# THE RISE OF THE SPANISH LANGUAGE IN THE U.S. DURING THE STREAMING ERA

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# Abstract

This analysis will show if the consumption of Latin pop concerts has increased in the last ten years in the English-speaking market of the U.S. in the streaming era. Instead of concerts helping to promote records, as they did in the late 1960s, merchandise and music streaming music platforms now work to convert listeners into concert attendees (Brennan 218). The project collected concert ticket data from Pollstar from the U.S. for the past ten years to showcase the trends in consumption while considering the yearly increasing number of active users on music streaming and social media platforms.

# Introduction

## Brief Description of the Proposed Culminating Experience

This project will research if the Spanish language benefits from the digitalization of music on streaming music and social media platforms in the United States. Streaming music platforms allowed easy and low-cost access to more extensive and diverse music catalogs. Digital music is distributed at a null marginal cost and listeners pay a flat monthly fee, thus allowing for more diverse music offerings (Bello, 2021). These factors of the digital era could help the Spanish language and potentially make for a higher consumption of Latin music in the English-speaking market of the U.S. This is feasible with the market opportunity of music streaming platforms. During the streaming era, music consumption patterns and popularity have been redefined (Gao, 2021). Further, it is with the streaming era that a progression of material to digital commodities and now to music as a service has been observed (Cwynar & Fauteux, 2020).

My role in this project will be as the researcher and analyst of the data. The main purpose of this Culminating Experience is to demonstrate that Spanish through Latin pop music is headed towards increased consumption in the English-speaking market of the United States. Moreover, according to the U.S. Census Bureau (2020) the Hispanic population in the U.S. in 2016 was 17.8%, by 2030 it is projected to be 21.1%, and by 2060 it is projected to be 27.5% out of the entire U.S. population. (See Appendix A for a table with more data on this trend).

Moreover, my motivation behind this research is that the songs I have written have been both in Spanish and English. This will provide data and insight to demonstrate if the consumption of Latin pop music has increased and potentially in which cities in the United States.

This research will include sources from books, organizations, journals, and governmental data that show the market trend and opportunity of active users in music streaming and social media by gathering consumption data on concerts across the U.S. for the last ten years. The quantifiable data will identify the correlation between consumer habits toward Latin music in an English-speaking market. Lastly, demographics in the U.S. will be considered per city to avoid getting a biased approach to the analysis.

# Literature Review

## How the Work Contributes to the Profession

This project will contribute insight into the profession by demonstrating if the Spanish language has benefited in consumption through music streaming and social media platforms and thus helping Latin pop music in the U.S. English-speaking market. The project will only consider Spanish in the English-speaking market of the U.S. and not any other languages. This is because, in 2019, it was published in an article by Music Business Worldwide that "English language music made up 67% of the Top 200, followed by Spanish 18%, and Hindi with 6%. Further, Kosinski the VP of Nielsen Music commented that globalization is real and has been proliferating through music streaming services and allowing unlimited access to international content, with a third of streamed songs in Spanish, Korean, Indian, and Arabic". (Ingham, 2019). The inclusion of Spanish can take years to manifest and cascade in the consumption of music, from streaming and social media to concerts. A couple of factors that will affect the change in consumption habits are the adaptation of the market to digitalization, geography, algorithms of music streaming and social media platforms, trends, population, and revenues. A study regarding Korean music by Parc (2020) concluded that Korean pop music embraced and transformed into the digital era. This was achieved by adapting to sectors like analog to digital, from albums to songs, from possessing to accessing, and from limited interactions to synergetic networks. These actions with the digitalization of music allowed access to more fans. Latin pop can and has adapted to the digital era for fans and new audiences all over the world to be able to access Latin music.

In a study by Bello, it was stated that "countries that were already close to one another in taste are becoming more similar but increasingly different from other clusters of countries. Such

clusters appear strongly determined, but not only, by geographical and cultural distance." (Bello, 2021, p. 5). In the case of the U.S., geographically it has Mexico as a neighboring country whose national de facto language is Spanish.

The algorithms also play a key role in music consumption. The easy access to streaming platforms makes genres and languages flow from other countries faster. This flow will influence the consumption and production of music. Research done by Hodgson (2021), stated that the algorithms of Spotify and YouTube have become more global in their reach and shape the digital music culture. This urges us to give more attention to how algorithms affect the experience of music by musicians, producers, and fans in a socio-economic context.

Moreover, the access and flow of information through music streaming platforms allow for global trends to be initiated by other countries. Jovanovska (2019) found that language, nationality, and geographic distance influence the way global communities are formed. Furthermore, Jovanovska proved that there is a clear direction of leadership flow in the music industry. Some countries do follow the trends beset by others and language and nationality play an essential role in the development of communities. Spain and Portugal are the most important countries in the study since they serve as bridges between the South American and the Eurasian communities. This indicates that language and geography play a key role in streaming preferences since European countries use Latin languages.

In an article by The Economist in 2022, the evolution of music taste across the world was analyzed. Around 13,000 hit songs according to Spotify in 70 languages were clustered into three cluster groups English, Spanish, and other languages. One trend that emerged in the last five years, was that the hegemony of English has been in decline. Within the Spanish cluster, English quickly lost ground – from 25% of hits to 14% - as native artists like Bad Bunny and Rauw

Alejandro Ocasio Ruiz became internationally ascendant and crossovers such as “Despacito” between Luis Fonsi and Daddy Yankee featuring Justin Bieber in 2017. (The Economist, 2022). This analysis brings forth the data that even in Spanish-speaking countries, the consumption of Spanish is on the rise through streaming music platforms.

Industries are constantly changing. Technologies bring new opportunities and with them, they bring new sets of challenges for the industry players. The music industry has not been exempted from technological changes through the years. From the printing press to the phonograph, to the radio, to the Internet, and now to music streaming platforms. In a sense, the music industry is evolving as a new environment of users and third parties discover what works and what does not in a post-object economy of file sharing and streaming. As is always the case, evolution is about adaptation (Anderson, 2014).

A new opportunity brought forth by the music streaming platforms is that local musicians and artists can potentially find a new audience anywhere in the world. It is mentioned in the IFPI report of 2022 that local repertoire dominated the local charts in most geographies – whether it’s Latin music, K-pop, French hip-hop or so many other genres - artists are finding new audiences in places they never imagined. Labels are putting down deep roots and helping to foster the continued advancement of vibrant and diverse local music ecosystems. (IFPI, 2022). Maria Fernandez, the COO of Latin Iberia Sony Music Entertainment, further expanded the idea by saying that there are no barriers in music anymore and we must take advantage of that. We believe that if music is good and it connects, then it can work in any market. (IFPI, 2022).

However, the new opportunities of digitalization and the streaming era come with another cost, the algorithms. The algorithms can vary the music moved around in the platforms and how the users are exposed to the music. This can concern the users if the music they are exposed to is

shaped by the algorithm, the users, or a mix of both. In a study by Maas and Spilker, the algorithms and the impact of the mechanism were analyzed to observe the effects and consequences of said algorithms in the platforms. It was stated that since all the mechanisms rely on input from user data, one can wonder whether users have only themselves to blame for the lack of diversity in the music dominating the streaming era. Research indicates that most users consider algorithmic recommendations to be both helpful and relevant, even as they occasionally try to sidestep, bypass, or otherwise manipulate them. In short, users generally go with the flow and choose what is offered. (Maas & Spilker, 2022).

Considering that users generally go with the flow of what the algorithms move and offer, it can be said that algorithms will have an effect not only on music but also on identity and culture. These changes will not be observed in the short but rather in the longer term. To analyze the impact of music on identity, Deborah Rapuano compared Irish and non-Irish musicians if playing “traditional Irish” music makes the musician Irish. In her findings, she mentions Anya Peterson Royce (1977) noted that music is an important indicator of identity. As such, studying music communities should illuminate how various identities are constructed in important ways. If we view playing and listening to music as one aspect of culture, then studying music communities can illuminate social and cultural history (Rapuano, 2009). In other words, being surrounded by music from birth. Although most non-Irish musicians never intentionally relinquish their original cultural identification, they nevertheless integrate it with vital aspects of Irish culture. To aid the process of dividing the musicians into camps of "us" and "them," which further separates them from everyone not included in the "us" camp, it becomes even more important for the musicians to create, define, establish, and maintain exclusive and inclusive boundaries. (Rapuano, 2022).

This point taken to today's streaming era in 2022 still holds by having music labeled as Latin music, K-pop, or any variation of pop. And meanwhile, pop music is implied as English pop music. However, it is the case that listening to pop music does not make the listener a U.S. citizen. Just as a U.S. citizen or musician is not conversely converted into a Mexican or Brazilian by listening to or playing Latin music.

This leads to how our identity, music, and culture influence each other. A study done by Ian Cross concluded that the bundles of elements and functions that are music for any given culture may overlap minimally with those of another culture, even for those cultures where "music" constitutes a discrete and identifiable category of human activity. The dynamics of culture, of music as cultural praxis, are neither necessarily reducible nor easily relatable, to the dynamics of our biology. (Cross, 2006). Christopher Westgate published a study in 2020 about popular music and its value regarding culture and its effect on identity. He mentioned the idea of habitus – habitat, habitats, and habits, the class-based tastes that lead people toward different ways of behaving – help to analyze how fans work to increase their standing in a community. Consider resistance, replete with incorporation into a larger dominant or "official culture". (Westgate, 2020). Westgate then concludes that the relationship of popular culture to the cultural industries is therefore complex, but the people are never at the mercy of the industries – they choose to make some of their commodities into popular culture but reject many more than they adopt". (Westgate, 2020).

The complex relationship and interplay of identity, music, culture, music streaming and social media platforms, and algorithms bring us to today 2022. Billboard started measuring and recognizing the most successful Year-End Top Artists of pop in 2006 (Billboard, 2022a) and the Year-End Top Latin Artists in 2011 (Billboard, 2022b). In 2022, Bad Bunny released his third

album, "Un Verano Sin Ti" and launched at No. 1 on Billboard, becoming the first Latin Artist to be Top Billboard Artist. This sets Bad Bunny as the only Latin artist ever with two albums singing solely in Spanish to reach the Top Billboard Artists. (Zellner, 2022). This could be tied back to the idea of streaming music platforms allowing for global trends. In this case, Spanish has an effect in an English-speaking market like the U.S.

Nevertheless, this is not the first Spanish song or album to break into the U.S. market. It can be traced back to the early 1990s the coexistence of Spanish and English in pop music with Marc Anthony, Shakira, and Jennifer Lopez. However, these artists constantly "flip their tongues" when performing. In 2018, it was stated by the VP of Marketing for Universal Music Latin Entertainment that Latin artists singing in Spanish and English reflect the U.S. Hispanic reality. (Cobo, 2018). There was a study by Potowski in 2004 regarding the Spanish language in Chicago and the study denotes that even students who were born in the U.S. or have lived here most of their life listen to Spanish music, an activity that promotes cultural and linguistic connections to Spanish. (Potowski, 2004). In addition, to these findings, there was another study regarding the Vitality of Spanish in the U.S. in 2013, and then it was concluded that Latinos in the United States are connected and Spanish speakers abroad, enjoying a vast range of opportunities to use Spanish (Carreira, 2013). In both studies, it is denoted that Spanish can and is used by Latino speakers in the U.S. as an advantage for communication with other nations as well as a sense of cultural and linguistic enjoyment.

The demographics and population of a country are constantly changing and shaping. The population and revenue, or market share, evolve on an annual basis. In a book by Gebesmair & Students (2016) they stated that the Latin music market around 1995 was smaller than the mainstream U.S. market. U.S. Latinos constitute over 11% of the U.S. population and are

forecasted to surpass African Americans as the country's largest minority group. Moreover, sales of Latin music went from USD 260 million in 1995 to USD 570.8 million in 1998, and approximately one-third of these profits were generated in the U.S. This represented only about 5% of total music industry earnings and was estimated to grow between 22% and 24% a year (RIAA 1999). Fast forward to 2013, Latino purchasing power was a trillion dollars, and the U.S. Latino market is the world's 11th largest economy and third largest economy in the Spanish-speaking world, after Mexico and Spain (Carreira, 2013).

Further, according to the annual statement of RIAA (2021a), the revenue (net after returns) from the digital streaming of Latin music in the U.S. increased by 36%. In 2020, the total revenue was USD 630.1 million; in 2021 the total revenue was $856.9 million. Moreover, in the annual statement of RIAA (2021b) the revenue (net after returns) from digital streaming of music in the U.S. increased by 23.8%. In 2020, the total revenue was $10,051.5 million; in 2021 the total revenue was $12,443.2 million. (See Appendices B and C for more data on these trends).

To complement the findings of the RIAA, the following statistics will break down data points of the U.S. and Hispanic markets. A study in March 2020, found that the Hispanic demographic increased their music consumption and 51% said that it was likely to increase (Statista, 2021b). In a similar analysis by Music Worldwide, Latin music revenues in the U.S. went up 19% between 2019 and 2020 (Music Business Worldwide, 2021). The 2022 report of IFPI also reported that the Latin America region represents 3.9% of the global market and has kept growing for its consecutive 12th year. The strong gains came from the U.S. where the revenues were up by 22.6% (IFPI, 2022).

Moreover, the Grammy awards also influence music consumption. In 2006, it was observed in a study that merchandisers came to rely on the Grammy awards as their sales cue and began to promote nominees and winners. As a result, and as a positive feedback loop, the award-winners began enjoying greater popular appeal through increased album sales (Watson & Anand, 2006). Nevertheless, the streaming era has shifted the dynamics in the music industry one more time. In an analysis of 2020 regarding popular music and the value of concert tickets, it was stated that music fans have shifted their expenditures on recordings to concert tickets. It was in the 1960s that concerts helped promote records, and today merchandise and streaming platforms now work to convert listeners into concert attendees (Westgate, 2020).

This tremendous shift in concert incomes for artists in the music industry was also commented on in the findings of a study published in 2022 regarding the streaming age of Canadian music. It was noted that even though streaming platforms help reach new audiences beyond borders, it forces musicians to rely on live shows and touring to generate income. Artists further denoted the importance of festivals (deWaard & Fauteux & Selman, 2022).

The pandemic in 2020 brought concerts to a halt worldwide. In an article in 2021 by Billboard, it was mentioned that consumers of live shows were eager to return to concert venues. According to Ticketmaster, less than 15% of ticket holders requested refunds for events. Further, it was commented concertgoers were eager to participate in the communal live experience after a year of lockdown (Brooks, 2021).

Social media is also a key factor that has become predominant in the music industry. Moe Hamzeh the Managing Director of Warner Music commented in the IFPI report of 2022 that growth has been perceived from digital service providers' increased subscription numbers but also from the rise in consumption of social media on platforms like TikTok, Snapchat, Instagram

Reels, and YouTube Shorts given that “these are pillars of people’s music discovery”. Similarly, the IFPI report backs up that claim stating that TikTok continued to be a significant source of music discovery for fans with record labels licensing catalogs to the platform(s) for consumers to use in short-form videos (IFPI, 2022a). Rolling Stone made an article in 2020 regarding this trend. Sony Music struck the first major multi-year licensing deal with TikTok. The article also claims that Western labels continue copying from Tencent and their combo of social media, music streaming, and online karaoke (Ingham, 2020).

The forecast for changes in population and revenues supports gathering data to measure changes, if any, in music consumption habits. There is data available online that will allow measuring the changes in consumption of streaming music, the role of social media, and concert consumption. If these consumption habits have evolved in the past ten years in the U.S. between the top Latin artists and top artists, then that could further support the rise of the Spanish language.

# Methodology

## Plan of Action

For the culminating experience, I will use a quantitative method and will gather data from different databases. I have selected the Year-End Charts of Billboard from 2011 to 2021 to compare the top Latin artists against the top artists. In the Our Industry section of IFPI, it is mentioned that the Artist 100 measures metrics of music consumption, radio airplay, and streaming provided weekly from the charts of Billboard. Hence, the decision to use Billboard and its selection of Year-End artists. Moreover, ten years of data is the only years of data available for the Year-End Charts for the Latin artists and a decade will showcase the tendency if there has been increased consumption of concerts considering the increasing number of active users of music streaming services and the increasing number of active users in social media platforms.

I will be gathering historical data of active users from music streaming and social media platforms and touring concert data from Pollstar. The streaming data will consider the increasing number of active users of music streaming platforms exclusively from the U.S. The streaming data will include platforms such as Spotify, Pandora, Apple, or Amazon depending on the availability per platform. A subscription will be required to access Pollstar to collect concert touring data from the ten Year-End Top and Latin Billboard artists of the past ten years. Once the data has been acquired, then data analysis will follow.

The data analysis considers concert performances as solo acts, festivals, or awards shows. The data available for the number of active U.S. streaming platforms were found in Statista and considered Spotify, Amazon, Apple, and Pandora. Moreover, I will collect the number of active users from social media platforms from Statista. The social media platforms available in Statista

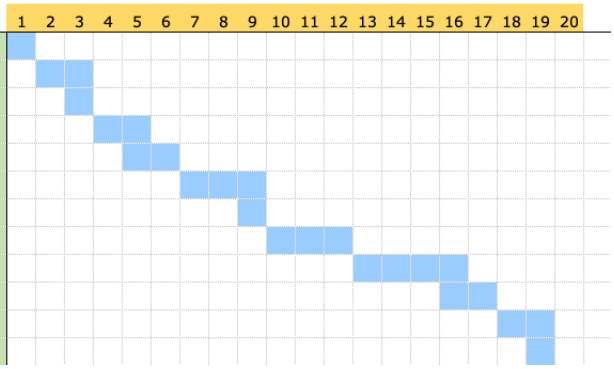
are Facebook, Instagram, Snapchat, Twitter, TikTok, and YouTube. A limitation of the project is that the number of active users from music streaming platforms only has data from 2016 to 2022, while the numbers of active users from social media platforms only have data from 2017 to 2022. This limits the project's concert data consumption from Pollstar between 2017 and 2022. However, to use 2022 data, the concert data will consider the following. If an artist appears in the Year-End Top Charts of 2016, the concert data considered for that artist is 2016 and 2017. This is considering artists can begin a tour late in the year and finish it in the next year.

An extra consideration is that BTS will not be considered a top English pop artist because BTS mainly sings in Korean. Concerts in Puerto Rico will be considered part of the United States. The analysis will compare whether concert consumption correlates to increased active users on music streaming and social media platforms. Tendencies and correlations will be observed amongst both groups over the last five years.

Correlations will be done with an ANOVA two-factor without replication analysis for two hypotheses. The first hypothesis regards Latin concerts with the number of active users for music streaming services and the number of active users from social media platforms. The second hypothesis is for English concerts. The two-factor replication ANOVA will demonstrate if the correlations are significant for either hypothesis. Furthermore, tendencies in consumption of concerts through the years will be shown to compare top and Latin music. Moreover, a Pareto distribution will be shown for the states that consume the most concerts. The top ten cities that consume the most concerts will be shown as well. Lastly, the top-grossing concerts of the year will be compared between the top and Latin artists.

## Timeline

| # | Activity | Start | End |
|---|---|---|---|
| 1 | Rewrite Thesis Statement | 1 | 1 |
| 2 | Literature Review + Reference List | 2 | 3 |
| 3 | Contact Advisor and send CE Proposal | 3 | 3 |
| 4 | Test Run Platforms Mining Data for Methods Section | 4 | 5 |
| 5 | Draft for Introduction and Abstract | 5 | 6 |
| 6 | Clean Data and Edit Literature Review | 7 | 9 |
| 7 | Add Advisor Feedback and Peer Review Feedback | 9 | 9 |
| 8 | Data Analysis and Methodology Draft | 10 | 12 |
| 9 | Conclusion Draft and Revision with Advisor | 13 | 16 |
| 10 | Results and conclusion draft | 16 | 17 |
| 11 | Review Introduction Draft | 18 | 19 |
| 12 | Revised complete culminating experience | 19 | 19 |




## Resources/Materials Needed

The resources needed for this project are:

1) Technology: A personal computer with access to the Internet and enough storage to collect data from online platforms. Microsoft office will be used to store the data and develop the project. A subscription to Pollstar. The monthly subscription for Pollstar is $199.
2) Human Resources: Myself, my advisor, and the professor(s).
3) Marketing and promotional resources: Nothing because the project will not use online surveys to gather data.
4) Space requirements: No space requirements because the project will use online platforms to gather data.

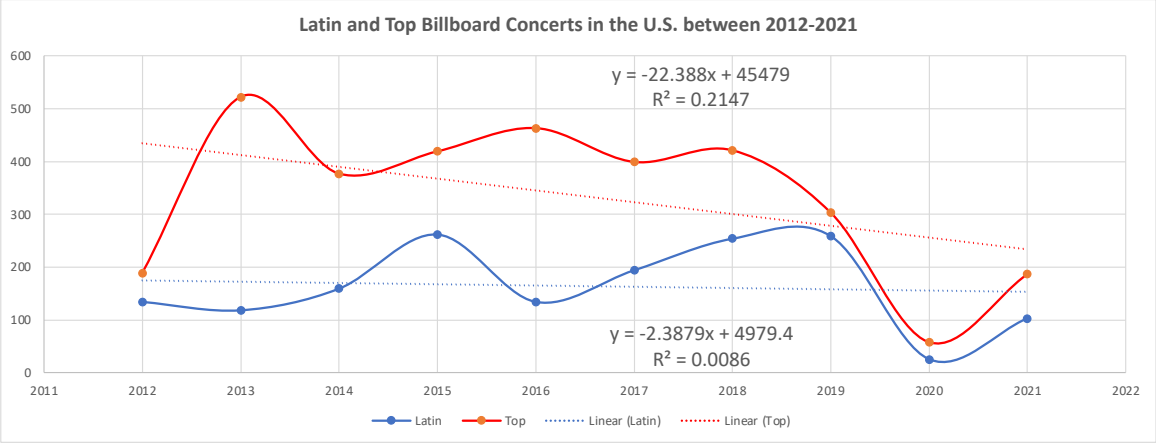
# Results

## Description and Findings

After gathering the data from Pollstar and Statista, here are the findings of the analysis. The number of total concerts from Pollstar for the Latin and Top Year-End Charts from Billboard are:

| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Latin | 134 | 118 | 159 | 262 | 134 | 194 | 254 | 259 | 25 | 103 | **1642** |
| Top | 189 | 522 | 377 | 419 | 463 | 399 | 421 | 303 | 58 | 187 | **3338** |

The data was gathered from Pollstar throughout the month of August 2022. For example, if Bad Bunny had concerts all around the world, then the data had to only consider the U.S. for public performances such as solo concerts, festivals, or awards. It can be stated that the top artists have a higher number of concerts in the U.S. than Latin artists. The trend for the concerts is below.

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The graph demonstrates that there have been more concerts in the U.S. for Top artists in years like 2013 and 2016. However, in 2019 before the pandemic, both types of artists decreased

their number of concerts. In 2020, with the pandemic of COVID-19, both types of artists approximated concerts to zero, and in 2021, both types increase the number of concerts.

Further, the trend line in the graph depicts that the Top artists are significantly decreasing the number of concerts per year, whereas the number of Latin concerts decreased significantly less across ten years. Both artists have a negative linear regression.

Latin: $y = -2.3879x + 4979.4$

Top: $y = -22.388x + 45479$

It could be stated that the trend in the past ten years between 2012 and 2021 is that Top Year-End Charts artists from Billboard are decreasing the number of concert performances in the U.S. at a higher rate than the Latin artists from Billboard. Latin artists are also decreasing their number of concert performances in the U.S. However, it is at a slower pace than the top artists.

Next, are the number of active users for music streaming platforms and social media that were found on Statista. Regarding the music streaming platforms data available were Spotify, Amazon, Apple, and Pandora for the U.S. For social media platforms, the data available was for Facebook, Instagram, Snapchat, Twitter, TikTok, and YouTube.

Number of Active Users in Music Streaming Platforms per year in the U.S. (in Millions)

| Platform | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Spotify | 45.8 | 52 | 38.7 | 58.2 | 55.1 |
| Amazon | 21.4 | 30.4 | 33.1 | 45.8 | 48.3 |
| Apple | 19.9 | 28.4 | 33.1 | 35.1 | 36.9 |
| Pandora | 74.5 | 68.6 | 63.1 | 78.5 | 87.3 |
| **Total** | **162** | **179** | **168** | **218** | **228** |

Number of Active Users in Social Media Platforms per year in the U.S. (in Millions)

| Platform | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Facebook | 219 | 221 | 223 | 230 | 235 |
| Instagram | 97 | 105 | 116 | 129 | 142 |
| Snapchat | 71 | 74 | 77 | 82 | 86 |
| Twitter | 68 | 69 | 77 | 93 | 84 |
| TikTok | *NA* | *NA* | *NA* | 66 | 78 |
| YouTube | 173 | 200 | 191 | 205 | 203 |
| **Total** | **628** | **669** | **684** | **805** | **828** |

Both tables were compiled in August 2022 from Statista. More information regarding both can be found in the reference section. A limitation of the analysis is that the information available for the music streaming and social media platforms only is for the past five years. This is considering that platforms like Spotify went public in 2018 and the information available online is after this point in time.

Despite this fact, the two-factor ANOVA analysis without replication was done with five years of data. The number of active users of music streaming and social media platforms in the U.S. will be the same for both hypotheses. The ANOVA considered the variables and data as seen below.

| | Latin Artists | | | Top Artists | | |
|---|---|---|---|---|---|---|
| Year | Number of Concerts | Number of Active users in Music Streaming platforms per year in the U.S. (in Millions) | Number of Active users in Social Media platforms per year in the U.S. (in Millions) | Number of Concerts | Number of Active users in Music Streaming platforms per year in the U.S. (in Millions) | Number of Active users in Social Media platforms per year in the U.S. (in Millions) |
| 2017 | 194 | 142.7 | 628 | 399 | 142.7 | 628 |
| 2018 | 254 | 161.6 | 669 | 421 | 161.6 | 669 |
| 2019 | 259 | 179.4 | 684 | 303 | 179.4 | 684 |
| 2020 | 25 | 168 | 805 | 58 | 168 | 805 |
| 2021 | 103 | 217.6 | 828 | 187 | 217.6 | 828 |

The first null hypothesis is if the number of concerts for Latin artists in the U.S. from the Billboard Year-End Charts is significantly influenced by the number of active users on music streaming and social media platforms. Side note, the p-value is the probability of obtaining the results of a statistical hypothesis test, assuming the null hypothesis is correct. A P-value less than 0.05 is statistically significant. (Beers, 2022). Meanwhile, the F value calculation is used in ANOVA to determine the ratio of explained variance to unexplained variance. The value can be used to determine whether the test is statistically significant. If the F-critical value is larger than the F-value, then you can accept the null hypothesis (IBM, 2021). The ANOVA is considering a P-value of 0.05. The F-critical value for this analysis was 6.38 against an F value of 2.56. The P-

value was 0.19. Since the F-critical value is higher than the F value and the P-value is higher than 0.05, then the null hypothesis can be accepted. This means that the number of Latin concerts from the Year-End Charts Latin artists from Billboard is influenced by the number of active users on music streaming and social media platforms.

The second null hypothesis for the number of concerts for top artists in the U.S. from the Billboard Year-End charts had an acceptance of the null hypothesis like Latin artists. This is because the number of active users in the U.S. is the same for either hypothesis. The acceptance of both hypotheses makes the case that the increased number of users for music streaming and social media platforms increases the consumption of live concerts for the Year-End Charts Billboard artists independently of the language.

Moreover, to determine the states and cities of the U.S. that consume the most concerts for both Latin and top artists on Billboard, I used a Pareto distribution. The Pareto distribution will consider that 80% of the consumption of concerts comes from 20% of the States and cities. The Pareto distribution of the States is as follows:

| # | State | Latin % |
|---|---|---|
| 1 | California | 23.31% |
| 2 | Texas | 18.13% |
| 3 | Florida | 12.11% |
| 4 | New York | 6.70% |
| 5 | Nevada | 5.41% |
| 6 | Illinois | 4.79% |
| 7 | Arizona | 3.43% |
| 8 | Massachusetts | 3.10% |
| 9 | New Jersey | 3.10% |
| 10 | Georgia | 2.48% |
| | | **82.55%** |

| # | State | Pop % |
|---|---|---|
| 1 | California | 15.92% |
| 2 | New York | 8.23% |
| 3 | Texas | 7.46% |
| 4 | Nevada | 6.30% |
| 5 | Florida | 5.85% |
| 6 | Pennsylvania | 4.61% |
| 7 | Illinois | 4.38% |
| 8 | Massachusetts | 3.22% |
| 9 | Georgia | 3.11% |
| 10 | New Jersey | 2.91% |
| | | **62.00%** |

The Pareto distribution does not apply to the top ten states for the top artists because they add up to 62%. It can be observed that the top five states are the same but shuffled in a different

order. That is California, Texas, Florida, New York, and Nevada. This is considering that these top five states have approximately one-third of the U.S. population.

| U.S. Census Gov Data 2020 | |
|---|---|
| **State** | **Population** |
| California | 39,538,223 |
| Texas | 29,145,505 |
| Florida | 21,538,187 |
| New York | 20,210,200 |
| Nevada | 3,104,600 |
| **Total** | **113,536,715** |
| USA | 331,000,000 |

34.3%

The data was taken from the U.S. Census 2020 in August 2022.

| # | State | City | % Latin |
|---|---|---|---|
| 1 | Florida | Miami | 6.10% |
| 2 | California | Los Angeles | 5.99% |
| 3 | Nevada | Las Vegas | 4.90% |
| 4 | New York | New York | 3.81% |
| 5 | Puerto Rico | San Juan | 3.32% |
| 6 | Florida | Orlando | 3.05% |
| 7 | Illinois | Rosemont | 3.00% |
| 8 | Texas | El Paso | 2.62% |
| 9 | Texas | Houston | 2.62% |
| 10 | Massachusett | Boston | 2.45% |
| | | | **37.87%** |

| # | State | City | % Top |
|---|---|---|---|
| 1 | Nevada | Las Vegas | 6.18% |
| 2 | California | Los Angeles | 4.29% |
| 3 | New York | New York | 4.03% |
| 4 | Illinois | Chicago | 2.90% |
| 5 | Pennsylvania | Philadelphia | 2.88% |
| 6 | Georgia | Atlanta | 2.76% |
| 7 | Texas | Houston | 2.23% |
| 8 | Florida | Miami | 2.09% |
| 9 | Massachusetts | Boston | 2.03% |
| 10 | California | Inglewood | 1.95% |
| | | | **31.33%** |

The top ten cities consume around a third of the concerts nationwide for both types of artists. There are six repeated cities for the top ten. The cities are Miami, Los Angeles, Las Vegas, New York, Houston, and Boston.

Lastly, the average gross and average tickets sold in the last 36 months from Pollstar for the Year-End Charts artists from Billboard in 2021 were as follows. One limitation for the average gross and tickets for these artists is that it includes more countries, not just the United

States. For a more country-detailed report, I would have had to pay extra, which is out of this project's scope. Nonetheless, the data is as follows:

| # | Type | Year-End Charts Billboard 2021 | Artist | Box Office Reports of past 36 months | Avg Tickets Sold | Avg Gross |
|---|---|---|---|---|---|---|
| 1 | Latin | 1 | Bad Bunny | 50 | $14,619 | $2,254,690 |
| 2 | Top | 8 | Justin Bieber | 15 | $14,275 | $1,979,087 |
| 3 | Top | 5 | Morgan Wallen | 63 | $11,881 | $1,634,460 |
| 4 | Top | 6 | Ariana Grande | 32 | $13,863 | $1,406,826 |
| 5 | Top | 7 | Doja Cat | 6 | $11,369 | $900,634 |
| 6 | Latin | 8 | Maluma | 60 | $8,930 | $882,801 |
| 7 | Latin | 2 | Rauw Alejandro | 18 | $10,524 | $745,645 |
| 8 | Top | 9 | Luke Combs | 68 | $14,517 | $742,283 |
| 9 | Latin | 7 | Ozuna | 8 | $9,934 | $716,351 |
| 10 | Latin | 3 | Karol G | 37 | $9,857 | $568,232 |
| 11 | Latin | 5 | J Balvin | 20 | $8,257 | $537,198 |
| 12 | Latin | 6 | Jhay Cortez | 7 | $5,863 | $376,248 |
| 13 | Top | 2 | Olivia Rodrigo | 5 | $6,236 | $358,928 |
| 14 | Latin | 9 | Myke Towers | 10 | $3,747 | $338,643 |
| 15 | Top | 1 | Drake | 0 | $0 | $0 |
| 16 | Top | 3 | The Weeknd | 0 | $0 | $0 |
| 17 | Latin | 4 | Kali Uchis | 8 | $0 | $0 |
| 18 | Top | 4 | Taylor Swift | 2 | $0 | $0 |
| 19 | Latin | 10 | Eslabon Armado | 0 | $0 | $0 |
| 20 | Top | 10 | Pop Smoke | 3 | $0 | $0 |
| | **Total Latin** | | | **212** | **$71,731** | **$6,419,808** |
| | **Total Top** | | | **194** | **$72,141** | **$7,022,218** |

Considering the previous limitations, on average, half of the top ten highest-grossing concerts are from the Top Year-End Charts and the remaining half are from Latin artists. Overall, Latin artists are having more concerts worldwide against the top artists. However, the top artists have higher grosses on average. This section will be expanded in the Limitations and Further Research section.

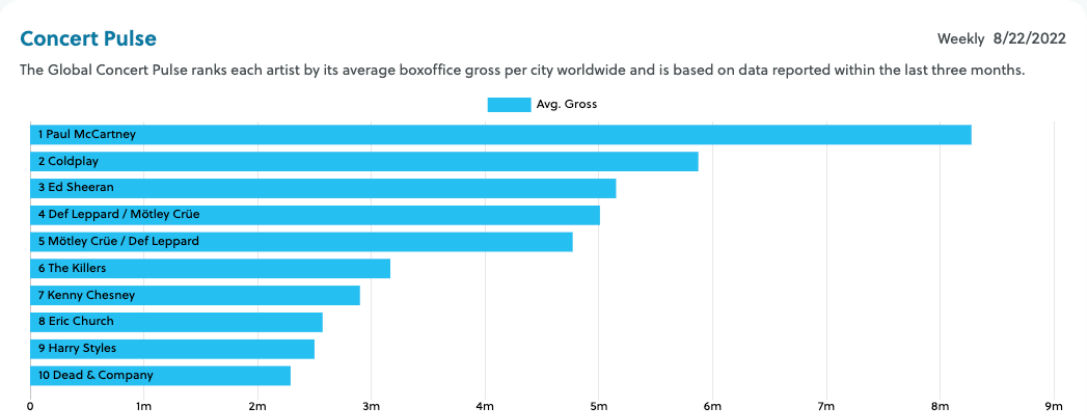
# Conclusion

The consumption of Spanish concerts in the U.S. from the Latin Year-End Charts of Billboard is significantly influenced by the number of active users on music streaming and social media platforms. Both hypotheses proved that the more active users are on social media and music streaming platforms, the more consumption of concerts will be perceived in the U.S. independently of the language.

Further, the analysis showed that in the U.S. the top artists from Billboard are decreasing their number of concert performances. Meanwhile, the concert consumption of Billboard's Year-End Top Latin artists remained almost constant in the last ten years. This effect could have been perceived at first glance as if Spanish or Latin pop music consumption in the U.S. has increased. Despite the lockdowns of the COVID pandemic, the data shows that in the U.S. both top and Latin artists from Billboard are decreasing their concert performances. Nevertheless, Latin concert consumption is decreasing at a slower pace when compared to the top artists.

## Limitations and further research

A limitation of the project is that other artists are not in the Year-End Billboard charts and yet are touring the U.S. with higher numbers of concerts and grossing revenues like Paul McCartney and Los Bukis in 2021 and 2022. Moreover, BTS was another higher-grossing tour but was not considered because they sing mainly in Korean.




The above graph was taken from the Concert Pulse section from Pollstar in August 2022.

Another limitation is that the project only considers the English-speaking market of the U.S. and no other countries. This could expand on how Latin artists are been marketed, demanded, and consumed around the globe. The U.S. was solely considered for this project because as of today it is the biggest market for music. Further, the U.S. is my country of residence, hence my persistence in knowing which language is getting consumed the most in music.

| # | Type | Year-End Charts Billboard | Artist | Box Office Reports of past 36 months | Avg Tickets Sold | Avg Gross |
|---|---|---|---|---|---|---|
| 1 | Top | 2020 | BTS | 8 | $47,884 | $7,145,982 |
| 2 | *Not in Charts* | *Not in Charts* | **Paul McCartney** | 10 | $25,987 | $6,338,816 |
| 3 | *Not in Charts* | *Not in Charts* | **Los Bukis** | 6 | $39,704 | $5,518,573 |
| 4 | Latin | 2020 | Romeo Santos | 3 | $31,039 | $4,513,360 |
| 5 | Top | 2016 | Coldplay | 5 | $52,611 | $4,061,217 |
| 6 | Top | 2013 | P!nk | 6 | $25,288 | $2,779,831 |
| 7 | Top | 2019 | Ed Sheeran | 19 | $28,196 | $2,685,582 |
| 8 | Top | 2020 | Harry Styles | 35 | $17,896 | $2,321,090 |
| 9 | Latin | 2021 | Bad Bunny | 50 | $14,619 | $2,254,690 |
| 10 | Top | 2021 | Justin Bieber | 15 | $14,275 | $1,979,087 |
| 8 | Top | 2020 | Post Malone | 56 | $13,605 | $1,693,972 |
| 3 | Top | 2021 | Morgan Wallen | 63 | $11,881 | $1,634,460 |
| 10 | Latin | 2012 | Mana | 11 | $13,534 | $1,514,802 |

For further research, it would be key to understand the relationship between the gross, language, and the number of active users in music streaming and social media platforms. This is considering that artists like Paul McCartney and Los Bukis are not in the Year-End Billboard Charts and yet are some of the highest-grossing tours between 2021 and 2022. Lastly, this same effect happened with artists like Richie Valens or Santana who are not on the Year-End Billboard charts yet have been signing in Spanish for years in English-speaking markets.

# References


Anderson, Tim J. (2014) Popular Music in a Digital Music Economy: Problems and Practices for an Emerging Service Industry

Andrew deWaard, Brian Fauteux & Brianne Selman (2022) Independent Canadian Music in the Streaming Age: The Sound from above (Critical Political Economy) and below (Ethnography of Musicians), Popular Music and Society, 45:3, 251-278, DOI: 10.1080/03007766.2021.2010028

Beers, Brian (2022) P-Value: What It Is, How to Calculate It, and Why It Matters. Investopedia. https://www.investopedia.com/terms/p/p-value.asp

Bello, P., Garcia, D. Cultural Divergence in popular music: the increasing diversity of music consumption on Spotify across countries. Humanit Soc Sci Commun 8, 182 (2021). https://doi.org/10.1057/s41599-021-00855-1

Billboard (2022a) Year-End Charts: Top Artists. https://www.billboard.com/charts/year-end/top-artists/

Billboard (2022b) Year-End Charts: Top Latin Artist. https://www.billboard.com/charts/year-end/top-latin-artists/

Brooks, Dave (2021) That's the Ticket. Billboard.

Carreira, Maria. 2013. The Vitality of Spanish in the United States. Heritage Journal, 10(3). https://doi.org/10.46538/hlj.10.3.10

Christopher Cwynar & Brian Fauteux (2020) Introduction to Public Radio and Music in the Streaming Era Symposium Music in the Public Service: Public Radio and Music in the Streaming Era, Journal of Radio & Audio Media, 27:1, 4-7, DOI: 10.1080/19376529.2019.1706260

Cobo, Leila. "The Biz's Big Bilingual Bet: Following the success of 'Despacito,' labels are now bullish on once-risky tracks that swing evenly between English and Spanish--but crafting them is far from easy." Billboard, vol. 130, no. 14, 2 June 2018, p. 24. Gale Academic OneFile, link.gale.com/apps/doc/A542576681/AONE?u=ecl_main&sid=googleScholar&xid=c41754d0. Accessed 21 July 2022.

Cross, Ian (2006) Music, Cognition, Culture, and Evolution. https://doi.org/10.1111/j.1749-6632.2001.tb05723.x

Gao, Andrea (2021) Catching the Earworm: Understanding Music Popularity Using Machine Learning Models. https://doi.org/10.1051/e3sconf/202125303024

Gebesmair, A., & Smudits, M. A. (2016). Global repertoires of popular music within and beyond the Transnational Music Industry. Taylor and Francis.

Hodgson, T. (2021). Spotify and the democratization of music. Popular Music, 40(1), 1-17. doi:10.1017/S0261143021000064

IBM (2021) F value. Cognos Analytics. https://www.ibm.com/docs/no/cognos-analytics/11.1.0?topic=terms-f-value

IFPI (2022a) Global Music Report 2022

IFPI (2022b) Our Industry. IFPI. https://www.ifpi.org/our-industry/global-charts/

Ingham, Tim (2019) English-Language Music Is Losing Its Stranglehold On Global Pop Charts - And YouTube Is Driving The Change. Music Business Worldwide. https://www.musicbusinessworldwide.com/english-language-music-is-losing-its-stranglehold-on-global-pop-charts-and-youtube-proves-

it/#:~:text=The%20VP%20of%20Nielsen%20Music,and%20Hindi%20on%20six%20percent.

Ingham, Tim (2020). Social Media, Not Streaming, Is the Music Industry's Future. Rolling Stone. https://www.rollingstone.com/pro/features/social-media-tiktok-instagram-video-games-music-money-1097428/

Jovanovska, L. (2019). The Geographic Flow of Music On Spotify. Proceedings of the 16th International Conference for Informatics and Information Technology (CIIT 2019). Bistra, Mavrovo, Macedonia, 2019 – Presented at the Conference as a Student Paper, Won 3rd Prize.

Maasø, Arnt & Spilker, Hendrik Storstein (2022) The Streaming Paradox: Untangling the Hybrid Gatekeeping Mechanisms of Music Streaming, Popular Music and Society, 45:3, 300-316, DOI: 10.1080/03007766.2022.2026923

Music Business Worldwide (2021) Six Reasons Why Regionality Still Matters for the Global Music Streaming Business. https://www.musicbusinessworldwide.com/six-reasons-why-regionality-still-matters-for-the-global-music-streaming-business/

Parc J, Kim SD. The Digital Transformation of the Korean Music Industry and the Global Emergence of K-Pop. Sustainability. 2020; 12(18):7790. https://doi.org/10.3390/su12187790

Potowski, K. (2004). Spanish language shift in Chicago. Southwest Journal of Linguistics, 23(1), 87-116.

Rapuano, Deborah L. (2009) Becoming Irish or Becoming Irish Music? Boundary Construction in Irish Music Communities. https://doi.org/10.1111/j.1537-4726.2001.2401_103.x

RIAA. (2021a). Year-End 2021 RIAA U.S. Latin Music Revenue Report. https://www.riaa.com/wp-content/uploads/2022/04/2021-RIAA-Year-End-U.S.-Latin-Music-Revenue-Report.pdf

RIAA. (2021b). Year-End 2021 RIAA Revenue Statistics. https://www.riaa.com/wp-content/uploads/2022/03/2021-Year-End-Music-Industry-Revenue-Report.pdf

Statista (2021b) Distribution of music consumption in the United States in 2021, by genre and format. https://www-statista-com.catalog.berklee.edu:2443/statistics/502908/music-consumption-genre-format-usa/

Statista (2021c) Number of Pandora's monthly active users in the United States from the 4th quarter of 2013 to the 2nd quarter of 2021. https://www-statista-com.catalog.berklee.edu:2443/statistics/190989/active-users-of-music-streaming-service-pandora-since-2009/

Statista (2021d) Forecast of the number of Facebook users in the United States from 2017 to 2025. https://www-statista-com.catalog.berklee.edu:2443/forecasts/1136345/facebook-users-in-the-united-states

Statista (2021e) Forecast of the number of Instagram users in the United States from 2017 to 2025. https://www-statista-

com.catalog.berklee.edu:2443/forecasts/1138863/instagram-users-in-the-united-states

Statista (2021f) Forecast of the number of Snapchat users in the United States from 2017 to 2025. https://www-statista-com.catalog.berklee.edu:2443/forecasts/1142969/snapchat-users-in-the-united-states

Statista (2021g) Forecast of the number of Twitter users in the United States from 2017 to 2025. https://www-statista-com.catalog.berklee.edu:2443/forecasts/1146561/twitter-users-in-the-united-states

Statista (2021h) Forecast of the number of YouTube users in the United States from 2017 to 2025. https://www-statista-com.catalog.berklee.edu:2443/forecasts/1147203/youtube-users-in-the-united-states

Statista (2022g) Number of active users of the major music streaming services in the United States from 2016 to 2023. https://www-statista-com.catalog.berklee.edu:2443/statistics/293749/spotify-pandora-number-active-users/

Statista (2022h) Number of TikTok users in the United States from 2020 to 2023. https://www-statista-com.catalog.berklee.edu:2443/statistics/1100836/number-of-us-tiktok-users/

The Economist (2022). What Spotify data show about the decline of English: Our interactive analysis of five years of hits in 70 countries - and the links between

them. https://www.economist.com/interactive/graphic-detail/2022/01/29/what-spotify-data-show-about-the-decline-of-english

U.S. Census Bureau (2020a). Demographic Turning Points for the United States: Population Projections for 2020 to 2060. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf

U.S. Census Bureau (2020b) California: 2020 Census. https://www.census.gov/library/stories/state-by-state/california-population-change-between-census-decade.html

U.S. Census Bureau (2020b) Texas: 2020 Census. https://www.census.gov/library/stories/state-by-state/texas-population-change-between-census-decade.html

U.S. Census Bureau (2020c) Florida: 2020 Census. https://www.census.gov/library/stories/state-by-state/florida-population-change-between-census-decade.html

U.S. Census Bureau (2020d) New York: 2020 Census. https://www.census.gov/library/stories/state-by-state/new-york-population-change-between-census-decade.html

U.S. Census Bureau (2020e) Nevada: 2020 Census. https://www.census.gov/library/stories/state-by-state/nevada-population-change-between-census-decade.html

Watson, Mary R. & Anand, N. (2006).

Popular Music, Volume 25, Issue 1, January 2006, pp. 41 - 56

DOI: https://doi.org/10.1017/S0261143005000747

Westgate, Christopher J. (2020) Popular Music and the Value of Concert Tickets.

Routledge. https://doi.org/10.1080/03007766.2019.1601152

Zellner, Xander (2022) Bad Bunny Becomes First Latin Artist to Top Billboard Artist

100 Chart, Thanks to 'Un Verano Sin Ti'. Billboard.

https://www.billboard.com/music/chart-beat/bad-bunny-first-latin-musician-top-artist-100-chart-1235072345/

# Annexes

Annex 1)

Table 3.

**Population by Race and Ethnicity: Projections 2030 to 2060**

The non-Hispanic White population is projected to shrink by nearly 19 million people by 2060.
(In thousands)

| Characteristics | Population | | | | | | Change from 2016 to 2060 | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | | 2030 | | 2060 | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| **Total population** | **323,128** | **100.0** | **355,101** | **100.0** | **404,483** | **100.0** | **81,355** | **25.2** |
| One race | | | | | | | | |
| White | 248,503 | 76.9 | 263,453 | 74.2 | 275,014 | 68.0 | 26,511 | 10.7 |
| Non-Hispanic White | 197,970 | 61.3 | 197,992 | 55.8 | 179,162 | 44.3 | -18,808 | -9.5 |
| Black or African American | 43,001 | 13.3 | 49,009 | 13.8 | 60,690 | 15.0 | 17,689 | 41.1 |
| American Indian and Alaska Native | 4,055 | 1.3 | 4,663 | 1.3 | 5,583 | 1.4 | 1,528 | 37.7 |
| Asian | 18,319 | 5.7 | 24,394 | 6.9 | 36,815 | 9.1 | 18,496 | 101.0 |
| Native Hawaiian and Other Pacific Islander | 771 | 0.2 | 913 | 0.3 | 1,125 | 0.3 | 354 | 45.9 |
| Two or More Races | 8,480 | 2.6 | 12,669 | 3.6 | 25,255 | 6.2 | 16,775 | 197.8 |
| Hispanic | 57,470 | 17.8 | 74,807 | 21.1 | 111,216 | 27.5 | 53,746 | 93.5 |
| **Native-born population** | **279,283** | **100.0** | **301,318** | **100.0** | **335,150** | **100.0** | **55,867** | **20.0** |
| One race | | | | | | | | |
| White | 222,942 | 79.8 | 232,638 | 77.2 | 236,955 | 70.7 | 14,013 | 6.3 |
| Non-Hispanic White | 189,896 | 68.0 | 188,169 | 62.5 | 165,964 | 49.5 | -23,932 | -12.6 |
| Black or African American | 38,345 | 13.7 | 43,013 | 14.3 | 51,195 | 15.3 | 12,850 | 33.5 |
| American Indian and Alaska Native | 3,465 | 1.2 | 4,036 | 1.3 | 4,975 | 1.5 | 1,510 | 43.6 |
| Asian | 6,377 | 2.3 | 9,373 | 3.1 | 17,289 | 5.2 | 10,912 | 171.1 |
| Native Hawaiian and Other Pacific Islander | 576 | 0.2 | 686 | 0.2 | 866 | 0.3 | 290 | 50.3 |
| Two or More Races | 7,578 | 2.7 | 11,572 | 3.8 | 23,869 | 7.1 | 16,291 | 215.0 |
| Hispanic | 37,819 | 13.5 | 51,466 | 17.1 | 83,971 | 25.1 | 46,152 | 122.0 |
| **Foreign-born population** | **43,845** | **100.0** | **53,783** | **100.0** | **69,333** | **100.0** | **25,488** | **58.1** |
| One race | | | | | | | | |
| White | 25,560 | 58.3 | 30,815 | 57.3 | 38,059 | 54.9 | 12,499 | 48.9 |
| Non-Hispanic White | 8,073 | 18.4 | 9,823 | 18.3 | 13,198 | 19.0 | 5,125 | 63.5 |
| Black or African American | 4,656 | 10.6 | 5,996 | 11.1 | 9,494 | 13.7 | 4,838 | 103.9 |
| American Indian and Alaska Native | 590 | 1.3 | 627 | 1.2 | 609 | 0.9 | 19 | 3.2 |
| Asian | 11,942 | 27.2 | 15,021 | 27.9 | 19,525 | 28.2 | 7,583 | 63.5 |
| Native Hawaiian and Other Pacific Islander | 195 | 0.4 | 227 | 0.4 | 259 | 0.4 | 64 | 32.8 |
| Two or More Races | 902 | 2.1 | 1,097 | 2.0 | 1,386 | 2.0 | 484 | 53.7 |
| Hispanic | 19,652 | 44.8 | 23,341 | 43.4 | 27,246 | 39.3 | 7,594 | 38.6 |

Note: The official population estimates for the United States are shown for 2016; the projections use the Vintage 2016 population estimate for July 1, 2016, as the base population for projecting from 2017 to 2060. Percentages will not add to 100 because Hispanics may be any race.
Source: U.S. Census Bureau, 2017 National Population Projections.

Annex 2)

# YEAR-END 2021 RIAA
# U.S. LATIN MUSIC REVENUE STATISTICS

For a list of authorized services see www.whymusicmatters.com

**United States Estimated Retail Dollar Value** (In Millions, net after returns)

| DIGITAL STREAMING | | 2020 | 2021 | % CHANGE 2020-2021 |
|---|---|---|---|---|
| (Units)<br>(Dollar Value) | Paid Subscription | $439.0 | $592.8 | 35.0% |
| | On-Demand Streaming (Ad-Supported)[1] | $128.3 | $187.4 | 46.1% |
| | SoundExchange Distributions[2] | $37.5 | $45.8 | 22.1% |
| | Other Ad-Supported Streaming[3] | $25.3 | $30.9 | 22.2% |
| | **Total Streaming Revenues** | **$630.1** | **$856.9** | **36.0%** |
| **PERMANENT DOWNLOAD** | | | | |
| (Units)<br>(Dollar Value) | Download Single | 8.0<br>$9.3 | 7.3<br>$8.5 | -8.8%<br>-8.1% |
| | Download Album | 0.5<br>$4.4 | 0.5<br>$4.4 | -2.5%<br>-0.7% |
| | Other Downloads[4] | 0.1<br>$0.2 | 0.1<br>$0.2 | 9.4%<br>1.2% |
| | Ringtones & Ringbacks[5] | 0.2<br>$0.6 | 0.3<br>$0.6 | 4.5%<br>4.5% |
| | **Total Permanent Download Units**<br>**Total Permanent Download Value** | **8.8**<br>**$14.5** | **8.1**<br>**$13.7** | **-7.9%**<br>**-5.2%** |
| **TOTAL DIGITAL VALUE** | | **$644.6** | **$870.6** | **35.1%** |
| | Synchronization Royalties[6] | $5.5 | $7.7 | 39.7% |
| **PHYSICAL** | | | | |
| (Units Shipped)<br>(Dollar Value) | CD | 0.1<br>$1.4 | 0.2<br>$2.0 | 37.0%<br>44.4% |
| | LP | 0.1<br>$3.3 | 0.2<br>$5.8 | 94.3%<br>76.0% |
| | Music Video[7] | 0.0<br>-$0.1 | 0.0<br>$0.0 | -96.8%<br>-96.8% |
| | **Total Physical Units**<br>**Total Physical Value** | **0.2**<br>**$4.5** | **0.4**<br>**$7.7** | **69.0%**<br>**71.2%** |
| **TOTAL U.S. LATIN MUSIC REVENUES** | | | | |
| | **Total Units**<br>**Total Value** | **9.0**<br>**$654.6** | **8.5**<br>**$886.1** | **-6.0%**<br>**35.4%** |
| | **% of Revenues[8]**<br>Physical<br>Digital | **2020**<br>0.7%<br>99.3% | **2021**<br>0.9%<br>99.1% | |

Retail Value is the value of shipments at recommended or estimated list price
Formats with no retail value equivalent included at wholesale value

**Note: Historical data updated for 2020**

[1] Ad-supported audio and music video services not operating under statutory licenses
[2] Estimated payments in dollars to performers and copyright holders for digital radio services under statutory licenses
[3] Revenues from services that are not distributed by SoundExchange and not included in other streaming categories
[4] Includes Kiosk singles and albums, and Digital Music Videos
[5] Includes Master Ringtones, Ringbacks, and Other Mobile
[6] Includes fees and royalties from synchronization of sound recordings with other media
[7] Includes DVD music video
[8] Synchronization royalties excluded from calculation

Annex 3)

# YEAR-END 2021
# RIAA MUSIC REVENUE STATISTICS

**United States Estimated Retail Dollar Value** (In Millions, net after returns)

For a list of authorized services see www.whymusicmatters.com

| DIGITAL SUBSCRIPTION & STREAMING | | 2020 | 2021 | % CHANGE 2020-2021 |
|---|---|---|---|---|
| (Units)<br>(Dollar Value) | Paid Subscription[1] | 75.5<br>$6,972.7 | 84.0<br>$8,573.6 | 11.3%<br>23.0% |
| | Limited Tier Paid Subscription[2] | $719.9 | $907.3 | 26.0% |
| | On-Demand Streaming (Ad-Supported)[3] | $1,200.1 | $1,760.7 | 46.7% |
| | SoundExchange Distributions[4] | $947.4 | $992.5 | 4.8% |
| | Other Ad-Supported Streaming[5] | $211.2 | $209.0 | -1.0% |
| | **Total Streaming Revenues** | **$10,051.5** | **$12,443.2** | **23.8%** |
| **DIGITAL PERMANENT DOWNLOAD** | | | | |
| (Units)<br>(Dollar Value) | Download Single | 249.3<br>$303.3 | 209.3<br>$256.0 | -16.0%<br>-15.6% |
| | Download Album | 33.1<br>$319.3 | 29.1<br>$282.2 | -12.1%<br>-11.6% |
| | Ringtones & Ringbacks | 8.1<br>$20.2 | 6.0<br>$15.0 | -25.6%<br>-25.6% |
| | Other Digital[6] | 1.6<br>$21.9 | 1.3<br>$33.6 | -16.2%<br>53.5% |
| | **Total Digital Download Revenues** | **$664.7** | **$586.8** | **-11.7%** |
| **TOTAL DIGITAL VALUE** | | **$10,716.1** | **$13,030.0** | **21.6%** |
| | Synchronization Royalties[7] | $265.2 | $302.9 | 14.2% |
| **PHYSICAL** | | | | |
| (Units Shipped)<br>(Dollar Value) | CD | 31.6<br>$483.3 | 46.6<br>$584.2 | 47.7%<br>20.9% |
| | LP/EP | 23.7<br>$643.9 | 39.7<br>$1,037.7 | 67.3%<br>61.2% |
| | Music Video | 1.0<br>$27.4 | 1.3<br>$19.9 | 31.0%<br>-27.5% |
| | Other Physical[8] | 0.5<br>$8.8 | 0.8<br>$14.0 | 55.5%<br>59.4% |
| | **Total Physical Units**<br>**Total Physical Value** | **56.8**<br>**$1,163.3** | **88.4**<br>**$1,655.8** | **55.7%**<br>**42.3%** |
| **TOTAL DIGITAL AND PHYSICAL** | | | | |
| | **Total Units[9]**<br>**Total Value** | **348.9**<br>**$12,144.7** | **334.2**<br>**$14,988.6** | **-4.2%**<br>**23.4%** |
| | **% of Shipments[10]**<br>Physical<br>Digital | **2020**<br>10%<br>90% | **2021**<br>11%<br>89% | |

Retail Value is the value of shipments at recommended or estimated list price
Formats with no retail value equivalent included at wholesale value

**Note: Historical data updated for 2020**

[1] Streaming, tethered, and other paid subscription services not operating under statutory licenses
Subscription volume is annual average number of subscriptions, excludes limited tier
[2] Paid streaming services with interactivity limitations by availability, device restriction, catalog limitations, on demand access, or other factors
[3] Ad-supported audio and music video services not operating under statutory licenses
[4] Estimated payments to performers and copyright holders for digital and customized radio services under statutory licenses
[5] Revenues for statutory services that are not distributed by SoundExchange and not included in other streaming categories
[6] Includes Kiosks, music video downloads, and starting in 2016 other digital music licensing
[7] Includes fees and royalties from synchronization of sound recordings with other media
[8] Includes CD Singles, Cassettes, Vinyl Singles, DVD Audio, SACD
[9] Units total includes both albums and singles, and does not include subscriptions or royalties
[10] Synchronization Royalties excluded from calculation

Annex 4)

*Latin Anova: Two-Factor Without Replication*

| *SUMMARY* | *Count* | *Sum* | *Average* | *Variance* |
|---|---|---|---|---|
| 194 | 2 | 770.7 | 385.35 | 117758.045 |
| 254 | 2 | 830.6 | 415.3 | 128727.38 |
| 259 | 2 | 863.4 | 431.7 | 127310.58 |
| 25 | 2 | 973 | 486.5 | 202884.5 |
| 103 | 2 | 1045.6 | 522.8 | 186294.08 |
| Number of Active Users in Music Streaming Platforms per year in the USA (in Millions) | 5 | 869.3 | 173.86 | 774.868 |
| Number of Active Users in Social Media Platforms per year in the USA (in Millions) | 5 | 3614 | 722.8 | 7802.7 |

ANOVA

| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
|---|---|---|---|---|---|---|
| Rows | 24673.496 | 4 | 6168.374 | 2.56034757 | 0.192351112 | 6.38823291 |
| Columns | 753337.809 | 1 | 753337.809 | 312.692879 | 6.00776E-05 | 7.70864742 |
| Error | 9636.776 | 4 | 2409.194 | | | |
| Total | 787648.081 | 9 | | | | |

Annex 5)

*Top Anova: Two-Factor Without Replication*

| *SUMMARY* | *Count* | *Sum* | *Average* | *Variance* |
|---|---|---|---|---|
| 399 | 2 | 770.7 | 385.35 | 117758.045 |
| 421 | 2 | 830.6 | 415.3 | 128727.38 |
| 303 | 2 | 863.4 | 431.7 | 127310.58 |
| 58 | 2 | 973 | 486.5 | 202884.5 |
| 187 | 2 | 1045.6 | 522.8 | 186294.08 |
| Number of Active Users in Music Streaming Platforms per year in the USA (in Millions) | 5 | 869.3 | 173.86 | 774.868 |
| Number of Active Users in Social Media Platforms per year in the USA (in Millions) | 5 | 3614 | 722.8 | 7802.7 |

ANOVA

| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
|---|---|---|---|---|---|---|
| Rows | 24673.496 | 4 | 6168.374 | 2.56034757 | 0.19235111 | 6.38823291 |
| Columns | 753337.809 | 1 | 753337.809 | 312.692879 | 6.0078E-05 | 7.70864742 |
| Error | 9636.776 | 4 | 2409.194 | | | |
| Total | 787648.081 | 9 | | | | |