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An Examination of the Decline of Bands in the Top 20 Singles and Album Charts from 1961-2025

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Research Article

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Abstract

Media reports have stated that the number of hit songs and albums performed by bands has declined over time. Possible reasons for this are organized into five theoretical areas: changing consumer tastes, technology allowing for solo projects, social media rewarding individual performers, financial incentives for solo artists, and record labels being less interested in bands. Within these theories, a portion of the blame has been pointed toward Spotify and their use of algorithms. Two data sets were constructed, the top 20 songs from Billboard's annual Hot 100 chart for the years 1961 to 2025 and the top 20 albums from Billboard's annual Top 200 chart for the same time period. Ordinary least squares was employed to determine that a significant decline in hits by bands had indeed occurred on both charts. A Mann-Whitney two-sample t-test was used to determine whether Spotify was to blame. The results indicate that Spotify is not to blame as the declining trend began years before Spotify came to the U.S. There is evidence that points toward changes in consumer tastes over time, as the decline in hit songs by bands correlates to an increase in the number of hits made using collaborations, particularly an increase in the number of hip-hop songs.

Keywords: Spotify, recorded music, consumer tastes, musical bands, solo artists

An Examination of the Decline of Bands in the Top 20 Singles and Albums Charts

In recent years there have been observations made by news and entertainment industry media that the number of hit songs recorded by bands has decreased. Leight (2024) points out that in 1994, one-third of the top ten songs on the Billboard Hot 100 list were performed by groups, but from 2018 to 2023 the number of top 10 hits by bands fell to only 8%. Lynskey (2021) also points toward this decline in the success of music made by bands through examining the Spotify Top 50 list of songs most played globally. East (2024) points out that there has not been a band to have a number one song on the charts in the U.K. since the Arctic Monkeys in 2005. Tapper (2023) makes a similar assertion concerning the decline of consumer popularity of music by bands. If all these observations are correct, the natural question to ask is why has this occurred?

Theories for the Decline

Writers addressing this question have put forth a number of theories that are organized here into five specific categories.

1. A change in consumer tastes and preferences.

Leight (2024) points out that rock music is typically band oriented. Any decrease in the popularity of rock will therefore decrease the presence of bands at the top of the charts. This would only be true, however, if the genre of music that replaced rock on the charts were performed by solo artists or by collaborations, and not by bands.

In studying trends in genres, Pettibon and Hitchcock (2022) considered the entire Billboard Hot 100 from 1974 to 2018. Using a multinomial logit model they found a significant rise in country and also hip-hop music, while also seeing a decline in rock. Pettibone and Hitchcock (2022) counter that genre is an imperfect measure for categorizing music, yet Lynskey

(2021) postulates that music in general has become more compartmentalized into sub-genres. This could make any change in consumer preferences for one particular genre stand out more than before.

If tastes are changing, would the change be observed across generations or from individuals across time? Kelly (2022) found that a decrease in the interest for music by bands is observed in younger listeners who are just not as interested in rock as the generation of music consumers who went before them. Further evidence for this is seen in the smaller number of streams that bands receive compared to other genres (Lynskey, 2021).

This trend of increased popularity of solo artists is also observed in the decrease of the number of bands headlining festivals. Bands have not been the majority of headliners since 2013, which raises the question of whether this is a permanent change or just a temporary phenomenon (Lynskey, 2021).

If the premise that rock music has declined in popularity is correct, then it would point toward a shift having taken place in the tastes and preferences of music consumers. Tastes and preferences involve psychology, culture, identity, and personal beliefs (Pettibon & Hitchcock, 2022) and are assumed to be fairly consistent, changing only gradually over time (Stigler & Becker, 1977). A shift in these tastes could be inferred by the revealed preferences of the consumers.

Samuelson, in 1938, first postulated the theory of revealed preference. In it, he proposes that bundles of goods that consumers prefer can be distinguished from those they find inferior by observing the interaction of prices and quantities (Samuelson, 1948). If we assume that the price of music is constant for any one given year, given the rather universal price for music, then any changes in consumption patterns during that time would reveal that the preferences of consumers

have changed. Pettibon and Hitchcock's (2022) findings therefore imply a shift in the generational preference toward the genres of music consumed. Tapper (2023) would seem to confirm this, finding that in the U.S. over a recent 20-year period consumers are less sentimental about bands. He goes further, writing that the American tradition of music preference favors solo artists rather than bands.

2. Technology allows for solo projects.

With the advent of Garage Band in 2004, artists were given greater autonomy in the creation of their music (Leight, 2024). Tapper (2023) points toward an earlier software development, Ableton, which debuted in 1999. Pro Tools had an even earlier launch, starting in 1991. These software packages allow artists to create quality recordings by themselves without the need for a professional recording studio.

The theory here is that artists would then no longer need a band to create the sounds they desire. Using software, they are able to create drum, bass, keyboard, and guitar sounds on their own computers. No longer would they need to find people who could play these instruments or sing in the style they wanted and who had personalities with whom they are compatible. As an example, Finneas and his sister Billie Eilish produced the 2019 Grammy winning album 'When We All Fall Asleep Where Do We Go?' using Logic Pro in their bedrooms of their parents' home. From a creative standpoint, a lack of bands also means a lack of synergy that occurs between members of a band in the creation process, which can help define the style and direction of their music.

3. Social media and streaming services reward individuals.

Bands were once highlighted in music videos that were broadcast on MTV (Lynskey, 2021). The videos shown on that network helped promote those groups. Visually, Lynskey

argues, it was more interesting to show several members of a band on a TV screen rather than just one performer in those videos.

At the same time the MTV network moved away from music videos, broadcast networks began airing shows which were multi-week singing contests that progressed towards an ultimate winner. As the competition progressed during the season, the number of fans for each performer grew and interest and loyalty for the artists or groups developed. Lynskey, a U.K. journalist, points towards popular shows in Britain stating, "The X Factor was a reliable incubator of girl groups and boy bands…" (2021). The U.K. version of the show launched both One Direction and Fifth Harmony. Over time though as viewers cut the cable, moving away from broadcast TV and towards streaming, the influence shows like X Factor had on promoting groups faded as the audiences shrank. In the U.S., shows like American Idol and The Voice, which promoted artists, promoted solo artists. Those shows also no longer have the audience size they used to (Lawler, 2018).

The creation of social media brought with it new ways to promote artists. Tik Tok became a popular tool for song promotion and fan engagement, especially for the solo artist. Leight (2024) argues that it is harder to get a group to have a viral video on Tik Tok than a solo performer because of the nature of the smaller screens on phones where many of the Tik Tok videos are watched. The app is more favorable towards having one face on a small screen rather than several smaller faces of band members on screens of that size. Social media's influence, then, is a benefit for a solo artist (Tapper, 2023). As a result, artists performing in groups have resorted to having individual members make individual posts, rather than as the entire band.

East (2024) takes this notion one step further by arguing that if interested listeners move from Tik Tok to Spotify, the dominant digital service provider in music streaming, in order to

listen to the full song by a solo artist, the algorithms used by the streaming service will kick in and drive the listener to other songs by other solo artists. East makes the claim that the algorithms are not strictly individualized, and so if an artist like Sabrina Carpenter is universally popular, her songs will soon pop up on other playlists. The algorithms, therefore, are primed to pump out mainstream music, and if solo acts are what the algorithms classify as mainstream, then songs by bands will get pushed farther down the playlists. The curation of playlists by Spotify therefore serves to reinforce the influence of social media and drive music consumption towards songs by solo performers (Pelly, 2025).

As a result, bands do not disappear, they just are not in a position to dominate as they once were. One further complication for groups is that if they are not appearing near the top of streaming playlists and getting multitudes of plays, then radio stations will not play those songs either. Radio wants to play the songs that audiences like. If it is true, as Lucian Grange has said, that 100,000 tracks per day are uploaded to streaming services, it presents an almost unconquerable situation for bands (Tapper, 2003). There are simply too many songs by solo artists ahead of them.

4. Financial incentives are better for solo artists.

Economists hold that people respond to incentives. If being a solo artist is more lucrative than being in a band, then artists will respond to that incentive and as a result we will see more solo artists and fewer bands. With a band, the money earned is divided among the members of the group. The greater the number of people in a band, the further the income received must be spread out, resulting in less earned by each individual member. Touring with a band could be more expensive than traveling as only a solo artist, which in turn would also reduce the income per artist (East, 2024).

The world of streaming has reduced royalty payments received by artists (Pelly, 2025). East (2024) makes the comparison of an artist in the U.K. who in 1995 sold 490,000 units resulting in an income of approximately 2 million pounds. In 2024, that same number of streams would result in income of only 2,000 pounds. With earning a living becoming more difficult because of this drastic reduction in income due to streaming services such as Spotify, the result is an increased incentive to be a solo artist.

5. Labels are not interested in bands.

Record labels have changed how they find artists to sign. Artists and repertoire (A & R) staffs now scout for new artists online rather than going in search of them at shows in clubs and smaller venues (Tapper, 2023). Due to the covid pandemic, there was a loss in the number of venues resulting in fewer places for bands to play and improve. This makes it more difficult for bands to build a buzz by selling out smaller venues (East, 2024). Also, launching and supporting a band is more expensive than launching a solo act (Lynskey, 2021), giving labels a financial incentive to sign more solo artists.

Labels formerly had more control over what music became popular (Leight, 2024). They would find, develop, and present artists who they hoped would become popular, providing a limited supply of music. They now have less control over what music is presented because social media can bypass the efforts of labels and increase an artist's popularity. As a result, labels now seek to find artists who are already popular, that is, those who have already had success with streaming and who have a strong social media presence.

Research Questions

Whether or not the number of bands having hit records has changed over time is an empirical question. This paper will examine whether there is evidence that supports this claim.

If that is indeed found to be accurate, then we will turn our attention to the cause of this decline. Was it, as East (2024) states, the result of the presence of Spotify? Or, has there been a change in the tastes and preferences for a genre of music which would in turn have an impact on the number of bands having hit songs and albums? The research questions are as follows:

1. Has there been a change in the number of bands having songs and albums in the Top 20 from 1961 to 2025?
2. If a significant change is present, is Spotify to blame?
3. Has there been a change in consumer preferences towards certain music genres?

These research questions will first be explored by first examining the Hot 100 singles chart and then replicated using data from the Top 200 albums chart.

Hypothesis Testing

We begin with the first research question: has there been a change in the number of bands having songs in the top 20 of the Hot 100 from 1961 to 2025? Chart 1 shows the number of singles that were performed by bands per year.

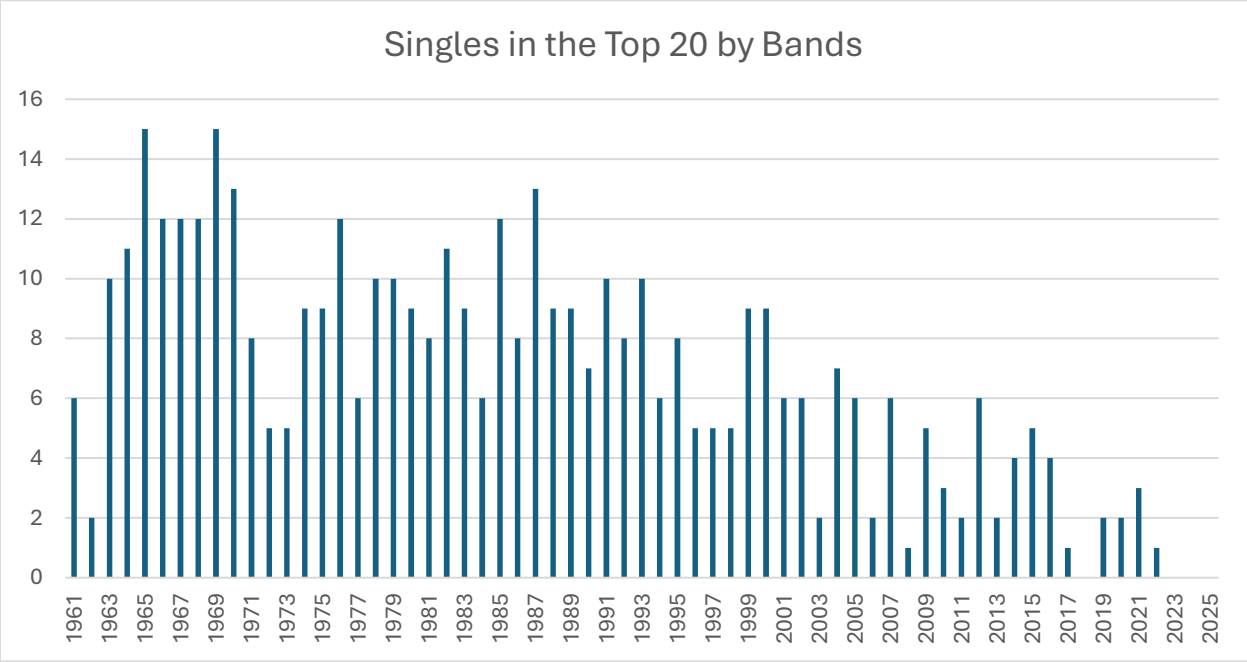


Chart 1 – the number of Top 20 songs by bands per year

A model was constructed to examine the number of songs by bands in the top 20 per year:

$$Bands = f(Year, e)$$

where, Bands is the number of top 20 songs per year performed by bands, Year is the year that the songs were in the top 20, and e is the error term.

The null hypothesis is that the number of songs by bands in the top 20 has not changed over time. The alternative hypothesis is that the number of songs by bands has changed.

H_O: the number of songs per year in the top 20 by bands is unchanged

H_A: the number of songs per year in the top 20 by bands has changed

The Data

A data set was constructed which included information about the top 20 songs in the U.S. for each year from 1961-2025. The lists of songs were taken from The Hot 100 songs of the year as determined by Billboard magazine. (For the sake of brevity, the complete reference list of this annual chart was omitted from the references but are available from the author upon request). In total, 1,300 observations of both songs are included in the data set.

It should be noted that over the time period included in this study Billboard changed its methodology for arriving at their list of hits. During the early years included in this study Billboard compiled its hits list after calling record stores and conducting a survey about record sales (Della Riva, 2025). There is speculation that the stores would misrepresent their sales in order to move records which had a stagnant inventory. In 1991, Billboard changed to using SoundScan to measure point of sales data, thus avoiding the bias of the phone surveys. The early years of the albums Top 200 chart also saw separate charts for albums recorded in stereo and

those recorded in mono. For consistency purposes, the stereo chart was used for this study. Another issue is the potential for manipulation by the director of the charts. Bill Wardlow, who oversaw the Billboard charts from 1974 to 1983, was fired from his position for mishandling the charts (Della Riva, 2025). Despite these flaws and changes in Billboard's methodology, in the end, these are still the charts which were published and as such are the source of the data for this study.

For each year of the study, the top 20 songs were categorized into one of three categories: those performed by a solo artist, by a band, or by a collaboration. If a song had only one performer's name listed, it was considered a solo artist. If the song was not credited to the name of an individual, it was considered to be performed by a band. For example, songs by The Shirelles, The Beatles, and The Black Eyed Peas were counted as bands. For classification purposes, groups that were listed using a person's name but which were followed by the phrase "and the" were also counted as bands. Examples from the data set include Gary Lewis and the Playboys, Paul Revere and the Raiders, and Bruce Hornsby and the Range. The third category for the purposes of this study were songs performed by collaborations. These were songs performed by multiple artists who did not normally record together. Examples of these include Frank and Nancy Sinatra, Elton John and Kiki Dee, and Kanye West featuring Jamie Foxx.

A table of top 20 songs categorized per year appears below:

Year	Solo	Band	Collab
1961	13	6	1
1962	17	2	1
1963	8	10	2
1964	9	11	0
1965	5	15	0
1966	8	12	0
1967	7	12	1
1968	8	12	0
1969	5	15	0

1970	7	13	0
1971	11	8	1
1972	15	5	0
1973	15	5	0
1974	11	9	0
1975	11	9	0
1976	7	12	1
1977	14	6	0
1978	9	10	1
1979	10	10	0
1980	11	9	0
1981	10	8	2
1982	8	11	1
1983	9	9	2
1984	13	6	1
1985	6	12	2
1986	9	8	3
1987	7	13	0
1988	11	9	0
1989	11	9	0
1990	12	7	1
1991	10	10	0
1992	12	8	0
1993	9	10	1
1994	11	6	3
1995	11	8	1
1996	13	5	2
1997	10	5	5
1998	13	5	2
1999	10	9	1
2000	10	9	1
2001	7	6	7
2002	7	6	7
2003	7	2	11
2004	5	7	8
2005	8	6	6
2006	9	2	9
2007	6	6	8
2008	12	1	7
2009	8	5	7
2010	8	3	9
2011	11	2	7
2012	8	6	6

2013	11	2	7
2014	7	4	9
2015	10	5	5
2016	8	4	8
2017	8	1	11
2018	11	0	9
2019	9	2	9
2020	12	2	6
2021	10	3	7
2022	13	1	6
2023	13	0	7
2024	17	0	3
2025	14	0	6

Choice of Tests and Results

The number of songs performed by bands per year was tested with a regression analysis using ordinary least squares to determine if there has been a significant decrease over time. Year was the independent variable and the number of songs in the top 20 by bands was the dependent variable. This test is appropriate because all the observations are independent of each other, a linear relationship is assumed, and the independent variables are not correlated with each other (Greene, 2003).

The results of the model are as follows:

Variable	**Coefficient**	**Standard Error**	**t-stat**	**P > t**
Year	-.1566871	.0174016	-9.00	0.00
Constant	318.9542	34.68299	9.20	0.00
	R^2 = .563	F = 81.07	P > F = 0.00	

Examining the results for the variable Year, the t-statistic shows the variable to be significant. The coefficient of that variable is negative, indicating a downward sloping

relationship. The model explains 56.3% of the variance observed. Because Year is significant, H_O is rejected and the null hypothesis is accepted. There has been a statistically significant decrease in the number of songs by bands over the time of this study.

The causation of this relationship next needs further examination. Research question number two is next examined to explore whether Spotify was to blame for the observed decrease.

Spotify first arrived in the U.S. in 2011. To measure its impact on songs by bands, the data set was divided into two parts, the years from 1961 to 2010, and from 2011 to 2025. The summary statistics for the Band variable before and after the arrival of Spotify are as follows:

Spotify	n	Mean	Variance	Std. dev.	Std. err.	Median	Range
After	15	2.13	3.69	1.86	0.514	2	6
Before	51	8.04	11.10	3.33	0.471	8	14

A Mann-Whitney two-sample t-test was run to determine if there was a significant difference between the means for the pre-Spotify years and those after Spotify's arrival. This test meets most of the needed criteria in that the samples are random and independent of each other and they are not paired with each other. The number of observations post-Spotify are a bit low, with only 15 years of data, but it does include all the data possible for those years following Spotify's introduction to the U.S.

The null hypothesis is that the mean number of top 20 songs for bands is the same for the years before and after Spotify (1961 – 2010). These are indicated as $\mu_{B,}$ before Spotify (1961 – 2010) and μ_A indicating after Spotify arrived (2011 – 2025). The alternate hypothesis is that the mean number of top 20 songs for bands decreased after Spotify arrived. That is to say, the mean before Spotify (1961 – 2010) is greater than mean after Spotify (2011 – 2025).

$$H_0: \mu_B = \mu_A$$

$$H_A: \mu_B > \mu_A$$

The results for the two sample mean test are as follows:

Difference	Sample Diff.	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	5.91	0.697	34.64	6.56	0.000

Because the mean sample difference is 5.91 and not zero, along with a t-statistic being significant and the p-value is 0.000, the null hypothesis is rejected. Therefore, there is some evidence to imply that the mean number of top 20 songs for bands decreased after Spotify arrived in the U.S.

But before we begin to claim that evidence has been discovered to blame Spotify for the change, there is another consideration to be made. While it is true that the sample means are different, it could also be true that the sample means would also be different should another time frame have been chosen. The question then becomes, when did the change begin to occur?

Introducing Hip-hop

Hip-hop was created in the summer of 1973 by DJ Kool Herc in the West Bronx, New York (Chang, 2007). As the genre spread across the nation, it increased in popularity. As quickly as it spread, the genre took on different influences and interpretations. As Senneh (2021) points out, hip-hop had become so broad that it put stress on the term itself.

As categorized for this study, the first year that hip-hop songs finished in the top 20 of the annual Billboard chart was in 1992 when Sir-Mix-a-Lot broke through with ‘Baby Got Back’ and Kris Kross had the song ‘Jump’. The rise of the number of hip-hop songs in the annual top 20 list is visualized with Chart 2 below.

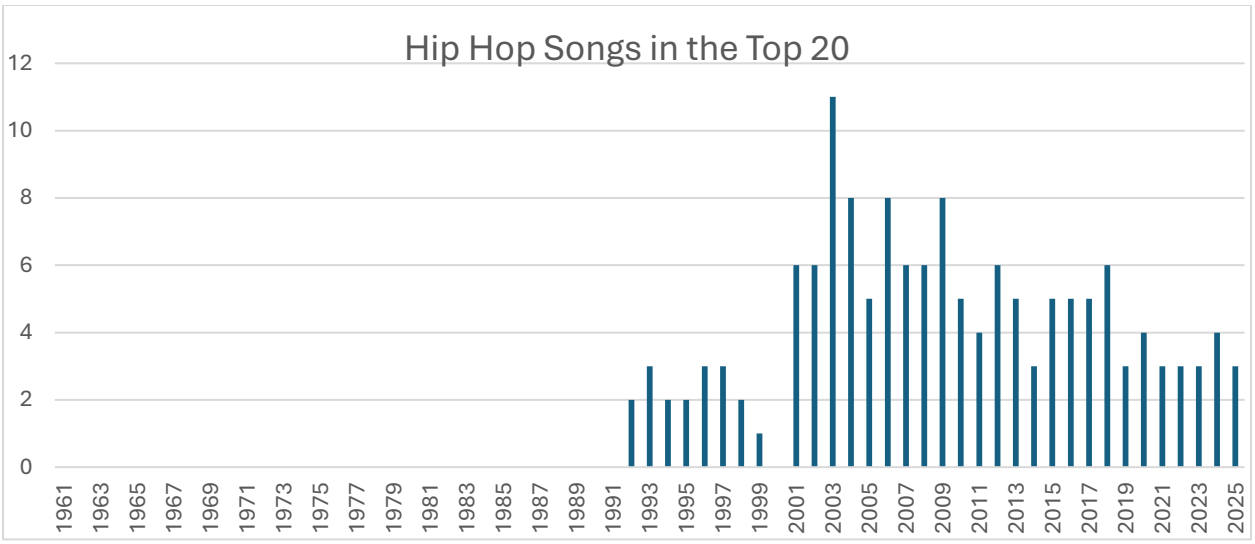


Chart 2 – The number of hip-hop songs in the yearly Top 20

By comparing the mean number of songs by bands in the top 20 for the years prior to the creation of hip-hop with the mean number of songs by bands in the top 20 for the years after hip-hop, we can begin to determine if there is a correlation between the rise of hip-hop and the decline of bands.

A two sample mean test is again used. The null hypothesis is that the mean number of top 20 songs by bands is the same for the years before hip-hop became mainstream (1961–1991) and after (1992–2025). The alternate hypothesis is that the mean number of top 20 songs by bands decreased after hip-hop became mainstream. If the alternative is the case, the mean before (1961–1991) would be greater than the mean after (1992–2025).

$$H_0: \mu_B = \mu_A$$

$$H_A: \mu_B > \mu_A$$

The results are as follows:

Difference	Sample Diff.	Std. Err.	DF	t-stat	P-value
$\mu_1 - \mu_2$	5.30	0.726	60.19	7.39	0.000

Since the mean difference is 5.30 and not zero, the t-statistic is significant, and the p-value is 0.000, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is sufficient evidence to support the claim that the mean number of top 20 songs by bands decreased after hip-hop became mainstream. This indicates that hip-hop changed the dynamics of popular music. Therefore, we cannot blame Spotify for the decrease in songs by bands because the change began prior to the arrival of Spotify.

A Collaboration Confirmation

While many hip-hop artists perform as solo artists rather than bands, they also often record in collaboration with other artists. A few examples of these types of songs included in the data set are 2003's '21 Questions' by 50 Cent featuring Nate Dogg, 2007's 'Buy U a Drank' by T-Pain featuring Yung Joc, and 2017's 'Bad and Boujee' by Migos featuring Lil Uzi Vert.

Chart 3 shows the number of top 20 songs performed in collaborations over the years of this study.

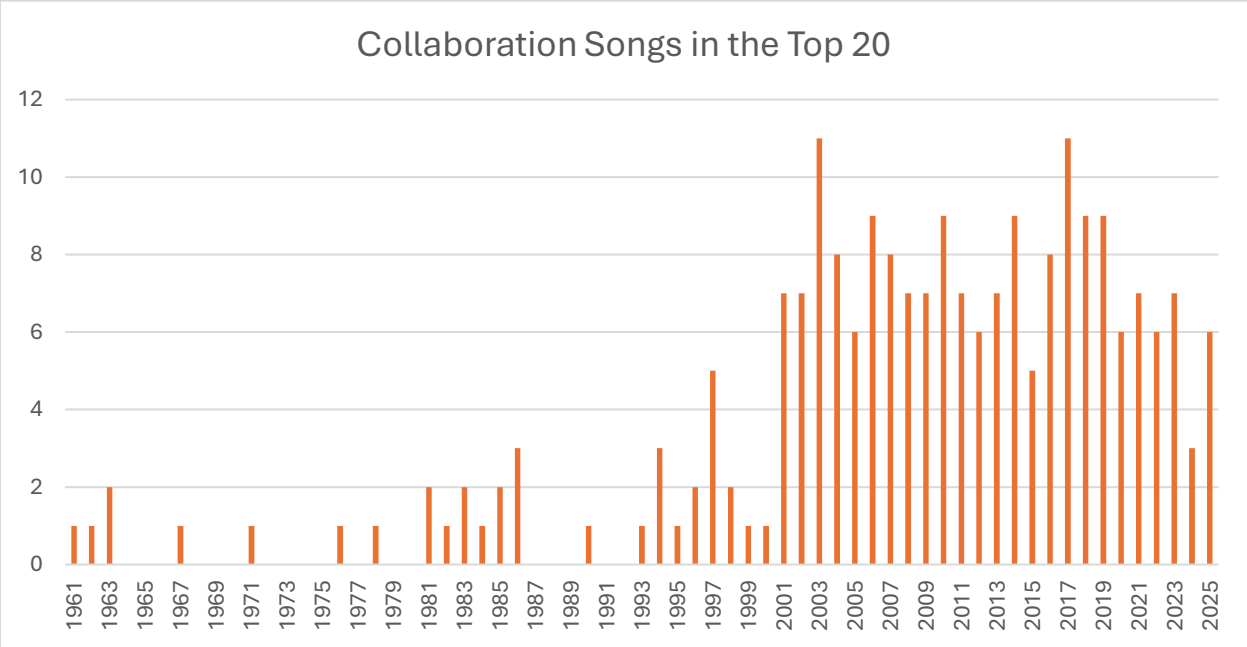


Chart 3 – the number top 20 of songs performed by collaborations

To confirm the relationship between hip-hop and collaborations, a regression using ordinary least squares was performed. The number of songs by collaborations was the dependent variable and the number of hip-hop songs was the independent variable. The results of the model are as follows:

Variable	**Coefficient**	**Standard Error**	**t-stat**	**P > t**
Hip-hop	1.103	.078	14.15	0.000
Constant	.870	.278	3.14	0.003
	$R^2 = .761$	F = 200.32	P > F = 0.00	

The positive value of the hip-hop coefficient indicates that the hip-hop variable has a direct relationship to collaborations, and that this relationship is also statistically significant. The model explains 76.1% of the variance observed between the two variables.

The model suggests that the increase in the number of collaborations correlates to the years following hip-hop songs being introduced to the top 20. Hip-hop does not account for all the collaboration songs, but it does point to a reason for the increased number of collaboration songs during those years.

Because each year included in this study consisted of a total of 20 songs, an increase in the number of one type of song (solo, band, or collaboration) must accompany a decrease in another type of song. That is what appears to have happened. As the number of hip-hop songs increased, the number of collaborations increased, resulting in the number of songs by bands decreasing. This finding supports the first theory proposed, that there has been a change in the tastes and preferences of consumers in music consumption. A preference for hip-hop replaced a preference for rock, resulting in a decline in top songs performed by bands.

The Albums Charts

If hip-hop has led to a decline of the number of songs in the top 20 on the singles chart, it raises the question as to whether this same effect is seen on the Top 200 albums chart. To explore this, an identical methodology is used.

Chart 4 shows the number of albums by bands in the top 20 of Billboard's annual Hot 200 chart for 1961-2025.

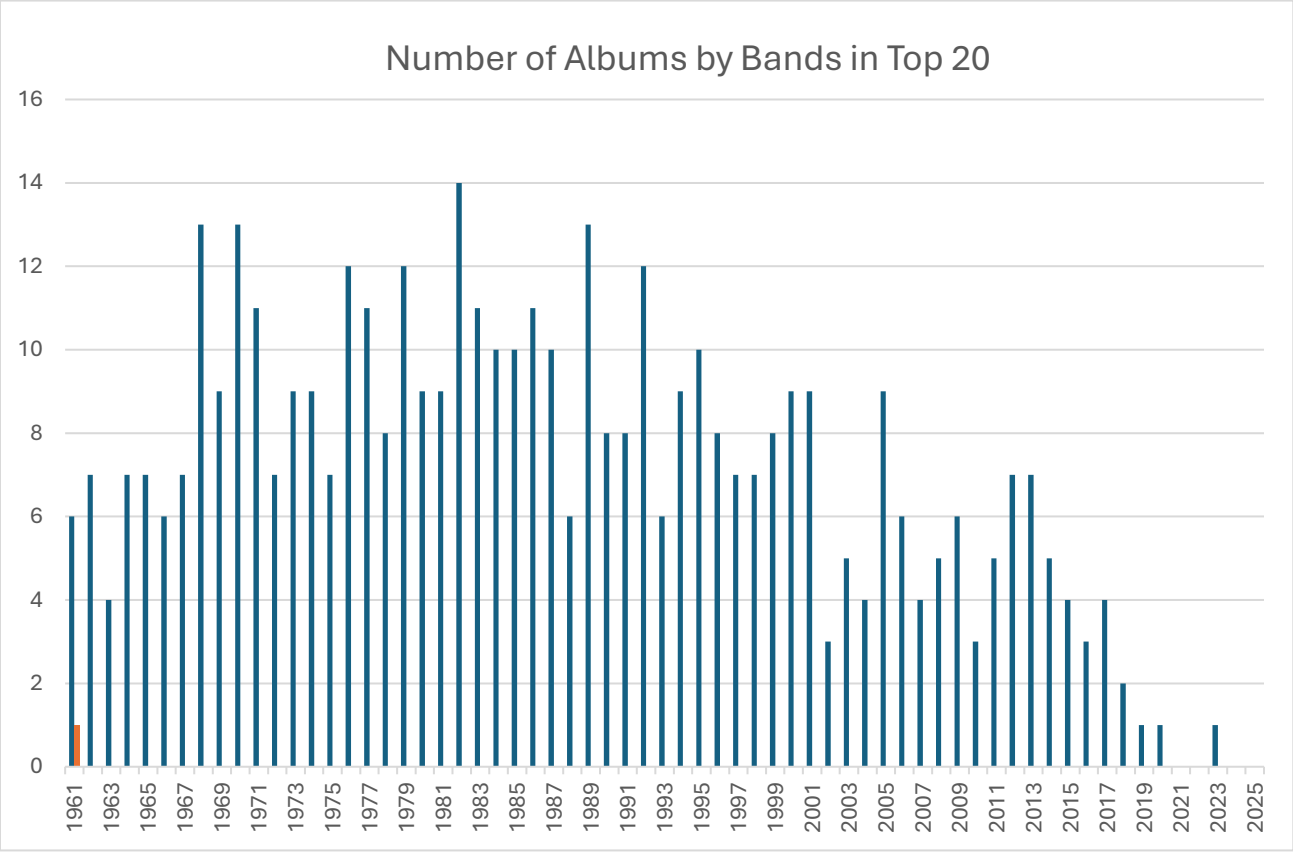


Chart 4 – the number of albums in the Top 20 by Bands by year

An identical model was constructed to examine the number of albums by bands in the top 20 per year:

$$\text{Bands} = f(\text{Year}, e)$$

where, Bands is the number of top 20 albums per year performed by bands, Year is the year that the songs were in the top 20, and e is the error term.

The null hypothesis is that the number of albums by bands in the top 20 has not changed over time. The alternative hypothesis is that the number of albums by bands has changed.

H_O: the number of albums per year in the top 20 by bands is unchanged

H_A: the number of albums per year in the top 20 by bands has changed

The Data

While singles are often recorded using a collaboration, albums are not. The album may include a few songs that are collaborations, but most albums are listed as that of an individual or a band. Only 27 of the albums in this study could be categorized as collaborations, such as 'Watch the Throne' by Jay-Z and Kayne West or as compilation albums, such as 'Now That's What I Call Music' by various artists. The albums chart did present the need to include a new category, that of soundtracks. Movie soundtracks which include original music from the film along with individual songs used in the movies could not be categorized as either being a band or a solo recording. There were 102 soundtrack albums that made the list.

A table of top 20 albums categorized per year appears below:

Year	Solo	Band	Collab	Soundtrack
1961	6	6	1	7
1962	7	7	0	6
1963	11	4	0	5
1964	10	7	1	3
1965	6	7	0	6
1966	9	6	0	5
1967	9	7	0	4
1968	5	13	0	2
1969	8	9	0	3
1970	5	13	0	2
1971	8	11	0	1
1972	12	7	0	1

1973	10	9	0	1
1974	9	9	0	2
1975	13	7	0	0
1976	8	12	0	0
1977	8	11	0	1
1978	11	8	0	1
1979	7	12	0	1
1980	11	9	0	0
1981	11	9	0	0
1982	5	14	0	1
1983	8	11	0	1
1984	8	10	0	2
1985	8	10	0	2
1986	9	11	0	0
1987	10	10	0	0
1988	12	6	0	2
1989	6	13	0	1
1990	11	8	0	1
1991	12	8	0	0
1992	8	12	0	0
1993	11	6	0	3
1994	10	9	0	1
1995	8	10	0	2
1996	11	8	0	1
1997	10	7	0	3
1998	9	7	1	3
1999	12	8	0	0
2000	11	9	0	0
2001	9	9	2	0
2002	15	3	1	1
2003	13	5	1	1
2004	14	4	2	0
2005	10	9	1	0
2006	11	6	2	1
2007	14	4	1	1
2008	13	5	1	1
2009	12	6	1	1
2010	17	3	0	0
2011	15	5	0	0
2012	13	7	0	0
2013	12	7	0	1
2014	12	5	1	2
2015	14	4	0	2

2016	15	3	0	2
2017	13	4	0	3
2018	16	2	0	2
2019	17	1	0	2
2020	17	1	0	2
2021	20	0	0	0
2022	19	0	0	1
2023	18	1	1	0
2024	19	0	1	0
2025	18	0	1	1

Tests and Results

Similar to the testing done with the top 20 songs, a regression analysis using ordinary least squares was used to determine if there has been a significant decrease over time in albums by bands. Year was the independent variable and the number of albums in the top 20 by bands was the dependent variable. The results are shown below:

Variable	**Coefficient**	**Standard Error**	**t-stat**	**P > t**
Year	-.1240	.0179	-6.91	0.00
Constant	254.193	35.796	7.10	0.00
	R^2 = .4309	F = 47.07	P > F = 0.00	

Examining the results for the variable Year, the t-statistic shows the variable to be significant. The coefficient of that variable is negative, indicating a downward sloping relationship. The model explains 43% of the variance observed. These results indicate there has been a statistically significant decrease in the number of albums by bands over the time of this study.

The Effect of Hip-hop

The rise of the number of hip-hop albums in the annual top 20 list are visualized with Chart 5 below. The author is solely responsible for the categorization of an album being listed in the hip-hop genre. Certainly not every song on each of these albums can be categorized as hip-hop, but if the general feel of the album fit that genre, it was counted as being hip-hop.

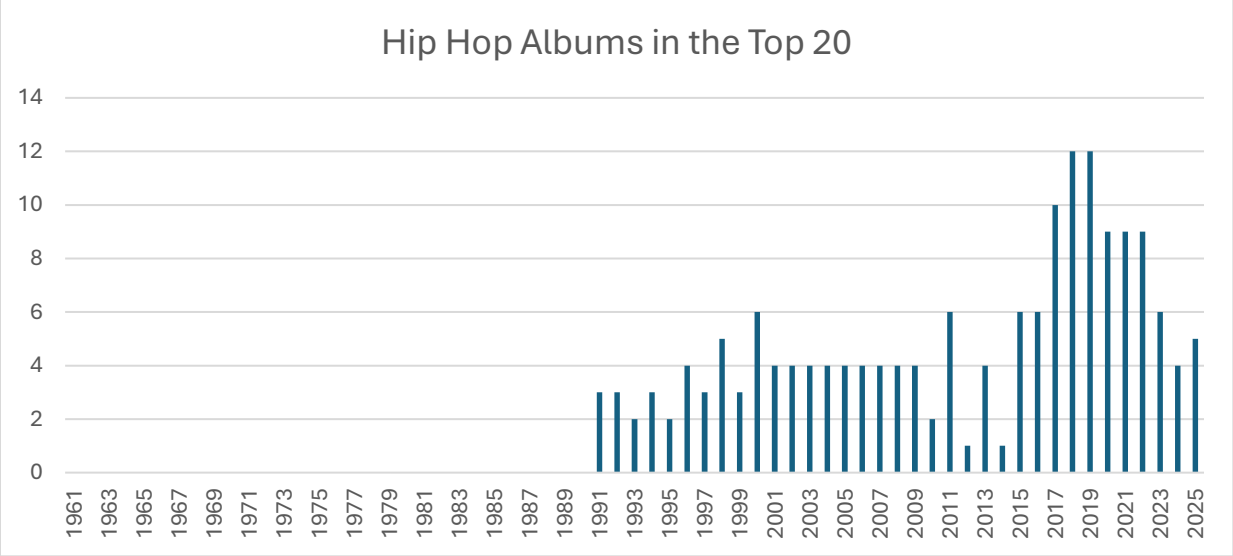


Chart 5 – the number of hip-hop albums in the top 20 per year

To determine if the introduction of hip-hop coincides with the decrease in albums by bands, a two sample means test is again used. The null hypothesis is that the mean number of top 20 albums by bands is the same for the years before hip-hop became mainstream (1961–1991) and after (1992–2025). The alternate hypothesis is that the mean number of top 20 albums by bands decreased after hip-hop became mainstream. If the alternative is the case, the mean before (1961–1991) would be greater than the mean after (1992–2025).

$$H_0: \mu_B = \mu_A$$

$$H_A: \mu_B > \mu_A$$

The results are as follows:

Difference	Sample Diff.	Std. Err.	DF	t-stat	P-value
$\mu_1 - \mu_2$	4.061	2.71	63	7.39	0.000

Since the sample difference is not 0, and the difference is positive and significant, it is concluded that the number of albums by bands dropped following the introduction of hip-hop.

The collaboration test that was used for the singles charts cannot be applied to the album charts as album titles are generally credited to one artist. However, if the number of bands is decreasing, then the number of solo albums would increase if this hypothesis is correct. Chart 6 shows the number of albums by solo artists over time.

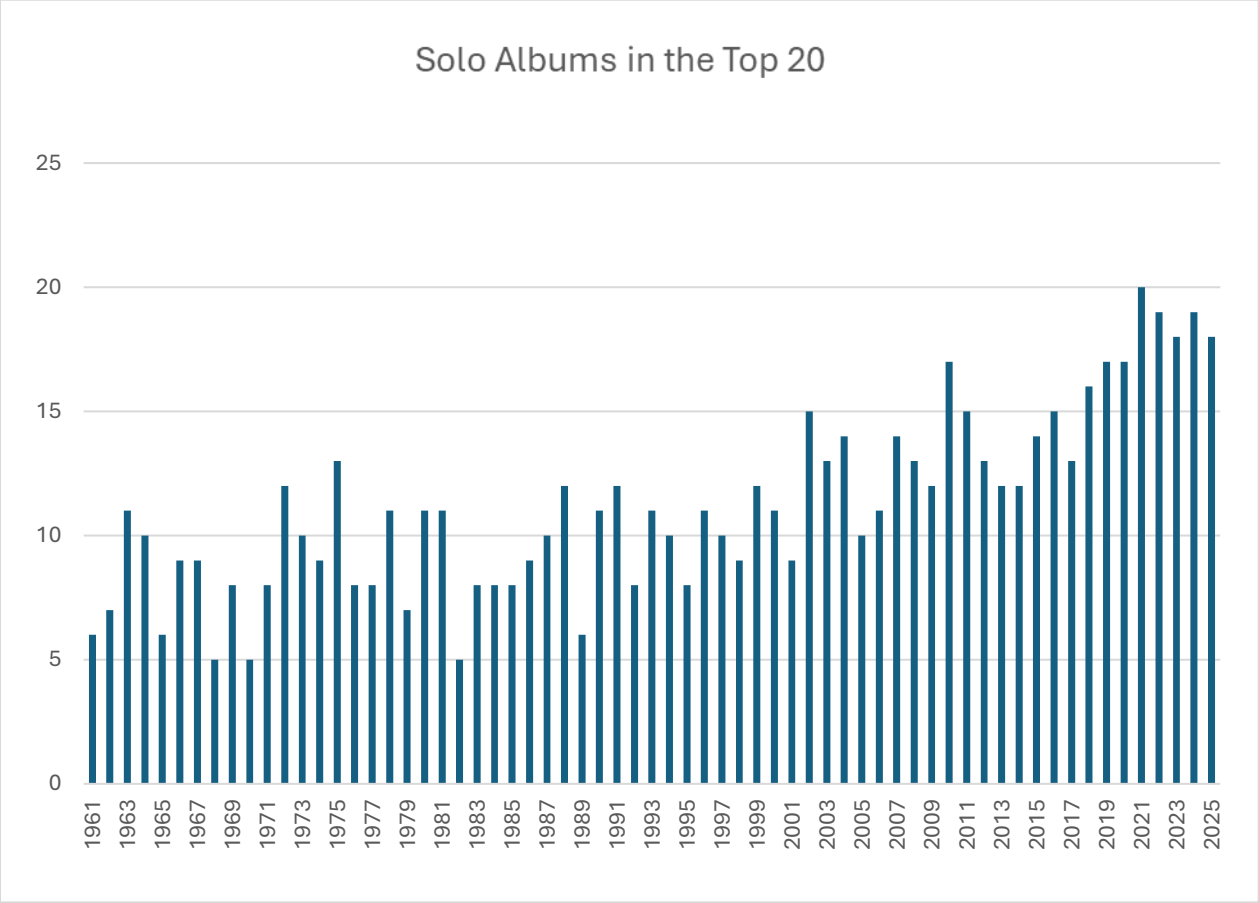


Chart 6 – Number of albums by solo artists in the top 20 by year

To confirm this a significant relationship, a regression was run with solo albums being the dependent variable and year being the independent variable. The results are displayed below:

Variable	Coefficient	Standard Error	t-stat	P > t
Year	.1541	.0149	10.32	0.00
Constant	-295.923	29.770	-9.94	0.00
	R^2 = .6282	F = 106.25	P > F = 0.00	

The results indicate a positive relationship between solo albums and years which is also significant. Without the collaboration variable to test, the results of the album charts are not as persuasive as was observed in the singles charts, but there is nothing in the album chart analysis that contradicts the findings from the singles charts. The album findings support the singles findings, just perhaps not to the same degree of certainty.

Conclusion

A large data set of 1,300 songs and albums were constructed to explore the phenomenon of a decreasing number of hit songs and albums by bands over time. It was found that these decreases are statistically significant. The reason for the decreases was next explored. Five theories were brought forward as possible explanations: a change in consumer tastes, social media, technology, financial incentives, and record label preferences.

East (2024) put forth a proposition that Spotify had killed bands. This idea was explored using a two sample means test. A close examination determined that the trend had begun long before Spotify came to the U.S. As it turns out, the decrease in songs by bands occurred simultaneously with the increase in the number of songs that were collaborations. It was determined that the number of collaborations increased with the introduction of hip-hop songs

into the top 20 singles charts. Data from the albums charts support the finding that hip-hop albums led to a decrease in the number of albums by bands.

From these findings, we conclude that Spotify is not to blame for the significant decrease in the number of songs and albums by bands. As the number of hip-hop hits increased, the number of songs and albums by bands decreased. Therefore, this points toward a confirmation of the theory that a change in consumer tastes and preferences has occurred in the music consumption patterns of listeners. What once was popular, songs and albums by bands, have become less popular and have been replaced, at least in part, by collaborations in hip-hop songs and albums.

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