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Atanas Nikolov

Yana Andonova

Yang He

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Atanas Nik Nikolov, Ph.D.
Assistant Professor, Marketing
nikolovan@appstate.edu
828-262-6195
Appalachian State University
4098 Peacock Hall
ASU Box 32090
Boone, NC 28608

Yana Andonova, Ph.D.*
Assistant Professor, Marketing
yandonova@murraystate.edu
270-809-4766
Murray State University
413B Business Building
Murray, KY 42071

Yang He, Ph.D.
Assistant Professor, Marketing
yang.he@belmont.edu
619-677-0214
Belmont University
1900 Belmont Blvd,
Nashville, TN 37212

*corresponding author

Internet Killed the Radio Star?

Abstract

Radio airplay is still a popular direct-to-consumer (DTC) channel for music products. In this paper, we investigate the effect of radio airplay on album sales, mediated by consumer social media engagement with music artists. Grounded in the cultural production model, as well as the literature on customer engagement and satiation, we propose several hypotheses. We analyze our unique dataset by structural equation modeling (SEM). The results reveal that radio airtime has a bigger impact on album sales of lesser-known musicians than those of famous musicians. Social media engagement mediates the positive effect of radio airplay on album sales; this effect is moderated by the musician's popularity such that famous musicians enjoy greater social media engagement compared to their lesser-known counterparts. These results have important managerial implications for positioning and channel strategies for lesser-known as well as for already famous musicians. Our findings contribute to the literature on music marketing, social media engagement, and satiation. Surprisingly, this research suggests that the role of radio is not as straightforward as has been described before and the implications for new and seasoned artists in the age of digital music consumption have the potential to change the views of this "outdated" medium.

Keywords: Music, Radio, Social Media Engagement, Satiation

Introduction

The music industry has been disrupted by streaming services such as Spotify and Apple Music, which generate more than half of all global music sales, according to a report by the International Federation of the Phonographic Industry (2020). Despite the dominance of streaming, radio is still a popular medium reaching around 90% of U.S. adults (Watson 2019). In fact, Americans listen to 106 minutes of radio a day, a significant part of it while commuting (Watson 2019). Even with online streaming and sales of music products increasingly becoming the standard revenue stream for music label companies, over the-air radio still services 240 million listener tune-ins each week in the US alone, ranking as one of the most important promotional channels for music products (Shaw 2017). While most digitized music products are consumed through a "pull" process where consumers can request the specific products they are interested in, consumers have little control over the content selection in radio programming, which makes it an especially important channel for publishers to "push" for the exposure of new products to consumers (Burns 1997). In fact, radio can be seen as a form of a cultural gatekeeper which determines to a large extent the music a society is exposed to (Laor and Galily 2020). Additionally, an economic analysis commissioned by the National Association of Broadcasters concluded that radio airplay provides free promotion and exposure to music products that would have otherwise cost promoters 2.4 billion dollars annually (Dertouzos 2008). The same report suggests that there is a strong correlation between radio airtime and music product sales performance, a finding that has also been corroborated by academic research (Dewan and Ramaprasad 2014).

Recognizing its potential marketing influence, the competition for radio airtime is still fierce, especially considering the limited airwave spectrum available and the sheer volume of

new music content created every year (Frankel and Gervais 2014). Such competition has led to the "pay-to-play" practice by some leading music label publishers despite long-standing legal restrictions. It is a common practice in the music industry that large music label companies use their financial influence, usually through third-party intermediaries, to encourage over-the-air radio stations to feature songs published by these companies' recording artists as part of regular programming (Messitte 2014). Worth noting is that such pay-to-play practices create an adverse situation for independent musicians and smaller record labels because they usually lack the necessary resources to acquire influential promoters to secure radio airtime (Howard 2011). As a result, today's radio waves offer an ever-dwindling selection of new music, the majority of which consists of singles and albums from predominantly major record labels (Messitte 2014). Additionally, theoretical research suggests that the media industry's role results in lowering the standards of media products, resulting in shallow, uniform contents all geared toward profit maximization (Horkheimer and Adorno 2020).

In addition to radio, music artists promote their new albums on social media. Radio stations also utilize Facebook mostly for promotional purposes (Laor and Steinfeld 2018). It has been found that radio program activity on social networks increases the reach of radio and leads to higher levels of interaction with listeners (Laor 2019). Research has also explored the relationship of social media activities and brand sales in the context of music and found that social following has a positive effect on brand sales (Saboo et al. 2016). The number of blog posts about an album has been found to be positively correlated with future album sales while increases in an artist's Myspace friends have a weaker correlation to future sales (Dhar and Chang 2007). Research has also found evidence for the effect of brand page participation on brand awareness and brand attitude (Langaro et al. 2018). While research on the effectiveness of

social media marketing on album sales has been scant, there has even been less research exploring the interplay between different promotional channels for music products, namely radio airplay and social media. A study by Dewan and Ramaprasad (2014) found that radio play and blog buzz have a moderate and positive effect on album sales. Given that musicians utilize various channels to promote their music and that the role of radio is not as straightforward as it has been described before, the present research attempts to address an important gap in the literature related to the effective marketing of music products. More specifically, we explore boundary conditions to the long-standing claim that radio airtime leads to higher album sales. Specifically, we attempt to address the following research questions: 1) How does musician popularity affect the relationship between radio airplay and album sales, and 2) Does social media engagement positively affect album sales and if so, what is the mechanism driving this effect?

To this end, we draw upon literature on celebrity brand management, consumer satiation, brand identification, and social media engagement, to explicate the interrelationship between radio airtime, social media engagement, musician's popularity, and album sales. Using a large, proprietary sample of panel data, we build and empirically estimate a moderated mediation model. We reveal a set of competing effects of how radio airtime may influence music album sales depending on a musician's popularity. On one hand, compared to famous musicians, lesser-known musicians are not as susceptible to the satiation effect caused by radio airtime and therefore their albums are more likely to benefit from the direct exposure to radio airtime. On the other hand, radio airtime may serve as a reminder of past music consumption experience which may strengthen consumer brand identification with the artist and in turn drive social media engagement; this effect thus may be stronger for famous musicians than lesser known ones. In

addition, we find that social media engagement is associated with increased album sales. These findings provide important practitioner implications on how music label companies may take different approaches when managing radio promotion campaigns depending on the degree of audience familiarity with the musicians being promoted. To the best of our knowledge this is the first research to explore the interrelationships between radio airplay, social media engagement in the form of social media following, and album sales as moderated by a musician's popularity. Thus, this paper makes important contributions to two literature streams—on entertainment product marketing and customer engagement on social media.

This paper is organized as follows. First, we present a brief overview of the relevant literature on music consumption, satiation, the cultural production model, consumer brand identification, and social media engagement used to build our hypotheses. Second, we describe the methodology of our study and results. Third, we conclude by offering a discussion of our findings and relevant theoretical and managerial implications. Last, we discuss limitations and directions for future research.

Theoretical Background

Music, Repeated Consumption, Satiation, and the Cultural Production Model

Music products differ from all other media products, such as movies and video games in that music is to a greater degree subject to repeated consumption. Specifically, whereas the average movie runtime lasts about 2 hours and a modern AAA title video game's playtime usually exceeds 10 hours, a soundtrack in a modern production music album usually lasts only 3 to 4 minutes on average. Therefore, consumers repeatedly listen to the same set of songs over a short period of time, whereas the same rate of repeated consumption of movie and video games is rarely observed. Research has further shown that consumers often experience satiation, a

decrease in enjoyment after repeated consumption of the same product (McAlister 1982; McAlister and Pessemier 1982). Evidence suggests that satiation is more than the mere physiological limit of consumption (e.g., feeling full after eating), but may also stem from psychological processes such as habituation or adaptation (Galak et al. 2009). In particular, a number of studies provide direct evidence that listening to the same music repeatedly leads to a rapid decrease in enjoyment (Galak et al. 2009, 2013; Nelson and Redden 2017). In turn, consumers look for variety in the products they consume as a remedy for satiation (Redden 2008).

Relating to the current research, a recent study has found that modern music production is becoming increasingly formulaic, featuring little variation amongst artists (Percino et al. 2014). According to the cultural production model, all entertainment products across all media are similar, and made to fit a prespecified structure, with the overarching goal of profit production: all products are essentially recycled and previously successful radio formats are used in a recognizable format (Peterson and Anand 2004). To predict whether new artists and their new songs will appeal to audiences and sell, the music industry attempts to control consumer behavior (Laor and Galily 2020). Percino et al. (2014) examined 500,000 modern production albums across 15 genres and 374 subgenres; results revealed that the decrease in timbre and acoustical variations is positively related to increasing genre popularity. Percino et al. (2014) conclude that once reaching mainstream success, music becomes increasingly formulaic. In line with this finding, we argue that a celebrated musician has the incentive to persist with a singular style through his/her career for the sake of brand loyalty (Brakus et al. 2009; Cohen and Houston 1972). One of the strategies for music artists to promote their music includes defining one's personal sound through genre (Sanders et al. 2021) which is a reason why artists generally stick

to the same style throughout their career. However, whereas popularity rises as label production musicians attempt to clone their preceding success, repetitive and formulaic music products induce consumer satiation. Thus, we argue that new releases from famous musicians are comparatively more susceptible to the satiation effect than music from their lesser-known counterparts. In fact, as satiation accrues, consumers would even go so far as switching to less preferred product options simply to avoid repeating the more preferred product (Ratner et al. 1999). Applied to the current context, this finding suggests that satiated consumers may overlook the possible discrepancy in the intrinsic quality of songs, regardless of whether they are produced by famous or lesser-known musicians, but simply prefer a more original musical style.

Further, we propose that radio airtime may exacerbate the asymmetric threat of satiation to sales of music produced by famous musicians in comparison to that by lesser-known musicians. Research has found that satiation may be exacerbated or mitigated depending on the salience of prior consumption experience in one's working memory (Galak et al. 2009; Nelson and Redden 2017). Although most consumers have their favorite musicians and may have listened countless times to their favorite songs, disruption in the continuous repetition of consumption either in the form of delay (McSweeney and Swindell 1999) or distraction (Epstein et al. 1993) effectively counters the negative effect of satiation. But the reverse effect is also found to be true—satiation is affected by the degree to which past consumption experience is present in one's focal attention (Nelson and Redden 2017). A simple reminder that one has repeatedly consumed a certain product in the past, even if the consumption episodes are not immediately recent, may lead to a decreased preference for the product. Applying this logic in the music context, we argue that songs played on the radio may serve as reminders of prior listening experiences, and this effect is largely asymmetrical, depending on whether the songs

were produced by famous musicians or by lesser-known artists. For famous musicians, although the broadcasted new songs are not exactly identical to their previous production, it is likely that they preserve a consistency of musical style for the sake of brand identity (Brakus et al. 2009; Cohen and Houston 1972). Thus, the broadcasting of new songs may bring back memories of previous listening experiences to consumers' focal attention, which increases the likelihood of satiation and in turn variety-seeking behavior. Following this logic, the more popular the musician is and the better sales record the musician's previous publications have achieved, the more likely this adverse effect of satiation is to be invoked by repeated radio airtime play. On the other hand, songs published by lesser-known musicians may be drastically less affected by the satiation effect due to the lack of previous exposure. Formally,

H1: The positive effect of radio airtime on new music album sales is moderated by the musician's popularity such that this effect is stronger for lesser-known musicians compared to famous ones.

Consumer Identification and Engagement with Music Artists

The discussion above involves satiation through the lens of an isolated consumer's consumption utility. In this section we examine music consumption from a social identity perspective, in order to account for the social context of music consumption. Previous research has revealed that music is not only enjoyed as a hedonic good with the purpose of relaxation and emotional expression, but also as a social experience that is symbolic of one's identity *(*Larsen et al. 2009 2010). Consumers often subscribe to their favorite musicians' personality and lifestyle and declare their fandom to musicians as a badge to represent who they are as individuals (Schau et al. 2009). For example, "liking" a musician on Facebook, a form of social media engagement

(Barger et al. 2016), signals one's loyalty and identification with the musician to a consumer's social network.

Research has further shown that identity salience or the extent to which specific identity information dominates a person's focal attention is also a key determinant of identification declaration (Bhattacharya et al. 1995; Bhattacharya and Sen 2003). In a related study (Hogg and Terry 2009), researchers found that movie viewers' favorability towards a movie star is positively related to the star's number of screen appearances per movie. Thus, we expect the more a music listener is reminded of their past consumption experience with a musicians' song, the more they will identify with that musician (Luo et al. 2010). More specifically, we expect that radio broadcasting of new songs by famous musicians could serve as a reminder of past experiences as well as a signal of the musicians' continued dedication to their music and their fans. In turn, previous literature has shown that consumer brand identification leads to a series of downstream effects such as increased sales of branded products (Algesheimer et al. 2005) and increased social media engagement (Tuškej and Podnar 2018; Swani et al. 2019).

Thus, it follows that such benefits would likely be exclusive to famous musicians whose previous products are already well known, namely that radio airplay increases engagement with popular artists. According to brand identity theory, an individual's knowledge regarding a brand is a critical antecedent to brand identification (Bhattacharya and Sen 2003). As mentioned earlier, and in tune with the cultural production model, famous musicians are likely to have a set of well-established personae based on their musical style, radio airtime play, personality, and targeted audience stemming from past brand-building effort. In comparison to their lesser-known counterparts, we expect famous musicians to be better known to consumers to the extent that consumers start to develop personal identification with their "brands." In sum, we propose that

radio airtime serves as a reminder of consumers' previous alignment with the artists' past albums and enhances their brand and personal identification with the artists, which in turn leads to downstream effects such as greater engagement and increased album sales. We expect this effect to be moderated by the artist's popularity: the more popular the artist is, the more likely consumers will identify with that artist and as a result, the more likely they will be to engage with the artist on social media (e.g., like or follow the artist's page on Facebook). Therefore, we hypothesize:

H2: Radio airtime of an artist's new album has a positive effect on social media engagement with the artist. This effect will be stronger for famous musicians compared to lesser-known ones.

H3: Engagement with artists on social media will have a positive effect on album sales.

Methodology

Data and Measures

We collected weekly data on all combinations of artists and albums with release dates between 2010 and 2013 inclusive, from all music genres that appear on the Billboard 200 charts at any point in that time period. The period between 2010-2013 is important in the music industry as it follows key disruptive changes that affected the industry to the present time. While Spotify was launched in 2006, it was not until 2007 when the first iPhone was commercially available. Together, these two disrupted the way society listens to music. Additionally, this time period is very important to understand the switchover period between offline and online music consumption.

The data is structured as a panel. This exclusive dataset serves as the best possible source of music industry insights at the time, as the provider is one of the largest consumer and media

tracking organizations in the world. Thus, we capture weekly album sales across all formats, for each artist/album combination over 150 consecutive weeks. We remove albums by "various" or multiple artists, comedy, and holiday genre albums because of the potential for such albums to feature multiple artists and genres, and their seasonal nature. The independent variables include radio airtime, or the album's radio broadcast coverage (weekly radio audience reached per artist album, logged), musician popularity (number of all copies sold by the album's authoring artist/band *prior* to the release of the current album, logged), social media engagement (operationalized as weekly new likes of the artist/band's Facebook page, logged), and controls for genre heterogeneity (dummy variables). Refer to Table 1 for a summary list of the variables in the model, their respective oprationalizations, and descriptive statistics.

[Insert Table 1 Approximately Here]

For our operationalization of social media engagement, we focus on Facebook likes of musician/band pages. With 2.20 billion monthly users, Facebook is the largest social media network (Statista 2020) and was the major social network at the time, which makes it a suitable context for our study. The dependent variable is weekly album unit sales across all mediums, logged (i.e., physical and digital album copies). We log the main independent and dependent variables in the model as many of those values have a tendency to display large outliers, as well as for ease of interpretation.

Model

We test our hypotheses using a moderated-mediation model, following Preacher, Rucker, and Hayes (2007). Mediated models investigate "…how, or by what means, an independent variable (X) affects a dependent variable (Y) through one or more potential intervening variables, or mediators (M)" (Preacher and Hayes 2008). Moderated mediation occurs when a moderator

variable interacts with a mediator variable in a way that the value of the indirect effect changes depending on the value of the moderator (i.e., a conditional indirect effect). Specifically, we estimate the effect of radio airtime play on album sales through dual paths: a direct impact and a mediated impact via social media engagement. Both the direct impact of radio airtime on album sales and the mediated effect via social media engagement are moderated by the artist's popularity (see Figure 1).

[Insert Figure 1 about here]

Prior research has proposed several competing empirical techniques for testing mediated moderation models. Common tests include the causal steps approach (Baron and Kenny, 1986), the test of joint significance (Mallinckrodt et al. 2006), the product-of-coefficients approach (Preacher et al. 2007; Sobel 1982, 1986), the distribution-of-the-product approach (MacKinnon et al. 2007), and bootstrapping (Preacher and Hayes 2004; Williams and MacKinnon 2008). The latter three techniques imply a structural equation modeling approach. Furthermore, the current state of the art in moderated mediation (e.g., Iacobucci et al. 2007; Kline 2011; Preacher and Hayes 2004) typically prefers structural equation modeling (SEM) to regression analysis for testing mediated models. Furthermore, an analysis of the structural relationships which allows multiple relationships to be analyzed simultaneously and maintain statistical efficiency (Arbuckle 1996) is preferred. Therefore, we follow the literature and select a panel data SEM approach, which further allows the simultaneous estimation of all path coefficients in a single model, thus offering theoretical and practical advantages over regression-only models of testing moderated mediation (Iacobucci 2008).

The first equation in our panel SEM model includes the paths from the independent variables (i.e., Radio Airplay, Musician Popularity) to the mediator (i.e., Social Media

Engagement), and the second equation represents the paths from the mediator to the dependent

variable (i.e., Album Sales), including the interaction terms which indicate the moderated

mediation. We specify a Gaussian link function for both the first and second equation. Finally,

we also include Hubert-white robust standard errors and control for artist level and time fixed

effects.

Results

We present the results of the SEM analysis in Table 2. First, we examine the overall effect of

radio airtime on album sales (see Figure 1, c path). After controlling for the potential difference

in sales across music genres, we find that radio airtime is positively related to album sales, which

is in line with past research (β = .1617, p < .01). That is, for every 10% increase in airplay, the

corresponding increase in album sales is approximately 1.6% on average, across all albums and

all genres in the data. Next, we examine the mediated effect of radio airplay on album sales via

social media engagement. We find that album radio coverage is positively associated with social

media engagement (a path, β = .2658, p < .001), and this effect is positively moderated by

musician popularity (β = .0014, p < .01), supporting H2. This corresponds to 2.6% increase in

social media engagement for every 10% increase in radio airplay, as well as a small boost by

.014% due to artist popularity. In turn, social media engagement is positively related to album

sales (b path, β = .2542, p < .001), supporting H3. This result suggests the direct role of social

media engagement leads to a 2.54% boost in sales. Combined, the indirect path (ab path) from

radio airplay to album sales via social media engagement returns a positive relationship (β =

.0676, p < .001), moderated by the musician's popularity (β = .0004, p < .001). After controlling

for the mediated effect above, we find that the direct effect of radio airtime on new album sales

remains positive (c' path, β = .1618, p < .001). However, this effect is negatively moderated by

the popularity of the album's musician (β = -.0007, p < .05). It appears that for every 10%

increase in musician popularity, there's a decrease of .007% in album sales, suggesting that the

satiation effect reasonably exists. This finding supports H1. Fit indices (CFI=1.00, TL=1.00)

were greater than 0.9 indicating acceptable fit of the model.

[Insert Table 2 Approximately Here]

Our results are consistent with previous findings and industry consensus that radio airtime is

positively related to music album sales (c path). However, the major contribution of the current

study to the literature is in identifying boundary conditions to this effect and in providing evidence

for two competing mechanisms driving this relationship. We show that the overall effect of radio

airtime on album sales can be parsed into two specific pathways, each of which is differently

moderated by the musician's popularity. First, we observed that radio airtime is positively related

to social media engagement, which in turn leads to greater album sales. This effect is stronger for

famous musicians than it is for lesser-known musicians (ab path). On the other hand, the

unmediated path (c' path) suggests that radio airtime may also directly contribute to new album

sales, but this effect is stronger for emerging musicians compared to more popular ones. A possible

explanation for this finding could be due to the satiation effect discussed earlier. Worth noting is

that after combining these two pathways, even though radio airtime still shows a strong positive

correlation with album sales, the moderation effect of musician's popularity no longer reaches

statistical significance. Thus, it may stand to reason that the musician popularity's enhancement

effect on the indirect path via social media engagement neutralizes its mitigating effect on the

direct path from radio airtime to album sales.

Discussion

Our study is among the first to investigate the boundary conditions around the consumption of music products, and the interactive effects of social media engagement in a crucial period for the entertainment industry: the birth and initial growth of digital music consumption. Music products differ significantly from any other entertainment product, (i.e., movies or games) due to characteristics such as the nature of distribution channels, product sampling process, and consumption rate. In particular, our study tests the impact of radio airtime on music album sales through a complex network of mediated moderation, taking into account the impact of "new" media influences on consumption. We contribute to the music marketing literature, and suggest that artists can be viewed as brands, in similar vein as movie stars (Luo et al. 2010), as their value lies in the revenue premium generated for each product (i.e., album) carrying the artist's brand. Similar to new releases by an actor in the movie industry, each album serves as a brand extension (Sood and Drèze 2006) for musicians. However, in contrast to prior branding literature, we maintain that music artists as brands are also different from other product brands (including other entertainment brands) due to the fact that a music product is drastically more susceptible to the satiation effect and are also susceptible to the overall cultural production model postulates, likely more so than other media products. Our findings support this argument, as we observe famous musicians' new album sales do not directly benefit from radio airtime as much as their lesser-known counterparts, also contributing to the theory related to the cultural production model. Furthermore, we find that each new album released by an artist is likely to positively impact social media engagement with their followers, and as expected, the effect is larger for more famous artists. Furthermore, celebrity brand equity (or popularity) in the music industry, in terms of potential for new sales generation, seems to depreciate over time, in contrast with the traditional view of product brands (Aaker 1991).

Additionally, we provide important managerial implications for music labels and artists, and public regulators. Radio airtime as a promotional tool in the age of digital music consumption still appears important for new album releases: for more famous artists, it can be a good way to engage (or reengage with) their fan base. However, using radio airtime as a promotional tool should be a higher priority for newer artists as it increases consumer awareness with unknown artists, while its importance for promoting more famous artists diminishes due to the potential satiation and dilution effects of repeated music consumption: the more such artists' music receives radio play, the lesser the impact on sales. These results should be viewed with caution, however, as the landscape of the music industry has shifted markedly in favor of streaming of music products. At the same time, we believe that for the segment of music consumers who still utilize radio as an entertainment channel, these findings should be robust. According to Steinfeld and Laor (2019) as long as individuals continue to use radio in the same way, regardless of its format and means of broadcasting, it can be considered the same medium.

Limitations and Future Research

As with any empirical study, ours is not without limitations. First, the number of control variables included is limited due to the proprietary nature of the data. We rely on artists' cumulative album sales prior to the current album release as a proxy measure for artist popularity. Future research may examine how a different measure of popularity (e.g., brand equity rating) may influence radio airplay's impact on album sales. Second, due to the reduced form of our empirical model, the potential threat for endogeneity is present. This may be addressed in future research by building a structural model to account for the simultaneous decisions of the recording studios, artists, and radio stations involved. Finally, the dependent measure is at the album level, while the mediator, social media engagement, is at the artist/band level. This mismatch of levels of analysis is due to

data limitations and could be addressed in future research by obtaining more disaggregate data at the single-track level. Another limitation of the current study is that we do not control for quality of the album. Unlike movie ratings (e.g., IMDB, Rotten Tomatoes), there is no commonly acknowledged aggregator of music album ratings. It is possible that this is due to the fact that a music album, by design, is a collection of a variety of piecemeal products, making it more difficult to summarize the quality of an album in a singular numeric score among other reasons. Also, music listeners may employ a wider variety of criteria to judge music's quality, more than that of moviegoers, and the perception of any single song's quality may be subject to a person's mood. Further, as mentioned earlier, as far as the satiation effect is concerned, consumers bored of repeated exposure opt for alternative product options regardless of the intrinsic quality (Ratner et al. 1999). Research has also found that critics' ratings of a movie have little effect on the movie star's favorability (Luo et al. 2010). Thus, we argue the same logic applies in the context of the music industry and should mitigate such concerns.

Last, we focused on one social network, Facebook, and examined only one form of social media engagement, namely following an artist or band on Facebook. Future research could explore the effect of consumer engagement with their favorite artists on other social networks (e.g., Instagram or YouTube) on music album sales, as well as other forms of engagement such as commenting on or sharing musician's posts. In addition, future research could collect new data to replicate our findings and serve as a comparison of the database of this research and an updated database.

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Table 1

VARIABLES AND MEASURES

Variable	Measure	Mean (St.Dev)	Min-Max
Radio Airtime	Weekly radio audience reached per artist album (logged)	11.72 (3.56)	5.61 / 19.47
Musician Popularity	Number copies sold by the album's authoring artist *prior* to the release of the current album (logged)	10.66 (6.15)	-9.21 / 18.99
Album Sales	Album weekly sales in a given week per artist (logged)	4.86 (1.95)	0 / 14.01
Social Media Engagement	Weekly new likes on the artist/band's Facebook page (logged)	7.25 (2.26)	0 / 17.98
Controls			
Music genre dummies	Rock	.42 (.49)	0 / 1
Music genre dummies	Popular	.07 (.27)	0 / 1
Music genre dummies	Hip-hop	.14 (.35)	0 / 1
Music genre dummies	Country	.09 (.29)	0 / 1

Table 2

INTERPLAY OF RADIO AIRPLAY, SOCIAL MEDIA ENGAGEMENT, AND MUSICIAN POPULARITY ON WEEKLY ALBUM SALES

Variable	Social Media Engagement Model (1)	Album Sales Model (2)
Radio Airtime	.2658 (.01)***	.1618 (.00)***
Musician's Popularity	.0810 (.00)***	-.0201(.00)***
Social Media Engagement		.2542(.00)***
Interaction		
Radio Airtime × Popularity	.0014 (.00)**	-.0007(.00)**
Controls		
Genre: rock	-.3400 (.02)***	.5768 (.01)***
Genre: pop	1.539 (.03)***	.3268 (.02)***
Genre: hip-hop	.8363 (.02)***	.2977 (.01)***
Genre: country	-.1015 (.02)***	.8026 (.02)***
Observations	99,667	99,667
Fit Statistics		
CFI (Comparative fit index)	1.000	1.000
TLI (Tucker-Lewis index)	1.000	1.000
RMSEA	0	0
CD (Coef. of Determination)	.438	.438
Log likelihood	-1467707***	-1467707***
Robust SE	Included	Included

SEs are in parentheses. *p<.05, **p<.01, ***p<.001

Figure 1

Proposed Framework: Impact of Radio Airplay on Album Sales and Social Media Engagement