or services promoted through ads.” IAB Hispanic Research Working Group (2011) also reports that of the online Hispanics that access the Internet at least once a week, 45% click on an advertisement and 21% of the Internet advertisements lead to a purchase compared to 41% of non-Hispanics clicking on an advertisement and 16% of non-Hispanics making a purchase because of the advertisement. Ipsos OTX MediaCT (2010 p.29) reported “61% have made a purchase in-store as a result of seeing an advertisement online as they were searching products …22% more than the general population.”

When Hispanics are ready to purchase a technology product, 32% searched for a promotion online and 54% made a consumer packaged goods purchase as a result of seeing an online advertisement (Ipsos OTX MediaCT, 2010). When planning to see a movie, Hispanics are more likely to be influenced by mobile ads than the general market at 40% and 31% respectively (Briabe Mobile & Moco Space, 2011). As seen in Figure 8, Hispanics reported that out of the most commonly used mobile advertising types; mobile searches and mobile banner advertisements had the most influence on them when planning on seeing a movie (Briabe Mobile & Moco Space, 2011).
Hispanics have adapted to the idea of mobile phones being an advertising medium and regularly use their mobile phone during the purchasing process. Ipsos OTX MediaCT (2010) found that Hispanics consider their smartphone to be a part of the purchasing process with 40% using their phone to compare prices or to locate a retailer. According to the Mobile Marketing Association, “ethnic groups are key audiences for mobile marketing. For example, African Americans and English-dominant Hispanics indicate stronger interest in mobile marketing than Caucasians. These findings suggest that the mobile channel can be highly effective for reaching specific ethnic groups” (Mobile Marketing Association, 2007). The confidence in using mobile marketing as an effective tool to reach U.S. Hispanics was echoed in the article Why Hispanic Marketers Need to Consider Mobile: “Mobile marketing is emerging as a powerful marketing tool for all marketers, but those trying to reach the Hispanic segment should really take note” (Foschetti, 2008).
Another form of advertisements via a mobile phone that Hispanics are open to is couponing. It has been reported that Hispanics are not only more receptive of mobile marketing messages, but they are much more receptive to coupons, status alerts about accounts, sweepstakes and contests (Foschetti, 2008). As previously mentioned, 40% of Hispanics said they were likely to use their mobile phone to access coupons or special offers while shopping compared to 28% of non-Hispanics (Rodriguez, 2010). With a majority of today’s advertising messages being digital and a vast amount of content Hispanics consume on their mobile phones, relevant coupons that relate to an individual’s interest should be accessible and redeemable via their mobile phone.

Online Shopping

When discussing online activities Internet users participate in, Hispanics either over-index or are not far behind the general market in many categories. According to IAB Hispanic Research Working Group (2011), “Hispanics also outpace non-Hispanics in the use and adoption of the Internet for news, entertainment and socializing,” however, these are not the only activities in which U.S. Hispanics participate in.

Over the past few years, Hispanics have been logging onto the Internet for shopping and product related information. One study reports that the number one activity for minorities is online shopping. Hispanics are more likely than Caucasians to shop online at 32.2% (Hispanics, African Americans, Asians more digital-savvy than Caucasians, 2010). It was reported that while 72% of the total Internet population made an online purchase in 2009 spending an average of $85.1 while 61% of Hispanic Internet users were not too far behind by spending an average of $746 (IAB Hispanic Research Working Group, 2011). More online Hispanics have made a purchase
compared to offline Hispanics at 54% and 43% respectively; in-fact, 61% of online Hispanics visited a specific brand’s website compared to only 46% of offline Hispanics who have visited a retailer’s physical location (Ipsos OTX MediaCT, 2010).

With 78% of Hispanics using the Internet as their primary source of information, approximately 48% of Hispanics say an Internet search helped them make a product related decision (Ipsos OTX MediaCT, 2010). Hispanics also turn to the Internet to research and learn more about a product's features (around 85%) (Hispanics, African Americans, Asians more digital-savvy than Caucasians, 2010). Eighty-five percent of Hispanics also say that they use the Internet to look for a place to purchase products, 90% compare prices and 79% use the Internet to make a final decision (Hispanics, African Americans, Asians more digital-savvy than Caucasians, 2010). Hispanics also conduct preliminary product research online more so than Caucasians at 51.2% and 40.2% respectively (Hispanics, African Americans, Asians more digital-savvy than Caucasians, 2010).

Hispanics turn to the Internet to help them locate products of interest, as 78% of Hispanics say they have used an Internet search engine to find more information about something they have seen on television (Ipsos OTX MediaCT, 2010). When it comes to online product videos, online Hispanics tend to engage with longer-form content than the general market with 30% of Hispanics watching a variety of product related videos (Ipsos OTX MediaCT, 2010).
Impact of Consumer Factors

*Population Growth*

The U.S. Census Bureau reports out of the 308.7 million people living in the U.S., 50.5 million are Hispanic, approximately 16.4% of the population (Albert, Ennis & Rios-Vargas, 2011). The minority population in 2000 was 86.9 million and in ten years that number increased to 111.9 million. In other words, the minority population represents just over one-third of the U.S. population (Albert, Ennis & Rios-Vargas, 2011). While the number of minorities in the U.S. exploded between 2000 and 2010, the population of non-Hispanic whites did not. The Hispanic population grew 43% from 2000 to 2010 while the population of non-white grew 5% during the same time period (Humes, Jones, & Ramirez, 2011).

Seventy-five percent of U.S. Hispanics are concentrated in eight states; these states had one million or more Hispanics residing in their state in 2010: California, Texas, Florida, New York, Illinois, Arizona, New Jersey and Colorado (Albert, Ennis & Rios-Vargas, 2011). With the new Census data, eight new states saw their Hispanic population nearly double: Maryland, North Carolina, South Carolina, Alabama, Mississippi, Tennessee, Kentucky and Arkansas (Albert, Ennis & Rios-Vargas, 2011). One report notes that the increase of Hispanic population is attributed to not only immigration, but also high birthrates (Day-Cheeseman, 2011). However another report states that “births have surpassed immigration as the main driver of the dynamic growth in the U.S. Hispanic population…especially evident among the largest of all Hispanic groups Mexican-Americans” (Pew Hispanic Center, 2011, p. 2). Looking at the
demographic information the Census reported most of the Hispanics living in the U.S. are of Mexican origin (Albert, Ennis & Rios-Vargas, 2011) (See Table 7).

Table 7

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hispanic or Latino Population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>31,798,258</td>
<td>20,640,711</td>
<td>54.1%</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>4,623,716</td>
<td>3,406,178</td>
<td>35.7%</td>
</tr>
<tr>
<td>Cuban</td>
<td>1,785,547</td>
<td>1,241,685</td>
<td>43.8%</td>
</tr>
<tr>
<td>Other Hispanic or Latino</td>
<td>12,270,073</td>
<td>10,017,244</td>
<td>22.5%</td>
</tr>
<tr>
<td>Dominican (Dominican Republic)</td>
<td>1,414,703</td>
<td>764,945</td>
<td>84.9%</td>
</tr>
</tbody>
</table>


Generation Y

As a whole, U.S. Hispanics are younger than non-Hispanics. The median age of a Hispanic in the U.S. is 27 compared to 41 years old for a non-Hispanic (IAB Hispanic Research Working Group, 2011). The number of Hispanic children ages 17 and younger in 2010 was 17.1 million. That particular age group grew 39% between 2000 and 2010 (Cohn, 2011). The number of Hispanics aged 18 and older in 2010 was 33.3 million, an increase of 45% from 2000 (Cohn, 2001). Younger consumers, particularly Generation Y (Gen Y) consumers, are an important demographic to reach by marketers (Kumar and Lim, 2008). The age of people associated as Gen Y is debatable and can vary from source to source, however typically Gen Y is someone born between 1977 and 1994 or 15-32 years old (MetLife Mature Market Institute, 2009). Gen Y is an important part of the consumer market due to their significant purchasing power across most industries, but particularly in their wireless communication purchases (Beneke, Cumming, Stevens & Versfeld, 2010).
Gen-Y are often seen as early adopters of new technologies and are avid users of the Internet and mobile services (Kumar & Lim, 2008). Gen-Y utilize mobile services such as value-added services, text messaging, online game and music downloading much more often than other age groups (Kumar & Lim, 2008). Young Latinos (ages 16 to 25) have higher reports of text messaging their friends daily at 50%. Forty-five percent of young Latinos say they talk with their friends via a cell phone daily (Livingston & Lopez, 2010) (See Figure 9).

With the data that younger people adapt and embrace new technologies more so than other age groups and U.S. Hispanics being younger as a whole, it is likely Hispanics would be early adopters of LBS. As previously mentioned, younger users (aged 18-49) are more likely to utilize geosocial or LBS applications on their phones, however “there are no significant differences among social media users by age in regard to automatic location-tagging” (Smith & Zickuhr, 2011 p. 3) (See Table 8).
Table 8

*Geosocial and LBS usage by Age*

<table>
<thead>
<tr>
<th>Age</th>
<th>Geosocial Service</th>
<th>Location-based directions and information</th>
<th>Total (Individuals who have used at least one of these services)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>18%</td>
<td>60%</td>
<td>63%</td>
</tr>
<tr>
<td>30-49</td>
<td>12%</td>
<td>58%</td>
<td>61%</td>
</tr>
<tr>
<td>50+</td>
<td>2%</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Source: Smith and Zickuhr (2011).

In July 2011, Briabe Mobile and MocoSpace conducted a study to better understand how Hispanics utilize their mobile phones when planning to see a movie. The study showed that “72% of Hispanics rely on their mobile phone when planning to see a movie” with higher percentages being among the younger demographics (Briabe Mobile & Moco Space, 2011). The study also reported that younger Hispanics tend to use their cell phone within four hours of seeing a movie (See Figure 10). The same study reported that younger Hispanics, ages 18-24 years old, are more receptive to movie mobile advertisements than Hispanics aged 25-34 (See Figure 11).

*Figure 10. Use of smartphone when planning to see a movie by age (adapted from: Briabe Mobile & Moco Space, 2011)*
Figure 11. Most effective type of mobile advertisements to Hispanic moviegoers by age (adapted from: Briabe Mobile & Moco Space, 2011)

**Purchasing Power**

U.S. Hispanics are estimated to have a purchasing power of $1 trillion. “If U.S. Hispanics were a country, they would rank as the 12th largest global economy, somewhere between Mexico and Australia” (Dreas & Pardo, 2011). U.S. Hispanics spend more money on telephony than any other group (Mintel International Group Ltd.,
Among the most popular consumer packaged goods purchased by Hispanics are groceries, household cleaning and laundry products and also beauty products (Ipsos OTX MediaCT, 2011a).

IAB Hispanic Research Working Group (2011, p. 8) reports the growth in Hispanic purchasing power is due to the younger demographic entering the workforce or moving up in their careers and growth in entrepreneurial activity and educational attainment. The U.S. Hispanic purchasing power is estimated to increase to $1.5 trillion in 2015, “representing nearly 11% of the nation’s total buying power” (IAB Hispanic Research Working Group, 2011 p 8) (See Figure 12).

Figure 12. Hispanic purchasing power in billions (adapted from: IAB Hispanic Research Working Group, 2011)
Impact of Companies and Businesses

Wireless Companies

The following section will examine the top rated cell phone providers in the United States and what each company is doing in terms of utilizing LBS and how each company is targeting U.S. Hispanics. As the Hispanic population and their consumption of telecom services continue to surge, it is important to review what wireless service companies are doing to include and market to the large segment. The top rated wireless cell phone providers in the U.S. included in this analysis are Verizon, AT&T, Sprint and T-Mobile (Top Ten Review, 2011).

As previously mentioned, most LBS are presented to the mobile phone users as an application that the user downloads from a third party to the handset in order to use the service. Depending of the publisher of the app, some may be free of charge or sold. In the second quarter of 2007, LBS apps accounted for 51% of the $118 million generated in revenue by downloadable mobile apps (Nielsen Mobile, 2007). Wireless cell phone companies can create their own apps; however most of the apps that are on the market are produced by third parties. However, it is the companies that offer handsets equipped with GPS and often creates their own services that utilize GPS and other technologies for a profit, such as Verizon’s Family Locator service.

Verizon

Verizon Communications claims to operate the most reliable wireless network in the United States, serving 92.1 million wireless customers (Verizon, 2010). Verizon has the industry’s lowest customer turnover rate (high rates of customer retention), 1.27
percent, and in the second quarter of 2010 over 180 billion text messages were exchanged on Verizon’s network. Verizon claims to have the leading portfolio of devices and smartphones including iPhone, Android, RIM (Blackberry), Palm and Microsoft. Verizon has a partnership with Google which enables the wireless service provider to deliver leading-edge mobile applications, services and devices like the Android operating system (Verizon, 2010c).

Verizon’s services are available in many multicultural markets. Verizon’s four largest markets are in New York, Florida, Texas and California, where a majority of the U.S. Hispanic population resides (Verizon, 2010b). The company has diverse marketing efforts, and tries to communicate with minorities in their language and focuses on topics relevant to each group. Verizon has a multicultural marketing team that conducts market research, focus groups and surveys in order to better understand the needs of their customers. The company also hires agencies that specialize in targeting minorities including Hispanics. Verizon provides customer service in Spanish and five other languages. Verizon has a multicultural sales staff and solution centers in 13 cities across the U.S.; this allows the customers to have a sales staff member that speak their language. Roughly 1,000 employees staff the multicultural sales and solution centers. Verizon also sponsors events that pertain to their diverse customers, including Cinco de Mayo, Hispanic Heritage month, Latin Grammys and Hispanic film festivals (Verizon, 2010b). Verizon partnered with Univision Interactive Media to bring its wireless users access to Mexican league soccer information, news, scores, statistics and promotions (Arango, 2011).
Verizon has found that over a million of their customers prefer to speak to someone that speaks their native language when calling about their accounts. Because of this, Verizon not only provides technical services and sales in six languages, but also repair and billing services. More than 600,000 of Verizon’s customers in New York and California receive their bills in Spanish (Verizon, 2010b). Verizon has reported that those customers that prefer to do business with “Verizon in-language” spend $420 billion a year on Verizon services and products.

AT&T

According to the AT&T website, the company is recognized as “having the nation’s fastest mobile broadband network serving 85.1 million customers, the nation’s fastest 4G Network, and the largest international coverage of any wireless carrier in the U.S.” The company offers the “most phones that work in the most countries … and are making huge advances in the entertainment and communications industry” (AT&T, 2010a). AT&T offers individual, family, prepaid, and data plans. According to the AT&T website, the innovative company offers their customers the many “firsts” in the wireless industry, including the Apple iPhone, a wireless Palm device, the BlackBerry, and wireless e-mail. In March 2010, AT&T Inc. announced a deal to acquire T-Mobile USA in a $39 billion merger (Davis, 2010). If T-Mobile is acquired by AT&T, the telecom industry competitive landscape could change drastically. For example, AT&T could leverage their size to make deals with LBS app creators or handset manufactures, making it impossible for other wireless providers to offer their customers the latest in LBS or devices. The deal sparked a lawsuit filed by the U.S. Justice Department, who
has since blocked the merger stating the merger could cause “higher prices, poorer quality and less innovation” (Davis, 2010).

AT&T shows positive growth in marketing to U.S. Hispanics. AT&T notes it's loyalty among some of the fastest-growing segments of the wireless market including the youth and the Hispanic market. There are approximately 700 bilingual concept stores in “key markets” that offer English and Spanish salespeople to “better serve” the Hispanic consumer market. According to the AT&T website, the company recognizes that their consumers are multicultural and diverse individuals. AT&T invests in advertising and marketing campaigns that portray their multicultural consumers in “positive roles” and presents all of their products and services through “meaningful moments in a culturally relevant way” (AT&T, 2010).

In September 2010, AT&T partnered with Univision Interactive Media to deliver soccer games played by the Mexican National Soccer Team. The games were streamed live to AT&T customers who subscribe to AT&T Mobile TV or MobiTV services. The customers who wanted to watch the games texted “TRI” to a number via their AT&T wireless phone and signed up to receive the content. AT&T has a five-year contract with the Mexican Soccer Federation and the national team. In addition to streaming the games live, AT&T offered game highlights, short messaging service (SMS) alerts, scores, news, match schedules and soccer content on UnivisionFutbol.com to customers clicking “Mobile Video” icon on their cell phone and searching “El Tri” in the Latino category.
This was not the first time AT&T has directed services to the Hispanic consumer. In the past, AT&T offered Latino content such as soccer, boxing, games, programming, advertising campaigns featuring popular Mexican players, and sponsorship of a soccer clinic in eight US cities that featured Mexican players. AT&T also has a Spanish website (espanol.att.com) and a Spanish Facebook site (AT&T Latino) (AT&T. 2010a).

In August 2010, AT&T and Azteca America, one of the nation’s leading Latino broadcasters, launched a site called Paparazzi. The site blends product integration, mobile marketing, blogs and celebrity endorsements. As of mid-August 2010, Paparazzi attracted over 20,000 Facebook and Twitter followers and viewers can receive post updates directly to their phone by texting AT&T (PR Newswire, 2010a).

Sprint

Sprint offers a range of wireless and wireline communications services and at the end of the third quarter in 2010 the company served more than 48.8 million customers (Sprint, 2010). On November 24, 2009, Sprint acquired Virgin Mobile USA and on December 4, 2009, Sprint also acquired iPCS Inc. Sprint’s corporate brand includes Sprint, Nextel, Boost Mobile, Virgin Mobile and Assurance Wireless (Sprint, 2010). Sprint is recognized as being the first national wireless carrier in the United States to offer 4G services (Sprint, 2010). 4G is short for “fourth generation,” and is a technology that enables higher data speeds, IP-based voice, and streaming multimedia content (Beal, 2010).

Sprint launched its first Spanish-language campaign in 1997 and in 2006 Sprint was recognized as “Marketer of the Year” by Marketing y Medios for exemplary work in
marketing to the Hispanic community (Adweek, 2010). Also in 2006, Sprint offered two Spanish-language mobile chat communities, “Chat del Mundo” from Jumbuck Entertainment and “Muchachat” from Cellfist Media (Sprint News Release, 2006). Sprint began to offer these two communities in December 2006 in part with their “Twelve Days of Power Shopping” campaign in hopes that Sprint subscribers would want to connect with other Spanish speaking family, friends and strangers around the holiday season. The mobile chat communities were to “complement” Sprint’s bilingual chat product called Latino Lounge that launched in early 2006 (Sprint News Release, 2006). “Chat del Mundo” offered Spanish speakers a profile from which they could share photos and video and also interact with friends from around the world. The community is offered in Argentina, Chile, Ecuador, Spain, Colombia, Panama, Venezuela and the U.S. The service was available for $1.99 per month to Sprint subscribers. “Muchachat” also offered Sprint subscribers a chance to create profiles and choose avatars to represent them and search for other users by age, location, description, etc. for a charge of .50 cents for each message received via the service (Sprint News Release, 2006).

Sprint claimed to be the first carrier to introduce a service that provides live Spanish-language television for wireless phones with the launch of Sprint TV En Vivo in 2006. The live video and audio service for mobile phones offers a mix of Spanish and English language channels that are attractive to Hispanics. Some of the channels that are available on Sprint TV En Vivo are Discovery en Español, ESPN Deportes, The History Channel en español, ¡Sorpresa!, Video Rola, AccuWeather.com, Barrio 305, Comedy Time Latino, ABC News Now, Fashion TV, MAXX Deportes, ShortsTV Corto, V40 Caliente!, El Mic Hip Hop, SHIFT Alternativo and CHAOS Extremo (Wireless
Sprint’s other services that target the Hispanic community include more than 20,000 Latin-related songs available via the Sprint Music Store, Latin ringtones in 12 different genres, Spanish-language mobile e-cards from Univision Tarjetas and Greetings 123 en Español and Spanish-speaking roadside rescue (Sprint News Releases, 2006).

In 2007, Sprint launched a Hispanic integrated-marketing campaign to promote both the NASCAR NEXTEL Cup Series™ and Sprint’s products. The Spanish-language ad features Colombian-born race car driver Juan Pablo Montoya and Sprint’s “immediate and reliable” Nextel Walkie-Talkie service. The walkie-talkie service also is capable of connecting Nextel subscribers in the U.S. to subscribers in Mexico, Peru, Argentina, and Brazil. The Hispanic integrated-marketing campaign also included radio advertising, a sweepstakes entitled “Viva la Copa Nextel de NASCAR,” in-store promotions, online, and direct marketing (Sprint News Releases, 2007). This was not the only example of Sprint teaming up to connect with Hispanic sports fans. In 2009, Sprint aligned with the 2009 CONCACAF Gold Cup soccer tournament. Sprint subscribers with the appropriate data plan could watch any Gold Cup game on their cell phone (Hispanic Market Weekly, 2009).

In October 2010, Sprint announced the launch of Sprint ID for Sprint’s smartphones. Sprint ID allows the company’s smartphone users the chance to personalize his or her mobile phone with applications, widgets, ringtones and wallpapers (Sprint News Releases, 2010). Within the press release for Sprint ID the company highlighted that Hispanic users will benefit from Sprint ID in that it will allow them to “flow seamlessly between bicultural and bilingual worlds by providing both
English and Spanish language content and the ability to easily switch between languages while texting or e-mailing. “The Hispanic population is growing at an unprecedented rate, so it is imperative that we both continue to evolve these initial packs with additional content as well as add new packs that fit even more specific lifestyles and preferences of this target” said Jorge Rincon, CEO of LatCel, a Latino Mobile Media company (Sprint News Releases, 2010). Along with the launch Sprint partnered with LatCel, the lead provider of Latin mobile content and services. The partnership brought three ID packs for the use of U.S. Hispanics. Lo2Yo Latino, Lo2Yo Mujer and Lo2Yo Futbol are the packs that cater to a specific segment of Hispanics in the U.S. (Wiredlatino, 2010). For example, Lo2Yo Latino was designed for the young, bilingual and tech-savvy U.S. Hispanic (Wiredlatino, 2010).

T-Mobile

T-Mobile USA is an operating entity of T-Mobile International AG, an arm of European company Deutsche Telekom AG. Deutsche Telekom is one of the world’s largest telecommunications companies. For the purpose of this company profile, only T-Mobile USA will be discussed and will further be noted as T-Mobile (T-Mobile, 2010a). In the second quarter of 2010, the company reported $4.7 billion in revenues and reported serving 33.6 million customers at the end of the second quarter in 2010 (T-Mobile, 2010a; T-Mobile, 2010b). T-Mobile reported 6.5 million customers using their 3G capable smartphones in the second quarter of 2010; an increase of 25% from the first quarter of 2010 (3G is defined as “mobile phone technology that includes services and applications with faster access to the web” (Broadband Glossary, 2010).
T-Mobile actively targets the Hispanic consumer in the U.S. and one out of four T-Mobile subscribers are Hispanic, more than that of other wireless companies (Mora, 2010a). T-Mobile offers a wireless plan called Más México. Subscribers can add Más México to their existing plan and this service provides unlimited text messages and discounted calling rates to Mexico. For just $10 a month T-Mobile family subscribers can have access to unlimited text messages to Mexico and individual subscribers pay only $5 a month. The plan also includes a deal on calls, at just five cents per minute to landlines in Mexico and 25 cents per minute to cell phones (T-Mobile, 2010).

T-Mobile has teamed up with Univision, the number one Spanish-language television network in the U.S. Univision’s novela “Eve Luna” has multiple sponsorships that are woven into the storyline of the show and T-Mobile is one of those sponsors. T-Mobile showcases new mobile devices within the show as brand vignettes appear during pivotal scenes of the show. T-Mobile also sponsors online content and subscribers have exclusive access to “Eva Luna” content via their mobile device (QRS Magazine, 2010).

T-Mobile isn’t just pushing their brand on novelas, but also with soccer. During the FIFA World Cup in 2010 the company launched a Web and mobile campaign targeted towards U.S. Hispanics soccer fans. “El Llamado del Futbol” or “The Call of Soccer” was created in effort to engage Hispanic subscribers and non-subscribers and aid the company’s growth in email and mobile databases. From their mobile device, fans could text the word “win” to a certain number and then T-Mobile selected 10 winners for a trip to South Africa where the World Cup was taking place. The company not only paid for the flight but also hotel and spending money. Along with entering via a
mobile device, fans could also enter via the Internet. Once entered, the fan could “opt-in" to receive other marketing messages, via email or SMS, from the company. The messages consisted of both soccer information and non-soccer related information. T-Mobile promoted this campaign through television ads on Univision as well as radio (Hurn, 2010).

All four companies target U.S. Hispanics to some degree by integrating their brand into Hispanic cultural staples such as language, websites in Spanish language, sporting events, and music. All four companies were ranked among the top 15 largest advertisers in Hispanic media in 2010 (Hispanic Fact Pack: Annual Guide to Hispanic Marketing and Media, 2011) (See Table 9). T-Mobile, AT&T, and Verizon have partnered with major Spanish language networks to provide access to content, particularly sporting events like the 2010 FIFA World Cup. Meanwhile, Sprint has created Sprint TV En Vivo, the first live Spanish language video and audio service.

Table 9

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>2010</th>
<th>2009</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Verizon Communication</td>
<td>137,966,000</td>
<td>116,201,000</td>
<td>18.7%</td>
</tr>
<tr>
<td>3</td>
<td>AT&amp;T</td>
<td>132,089,000</td>
<td>101,909,000</td>
<td>29.6%</td>
</tr>
<tr>
<td>13</td>
<td>T-Mobile (Deutsche Telkom)</td>
<td>79,368,000</td>
<td>54,113,000</td>
<td>46.7%</td>
</tr>
<tr>
<td>14</td>
<td>Sprint Nextel Corp</td>
<td>73,502,000</td>
<td>64,565,000</td>
<td>13.8%</td>
</tr>
</tbody>
</table>


Hispanics over-index in the following categories compared to the general market: making long distance calls outside of the U.S. in the last three months, having a telephone credit card and having a pre-paid calling card (Portada, 2010). AT&T, T-Mobile and Verizon offer pre-paid service plans, however Sprint does not (Top Ten
Sprint is the only carrier, out of the four, which does not offer pre-paid international plans, but all four carriers offer international contract service plans. However, Sprint customers that have the Sprint Nextel walkie-talkies can use them for international calls. All four companies offer service coverage in areas that have a large Hispanic population. The top Hispanic states in the U.S. are: California, New York, Texas and Florida (Advertising Age Hispanic Fact Pack, 2011).

Whereas AT&T, Verizon, and T-Mobile offer pre-paid plans and partner up with Spanish language networks to offer their subscribers access to content, Sprint created their very own outlet that allows their subscribers access to various Spanish language television channels and content. All the carriers try to tie their products or services to the Hispanic population through language or cultural relevance.

**LBS and Company Analysis**

All four companies utilize LBS in some degree. Verizon began marketing LBS to families in 2006 with the Family Locator service. Verizon appeals to families by stating that this particular service is “peace of mind is right at your fingertips” (Verizon, 2010a). Formally known as Chaperone®, for an additional $9.99 a month on top of the subscribers’ wireless plan, the subscriber can locate family members or members listed on his or her plan via a home computer or mobile device. The customer can receive arrival and departure alerts on each member, schedule updates at certain times, locate a member, or send directions or messages directly to a member. The “locator” can access the location and maps via any phone that has mobile browser capabilities, however only specific handsets can configure to act as the “locatee” (Verizon, 2010a).
AT&T started marketing LBS in 2007 as a solution to business customers with TeleNav Track. TeleNav Track allows “GPS-enabled location-tracking, mileage-tracking, wireless time sheets, alerts and detailed location-reporting to capture field data” (AT&T, 2007). AT&T business subscribers also have access to AT&T Navigator, AT&T Navigator Global Edition, Xora GPS, and many more tracking services. AT&T also offers the “Developer Program” for LBS developers, which provides “a variety of free sources to help consumer and enterprise LBS developers at all stages of LBS development and implementation” (AT&T, 2010b). In 2011, AT&T partnered with Placecast to offer its wireless customers geo-fencing-based shopping alerts via MMS or SMS to their smartphone (Sterling, February 28, 2011). Placecast creates a “geo-fence” around a location and consumers that opt-in for the service then receive “ShopAlerts” via MMS or SMS to their mobile device.

Like Verizon, Sprint also markets LBS to families with Sprint Family Locator. Launched in 2007, Sprint’s plan is identical to Verizon, in that members of the same plan can keep tabs on each other’s location. Sprint Family Locator also alerts the “locater” when a member reaches his or her destination. For example, a parent can be notified with their child reaches school (Mobile Tracker, 2006). Sprint also markets LBS to federal, state and local governments as a way to help manage a workforce (Sprint, 2010). Sprint claims to be the leader in LBS with a “robust LBS partner portfolio” including Telenav and Xora (Sprint, 2010). T-Mobile describes LBS on their website as recently available due to their devices now being capable of running LBS apps on smartphones and 3G (T-Mobile, 2011).
Each company offers a wide range of handsets that are equipped with GPS receivers and all companies offer mobile devices capable of running applications and smartphones that have the capabilities to run LBS. For example, Loopt™, created in 2005, is an app that allows a user to search for people and places around them using the user’s location. Loopt™ is available for download on iPhone, BlackBerry, Android and Windows Phone 7; the app supports users on all four carriers plus a few more (Loopt, 2010). With the ability to connect to the Internet and to GPS, the uses for LBS are vast, including the ability to search for the nearest retail locations, locate family and friends on interactive maps or receive e-coupons from nearby retailers or businesses (T-Mobile, 2010).

Utilization of LBS

LBS have been available for years, however the first generation of LBS has had its limitations. In the summer 2011, VMBC, a creative marketing company that deals in voice, mobile and electronic channels, announced the service of LBS 2.0 (Internet Retailer, 2011). LBS 2.0 is a service designed to “overcome the limitations and adoption barriers of the first generation of LBS” (Internet Retailer, 2011). VMBC states LBS 2.0 can work on any cellular phone, on any wireless providers, in or outdoors and does not need an app to run. VMBC announced partnerships with some of the world’s largest Fortune 100 companies including retail, telecom and financial and states that “through LBS 2.0, VMBC is delivering a new way for brands to opt-in loyal customers without the traditional hurdles of LBS 1.0” (Internet Retailer, 2011). VMBC notes that for LBS 1.0 to work, consumers had to have a cell phone that was capable of connecting to the
Internet and GPS, be outdoors and download an app in order to receive content from businesses.

Many companies have realized the power of LBS and adopted LBS into their marketing initiatives. Whether it is pushing or pulling content to consumers, many businesses, big or small, have realized the reach of LBS. In terms of mobile marketing, companies such as Coca-Cola, Ikea, McDonald's, Proctor & Gamble and Univision have utilized the tools to reach and engage consumers (Foschetti, 2008). Not only are these companies reaching their consumers via mobile phones, they are also targeting mobile advertisements towards Hispanics. Cover Girl, a Proctor & Gamble brand, was a major advertiser for an entertainment special on Univision’s mobile portal, Univision Movil (Foschetti, 2008). McDonald’s also reached out to Hispanics by promoting a product via SMS short codes. The company noted that Hispanics are a “fast growing mobile user segment with significant brand loyalty” (Nelson, 2007).

In 2011 Forrester Research Inc. noted that out of the 252 U.S. interactive marketing professionals that participated in a survey, 40% reported using some form of mobile marketing and 35% are planning to incorporate mobile into next year’s marketing plans (Deatsch, 2011). Even though marketers are willing to try mobile marketing, 59% say they will only allocate $1 million dollars to mobile marketing while 23% plan to spend more than $1 million (Deatsch, 2011). The marketers that were surveyed know that using and experimenting with different forms of mobile marketing is critical part of their marketing strategy. “Experimentation is always a good way to learn new technologies and channels, however, the pace of consumer adoption is so quick in
mobile, and the potential for mobile to change the way businesses operates is so clear, that marketers cannot afford to test for another year” (Deatsch, 2011).

The use of mobile marketing and LBS to reach consumers and gain consumer loyalty is present and in use. Companies such as Target, Best Buy, J.C.Penney, Apple and Barnes & Noble are offering content via mobile shopping apps that allow their customers to perform multiple actions such as to research and purchase products, find locations and receive discounts from their mobile phone (Deatsch, 2011a). In a cluttered marketing environment reaching consumer or retaining consumers can be difficult. By utilizing LBS, consumers can be reached via a medium that most of the population owns, especially young Hispanics. Mobile marketing and LBS can reach a consumer at opportune times and locations.

Findings

RQ1 sought to find if Hispanics are more likely than non-Hispanics to adopt LBS due to their media ownership and usage, advertising adoptions and consumer factors. As to media ownership, the smartphone ownership by Hispanics is undeniable. Hispanics are more likely to own a smartphone than the general market and Hispanics also carry a 14% higher average monthly cell phone bill than the market average (Dreas & Pardo, 2011). Compared to all ethnic groups, U.S. Hispanics average 40% more calls per day, text message more, utilize mobile Internet and e-mail more frequently and are more likely to download pictures or music on mobile devices (Dreas & Pardo, 2011).

As seen in Table 5, English-speaking Hispanics outpace Caucasians in every smartphone function. Functions that English-speaking Hispanics approximately double Caucasians in are: sending/receiving instant message, watching video, using social
networking sites and using a status update service. English-speaking Hispanics are 8% more likely to purchase a product via their smartphone than Caucasians and 7% more likely than all adults. Latino cell phone owners are more likely to have made a charitable donation via a text message at 23% compared to 7% of Caucasians (Smith, 2010). With Ipsos OTX MediaCT (2010) reporting that 93% of Hispanics use their mobile phone regularly, it seems likely that Hispanics may utilize their phone in the purchasing process. Over 40% of Hispanics use their phone to compare prices and locate retailers (Ipsos OTX MeidaCT, 2010).

In regards to RQ1, Hispanics are more likely to be innovators/early adopters of LBS than non-Hispanics. Rogers (2003) notes that compatibility is extremely important, more so than relative advantage, when it comes to adoption rate. LBS align with the current values, beliefs and needs of Hispanic smartphone owners. Hispanics are utilizing a wide range of services a smartphone offers, including Internet and GPS. Roger (2003) also noted that if an innovation is complex, the adoption rate will be low or rejected by a social system. Again, because of the numerous ways Hispanics over-index in smartphone services, the minority group will not view LBS as a complex innovation. Equally, LBS can be easily associated with common services already used by Hispanics including sending and receiving text messages, comparing prices online, viewing mobile content, utilizing coupons and GPS. For example, 65% Hispanics reported using their mobile phone to get times and locations of movies and 39% used their mobile phone to view trailers (Briabe Mobile & Moco Space, 2011) (See Table 10).
In order to predict Hispanics adoption rate of LBS, this study explored their adoption of other technologies. Hispanics are eager and willing to try new technologies (Vann, 2011, August 11). Hispanics have high ownership rates of new technologies such as tablets and eReaders, therefore it is likely that Hispanics will adopt other new technologies such as LBS.

Hispanics also own more new technology than non-Hispanics or intend to purchase new technology products at a higher rate than non-Hispanics (Rodriguez, 2010). This information suggests that Hispanics are likely early adopters of LBS more so than non-Hispanics. With Hispanics outpacing non-Hispanics in new technology ownership, it can be implied that Hispanics would be much more receptive to LBS than non-Hispanics. Rodriguez (2011) noted about the new technologies in Figure 13, “Marketers have many avenues for their digital campaigns, so we inquired about receptivity to advertising integrated within these new media items. Again, Hispanics are most likely to say that marketing initiatives using these innovative digital experiences are worthwhile”.

Table 10

Ways Hispanics use mobile phone when planning to see a movie

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get times and locations</td>
<td>65%</td>
</tr>
<tr>
<td>View trailers</td>
<td>39%</td>
</tr>
<tr>
<td>Discover movies</td>
<td>35%</td>
</tr>
<tr>
<td>Get reviews</td>
<td>28%</td>
</tr>
<tr>
<td>Buy tickets</td>
<td>14%</td>
</tr>
<tr>
<td>Share opinions</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Adapted from Briabe Mobile & Moco Space (2011)
High penetration of various new technologies among Hispanics seems to relate to the strong intention of adopting LBS. Hispanics also over-index in geosocial services and pace slightly behind non-Hispanics in location-based directions and information (Smith & Zickuhr, 2011). Hispanics are early adopters of numerous technologies and have adopted various smartphone services quicker than non-Hispanics.

Empirical studies have shown early adopters as having more education, higher income and higher status occupations (Adcock, Hirschman and Goldstucker, 1977; Bell, 1963, Boone, 1970; Plummer, 1971) however the profile of an early adopter of LBS can differ. If a consumer has a higher income the financial risk associated to with purchasing the innovation is lower. LBS are typically not associated with any fees or high cost so income would not solely affect adoption rate of LBS. Studies have found that adopters are younger than non-adopters in innovations that are associated with little or no

Figure 13. New technology ownership or planned ownership (adapted from Rodriguez, 2010)
financial cost such as bank cards, automatic teller machines (ATMs) and consumer information services (Adcock, Hirschman and Goldstucker, 1977). If there are no financial obstacles in the adoption process of an innovation, the early adopters tend to be younger.

Rogers noted that early adopters or often heavy users in products that are similar to the innovation (Rogers, 1962). In this case, Hispanics are already heavy users of value-added services available on smartphones. In a survey based study on the adoption of 3G mobile multimedia services, the author discovered innovators as “mainly composed of ‘students’ (18-24) who look mainly for low cost and convenience…they are fundamentally committed to new technology and are typically the first customers for anything that is truly brand-new. They are mainly interested in games in real time, multimedia messaging services, mobile shopping and location based services” (Pagani, 2004, p.57). The same author noted early adaptors of 3G mobile multimedia services as “professionals” or persons who “look for usefulness as the almost exclusive variable in order to access and pay for the service. They are interested in remote control, portfolio and personal funds management” (Pagani, 2004, p.57).

An industry article describes early adopters as:

- More likely to purchase a new product before friends and family (Wallace, 2010).
- Typically uses the Internet to gather more information about new products and expresses his or her opinion on latest products or brands through blogs and social media (Wallace, 2010).
- Takes his or her role as an early adopter very seriously and uses technology innovations if they find them to be useful and convenient (Wallace, 2010).
• Usually early adopters are better educated and have higher income (Wallace, 2010).

• Extreme early adopters of technology innovations tend to be married males in their early 30 with young children; however women can be significant early adopters as well if the product is viewed as improving their lives (Wallace, 2010).

Based on this data, an individual who is more likely to adopt LBS can be profiled as a Hispanic female between the ages of 18-34 who is well versed in value-added smartphone services and participates in product or brand research when shopping. Current data and information on adopters of LBS is limited to what is being published by industry insights and mainly non-profit organizations. Academic surveys and focus groups can aid in discovering who is adopting LBS and at what rate. However the majority of information concerning LBS adoption will need to come from the industry sector and those brands/companies who are utilizing LBS to target consumers. Without their consumer profile, factual data on adoption of LBS will lack validity.

Also lending to adoption of LBS is data that indicates Hispanics are more receptive to advertisements, especially online advertisements. Since Hispanics have a reputation of not only clicking on online advertisements but also making a purchase due to seeing an online advertisement, the minority group will be willing to receive advertisements directly to their smartphone. Moreover, Hispanics have adopted the action of researching products, comparing prices, and locating retailers via their smartphone, thus incorporating their mobile phone into the purchasing process. These tasks and the willingness to receive mobile coupons or discounts lend to a seamless adoption of LBS. “Given the diversity and expected growth of the Hispanic population in the US from 15%
in 2009 to 30% in 2050, there is a big opportunity for manufacturers and retailers to introduce new products to Hispanics with the help of coupons” (Mora, 2010). In addition, English-dominant Hispanics have a higher interest in mobile marketing than other demographic groups, which supports the intention of Hispanics emerging as early adopters of LBS (Mobile Marketing Association, 2007).

The data provides support for the assertion of Rogers’ (1995) five attributes of diffusion of innovations theory in that the adoption of LBS by Hispanics has relative advantage, is compatible, not complex and has a trialability factor. The gap in the adoption rate between Hispanics and non-Hispanics in terms of smartphones, new media, online advertising, online shopping and digital couponing seems to predict that Hispanics are more likely to adopt LBS than non-Hispanics. The willingness and high penetration of various media foster a familiar technological environment in which Hispanics can seamlessly adopt LBS. By adopting media and smartphone services, Hispanics have gained direct experiences in using mobile services and have been exposed to different forms of advertisements; making the likelihood of adopting LBS much stronger.

Possibly the most influential factor in why Hispanics could be a key demographic to advertise to via LBS is their purchasing power and tremendous growth over the years. Hispanics’ income influences the minority group to adopt new technologies and purchase products at high rates. The immense growth of the Hispanic population in the U.S. is unmatched by any other demographic group. In the decades to come, this minority group is predicted to become the majority (Humes, Jones, & Ramirez, 2011)
and advertisers will have to turn their attention toward this growing market. “The Hispanic consumer represents the greatest potential for sustained growth in the U.S. today. At the current rate of expansion, Hispanics will drive population growth and, in turn, consumption in America for the next generation. Reaching Hispanics effectively should be at the top of every marketer’s to-do list. Hispanics actively embrace new technologies and platforms, while keeping close ties to their roots, especially language” (Dreas & Pardo, 2011).

This study also demonstrated the essential factor of age and adoption of innovations. Data implies that younger demographics have a tendency to be early adopters to new technologies (Kumar & Lim, 2008) and Hispanics, as a whole, are younger than non-Hispanics. Young cell phone owners, particularly Latinos, are more likely to send or receive a photo/video or make a charitable donation by text message. “Fully 81% of cell phone owners ages 18-29 have used their phone to send a photo or video to someone else, significant higher than the proportion of cell owners ages 30-49 (63%), 50-64 (40%) or 65+ (18%) who have done so” (Smith, 2010a p. 17). Cell phone owners 18-29 are 9% more likely to make a charitable donation via text message than 30-49 year olds, 11% more likely than 50-64 year olds and 15% more likely than 65+ (Smith, 2010a). Pew’s report also notes 52% of 18-29 year olds use their cell phone to go online several times a day and 30-49 year olds are not far behind with 43% of them going online multiple times a day (Smith, 2010a). eMarketer (2010) reports 50.7% of Hispanic mobile users are between the ages of 18 and 34. Hispanic mobile users even skew younger than Hispanic Internet users, as only 35.6% of Hispanic Internet users are 18-34 (eMarketer, 2010).
The second research question (RQ2) addresses how wireless companies are targeting Hispanic consumers and what types of LBS are offered. As to the services that the top rated wireless cell phone providers are offering, Verizon, AT&T, Sprint and T-Mobile have all recognized the importance of targeting the Hispanic consumer. As discussed in Chapter Four, each company offers in-culture services that directly target Hispanics. The companies provide coverage in heavy Hispanic populated areas and have even partnered with Spanish language television networks and mobile companies to provide content to their wireless customer. The four major providers also advertise to Hispanics via numerous outlets, spending millions of dollars in advertising.

The direct offerings and advertisements that cater to Hispanics improve the adoption rate of LBS by the group. Along with offering in-culture services, the top wireless companies also offer LBS. All companies offer a tracking service and GPS capable mobile phones. Hispanics have the potential to adopted offerings and purchase products that these wireless companies provide; therefore, the potential of adopting any LBS service these companies offer is present.

Based on the information gathered, T-Mobile is the wireless carrier that stands out as a leader in marketing to U.S. Hispanics. T-Mobile effectively markets to Hispanics by offering international data plans, pre-paid plans, and a wide selection of smartphone and other handsets. T-Mobile also integrates their products and brand into top rated novelas and associates their brand with sporting events that are popular within the Hispanic culture.
The success of mobile advertising among Hispanics can be indicated by the positive relationship between Hispanics’ attitudes and their purchase or intention to purchase products as a result of advertisements, their usage of mobile phones, and their involvement with online advertisements. Mobile marketing needs to be at the forefront of a business’ marketing plan. Many businesses have already embraced marketing via mobile devices to Hispanic consumers (Foschetti, 2008).

Some businesses have already adopted LBS, evidenced by the growing number of businesses using the Merchant Platform Foursquare offers (Foursquare, 2011). While LBS such as Foursquare are offered in other languages, businesses that are not already marketing location check-ins towards Hispanics are omitting an extremely large and well versed segment of the U.S. population. eMarketer (2010) notes Hispanics love their mobile phones, and like other U.S. consumers, Hispanic consumers are looking for deals. Since Hispanic shoppers use their mobile phone to check prices or deals, product reviews, and product inventory while in-store, “marketers who are just turning to mobile will find a market well ahead of them” (eMarketer, 2010). In order for Hispanics to be early adopters of LBS, companies and businesses need to properly execute mobile campaigns with a LBS component directed to Hispanics.
CHAPTER V

DISCUSSION

This case study attempted to analyze the adoption of LBS by U.S. Hispanics. By using the pattern-matching strategy and time-series analysis, this case study was implemented to provide answers to the research questions initially presented in Chapter 2.

Contribution of the Study

This case study contributes to the diffusion of innovation theory by taking into consideration a social group’s ethnicity in the adoption of an innovation. Previous studies have not reviewed a social group’s ethnicity as a factor in whether or not the group adopts an innovation. This case study analyzes the characteristics that are portrayed by U.S. Hispanics that would lead them to be innovators/early adopters of LBS. It is important to study how a race adopts a particular innovation, especially an innovation that acts as a medium of advertisements, because the U.S. population is comprised of such a diverse and ever changing social landscape.

In this case, U.S. Hispanics are noted as the fastest growing minority group and can quite possibly become the majority in the coming years. It is important to understand how this racial group adopts innovations, especially their openness to mobile content and advertisements since their current purchasing power is equal or greater than other countries. With ethnicity comes cultural differences and standards which can factor into an adoption of an innovation. Roger noted that the adoption of the Internet was slower among certain social groups due to the fact that most Internet sites
were in English, therefore non-English dominant persons could not fully utilize the benefits of the World Wide Web. Therefore, taking into consideration a group’s ethnicity could identify specific variables in whether or not they adopt an innovation.

This study lends more recent evaluation of adoption of a mobile centered advertising medium. Research covering audience-centered research exists reporting on adoption of mobile marketing via SMS or MMS, yet limited current research reveals a social groups adoption of LBS. Some literature notes a racial group’s usage of LBS; however no detailed literature of the usage exists.

This study is extremely important to marketers, advertisers, and telecommunication companies because it connects the over usage of cellular phones by U.S. Hispanics and the minority group’s openness to advertisements. Business and companies alike should have U.S. Hispanics on their marketing radar because they are too big and obvious to ignore. The Hispanic population is growing rapidly and so is their purchasing power. Before this study, some business and companies might have marketed to Hispanics, but only in certain states like Texas and California. However, recent U.S. Census data notes that Hispanics are populating states such as Alabama and Maryland. This means more opportunity for local businesses to market to Hispanics and this study can educate marketers in how to best reach Hispanics and provide insight into how Hispanics are using mobile devices.

This study can break stereotypes that marketers and businesses may have of Hispanics. This study notes that Hispanics can be considered early adopters of technology, own smartphones, and utilize the Internet to find products and services.
U.S. Hispanics are a vibrant, young and bi-cultural market that needs to be studied in order to discover how this group responds to advertising messages, especially location sensitive mobile content.

Limitations of the Study

There are limitations in the research. The categories of variables employed by this study related to the adoption of LBS, media ownership, advertising adoptions and consumers factors and could not cover all the influential factors when assessing the adoption rate of LBS by U.S. Hispanics. Another limitation is in regards to the businesses and companies that offer mobile marketing or LBS. The amount of businesses that do advertise is extremely vast making a review of every marketing plan impossible. Also, missing data from the wireless companies was inevitable since the release of their customers' demographics is not available to the public. In addition, LBS is still in its infancy stage here in the U.S. which creates a lag in research and data covering the topic and its effects on consumers.

Suggestions for Future Study

Future research needs to be conducted on LBS adoption and the use of LBS by the businesses in order to obtain a comprehensive understanding of adoption rate by different demographics. Due to high penetration rates of mobile phones, mobile apps, and GPS, researching who is using these tools to push and pull advertising content is valuable. LBS can significantly reach a vast audience and offer extremely personalized content and advertising messages. For many demographics groups, especially
Hispanics, personalized and in-culture content is highly effective. Data on how different demographics want to be targeted via mobile marketing and LBS needs to be conducted. Such information can garner positive reactions from consumers and they will quickly opt-in to receive the personalized content.

Extending research can include adoption of quick response codes (QR Codes) and company usage of QR codes. A QR code is a two dimensional matrix bar code that once scanned will provide more information on a mobile device. For example, a QR code can be lined to a mobile version of a brand’s website. Many top brands are already using QR codes in their advertising efforts such as Ford, Best Buy, Starbucks, Pepsi, McDonald’s, Audi and Ralph Lauren. Research on the adoption rate ad preferences of QR codes can be beneficial to many brands and advertisers (O’Dell, 2011). QR codes provide yet another outlet to push advertising messages to consumers besides the traditional cluttered medium.

Via LBS and QR codes advertisers can take advantage of the fact that a majority of the population will have their mobile phone with them at any given time, including point of impulse purchasing. If an advertiser can effectively execute a location detailed and personal advertising message to a consumer, the return on investment could be tenfold. More research on these topics is necessary and can garner positive return on investment in marketing via mobile devices.

Analysed data centering on diffusion of innovations can be extremely beneficial. By having data that infers whether or not an innovation will be adopted can be crucial in any aspect of an innovation. In this case, data on a group’s adoption of a marketing
service can be beneficial to many outlets including advertising agencies, wireless companies and app creators. By understanding the process of diffusion and the adoption stages of a particular group, steps can be taken to ensure a majority of a social system adopts an innovation and at what stage.

Conclusions

This study compares the impact of media ownership, advertising adoption, and consumer factors to the adoption of LBS by U.S. Hispanics. High ownership rates of smartphones and new technologies results in the likelihood of early adoption due to relative advantage, non-complexity, compatibility, trialability and observability. The adoption of online advertising, online shopping, couponing and mobile services also make the adoption of LBS seamless. Mobile offerings provided by wireless companies and brands towards U.S. Hispanics garners a positive relationship in what Rogers noted as relative advantage.

The information gathered in this study can be utilized by many outlets to create successful advertising campaigns for the fastest growing population in the U.S., Hispanics. Armed with information that Hispanics can be considered innovators or early adopters of new technologies, especially smartphones, mobile Internet and LBS, advertisers can create content that is compatible with smartphones. This case study predicts that U.S. Hispanics can be innovators or early adopters of LBS, therefore outlets that push advertising content can effectively target Hispanics via this medium. Since the question of adoption of LBS by Hispanics can be assumed, further research on other topics can be reviewed. For example, research on when Hispanics prefer to
receive location-base content, in what language and from what brands can be researched since it can be assumed they have already adopted LBS.
REFERENCES


