

อันดับบนชาร์ตเพลงเมลอนประเทศไทยให้ส่งอิทธิพลต่อยอดเข้าชม YouTube โดยรวมของศิลปินเดียวหรือไม่

ฟ้าใส ทิพย์索ติกุล*

บทคัดย่อ

แม้ว่าในขณะนี้ดันตระกูลปีบจะเป็นที่แพร่หลายไปทั่วโลก ความสำเร็จของศิลปินยังคงถูกประเมินจากชื่อเสียงภายในประเทศ และท่ามกลางการแข่งขันอันเข้มข้น ในอุตสาหกรรมดนตรีเกาหลีทำให้หลักเลี่ยงไม่ได้ที่ศิลปินจะคาดหวังให้เพลงของตนอยู่ในอันดับสูงบนชาร์ตเพลงภายในประเทศเพื่อเป็นที่สนใจของสาธารณะ ดังนั้นจึงเกิดคำถามว่าศิลปินบางส่วนกำลังให้ความสำคัญกับผลงานภายในประเทศมากเกินไป หรือไม่ ในขณะที่ตลาดโลกก็เป็นอีกโอกาสหนึ่งเช่นกัน งานวิจัยนี้ทำการวิเคราะห์ข้อมูลในเชิงปริมาณเพื่อทดสอบว่าอันดับบนชาร์ตเพลงเมลอนซึ่งเป็นแพลตฟอร์มสำหรับพังเพลงที่มีจำนวนผู้ใช้งานมากที่สุดในประเทศไทยให้สามารถคาดการณ์ยอดเข้าชมโดยรวมบน YouTube ของศิลปินเดียวหรือไม่ หรือในอีกความหมายหนึ่งคือ ความนิยมภายในประเทศสามารถคาดการณ์ความนิยมระดับโลกได้หรือไม่

ผลการวิจัยพบว่าอันดับบนชาร์ตเพลงเมลอนคาดการณ์ยอดเข้าชมโดยรวมบน YouTube ของศิลปินโดยเฉพาะผู้ที่มียอดเข้าชมทั่วโลกเป็นจำนวนมากและมีสัดส่วนยอดรับชมในประเทศไทยที่มาก เช่นกันภายในระยะเวลาการวิจัย ในขณะเดียวกัน อันดับบนชาร์ตเพลงเมลอนไม่แสดงนัยสำคัญในการคาดการณ์ยอดเข้าชมโดยรวมบน YouTube ของศิลปินที่มียอดเข้าชมทั่วโลกค่อนข้างต่ำเมื่อเปรียบเทียบกับศิลปินกลุ่มอื่นในงานวิจัย ทั้งนี้การเป็นผู้นำด้านแพลตฟอร์มสำหรับพังเพลงของเมลอนยังถูกยกยื่นยันได้

* นักศึกษาหลักสูตรศิลปศาสตรมหาบัณฑิต สาขาวิชาภาษาไทย จุฬาลงกรณ์มหาวิทยาลัย ติดต่อได้ที่ e-mail: farsai.ts@gmail.com

ด้วยผลการทดสอบที่แสดงให้เห็นว่าอันดับบนชาร์ตเพลงเมลอนคาดการณ์อันดับบนชาร์ตเพลง YouTube Music ประเทศเกาหลีได้

คำสำคัญ: เคปีอป; เพลงเกาหลี; อันดับชาร์ตเพลงเมลอน; YouTube

Does South Korea's Melon chart ranking influence K-pop artists' overall YouTube views?

Farsai Tipsotikul *

Abstract

Although K-pop has been diffused throughout the world by YouTube and become globalized, artist's success is still evaluated by their reputation within the domestic market. Amidst the intense competition in the South Korean music industry, it's inevitable that artists would hope their songs perform well on the domestic chart as it's a way to gain public attention. Thus, it leads to the question; "Are some artists putting too much stress on the domestic performances when the global market is also an opportunity?". To answer the question, this study analyzes the data by quantitative approach to examine whether Melon chart ranking, a music streaming platform with the highest number of users in South Korea, predicts K-pop artist's overall YouTube views. In other words, whether the domestic popularity predicts global popularity.

Results showed that Melon chart ranking predicted artists' overall YouTube views especially those who have considerably high global YouTube views and a large proportion of South Korea YouTube views during the test period. On the other hand, Melon chart ranking did not predict overall YouTube views for some Melon artists with comparatively low global YouTube views.

* Post graduate student, Programme in Master of Arts (M.A.) Korean Studies, Graduate School, Chulalongkorn University, e-mail: farsai.ts@gmail.com

Melon's position as a leading music streaming platform in South Korea was also affirmed by the results in predicting South Korea YouTube Music chart.

Key words: K-pop; Korean music; Melon chart ranking; YouTube

1. Introduction

It is undeniable that Korean pop music (K-pop) has emerged to be one of the popular genres in the global music industry and has been generating a considerable amount of revenue for South Korea. The Korea Customs Service (2020) reported that the export value of K-pop physical records has hit the highest record in history at 1.7 hundred million U.S. dollars in 2020 which was a 94.9% increase from the previous year. The report also stated that this high growth in export value was influenced by the fandom culture as K-pop has developed globally in which fans purchase CDs or DVDs containing K-pop artists' songs or music videos for the purpose of ownership. Besides physical records of music, the revenue of the global recorded music industry also came from the digitized form of music distribution which were downloads and streaming. A global music report by IFPI (2020) showed that 56.1% of the total global recorded music revenue in 2019 came from streaming revenue, while South Korea was considered the sixth largest music market where the global revenues were worth 20.2 billion U.S. dollars.

Technological development and digitization have changed the way people consume music and contributed significantly to K-pop. Shin and Kim (2013, p. 257) informed that the rise of online video-sharing sites such as YouTube played the most important role in globally diffusing Korean music which was one of the success factors of K-pop in the global market. The success of the South Korean music industry comes with an intense competition among musicians especially on the domestic music streaming platforms. The intensity has raised to the extent that over the past decade, an issue concerning illegal music chart manipulation (음원 사재기) has been constantly mentioned. Although

there was no solid confirmation, chart manipulation was mostly claimed to be done on the real-time chart of South Korea's largest music streaming platform, Melon. Real-time charts normally demonstrate popular songs over the past hours by counting downloads and streams which make it possible for a song to get the first rank in every hour, leading to a tricky method of illegal mass downloading or streaming whenever there is low traffic. This issue has caused Melon to change its charting system to reduce the competition intensity and allow users to discover a more diverse type of music.

Regardless of the change in the charting system, ranking on Melon chart is still being perceived as a measurement of reputation and opportunity to gain more public attention. In the globalization era of K-pop where global performances should be crucially taken into consideration to indicate management focus, the questions "Are K-pop artists putting too much stress on the domestic streaming platform?" and "Would the reputation within the domestic market automatically lead to global reputation?" have been raised. This study will examine whether Melon chart ranking is the leading indicator for the K-pop music industry to achieve global popularity or not.

2. Literature Review

2.1 Impact of digitization on the recorded music industry and K-pop

Online music streaming has recently been growing rapidly and continued soaring upward in global music consumption. According to Moreau (2013, p. 27), music streaming services appeared in the industry as a new

business model after the conventional music distribution and marketing were challenged by digitization. In 2003, Apple launched iTunes Music Store enabling digital downloads for sale. Likewise, major music labels started to offer digital downloads as a service for the sake of cost reduction while offering products to consumers at a much lower price. YouTube, founded in 2005 as a video-sharing platform, has also become the new way of music consumption. After the encounter of digitization and the fact that song downloads have become another option for consuming music, online music streaming appears to be another alternative which has become a rapidly growing segment of global music consumption. Music streaming has been the driving segment of the global market growth since 2015, reported IFPI (2020).

In South Korea, new music platforms kept paving their way into the market during the 2000s. This was not only due to the advancement in ICT but also the high household broadband penetration rate. The leaders in the Korean music streaming market, Melon and Genie, have been dominating the market since their appearances in the industry and take up over half of the market share. According to the data collected from iOS and Android users by IGAWorks (2020), Melon had 8.81 million monthly active users (MAUs) in October 2020 which accounted for 42.5% among seven main service providers. YouTube Music (YTM) came in fourth with 11.6% share. Launched in 2018, YTM MAUs increased approximately five times during January 2019 and October 2020, based on Android users in South Korea. The growth of YTM users is not much of a surprise. Sohn (2018) reported on The Korea Herald that one thousand people answered about their mobile service usage patterns and application preferences on the “Mobile Service User Behavior Survey” conducted by the Korea Internet Corporations Association even before the launch of YTM. The result showed the most frequently engaged activities as follow; watching videos

(87.5%) and listening to music (73.9%). 43% of the respondents said YouTube was the main application they used for enjoying music, while Melon came in second with 28.1%.

As much as South Korean people enjoy music on YouTube, K-pop has been able to reach more global audiences via YouTube. Based on a JoonAng Ilbo article written by Jung (2011), 923 videos by Korean artists from the three largest K-pop entertainment labels (SM Entertainment, JYP Entertainment, and YG Entertainment) were watched in 229 countries with about 800 million views throughout 2010. By the end of July 2021, the most viewed K-pop artist on YouTube is BTS whose YouTube videos had 15.4 billion plays over the past 12 months, suggesting how vast YouTube has been diffusing K-pop to the world.

2.2 Charts on South Korean VS global music streaming platforms

Currently, there are various music streaming service providers in the global market. Aside from music streaming platforms, YouTube is also one of the top destinations for enjoying music. As of October 2020, 42 of the top 50 YouTube most-viewed videos of all time are in the form of music videos. Therefore, it is crucial to consider YouTube as one of the music streaming platforms.

Although music streaming services commonly provide song popularity charts to let consumers know what songs are trending, global platforms do not have real-time charts like most Korean platforms. Spotify and Apple Music as top platforms of the world's first and third largest music market, the US and UK, provide daily charts as the most frequent chart update. Line Music, as the biggest domestic platform in Japan, the world's second largest music market,

does provide its users with real-time charts. However, music streaming in Japan contributed less than a fifth of the industry turnover while CDs and vinyl made up over two-thirds of annual revenues in 2020 (Ingham, 2021), implying how the competition in the music streaming market would not be as heated as in physical records market for Japan. There was no incentive for Japanese consumers to subscribe to their favorite artists' channel on streaming platforms since they already had the CD or had downloaded the music, said Tetsutaro Ono, President and CEO of AWA, another top music streaming platform in Japan (Avex, 2021).

South Korea has been dominated by domestic providers ever since music streaming became a growing business. The current dominant domestic players are Melon, Genie, and FLO who provide services solely in South Korea. Melon and FLO removed real-time charts from their platforms in 2020 to alleviate the competition intensity in the Korean music industry and to prevent an abnormal method of entering the chart, known as music chart manipulation. As real-time charts update the data hourly to show the most streamed and downloaded songs within the previous hours, it gives the opportunity for any songs to rank first at least once during one hour in a day. The expected popularity and career opportunity that come with topping the chart are viewed as incentives in causing the suspicions of chart manipulation. The term “music chart manipulation” as given definition by BBC News Korea (2020) is the action of manipulating the chart ranking of a specific artist by paying service fee to a broker. In order to prove this theory, a prosecutorial investigation must be conducted to find out the truth. However, the result is still inconclusive.

It's reasonable to say that Korean artists would like their songs to enter music charts especially the most dominant one like Melon to get some spotlight from the public. There are numerous cases in which Korean artists happened to gain popularity once their songs entered music charts at a high rank after not

having good results around the time of its release. This phenomenon is known as the “reverse-charting (역주행)” which has given many artists the opportunity not only in music but also in entertainment industry. One of the cases was the song “Bar Bar Bar” by a girl group, Crayon Pop, which charted on many Korean charts after two months of the release. After becoming the new craze, Lee (2013) informed through Maekyung Media that Crayon Pop has signed a strategic partnership agreement with Sony Music Entertainment Korea, the global record company, and planned to enter the overseas market.

2.3 Song survival on charts and charting effects

There are many factors that make a particular song survive on music charts. As of July 2021, Spotify has over 70 million songs on its catalog. This overwhelming number of songs on the platform means it's impossible for consumers to find songs that match with their music taste by personally going through all of the existing songs. Therefore, the existing playlists or charts are what they rely on to either reduce their risk of encountering bad choices or enable them to follow the trends as suggested by Im, Song, and Jung (2018, p. 1676). South Korean consumers are more interested in artists whose songs are on the top rankings than those in the bottom or with no chart entry. This idea can be supported by FLO's analysis of the streaming data in the first quarter of 2020. According to the data, half of its three million subscribers listened to only three songs and 80% listened to about 10 songs on higher ranks on the top 100 chart, wrote Jung (2020) on Digital Today. Aguiar and Waldfogel (2018, p. 26) examined the effect of Spotify charts and playlists and found that the platform-operated playlists have considerable and significant impacts on streaming. Based

on the findings, being on an algorithmically generated playlist like the Global Top 50 list raised a song's streams by about three million.

Like global charts, Korean music streaming platforms have a part in influencing consumers' choices by chart presentation. As a result, there are times when people are suspicious of chart manipulation. However, now that Korean music, especially K-pop has been globalized and reached a large number of audiences across the globe, should artists rely mainly on Melon charts to evaluate their performance? Does Melon chart ranking influence their global reputation that K-pop artists should take the opportunity to gain after globalization? This study will explore whether Melon chart ranking predicts the artist's overall YouTube views (global impact) and the song's ranking on YTM chart (domestic impact).

3. Research Methodology

This research uses a quantitative approach to examine whether music chart ranking on Korean platform (Melon chart ranking) predicts the artist's global popularity (overall YouTube views) and domestic popularity (YTM chart ranking). Therefore, a regression analysis is used to test for Granger causality, a statistical hypothesis test for determining whether one time series is useful for forecasting another. Equations for regressions are shown in table 1. Songs by K-pop artists who have appeared in the top 50 of the Idol Group Brand Reputation Ranking¹ are collected from Melon and YTM weekly charts. This study analyzes only

¹ A monthly ranking analysis of idol groups (K-pop artists) conducted by the Korea Brand Reputation Center

within a one-year length data due to the limitation of the artists' YouTube views statistics provided by YouTube and the limited research time.

Table 1.

Equations for regression analysis

Analysis	Equation
Simple regression analysis of Melon chart ranking predicting overall YouTube views	$YouTube_t = b_0 + b_1 Melon_{t-1} + e$
Simple regression analysis of Melon chart ranking predicting YTM chart ranking	$YTM_t = b_0 + b_2 Melon_{t-1} + e$

4. Results and Data Analysis

Melon and YouTube data collected ranges from April 13, 2020, to April 25, 2021, to cover a one-year period for the test. However, due to the unavailability of the Idol Group Brand Reputation Ranking in March and April 2021, artists considered idol groups who ranked on the Singer Brand Reputation Ranking² were collected as a substitution.

4.1 Melon chart ranking predicting overall YouTube views

Simple regressions are run by three categories: song, artist, and label.

² A monthly ranking analysis of South Korean singer (all genres) conducted by the Korea Brand Reputation Center

4.1.1 Results by song

After testing 61 songs by 20 artists, 21 songs by 10 artists showed significance as shown in table 2. 67% took less than two weeks to enter Melon chart after its release while 33% were released 8-22 weeks prior to charting during the test period. However, all artists had new releases during this period.

Table 2

Results: Melon chart ranking predicting overall YouTube views (by song)

Artist	Song Title	N (weeks)	Sig.	Days Released
(G)I-DLE	DUMDi DUMDi	20	*	6
(G)I-DLE	HWAA	11	**	6
Apink	Dumhdurum	27	***	6
BLANKPINK	Bet You Wanna (Feat. Cardi B)	5	**	9
BLANKPINK	How You Like That	42	***	2
BLANKPINK	Ice Cream (with Selena Gomez)	15	*	2
BTS	00:00 (Zero O'Clock)	29	*	58
BTS	Blue & Grey	10	**	9
BTS	Interlude : Shadow	13	**	58
BTS	Louder than bombs	13	**	58
BTS	Outro : Ego	13	**	58
BTS	Respect	11	***	58
ITZY	Not Shy	16	***	6
IZ*ONE	Secret Story of the Swan	14	***	6
MAMAMOO	Dingga	25	***	5
MAMAMOO	HIP	32	**	157
OH MY GIRL	Dolphin	49	**	13
OH MY GIRL	Nonstop	50	***	6
Red Velvet	Monster	13	***	6
Red Velvet	Psycho	34	***	118
TWICE	I CAN'T STOP ME	24	***	6

It is certain that Melon artists³ have a large number of Korean listeners as their songs make it to the chart. Table 3 shows the amount of one-year global and South Korea YouTube views for 22 Melon artists. 90% of artists with significant results had over 100 million YouTube views from South Korea in a year. 70% also gained YouTube views in South Korea above Melon artists' average of 136.8 million. Among all Melon artists, South Korea ranks third in average, emphasizing the popularity in their home country. As much as 70% of Melon artists also have South Korea as the first and second viewing country on YouTube.

Table 3

Global and South Korea YouTube views by Melon artist (sorted by South Korea YouTube views)

Artist	1-Year Global Views (Million)	South Korea		
		1-Year Views (Million)	Country Rank	Share
BTS	13000	707.0	8	5.44%
BLACKPINK	11000	423.0	10	3.85%
TWICE	3240	209.0	4	6.45%
OH MY GIRL	324	161.0	1	49.69%
IZ*ONE	558	156.0	1	27.96%
SEVENTEEN	983	156.0	2	15.87%
Red Velvet	1030	149.0	1	14.47%
(G)I-DLE	797	140.0	1	17.57%
ITZY	1200	117.0	2	9.75%
MAMAMOO	1120	116.0	1	10.36%
GFRIEND	388	91.7	1	23.63%
EXO	935	67.9	3	7.26%

³ Artists whose song(s) entered Melon chart during April 13, 2020–April 25, 2021

Artist	1-Year Global Views (Million)	South Korea		
		1-Year Views (Million)	Country Rank	Share
NCT 127	616	62.4	3	10.13%
Brave Girls	86.4	60.8	1	70.37%
SHINee	279	53.4	1	19.14%
APRIL	83.6	52.7	1	63.04%
TXT	601	51.2	4	8.52%
NCT DREAM	407	45.6	3	11.20%
NCT U	688	43.3	3	6.29
WINNER	192	43.3	1	22.55
aespa	346	37.8	2	10.92
Average	1731	136.8	9	20.24

4.1.2 Results by artist

Regressions are run on 19 artists, all songs combined for each. As shown in table 4, significance showed only on three artists: (G)I-DLE, OH MY GIRL, and Red Velvet, which are female groups that have a fair to high share of South Korea YouTube views at 17.57%, 49.69%, and 14.47% respectively. All of them also have South Korea YouTube views above Melon artists' average.

Table 4

Results: Melon chart ranking predicting overall YouTube views (by artist)

Artist	N (weeks)	Sig.
(G)I-DLE	36	***
OH MY GIRL	99	***
Red Velvet	47	***

4.1.3 Results by label

Regressions are run on four major labels⁴, HYBE Labels (former Big Hit Entertainment), JYP Entertainment, SM Entertainment, YG Entertainment, and nine minor labels combined as others. HYBE Labels and JYP Entertainment showed no significance of Melon chart ranking predicting YouTube views of its artists, while YG Entertainment also had merely little significance level as shown in table 5. Similarly, these three labels have less than 7.5% share of South Korea YouTube views, while those of SM Entertainment and minor labels are 11.52% and 21.96% respectively as shown in table 6.

Table 5

Results: Melon chart ranking predicting overall YouTube views (by label)

Label	Number of Artists	N (weeks)	Sig.
SM	6	91	***
YG	2	107	*
Others	9	320	***

Table 6

Global and South Korea YouTube views by label

Label	1-Year Global Views (million)	South Korea	
		1-Year Views (million)	Share
HYBE	13000	707.0	5.44%
JYP	4440	326.0	7.34%
SM	3613	416.1	11.52%

⁴ Considering company's market capitalization according to the Korea Composite Stock Price Index (KOSPI)

Lebel	1-Year Global Views (million)	South Korea	
		1-Year Views (million)	Share
YG	11192	466.3	4.17%
Others	4552	999.7	21.96%

4.2 Melon chart ranking predicting YouTube Music chart ranking

Simple regressions are run on songs by Melon artists that entered both Melon chart and South Korea YTM chart. Number of songs decreased from 61 to 40 as those with no entry on YTM chart could not be tested. 73% showed significance and it is similar to results in 4.1 that all artists of these songs had new releases during the test period.

Table 7

Regression results: Melon chart ranking predicting YouTube Music chart ranking

Artist	Song Title	N (weeks)	Sig.	Days Released
(G)I-DLE	HWAA	11	***	6
(G)I-DLE	DUMDi DUMDi	19	***	6
(G)I-DLE	Oh my god	5	**	13
Apink	Dumhdurum	19	***	6
APRIL	LALALILALA	4	**	11
BLANKPINK	Ice Cream (with Selena Gomez)	15	***	2
BLANKPINK	Lovesick Girls	28	***	2
BLANKPINK	How You Like That	42	***	2
BLANKPINK	Pretty Savage	10	*	9
BLANKPINK	Bet You Wanna (Feat. Cardi B)	5	***	9
Artist	Song Title	N (weeks)	Sig.	Days Released
BTS	Life Goes On	20	***	2
BTS	Savage Love (Laxed – Siren Beat) (BTS Remix)	20	*	9

Artist	Song Title	N (weeks)	Sig.	Days Released
BTS	Blue & Grey	5	***	9
BTS	ON	43	***	58
ITZY	Not Shy	16	***	6
ITZY	WANNABE	25	***	41
IZ*ONE	Secret Story of the Swan	14	***	6
IZ*ONE	Panorama	18	***	6
IZ*ONE	FIESTA	26	***	62
MAMAMOO	Dingga	19	***	5
MAMAMOO	HIP	20	***	157
OH MY GIRL	Nonstop	50	***	6
OH MY GIRL	Dolphin	23	*	13
Red Velvet	Monster	13	***	6
Red Velvet	Psycho	33	***	118
SEVENTEEN	Left & Right	11	***	6
SHINee	Don't Call me	7	**	6
TWICE	MORE & MORE	21	***	6
TWICE	I CAN'T STOP ME	24	***	6

5. Conclusion and Discussion

It could be concluded that Melon chart ranking predicted or had an influence on artists' overall YouTube views, especially those who had considerably high global YouTube views and a large proportion of South Korea YouTube views. On the other hand, Melon chart ranking did not predict overall YouTube views for some Melon artists with comparatively low global YouTube views. This could be implied that popularity in South Korea would not lead to global popularity in some cases. From regression results by song, 50% of artists' overall YouTube views were significantly predicted by their song ranking on

Melon chart. It can be seen that most songs on the Melon chart are new releases. However, previously-released songs also stand a chance in entering the chart if the artists released new songs in most cases. Melon chart entry of older releases did not show much prediction on overall YouTube views while most new releases did. It could be implied that overall YouTube views are mostly predicted by Melon chart entry of newly released songs. Melon chart ranking also predicted YTM chart ranking in most regression results, affirming Melon's position as a leading music streaming platform in South Korea with the ability to predict chart rankings on other platforms.

Apart from all regressions which focused only on songs and artists that needed to appear on Melon chart, it could be observed from YTM chart that YTM may be more popular among K-pop listeners as there are more various Brand Reputation artists⁵ on the chart. When looking at statistics in a specific period alone, it is positive that Melon artists are more popular than non-Melon artists in South Korea as Melon is the most used platform domestically. However, referring to the Brand Reputation Ranking, it's plausible that some idol groups may not be active on Melon but the group's name can still appear amidst the public attention chart as they did not release songs under the group name but their popularity are in fact gained from the members' solo or unit activities appearing both in music or other entertainment fields.

Besides the limited period of the collectible data, another limitation to sample sizes was a small variety of K-pop songs and artists on Melon chart as it is the most used music platform with various genres being streamed. Therefore, further studies could be conducted on different music platforms or different music

⁵ K-pop artists who appeared in the top 50 of the Idol Group Brand Reputation Ranking (April 2020–February 2021) and the Singer Brand Reputation Ranking (March–April 2021)

genres with more variables such as acoustic features of the song, composers, or seasonal features. A test on overall YouTube views predicting Melon chart ranking could be attempted further to see the results in a reverse direction. This kind of research may be beneficial to South Korean musicians, not only K-pop artists but also those in different genres, in a way to find out which market should be their focus or what strategy does not contribute to their success. As mentioned about music chart manipulation in South Korea, it shows the possibility of some artists who urge to perform well on domestic charts. Suppose there is a further study on any other genres, it might turn out that expanding to the global market yields more effective results than concentrating only on domestic popularity.

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