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Conference Paper

Ensuring the Sustainability of Local Broadcasting through Citizen Engagement

24th Biennial Conference of the International Telecommunications Society (ITS): "New bottles for new wine: digital transformation demands new policies and strategies", Seoul, Korea, 23-26 June, 2024

Provided in Cooperation with:

International Telecommunications Society (ITS)

Suggested Citation: Mitomo, Hitoshi; Otsuka, Tokio (2024) : Ensuring the Sustainability of Local Broadcasting through Citizen Engagement, 24th Biennial Conference of the International Telecommunications Society (ITS): "New bottles for new wine: digital transformation demands new policies and strategies", Seoul, Korea, 23-26 June, 2024, International Telecommunications Society (ITS), Calgary

This Version is available at:

<https://hdl.handle.net/10419/302535>

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(DRAFT ONLY)
**Ensuring the Sustainability of Local Broadcasting
through Citizen Engagement**

Hitoshi MITOMO¹ and Tokio OTSUKA²

1. Objective and background

This study aims to investigate the feasibility of sustaining local terrestrial broadcasting in rural Japan through citizen engagement. Commercial broadcasters in Japan have been sustained by advertising revenue. However, due to the proliferation of rich Internet content, much of the advertising expenditure of sponsor companies has shifted to the Internet. Thus, many local broadcasters in Japan have faced financial difficulties due to decreased commercial revenue.

To maintain broadcasting, diverse sources of revenue must be secured, and one way to achieve this is to support local broadcasting that is closely connected to their communities through local residents' engagement.

This paper examines the possibility of citizen engagement. It quantitatively analyzes whether they are willing to provide financial support as an engagement and how much they are willing to pay based on a hypothetical scenario. A contingent valuation method (CVM) is applied to estimate the willingness-to-pay (WTP) for local television (TV) programs and broadcasters.

Commercial TV broadcasting is financed mainly by advertising revenues, but advertising revenues have declined for all TV broadcasters, and some stations are even suffering losses. This tendency is due to people's attention turning to the content provided by the Internet. If the number of TV stations were to decrease, the diversity of information would be lost, and the necessary information may not be delivered.

Cagé (2015) pointed out that “the web and the expectation that news should be available for free threaten the viability not only of print media but also of radio and television.” Advertisements will no longer sustain the traditional media. However, this cognitive dissonance, known as “advertising illusion,” has not been well recognized. This is the case for TV broadcasters in Japan. Local broadcasters, in particular, will be most severely impacted by this trend. Except for the Kanto region centered on Tokyo, each prefecture has its own local broadcasting stations, whose role is to produce local programs to provide community-based information, in addition to distributing TV programs from the key stations in Tokyo. In times of disaster, such as earthquakes and typhoons, its role is considered even more important, as it provides essential information to save people's lives.

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2. Limitations of the advertising model

A total of 127 broadcasters support Japan's broadcasting system. Of these, except for 13 independent regional broadcasters, five are key stations located in Tokyo, and the remaining 109 are local affiliates of one of the key stations. The main role of the local stations is to transmit the programs the key stations produce, but 10% of their airtime is for self-produced programs.

In addition to advertising revenue sharing from the key stations, local stations receive revenue from commercials aired on their own stations. In 2023, the total advertising revenue in Japan amounted to 7.33 trillion yen (103.3% of the previous year's total), supported by strong growth in Internet advertising expenditures against the backdrop of the digitalization of society, despite various domestic and international influences such as the re-expansion of infection by a new type of coronavirus infection, the situation in Ukraine, and rising prices (Dentsu, 2024). Television media advertising expenditures have declined by 4% annually since 2021, totaling 1,735 billion yen in FY2023.

The growth of Internet advertising spending supported the market as a whole. On the other hand, as for traditional mass media, newspaper magazines and TV media advertisements decreased.

According to the Ministry of Internal Affairs and Communications (2023), the total revenue of broadcasting stations in FY2022 decreased by only 0.4 % from the previous year as a consequence of seeking revenue sources other than advertisement. However, the number of unprofitable stations had increased from 13 to 20. It is more likely that local broadcasters will no longer be supported solely by advertising revenue.

3. Literature review

Studies are also being conducted abroad on new sources of revenue for broadcasting aiming to depart from the traditional advertising model, particularly on sustaining broadcasting through citizen engagement. In their study on the financing of broadcasting, Lowe and Berg (2013) first reviewed the financial situation of public broadcasting in the European Union (EU) member states. They argued that the issue of public broadcasting financing is related to the digitization of the entire media system. They then categorized the means of funding the media into four funding instruments: advertising, license fees, subscription & pay-per, and direct subsidies.

Bonini and Paris (2016) proposed crowdfunding as a new source of revenue, using the case study of license fees for the Italian public service broadcaster, Public Service Media (PSM). Assuming that the PSM license fee is paid online, viewers can invest 20% of the total amount in a program or genre of their choice if they pay a management fee of €5. They can receive rewards such as their name in the end roll, access to rewatch, participation in fan communities, etc.,

depending on the amount they pay. The analysis showed that 70% of respondents were willing to pay the fee if they could decide which program to fund. Such programs could attract more funds that took the time to build a relationship with their audience, that had a community of viewers who supported the program, and that actively shared their content on social networking sites were the ones that received the most investment money. They conclude that the crowdfunding model can be used to demonstrate viewer loyalty and trust in the program. Crowdfunding can work as a framework that allows intangible data, such as trust, to be objectified and converted into monetary value.

Cagé (2015) defined the media crisis from a long-term perspective and argued for the effectiveness of participatory financing (crowdfunding) through controlling voting rights and reducing the concentration of power.

Lopez-Golan and Campos-Freire (2017) reviewed and analyzed major European broadcasters' current state of public service models. Given the current situation characterized by the development of new technologies and the fragmentation of audiences across multiple platforms, they proposed the use of crowdfunding as an alternative to traditional funding methods.

Lingnau (2022) proposed subscription-based crowdfunding to eliminate the harmful advertising dependency experienced by online creators and raise funds for creators to earn a steady income, which would democratize content creation.

4. Research questions

According to our survey, which is explained below, around 60% of local people feel that TV is an important medium under normal circumstances, rising to 83% in times of disaster. TV is undoubtedly still an inevitable medium for local residents, although there is a tendency toward greater reliance on the Internet.

It can be assumed that local broadcasting services play a role in strengthening community resilience, shaping and developing local culture, and responding to the “right to know” of residents. In case of financial difficulties, whether local viewers are willing to support the service financially is a crucial problem for the business continuity of local broadcasting. This paper focuses on this problem and estimates quantitatively whether people are willing to support and how much they are willing to pay. As a result of interviews with the Ministry of Internal Affairs and Communications (MIC) and the Japan Commercial Broadcasters Association, financing a local broadcaster directly as a company is unrealistic, but supporting local programs should be more acceptable. For the study, we focus only on TV viewers because those who do not watch TV apparently do not want to pay for TV.

It should be noted that those who watch TV are obliged to pay subscription fees to NHK, the public broadcaster in Japan (JPY1,100/month for terrestrial and JPY1,950/month for

terrestrial+satellite). This obligatory payment may affect the estimation of the WTP.

A contingent valuation method (CVM) is employed to estimate the WTP, as it can uniquely define the relationship between the amount of payment and its acceptance ratio. Thus, the study raises the following research questions:

RQ 1. Are local TV viewers willing to provide lump-sum financial support to local broadcasters' programs (hereinafter, local programs) in case of financial difficulties? If so, how much are they willing to pay for them?

RQ 2. Are local viewers willing to support local programs financially to maintain the service in case of financial difficulties? If so, how much are people willing to pay for them?

RQ3. Are people willing to financially support the maintenance of local broadcasters' transmission facilities? If so, how much are people willing to pay for them?

Prior to the estimation, an interview was conducted with the Ministry of Internal Affairs and Communications to make sure in advance that direct funding from viewers is applicable to broadcasting and does not contravene the Broadcasting Act and regulations. We could confirm no conflict with the Broadcasting Act and its regulations.

5. The Estimation of the WTP

5.1 Survey Design

Since the institutional feasibility of citizen engagement is ensured through the interviews, we collected data from local viewers for the CVM to estimate users' subjective evaluation of their willingness to contribute to local TV programs and broadcasters' facilities. We also thoroughly reviewed the advertising market.

The questionnaire survey was conducted in March 2024, sampling over TV viewers in local prefectures of Japan where depopulation and aging are serious and local broadcasters' financial stability is seemingly lost. The TV viewer data was collected through an online survey, so the target audience was TV viewers who use the Internet.

Objective: To quantitatively confirm whether a framework of financially supporting local programs works as an engagement of local viewers. At the same time, we will also quantitatively confirm how much they are willing to pay as financial support for the programs and the maintenance of transmission facilities to ensure the continuity of local broadcasting.

Method: The Contingent Valuation Method (CVM) estimates the users' WTP from a questionnaire survey based on a hypothetical scenario. The WTP and the acceptance rate relationship was regressed on the Weibull Distribution using the binary choice single-bound

method.

The data collected:

- Support for local programs (lump-sum payment)
- Support for local programs (monthly recurring payments)
- Support for transmission and relay facilities (monthly recurring payments)

In addition to these, data were also collected on:

- Socioeconomic variables
- Assessment of the rewards for support (a return on support)
- Impressions of TV broadcasts and other media, usage trends
- Preference for and experience with donations, crowdfunding, etc.

5.2 Data Collection

An online survey was conducted on March 13-19, 2024, using a private survey company (Macromill, Inc.). Since the study's target was TV viewers in local areas watching local programs, the survey covered all prefectures in Japan (a total of 47), excluding the three major metropolitan areas (six prefectures in the Greater Tokyo Region, six prefectures in the Greater Osaka Region, and three prefectures in the Greater Nagoya Region).

The total number of samples collected was 2,693, ranging in age from 12 to older. The male/female ratio was controlled at 1:1.

5.3 Estimation of the amount of willingness to pay

In the CVM analysis, a binary choice, single-bound method was adopted, although various methods of asking CVM questions exist. That is, an amount of money is presented first, and then respondents are asked whether they are willing to accept the proposed amount and pay it. This method is considered to be relatively less affected by possible biases. In this study, the single-bound method was used, in which respondents were asked only once whether they were willing to pay the amount. The acceptance ratio curve, which represents the relationship between the amount of WTP and the acceptance rate, was estimated using the Weibull Distribution.

The WTP was estimated for each of the following three cases.

Case 1: Support for local programs (lump-sum payment)

Case 2: Support for local programs (monthly recurring payment)

Case 3: Support for infrastructure maintenance for local stations (monthly recurring payment)

One unique feature of our estimation is that we used a model explicitly considering the factors affecting the WTP as covariates, such as socioeconomic variables, the type of rewards, and other factors that need to be considered as covariates.

More concretely, this analysis used the following personal attributes as covariates. “Gender” (female = 0, male = 1), “age group” (5 years interval), and “monthly disposable money.”

Regarding the covariates related to personal preferences, we included “importance of local TV programs” and “request to watch programs in other prefectures,” in addition to the six items of “rewards” (thank-you gifts) for financial support. The “importance of local TV” was measured with a five-point scale ranging from “not at all important” to “very important,” and the “request to watch programs in other prefectures” was with a five-point scale ranging from “not at all interested” to “very interested.”

The reward for support consisted of “end-roll credits,” “access to the program for rewatching on the Internet,” “participation in fan gatherings,” “participation in the program social networking,” “program novelty goods,” and “participation in events shaking hands with the program performers,” each on a 5-point scale from “no” to “yes.”

Table 1 shows the estimated WTP for the three types of engagement: program support (lump-sum payment), program support (monthly recurring payment), and infrastructure support (monthly recurring payment).

Table 1

5.4 The estimation result and its interpretations

(1) The effects of the personal attributes

In Case 1, the estimation of program support (lump-sum), the individual attributes “gender,” “age group,” and “monthly disposable money” were all significant (negative effect only for age group, positive effect for all others). For personal preferences, “importance of local TV programs” and “request to watch programs in other prefectures” were significant, as were “end-roll credits,” “access to the program for rewatching on the Internet,” and “program novelty goods” for the rewards (all positively affected).

In Case 2, the estimation of program support money (monthly recurring payment), the “monthly disposable money” was significant for the individual attribute. For personal preferences, “importance of local TV programs” and “request to watch programs in other prefectures” were significant, as were “end-roll credits,” “access to the program for rewatching on the Internet,” “participation in the program social networking,” and “program novelty goods” (all positively affected) for the rewards.

Finally, in Case 3, the estimation of support for infrastructure maintenance for local stations (monthly recurring payment), “monthly disposable money” was significant for individual attributes. In addition, the “importance of local TV programs” and “request to watch programs in other prefectures” were significant for personal preferences, as were “end-roll credits,” “access to the program for rewatching on the Internet,” “participation in the program social networking,” “program novelty goods,” and “participation in events shaking hands with the program performers” (only the last one was negatively affected, all others had a positive effect).

Since the “monthly disposable money,” which can be interpreted as a proxy for a monthly allowance, was significantly positive in the three cases, the income effect is conspicuous in all three estimations (normal goods). This means that local people’s willingness to support local TV strongly depends on their income level.

As for personal preferences, “importance of local TV programs” and “request to watch programs in other prefectures” have a significant positive impact in all three estimation cases. Those who place importance on their own local TV programs and those who wish to watch TV broadcasting in other areas are more likely to support local TV regarding programs and infrastructure.

(2) The effects of the rewards

As for rewards for support, “end-roll credits,” “access to the program for rewatching on the Internet,” and “program novelty goods” had a significantly positive impact in all estimations. For “participation in the program social networking,” there was a significantly positive impact for both Case 1 and Case 3. On the other hand, “participation in fan gatherings” was not significant in all cases, and “participation in events shaking hands with the program performers” was not significant for program support (both lump-sum and monthly recurring payment) and had a significant negative impact on infrastructure support.

The results suggest that, while “end-roll credits,” “access to the program for rewatching on the Internet,” “program novelty goods,” and “participation in the program social networking” are effective as a reward for support, “participation in fan gatherings” and “participation in events shaking hands with the program performers” are not effective. There was even a case where it had a significantly negative effect. These factors were included in the analysis because passionate fans of TV personalities can significantly boost a program's success. However, this was not the case in this analysis. Depending on passionate fans would not be effective and, in some cases, had the opposite effect.

(3) The estimated WTP

From the estimated values of each analysis, we calculated the truncated mean, the adjusted truncated mean and the median as representative values of the WTP, respectively. (See Table 2.) The truncated mean is the average amount when the upper limit used in the survey is considered the upper limit of WTP. At the same time, the adjusted truncated mean is the value standardized by the cumulative density distribution of the truncated mean. The median is the WTP of the respondent, who is exactly in the middle when the WTP of the respondents is sorted from low to high. The adjusted truncated mean is higher than the truncated mean but not significantly different, while the median is one-half to one-tenth the amount of the adjusted truncated mean or the truncated mean due to the skewed cumulative density distribution.

The WTP for program support in the case of lump-sum payments is approximately three to five times the value in the case of monthly recurring payments. For each indicator, the WTP for monthly infrastructure payment was about 200 yen higher than that for monthly program support, and the median WTP is almost the same as that for lump-sum program support.

Table 2

(4) Marginal effects of the covariates

Finally, we compare the marginal effects of the individual attributes and individual preferences in each estimation. The attribute significant in all three estimations is the “monthly disposable money.” As it was significantly positive, we can estimate the increase in the WTP due to an increase, say JPY10,000, in disposable income.

The marginal effect of individual preferences implies the increase in the WTP for respondents, shifting one level up to a higher preference for each question response (questions on a 5-point scale). Since the “importance of local TV programs” and the “request to watch programs in other prefectures” are significant in all the cases, the marginal effects can be calculated to compare the impact of these two factors of viewers’ preferences on the WTP.

Concerning the rewards, the marginal effect of “end-roll credits” is almost twice as high as that of the other two items, i.e., “access to the program for rewatching on the Internet” and “program novelty goods.” According to the primary survey result, the percentage of respondents who answered “no” to “end-roll credits,” “access to the program for rewatching on the Internet,” and “program novelty goods” were 60%, 20% and 41%, respectively. More than a half of the respondents did not prefer listing their names in the end-roll credits. This percentage was higher than the other two rewards. However, the marginal effect of the “end-roll credits” was nearly twice as high. It is likely because respondents with high WTP were positive about being mentioned in the "end-roll credits." Respondents with a high WTP were more positive about “end-roll credits,” as they are more proud of contributing and probably seeking fame. (See Table 3.)

Table 3

6 Summary and Conclusion

6.1 Summary

Overall, about 20% of respondents were willing to provide financial support for local broadcasting support. Of these, support for the maintenance of network infrastructure was the most favored, exceeding support for TV programs in both percentage and amount of WTP.

Lump-sum payments seem slightly more preferred for supporting local TV programs. When continued for five months or more, monthly payment support exceeded lump-sum support in

monetary terms, resulting in a preference for monthly payment as the total amount, even if the percentage of WTP was low.

Analysis of the resistance responses indicates that there was not much opposition to support for local broadcasting per se, with only 13-15% of respondents answering “no.” However, many of them expected public funding to support local broadcasting, accounting for 15-23% of those who responded negatively to the engagement. It should be noted that there was a negative opinion about support for local broadcasting, saying that it is a double expense in addition to NHK's reception fees.

The effectiveness of rewards for supporting local broadcasting could be observed in the analysis. While the “access to the program for rewatching on the Internet” was supported by a wide range of respondents, “end-roll credit” was supported by a relatively smaller number of respondents but was supported by high donors. Providing program novelty goods and participation in the program's social networking also received a certain level of support. On the other hand, this survey did not support appealing to passionate fans, such as providing a chance to participate in fan gatherings or events of shaking hands with the program performers.

6.2 Conclusion

Broadcasting in Japan has earned a certain reputation for the objectivity and reliability of the information it provides, and its value is growing even more in the media information space that is being transformed by the penetration of Internet-based media. On the other hand, the advertising market strongly reflects the impact of the transformation of the media market. It is increasingly tilting toward Internet-based media, leaving traditional media, such as commercial broadcasting, in a difficult position. In particular, managing local broadcasters, whose services are focused in a prefecture, is becoming increasingly difficult.

Through a statistical analysis based on a questionnaire survey on local TV viewers, this study empirically clarified the feasibility of residents' direct support for local broadcasting through their own engagement, assuming that local broadcasting is important to residents. Through statistical analysis based on a questionnaire survey of residents. Although engagement is not necessarily limited to monetary engagement, financial difficulties ultimately have the most serious impact on business continuity. This study estimated the willingness-to-pay of local TV viewers for a scheme in which they support small amounts through methods like crowdfunding.

The theoretical background of this study is the new concept of regional ecosystems, in which the entire integrity of the region should be pursued by strengthening the regional web of life to move out of the regional degeneracy and into a regeneration (regenerative) phase. To break free from regional decline and transition into a phase of regeneration, it is essential to strengthen the local web of life through the presence of regional media. This is based on the concept of maintaining the

regional ecosystem by seeking cooperation across the entire region.

Although the various actors in the region are engaged in different activities, local media is believed to contribute to the formation of the web of life through awareness building among local people to make them aware that they are part of the overall regional ecosystem. We examined the possibility of maintaining local broadcasting through the engagement of residents based on the premise that they should mutually share the benefits and burdens of their activities rather than seeking partial optimization.

After confirming that there are no institutional difficulties in requesting residents to bear a small burden, we estimated the amount they are willing to pay for local programs and the broadcaster's transmission infrastructure by applying a contingent valuation method. The results showed that residents were willing to bear a reasonable burden.

Of course, if the burden were to be actually borne, there may be difficulties in gaining a true understanding of residents. However, as the limitations of the advertising model become apparent, maintaining local broadcasting in the hands of local people is important to ensure independence of speech from authority and pluralism and diversity of local information. As a method to achieve this, asking residents to bear a certain amount of burden should be considered a viable option.

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Table 1: The estimation result

1) Program support (lump-sum)

Total number of respondents	2693			
The number of effective answers	2220			
Log-likelihood	-1020.10			
AIC	2066.19			
Coefficients	Estimated value	Standard error	z-value	P-value
Intercept	0.103	0.381	0.27	
Gender	-0.145	0.059	-2.47	*
Age group	0.028	0.011	2.46	*
Monthly disposable money	0.022	0.001	2.45	*
Importance of local TV	0.116	0.031	3.70	*
Request to watch programs in other prefectures	0.074	0.028	2.59	**
End-roll credits	0.185	0.037	5.06	**
Access to the program for rewatching on the Internet	0.096	0.024	3.96	**
Participation in fan gatherings	-0.016	0.040	-0.40	
Participation in the program's social networking	0.059	0.041	1.42	
Program novelty goods	0.104	0.035	2.96	**
Participation in events of shaking hands with the program performers	0.059	0.038	1.57	
Proposed amount of WTP (logarithm)	-0.289	0.041	-7.04	**

p-value: **<=0.01, *<=0.05

2) Program support (monthly recurring payment)

Total number of respondents	2693			
The number of effective answers	2191			
Log-likelihood	-867.83			
AIC	1761.67			
Coefficients	Estimated value	Standard error	z-value	P-value
Intercept	0.092	0.333	0.28	
Gender	0.004	0.062	0.07	
Age group	0.003	0.012	0.30	
Monthly disposable money	0.003	0.001	2.68	**
Importance of local TV	0.176	0.033	5.27	**
Request to watch programs in other prefectures	0.110	0.030	3.61	**
End-roll credits	0.179	0.038	4.76	**

Access to the program for rewatching on the Internet	0.075	0.026	2.90	**
Participation in fan gatherings	-0.009	0.040	-0.21	
Participation in the program's social networking	0.130	0.042	3.10	**
Program novelty goods	0.116	0.035	3.27	**
Participation in events of shaking hands with the program performers	0.008	0.038	0.22	
Proposed amount of WTP (logarithm)	-0.396	0.043	-9.31	

p-value: **<=0.01, *<=0.05

3) Infrastructure support (monthly recurring payment)

Total number of respondents	2693			
The number of effective answers	2227			
Log-likelihood	-988.06			
AIC	2002.11			
Coefficients	Estimated value	Standard error	z-value	P-value
Intercept	1.221	0.350	3.49	
Gender	-0.067	0.062	-1.09	
Age group	0.003	0.012	0.25	
Monthly disposable money	0.003	0.001	2.65	**
Importance of local TV	0.105	0.033	3.19	**
Request to watch programs in other prefectures	0.069	0.030	2.32	*
End-roll credits	0.190	0.039	4.88	**
Access to the program for rewatching on the Internet	0.167	0.025	6.64	**
Participation in fan gatherings	0.003	0.041	0.07	
Participation in the program's social networking	0.167	0.044	3.80	**
Program novelty goods	0.177	0.037	4.79	**
Participation in events of shaking hands with the program performers	-0.078	0.040	-1.96	*
Proposed amount of WTP (logarithm)	-0.515	0.046	-11.27	

p-value: **<=0.01, *<=0.05

Table 2: The estimated WTP

1) Program support (lump-sum)

	WTP	Lower limit (95%)	Upper limit(95%)
Truncated mean	¥2,554	¥2,366	¥2,738
Adjusted truncated mean	¥3,059	¥2,794	¥3,342
Median	¥292	¥109	¥555

2) Program support (monthly recurring payment)

	WTP	Lower limit (95%)	Upper limit(95%)
Truncated mean	¥2,554	¥2,366	¥2,738
Adjusted truncated mean	¥3,059	¥2,794	¥3,342
Median	¥292	¥109	¥555

3) Infrastructure support (monthly recurring payment)

	WTP	Lower limit (95%)	Upper limit(95%)
Truncated mean	¥2,554	¥2,366	¥2,738
Adjusted truncated mean	¥3,059	¥2,794	¥3,342
Median	¥292	¥109	¥555

Table 3: Marginal effects of the covariates

Covariates		Indicators	Program support (lump-sum)	Program support (monthly recurring payment)	Infrastructure support (monthly recurring payment)
Personal attributes	Gender (female)	Truncated mean	¥468	---	---
		Adjusted truncated mean	¥677	---	---
		Median	¥142	---	---
	Age group	Truncated mean	¥91	---	---
		Adjusted truncated mean	¥133	---	---
		Median	¥28	---	---
	Monthly disposable money (+ ¥10,000/month)	Truncated mean	¥78	¥19	¥21
		Adjusted truncated mean	¥114	¥24	¥30
		Median	¥24	¥7	¥14
Preference for local TV	Importance of local TV	Truncated mean	¥385	¥132	¥83
		Adjusted truncated mean	¥582	¥175	¥121
		Median	¥138	¥54	¥60
	Request to watch programs in other prefectures	Truncated mean	¥242	¥81	¥55
		Adjusted truncated mean	¥359	¥105	¥79
		Median	¥81	¥31	¥39
Rewards	End-roll credits	Truncated mean	¥622	¥134	¥153
		Adjusted truncated mean	¥966	¥178	¥230
		Median	¥251	¥55	¥119
	Access to the program for rewatching on the Internet	Truncated mean	¥316	¥55	¥134
		Adjusted truncated mean	¥473	¥70	¥200
		Median	¥110	¥20	¥103
	Participation in fan gatherings	Truncated mean	---	---	---
		Adjusted truncated mean	---	---	---
		Median	---	---	---
	Participation in the program's social networking	Truncated mean	---	¥97	¥134
		Adjusted truncated mean	---	¥126	¥200
		Median	---	¥38	¥103
	Program novelty goods	Truncated mean	¥345	¥86	¥142
		Adjusted truncated mean	¥519	¥111	¥213
		Median	¥122	¥33	¥110

	Participation in events of shaking hands with the program performers	Truncated mean	---	---	¥-60
		Adjusted truncated mean	---	---	¥-82
		Median	—	—	¥-38