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Untapped Revenue: Smartphones, A Smart Move for the Music Industry

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**Untapped Revenue: Smartphones, A Smart Move for the Music
Industry**

Chancellor's Honors Program Thesis

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Abstract

The technology surrounding the consumption of music has changed dramatically over the past decades. The development of the digital MP3 format quickly led to its becoming the de facto standard for easy music distribution through the Internet. The integration of the mobile phone and the computer into a compact, portable, handheld device has allowed for the creation of an “intelligent design” communication device, commonly known as a smartphone. These two technologies combined have changed the way in which today’s consumers purchase and listen to music.

This study investigates the smartphone’s influence on consumption of music. Nearly half of all cellphones in the United States are smartphones, and smartphone sales are on track to surpass personal computer sales in 2012. This holds that smartphones will have a considerable impact on the distribution and consumption of music, rendering the results of this research immediately relevant.

The phenomenon studied is music providers’ continuing inability to offer what consumers want at a price they are willing to pay. This study shows that there are certain incentive packages that can entice smartphone users to buy online music services. The current mixed method study combines a qualitative study of the changes in music technology and its impact upon the music industry along with a qualitative study of young adult consumers’ music buying behavior in the United States. The results of the qualitative study are integrated in a quantitative survey instrument and distributed to 150+ smartphone users, exploring possible value propositions that will increase the likelihood of consumers paying for streaming music services through their smartphones.

The findings seem to imply that, for consumers who listen to music through their smartphones, the possibility of having a single provider offering a cross-section of unlimited internet radio (e.g. Pandora One) and unlimited access to music (e.g. Spotify Premium) is most desirous.

The managerial implications of this study are far-reaching and seem to offer music service providers consumer insights directly relevant for their current offerings.

Table of Contents

Abstract.....	3
Contents.....	4
Introduction.....	5
Research Questions.....	7
Literature Review.....	8
Advancements in Music Technology & the Response of the Music Industry	8
Smartphones: The Effect of Streaming on Music.....	13
Consumer Behavior as It Relates to Downloading Music Online.....	19
Thesis.....	23
Methodology.....	24
Results and Discussion.....	27
Conclusions.....	36
Study Limitations.....	37
Future Research Suggestions.....	38
References	39
Appendix.....	42
Appendix A: Copy of Survey.....	42
Appendix B: Analysis.....	44
Appendix C: Digital Music Services in the U.S.....	48

I. Introduction

Over the past thirty years, the music and record industry has experienced a power shift due to the constant evolution of technology and the changes in the music buying behaviors of consumers, particularly today's Generation Y consumers (McIntyre, 2011, p. 141). While the music industry continues its struggle to maintain control over its marketing efforts and distribution channels, its chief commodity—music—can now not only be easily converted into digital code (which opens it up to limitless copying and dissemination), it can also be shared almost instantaneously via the worldwide Internet (Alderman, 2001, p. 1).

This section of the study first provides a historical synopsis of technological advances in music delivery and the ensuing efforts of the music industry to meet these market developments. Examining history from the perspective of the music industry's efforts to maintain control over its distribution channels provides the empirical context for this study's market research. A historical review also allows for a better understanding of how the power shift from the music industry to the consumer has occurred as well as how consumer behavior has been affected by the resulting increase in power.

For the purpose of this study, the "music industry" refers to the companies that have control over music and the way that it is disseminated. In the 1980's, the music industry controlled the artist, their musical works, the producers, the record labels, the distribution sites, and ultimately the consumers (Owsinski, 2011, p. 6). However, during the ensuing 30 years, technological changes allowed the middlemen to be cut out and left the music industry floundering (Owsinski, 2011, p. 7-41). Where the music industry once held all the power over music publishing, distribution, and consumption, it has recently been reduced to "fighting" with consumers, artists, and independent companies over control of its end product. With the gain in popularity of Peer-to-Peer (P2P) file-sharing websites in the early 2000's, Generation Y

consumers are used to not having to pay for music (Coyle, Gould, Gupta, & Gupta, 2009, p. 1031-1037). Illegally downloading of music over the Internet by the younger generation has become widespread (Sparrow, 2006, p. 36-37). In addition, with the advent of numerous online music providers, some younger music consumers now only listen to free music (Nuttall, et al, 2011). This paper will research the buying behavior of the Generation Y consumer, along with how and why it differs from the buying behavior of the previous generation (denoted for purposes of this research as the “older” consumer).

From the earliest music cassettes to the latest MP3s, music portability and ease of use have been important factors affecting the consumers’ evaluation of new technology and music devices (Gandhi et al, 2009). The integration of those two trends into the “latest” technology encourages consumers to embrace technological innovation. The “smartphone” in particular, seems to meet most of consumers’ wants and needs. The quintessential smartphone has the ability to stream music via music streaming services or applications (apps). The definition of a smartphone according to Merriam-Webster is, “A cell phone that includes additional software functions (as e-mail or an internet browser).” (Merriam-Webster, 2012) The possibility to conveniently and instantaneously buy music on the smartphone seems to bode well for the future of this device. In Lane and Manner’s research (2011), it suggests that smartphones sales will surpass that of personal computer sales by the end of 2012. In addition, Warr and Goode (2011) project that the mobile music industry could be the next big market for music since it already accounts for almost 40% of all digital revenues.

There is limited theoretical and empirical research on the subject of subscribing to online music services via smartphones. This study will address the barriers and drivers behind consumers paying for a service subscription as well as identify some of the benefits or attributes that may be added to mobile phone services that will entice consumers. Furthermore, it will

attempt to find a tipping point at which certain value-added characteristics will persuade smartphone consumers to subscribe to paid music services. This study will begin as a descriptive research, and then it will transition into a prescriptive analysis in the conclusion section, looking at the managerial impact of this study.

Research Questions

1. How have the advances in music technology affected the music industry and the way that today's consumers listen to music?

Researching this question will involve a comparative review of music technology and the adaptations made by the music industry over the past thirty years in order to show the power shift from the music industry to the consumer and how that has impacted the way that consumers receive their music. It will also show the continuing trend of portability and ease of use as the major factors in determining the way that music consumers choose to listen to music.

2. How have smartphones affected the online music service industry?

Researching this question will help determine the music industry's current levels of involvement in changing technologies, with an emphasis on the smartphones' impact upon current online streaming as well as its influence over future music growth. The technical abilities of the smartphone will be identified, and data will be collected regarding the increase in smartphone users to show that the smartphone is quickly becoming "the" device that no one leaves home without.

3. What are the drivers and barriers to paying for online music streaming?

Researching this question will help determine what factors might influence consumer buying preferences in regard to music access on a smartphone. Generation Y consumer behavior as it relates to present-day music acquisition will be researched to show why the music industry needs to look at a different way of engaging today's consumer in paying for music. A focus group will be used to help determine the variety of incentives offered, and a survey will be used to determine which specific incentives would make a Smartphone carrying, music streaming consumer consider paying for music.

II. Literature Review

Advancements in Music Technology and Response of the Music Industry

A review of the past thirty years of technological advancements is necessary in order to comprehend how the balance of power has shifted from the music industry to the consumer. This power shift has resulted in a major change in how music is received by today's Generation Y consumer. Reviewing the history of technological advances also serves to portray how portability and convenience have continued to be the leading trends in music technology (Gandhi et al., 2009). Over this period of time, the media used for listening to music transformed from large, bulky vinyl records to infinitesimal digital code (MP3) played on equipment that fits thousands of songs onto a hard drive no bigger than the area of a fingernail (Owsinski, 2011, p. 14). With each advance in technology came a corresponding shift in power from the music industry to the consumer (Owsinski, 2011, p. 14). In addition, each generation of improved music format advanced the portability of the devices used for playback, with the most successful devices being those that were the easiest for the consumer to use (Gandhi et al., 2009).

During the late 70's and early 80's, vinyl records gave rise to the portable cassette tape (Owsinski, 2011, p.143). One of the first portable cassette players that Sony introduced in 1979 was named the Soundabout (Bottoms, 1999). Due to its size and its \$200 price tag, it was not considered a product for mass marketing. However, with the 1981 invention of Sony's Walkman II, a 25% smaller version with 50% fewer moveable parts and a considerably lower price, cassette tapes began their climb to become the most popular format for the distribution and consumption of music (Sony, 2012). For the first time ever, the Walkman allowed a music lover to take music just about anywhere with a device no larger than an adult hand (Alderman, 2001, p. 83). Because the device could easily be strapped to the waist, it was literally a "hands free" product. The Walkman was also very easy to use. By inserting a cassette tape and pressing the

“start” button, the music began. Unfortunately, tapes could still be easily damaged, and the battery life of the player was relatively short. However, consumers jumped on this technological advance when they learned that, by “using the compact, inexpensive (around \$1 for a blank tape), and easy-to-use cassettes, home tapers could record a hit song right off the radio with ease” (Owsinski, 2011, p. 14). From its inception, the audiotape cassette was a thorn in the music industry’s side, because it gave the consumer the power to copy recordings rather than to buy them (Owsinski, 2011, p. 14). Fortunately for the industry, the cassette tape provided mediocre audio quality for copied music, so sales of music tapes were brisk (Owsinski, 2011, p. 14). By 1990, the largest sale volume of distributed music was on cassette tapes—around 442 million units (Rose, 2011), indicating that portability and ease of use were integral to the success of the cassette tape player (Gandhi et al, 2009). Nevertheless, as is common with technological advances, even as the cassette tapes were hitting their heyday, the next generation of listening devices had already entered the market and had begun to generate a following. Thus, because the music industry was still pursuing revenues through the sales of cassette tapes in 1990, it was already behind the curve on the next technological advance.

In 1984, the Compact Disc (CD) was introduced into the music market (Krasilovsky and Shemel, 2007). A CD player called the Discman was developed through a cooperative venture between Sony and Phillips (Alderman, 2001, p. 62). Its new technology provided superior sound quality as well as the ability to skip between music tracks, a feature not available on cassette players. While CD players were lightweight and portable, they were also more resistant to bumps, which meant that there were fewer instances of interruptions (Sony, 2012). Increased portability due to less interruptions and the increased ease of use created by the ability to skip between music tracks were the two most important characteristics initially in moving music consumers from cassettes over to CDs.

By 1995, rewritable CDs had been introduced, allowing mixed CDs (Alderman, 2001, p. 26). This development allowed consumers to record their favorite songs from several different artists on a single CD. It was an easy way for consumers to interact directly and change their consumption experience, action which once again signaled a shift in power from the music industry to the consumer (Owsinski, 2011, p. 14). This new technology gave an additional boost in popularity to the Discman and the CD movement. Consumers were eager to switch to CDs and even to buy copies of albums they already owned on vinyl. This provided a much needed shot in the arm for the music industry since it gave the industry the ability to resell its existing catalog (Owsinski, 2011, p. 7). It was at this time that the music industry finally embraced the CD. Again, this extant research shows that the music industry was slow to move to the new format and did not capitalize early on the new CD until the next advance in software was in the process of being created. And, even when it began to capitalize on the consumer move to CDs, the music industry was blind to the future repercussions of its CD sales (Gordon, 2008). Because the CD was introduced before the Internet and personal computers became widely popular, the music industry failed to realize that it was selling perfect, unprotected digital copies of its master recordings (Gordon, 2008). As more and more consumers began to use the Internet regularly to download music, one other factor contributed to the transition from cassettes to CDs, the newfound ability to mass produce CDs inexpensively (Owsinski, 2011, p. 14). Even so, it was not until 2000 that the CD became the largest music format (Alderman, 2001, p. 152).

Even as the CD's success was growing, the software that converts audio files into an MP3 format was being developed. Limited storage was the biggest problem with the new format initially (Krasilovsky and Shemel, 2007, p. 446). Because the first players could only hold 8 to 16 songs (which was not much more than a CD), and the price for an MP3 player was high (\$200 - \$250), the MP3 format did not attract many consumers at first (Krasilovsky and Shemel, 2007,

p. 446). However, when the storage capacity was improved several years later, its popularity quickly increased. Again, the portability of the player along with the ease of use helped transition music consumers from portable CD players to MP3 players, with younger consumers embracing the change much more swiftly than older consumers.

At the same time that the technology of music hardware and software was rapidly changing, the personal computer and the Internet were becoming increasingly popular. The Web, in effect became a perfect copying and distribution machine by allowing for replication of all the CDs produced by the music industry as well as uploading perfect copies to everyone in the world (Gordon, 2008). An Internet-based software product known as Napster used that technology to make its mark upon the music world (Alderman, 2001, p. 109). Created in 1999 by Shawn Fanning, Napster was a file-sharing network that was free and allowed users to download and enjoy music without any hardware (Woelfel, 2001). This process of file sharing became known as P2P (peer-to-peer) and was considered inherently illegal because copyrighted material was being shared without any royalty payments to the copyright holders (i.e. music companies and artists). However, specifically for younger consumers, using the Internet to obtain information had always been free, and P2P was seen as just another form of file sharing (Owsinski, 2011, p.42).

The RIAA (Recording Industry Association of America), a trade organization that represented the five largest music labels, almost immediately filed a lawsuit against Napster for copyright infringement (Alderman, 2001, p.118). Though the litigation eventually resulted in the shut-down of Napster, the publicity surrounding the lawsuit actually served to increase consumers' awareness of the program, and the numbers of Napster users rose exponentially (Owsinski, 2011, p.12). Because of the high visibility of the trial, computer savvy music lovers flocked to the Napster website to see what the fuss was about (Alderman, 2001, p. 119). Once

consumers were there, they discovered how easy it was to use, and most were hooked. As the numbers of people signing on grew, so did the amount of music that was available. The numbers of registered users quickly rose to 80 million, and the numbers of files being traded back and forth reached the billions (King, 2002).

As the trial dragged on, open-source developers, known to be defenders of free speech in the digital world, were off and running with the development of alternative P2P programs in case Napster was shut down (Alderman, 2001, p. 134). Napster had grown to 26.4 million users worldwide when its numbers peaked in February 2001 (Owsinski, 2011, p.12). Napster's demise in the later part of 2001 only seemed to provide additional incentive for open-source developers to get their versions of P2P programs online (Owsinski, 2011, p. 12). Between 2003 and 2009, the number of licensed music services went from less than fifty to more than four hundred (International Federation of the Phonographic Industry, 2012).

Working quietly behind the scenes during the hoopla over Napster, Apple took the high road and joined the music market in 2001 with both the iPod Classic, an MP3 player, and iTunes, a program used to convert a customer's already owned music to a format that fit the iPod (Apple, Inc., 2012). Once Apple jumped into the fray, there was a "rush to digital" (Kahney, 2006). Apple further developed the iTunes technology in order to offer music at a reasonable price (\$.99) to owners of Apple products (Owsinski, 2011, p. 15). With the debut of the first iTunes Store in April of 2003, legal downloads became widely available (Gordon, 2008, p.64). In the first week, iTunes downloads reached the one million mark (Apple, Inc., 2012). Within the first year, the site sold over 25 million songs, and by the beginning of 2006, iTunes had sold its billionth song (Apple, Inc., 2012). Apple re-engineered its iPod several times over the years, adding additional file storage each time and gradually making the player smaller. Sales have continued to grow exponentially, and by 2010, iTunes had sold its 10 billionth song (Apple, Inc.,

2012). Apple products exemplify the consumer shift to smartphone use and illustrate clearly the ultimate tie-in between mobile devices and music streaming.

Smartphones: The Effect of Streaming on Music

With the advent of 3G and 4G data networks allowing for better Internet connectivity, the size, portability, and convenient features of the smartphone made this device a best seller almost immediately (Apple, Inc., 2012). One example of a smartphone is the iPhone, a multimedia, Internet-enabled mobile phone that marries a cell phone with a portable media player. Not only a phone, the iPhone has numerous features that, in the past, were found only on a personal digital assistant (PDA), a computer, a camera, or a GPS system (Gordon, 2008, p.44). The iPhone features a touch-screen, virtual keyboard, brilliant visual images, along with local Wi-Fi connectivity (Gordon, 2008, p. 44). As further refinements occur, it will no doubt become an even more essential piece of equipment for everyone. The ever-growing popularity of using a smartphone to stream music on a daily basis presents an obvious potential revenue source for the music industry.

In order to understand how a smartphone could provide an increased revenue source for the music industry, it is important to research data available regarding the use of the smartphone.

As suggested by CNET Review (2012), the five best smartphones offered today are:

1. Motorola Droid Razr Maxx (Verizon Wireless)
2. Samsung Galaxy Nexus (Verizon Wireless)
3. Apple iPhone 4S (Sprint, AT&T, Verizon)
4. Samsung Galaxy S II Skyrocket (AT&T)
5. HTC One S (AT&T)

According to a study in early 2010 by ComScore, a company that measures trends in e-commerce (online buying behavior), over 45.4 million people in the US owned smartphones out of 234 million total subscribers (Flosi, 2010). Smartphone sales increased during 2010 by 72.1% from the prior year, whereas sales for all mobile phones only increased by 32% (Pettey, 2011).

In the second quarter of 2011, sales of smartphones were up 74% compared to the year before (Petty, 2011). A survey of mobile users in the United States by Nielsen indicated that smartphone ownership had reached 44% of all U.S. mobile subscribers by the third quarter of 2011, with the vast majority of users under the age of 44 owning one (Nielsen Company, 2011). In the 18-24 age-range, smartphone ownership was reported to be at 53% (Nielsen Company, 2011). By March of 2012, Venturebeat.com reported that the US had reached a point where half of all US mobile consumers owned smartphones according to the most recent Nielsen figures (Hardawar, 2012). Additionally, the research group found that more than two-thirds of new phone buyers in the first three months of 2012 opted for smartphones over feature phones (Hardawar, 2012). If the smartphone growth continues at the rate it has this year, Nielsen forecasts that smartphones could account for 70% of all U.S. mobile devices by 2013 (Hardawar, 2012). The data concerning the continuing growth of this product provides corroboration that the smartphone is quickly becoming a household staple.

The convergence of services across devices was another pivotal event for digital music. In 2009, mobile applications brought streaming services like Spotify, Pandora, Slacker and others to devices like the iPhone which afforded a premium service that also offered portability (Apple, Inc., 2012). Just as young consumers had jumped onto Napster and then to iTunes because of the ease of use of the product, those same consumers also jumped at the prospect of being able to listen to music on easily portable devices such as smartphones without having to download each song.

Music streaming is a technique for transferring data so that it can be processed as a steady and continuous stream. Streaming technologies are becoming increasingly important with the growth of the Internet because most users do not have fast enough access to download large multimedia files quickly. When music is streamed to a smartphone, the smartphone can start

displaying the data, playing the music, before the entire file has been transmitted. There are now about 500 legitimate digital music services in 78 countries (International Federation of the Phonographic Industry, 2012). The Pro-music information website, accepted by the IFPI as having the most comprehensive up-to-date directory of the world's legitimate music, lists the US as having 24 legitimate music streaming services available (International Federation of the Phonographic Industry, 2012). Some of the more popular ones include: Pandora, Slacker, Spotify, Rhapsody, Rdio, and Muve Music. (For the complete list, see Appendix C.) For the purposes of this study, the first three have been researched.

“Radio” streaming services is a popular form of online music streaming. Pandora Media and Slacker Radio are two of the best streaming music services that are offered in the United States, according to Jeffery Wilson (2012), a writer for PC Magazine. These services are both online radio services with “recommendation” software (Wilson, 2012). This software takes the music that is “liked” by the user and then recommends similar music based off of the attributes of that song (Pandora Media, Inc., 2012). The difference between online radio streamers and Spotify is how the music is provided. Slacker and Pandora radios are required by music royalty contracts to not allow users to choose the song that is played (Wilson, 2012). This inability is unlike other online streaming services such as Spotify which allows the user to choose the desired song (Wilson, 2012). Either way, the music industry takes a cut every time a song is played. Advertisements help to underwrite the actual cost of the service.

In 2005, Pandora.com was introduced into the World Wide Web, quickly taking on many free subscribers (Pandora Media, Inc., 2011). Pandora's service allows users to create personalized radio stations by inputting their favorite artists or songs. The stations become more and more personalized as users react positively or negatively to each suggested song. Pandora utilizes the Music Genome Project—a metadata system created by the Pandora team which

describes the musical attributes associated with every song in its library—in order to make more precise guesses about what a listener may or may not like (Gordon, 2008, p. 39). In this way, Pandora suggests music based on similar subtle attributes rather than broad categorical likeness, as in being from the same genre, for instance. Pandora also utilizes another metadata system—All Music Guide—in order to augment the user’s experience when listening to a particular piece of music. All Music Guide offers biographical information about the artist, what album a song is from, other albums by the same artist, other songs which resemble this song, etc. (Gordon, 2008, p. 40). With this venue, the songs are not owned or downloaded.

By 2008, Pandora had become “one of the most consistently downloaded apps in the Apple store” (Pandora Media, Inc., 2011). USA Today writer Jefferson Graham interviewed Pandora’s CEO, Tim Westergren (2009), who stated, “Our world has completely changed because of mobile. It’s just gone berserk.” As a result of the introduction of the iPhone, by 2011 Pandora’s free online music radio became the number two most downloaded app (Pandora Media, Inc., 2011). Pandora ranks as one of the top five most popular apps across all Smartphone platforms (Pandora Media, Inc., 2011). Over 100 million people subscribe to Pandora’s free online music streaming service (Pandora Media, Inc., 2011).

Slacker Radio is another example of a successful online music streaming company. Founded in 2004 and then launching its online website in 2007, Slacker became one of the main competitors with Pandora (Gideon, 2007). Slacker stood apart from Pandora in terms of their business model. After only a few months of online music services, Slacker Radio introduced its own handheld device that utilized the same services as the website via Wi-Fi, USB, or satellite (Gideon, 2007). Another difference between Pandora and Slacker is that Slacker allows the user to suggest artists that can be added to a certain channel (Graham, 2009). In August of 2011, Slacker’s listener numbers were estimated to be between 25-30 million, while subscription

membership was estimated to be between 350,000-400,000 (Fletcher, 2011). With over 130 million consumers utilizing free streaming services from Pandora and Slacker alone, the total numbers are a statistic that the music industry would do well to target as a source of future revenue.

Another online music service provider is Spotify.com. Founded in 2006, Spotify quickly grew throughout its home country of Sweden and then the rest of Europe (Spotify, 2012). Spotify became the number one online music streaming service throughout Europe in 2011 (Spotify, 2012). In the middle of 2011, Spotify launched its services in the United States (Spotify, 2011). During the past year, Spotify has risen to become the second most popular online music services provider in America (Spotify, 2012).

Spotify is an online music streaming service that allows users who subscribe to upload their music libraries to share with all Spotify subscribers (Spotify, 2011). It also provides uninterrupted and buffer-free streaming music services (Spotify, 2012), unlike that of Pandora. Spotify allows the user to upload a personal music collection to the cloud for anytime, anywhere access. Users can build cloud-based playlists with up to 10,000 tracks per grouping, including any songs that are part of Spotify's 15 million-track catalog. Once the tunes are uploaded, music links can be posted to Facebook and Twitter. The attributes just mentioned are part of Spotify Free (Spotify, 2012). There is another paid service through Spotify called Spotify Unlimited which allows the user to have all of what is included in the free service with the exception of no advertisements for \$4.99 a month (Spotify, 2011).

One of the defining factors that sets Spotify apart from its competitors is its ability to create playlists and download them to a smartphone (Spotify, 2012). This service is provided through a program called Spotify Premium for \$9.99 per month (Spotify, 2011). The premium service also allows the smartphone to play music when it is not connected the Internet which

makes it great for traveling (Spotify, 2011). The ability to take your music anywhere without internet access as well as to hear it as many times as desired demonstrates how the service offers not only music access but several non-economic aspects that increase ease of use and portability. Understanding the history of Pandora, Slacker, and Spotify music streaming services in relation to how they have been adapted for use by mobile devices such as smartphones helps to clarify the market potential of streaming services. The large pool of free consumers presently enjoying online music streaming suggests that there is a large percentage of Americans that might be encouraged to pay for streaming services if additional incentives can be offered.

According to Rajagopal in his book, “Consumer Behavior – Global Shifts and Local Effects,” the bundling pricing strategy is an important strategy that is used by many companies in a competitive environment. This strategy is defined as an inclusion of extra margin in the price to cover a variety of different price functions and services. The price bundling strategy is “ideally suited for technologically sophisticated products” and would “help in increasing the sales due to the ‘total package’ concept of selling because consumers feel they are getting their money’s worth” (Rajagopal, 2010, pp.144-145). The concept of bundling services will be an attribute considered in the research.

One strategic way to entice the mass market to purchase digital streaming services is by offering “bundling” partnerships between ISPs and telecom companies. These companies have the commercial footprint and billing structure to enable music services to reach a broad audience. Stephen Bryan of Warner Music Group states:

“ISPs and mobile carriers are aware they need to offer entertainment content to stay relevant. As they see the economic benefits of offering such content they become more willing to tackle piracy and help develop a consumer experience

that is a lot better than piracy.” (International Federation of the Phonographic Industry, 2012)

In the US, Muve Music is an example of a new music subscription service that is being bundled into a wireless rate plan (International Federation of the Phonographic Industry, 2012). For \$65 a month, Cricket users can have unlimited song downloads through Muve Music, ringtones and ringback tones, and unlimited national talk, text, and web access (International Federation of the Phonographic Industry, 2012). This bundle plan is offered on an Android phone with no contract (International Federation of the Phonographic Industry, 2012). While this is a good example of bundling, the success of this partnership will be a blip on the screen because the majority of all US smartphone users are not using this network. The top two US mobile service providers, Verizon and AT& T, have 108.7 million and 103.2 million subscriptions respectively, while Cricket Wireless lags behind in eighth place with around 6 million subscriptions (Nielsen Company, 2011).

Consumer Behavior as It Relates to Downloading Music Online

When delving into the cultural influence on consumer behavior, it is necessary to define “culture.” Rajagopal (2010) explains that three basic concepts can be used to describe culture:

“First, culture is a total pattern of behavior that is consistent and compatible in its components. It is not a collection of random behaviors, but behaviors that are related and integrated. Second, it is a learned behavior and not biologically transmitted. It depends on environment, not heredity. It can be called the man-made part of our environment. Finally, the culture may be manifested in the behavior that is shared by a group of people, or a society.” (p. 236)

The music consumption process is a self-defining cultural activity that separates the generations, particularly the switch from valued products to virtual alternatives, as with downloading music

(McIntyre, 2011, p. 142). For purposes of this study, Generation Y consumers have been designated as a culture, separate from any generation of older consumers. This separation is appropriate because Generation Y consumers have grown up with the Internet an integral part of their environment (McIntyre, 2011, p. 141), their preferred way of obtaining music is individual, digital file downloading (McIntyre, 2011, p. 141), and they no longer have a need to physically own their music (McIntyre, 2011, p. 145), traits that differentiate them from any prior generation and clearly define them as a separate culture.

Much has been written about the current Generation Y and the ethics behind music downloading decisions. The consumer research piece of this study is concentrated on Generation Y smartphone consumers, because this is the upcoming population that will set consumer trends for the next twenty years. The Generation Y population is broadly defined to include all people born between 1980 and 2000 (McIntyre, 2011, p. 141). For the purposes of this research, the targeted population was further defined as college students between the ages of 18-22, since this group is easily available for study and tends to be more comfortable with the technology of streaming music through their smartphones (Sparrow, 2006, p. 5). This subset of Generation Y was born between 1990 and 1994 and has grown up with the Internet available for any type of information acquisition. By the time this population was old enough to be interested in music acquisition, CD burners were appearing on almost every computer, and the price of a blank CD had fallen below the \$1 apiece level (Owsinski, 2011, p. 14).

This group of consumers was used to MTV, not the radio, providing them with the next big hit, and copying movies from TV or the Internet was an every day occurrence (Owsinski, 2011, p. 9). These consumers did their research for middle school and beyond on a computer through the Internet, and they never had to pay for information (McIntyre, 2011, p. 141). It is not a far stretch to see how this group of consumers would believe that the music available by

computer was there for the taking as well (Warr and Goode, 2011, p. 126). Research studies about this group of consumers tend to substantiate this thinking. A study about illegal music downloading by Lysonski and Durvasula (2008, p. 25) found that, of the 364 university students surveyed, the “majority were not convinced that their behavior was harmful to the music industry or that record companies use profits from major artists to fund new talent.” The same study also found that the students would probably continue and not change their minds about their illegal consuming habits (Lysonski and Durvasula, 2008, p. 25). A survey commissioned by American Demographics suggested that consumers do not equate the morality of music piracy with other kinds of piracy (Fetto, 2000, pp. 8-9). Other research found that when young consumers were asked about 24 kinds of questionable Internet behaviors, downloading copyright-protected music and movies was considered least wrong (Freestone and Mitchell, 2004, pp. 121-128).

In examining the behavior of college students in regard to how they access their music, it is clear that there has been a shift in thinking between this group of consumers and older consumers about what constitutes “stealing.” Age has been found to be negatively correlated with the tendency to pirate software (Gopal and Sanders, 1997, p. 47). Though older people tend to exhibit more idealistic ethics (Rawwas and Singhapakdi, 1998, p. 26-38), and stronger business ethics (Ruegger and King, 1992, p. 179-186) than younger people, their perspective has been influenced by a completely different technological environment during their formative years (Kohlberg, 1969, p. 347-380). Growing up in the age of the Internet with immediate access to a limitless amount of information has blurred the lines about the legality or illegality of accessing information found there (Warr & Goode, 2011, p. 126). As early as 2004, it was recognized that teens and young adults were confused about what was legal and what was not, in the realm of downloading music (Atkinson, 2004, p. 75). Since this age consumer has grown up sharing all sorts of information by computer with friends, downloading music from P2P sites

may represent more of a way of life than a deliberate intent to acquire music illegally. Plus, Generation Y consumers are typically more comfortable using the Internet and are more likely to access their music through streaming than are older consumers (McIntyre, 2011, p. 141).

Another difference between older and younger music consumers is their view of “access” versus “ownership” of music (McIntyre, 2011, p. 141-142). Traditionally, music was shared through a physical product that was purchased, the foundation on which the music industry was built (Owsinski, 2011, p. 7). However, with the advent of digital music along with the avenues to download it, younger consumers quickly moved to from product ownership to product access (Dilmeri et al., 2011, p.133). Older consumers continue to frequent music stores, looking for music to buy, while younger consumers are familiar with sophisticated mobile phones and are much more receptive to watching television or streaming music through free sites to their smartphones (Sparrow, 2006, p. 5). Generation Y consumers have embraced the world of free music streaming, where there is no ownership of music, only access (McIntyre, 2011, p. 141-151).

Lifestyles of today’s Generation Y consumers make it clear that new technologies are quickly assimilated and advanced. In a study by Charles McIntyre (2011), “the modern nature of downloading and freely exchanging music files was seen to give a world of choice and easy, consumer-controlled interactions within a closed network of friends as part of their lifestyle enactment” (p.146). Generation Y consumers are driven toward file-sharing by a need to be seen as a participant in a “modern” lifestyle, to be fashionable and up-to-date (McIntyre, 2011, p. 147). This lifestyle is also seen in a newer technology, that of online music streaming. Considering that online music streaming has become more prevalent since 2008 (Pandora Media, Inc., 2011), this information suggests that, instead of trying to find ways to change the behavior of the streaming consumer who is comfortable getting music for free, the music industry would

do well to concentrate on increasing revenue through the development of factors that would increase the likelihood of getting this population to subscribe to music streaming services for their smartphones.

III. Thesis

Through research on advancements in music technology up through the smartphone, the response of the music industry to technology and the corresponding shift in power to the consumer, and a study of consumer behavior in regard to music consumption, I will research which factors motivate smartphone consumers to acquire music through their mobile phone plans. Specifically, my research will determine which economic and non-economic attributes of online music streaming services are attractive enough to be attractive to a smartphone user. My hypothesis is that having a careful balance of diverse incentives available to the non-paying, music-streaming, smartphone user will positively affect the consumer's intent to buy such services, and therefore generate additional revenue for the music industry.

IV. Methodology

There is a limited amount of theoretical development and empirical research available regarding the subject of this study, determining what attributes need to be offered in order to encourage a willingness to pay for music streaming services. Therefore, after reviewing the published material pertaining to the thesis, the researcher constructed a list of questions to be used in a qualitative/exploratory interview. Once the list was completed, the researcher then pulled together an interview group consisting of four individuals with an average age of 21 who were enrolled at the local university (University of Tennessee, Knoxville). This group of individuals was chosen as a convenience judgment sample of people known to the researcher who utilize online music streaming services via their individual smartphones. The researcher's qualitative interviews with the four individuals were semi-structured, in that the same specific questions were asked of each. However, in order to acquire as much relevant data as possible, the researcher encouraged the interviewee's to expand upon their responses, allowing them to lead the conversation and provide as much input as they desired instead of the interviewer controlling the entire interview. During the individual interview, the researcher took extensive notes which were reviewed after the interviews were completed. At that point, a focus group of the same individuals was conducted to consolidate and clarify the qualitative data collected from the individual interviews. The researcher took extensive field notes and transcripts and compiled them again.

With the guidance of the thesis advisor, the list of questions was updated to accommodate the qualitative research already found. Afterwards, a separate group of five individuals with an average age of 22, in conjunction with the same general college student population, were chosen as to be interviewees as before to gather more qualitative data. Again, copious field notes were taken throughout this whole process and later consolidated. After the interviews were completed

and the notes were reviewed, another focus group including the same five individuals was coordinated by the researcher to gather additional qualitative data.

Following both sets of interviews and focus groups, a basic round of coding was conducted to match common phrases and words from the nine individual interviews and the two focus groups. These common phrases and words were then sorted into areas of what motivates people to subscribe to online music streaming and what specific preferences the individuals were looking for in their music services. After the basic round of coding and in cooperation with the thesis advisor, the target survey population was identified to be 18 – 22 years, made up primarily of students in college. This sample was a convenient sample because it was easily accessed by the researcher. However, it was also used because this age users are more frequently known to stream music through their smartphones and are more technologically advanced in regard to music.

Once the target group was identified, the researcher discussed and constructed with the thesis advisor the draft survey that would utilize the qualitative data that had already been collected in order to capture the quantitative data in the most constructive format. The researcher and advisor then used Dillman's *Tailored Design Method* (2009) to organize the survey in the correct manner to achieve the least amount of bias as well as greatest rate of return. After the initial test survey was designed, pretesting and reliability testing were conducted. The survey was given to a group of 20 individuals for standard reliability testing and to ascertain input on what words or sentences might be confusing or incorrectly written. After the initial test surveys were completed, an open-ended discussion, led by the researcher, was held to get rid of any discrepancies included in the survey draft. Once these surveys were collected, the researcher then discussed the data collected with the thesis advisor to finalize the survey.

Once the questions for the survey were finalized, the researcher then used an online survey service, SurveyMonkey.com, to distribute the survey via the Internet to 130 individuals within the designated target sample. (For a full list of questions included in the survey, see Appendix A.) An additional 20 hard-copy surveys were distributed and received within the confines of the study. Out of the 150 disseminated, 101 were collected (~67.3% response rate). The data was then condensed into Microsoft Excel and then exported to SPSS (Statistical Package for Social Sciences). SPSS provided the platform for the descriptive data collected via the survey. A series of tests were run to quantify the descriptive data in order to find correlations that would affect music acquisition preferences. The correlations found are discussed in the next section of the thesis. These correlations were then used to construct prescriptive suggestions.

V. Results and Discussion

After the last of the surveys were collected, the data was imported into SPSS, a program used to find statistical data. This program was used to correlate any significant findings from the data. Descriptive analysis was used to determine any correlations between the data received from the questions and the attributes that might influence consumers to subscribe to online music streaming services via their smartphones.

Question 1:

Question 1 was an exploratory question used to gain more information about which cell phone service provider the consumer was using in regards to the consumer's smartphone. The data revealed that 63.4% and 27.7% of the participants were using the Verizon and AT&T, respectively. Out of the 101 participants, 91.1% were using Verizon or AT&T as their phone service provider. This data shows that out of this sample group, the majority of the population uses Verizon or AT&T. The next largest percentage was with Sprint at 5%. The last two providers, Cricket and T-Mobile, have a minimal percentage in comparison to the other providers and were determined to be statistically insignificant. Since the majority of the population is with Verizon or AT&T, the music industry will get the biggest bang for their buck by partnering with these two providers.

Question 2:

This question was also a discovery question. It inquired as to the amount of data there was available for use without overage fees on the survey participants' data plan. The responses were similar to question 1 in regards to a large majority having one particular amount. The results show that 62 members of the sample group (61.4%) have an unlimited data plan with their cell phone carrier. The next two levels with the largest percentage of the sample population are 15 respondents who have 2 gigabyte (GB) data plans (14%), and 15 respondents who have 3

– 5 GB data plans (14%). When the unlimited level, the 2 GB level, and the 3 – 5 GB data levels are combined, they account for 91.2% of the sample population. There were only two respondents who had a 6-10 GB data plan (2%), while seven respondents had a 1GB or less data package (6.9%). This data indicates that 38.7 % of the sample has some kind of limited data plan. This number is important because those respondents will be less inclined to stream music on their smartphones due to the possible associated cost of overage fees if they exceed their data limit. Considering that neither Verizon nor AT&T offer an unlimited data plan any more, and they are by far the largest phone service providers, this information suggests that either the music industry or the online streaming service providers should work together with the cell phone companies to offer a reasonably priced unlimited data plan in combination with a subscription to online music streaming. This would be beneficial to both groups by offering more incentives which could increase sales and revenues.

Question 3:

This question was asked in conjunction with question 2 to examine if the participants planned on changing the level of data in their data plan to unlimited. If the participant already had an unlimited data plan, “Not Applicable” was the desired response. Considering that the majority of the sample population answered that their data plans were unlimited, the answers for this question were mostly “Not Applicable” at 70.3%. The next largest percentage was 24.8% with the answer of “No.” Only 5.0% answered “Yes” to question 3.

Question 4:

Question 4 was used to inquire about how much music the participant listens to on their smartphone. The majority of the sample group listens to music < 1 hour a day at 45.5% of the sample population. The next two largest groups were both the same amount equaling 23.8%. These levels were “none” and “1 - 3” hours of music listening. This data illustrates that the

majority of the population of the sample group (69.3%) listen to music for less than one hour up to three hours a day on their smartphones, while a total of 76.2% of all the respondents typically listen to music on their smartphones at some point every day. The results of this question showing the significant number of consumers who listen to music at some point every day via a smartphone are portrayed on the bar graph below. (Figure 1) Since a quarter of the population of the group is not listening to music, this result is a significant factor.

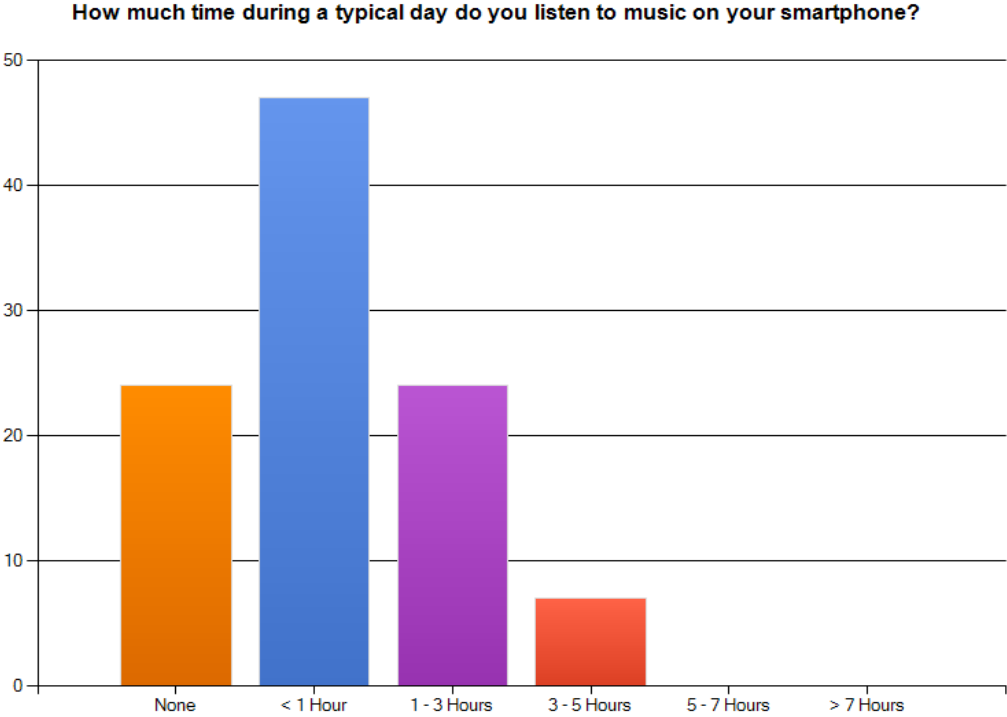


Figure 1 – Question 4 Distribution

Question 5:

This question was used to discover which forms or formats were used by the survey respondents to listen to music via their smartphone. This question was a multiple response based question. Again, a majority of 66.3% of the people who responded listened to free online music streaming services. The next biggest contributor was legally purchased music at 48.5%. Only 38.6% of the sample group listens to free online music streaming services as well as their own legally acquired music. Another 20.8% listen to illegally acquired music, and 22.8% do not listen to music on their smartphone. Only 4.0% of the sample population uses a paid subscription service. The graph below shows distribution (Figure 2). The difference between the paid subscription users and the free streaming users is significant. This huge discrepancy indicates that there is a massive market potential for increased revenue that continues to be missed by the music industry.

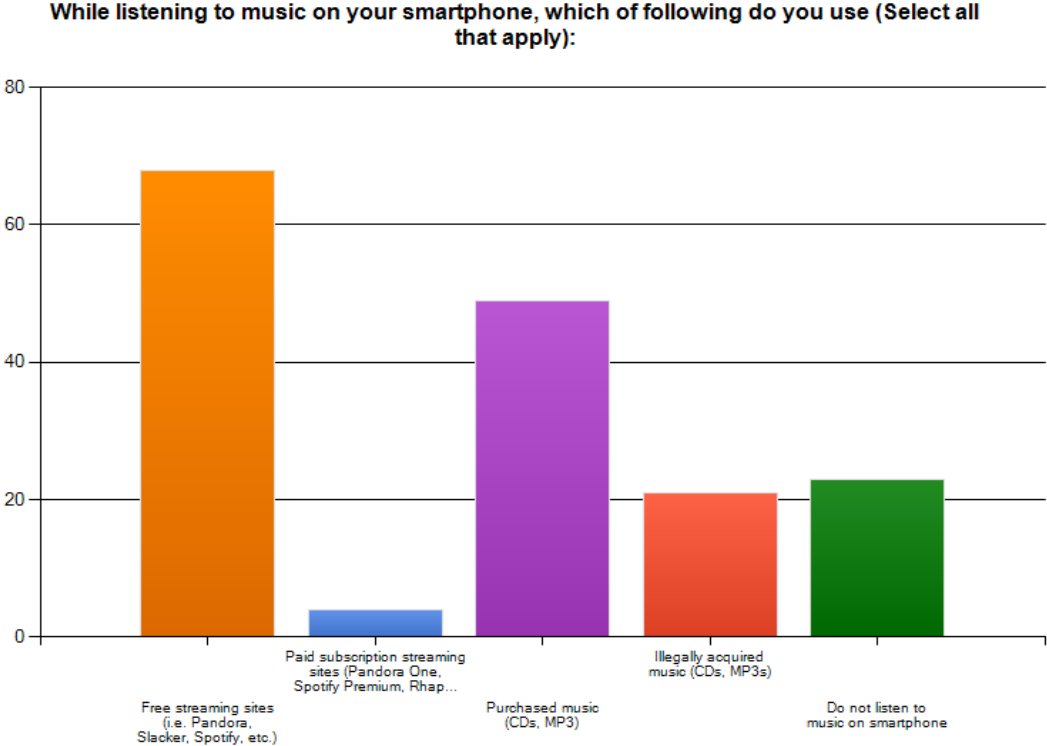
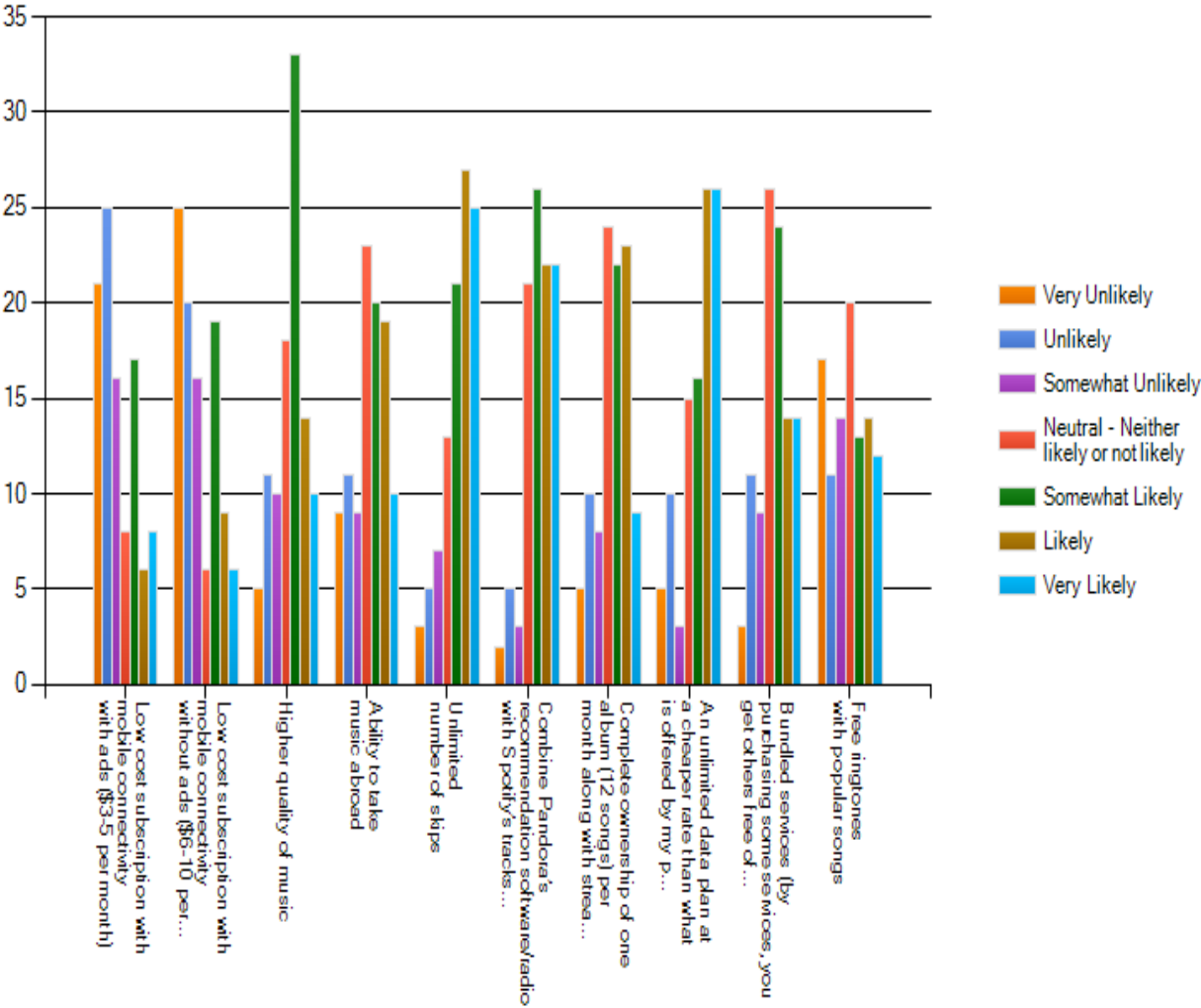


Figure 2 – Question 5 Distribution

Question 6:

Scenario: You have a smartphone with an unlimited plan, unlimited battery life, and unlimited and uninterrupted access to the internet (except outside the U.S.).

Considering the scenario above, how likely are you to subscribe to an online streaming music provider with service to your smart phone if the following attributes were applied:



Question 6 contained the determining information behind the theory of music acquisition increasing due to the specific value-added benefits. (The data analysis can be viewed in Appendix B.) The question asked the participant to consider a scenario in which there was a

smart phone with an unlimited data plan, unlimited battery life as well as unlimited and uninterrupted access to the internet (except outside the U.S.). The answers to this question reconfirmed peoples’ current disinterest with not purchasing music. Compared to a normal distribution, part one and two were the only two factors that were positively skewed, .529 and .406 respectively (See Appendix B). This result illustrates that is there is a positive correlation to paying for any type of subscription (the majority of responses were clustered to the left of the mean) (Yockey, 2008). Of the survey group, 69% responded that they were neutral, somewhat unlikely, unlikely, or very unlikely to subscribe to music streaming services when considering the added price with ads. For part two, 66.0% of the population replied that they were somewhere in the neutral to very unlikely range. This part considered the respondent’s interest in paying \$6 to \$10 for an online music subscription without ads. These positively correlated aspects illustrate that the sample group reflects the general population’s overall negative relationship with paying for music or music services. It also reveals that advertisements are not significant in terms of subscribing to online music streaming services.

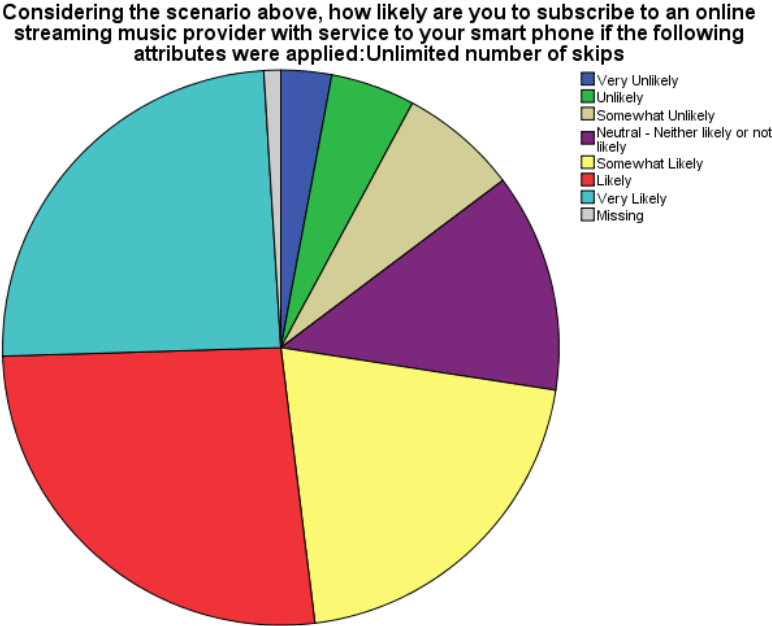


Figure 4 – Question 6 Part 5 Distribution

The factors that were negatively correlated with purchasing or using music services were parts 3, 5, 6, 7 and 8. The strongest contributor was part 5 which examined the number of skips, or the ability to move to the next song on a music streaming web service. Of the sample population that responded, 72.2% stated that an unlimited number of skips would somewhat likely, likely or very likely affect their decision to subscribe to an online music streaming service via their smartphones, as seen in Figure 4. At $-.860$ degrees separation from the normal distribution, the data shows that the unlimited skips, again, positively impacts (negatively correlated) the likelihood of a consumer subscribing to an online music service from a smartphone. The next biggest factors in influencing music consumers were parts 6 and 8. Part 6's incentive package included combining Pandora Radio's recommendation software with Spotify's ability to up- and download music and organize it into a playlist. The data resulted in a negative skew factor, or a negative correlation for affecting a consumer's decision in subscribing to streaming services. The value of the distribution disproportion is $-.680$. These results indicate another positive relationship in terms of music acquisition and part 6. Part 3 also had a negative correlation of $-.403$. All parts of question 6 were measured with a normal standard error of skewness of $.240$ (since there were 101 participants, then $.240$).

The following three aspects had the highest positive relationship and most statistical significance in regards to the original question:

1. Unlimited skips
2. Cheaper data plan
3. Combining Pandora's recommendation software with Spotify's tracks and playlists

After identifying the these aspects, the researcher then used Pearson's correlation coefficient model to determine if the three attributes could be combined and still have a positive relationship. After the analysis was completed, the best combination came out to $r(99) = .777, p$

< .05. That result indicates that two of the parts complement each other and are highly correlated. This correlation is combining unlimited skips with the combination of Pandora and Spotify. The next most significant combination was unlimited number of skips with a cheaper data plan, $r(99) = .658, p < .05$. Again, these two are presented statistically correlated when combined. The next largest combination involved Pandora and Spotify services combining and a cheaper data plan offered by mobile phone service provider, $r(99) = .579, p < .05$. Significance was measured in both two and one tailed approaches, and in all instances the same value was present, sig. = .000.

Part 8 was another distribution that had a positive correlation for buying a subscription to music services. Its distribution of part 8 was skewed by the value of $-.784$. That result indicates that this attribute is significant towards a consumer's buying decision for streaming services, considering it is over $-.5$ (Yockey, 2008).

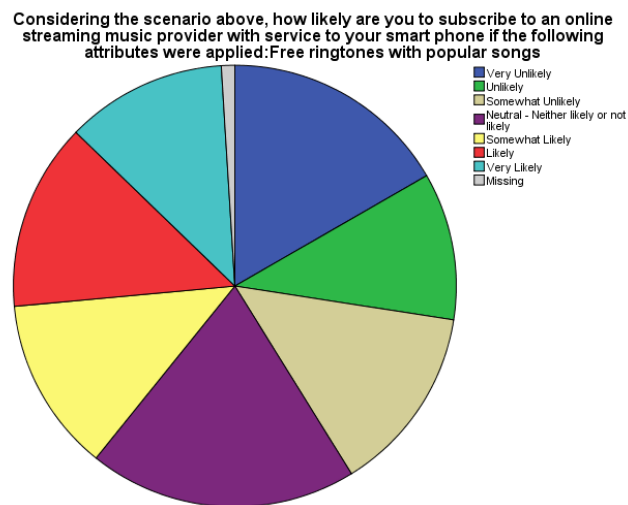


Figure 5 – Question 6 Part 10 “Normal Distribution”

Parts 4, 9, and 10 were analyzed in same manner as the rest of the parts in question 6. The results show that there was not a significant correlation between these attributes and the process of acquiring music streaming services via a smartphone. The data collected demonstrates how part 10 almost has no effect either way. It's correlation of $.004$ indicates that the degrees of

separation is a minute amount off from a normal distribution as seen in Figure 1.5. Thus the data is inconclusive as to whether or not someone would consider a paid subscription due to the offer of popular ringtones. Parts 4 and 9 are similar in the fact that they are not significant enough of a factor to influence consumers one way or another. (See Appendix ?? for analysis and results)

Question 7

This question was an open-ended question allowing for the respondent to add any knowledge pertaining to the subject of online music streaming and smartphone usage. The participant in the study was not required to answer the question. Out of the 101 participants, 49 offered their advice and opinion on the subject matter. The general consensus was against paying for streaming services.

Question 8 - 10:

Questions 8 - 10 were oriented towards demographic information. Question 8 was in regards to the gender the participant, 43.6% males and 56.4% females. Number 9 questioned the respondents' age, and 10 asked whether they were in a university or college. The majority of the population surveyed was between the ages of 18 – 22 at 61.4%, next largest group was the age range of 28 – 34 at 21.8%. 9 of the 101 participants were over the age of 50 (7.9%). Considering the dominant age range in the study, it was reinforced with 68.3% of the people who responded being in college. This left only 31.7% of the sample group not being in college or a university.

VI. Conclusion

In conclusion, the results from the analysis support my thesis in stating that there are several attributes that could influence a person's likelihood to subscribe to online music streaming services with their smartphone. Specifically, the analysis spoke of three parts that could potentially be the ideal combination to "win" consumers' confidence in their purchase of said services. These three attributes are unlimited number of skips, a possible combination of Pandora's recommendation software and Spotify's playlists and number of songs, and a cheaper unlimited data plan with a cell phone service provider. Each of these aspects positively affects the ease of use and portability factors involved with music consumption. These strong negative correlations had a positive relationship in regards to the attributes contributing to someone's purchase behavior have lasting managerial and academic implications.

Managerially, this study's research suggests that the music industry should work towards establishing a strong connection with cell phone companies as well as online music streaming services. By establishing a connection between these different industries the three of them could be able to collaborate together to get the best value (i.e. greatest revenue) by offering the ideal combination of attributes for the four prime contenders: the music industry, the online music streaming service providers, the cell phone companies as well as the customer. Though the majority of the people sampled in this study described that they only listen to music on their smartphones for less than hour a day, more and more people are switching to smartphones. With that statement, investing in these services and establishing the connections between the three main providers will only help the participating industries.

All in all, a more affordable unlimited data plan, offering unlimited skips, and the possibility of having a single provider offer a cross-section of unlimited internet radio (e.g.

Pandora One) and unlimited access to music (e.g. Spotify Premium) present the three highest predictors of consumer willingness to pay for music.

Study Limitations:

There were a few limiting factors that contributed to the research presented here. One factor is that a convenient sample group was utilized for this study. In order to acquire the largest amount of responses possible, the researcher used a sample population that was readily available to him. Since the majority of the survey participants were between the ages of 18 – 22, the sample population could be limited in representing the other age ranges of the general population. If the sample size had been more diverse, more statistical tests could have been run to determine correlation. Another factor that limits this research is in regard to the speed with which music technology normally develops and advances. If this continues to be the case, the smartphone could be rendered obsolete shortly and the premise of this study would be nullified. This research was limited to the current technology. The reason the researcher used examples of attributes that are already available is because no one can be sure what might be developed technology-wise in the future. This would be a recognized limitation, not a weakness in the available research. The depth of the survey could be a limitation as well. In order to collect the best qualitative and quantitative data, the researcher decided to limit the survey to ten questions. Since only ten questions were asked, there were limited opportunities for comparative statistical research.

Future Research Suggestions:

Throughout the study several other research opportunities arose that could further the research here. One such opportunity would be to target another age or generation with the survey. Even though the research presented here had many responses from outside Generation Y, a more consolidated approach could potentially glean more information about consumer's willingness to pay for online music streaming services bought via a smartphone. Another opportunity for expanding this research is surveying more influential attributes. For this study, it looked at about ten attributes that could help or hurt the consumer's decision to buy a subscription to an online music streaming provider. With more options to survey, more data could be pulled and analyzed to find possibly better correlations than were made in this research. Interviewing music industry officials and online music streaming service providers, as well as cell phone companies in regards to the current study could generate additional opportunities to enhance the present research. Researching the impact of a consumer's data plan upon the amount of music they listen to on their smartphones could provide more insight into the music industry's concern. The purpose of this study was to find what could incentivize a person to buy streaming music services on their smartphone. Considering one of the highest correlative facts that was discovered was in regards to a cheaper data plan, researching more within this subject field could open up another outlet for the music industry to utilize.

VII. References

Works Cited

- Alderman, J. (2001). *Sonic Boom: Napster, MP3, and the New Pioneers of Music*. New York: Perseus Books Group.
- Apple, Inc. (2012, April 20). *Press Room*. Retrieved April 20, 2012, from Apple.com: <http://www.apple.com/pr/>
- Atkinson, C. (2004). *Grammys take hard-line against online music piracy*. Advert Age.
- Bottoms, G. (1999, August). *Hero of Headphones*. Retrieved April 17, 2012, from GadflyOnline: <http://gadflyonline.com/archive/august99/archive-walkman.html>
- CNET Review. (2012, April 26). *Best Smartphones*. Retrieved April 26, 2012, from CNET Review: <http://reviews.cnet.com/best-smartphones/>
- Coyle, J. R., Gould, S. J., Gupta, P., & Gupta, R. (2009). "To buy or to pirate": The matrix of music consumers' acquisition-mode decision-making. *Journal of Business Research*, 1031-1037.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2008). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken: John Wiley & Sons, Inc.
- Dilmeri, A., King, T., & Dennis, C. (2011). Pirates of the web: The curse of illegal downloading. *Journal of Retailing and Consumer Services*, 132-140.
- Fetto, J. (2000). *Penny for your thoughts*. American Demographics.
- Fletcher, A. (2011, August 1). *Assessing 10 Music-Streaming Services*. Retrieved April 24, 2012, from Paste Magazine: <http://www.pastemagazine.com/blogs/lists/2011/08/10-best-music-streaming-services.html>
- Flosi, S. (2010, April 5). *ComScore Reports February 2010 U.S. Mobile Subscriber Market Share*. Retrieved April 21, 2012, from ComScore.com: http://www.comscore.com/Press_Events/Press_Releases/2010/4/comScore_Reports_February_2010_U.S._Mobile_Subscriber_Market_Share
- Freestone, O., & Mitchell, F. (2004). Generation Y attitudes towards e-ethics and internet-related misbehaviours. *Journal of Business Ethics*, 121-128.
- Gandhi, S., Mulligan, M., Husson, T., & Hood, E. (2009, August 17). *The Future Of Music On Cell Phones*. Retrieved April 19, 2012, from Forrester.com: <http://www.forrester.com/The+Future+Of+Music+On+Cell+Phones/fulltext/-/E-RES54409>
- Gideon, T. (2007, March 13). *'Slacker' Music Service Combines Player, Recommendations*. Retrieved April 10, 2012, from PCMAG.com: <http://www.pcmag.com/article2/0,2817,2103576,00.asp>
- Gogal, R. D., & Sanders, G. L. (1997). Preventive and deterrent controls for software piracy. *Journal of Management Information Systems*, 29-47.
- Gordon, S. (2008). *The Future of the Music Business* (2nd ed.). New York: Hal Leonard Books.
- Graham, J. (2009, October 7). *Slacker Radio App Lets Users Create Stations on BlackBerrys*. Retrieved April 11, 2012, from USA Today: http://www.usatoday.com/tech/products/2009-10-06-slacker-radio-app-blackberry_N.htm
- Hardawar, D. (2012, March 29). *The magic moment: Smartphones now half of all U.S. mobiles*. Retrieved April 19, 2012, from Venturebeat.com: <http://venturebeat.com/2012/03/29/the-magic-moment-smartphones-now-half-of-all-u-s-mobiles/>
- International Federation of the Phonographic Industry. (2010). *IFPI Digital Music Report 2010*. London: International Federation of the Phonographic Industry.

- International Federation of the Phonographic Industry. (2012). *Digital Music Report*. London: International Federation of the Phonographic Industry. Retrieved April 7, 2012, from <http://www.ifpi.org/content/library/DMR2012.pdf>
- Kahney, L. (2006, October 17). *Straight Dope on the iPod's Birth*. Retrieved April 19, 2012, from Wired Magazine: <http://www.wired.com/gadgets/mac/commentary/cultofmac/2006/10/71956?currentPage=all>
- King, B. (2002, May 5). *The Day the Napster Died*. Retrieved April 7, 2012, from Wired Magazine: <http://www.wired.com/gadgets/portablemusic/news/2002/05/52540?currentPage=all>
- Kohlberg, L. (1969). *Stage and sequence: the cognitive development approach to socialization*. Chicago: Rand-McNally.
- Krasilovsky, W., & Shemel, S. (2007). *This Business of Music: The Definitive Guide to the Music Industry* (10th ed.). New York: Billboard Books.
- Lane, W., & Manner, C. (2011). The Impact of Personality Traits on Smartphone Ownership and Use. *International Journal of Business and Social Science*, 2(17), 22-28. Retrieved April 17, 2012, from <http://www.ijbssnet.com/>
- Lysonski, S., & Durvasula, S. (2008, January 1). Digital Piracy of MP3s: Consumer and Ethical Predispositions. *Journal of Consumer Marketing*, 25(3), 1-35. doi:10.1108/07363760810870662
- McIntyre, C. (2011). News from somewhere: The poetics of Baby Boomer and Generation Y music consumers in tracking a retail revolution. *Journal of Retailing and Consumer Services*, 141-151.
- Merriam-Webster. (2012). *Smartphone*. Retrieved from merriam-webster.com: <http://www.merriam-webster.com/dictionary/smartphone>
- Nielsen Company. (2011). *The Mobile Media Report: State of the Media Q3 2011*. New York: Nielsen Company. Retrieved April 18, 2012, from www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2011-Reports/state-of-mobile-Q3-2011.pdf
- Nuttall, P., Arnold, S., Carless, L., Crockford, L., Finnamore, K., Frazier, R., & Hill, A. (2011). Understanding music consumption through a tribal lens. *Journal of Retailing and Consumer Services*, 152-159.
- Ogden, J. R., Ogden, D. T., & Long, K. (2011). Music marketing: A history and landscape. *Journal of Retailing and Consumer Services*, 120-125.
- Owsinski, B. (2011). *Music 3.0: A Survival Guide for Making Music in the Internet Age* (2nd ed.). Milwaukee: Hal Leonard Books.
- Pandora Media, Inc. (2011). *Pandora Press*. Retrieved April 10, 2012, from Pandora.com: <http://blog.pandora.com/press/pandora-company-overview.html>
- Pandora Media, Inc. (2012). *Music Genome Project*. Retrieved April 10, 2012, from Pandora.com.
- Pettey, C. (2011, August 11). *Gartner Says Sales of Mobile Devices in Second Quarter of 2011 Grew 16.5 Percent Year-on-Year; Smartphone Sales Grew 74 Percent*. Retrieved April 20, 2012, from Gartner Newsroom: <http://www.gartner.com/it/page.jsp?id=1764714>
- Rajagopal. (2010). *Consumer Behavior: Global Shifts and Local Effects*. New York: Nova Science Publisher.
- Rawwas, M., & Singhapakdi, A. (1998). Do consumers ethical beliefs vary with age? *Journal of Mark Theory Practice*, 26-38.

- Reed, B. (2010, June 18). *A Brief History of Smartphones*. Retrieved April 10, 2012, from PCWorld.com:
http://www.pcworld.com/article/199243/a_brief_history_of_smartphones.html
- Rose, K. (2011, October 3). *Cassette tapes see new life after MP3s*. Retrieved April 17, 2012, from USA Today: <http://www.usatoday.com/life/music/news/story/2011-10-02/mp3s-cassette-tapes-vinyl-albums/50639144/1>
- Ruegger, D., & King, E. W. (1992). A study of effect of age and gender upon student business ethics. *Journal of Business Ethics*, 179-186.
- Sony. (2012). *History of Products*. Retrieved April 18, 2012, from Sony.net:
<http://www.sony.net/SonyInfo/technology/history/index.html>
- Sparrow, A. (2006). *Music Distribution and The Internet*. Burlington: Gower Publishing Company.
- Spotify. (2011, July 14). *Hello America. Spotify Here*. Retrieved April 26, 2012, from Spotify.com: <http://www.spotify.com/uk/blog/archives/2011/07/14/hello-america-spotify-here/>
- Spotify. (2012, April 20). *Having Problems With Spotify*. Retrieved April 26, 2012, from Spotify.com: <http://www.spotify.com/uk/help/faq/#share-music>
- Warr, R., & Goode, M. M. (2011). Is the music industry stuck between rock and a hard place? The role of the Internet and three possible scenarios. *Journal of Retailing and Consumer Services*, 126-131.
- Wilson, J. L. (2012, April 10). *The Best Streaming Music Service*. Retrieved April 10, 2012, from PCMag.com: <http://www.pcmag.com/article2/0,2817,2380776,00.asp>
- Woelfel, A. (2001). *Journal of Undergraduate Research*. Retrieved April 7, 2012, from University of Wisconsin-La Crosse:
<http://murphylibrary.uwlax.edu/digital/jur/2001/woelfel.pdf>
- Yockey, R. D. (2008). *SPSS Demystified: A Step-by-Step Guide to Successful Data Analysis*. Upper Saddle River: Pearson Education, Inc.

Appendix A - Survey

Dear survey participant,

Thank you for your time today in completing this short survey. We are researching the use of smartphones for online music streaming.

Your participation in this important research is completely confidential. No personal information will be published or used for any other purposes than that of researching consumers' use of smartphones.

If you have any questions regarding this research project, please contact the primary researcher at the University of Tennessee:

Mr. Hunter Ripley
(865) 804-3353
hripley@utk.edu.

The only requirement for the completion of this survey is that you are an owner of a smartphone with Internet access through a cellular network such as a 3G or 4G connection, besides any other Internet access, for instance through a WiFi connection.

The estimated time to complete the survey is about 5 minutes.

Please answer the following questions about your preferences when using your Smart phone and music-related online streaming services:

Who is your cell/mobile phone service provider?

- Verizon
 AT&T
 Sprint
 T-Mobile
 US Cellular
 Cricket
 Other Please name_____

What is the maximum amount that you may download to your smart phone on your current data plan without being charged overage fees?

- 0-1 GB 2 GB 3-5 GB 6-10 GB Unlimited data

If you do not have an unlimited data plan, do you plan to update to unlimited data within the next year?

- Yes
 No
 Not Applicable

How much time during a typical day do you listen to music on your smart phone?

- None < 1 hour 1-3 hours 3-5 hours 5-7 hours > 7 hours

While listening to music on your smartphone, which of following do you use (Select all that apply):

- Free streaming sites (i.e. Pandora, Slacker, Spotify, etc.)
 Paid subscription streaming sites (Pandora One, Spotify Premium, Rhapsody, etc.)
 Purchased music (CDs, MP3s)
 Illegally acquired music (CDs, MP3s)
 Do not listen to music on smartphone

Use the following scenario when considering question 6:

You have a smart phone with an unlimited data plan, unlimited battery life as well as unlimited and uninterrupted access to the internet (EXCEPT OUTSIDE THE U.S.).

Considering the scenario above, how likely are you to subscribe to an online streaming music provider with service to your smartphone if the following attributes were applied: (Rate the following attributes with the number corresponding to how likely you are subscribe 1 = Very Unlikely and 7 = Very Likely)

1. Very Unlikely 2. Unlikely 3. Somewhat Likely 4. Neutral 5. Somewhat likely 6. Likely 7. Very Likely

- Low cost subscription with mobile connectivity with ads (\$3-5 per month)..... ____
- Low cost subscription with mobile connectivity without ads (\$6-10 per month)..... ____
- Higher quality of music ____
- Ability to take music abroad..... ____
- Unlimited number of skips..... ____
- Combine Pandora’s recommendation software/radio with Spotify’s tracks and playlist ability ____
- Complete ownership of one album (12 songs) per month along with streaming services..... ____
- An unlimited data plan at a cheaper rate than what is offered by my present provider..... ____
- Bundled services (by purchasing some services, you get others free of charge)..... ____
- Free ringtones with popular songs..... ____
- Other _____

If you already pay for an online music service via your smart phone, please list below which service you use and why you chose that service. If you do not pay for an online music service please list below your reasoning for not subscribing, and if you have any additional thoughts or information that you would like to share about what might be the way to increase the numbers of consumers who pay for their streaming service

Please answer the following demographic information questions:

What is your gender?

- Male
- Female

What is your age in years?

- < 13
- 13-17
- 18-22
- 23-27
- 28-34
- 35-49
- >50

Are you currently a college-level student?

- Yes Where? Name of school _____
- No

Thank You For Taking My Survey!!!!!!!!!!!!!!!!!!!!!!