

# Analysis of J-POP: Playing with Billboard Japan Hot 100

Zhiyi Jin

## Introduction

J-POP is widely known as a music genre that represents that mainstream Japanese pop music. Developed in the 1960s, J-POP had its deep root in rock music and generate numerous rock bands that had a huge influence on the shape of Asia music industry such as Happy End (はっぴいえんど) and Southern All Stars (サザンオールスターズ). From the 1990s, the J-POP market reaches its commercial peak. Various solo singers such as Namie Amuro (安室奈美恵) and idol groups like Morning Musume (モーニング娘) emerged and became a big hit at that time.

In recent decades, under the age of digital distribution, J-POP music and the way people consume it have changed. Some independent artists get the opportunity to be exposed to mainstream audiences via digital platforms such as Tiktok, Youtube, and SoundCloud. Also, with the rise of K-POP in East Asia, more and more K-POP artists successfully hit the Japanese music charts. Thus, considering its long history, diversification of music styles, and artists type, J-POP, as the world's second-biggest music market, is an interesting topic to dig into. And in this small project, I'll perform basic descriptive analysis using data extracted from Billboard Japan Hot 100 to answer some simple but interesting questions like:

- Who are the most popular artists in recent years?
- What are those hit songs in the J-POP market?

## Data collection

I use the website of Billboard Japan and focus on the Hot 100 charts. This is the URL from where I scrape the data:

["http://www.billboard-japan.com/charts/detail?a=hot100&year=xxxx&month=xx&day=xx"](http://www.billboard-japan.com/charts/detail?a=hot100&year=xxxx&month=xx&day=xx).

I'm interested in the Billboard Japan Hot 100 charts from Jan 1st, 2010 to Dec 31st, 2020, which covers weekly hit songs in Japan over half-decade. The URL is constant and all changes are over "year=", "month=", and "day=". The first chart in 2010 was published on the website on Jan 18th, although the ranking was calculated on 13th Jan. There seems to be a five-day delay. And the last chart published on the website is on 28th Dec, which recorded the charts of 23rd Dec 2021. Thus, I collected a vector of URLs from ["http://www.billboard-japan.com/charts/detail?a=hot100&year=2010&month=01&day=18"](http://www.billboard-japan.com/charts/detail?a=hot100&year=2010&month=01&day=18) to ["http://www.billboard-japan.com/charts/detail?a=hot100&year=2020&month=12&day=28"](http://www.billboard-japan.com/charts/detail?a=hot100&year=2020&month=12&day=28), covering charts from 13th Jan 2010 to 23rd Dec 2020, and store them in an object named "urls". Collected 572 web pages are reconstructed and stored in "t\_pages".

I extracted the following data from each page, and store all data under "total":

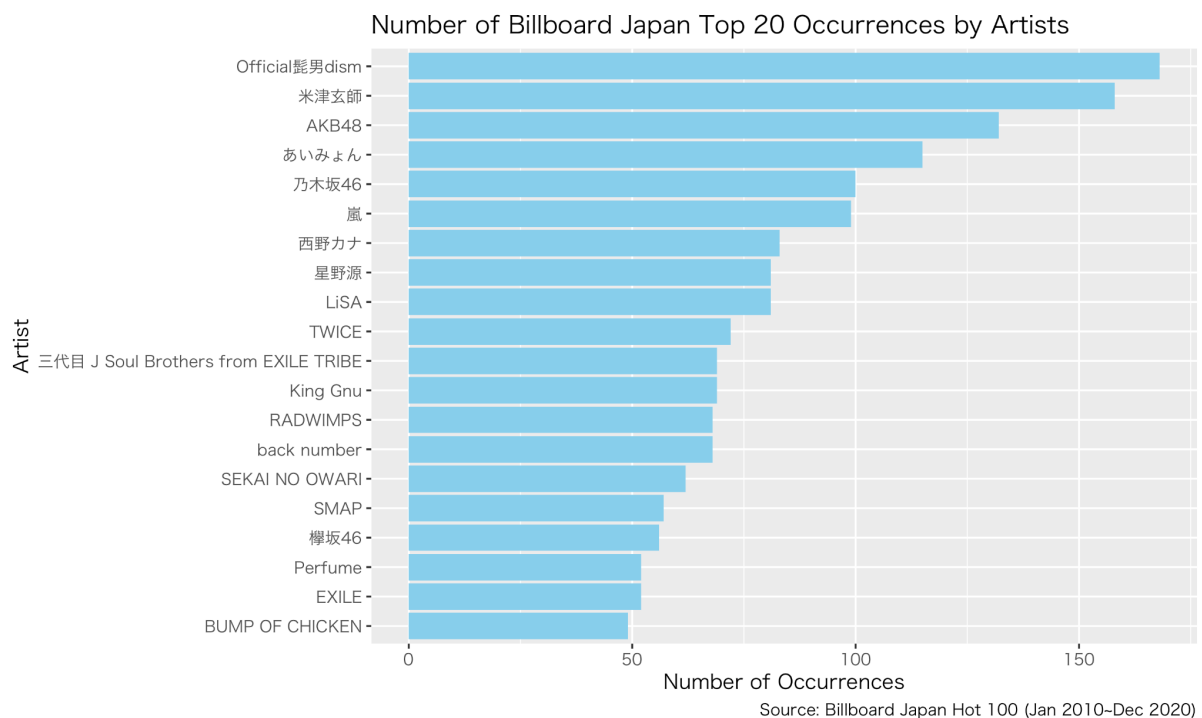
- Rankings
- Artists
- Titles
- Publishing date of the charts

Note that there are 100 songs in each chart, but I only collect information on the top 10 songs of the Hot 100 charts for a focus on songs with a high level of popularity.

The final data frame is stored in an object “dt5”. It has 6 columns with (572 charts x 10 songs) = 5720 rows. To get this data frame, I firstly remove the space, bracket “[ ]” and unnecessary Japanese character “公開”, which means “published” in English, in the date variable by using regexes. For example, “[ 2010/01/13 公開]” is transformed into “2010-01-13”. Then I separate the date variable into the year, month, and day variables by “-”. The data frame is output as a CSV document, named “chart.csv”.

## Data analysis

To see who are the most popular artists in the half-decade, I simply measure the number of occurrences by the artist on the Top 10 of Billboard Japan Hot 100. It can be seen from the following bar chart that Official Hige Dandism (Official 髭男dism), a Japanese pop band appears on the Top 10 of Billboard Japan Hot 100 more than 150 times. Yonezu Kenshi (米津玄師), who is a male solo, follows Official Hige Dandism as the second most in-ranked artist on the chart. AKB48, the most famous J-POP idol group in Aisa, is ranked in third place, with over 120 times occurrences. Note that Twice, the well-known K-POP girl group that has already broken countless records in South Korea is in the tenth place, which proves their success in the Japanese music market. Aimeyon (あいみょん), Kana Nishino (西野カナ) and LiSA are the three most popular female singers since 2010.



However, the occurrence of artists may not necessarily represent the popularity of their songs. Then, what are those hit songs in the half-decade? It can be found from the table and bar chart that *Lemon* of Yonezu Kenshi is the most in-ranked song and *Pretender* of Official Hige Dandism is in the second place. Both of them have three or more songs on the Top20 occurrence chart. One interesting thing is that among 20 songs, none of them are from idol groups despite that there are 7 idol groups out of 20 artists in the above figure. The reason

might be that idol groups usually release more singles than solo artists or bands. They have more opportunities to enter the chart, while lack really “hit” songs. The only song from idol groups is *Make you happy* of NiziU, who just debuted in 2020 and seems to have a promising future.

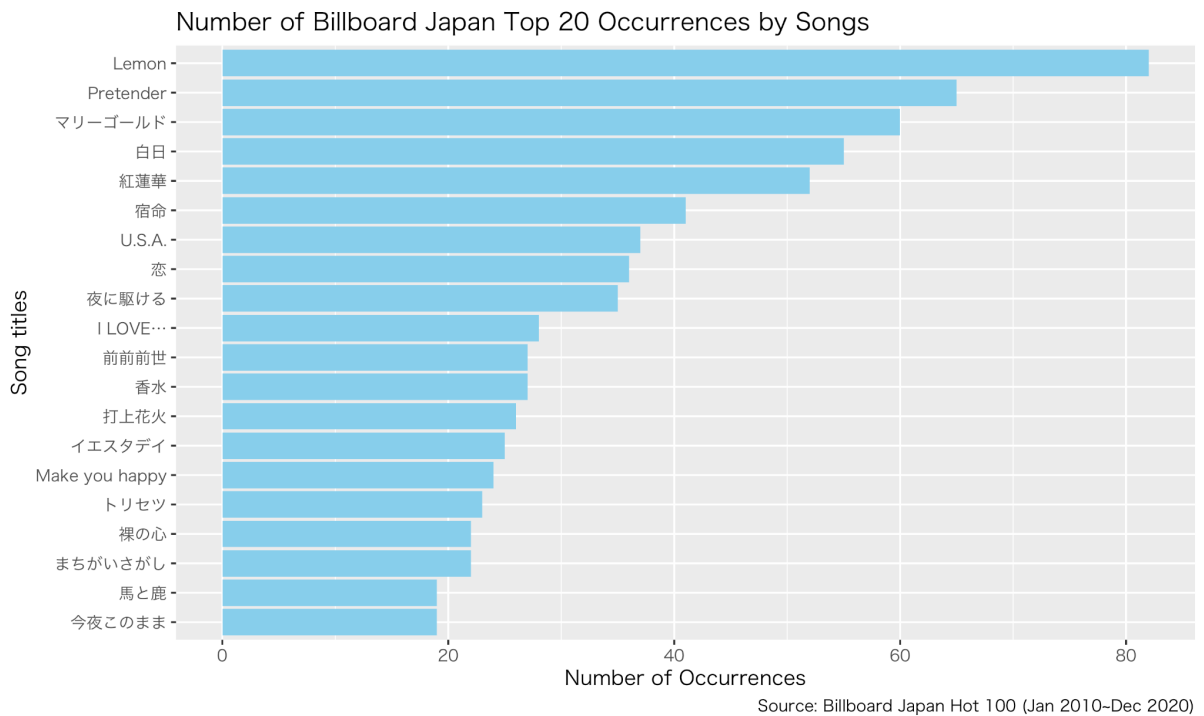


Table: Number of Billboard Japan Top 20 Occurrences by Songs

artists	titles	count
米津玄師	Lemon	82
Official髭男dism	Pretender	65
あいみょん	マリーゴールド	60
King Gnu	白日	55
LISA	紅蓮華	52
Official髭男dism	宿命	41
DA PUMP	U.S.A.	37
星野源	恋	36
YOASOBI	夜に駆ける	35
Official髭男dism	I LOVE...	28
瑛人	香水	27
RADWIMPS	前前前世	27
DAOKO × 米津玄師	打上花火	26
Official髭男dism	イエスタデイ	25
NiziU	Make you happy	24
西野カナ	トリセツ	23
菅田将暉	まちがいさがし	22
あいみょん	裸の心	22
あいみょん	今夜このまま	19
米津玄師	馬と鹿	19