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# **DID the DIGITAL MUSIC PLATFORMS KILLED RADIO's MUSIC BOX FUNCTION? A STUDY on MUSIC PLATFORM PREFERENCES of STUDENTS from the FACULTY of COMMUNICATION**

Mihalis KUYUCU\*

## ***Abstract***

*Changes experienced with the Internet technologies had a deep impact in various domains. Several sectors including the communication industry went through a transformation process due to effects of the internet. Music industry is also one of these sectors. File sharing activities have increased in parallel with the increased internet speed. Opportunity to share large-size files easily have facilitated sharing music products. Consequently, music products, i.e., songs, have been exchanged intensively on the internet. Economic structure of the music industry has changed as a result of music sharing on the internet. Physical sale of albums has been replaced with digital music platforms selling digital music products. People started consuming music over the digital music platforms. Internet has become the most important consumption platform for music. The aim of this paper is to reveal effects of the radio and digital music platforms on the patterns of music consumption. A survey has been conducted among 585 students from the faculty of communication in Istanbul and results showed that most students like to listen to music in digital music platforms. The radio that turned into a music box in the recent years has been gradually substituted by digital music platforms. Although most young individuals prefer digital music platforms, there is still a group that sees radio as primary source for listening to the music. This group stated that they still prefer to listen to radio instead of digital music platforms because of insufficient internet credits and high internet costs. Considering the fact that the internet speed will be increased and the cost will be*

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*reduced further, it is likely that this group will also listen to digital music platforms instead of the radio. Therefore, there is a high risk for the radio that turned into a music box to lose this mission gradually.*

**Keywords:** *Music, Radio, Digital Music, Music Box, iTunes, Spotify,*

## **1. Emergence of Digital Music and Digital Piracy**

The discussions started among the consumers and in the music industry about the effect of digital file sharing on music sales for the first time in 1999 when Napster, a service for sharing files over the internet, has been introduced. In this period, representatives of the music industry blamed these services for the decline in the album sales and service users suggested that there is no economic loss (Norbert, 2005: 40).

The music industry decided to battle against illegal file sharing through the courts and eventually took action against infringement of copyrights, and Napster has been closed as a result of such efforts. Likewise, Motion Picture Association of America (MPAA) launched its own legal campaign as it feared that movies may be as popular as music in the file sharing services. In this environment, High Court of the United States rendered a judgement on illegal nature of causing infringement of copyrights through file sharing software (Norbert, 2005: 41).

Digital period has been challenging for many actors in the music industry (particularly for the actors in the record industry). Release of the compressed digital music files increased the popularity of digital music and also caused unauthorized and non-compensated use of the digital music contents.

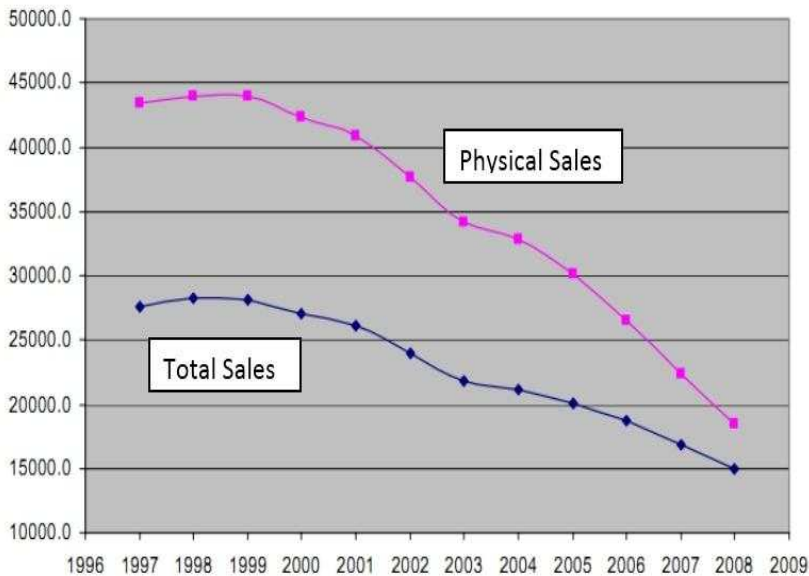
At present, infringement of copyrights involves surprisingly regular behaviours of many persons. However, there has been a

long-lasting uncertainty about which behaviours can be considered as express infringement (Arewa, 2010: 440).

There are two different opinions about the effect of digital piracy on the music industry. One opinion suggests that a downloadable album cannot be sold while the other opinion argues that consumers must get the “taste” before determining the value of music. The main argument of this opinion is that downloads over the internet help consumers discover new talents. New artists can take advantage of this situation. New artists can also increase the sales of the albums and concert tickets. In a sense, digital copies can be a cheap way of advertising (Waelbroeck, 2013: 5).

Despite diverse opinions, it is difficult to make a clear estimation as to how digital piracy affects the legal music consumption. The most important point is not knowing whether illegal download of an album or a song offered in that album can be converted into legal music consumption or not. The consumers can download an album and decide whether it is worth buying or not. At this point, personal valuation gains importance. Therefore, in theory, illegal music consumption can increase legal music consumption (Aguar and Martens, 2013: 3-4).

Today, individuals have bigger music libraries than ever with the introduction of the file sharing technology. People started carrying these big music collections easily particularly after discovery of MP3 technology. Digital music provided consumers with the opportunity to listen high number of alternative music works. File sharing technology improved the level of welfare by substituting the music sales. However, sales suffered a sharp decline when illegal downloads started (Zentner, 2009: 2). Figure 1 shows the progress of total sales and physical sales in the global music industry.



**Figure 1. International Music Proceeds (Zentner, 2009: 2)**

## **2. Structure of Digital Music Market**

Companies dealing with the digital music distribution operate based on different business models. All companies doing business in digital music market are under substantial level of pressure due to competition regardless of the business model they use. Companies compete to get share from the sales to the consumers paying for the music as end users in this market are not very keen to pay for the music. The reason of this situation can be explained as follows (Rayna, 2006: 11-12):

***The presence of multiple substitutes for the goods in the market:*** All companies tend to have the same catalogue subject to some temporary exceptions. So far, none of the music stores can produce their own music. They lease music from music companies. Considering the fact that they sign agreements with all companies instead of only one company, companies supply substitutable goods as online stores have similar catalogues.



**Strong replaceability with other methods of distribution:**

Companies in online music market do not compete with only each other, but they also compete with companies offering the music. However, different methods of distribution can also be used in this competition environment.

**Low short-term profits:** Online music market is one of the downstream markets of an intensive upstream market like record industry. Therefore, upstream market is strong enough to force companies to pay high price for the music. This competition environment force companies to keep prices low. High output price versus low input price lead to low but sustainable profits in this sector.

Conventionally, a song that is the product of digital music industry can be classified in two groups: downloads and streaming. Download consists of direct mp3 downloads and P2P-peer to peer downloads, and streaming consists of interactive and non-interactive streaming.

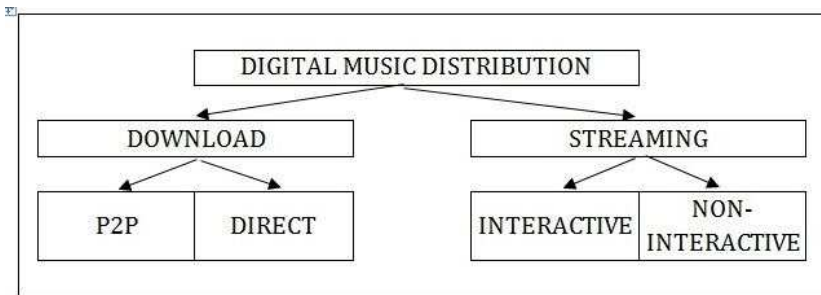


Figure 2. Digital Music Distribution (Ericsson, 2011: 6)

- **Download:** In conventional terms, download is the process of copying a file and transferring it from the main source to a peripheral source. (i.e., downloading from iTunes Store to iTunes) However, download culture changed with the development of P2P and it evolved into

the process of downloading from one source to another source in the network.

- **Streaming:** It is a technology that is used for listening to the music files in the buffer memory and it allows listening through data transfer without downloading from the main source to another source directly (Ericsson, 2011: 6-10)

Studies on the distribution channels and business models used in digital music industry suggest that 5 business models are used extensively in the recent period (Gelutzka, 2009: 39):

- ↻ **Pay Per Song Model:** This model allows consumers to buy songs in digital file format. Record companies receive a percentage of the price paid by customers.
- ↻ **Subscription Model:** This model provides consumers with unlimited access to the contents provided against monthly subscription fee. In this model, record companies receive percentage from the collected subscription fees in proportion with the popularity of the songs released by them.
- ↻ **Publishing Model:** Free music is offered to consumers and income is generated based on advertising model. In the free version of paid digital music services, consumers are required to listen to advertisements for a certain period of time on compulsory basis.
- ↻ **Free Music Model:** Free music model allows music to be distributed freely to non-commercial users and income is generated through other sources such as concerts, commercially licensed music, etc.

➤ **From Artist to Consumer Model:** This distribution model uses music that is composed, distributed and marketed without receiving any contribution from the record company.

Table 1. Comparison of Digital Music Business Models (Gelutzka, 2009: 40).

| Business Model     | Product   | Location   | Price   | Promotion                      |
|--------------------|---|--|---|--------------------------------|
| Conventional model | Always physical, Mostly in CD, it is not possible to buy songs separately   | Music stores, internet stores, internet site of record company, mail order, etc.   | Paid for collecting songs recorded in compact disc and other audio records. | In conventional and new media. |
| Pay per song model | Digital file, songs can be purchased separately, listeners are owners of the music, songs may be protected against DRM. | Online distribution (download). Songs are sold in digital music store.             | Paid per song.  | In conventional and new media. |
| Subscription model | Access to music catalogue, Listeners lease the music, Songs are protected against DRM.                                  | Online distribution (Streaming). Access to music is through digital music services | Payment is made as monthly subscription fee.                                | In conventional and new media. |

| <b>Business Model</b>                             | <b>Product Line</b>   | <b>Location</b>  | <b>Price</b>   | <b>Promotion</b>  |
|---|---|--|--|---|
| Publishing model                                  | Access to music catalogue or songs can be downloaded individually. Songs are protected against DMR. | Online distribution (streaming or download). Access to music is through own site of musician, social networks or P2P | Free service but consumer must watch or listen advertisements.   | In conventional and new media.  |
| "Free music" model                                | Digital file. No DRM protection.  | Online distribution Access to music is through own site of musician, social networks or P2P                          | Free for non-commercial users. Music is usually released under Creative Commons license.   | Mostly used in the new media in conjunction with guerrilla marketing methods. |
| Self-distribution (from artist to customer) model | Access to music through digital or other methods. Usually, there is no DRM.                         | Online distribution Access to music is through own site of musician, social networks or digital music stores, etc.   | Depends on artist's decision. It can be paid by using any method. Artist may allow consumers to decide on the price ("pay as you wish"). | In conventional and new media. Usually, guerrilla marketing methods are used. |

Li et al. (2016) conducted a study on business models and optimal pricing in digital music market. The model they developed within the scope of the study showed that advertising revenue ratio is an important factor determining the optimal pricing model. According to findings they obtained as a result of

the study, a music producer should prefer subscription model when advertising revenue is low. Combination model is ideal when advertising revenue is at moderate level and ownership model is optimal when advertising revenue is relatively high, and the music must be offered free of charge when the advertising revenue is at the highest level.

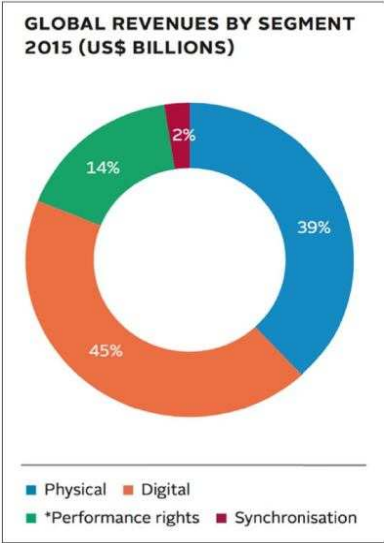
### **3. Current Situation of Digital Music Market**

In the early period of music distribution, it was necessary to own a record player and record of the music in order to listen to music. Subsequently, records and record players have been replaced with cassettes and cassette players as a result of technological developments. Then, CDs and CD player have been introduced. At present, MP3 technology allows people to listen to music at any location using smart phones. Naturally, this situation affected album sales. Today, general tendency is towards listening to the music for free and only 1 out of 5 persons pays for digital music.

Digital music sales exceeded physical album sales for the first time in 2011. In 2011, digital music sales exceeded physical album sales for the first time with a share of 50.3 percent. Digital sales increased by 8.4 percent and physical album sales declined by 5 percent compared to the previous year (Fersoy, 2012).

According to a report of the International Music Industry Federation, music sector achieved a volume of 15 billion USD in 2015 which indicated a growth of 3.2 percent compared to the previous year, and the volume of digital music sales was 45 percent versus the decline in physical music sales that declined to 39 percent. 6.7 billion USD has been generated from digital music sales in music industry sales of 15 billion USD; and sales of the physical music records particularly including CDs corresponded to 5.8 billion USD.

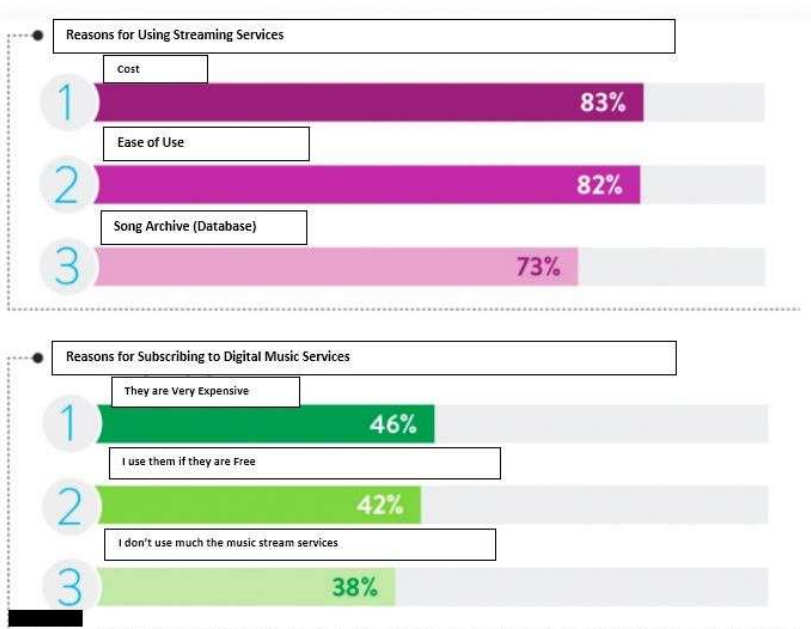
Copyrights is one of the most important problems of digital music industry. However, digital music platforms broadcasting music acted as saviour of the sector in the course of this process. In 2013, online music revenues in United Kingdom were, for the first time, above the revenues of radios. Revenues generated through online music services exceeded revenues of the radios for the first time in 2013 and they increased from 39.1 million Pound to 51.7 million Pound with the effect of the copyright agreements made with Google Play and Xbox.



**Figure 2. Global Music Sales (2015) (Tang and Lyons, 2016)**

In Nielsen’s report named “2015 U.S. Music Year-End”, a summary is provided about the yearly performance of digital music industry in the USA. In 2015, Apple Music, Beats, Pandora, YouTube Music, Tidal, Spotify and many other small and large-size actors tried to get a share in the digital music market of the USA. This situation increased competition in digital music market as well as digital music consumption. Nielsen’s report shows that digital music consumption was almost doubled in 2015. However, this was not the case for the revenues. Nielsen’s data revealed

that Americans who listened to 164.5 billion songs in 2014 versus 317 billion songs in 2015. Album sales declined by 6 percent despite this growth. Although this is a negative situation, it is consoling for the sector in terms of reduction in the rate of decline compared to the decline of 11% in 2014. On the other hand, Nielsen disclosed that record sales increased by 30 percent and it corresponded 9 percent of the physical album sales. However, conventional album sales continued to decline (Demirel, 2016d).



**Figure 3. Reasons of Using and Not Using Streaming Services in the USA (Demirel, 2016d).**

## 4. The Most Popular Digital Music Platforms and Business Models in Turkey

### 4.1. Spotify



Figure 5. Corporate Logo of Spotify

Spotify is a “streaming” music service using P2P technology. The service offers more than 8 million contents allowing users to select songs they would like to listen, freely. Data is transferred both in P2P (peer to peer) format and from a server network. The service launched in October 2008 is offered in two versions. A free version with advertisement contents and Premium version with monthly subscription fee. Premium version streams music at higher speeds and offers options such as synchronization of play lists for offline use. Both versions of the service allow unlimited streaming and most users are on the free version. The same music catalogue is offered to both premium and free version users; however premium users have privileges such as access to special pre-releases (Kreitz and Niemelæ, 2010: 1).

Spotify is also used as a social platform and users follow people to access their music lists. People allow their followers to access their music lists and they can also prevent access of others to certain songs. Personal play lists can be shared with others in Spotify. Spotify provides chance to filter search results by various categories and dates; thus, it facilitates access to the desired songs. Music selected in Shazam can be listened for free on



Spotify thanks to Shazam-Spotify integration. Spotify charges advertisement fees from standard members making agreements with music owners and generates revenues from premium members through subscription fees which are then used for payment of the copyrights.

Spotify allows users to communicate with each other and use music as social objects. Spotify users can select Facebook friends to follow and get their music streams. However, the following mechanism is asymmetrical. In other words, when a user follows someone, it is not required for the person followed to follow that user. Users can share music and play lists in other social networks. In addition, private listening without sharing is possible when hidden mode is used.

Spotify is the most popular and used digital music platform that had more than 75 million active users and 20 million subscribers from 58 countries in 2015. There has been a substantial decline in “illegal digital mp3 downloads” thanks to legal online music offered by Spotify that pays royalty more than 3 billion USD to copyright owners in the music sector.

In September 2016, Spotify has been launched in Japan that is the biggest music market of the world after USA with annual volume of 3 billion USD. It is a known fact that Japanese people focus on physical music CD purchases but digital music is still a rising market in Japan. Spotify is the first application in Japan offering free (with advertisement) music streaming services. Spotify opened an office in Tokyo in the first quarter of 2015 and carried out negotiations with the music products and the platform launched its services in Japan after Hong Kong, Singapore, Malaysia, Philippines and Indonesia. The next stop of Spotify in Asia will be India (Demirel, 2016b).

Acquisition of SoundCloud for “underground” and relatively niche music genres is one of the future plans of Spotify.

SoundCloud contains podcasts in addition to musical contents. Spotify is planning to access to a wider user population upon acquisition of SoundCloud that attracts attention with this feature. Spotify and SoundCloud relationship is expected to take up a clear direction in the future as no potential value has been determined so far (Caliskan, 2016a).

#### **4.2. Apple Music (iTunes)**



Figure 6. Corporate Logo of Apple Music

iTunes showing presence since 2001 can be downloaded into any personal computer. In 2003, Apple launched iTunes stores programs in order to allow users to buy music and download music online legally. Apple became the biggest retail seller of the world with a catalogue of more than 12 million songs and the other media. Users can create a personal virtual library with iTunes. iTunes is both one of the pioneers and one of the most important actors of the digital music sector with features such as easy organization of music libraries as well as the Genius, playlist, recommendations on new songs based on music history of users and play mixes (Hagen, 2016).

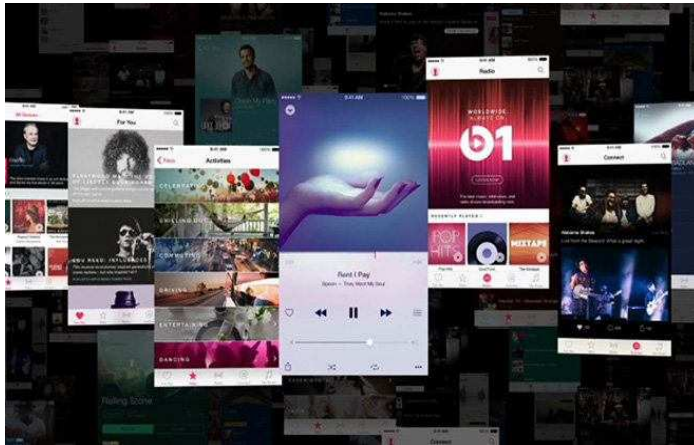


Figure 7. Interface of Apple Music

In December 2016, Apple announced that free music service Apple Music reached more than 20 million subscribers. Competing with digital music applications such as Spotify and Deezer, Apple Music announced that it has 17 million subscribers by September 2016. Apple Music has been target of critics because of offering only paid services but Apple does not see this approach and privileged contents as a problem. Apple disclosed that they gained 3 million subscribers in 3 months and also stated that 60 percent of its users are new users and they did not download a song in the last 12-month period. Apple Music that was launched in June 2015 has also started growing. Apple Music competes with Spotify, Deezer and Amazon Unlimited Music and it has been brought on the agenda because of negotiations carried out for the acquisition of Tidal (Demirel, 2016a).

Different from the other music services, Apple Music is making plans to host series and movie contents that are produced for Apple. There are rumours suggesting that Apple Music will become a bigger content service as a result of realizing its plans on offering video contents such as series and videos in near future. For this reason, Apple Music chose to become a competitor

of both Spotify and Netflix. This situation will mean that the number of Apple Music users will increase (Eyidilli, 2017).

### 4.3. Fizy



Figure 8. Corporate Logo of Fizy

Upon starting test streams in December 2008, Fizy signed agreements with MUYAP and Sony-BMG and started working with companies such as Mini, Coca-Cola and Turkcell. Fizy achieved more than 40 million page views in June 2009 and the number of its subscribers increased to 100 thousand. The number of Fizy subscribers increased to 250 thousand by January 2010 and it achieved 150 million views and 500 thousand subscribers in August 2010 (Kutsal, 2010).

Upon its acquisition by Turkcell in 2011, Fizy took the first step in October 2014 towards transition into a Turkcell service (Kara, 2014a). In February 2015, Fizy has been integrated into Turkcell Music application and it continued with streaming with both Android and IOS applications under Turkcell and Fizy trademarks. However, in May 2016, Turkcell Music integration has been terminated and it started offering services under Fizy trademark. The new fizy that has been developed as a mobile application by Turkcell is different from its competitors as it offers both video and music contents. It is different from its global

competitors such as Fizy, Apple Music with Turkish music and video music services offered. This application offers advertisement-free paid services to its subscribers like a typical music application and it features play lists from radios or based on the mood. In addition, the new fizy features offline listening, music download and streaming music with video playing in the background (Kara, 2016a).

#### 4.4. Deezer



Figure 9. Corporate Logo of Deezer

Deezer refunded the fees collected from Premium account owners following the access ban imposed with the court decision of July 2013, and in September 2013, license agreements have been signed with the Professional Association for Group of Musical Work Owners (MSG) and Musical Work Owners Society of Turkey (MESAM) and reinitiated its operations and started accepting Premium members in Turkey (Taylan, 2013 a).

Having its headquarters in France, Deezer is actively used in 180 countries around the world. Deezer that hosted more than 30 million songs, and it had more than 12 million active users and 5 million premium members as of November 2013. Deezer that launched its Mac application around the same date followed a different path than its competitors and created difference with its discovery feature by renewing its algorithm (Taylan, 2013b).

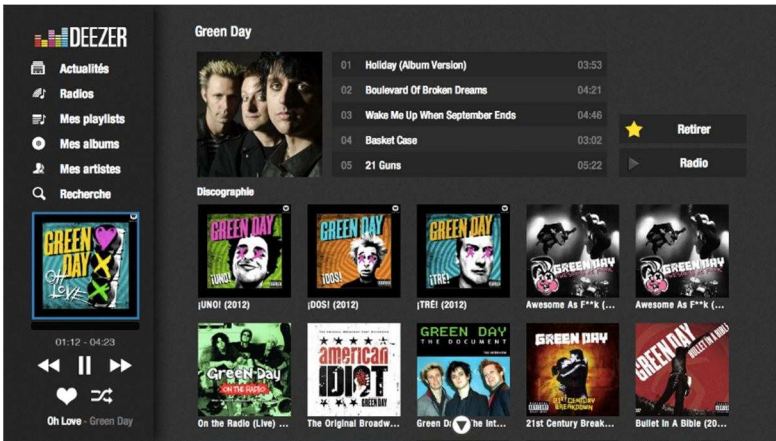


Figure 9. Interface of Deezer

Deezer renewed entirely with the upgrades made in April 2014 provides access to freemium (free, unlimited, with advertisement) music like Spotify. New “Flow” feature allows users to listen to their favourite songs instantly and it also offers personal radio feature. Other songs selected by Deezer editors are also offered along with the favourite songs in the play list radio. Samsung users have free Deezer Premium+ subscription for 3 months in their new telephones pursuant to the agreement made with Samsung (Kara, 2014b).

In 2016, Deezer decided to go public but then stepped back from this decision and it decided to use the investment fund of EUR 100 million for extending its operations and business. Data from October 2015 shows that Deezer has 6.3 million premium members in 180 countries and it hosts more than 40 million songs in its database. (Demirel, 2016c).

#### 4.5. Shazam

Shazam was founded in 2000 as a company based in London. Dominating its field of activity with its popularity and third-party application integrations, Shazam collaborates with Apple Music and the other online music services to generate

additional revenues by directing user traffic to these services through its application. Shazam sends 1 million clicks to online music services through its application. Shazam received an investment of 143.5 million USD in various periods and it disclosed profits for the first time in September 2016 (Caliskan, 2016b).

As a popular music recognition application, Shazam left another milestone behind by reaching to the 10 billionth song tagging in September 2013. Users access to this application more than 100 million times per week in order to find out the name of an unknown song or a television advertisement. Increasing the number of its active users by 150 percent compared to the previous year, Shazam has been used by 350 million persons in total since the day it was launched and it turned into a giant platform with 70 million users. Shazam directs users to popular digital music platforms such as iTunes and Spotify. Thus, it adds dynamism to the digital music sector (Arslan, 2013a)

Shazam received an investment of 30 million USD in January 2015 and its value increased above 1 billion USD, and it launched video recognition services in March 2015. This service is used in a similar way to its voice recognition application, and users can show, for example, a cornflakes box to access to the nutritional facts or buy soundtrack album of the movie by showing the DVD case (Kara, 2015).

Shazam completed its integration with Apple Music in June 2015 and provided access to “Shazamed” songs over Apple Music. In addition, Shazam directs users to iTunes for purchasing the “Shazamed” songs over iTunes (Eyidilli, 2015).

In October 2016, Shazam announced that video channels have been launched within the application and it started acting as a music video platform in collaboration with Vadio. The new feature offered to 120 million active users of Shazam provided

users with the opportunity to “Shazam” a song and have access to results including the picture and videos related with that song. Users tap on the video to start watching and when the video ends, Shazam suggests new music videos with the support of Vadio. Criterion used to make suggestions or whether they are similar to the previous song or not is not known. These videos displayed with advertisements are turning in a new advertisement field for Shazam. In addition, videos have a potential to cause a substantial increase in the time spent on Shazam. Shazam announced that this feature has been tested with one fourth of the users and that the time spent in the application has been quadrupled with videos (Kara, 2016b).

## **5. The Aim and Method of Study**

The aim of this study is to determine preferences between digital media platforms and the radio within the scope of music consumption habits of the university students studying in faculty of communication in Turkey. Population of this descriptive study consists of university students studying in faculty of communication in Turkey and the target group consists of four faculties of communication in Istanbul. A survey has been applied to 585 students studying in faculty of communication at Istanbul University- Marmara University- Istanbul Aydin University and Bahcesehir University within the scope of this study using purposeful sampling. Three demographic questions, two questions on radio listening habits, one question on digital music listening habits have been used in the survey. In the survey, a scale of 16 questions has been applied to analyse tendencies of the university students on digital music. The final question of the survey was an open-end question asking preferences of students in the faculty of communication between radio and digital music platforms and they were also asked to explain the reason of respective preferences. Statistical analysis has been conducted, reliability analysis has been applied to the scale and results have been tested as to whether they show deviations compared to the



demographic parameters. SPSS 21.0 statistic software used for the analysis of the data.

### 5.1. Validity and Reliability

Reliability value is the indication of achieving the same result after performing repetitive measurements. Therefore, survey questions are subjected to a reliability analysis. Cronbach's Alpha coefficient is used in the reliability analysis. The relevant coefficient takes up a value between 0 and 1 and the reliability of the survey increases as it gets close to 1. If the coefficient is above 0.70, then the survey is considered as a reliable survey (Cihangiroglu, et al., 2011: 85). As result of the reliability analysis, reliability value of the scale has been found 0.889. Therefore, the scale used in the study gives highly reliable results.

**Table 2. Reliability Analysis**

| Cronbach's Alpha | N  |
|------------------|----|
| 0.889            | 16 |

KMO and Bartlett Analyses have been used to test structural validity of the question form used for the study. As Table 4 shows, KMO value of the question form used for the study has been found 0.860. Bartlett Analysis revealed p values as ( $p=0,000 < 0,05$ ). According to analyses, KMO value is greater than 0.60 and Bartlett test revealed significance (p value is less than 0.05); therefore, the scale is valid (Buyukozturk, 2006: 179).

**Table 3. Structural Validity**

|  |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olking Measure of Sampling Adequacy |                    | 0.860    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 1176.776 |
|  | df                 | 120      |
|  | Ins.               | 0.000    |

## 5.2. Demographics

56.4 percent of the participants were male and 43.6 percent were female. 78.6 percent of the participants are under the age of 23.

**Table 4. Distribution of the Participants by Gender**

|        | <b>n</b> | <b>%</b> |
|--------|----------|----------|
| MALE   | 255      | 43.6     |
| FEMALE | 330      | 56.4     |
| Total  | 585      | 100.0    |

**Table 5. Distribution of the Participants by Age**

|              | <b>n</b> | <b>%</b> |
|--------------|----------|----------|
| AGE OF 18-20 | 10       | 1.7      |
| AGE OF 21-23 | 450      | 76.9     |
| AGE OF 24-26 | 95       | 16.2     |
| 27 AND ABOVE | 30       | 5.1      |
| Total        | 585      | 100.0    |

30.8 percent of the university students who participated in the study had income lower than 500 TL, 27.4 percent of them had income between 501 TL and 1000 TL and 41.9 percent had income equal to 1001 TL and higher.

**Table 6. Distribution of the Participants by Level of Income**

|                    | N   | %     |
|--------------------|-----|-------|
| 0-500 TL           | 180 | 30.8  |
| 501 -1000 TL       | 160 | 27.4  |
| 1001 TL AND HIGHER | 245 | 41.9  |
| Total              | 585 | 100.0 |

University students from the faculty of communication who participated in the survey were asked which platforms they use to listen to radio and they were given freedom to give multiple answers. Therefore, total number of answers is higher than total number of participants. Accordingly, 34 percent stated that they used car radio, 30.8 percent stated that they used smart phones, 21.8 percent stated that they used digital music applications while 6.4 percent stated that they used conventional radio. 7.1 percent did not listen to radio.

**Table 7. Distribution of Participants by Platform They Use to Listen Radio**

|                                  | N   | %     |
|----------------------------------|-----|-------|
| I don't listen to radio          | 55  | 7.1   |
| I use traditional radio receiver | 50  | 6.4   |
| I use my smart phone             | 240 | 30.8  |
| I use car radio                  | 265 | 34.0  |
| I use digital music applications | 170 | 21.8  |
|                                  | 780 | 100.0 |

58.1 percent of the survey participants stated that they listen radio less than 1 hour per day.

**Table 8. Distribution of Participants by Duration of Listening Radio**

|                         | N   | %     |
|-------------------------|-----|-------|
| I don't listen to radio | 105 | 17.9  |
| 0-1 hour                | 340 | 58.1  |
| 1-2 hours               | 110 | 18.8  |
| More than 3 hours       | 30  | 5.1   |
| Total                   | 585 | 100.0 |

Survey participants were asked which digital music platforms they followed and they were given freedom to give multiple answers. Therefore, total number of answers is higher than total number of participants. Accordingly, Spotify is the most popular digital music platform among the participants.

**Table 9. The Most Popular Digital Music Platforms Among Participants**

|             | n   | %      |
|-------------|-----|--------|
| SPOTIFY     | 315 | 40.90  |
| APPLE MUSIC | 135 | 17.50  |
| FIZY        | 120 | 15.60  |
| TTNETMUSIC  | 70  | 9.10   |
| YOUTUBE     | 70  | 9.10   |
| DEEZER      | 45  | 5.80   |
| AVEAMUSIC   | 15  | 1.90   |
| TOTAL       | 770 | 100.00 |

### 5.3. Descriptive Analyses

Analysis of the answers given about phrases related with the digital music platforms by students from the faculty of

communication showed that university students from the faculty of communication prefer digital music applications for:

- Listening to the music according to their moods (mean value 4.29 and standard deviation 1.059);
- Listening to songs of their choice (mean value 4.26 and standard deviation 1.027);
- Listening to the music whenever they want (mean value 4.22 and standard deviation 1.099).

**Table 10. Descriptive Statistics on Digital Music Survey**

|     |   | <b>Average</b> | <b>St. Deviation</b> |
|-----|---|----------------|----------------------|
| B3  | Digital music applications enable me listen to music according to my mood.  | 4.29           | 1.059                |
| B5  | Digital music applications enable me listen any song I want.                | 4.26           | 1.027                |
| B6  | Digital music applications enable me to listen to music any time I want.    | 4.22           | 1.099                |
| B15 | It would be better if digital music applications were advertisement-free.   | 4.20           | 1.131                |
| B12 | Digital music applications enable me to spend enjoyable time.               | 4.05           | 1.097                |
| B1  | I discover new songs with digital music applications                        | 3.97           | 1.207                |
| B11 | Digital music application make travelling relatively tolerable              | 3.97           | 1.207                |
| B2  | I discover new singers with digital music applications                      | 3.92           | 1.146                |
| B13 | Digital music applications enable me to make use of my spare time.          | 3.84           | 1.098                |
| B14 | Digital music applications will substitute traditional radio in the future. | 3.78           | 1.204                |
| B10 | Digital music applications drain my battery quickly.                        | 3.76           | 1.208                |
| B4  | I prefer digital music applications to radio.                               | 3.70           | 1.212                |

|     |  | Average | St. Deviation |
|-----|--|---------|---------------|
| B9  | Digital music applications spend a lot of credits from the internet package. | 3.44    | 1.234         |
| B16 | I prefer digital music applications because there is no DJ.                  | 3.26    | 1.453         |
| B7  | I would pay for digital music applications                                   | 2.62    | 1.382         |
| B8  | Digital music applications are worth more than I pay.                        | 2.50    | 1.324         |

#### 5.4. Statistical Analyses

Statistical analyses are provided in this part of the study.

##### 5.4.1. Analysis by Gender

As a result of the Independent Samples T-Test performed for determining whether opinions of students from faculty of communication vary by gender, it has been observed that opinions of participants did not vary by genders ( $p=0,626 > 0,05$ ).

**Table 11. T-Test Analysis by Gender**

|        | N   | Mean Value | St. Deviation | t     | p     |
|--------|-----|------------|---------------|-------|-------|
| MALE   | 255 | 3.7745     | 0.65229       | 0.489 | 0.626 |
| FEMALE | 330 | 3.7074     | 0.79437       |       |       |

##### 5.4.2. Analysis by Age

As a result of the Independent Samples T-Test performed for determining whether opinions of students from faculty of communication varied by age, it has been observed that opinions of participants do vary by age ( $p=0,022 < 0,05$ ). Accordingly, opinions of the participants below the age of 23 about digital

music are more positive compared to participants aged 24 and above.

**Table 12. Independent Samples T-Test Analysis by Age**

|                     | N   | Mean Value | St. Deviation | F     | p     |
|---------------------|-----|------------|---------------|-------|-------|
| Age of 23 and Below | 460 | 3.8173     | 0.64068       | 5.396 | 0.022 |
| Age of 24 and Above | 125 | 3.4400     | 0.96327       |       |       |
| Total               | 585 | 3.7366     | 0.73356       |       |       |

#### 5.4.3. Analysis by Level of Income

As a result of ANOVA analysis performed to determine whether opinions of participants varied by level of income, it has been observed that opinions of participants did not vary by level of income ( $p=0,857 > 0,05$ ).

**Table 13. ANOVA Analysis by Level of Income**

|                    | n   | Mean Value | St. Deviation | F     | p     |
|--------------------|-----|------------|---------------|-------|-------|
| 0-500 TL           | 180 | 3.7813     | 0.71488       | 0.155 | 0.857 |
| 501 -1000 TL       | 160 | 3.7520     | 0.67920       |       |       |
| 1001 TL AND HIGHER | 245 | 3.6939     | 0.79142       |       |       |
| Total              | 585 | 3.7366     | 0.73356       |       |       |

#### 5.4.4. Analysis by Duration of Listening Radio

As a result of ANOVA analysis performed for determining whether opinions of students from faculty of communication

varied by duration of listening radio, it has been observed that opinions of participants did not vary by duration of listening radio ( $p=0,087 > 0,05$ ).

**Table 14. ANOVA Analysis by Duration of Listening Radio**

|                   | N   | Mean Value | St. Deviation | F     | p     |
|-------------------|-----|------------|---------------|-------|-------|
| I DON'T LISTEN    | 105 | 3.5060     | 1.04860       | 2.244 | 0.087 |
| 0 -1 HOUR         | 340 | 3.8631     | 0.59039       |       |       |
| 1 -2 HOURS        | 110 | 3.5142     | 0.73647       |       |       |
| MORE THAN 3 HOURS | 30  | 3.9271     | 0.65957       |       |       |
| Total             | 585 | 3.7366     | 0.73356       |       |       |

### 5.5. Quantitative Analysis

University students from faculty of communication who participated in the survey were asked an open-end question asking whether they listen to the music from the radio or digital music applications. 66.7 percent of the participants stated that they preferred digital music applications for listening to the music versus 16.2 percent who preferred radio. 17.10 percent stated that they used both.

**Table 15. Platform Chosen for Listening to the Music**

|                                     | N   | %      |
|-------------------------------------|-----|--------|
| I prefer digital music applications | 390 | 66.70  |
| I prefer radio                      | 95  | 16.20  |
| I use both                          | 100 | 17.10  |
| Total                               | 585 | 100.00 |



In the survey, students from faculty of communication were asked why they preferred the music platform they chose. Opinions collected from the students showed that they addressed multiple points. Therefore, total number of answers is higher than total number of opinions.

For students from faculty of communication, the most important reason for using digital music applications is the possibility of instant access to music they like. Other reasons for listening to music over digital music platforms is the presence of the latest songs compared to the radio, the lack of control for listeners and the fact that programs are chosen by others and inability of choosing songs in case of radio. In addition, high number of advertisements in the radio and the same music type and songs being repeated by channels even when radio channel is switched, i.e., "inability to change music". Opinions of students from faculty of communication showed that students have a critical approach towards radio channels broadcasting the same music frequently.

Students from faculty of communication who stated that they usually listen to music in the car and traffic also stated that they do not listen to music purposefully. They showed availability of limited credit and lack of sufficient credit in the internet packages for listening to digital music platforms as a reason for listening the radio. Communication between people and radio DJs is one of the reasons for not listening to music from the radio.

Those who stated that they use both platforms show being in the traffic or at home as a reason for this preference. Individuals can listen to radio in the traffic and they use digital music platforms at home or indoors. Another reason is listening to music based on the mood. They chose either radio or digital music platforms based on their mood.

**Table 16. Reason of Choosing for a Particular Platform for Listening to Music**

|   |  | N    | %     |
|---|--|------|-------|
| <b>Reasons of Using Digital Music Platforms</b> | The latest songs are available                     | 185  | 15.9  |
|   | I can select songs I want to listen                | 290  | 24.9  |
|   | It comforts in the traffic                         | 180  | 15.5  |
|   | Other chose songs in the radios                    | 115  | 9.9   |
|   | Too many advertisements in the radio               | 95   | 8.2   |
|   | I make use of my spare time                        | 55   | 4.7   |
|   | I have instant access to any song I like           | 175  | 15.0  |
|   | You can switch channel but you cannot switch music | 70   | 6.0   |
| Total   |  | 1165 | 100.0 |
| <b>Reasons of Using Radio</b>                   | I listen to radio while driving                    | 65   | 48.1  |
|   | It is better that presenters interact with people  | 30   | 22.2  |
|   | I do not have/ I have limited internet package     | 40   | 29.6  |
| Total   |  | 135  | 100.0 |
|   |  | N    | %     |
| <b>Reasons for Using Both Platforms</b>         | Radio while travelling, digital at home            | 85   | 47.2  |
|   | Depends on my mood                                 | 95   | 52.8  |
| Total   |  | 180  | 100.0 |

## CONCLUSION

The developments in the internet technologies and increased internet speed facilitated big-size file sharing. Extensive use of big-size file sharing services started with photograph sharing and then continued with the exchange of compressed music files in MP3 format. A music file sharing program called Napster played the most important role in sharing music over the internet. People started listening to music over digital platforms

rather than using physical music platforms thanks to legal digital music platforms that have been opened after Napster was closed in the early 2000s. iTunes Music introduced to the world by Apple is the first digital music platform to sell music officially. iTunes has been the first digital music platform to sell music legally and the platform is an important milestone in digital music industry.

In this survey applied to university students studying in faculty of communication, answers were sought to questions related with digital music platforms. It has been observed that, in the present day, digital music platforms are preferred more than the radio. People are still not keen to pay for services offered by digital music platforms. University students stated that they frequently use digital music applications and they prefer these platforms to the radio when it comes to listening to music; however, they showed that they are in doubt about paying for digital music applications.

The biggest advantage of digital music applications when compared to the radio is the ability to access the desired music at any time. Although radio is based on communication with the music listeners, the ability of instant access to any music over digital music platforms facilitates the access to music. However, according to participants of the survey, the biggest handicap of digital music applications is the access over the internet and limited or insufficient of credit in the internet package for using digital music platforms outdoors. University students from the faculty of communication stated that they would use digital music platforms more frequently if they did not have internet quota problems. Given this fact, it is possible to say that young individuals will use digital music platforms more and more as the internet access is extended and its cost is reduced.

Particularly the young individuals started to follow music from the radio as a result of transition of the radio into a music box in the recent years. Substantial number of studies showed

that radio has been transformed into a platform, i.e., music box, that is used for listening to music particularly in two thousands. However, developments in the internet technology and increased importance of instant access and speed of access to information affected music consumers and guided them towards the internet. Increased internet speed, increased speed of file sharing and wide-spread use of the internet allowed music consumption over the internet. The only barrier before those using digital music platforms to listen to music has been described as the lack of internet credit. The potential for reduced costs and wide-spread use of the internet in the future shows that this handicap will be eliminated. The possibility of such patterns for listening to music among the young individuals with the wide-spread use and reduced cost of the internet poses a threat for the radio that turned into a music box. The developments described above will lead to substitution of the radio by digital music platforms and threaten the popularity of the radio. Therefore, radios must review the methods of offering music and work on alternative methods. In addition, radios must reach to a level they can compete with the digital music platforms with regard to content, they must make difference and establish a competitive structure. Radios must also question the process of transition into a music box and search for ways to recover the interest lost by offering different contents particularly including thematic contents.

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