Differences of Characteristics of Informing with Using SNS to Fans from Professional Football Clubs between Japan and Germany

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Abstract

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This study is intended as an investigation of difference of information contents via Twitter from professional football leagues in Japan (J1, 18 clubs) and Germany (1. Bundesliga, 18 clubs). The all gathered Tweets from clubs of both leagues in a year were classified into two categories. The Tweets which referred to football itself belonged to Category 1, and the other Tweets, which were not mentioned football were come under Category 2. To compare the Tweets from both leagues, Mann-Whitney test and Friedman test were performed. 1. Bundesliga clubs and J1 clubs posted totally 51,202 and 75,573 tweets, respectively. 1. Bundesliga clubs made greater level of the total Tweets, the amounts and the ratio of Tweets of Category 1 than J1 clubs significantly ($p < 0.05$), and in Category 2 it resulted in opposite situation ($p < 0.05$). Moreover, 1. Bundesliga clubs released Tweets in the larger amounts and in the higher ratio in off-season than J1 clubs ($p < 0.05$). In conclusion, 1. Bundesliga clubs tended to put stronger emphasis on informing to fans via Twitter, expressly relating to football, than J1 clubs.

日本とドイツのプロサッカークラブの、SNS を利用したファンへの情報発信の特徴の違い

本研究では、J1 リーグ（18 クラブ）とブンデスリーガ 1 部（18 クラブ）の全クラブにおける 1 年間の Twitter の投稿内容を分析した。収集された両リーグクラブのツイートは、サッカー競技自体に言及したツイート（カテゴリー 1）と、それ以外の競技に関係のないツイート（カテゴリー 2）に分離した。2 つのリーグのツイートを比べるため、Mann-Whitney 検定と Friedman 検定を用いた。J1 クラブとブンデスリーガ 1 部クラブの投稿数はそれぞれ 51,202、75,573 ツイートだった。ブンデスリーガ 1 部は合計ツイート数とカテゴリー 1 のツイート数・割合が J1 より有意に高く（p <0.05）、カテゴリー 2 は逆の結果となった（p <0.05）。さらにブンデスリーガ 1 部クラブは、J1 クラブと比べオフシーズンのツイート数・割合も有意に高かった ($p < 0.05$)。結論として、ブンデスリーガ 1 部クラブは、J1 クラブよりも Twitter を通したファンへの情報発信、特に競技に関連する情報を重視する傾向がみられる。

Untersuchung zur Verschiedenheit der Informierung durch Fußballvereine mittels sozialer Medien in Japan und Deutschland

Diese Untersuchung wurde ausgeführt, um die Verschiedenheit der Informationen zu Fans mittels Twitter zwischen japanischen und deutschen professionellen Fußballvereinen zu erforschen. Alle innerhalb eines Jahres gemachten Tweets beider Vereine wurden gesammelt und in zwei Kategorien unterteilt. Tweets welche einen Zusammenhang zu Fußball aufwiesen, wurden der Kategorie 1 zugeordnet, die restlichen Tweets der Kategorie 2. Die Daten (J1 51,202 Tweets und 1. Bundesliga 75,573 Tweets) wurden mittels des Mann-Whitney Tests sowie des Friedman Tests analysiert. Die Vereine der 1. Bundesliga machten bezüglich Kategorie 1 signifikant mehr Tweets, in absoluter und relativer Menge als Vereine der J1 und die Tweets der Kategorie 2 wiesen ein umgekehrtes Ergebnis auf (p <0.05). Außerdem, war die absolute und relative Anzahl an Tweets außerhalb der Spielsaison von Vereinen der 1. Bundesliga bedeutende höher, als diejenigen der Vereine der J1 (p <0.05). Folglich lag der Schwerpunkt der Informierung durch Twitter bei der 1. Bundesliga tendeziell stärker auf dem Thema Fußball.

Introduction

Germany has a professional football league called Bundesliga, which is one of the largest and the most famous leagues in the world. In 2017/18 season, the Financial Report in 2019 from Germany Football Association (DFL) reported that the league of first category of Bundesliga (1. Bundesliga) profited about €4 billion (€ 3,813,486,000) in all and the number is maximum revenue in the past the league. It is worthy of mention that the revenue exceeded former season for fourteenth consecutive season. On the other hand, the Club Financial Data List from J. LEAGUE in 2019 showed that Japanese professional football league of first category (J1) made a total profit of about ￥86 billion (￥85,597,000,000) in 2018 season. It was equivalent to about €719 million (€ 719,302,000) (EUR/JPY = 119) and accounted for 18% of 1. Bundesliga's total revenue in one season (Fig. 1). Moreover, the report by DFL emphasized that in 2017/18 season 17 of all 18 clubs belonging to 1. Bundesliga achieved €100 million of the proceeds respectively, and the case which 17 clubs got such results was for the first time in the history of Bundesliga. From the data list from J. LEAGUE the average of the proceeds by 18 clubs belonging to J1 in 2018 season was about ￥5 billion (￥4,755,000,000) and it can be converted into €39.95 million, and there was no club which reached to €100 million in all J1 clubs. From the perspective on the spectators, DFL reported that the total number of them in 2017/18 season was 13,426,855 for all 306 matches of 1. Bundesliga, and J. LEAGUE presented that in 2018 season J1 had 5,833,538 spectators for all 306 matches (Fig. 2). Bundesliga had an average of 43,879 spectators on one match, and J1 had 19,064 on it. Each Matchweek there are 9 matches in both leagues, so the data above could be calculated that every weekend 0.475% of German people visited stadium to watch professional football of their national first league and 0.136% of Japanese did so in

average (the Ministry of Public Management of Japan, 2018; the Ministry of Foreign Affairs of Japan, 2018). DFL also stated in Financial Report 2019 that in recent years Bundesliga acquired the most spectators in the world. Furthermore, in not only world football, Bundesliga is but also one of the most attractive professional sports leagues in the other world sports. Bundesliga is in third place of number of average attendances in the all sports leagues, and only two leagues, US National Football League and Indian cricket's Premier League have more average attendances than that of Bundesliga (Peter Kennedy &David Kennedy, 2012). It follows from what has been said that there is a great difference between the situation of these leagues of two countries.

It is completely clear that Japan stands higher level in aspects of the economy than Germany. Gross domestic product (GDP) of Japan is about $5 million ($4,970,915.56) and of Germany is about $4 million ($3,996,759.29) in 2018 (THE World Bank, 2019), whereas it is at quite opposite end when it comes to football. There are several reasons for this situation. One must be the length of history as culture or custom in each country. The population of playing football is the largest of all local sports clubs in Germany and long culture has been developed around local sports clubs (Tsuboi & Hagi, 2015). Another reason may be that the existence of the competitive sports. There is no doubt about the large-scale popularity, long history and great public culture of baseball in Japan. In the Meiji Era the concept of sport was imported from Western countries to Japan. Baseball and boat race were the first imported sports at the time, and football, tennis and track-and-field followed them (Kusaka, 1996), so baseball has a longer history than football in Japan, and Germany is in the opposite situation. Moreover, with the background of history of corporate sports, deep-seated amateurism still exists in Japan and media tend to use sports teams or athletes to get more audience rating, thus the situation in Japanese professional

sports is different from it in Germany to some extent (Nagata, 2011). However, another factor dealing with in this paper is the contents of Information given by clubs to fans through social media in both countries.

According to the official fan-survey of J. LEAGUE (2018), 87.9% of fans who watched football games in stadiums got information about J-league from the Internet, 39.8% of them from TV, 27.9% of them from daily newspapers and 9.3% from match programs they could get in stadiums (Fig. 3). It was likely that fans were much or less influenced by Web media surroundings, and they could decide their consumptive actions and form their disposition as fans. Recently with the increase of users of SNS, social networking service on Web aimed to communicate others, especially the micro blog has been paid attention by companies and corporations. The micro blog is the service which users can both inform like web blog and real-time communicate like web chat. Twitter is popular micro blog service, in December 2012 it had over 500 million user accounts (Yamamoto et al., 2013), and in October 2017 Twitter Japan reported it had over 45 million users in a month. Thus, Twitter is the social media to have very wide spread usage all over the world, and professional football clubs also follow this trend. At the present time every big club utilizes Twitter for marketing. It can allow clubs to build fan participation, heighten access to their website, and even develop sponsor programs to increase revenue (Kuzma et al., 2014). Twitter users can send a short sentence (Tweet) to the stream of other user's Tweet called Time-Line and watch real-time-posted Tweet to know other user or gather information about their interesting subjects or just have a fun. It is free, easy to use, very convenient and there are tremendous users all over the world, so in recent years some surveys which analyze trend of Tweets to clarify user's interest or attribute were conducted (Kobayashi et al., 2011). In February 2019 Vegalta Sendai established official Twitter account and it completed all J1 club official accounts.

All clubs of Bundesliga have already entered Twitter and made use of each official account. They use Twitter for marketing for tickets or goods, to keep up live commentary during a game, to show player's snapshots and videos, to inform events or new comers to team, to paste link for their Web site to raise access, and so on. Everyone can watch club's Tweets every time and everywhere, therefore now club's account has a great influence on consciousness of football fans. For example, FC Bayern München, the champion of Bundesliga for the seventh consecutive season, was followed by over 4 million users and made about 60,000 Tweets in October 2019. In other words, it could be assumed that what club informed through Twitter controlled fans and Twitter affected the professional football league market of their own countries. Sales staffs of clubs can easily target at specific fans and formulate a more effective marketing strategy in order to increase sales of tickets and attendance at stadiums (Pacheco et al., 2016).

The purpose of this study was to clarify the characteristics of information to fan via Twitter from Japanese and German professional football clubs. The information was divided into two patterns of characteristics in this paper, to relate to football or not. As stated above, German people live surrounded football culture as both a game sport and an entertainment. However, it seems that marketing target of J. LEAGUE and interest of many Japanese fans are a little different. Study by Nakazawa et al. (2000) said that ways for marketing of J. LEAGUE, especially targeting for female fans, tended to regard players as entertainers, and the ways seemed to be effective. That means many Japanese female fans prefer personal charm of football players. From J. LEAGUE PUB REPORT (2018), 37.9% of spectators were female fans, so clubs cannot disregard them as targets, and it is natural to depend on such marketing. The study aimed to show that there were differences of the amounts

and the ratio of the Tweets relating football between Japan and Germany leagues, which had different backgrounds. In this paper I hypothesized that Bundesliga clubs make larger amount and higher ratio of Tweets relating football than J. LEAGUE clubs, and J. LEAGUE clubs released larger amount and higher ratio of Tweets non-relating football than Bundesliga clubs. I estimated that J. LEAGUE clubs also released the more total amount of Tweets, and the reason was that Japanese was in 5th in the rank of language by number of Twitter users worldwide, and German was in 6th (Mocanu et al., 2013). Although it seemed that in off-season clubs of both leagues made fewer Tweets totally than in season, even it may be assumed that Bundesliga clubs also keep more Tweets relating football than J. LEAGUE clubs.

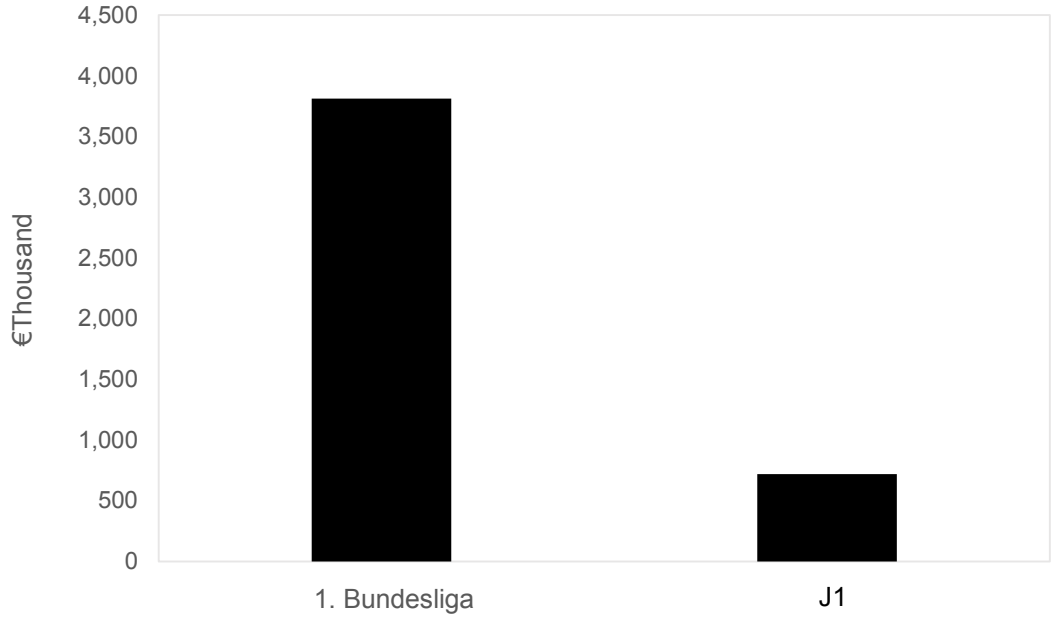

Fig. 1: The avenue of J1 (season 2018) and 1. Bundesliga (season 2017/18) made by author based on data from the Financial Report in 2019 from DFL and the Club Financial Data List from J. LEAGUE.

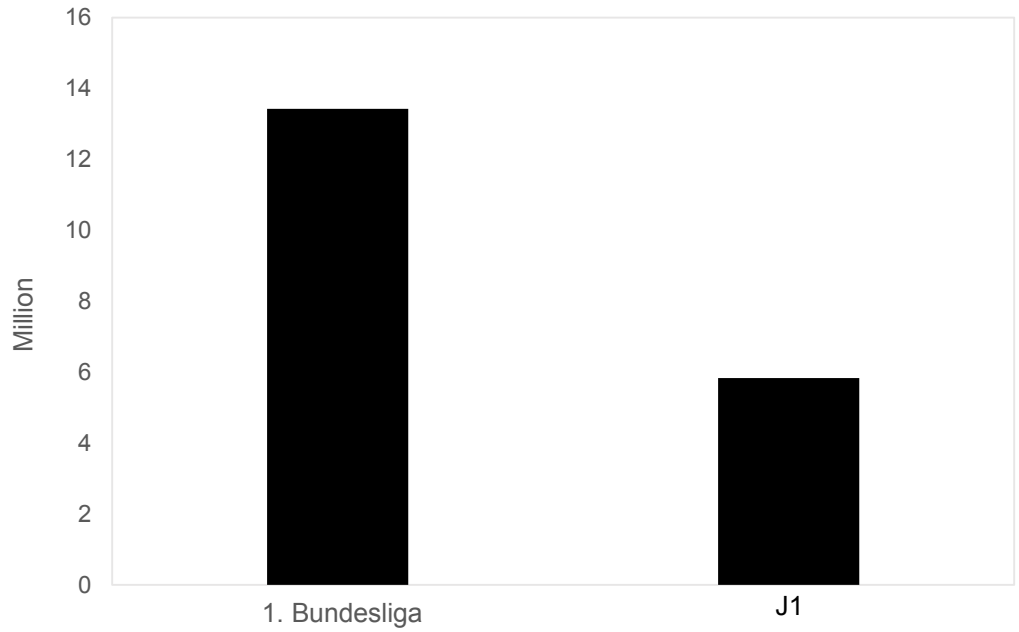

Fig. 2: The total spectators in one season of J1 (season 2018) and 1. Bundesliga (season 2017/18) made by author based on data from the Financial Report in 2019 from DFL and J. LEAGUE Data Site.

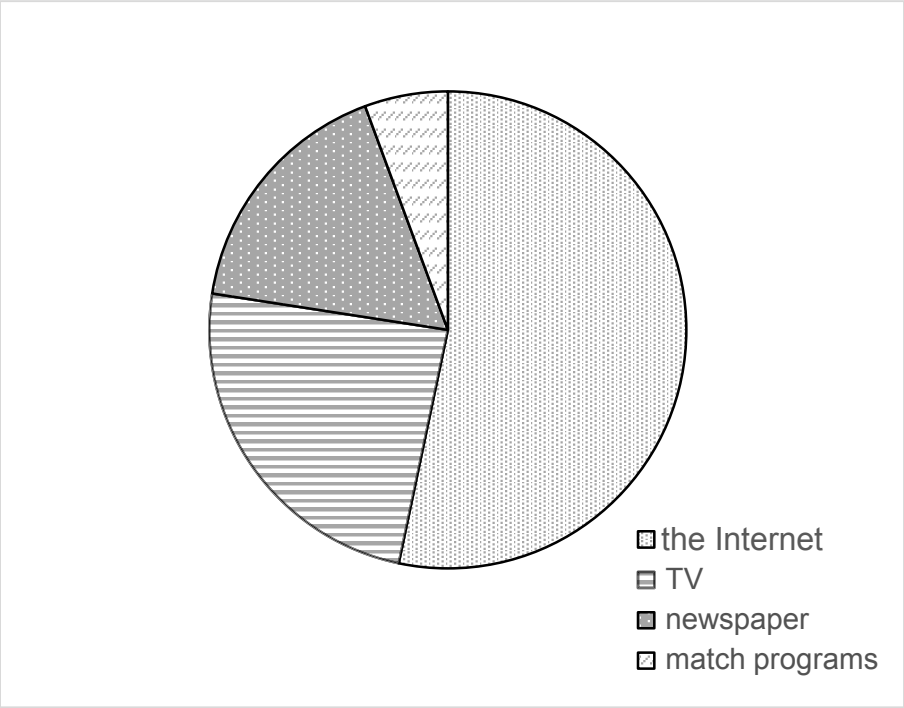

Fig. 3: The rate of how fans get information about J.LEAGUE games made by author based on data from J. LEAGUE FAN SURVEY 2018 SUMMARY REPORT.

Methods

Experimental design

Tweets from all official accounts of professional football clubs in first league both in Japan (J1) and in Germany (1. Bundesliga) were gathered and categorized into two types of contents (Details are shown below) (Table 1). The term of this survey was fixed on one a year, from 1. October 2018 to 30. September 2019. The reason to settle this term was that until February 2019 Vegalta Sendai had no official account of Twitter, and World Cup held in Russia which lasted until July 2019 changed match plans of both leagues and the contents of club's Tweets became unusually. Therefore, this term was used in order to catch all club's usual Tweets as much as possible.

Data analysis

Tweets were classified into two categories according to their contents, mention, and theme. Category 1 called in this paper was for information about football itself as a game sport (Fig 4, 5). Tweets with sentences, videos, pictures or URLs of result, live commentary, match highlight, match preview and statistics of games and so on were sorted into Category 1. When main contents were referred to game, press conference and coach's or player's interview were applied to Category 1, too. The other information, which meant contents excluding about football itself as a game sport, namely, off the pitch information, were classified into Category 2 (Fig 6, 7). For example, gratitude or communicating with fans, marketing of merchandise like goods, tickets, tours and foods in stadium, snapshots of players, event information, show the club mascot, and the others like an anniversary, someone's birthday, news of birth and death were applicable to Category 2. ReTweet, the function of Twitter

which user can show other user's Tweets on his or her own account was not countable in both categories because it was just information from another account. However, quotation ReTweet, which user can take own comments on other user's Tweets, was included in count. Reply, the function which user can send messages to other user' s Tweets was countable when it was sent to another official accounts like players of the club, other clubs, or sponsoring companies, for every user can watch the exchange of comments easily. Of course, Reply to non-official accounts was uncountable on this survey. A Tweet which mentioned both categories, was judged on which contents of category were focused on mainly. Attached videos, pictures or URLs could help these judgments. When it came to Tweets with URLs which only pay members could entry, lead sentences and thumb nail pictures could also help to categorize. Gathered Tweets were classified into two categories according to main contents, and were classified simultaneously by clubs, by the timings (in season or in off-season), and by months. During the research term (from 1. October 2018 to 30. September 2019), season of J1 lasted from 1. October 2018 to 1. December 2018, from 22. February 2019 to 30. September and of 1. Bundesliga lasted from 1. October 2018 to 18. May 2109, 16. August to 30. September 2019.

Statistics

In this study total 126,775 Tweets were gathered and they were classified into (ⅰ) the amounts of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs, (ⅱ) the amounts of Tweets in season and off-season from J1 and 1. Bundesliga clubs. These data were computed (ⅲ) the ratio of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs and (ⅳ) the ratio of Tweets in season and off-season from J1 and 1. Bundesliga clubs. In addition to that, (ⅴ) the monthly total amounts of Tweets, (ⅵ) the monthly amounts of Category 1 and 2, and (ⅶ)

the monthly ratio of Category 1 and 2 from J1 and 1. Bundesliga clubs were classified. From the results of Shapiro-Wilk test, detected data were not normally distributed in this study. Therefore, this study used non-parametric analysis. The total amounts of Tweets, (ⅰ) the amounts of Tweets of Category 1 and 2, (ⅱ) the amounts of Tweets in season and off-season, (ⅲ) the ratio of Tweets of Category 1 and 2, (ⅳ) the ratio of Tweets in season and off-season were compared by Mann-Whitney test. (ⅴ) The monthly total amounts of Tweets, (ⅵ) the monthly amounts of Category 1 and 2 and (ⅶ) the monthly ratio of Category 1 and 2 were analyzed by Friedmann test to detect differences in each month of J1 and 1. Bundesliga clubs respectively. These statistical analyses were performed with SPSS software (version 15.0; SPSS, Tokyo, Japan).

Club (J1)	Official Twitter account	Club (1. Bundesliga)	Official Twitter account
Hokkaido Consadole Sapporo	@consaofficial	SV Werder Bremen	@werderbremen
Vegalta Sendai	@vega_official_	VfL Wolfsburg	@VfL_Wolfsburg
Kashima Antlers	@antlrs_official	Hertha BSC	@HerthaBSC
Urawa Reds	@REDSOFFICIAL	1. FC Union Berlin	@fcunion
FC Tokyo	@fctokyooficial	SC Parderborn 07	@SCParderborn07
Kawasaki Frontale	@frontale_staff	RB Leipzig	@DieRotenBullen
Yokohama F. Marinos	@prompt_fmarinos	FC Schalke 04	@s04
Shonan Bellmare	@bellmare_staff	Borussia Dortmund	@BVB
Shimizu S-pulse	@spulse_official	Borussia Mönchengladbach	@borussia
Jubilo Iwata	@Jubiloiwata_YFC	Bayer 04 Leverkusen	@bayer04official
Matsumoto Yamaga FC	@yamagafc	Fortuna Düsseldorf	@f95
Nagoya Grampus	@nge_official	1. FC Köln	@fckoeln
Gamba Osaka	@GAMBA_OFFICIAL	Eintracht Frankfurt	@Eintracht
Cerezo Osaka	@crz_official	1. FSV Mainz 05	@1FSVMainz05
Vissel Kobe	@visselkobe	TSG Hoffenheim	@tsghoffenheim
Sanfrecce Hiroshima	@sanfrecce_SFC	FC Augsburg	@FCAugsburg
Sagan Tosu	@saganofficial17	FC Bayern München	@FCBayern
Oita Torinita	@TRINITAofficial	SC Freiburg	@scfreiburg

Table 1: J1 and 1. Bundesliga Clubs, and their Twitter official accounts used in this survey.

Fig.4: Examples for Tweets of Category1 from J1 clubs.

Left: Live commentary of a game.　Right: A column of match review and explanation for team tactics.

Fig.5: Examples for Tweets of Category1 from 1. Bundesliga clubs.

Left: Data and statistics on next games. Right: Comments on a previous game from coach in press conference.

Fig.6: Examples for Tweets of Category2 from J1 clubs.

Left: The sales promotion of goods in stadium. Right: The sales promotion of original foods in stadium.

Fig.7: Examples for Tweets of Category2 from 1. Bundesliga clubs.

Left: A celebration of a player's birthday. Right: Information on an event of a club mascot.

Results

(ⅰ) The amounts of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs are showed in Table 2, (ⅱ) the amounts of Tweets in season and off-season from J1 and 1. Bundesliga clubs are showed in Table 3. (ⅲ) The ratio of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs are explained in Table 4, and in Table 5 (ⅳ) the ratio of Tweets in season and off-season from J1 and 1. Bundesliga clubs are displayed. (ⅴ) The monthly amounts of Tweets are described in Table 6, 7, (ⅵ) the ratio of Category 1 and 2 in each month from J1 clubs are showed in Table 8, 9, and 1. Bundesliga clubs are showed in Table 10, 11.

A significant difference was seen in the total amounts of Tweets between J1 and 1. Bundesliga clubs ($p < 0.05$) (Table 12), the amounts of Tweets of Category 1 between J1 and 1. Bundesliga clubs ($p < 0.05$) (Table 13), and both amounts of Tweets from 1. Bundesliga clubs were larger than J1's. However, in Category 2 there was no significant difference between these two leagues ($p > 0.05$) (Table 13). In the ratio of Tweets of Category 1 and 2 between J1 and 1. Bundesliga clubs, a significant difference was noted ($p < 0.05$) and in the ratio of Tweets of Category 1, 1. Bundesliga clubs were noted higher degree (Table 13). On the whole, J1 clubs made less Tweets but the ratio of Tweets of Category 2 was higher than 1. Bundesliga clubs. Both in season and off-season, significant differences were noted in the amounts and the ratio of Tweets between J1 and 1. Bundesliga clubs ($p < 0.05$) (Table 14). These data pointed out that more amounts of Tweets both in season and off-season were made by 1. Bundesliga clubs than J1 clubs, and in season the difference was smaller than in off-season (Table 14). The ratio of Tweets in season of a year made by J1 clubs were higher than of 1. Bundesliga clubs (Table 14). Comparing the groups of Tweets made in each month, I set a standard group of a month to judge differences of the

amounts and the ratio of Category 1 and 2 of Tweets from other months in J1 and 1. Bundesliga clubs respectively. The group of Tweets released in August from J1 clubs was set as a standard group (after six months from season beginning), and the total amounts of Tweets of this group differed significantly from the groups of November and December 2018, January, February and September 2019. *(p* < 0.05) (Table 15). These all groups were lower level of the amounts of total Tweets than the standard group. From the groups of January and February 2019 of J1 significant increases were noted in the ratio of Category 2 and significant decreases of the ratio in Category 1 followed *(p* < 0.05) (Table 15). In February the group of Tweets made from 1. Bundesliga clubs was fixed a standard group (after six months from season beginning). Comparing with this group, the total amounts of Tweets were significantly decreased in group of June 2019 *(p* < 0.05) (Table 16). Significantly differences were also noted in the groups of January, May and July 2019 in the ratio of Category 1 and 2 of Tweets from 1. Bundesliga *(p* < 0.05) (Table 16). The ratio of these groups in Category 2 were higher than the standard group. Thus, these monthly data represented that in off-season (J1: 2. December 2018 to 21. February 2019, 1. Bundesliga: 19. May to 15. August 2019) clubs of both leagues tend to make less Tweets than in season, as we can also recognize with Table 14. Moreover, J1 clubs released fewer Tweets in early and at the end of season besides in off-season (Table 15).

	Category 1	Category 2	Total		Category 1	Category 2	Total
Sapporo	980	1007	1987	SVW	4721	1660	6381
Sendai	377	468	845	WOB	2107	806	2913
Kashima	1956	1564	3520	BSC	3011	1177	4188
Urawa	801	1539	2340	FCU	1256	591	1847
FC.Tokyo	2005	2028	4033	SCP	1370	397	1767
Kawasaki	488	2844	3332	RBL	2967	1424	4391
F.Marinos	758	590	1348	S04	3890	2037	5927
Shonan	795	1406	2201	BVB	3736	1614	5350
Shimizu	1273	1440	2713	BMG	2583	1181	3764
Iwata	783	687	1470	B04	4231	1791	6022
Matsumoto	1462	2616	4078	F95	2769	1318	4087
Nagoya	1566	1649	3215	KOE	2482	954	3436
G.Osaka	4282	2255	6537	SGE	5222	1927	7149
C.Osaka	1887	2108	3995	M05	1841	637	2478
Kobe	1149	753	1902	TSG	2867	1124	3991
Hiroshima	779	1521	2300	FCA	3001	761	3762
Tosu	1300	849	2149	FCB	3900	1633	5533
Oita	2034	1203	3237	SCF	2018	569	2587

Table 2: The amounts of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs.

	Season	Off-season	Total		Season	Off-season	Total
Sapporo	1690	297	1987	SVW	5287	1094	6381
Sendai	845		845	WOB	2335	578	2913
Kashima	2981	539	3520	BSC	3386	802	4188
Urawa	1963	377	2340	FCU	1392	455	1847
FC.Tokyo	3381	652	4033	SCP	1370	397	1767
Kawasaki	2531	801	3332	RBL	3536	855	4391
F.Marinos	1092	256	1348	S04	4772	1155	5927
Shonan	1804	397	2201	BVB	4317	1033	5350
Shimizu	2269	444	2713	BMG	3066	698	3764
Iwata	1330	140	1470	B04	4903	1119	6022
Matsumoto	3282	796	4078	F95	3293	794	4087
Nagoya	2805	410	3215	KOE	2702	734	3436
G.Osaka	5812	725	6537	SGE	5785	1364	7149
C.Osaka	3510	485	3995	M05	2086	392	2478
Kobe	1623	279	1902	TSG	3366	625	3991
Hiroshima	1926	374	2300	FCA	3149	613	3762
Tosu	1902	247	2149	FCB	4320	1213	5533
Oita	2897	340	3237	SCF	2179	408	2587

Table 3: The amounts of Tweets in season and off-season from J1 and 1. Bundesliga clubs.

	Category 1	Category 2		Category 1	Category 2
Sapporo	49.32	50.68	SVW	73.99	26.01
Sendai	44.62	55.38	WOB	72.33	27.67
Kashima	55.57	44.43	BSC	71.90	28.10
Urawa	34.23	65.77	FCU	68.00	32.00
FC.Tokyo	49.71	50.29	SCP	77.53	22.47
Kawasaki	14.65	85.35	RBL	67.57	32.43
F.Marinos	56.23	43.77	S04	65.63	34.37
Shonan	36.12	63.88	BVB	69.83	30.17
Shimizu	46.92	53.08	BMG	68.62	31.38
Iwata	53.27	46.73	B04	70.26	29.74
Matsumoto	35.85	64.15	F95	67.75	32.25
Nagoya	48.71	51.29	KOE	72.24	27.76
G.Osaka	65.50	34.50	SGE	73.05	26.95
C.Osaka	47.23	52.77	M05	74.29	25.71
Kobe	60.41	39.59	TSG	71.84	28.16
Hiroshima	33.87	66.13	FCA	79.77	20.23
Tosu	60.49	39.51	FCB	70.49	29.51
Oita	62.84	37.16	SCF	78.01	21.99

Table 4: The ratio of Tweets of Category 1 and 2 from J1 and 1. Bundesliga clubs.

	Season	Off-season		Season	Off-season
Sapporo	85.05	14.95	SVW	82.86	17.14
Sendai			WOB	80.16	19.84
Kashima	84.69	15.31	BSC	80.85	19.15
Urawa	83.89	16.11	FCU	75.37	24.63
FC.Tokyo	83.83	16.17	SCP	77.53	22.47
Kawasaki	75.96	24.04	RBL	80.53	19.47
F.Marinos	81.01	18.99	S04	80.51	19.49
Shonan	81.96	18.04	BVB	80.69	19.31
Shimizu	83.63	16.37	BMG	81.46	18.54
Iwata	90.48	9.52	B04	81.42	18.58
Matsumoto	80.48	19.52	F95	80.57	19.43
Nagoya	87.25	12.75	KOE	78.64	21.36
G.Osaka	88.91	11.09	SGE	80.92	19.08
C.Osaka	87.86	12.14	M05	84.18	15.82
Kobe	85.33	14.67	TSG	84.34	15.66
Hiroshima	83.74	16.26	FCA	83.71	16.29
Tosu	88.51	11.49	FCB	78.08	21.92
Oita	89.50	10.50	SCF	84.23	15.77

Table 5: The ratio of Tweets in season and off-season from J1 and 1. Bundesliga clubs.

Table 6: The monthly amounts of Tweets from J1 clubs.

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019	1 season
Sapporo	131	157	118	132	106	200	190	160	171	194	246	182	1987
Sendai					18	99	129	111	136	117	135	100	845
Kashima	342	287	266	166	206	289	321	310	302	346	351	334	3520
Urawa	175	172	164	95	186	237	218	254	203	213	225	198	2340
FC.Tokyo	284	273	245	266	207	409	457	381	414	394	412	291	4033
Kawasaki	271	244	242	381	240	282	249	310	183	399	288	243	3332
F.Marinos	99	101	78	104	116	136	148	137	119	116	130	64	1348
Shonan	256	144	149	148	163	209	202	242	163	175	205	145	2201
Shimizu	251	262	147	186	198	197	238	222	259	243	264	246	2713
Iwata	77	66	55	44	61	156	168	165	228	167	180	103	1470
Matsumotc	379	360	258	250	340	326	365	418	354	388	333	307	4078
Nagoya	256	236	160	156	201	357	349	359	314	277	337	213	3215
G.Osaka	503	588	311	267	349	706	660	670	674	571	700	538	6537
C.Osaka	234	289	165	164	263	367	427	436	376	509	381	384	3995
Kobe	111	109	101	111	113	208	169	170	192	205	254	159	1902
Hiroshima	122	164	114	127	208	211	265	217	172	255	210	235	2300
Tosu	189	174	88	76	151	210	237	256	191	185	263	129	2149
Oita	277	248	119	140	135	358	302	350	421	291	326	270	3237
avarage	232.76	227.88	163.53	165.47	181.11	275.39	283.00	287.11	270.67	280.28	291.11	230.06	2844.56

Table 7: The monthly amounts of Tweets from 1. Bundesliga clubs.

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019	1 season
SVW	561	521	553	597	667	552	698	437	167	480	626	522	6381
WOB	176	225	273	213	253	277	256	280	122	224	338	276	2913
BSC	343	362	336	368	410	372	338	408	110	386	405	350	4188
FCU	181	147	148	113	136	141	153	220	83	180	202	143	1847
SCP	143	138	93	116	185	147	159	156	72	190	213	155	1767
RBL	457	362	394	271	293	330	567	478	157	326	394	362	4391
S04	533	617	536	427	537	534	522	444	346	455	510	466	5927
BVB	546	546	489	374	496	499	415	403	251	354	511	466	5350
BMG	398	320	339	303	277	298	356	339	162	232	400	340	3764
B04	622	515	518	377	696	564	443	403	224	580	587	493	6022
F95	339	356	314	403	347	336	352	337	158	369	417	359	4087
KOE	292	258	286	228	310	275	319	336	175	300	361	296	3436
SGE	630	540	622	474	570	688	680	743	250	591	763	598	7149
M05	259	232	232	313	246	186	193	189	96	168	201	163	2478
TSG	445	400	393	315	338	373	386	283	121	294	395	248	3991
FCA	401	265	325	272	357	342	435	259	127	257	353	369	3762
FCB	477	472	464	355	451	488	466	673	162	456	604	465	5533
SCF	223	214	236	209	226	278	236	202	70	197	300	196	2587
avarage	390.33	360.56	363.94	318.22	377.50	371.11	387.44	366.11	158.50	335.50	421.11	348.17	349.88

Table 8: The monthly ratio of Category 1 from J1 clubs.

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019
Sapporo	48.85	41.40	33.90	40.15	19.81	50.00	61.58	58.75	69.59	45.88	53.25	47.80
Sendai					22.22	44.44	41.86	46.85	48.53	48.72	42.96	42.00
Kashima	64.33	66.20	67.67	47.59	49.51	57.09	56.39	57.42	53.31	40.46	47.01	58.38
Urawa	29.71	34.88	35.98	16.84	16.13	36.29	38.99	29.92	40.39	40.38	38.22	41.92
FC.Tokyo	43.66	47.62	33.06	22.18	37.20	60.88	48.36	60.63	56.76	55.58	49.03	60.82
Kawasaki	8.86	13.52	20.66	10.24	8.75	17.38	22.09	20.65	18.03	13.78	10.76	13.99
F.Marinos	52.53	56.44	46.15	45.19	49.14	56.62	64.86	61.31	52.94	56.90	61.54	67.19
Shonan	33.59	26.39	30.87	21.62	15.95	38.28	42.57	38.02	36.20	49.14	52.68	38.62
Shimizu	32.67	51.91	25.17	17.20	39.90	60.91	62.18	61.26	57.53	45.68	48.86	46.34
Iwata	68.83	46.97	47.27	45.45	52.46	64.74	52.38	50.30	43.42	61.08	44.44	66.02
Matsumoto	32.45	33.33	21.71	40.40	31.47	43.25	47.95	40.19	34.46	35.31	38.44	27.36
Nagoya	40.63	50.00	49.38	39.74	35.32	47.34	52.72	51.81	53.82	47.65	51.04	56.34
G.Osaka	59.84	65.48	56.91	34.46	36.96	71.67	72.73	72.09	76.85	68.13	67.00	65.61
C.Osaka	46.58	36.33	56.36	54.88	34.60	59.40	43.79	50.92	54.52	39.10	45.93	50.26
Kobe	55.86	56.88	56.44	33.33	43.36	65.38	76.33	70.00	66.15	54.15	65.35	59.12
Hiroshima	18.03	15.24	36.84	31.50	25.96	38.86	35.09	41.47	38.37	54.15	40.48	39.57
Tosu	47.62	45.98	51.14	52.63	53.64	69.05	65.40	61.33	60.21	54.15	69.96	66.67
Oita	58.12	56.45	46.22	41.43	54.07	63.41	72.52	64.86	67.93	54.15	68.10	67.04

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019
Sapporo	51.15	58.60	66.10	59.85	80.19	50.00	38.42	41.25	30.41	54.12	46.75	52.20
Sendai					77.78	55.56	58.14	53.15	51.47	51.28	57.04	58.00
Kashima	35.67	33.80	32.33	52.41	50.49	42.91	43.61	42.58	46.69	59.54	52.99	41.62
Urawa	70.29	65.12	64.02	83.16	83.87	63.71	61.01	70.08	59.61	59.62	61.78	58.08
FC.Tokyo	56.34	52.38	66.94	77.82	62.80	39.12	51.64	39.37	43.24	44.42	50.97	39.18
Kawasaki	91.14	86.48	79.34	89.76	91.25	82.62	77.91	79.35	81.97	86.22	89.24	86.01
F.Marinos	47.47	43.56	53.85	54.81	50.86	43.38	35.14	38.69	47.06	43.10	38.46	32.81
Shonan	66.41	73.61	69.13	78.38	84.05	61.72	57.43	61.98	63.80	50.86	47.32	61.38
Shimizu	67.33	48.09	74.83	82.80	60.10	39.09	37.82	38.74	42.47	54.32	51.14	53.66
Iwata	31.17	53.03	52.73	54.55	47.54	35.26	47.62	49.70	56.58	38.92	55.56	33.98
Matsumoto	67.55	66.67	78.29	59.60	68.53	56.75	52.05	59.81	65.54	64.69	61.56	72.64
Nagoya	59.38	50.00	50.63	60.26	64.68	52.66	47.28	48.19	46.18	52.35	48.96	43.66
G.Osaka	40.16	34.52	43.09	65.54	63.04	28.33	27.27	27.91	23.15	31.87	33.00	34.39
C.Osaka	53.42	63.67	43.64	45.12	65.40	40.60	56.21	49.08	45.48	60.90	54.07	49.74
Kobe	44.14	43.12	43.56	66.67	56.64	34.62	23.67	30.00	33.85	45.85	34.65	40.88
Hiroshima	81.97	84.76	63.16	68.50	74.04	61.14	64.91	58.53	61.63	65.88	59.52	60.43
Tosu	52.38	54.02	48.86	47.37	46.36	30.95	34.60	38.67	39.79	34.05	30.04	33.33
Oita	41.88	43.55	53.78	58.57	45.93	36.59	27.48	35.14	32.07	36.43	31.90	32.96

Table 9: The monthly ratio of Category 2 from J1 clubs.

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019
SVW	77.01	71.40	78.66	68.68	70.31	79.17	79.80	75.97	62.28	58.33	79.23	76.05
WOB	68.75	68.44	73.99	66.67	80.24	76.17	75.39	71.79	60.66	75.45	69.53	73.19
BSC	77.84	70.72	74.40	72.28	77.07	80.38	73.37	57.60	55.45	70.47	73.83	69.14
FCU	74.59	69.39	56.76	72.57	75.74	72.34	69.28	60.45	60.24	66.67	74.26	62.24
SCP	75.52	84.06	77.42	75.86	79.46	83.67	78.62	66.67	43.06	87.37	77.46	80.65
RBL	74.62	70.44	72.84	69.37	70.65	74.55	73.02	56.07	47.77	46.32	70.56	70.99
S04	72.80	68.23	68.84	62.53	69.27	72.66	69.35	58.33	46.24	64.84	60.39	64.59
BVB	78.21	73.26	72.80	65.24	79.84	78.96	68.43	67.74	63.35	49.15	62.23	66.74
BMG	76.38	78.13	76.40	62.05	76.90	74.50	59.55	59.29	62.96	54.74	67.00	69.71
B04	79.42	79.03	75.87	60.48	73.28	78.19	70.43	65.76	62.50	44.66	67.97	77.69
F95	68.14	69.38	68.47	61.54	77.52	72.02	75.57	68.84	37.34	53.39	72.66	72.42
KOE	79.79	71.71	79.02	64.91	79.35	78.55	78.37	70.83	65.14	61.00	67.31	67.57
SGE	82.38	83.52	67.52	67.30	79.12	80.81	76.91	70.26	38.40	66.50	70.77	72.24
M05	79.92	81.90	75.86	73.16	81.30	77.96	74.09	68.78	59.38	61.31	78.11	63.80
TSG	75.28	79.75	65.39	67.94	69.23	78.82	71.76	67.49	55.37	65.65	77.72	72.18
FCA	79.80	81.51	77.85	73.16	89.64	88.60	87.59	80.69	59.06	66.93	81.02	72.36
FCB	81.97	78.18	61.21	71.55	79.38	74.18	81.12	67.46	45.06	54.82	70.53	64.73
SCF	72.20	78.50	74.58	69.86	80.97	83.09	85.59	80.69	68.57	75.63	79.67	77.55

Table 10: The monthly ratio of Category 1 from 1. Bundesliga clubs.

	Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019	Apr, 2019	May, 2019	Jun, 2019	Jul, 2019	Aug, 2019	Sep, 2019
SVW	22.99	28.60	21.34	31.32	29.69	20.83	20.20	24.03	37.72	41.67	20.77	23.95
WOB	31.25	31.56	26.01	33.33	19.76	23.83	24.61	28.21	39.34	24.55	30.47	26.81
BSC	22.16	29.28	25.60	27.72	22.93	19.62	26.63	42.40	44.55	29.53	26.17	30.86
FCU	25.41	30.61	43.24	27.43	24.26	27.66	30.72	39.55	39.76	33.33	25.74	37.76
SCP	24.48	15.94	22.58	24.14	20.54	16.33	21.38	33.33	56.94	12.63	22.54	19.35
RBL	25.38	29.56	27.16	30.63	29.35	25.45	26.98	43.93	52.23	53.68	29.44	29.01
S04	27.20	31.77	31.16	37.47	30.73	27.34	30.65	41.67	53.76	35.16	39.61	35.41
BVB	21.79	26.74	27.20	34.76	20.16	21.04	31.57	32.26	36.65	50.85	37.77	33.26
BMG	23.62	21.88	23.60	37.95	23.10	25.50	40.45	40.71	37.04	45.26	33.00	30.29
B04	20.58	20.97	24.13	39.52	26.72	21.81	29.57	34.24	37.50	55.34	32.03	22.31
F95	31.86	30.62	31.53	38.46	22.48	27.98	24.43	31.16	62.66	46.61	27.34	27.58
KOE	20.21	28.29	20.98	35.09	20.65	21.45	21.63	29.17	34.86	39.00	32.69	32.43
SGE	17.62	16.48	32.48	32.70	20.88	19.19	23.09	29.74	61.60	33.50	29.23	27.76
M05	20.08	18.10	24.14	26.84	18.70	22.04	25.91	31.22	40.63	38.69	21.89	36.20
TSG	24.72	20.25	34.61	32.06	30.77	21.18	28.24	32.51	44.63	34.35	22.28	27.82
FCA	20.20	18.49	22.15	26.84	10.36	11.40	12.41	19.31	40.94	33.07	18.98	27.64
FCB	18.03	21.82	38.79	28.45	20.62	25.82	18.88	32.54	54.94	45.18	29.47	35.27
SCF	27.80	21.50	25.42	30.14	19.03	16.91	14.41	19.31	31.43	24.37	20.33	22.45

Table 11: The monthly ratio of Category 2 from 1. Bundesliga clubs.

	Total amounts
J1 clubs	2844.56 ± 1330.50
1. Bundesliga clubs	4198.50 ± 1582.87
	p=0.01 between J1 and 1. Bundesliga clubs

Table 12: The averages and the standard deviations of the total amounts of Tweets from J1 and 1. Bundesliga clubs.

	Amounts of Category 1	Amounts of Category 2	Ratio of Category 1	Ratio of Category 2
J1 clubs	1370.83 ± 897.17	1473.72 ± 693.06	47.53 ± 12.82	52.47 ± 12.82
1. Bundesliga clubs	2998.44 ± 1108.16	1200.06 ± 506.37	71.84 ± 3.86	28.16 ± 3.86
	$p<0.0001$*	$p=0.293$	$p<0.0001$*	$p<0.0001$*

*$p<0.05$ between J1 and 1. Bundesliga clubs

Table 13: The averages and the standard deviations of the amounts and the ratio of Tweets of Category 1 and 2, from J1 and 1. Bundesliga clubs.

	Amounts in season	Amounts in off-season	Ratio in season	Ratio in off-season
J1 clubs	2424.61 ± 1157.75	444.65 ± 197.37	84.83 ± 3.74	15.17 ± 3.74
1. Bundesliga clubs	3402.44 ± 305.94	796.06 ± 305.94	80.89 ± 2.45	19.11 ± 2.45
	p =0.016*	p < 0.0001*	p =0.001*	p =0.001*

*p <0.05 between J1 and 1. Bundesliga clubs

Table 14: The averages and the standard deviations of the amounts and the ratio of Tweets in season and off-season, from J1 and 1. Bundesliga clubs.

	Total amounts	Ratio of Category 1	Ratio of Category 2
October, 2018	232.76 ± 111.43	43.66 ± 16.26	56.34 ± 16.26
November, 2018	227.88 ± 121.68 *	43.83 ± 15.58	56.17 ± 15.58
December, 2018	163.53 ± 74.87 *	42.10 ± 13.65	57.90 ± 13.65
January, 2019	165.47 ± 83.87 *	34.99 ± 13.27 *	65.01 ± 13.27 *
February, 2019	181.11 ± 85.83 *	34.80 ± 14.19 *	65.20 ± 14.19 *
March, 2019	275.39 ± 137.93	52.50 ± 14.08	47.50 ± 14.08
April, 2019	283.00 ± 132.67	53.21 ± 14.58	46.79 ± 14.58
May, 2019	287.11 ± 136.44	52.10 ± 13.82	47.90 ± 13.82
June, 2019	270.67 ± 138.45	51.61 ± 14.61	48.39 ± 14.61
July, 2019	280.28 ± 129.75	48.02 ± 11.89	51.91 ± 13.38
August, 2019	291.11 ± 129.37	49.73 ± 14.17	50.27 ± 14.17
September, 2019	230.06 ± 115.75 *	50.84 ± 15.06	49.16 ± 15.06

*p <0.05 vs August 2019

Table 15: The averages and the standard deviations of the total amounts, the ratio of Category 1 and 2 of Tweets in each month, from J1 clubs (group in August 2019 was set as a standard).

	Total amounts	Ratio of Category 1	Ratio of Category 2
October, 2018	390.33 ± 155.42	76.37 ± 4.08	23.63 ± 4.08
November, 2018	360.56 ± 147.28	75.42 ± 5.58	24.58 ± 5.58
December, 2018	363.94 ± 144.84	72.11 ± 6.23	27.89 ± 6.23
January, 2019	318.22 ± 121.31	68.06 ± 4.57 *	31.94 ± 4.57 *
February, 2019	377.50 ± 161.62	77.18 ± 5.17	22.82 ± 5.17
March, 2019	371.11 ± 153.44	78.03 ± 4.38	21.97 ± 4.38
April, 2019	387.44 ± 160.73	74.90 ± 6.62	25.10 ± 6.62
May, 2019	366.11 ± 156.50	67.48 ± 7.25 *	32.52 ± 7.25 *
June, 2019	158.50 ± 71.85 *	55.16 ± 9.65	44.84 ± 9.65
July, 2019	335.50 ± 133.66	62.40 ± 11.04 *	37.60 ± 11.04 *
August, 2019	421.11 ± 154.83	72.24 ± 5.97	27.76 ± 5.97
September, 2019	348.17 ± 135.18	70.77 ± 5.21	29.23 ± 5.21

*p <0.05 vs February 2019

Table 16: The averages and the standard deviations of the total amounts, the ratio of Category 1 and 2 of Tweets in each month, from 1. Bundesliga clubs (group in February 2019 was set as a standard).

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Discussion

In this study I investigated into the differences of characteristics of informing from Japanese and German professional football leagues via Twitter, the popular social media in present-day. The main findings of this study were that Bundesliga clubs used Twitter so actively, especially to inform about football, and in contrast, J.LEAGUE clubs made more Tweets which were not related to football. 1. Bundesliga clubs released the significantly larger amounts of Tweets totally and of Category 1 ($p < 0.05$) (Table 12 and 13), and the higher ratio of Category 1 ($p < 0.05$) (Table 13) than J1 clubs, which made the significantly more amounts and the higher ratio of Tweets of Category 2 ($p < 0.05$) (Table 13). These results supported the hypotheses that Bundesliga clubs made the larger amounts and the higher ratio of Tweets relating football and J.LEAGUE clubs made more Tweets of Category 2, but the hypothesis that J.LEAGUE clubs made a larger number of Tweets totally was not supported. The hypotheses that in off-season clubs of both leagues made fewer Tweets than in season, and more Tweets were made by Bundesliga clubs than J.LEAGUE clubs even in off-season were also supported. With the great amounts of total Tweets and Tweets of Category 1 from 1. Bundesliga, it was likely that Bundesliga clubs made use of Twitter to supply details of games, trainings or statistics like live commentary Tweets or press conference Tweets before and after every game with fans. On the contrary, J.LEAGUE clubs may consider Twitter as a tool of promoting products, events or the appeal of player's personality. Based in these reasons, it seemed reasonable to assume that even in off-season Bundesliga clubs made lots of Tweets to report test matches or training camp, but J.LEAGUE clubs did not make so many Tweets (Table 14). Although the heat became the liveliest, in early and climax of season J.LEAGUE clubs also made fewer Tweets (Table 15), and it could be also regarded that they did not

emphasize so much on informing via Twitter.

In this paper Twitter was used to compare contents of real-time information released by two professional football leagues. However, in this method it seems somewhat vague to classify whether category 1 or 2. As stated in chapter of Methods, the Tweets were sorted out according to contents which mentioned mainly, but it still depended on researcher's subjectivity. All parts of gathering and distinguishing Tweets on this survey conducted by hand-operated, so it is necessary for more efficient way with objective like expression abstracting algorithm system used in study by Kobayashi et al. (2011). In addition to that, it will make this study more correct to examine not only first leagues but also second leagues of both countries called J2 and 2. Bundesliga, and not only Twitter but also other social media like Instagram or Facebook. Moreover, it needs further investigation of the reaction from fans like Retweet or Favorite functions to Tweets from clubs in both leagues. This study was examination only for club side actions, so we need to more examine how fans behave to club's informing and difference between J.LEAGUE and Bundesliga.

J.LEAGUE reported that the average age of spectators in 2018 season was 36.4 years old, which was increasing consecutive three seasons, and study by Nagata (2011), described that the rate of young generation (12 to 29 years of age) who come to stadium became fewer in Japan. This researcher explained that the reason was the change of lifestyle of young people, for they had to prioritize many things of daily lives over watching sports and there were large varieties of amusements recently, thus to watch sports was just one of many choices, and it was more difficult to get them into the habit of watching football in the stadium. Moreover, Nakazawa et al. (2000) revealed in their study that female fans in Japan had less interest and less connection to football itself as a

sport game. They showed their interest toward player's personality or characters. Therefore, their understanding of football rules was less than that of male fans. In the study they insisted that in order to make stable market it was necessary to deepen female fan's understanding on rules, to raise their interest in football games, and to build stronger identity of football as itself in their lives. To make stronger identity of football in Japanese fans is especially essential to make stable market. I would like to emphasize that many fans have already had the demand for broadcasting of football with deeper contents like a technical live commentary, not focusing only entertainment contents and player's personality. One of the examples of this was in October 2018 live broadcasting of international match with profound tactical commentary by former professional football player, Kazuyuki Toda. Although this was a first trial held by commentator in person without terrestrial broadcasting and was not free, over 700 fans payed audience fee and joined the program. This project continues still as of November 2019. Another example is: on the same game of Toda's project, Skyperfectv broadcasted free tactical commentary on YouTube and it got 20,000 views in only a day. On the other hand, in recent years the situation of Japanese sports market is changing. Many sports show growths, for example, in 2019 Rugby World Cup and Volleyball World Cup were held and these games broadcasted across Japan. These competitions became current topics and Japanese professional rugby league (TOP LEAGUE) and volleyball league (V-League) got chances to make people pay more attention to these leagues. As stated earlier in study by Kusaka (1996), baseball also has a strong influence on Japanese sports culture. Thus J.LEAGUE and clubs must increase the number of fans who are attracted to football itself to make its market larger and more stable.

In conclusion, the survey on this paper revealed that Bundesliga clubs gave their fans much information

both in season and off-season, especially relating football via Twitter than J.LEAGUE clubs, and J.LEAGUE clubs offer information referred to off-the-pitch to their fans. These findings suggest that to establish fan's interest with information from clubs become important factor to enlarge football market.

As I stated above, in Japan the culture and history of football are still not so huge like Germany. To build great identity of football in J.LEAGUE fans is needed in order to ensure market against other professional sports. Plenty of Japanese people access Twitter every day, so clubs can make use of this great social media more efficiently not only to promote products or events, but also to spread the pleasure of watching and thinking about football games. Real-time tracking date technology is available in recent seasons, so it is possible to display what happened on the pitch more easily in one's smartphone. In the future I expect a lot of fans who have a purpose to watch football game primarily fill the stadiums up, and they also enjoy various events, foods and other entertainments. I am sure that this scene become Japanese own football culture.

Acknowledgement

I would like to express the deepest appreciation to Mr. Kohei Watanabe for generous support and lots of valuable comments, and to Ms. Megumi Higuchi for correcting German sentences.

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