Kansei J-POP Hit Factors Analysis

Toshihiro Kaino
Aoyama Gakuin University
4-4-25, Shibuya, Shibuya, Tokyo
E-mail: kaino@busi.aoyama.ac.jp

Tomohiro Suzuki
DHL Japan, Inc.
1-37-8, Higashi-Shinagawa, Shinagawa, Tokyo

Abstract - Diversification of consumer needs and digitization change the music industry more competitive. Record labels must raise the hit probability in the music marketing. However, most of music marketing researches are qualitative. In this paper, the hit factors of J-POP music are analyzed with Kansei information processing. Concretely, 25 J-POP music songs of the Oricon yearbook 2007 are analyzed by the semantic differential method and factor analysis. Moreover, Kansei J-POP hit factor analysis is evaluated by interview surveys of two business persons in music industry.

I. INTRODUCTION

The record labels need the marketing research that raises the probability of the hit music because consumer needs are diversified in the music market. There is a lot of qualitative research, but a few quantitative one in actual music marketing research area.


In this paper, J-POP music songs on “Oricon music ranking yearbook 2007[8]” will be analyzed about hit music factors by Kansei information processing. To be concrete, 50 examinees will listen to 25 music songs and answer the questionnaire by the SD method using the adjective pairs of the Kansei words. Next, the results of these questionnaires will be extracted the hit factors by the factor analysis. If the hit factors are extracted, the music business players will carry out the effective marketing activities on the music business area.

II. HIT FACTORS OF J-POP MUSIC BUSINESS

J-POP is an abbreviation for Japanese popular music, but there is no concrete definition.

Ugaya[9] defines J-POP as the Japanese urban and international music that makes a favorable impression upon the young peoples of the day. This definition will be accepted in this paper. By the way, it is thought that the hit factors of J-POP music will be roughly classified by music songs, artists, promotion, and social factors (Refer to Figure 1)

Figure 1. Hit factors of J-POP music

A music song is composed of the genre, lyrics, melody, rhythm, tempo, and music instruments. Kameda et.al.[1] researched about these factors, qualitatively.

Composers, songwriters, arrangers, and players are called as artists. Player’s popularity, performance and personality are the most important for success of the music business. And, popularity and performance of composers, songwriters, and arrangers (They are called as producers or directors.) also influence the success of music business. The record labels, productions, and the retail stores typically promote their artists and music songs by tie-up, the artist’s appearance on the television programs, and special sales in front of the shop, etc. Salganik et.al.[10] introduce that a social factor (trend of the time, fashion, current topics, phenomenon, historical events, etc.) is the fundamental hit factor and influences
the popularity of artists, messages of music songs, tie-up, and consumer mentality.

In this paper, 25 music songs will be analyzed by Kansei factors of 50 examinees, quantitatively.

### III. J-POP HIT FACTOR ANALYSIS

#### 1. PURPOSE OF THIS RESEARCH

In this paper, it is the purpose that Kansei hit factors will be quantitatively picked up and examined to apply the actual music business. If the hit factors are extracted, the music business players will not only qualitatively, but also quantitatively design the music songs by the listener’s Kansei factors and carry out the effective marketing activities on the music business area.

#### 2. OVERVIEW OF THIS RESEARCH

50 examinees will listen to 25 music songs that are selected from “Oricon music ranking 2007 yearbook”, and answer the questionnaire by the SD method using the adjective pairs of the Kansei words. Then these results are analyzed by factor analysis.

#### 3. PROCEDURE

**1) KANSEI WORDS**

In this paper, the questionnaire will be designed by 40 adjective pairs (for example: “bright” and “dull”) of Kansei words in Sugihara et.al.[4].

**2) GRASP OF SEMANTIC SPACE**

50 examinees will listen to 25 music songs that are selected from “Oricon music ranking 2007 yearbook”, and answer the questionnaire by 5 graded criterions using the adjective pairs of the Kansei words. Then these results will be analyzed by factor analysis and grasp the semantic space. Then, Kansei words of each factor will be classified and the representative Kansei words will be extracted. The sample music songs are chosen at random from among 5 ranking stages (1-200, 201-400, 401-600, 601-800, 801-1000). Here, foreign music songs are taken off because of the J-POP’s definition. Examinees should listen and answer the questionnaire at random. Each sample music songs will be played from introduction to first chorus because of examinee’s load. 50 examinees (1 professor [49 years old] and 49 students [20-24 years old]) with Kaino Seminar in the school of business, Aoyama Gakuin University, listen 25sample music songs and after answer the questionnaire with 40 adjective pairs (Kansei words). 50 examinees listen to the music for 1 hour or more, every day. Sample music songs of questionnaire survey are shown as Table 1.

#### IV. RESULTS OF QUESTIONNAIRE SURVEY AND ANALYSIS

Results of questionnaire survey using the SD method will be analyzed by the factor analysis of “SPSS (Statistical Package for the Social Sciences)”. A principal axis factoring is used for factor extraction and a varimax rotation is used for rotation method with 14 rotations. The factor loadings of factor analysis are introduced in Table.2. Adjective pairs (Kansei words) of 3 Kansei major factors will be extracted, if the absolute value of factor loading is more than equal 0.6. Attributes of extracted factor is shown as Table 3.
Table 2. Factor loadings

<table>
<thead>
<tr>
<th>1st factor</th>
<th>2nd factor</th>
<th>3rd factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>refreshing, clear, calm</td>
<td>gloomy, opaque, unmoving, uncomfortable, irritating</td>
<td>cheerful, bright, happy, light, merry</td>
</tr>
<tr>
<td>impressive, comfortable</td>
<td>new</td>
<td>quiet, dark, unhappy, profound, gloomy</td>
</tr>
<tr>
<td>peaceful</td>
<td>novel</td>
<td>joyful</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sorrowful</td>
</tr>
<tr>
<td>X-axis</td>
<td>Y-axis</td>
<td>Z-axis</td>
</tr>
</tbody>
</table>

For the sake of analysis of 3 major Kansei factors, 3 scatter plots is shown as Figure 2, 3, 4. Here, the numbers beside the small circles in scatter plots are sales volume of each music song. In the analysis, the mean of sales volume of 25 sample music songs (45,674 CDs) will be considered as the central index.

Figure 2 is a scatter plot of sample music songs. Here, X-axis is the mean of factor loadings of adjective pairs belong to peaceful Kansei factor, Y-axis is the mean of factor loadings of adjective pairs belong to novel Kansei factor.

In Figure 2, 11 sample music numbers belong to peaceful and common group with positive number of X-axis (peaceful) and negative number of Y-axis (novel). The mean of sales volume in this group is 67,573 CDs that is the top sales volume. Music songs in peaceful and common group are slow tempo and almost don’t include the artificial electronic sound. And, foreign languages and abbreviations are not used in the most of music song’s lyrics.

8 sample music songs belong to peaceful and novel group with positive X-axis (peaceful) and positive Y-axis (novel). The mean of sales volume in this group is 39,832 CDs that is the second sales volume. Music songs in peaceful and novel group are up tempo and include the artificial electronic sound. And, foreign languages and abbreviations are used in the most of music song’s lyrics.

4 sample music songs belong to tense and novel group with negative X-axis (peaceful) and positive Y-axis (novel). The mean of sales volume in this group is 23,272 CDs that is the third sales volume. Music songs in tense and novel group are up tempo and include the artificial electronic sound. Moreover, the beat is subdivided into multiples of the basic pulse.

3 sample music songs belong to tense and common group with negative X-axis (peaceful) and negative Y-axis (novel). The mean of sales volume in this group is 5,085 CDs that is the fourth sales volume.

Figure 3 is a scatter plot of sample music songs. Here, X-axis is the mean of factor loadings of adjective pairs belong to novel Kansei factor, Y-axis is the mean of factor loadings of adjective pairs belong to joyful Kansei factor.
In Figure 3, there is no sample music songs belong to novel and joyful group with positive number of X-axis (novel) and negative number of Y-axis (joyful).

5 sample music songs belong to peaceful and novel group with negative X-axis (novel) and positive Y-axis (joyful). The mean of sales volume in this group is 118,529 CDs that is the top sales volume. Music songs in common and joyful group are slow tempo and don’t include the artificial electronic sound. And, foreign languages and abbreviations are not used so much in the most of music song’s lyrics without a sample music song No. 7.

11 sample music songs belong to novel and joyful group with positive X-axis (novel) and positive Y-axis (joyful). The mean of sales volume in this group is 34,844 CDs that is the second sales volume. Music songs in novel and joyful group are up tempo and include the artificial electronic sound very much. And, foreign languages and abbreviations are used in the most of music song’s lyrics. Moreover, the beat is subdivided into multiples of the basic pulse.

9 sample music songs belong to common and sorrowful group with negative X-axis (novel) and negative Y-axis (joyful). The mean of sales volume in this group is 18,435 CDs that is the third sales volume.

Music songs in common and sorrowful group are up tempo and include the artificial electronic sound very much. And, foreign languages and abbreviations are not used so much in the most of music song’s lyrics so much.

Figure 4 is a scatter plot of sample music songs. Here, X-axis is the mean of factor loadings of adjective pairs belong to peaceful Kansei factor, Y-axis is the mean of factor loadings of adjective pairs belong to joyful Kansei factor.

Sample music songs classified in each factor spaces will be analyzed in Figure 4.

12 sample music songs belong to peaceful and joyful group with positive number of X-axis (peaceful) and positive number of Y-axis (joyful). The mean of sales volume in this group is 75,506 CDs that is the top sales volume. Music songs in peaceful and joyful group are divided to a slow tempo group (music song No. 10, 15, 16, 22) and a slow tempo group (the others). These include the artificial electronic sound without No. 22. Most of music song’s lyrics give listeners spiritual elevation or relief.

7 sample music songs belong to peaceful and sorrowful group with positive X-axis (peaceful) and negative Y-axis (joyful). The mean of sales volume in this group is 22,244 CDs that is the second sales volume. Music songs in peaceful and sorrowful group are slow tempo and almost don’t include the artificial electronic sound without No. 24. And, foreign languages and abbreviations are not used in the most of music song’s lyrics.

4 sample music songs belong to tense and joyful group with negative X-axis (peaceful) and positive Y-axis (joyful). The mean of sales volume in this group is 19,627 CDs that is the third sales volume.

Music songs in tense and joyful group are up tempo and include the artificial electronic sound very much. And, the beat is subdivided into multiples of the basic pulse.

2 sample music songs belong to tense and sorrowful group with negative X-axis (peaceful) and negative Y-axis (joyful). The mean of sales volume in this group is 19,627 CDs that is the fourth sales volume. Table 4 is a summary of mentioning above.

Thus, the Kansei factors in high sales rank, middle sales rank, and low sales rank, are extracted from the sample music songs of “Oricon yearbook 2007”. But, it is needed to pay attention the exceptions, because there is a factor space that includes few classified music songs in high sales rank. Moreover, it is difficult to specify the
Kansei factor because music songs of high sales rank and low sales rank vary widely

Table 4. Kansei factors of hit music songs

<table>
<thead>
<tr>
<th>Music songs in high sales rank</th>
<th>Music songs in middle sales rank</th>
<th>Music songs in low sales rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>peaceful</td>
<td>peaceful</td>
<td>tense</td>
</tr>
<tr>
<td>common</td>
<td>novel</td>
<td>common and novel</td>
</tr>
<tr>
<td>joyful</td>
<td>Joyful and sorrowful</td>
<td>Joyful and sorrowful</td>
</tr>
</tbody>
</table>

V. INTERVIEW SURVEYS TO MUSIC BUSINESS PLAYERS

Mr. Shuji Inoue (Artist Branding Analyst) and a marketing stuff with the marketing department in Avex, Inc. will answer about the possibility of this Kansei J-POP hit factor analysis with interview surveys.

1. A few quantitative marketing research in the actual business

There is a few quantitative marketing research for music songs like as this paper, but consumer acceptable researches are used in the actual music business. And, there is sometimes consumer behavior survey in the around music business without record labels. It is a reason that most of music business players are short of fund due to the recession in music industry. And, players produce the music song depend on their experience and knowhow. Therefore, music production stuffs don’t understand the marketing concept, so much. And they doubt the necessity of marketing research.

2. There is a possibility to apply the quantitative marketing research in actual business.

In a present music business, it is seen that the concept of marketing has not infiltrated especially enough on the production site. In addition, it is seen that a skeptic image to marketing exists between managers. Recently, the advanced competitors enter the music industry from the other industries (retailers, electric manufacturers, etc.). They try to reform the music industry by their scientific methods. Existing music players must tackle more logical marketing approach and quantitative marketing researches. So, this paper’s approach is interesting to apply the actual business in future.

3. Transform to artist oriented merchandising

The music is the core of business success in music industry. So, business players consider artists and others as the second factors. But, the Avex’s marketing stuff notes that they try to transform from music song oriented merchandising to artist oriented merchandising.

From the above-mentioned interview survey, there are few quantitative marketing researches and also Kansei hit factor analysis like as this paper in the present actual business. However, it was confirmed that actual business persons think that it will be necessary to apply the quantitative marketing research into music business in the future. And, core competent of music business will be not only music but also artist, so Kansei J-POP hit factor analysis should include artist’s Kansei images.

VI. CONCLUSIONS

In this paper, the hit factors of J-POP music are analyzed with Kansei information processing. Concretely, 25 J-POP music songs of the Oricon yearbook 2007 are analyzed with the SD method and factor analysis. Moreover, the possibility of applying the Kansei J-POP hit factor analysis to actual business will be confirmed by interview surveys of two business persons in music industry.

Now, there are some subjects in this paper as follows:

1. Number of sample music and examinee is not sufficient.
3. Extracted Kansei factors should be estimated in actual music market. More appropriate selection of Kansei words
4. Sales ranking of sample music in this paper was little bit should be high, so selection of sample music should be extended to lower ranking music in future survey.
5. Kansei J-POP hit factor should be analyzed not only music, but also the other factors (artist, promotion, social factor).

So, the above subjects will be coped with in future survey.

REFERENCES

[5] Sugihara, Morimoto, Kurokawa: "Selection of Kansei words for Kansei based music retrieval system for


