How does family income influence teenage children's consumption of music?*

Miyuki Taniguchi
Visiting Researcher, Faculty of Economic, Keio University, Japan
E-mail: t-miyuki@keio.jp

ABSTRACT

This study investigates how family income influences the consumption of music by teenage children. The purpose of this study is to investigate the differences in music consumption between children in high income and low-income families. A logistic regression analysis is conducted to determine the impact of family income on the likelihood of a teenage child attending a concert using individual anonymous microdata from the *Survey on Time Use and Leisure Activities* conducted by the Japanese Ministry of Internal Affairs and Communications (MIC). Four cross-sections of data for 1991, 1996, 2001, and 2006 are used. An ordered logistic regression analysis is also conducted to determine the impact of family income on frequency with which a teenage child attends concerts. Generally, it is well-known that lower income families prefer popular music, while high income families prefer classical music. However, it is found that children who came from rich families were more likely to attend both classical music concerts and popular music concerts. The estimated results also show that very-high-family-income group attends the classical music concert more frequently.

Keywords: inequal opportunity, education, concert attendance, logit model
JEL Classification Codes: H32, H41, H42

* The author would like to thank Masahiro Arima, and Colin McKenzie for their helpful comments and suggestions. This study uses microdata obtained from the *Survey on Time Use and Leisure Activities* (*Shakaiseikatsu-kihon-chousa*), which is provided by the National Statistics Center, through *Hitotsubashi* University, in accordance with the Statistics Act.

1. Introduction

Since Thomas Piketty's (2014) book Capital in the Twenty-First Century became a bestseller, income inequality has become one of the hot issues around the world. Recently, income inequality has also become one of the big issues in Japan. According to the report published by OECD (2015) (P. 29, L.L. 12-14), Japan had the sixth highest relative poverty rate among the OECD countries in 2012, and the report suggested that the large income inequality of Japan might result from fiscal consolidation and regulatory reform (OECD). Figure 1 reports the relative poverty rates in OECD countries in 2012 and indicates that Japan's relative poverty rate is 16.1 and is far higher than the OECD average of 11.5. The OECD Economic Survey of Japan in 2013 (OECD (2013)) reported that Japan is the only OECD country where the poverty rate for all working households and all households with children increases when account is taken of the redistribution policies. In Japan, the relative poverty rate among children is notable. Figure 2 shows the relative poverty rate by age group. In Figure 2, the relative poverty rate among elderly is the highest among three age groups in 2009 and 2012. However, the relative poverty rate among elderly decreased from 2009 to 2012, while the relative poverty rate among children increased notably.

Maintaining a cultured life is difficult for children who fall into relative poverty. The relationship between income inequality and consumption inequality of art and culture is also worth discussing. There are many empirical studies concerning income inequality and consumption inequality (see, for example, Kruger and Perri (2006), Aguiar and Bils (2015); Goetzmann et al. (2011)). Kruger and Perri (2006) investigate whether income inequality is accompanied by consumption inequality, using data from a U.S. consumption survey. Goetzmann et al. (2011) investigates that the expanding of income inequalities has affected the art auction price, using time series data on the average auction price in London and data on inequalities constructed by Piketty (2010). Aquiar and Bils (2015) estimate consumption inequality to figure out how consumption inequality has mirrored income inequality in the U.S., controlling for mismeasurements in the consumer expenditure survey. Aquiar and Bils (2015) found that estimate elasticities of entertainment fees which includes the consumption of art and culture is the highest. This suggests that among all goods, art and culture are affected the most easily by the economy.

This study focuses on the impacts of family income on their teenage children's consumption of music concerts because the consumption of music concerts could reflect their family income level well. Almost all teenagers listen to music in daily life but whether a teenager could attend any live music concerts depends on their family income.

Therefore, the key contribution of this paper is to examine the impacts of family income on the attendance of music concerts by their teenage children, using Japanese data.

The rest of this paper is organized as follows. Section 2 discusses the existing papers on the relationship between income and cultural consumption. Section 3 explains the logistic model which is employed to examine the impacts of family income on the consumption of music concerts by their teenage children. Section 4 explains the source of the study data. Section 5 discusses the estimated results. Section 6 contains some belief summaries and the idea of future research.

[Figure 1 around here]
[Figure 2 around here]

2. The relationship between income and cultural consumption

One of the most notable literatures which is concerning income and consumption of art and culture is Goetzmann et al. (2011) that focuses on the impacts of income inequality on the consumption of art by the high-income group. Since art in auction is sometimes used for speculation, Goetzmann et al. (2011) considers not only the impacts of income and income inequality on art price in auction but also the impacts of equities, using Ordinary Least Square (OLS) regression. Goetzmann et al. (2011) shows that the expanding of income inequality has affected the art auction price and that the growth of personal income has not affected the art auction price, using time series data on the average auction price in London during the period from 1830 to 2007. Goetzmann et al. (2011) employs the indicator of income inequality proposed by Piketty (2010), where income inequality is defined by how much wealth is concentrated in the top 0.1 percent earners.

In contrast to Goetzmann et al. (2011), this paper focuses on the impacts of income inequality on the consumption of art by the low-income group because an increase in the lower-income population has become a hot issue in Japan. Komuro (2015, P.39) reports that the poverty rate had rapidly increased to 18% from 2007 to 2012 in Japan. In 2012, 900 million households received welfare payments. Thus, in Japan, the expansion of income inequality has accompanied an increase in lower-income group. Especially, this study examines the impacts of low family-income on their teenage children's consumption of music concerts.

Southgate and Roscigno (2009) is the literature that examines the impacts of parents on their children's concert attendance, using U.S. data. Southgate and Roscigno (2009) found that the music attendance of children and adolescents had been affected by

race, gender, and parents and that the music attendance had been related to the academic achievement. Southgate and Roscigno (2009) is employed Ordinary Least Square regression. There are some literatures that focus on the determinants of performing arts (see, for example, Baumol and Bowen (1966); Lange et al. (1986); Luksetich and Lange (1995); Ekelund and Ritenour (1999); and Toma and Meads (2007)). For example, Toma and Meads (2007) focuses on the determinants of the annual attendance of the mid-sized orchestra concerts, using aggregated data. Toma and Meads (2007) employed the reduced form equation which is driven from demand function and supply function.

Therefore, this paper could be the first paper to examine the impacts of family income on the consumption of music concerts of children, using microdata.

3. Model

In order to model the probability of a teenage child attending at least one music concert in a year, this study employs the logit model as follows:

$$Z_{it} = logit(p_{it}) = \alpha + \sum_{s=1}^{t} X_{s_{it}}\beta_s + \gamma_1 D_{1996} + \gamma_2 D_{2001} + \gamma_3 D_{2006}, \quad (1)$$

$$p_{it} = \exp(Z_{it}) / (1 + \exp(Z_{it}))$$

where Z_{it} takes the value 1 if child i attends at least one music concert in year t, and 0 otherwise, p_{it} is the probability that child i attends at least one music concert in year t, X_{it} is a set of control variables which possibly affect child i's concert attendance in year t, D_{1996}, D_{2001}, and D_{2006} are 0-1 dummies which take the value 1 in the year 1996, 2001, and 2006, respectively, and 0 other wise, α is a constant, and β_s, γ_1, γ_2, and γ_3 are coefficients to be estimated.

Moreover, in order to examine the impact of income level on the frequency of concert attendance, this study employs the ordered logit model as follows:

$$y_{it}^* = a + \sum_{s=1}^{t} X_{s_{it}} b_s + c_1 D_{1996} + c_2 D_{2001} + c_3 D_{2006}, \quad (2)$$

$$\begin{aligned} y_{it} = 0 \quad & if\ y_{it}^* < \mu_0, \\ = 1 \quad & if\ \mu_0 < y_{it}^* < \mu_1, \\ = 2 \quad & if\ \mu_1 < y_{it}^* < \mu_2, \\ = 3 \quad & if\ \mu_2 < y_{it}^* < \mu_3, \\ = 4 \quad & if\ \mu_3 < y_{it}^*, \end{aligned}$$

where y_{it}^{*} is not observed, y_{it} the frequency of child i's concert attendance in year t and the observed counterpart to y_{it}^{*}, X_{it} is a set of control variables which possibly affect the frequency of child i's concert attendance in year t, D_{1996}, D_{2001}, and D_{2006} are 0-1 dummies which take the value 1 in the year 1996, 2001, and 2006, respectively, 0 otherwise, a is a constant, and b_s, c_1, c_2, and c_3 are coefficients to be estimated. In equation (1), y_{it} takes 0 if the number of child i's concert attendance in year t is 0, y_{it} takes 1 if the number of child i's concert attendance in year t is 1, y_{it} takes 2 if the number of child i's concert attendance in year t is 2, y_{it} takes 3 if the number of child i's concert attendance in year t is 3, y_{it} takes 4 if the child i's concert attendance in year t is 4 or more.

4. Data

To examines the impacts of family income level on the attendance of live music concerts, this study uses the microdata obtained from the Survey on Time Use and Leisure Activities (STULS, *Shakaiseikatsu-kihon-chousa*) which is provided by the National Statistics Center, through *Hitotsubashi* University, in accordance with the Statistics Act. It is a well-known fact that educational background and parents' art appreciation behavior also affect someone's art appreciation behavior. The microdata of the "Survey on Time Use and Leisure Activities" (STULA, S*hakaiseikatsu Kihon-chousa*) in 2006 includes information on annual family income, educational background, gender, whether his/her parent had attended live music concert together, and other personal information. In this paper, only children at age 10 – 19 are analyzed because children are more easily affected by whether their parents attend live music concert together.

The anonymous microdata in 1991, 1996, 2001, and 2006 is available from STULA and the sample size of original microdata is 680,000. At first, 40,000 samples (=10,000 samples×4 year) are selected randomly, considering the limitation of the data area of LIMDEP 10. Then, the sample of children who are in the age 10-19 are chosen, excluding missing data. As a result, 4,600 samples are used for this analysis. Table 3 presents the definition and the descriptive statistics of variables. Table 4 reports the correlation coefficients.

[Table 3 around here]

[Table 4 around here]

5. Results

LIMDEP 10 is used for the estimation. Since the determinants of whether children had attended classical music concerts are assumed to be different from the determinants of whether children had attended popular music concerts, classical music concerts and popular music concerts are analyzed separately. Table 5 reports the estimated results of the determinants of whether children had attended classical music concert (Models (5-1), (5-2), and (5-3)) while Table 6 reports the estimated results of the determinants of whether children had attended popular music concerts (Models (6-1), (6-2), and (6-3)). Since the data on whether the child attended any music concert with his/her parent is available only from the survey in 2006, the data from the survey in 2006 are pooled and used to examine the influence of parents' behavior on their children's concert attendance (Models (5-3) and (6-3)).

This section first discusses the determinants of whether children had attended classical music concerts (CLA_CON). In Models (5-1) and (5-2) of Table 5, the estimated coefficients of the low-family-income group (I1) are negative and not significant. In Models (5-1) and (5-2) of Table 5, the estimated coefficients of high-family-income group (I3) are positive but not significant. In Models (5-1) and (5-2) of Table 5, the estimated coefficients of very-high-family-income group (I4) are positive and significant. These results show that the over-9-million-yen family-income group is more likely to attend classical music concerts. The estimated coefficients of parents' behavior to classical music concerts (CLA_PARE) is positive and significant in Model (5-3). Teenagers are more likely to attend classical music concerts when their parents take the family to see classical music concerts. The estimated coefficients of the attendance of popular music concerts (POP_CON) are positive and significant in all models. The children who attend popular music concerts tend to also attend classical music concerts. The popular music concerts do not seem to be substitutes for classical music concerts. The estimated coefficients of listening to recorded classical music (CLA_REC) are positive and significant in Model (5-3). The children who listen to recorded classical music tend to attend the classical music concerts. This suggests that the recorded classical concerts had not been the substitutes of classical music concerts. As a side note, the children who engage in full-time jobs do not attend universities. Their parents are also assumed to have not attended universities. Thus, the coefficients of engaging in full-time job (JOB) is assumed to be negative. The estimated coefficients of engaging in full-time job (JOB) are negative and significant in Models (5-1) and (5-3). The estimated coefficient of low education (EDU_LOW) is also negative and significant in Model (5-2). The estimated coefficients of metropolitan areas (METRO) is not significant in Model (5-3) but

significant in Models (5-1) and (5-2). Children living in metropolitan areas seem less likely to attend classical music concerts. The estimated coefficients of female (FEMALE) are positive and significant in all models. Females tend to attend classical music concerts more than males.

Secondly, this section discusses on the determinants of whether children had attended popular music concert (POP_CON). In Models (6-1) and (6-2) of Table 6, the estimated coefficients of low-family-income group (I1) are positive but not significant. In Models (6-1) and (6-2) of Table 6, the estimated coefficients of high-family-income group (I3) are positive and significant. In Models (6-1) and (6-2) of Table 6, the estimated coefficients of the very-high-family-income group (I4) are positive and significant. These results show that over 6-million-yen family-income group is more likely to attend classical music concerts. The estimated coefficients of parents' behavior to popular music concerts (POP_PARE) is positive and significant in Model (6-3). This means that teenage children are likely to attend popular music concerts when their parents go with them. The estimated coefficients of the attendance of popular music concerts (POP_CON) are positive and significant in all models. The children who attend classical music concerts tend to attend popular music concerts. The estimated coefficients of listening to the recorded popular music (POP_REC) are positive and significant in Model (6-3). The children who listen to the recorded popular music tend to attend popular music concerts. This suggests that the recorded concerts were not substitutes for popular music concerts. The estimated coefficients of engaging in a full-time job (JOB) is positive but not significant in Model (6-1) while the estimated coefficients of engaging in a full-time job (JOB) is positive and significant in Model (6-3). One possible reason for this is that the preference of popular music concert does not depend on educational background and that children engaging in full-time jobs have higher amount of money to buy concert tickets. The estimated coefficients of metropolitan areas (METRO) are positive and significant in Models (6-1) and (6-2). The children who live in metropolitan areas attend concerts more often than others. In all models, the estimated coefficients of females (Female) is positive and significant. Females tend to attend popular music concerts more than males, as well as classical concerts.

Therefore, this section has five main findings: (1) the children who come from over-9-million-yen family-income-group are more likely to attend classical music concerts; (2) the children who come from over-6-million-yen family-income-group are more likely to attend popular music concerts; (3) when parents attend live music concerts together, their teenage children are more likely to attend live music concerts; (4) recorded music

are not substitutes of live music concerts; and (5) higher education leads to more attendance of classical music concerts.

[Table 5 around here]
[Table 6 around here]

Table 7 reports the estimated results of equation (2). To examine the impact of family income on frequency with which a teenage child attends classical music concerts, the frequency of the attendance of classical music concerts was used as an explanatory variable (Model (7)). Figure 3 show the frequency of teenage children's classical music concert attendance. The number of teenage children who attended classical music concerts four times annually is far smaller. To examine the impact of family income on frequency with which a teenage child attends popular music concerts, the frequency of the attendance of popular music concerts was used as an explanatory variable but LIMDEP10 could not compute the estimated results. The estimated coefficients of low-family-income group (I1) are negative but insignificant. The estimated coefficients of high-family-income group (I3) are positive but insignificant. The estimated coefficients of very-high-family-income group (I4) are positive and significant. These results show that very-high-family-income group attends the classical music concert more frequently.

[Figure 3 around here]
[Table 7 around here]

6. Concluding Remarks

This study focuses on the impacts of family income on music concert attendance because the consumption of music concerts could reflect their family income level well. Almost all teenagers listen to music in daily life but whether a teenager could attend any live music concerts depends on their family income.

A logistic regression analysis is conducted to determine the impact of family income on the likelihood of their teenage children's concert attendance, using the individual anonymous microdata from 1991, 1996, 2001, and 2006. The children are divided into four family income group: These are; 0 – 2.99 million-yen-family-income group (low-family-income-group); 3 – 5.99 million-yen-family-income group (middle-family-income-group); 6 – 8.99 million-yen-family-income group (high-family-income-group); and over 9 million-yen family-income group (very-high-family-income group).

The estimated result shows that teenagers who belong to very-high-family-income group were more likely to attend both classical music concerts and that teenagers who belong very-high-family-income group or high-family-income group were more likely to attend popular music concerts. Generally, it is well-known that lower-family-income group prefer popular music while high-family-income group prefer classical music. However, children who came from rich families were more likely to attend both classical music concerts and popular music concerts. The estimated results show that recorded music had not been a substitute for live concerts. Children who listened to recorded music were more likely to attend live concerts. It seems that children who came from rich family can consume music in more ways. In contrast, children who belong to the low-family-income group are less likely to attend any music concerts. Generally, the children who had a job and the children who did not go school after graduation of junior high school or high school can be related to low-family-income group. Such children were less likely to attend any music concerts, and this finding is statistically significant.

An ordered logistic regression analysis is also conducted to determine the impact of family income on the frequency of their teenage children's concert attendance. The estimated show that very-high-family-income group attends the classical music concert more frequently.

This study shows the strong relationship between family income and concert attendance. The empirical results show that high-family-income (over 6 million-yen family-income) increase the probability that teenage children attend live music concerts, and that very-high-family-income (over 9 million-yen family-income) increase the frequency that teenage children attend classical music concerts. These results imply that the opportunity to access live music concerts is not equal among teenage children. To improve such inequal opportunity to access live music concerts is one issue for the Japanese cultural policy.

References

Aguiar M., and Bils, M. (2015). "Has Consumption Inequality Mirrored Income Inequality?." *American Economic Review*, 105(9), 2725-2756.

Goetzmann, W. N., Renneboog, L., and Spaenjers, C. (2011). "Art and Money." *American Economic Review: Papers & Proceedings*, 101(3), 222-226.

Hausman,,J.A. (1978). "Specification Tests in Econometrics," *Econometrica*, 46(6), 1251-1271.

Kruger, D., and Perri, F. (2006). "Does Income Inequality Lead to Consumption Inequality? Evidence and Theory," *Review of Economics Studies*, 73 (1), 163-193.

OECD (2013). *OECD Economic Survey of Japan*, Paris OECD Publishing.

OECD (2015). *OECD Economic Surveys Japan*, Executive Summary, Paris OECD Publishing. Available from URL: http://www.oecd.org/eco/surveys/Japan-2015-overview.pdf

Piketty, T. (2010). *Top Incomes: A Global Perspective*. New York: Oxford University Press.

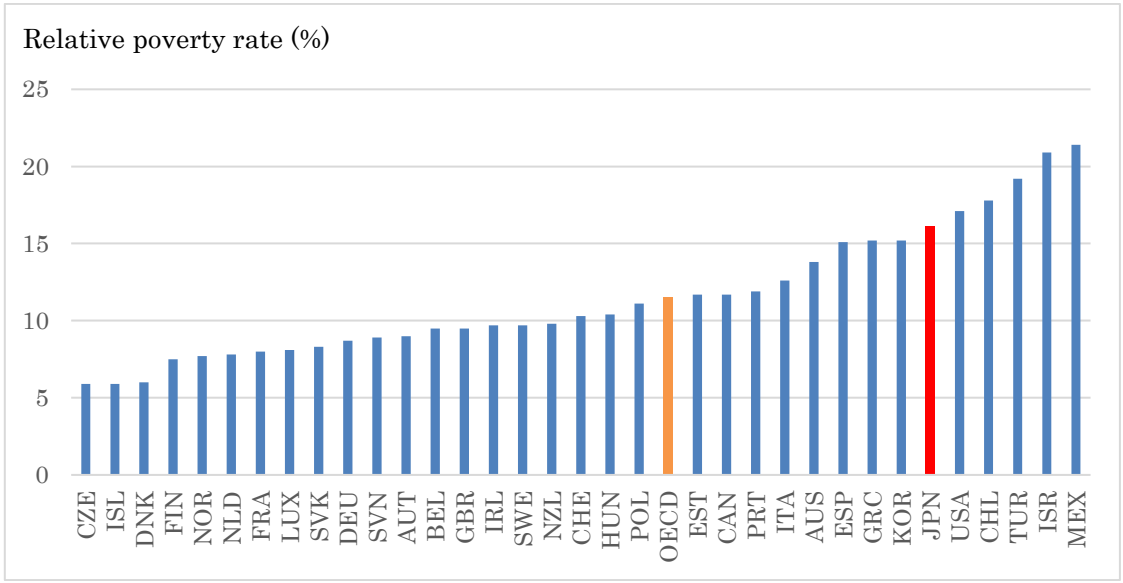
Piketty, T. (2014). *Capital in the Twenty-First Century*. Cambridge, MA: Harvard University Press.

Slesnick, D. T. (2001). *Consumption and Social Welfare: Living Standards and their Distribution in the United States*. Cambridge: Cambridge University Press.

Southgate, D. E., and Roscigno, V. J. (2009). "The impact of music on childhood and adolescent achievement." *Social Science Quarterly*, 90(1), 4-21.

Toma, M. and Meads, H. (2007). "Recent evidence on the determinants of concert attendance for mid-size symphonies." *Journal of Economics and Finance*, 31(3), 412-421.

Figure 1: Relative Poverty Rates of OECD countries



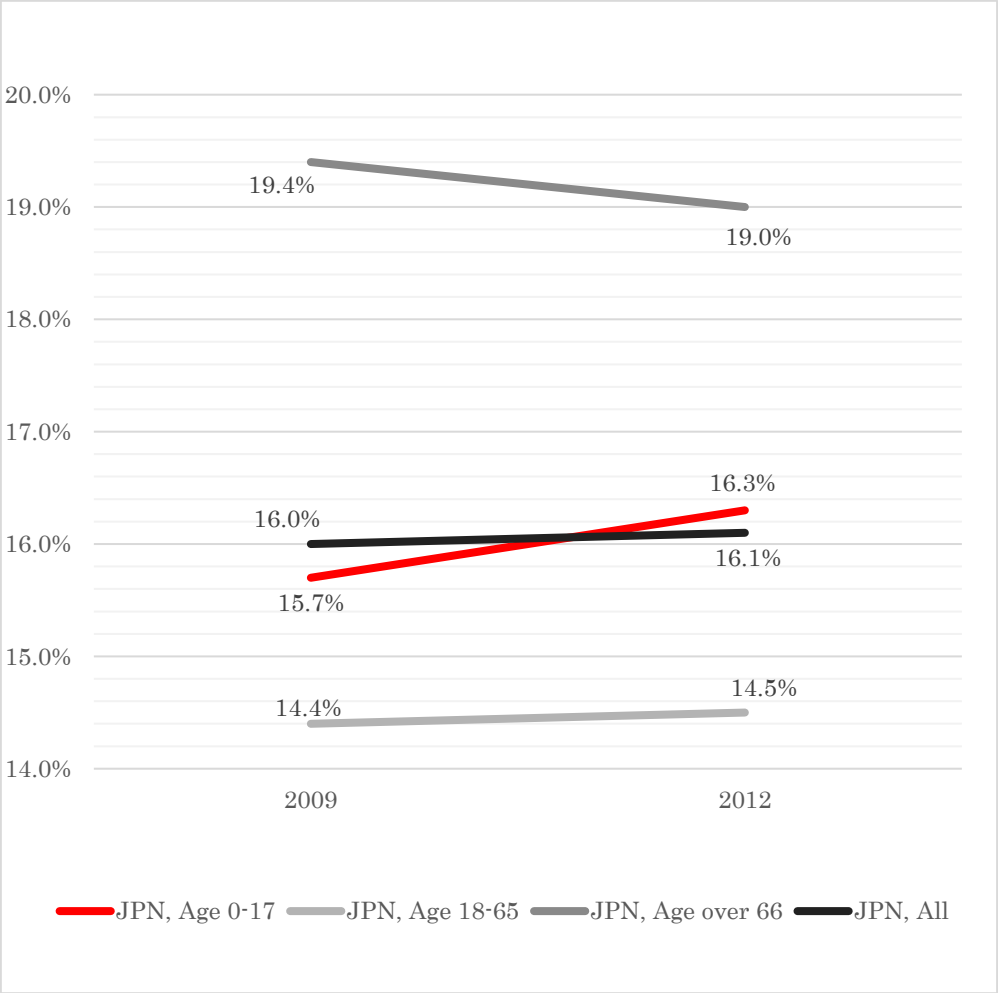
Notes:

[1] The relative poverty rate is the share of the population with an income below half the "median equivalent disposable income", which is defines household disposable income divided by the square root of the number of household members.

[2] The Japanese data are based on the *Comprehensive Survey of Living Conditions*, which is submitted to the OECD by Japan. Another survey, the *National Survey of Family Income and Expenditure*, shows a much lower relative poverty rate of 10.1%.

Source: OECD Income Distribution and Poverty Database; Ministry of Health, Labor and Welfare (Japan), *Comprehensive Survey of Living Conditions*

Figure 2: Relative Poverty Rates of Japan by Age Group



Notes:

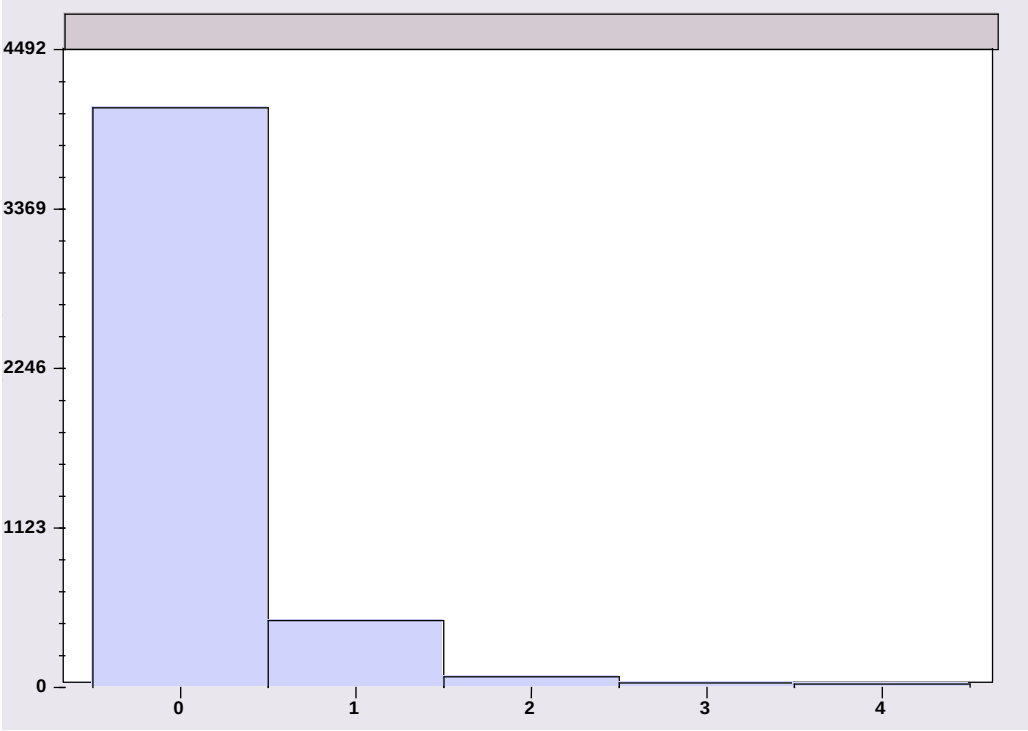
[1] The relative poverty rate is the share of the population with an income below half the "median equivalent disposable income", which is defines household disposable income divided by the square root of the number of household members.

[2] The relative poverty rate is also available by broad age group: child poverty (0-17 years old), working-age poverty, and elderly poverty (over 66 year-old).

Source: OECD (2018), Poverty rate (indicator). doi: 10.1787/0fe1315d-en (Accessed on 07 March 2018)

Figure 3: The frequency of teenage children's classical music concert attendance

The number of teenage children
who attended classical music concerts



The number of concerts attended annually

Notes:

[1] The sample size is 4682.

[2] 0: The total number of the teenage children who did not attend any concert in the year

1: The total number of the teenage children who attended one concert in the year

2: The total number of the teenage children who attended two concerts in the year

3: The total number of the teenage children who attended three concerts in the year

4: The total number of the teenage children who attended four or more concerts in the year

Table 3: Definitions and Descriptive Statistics for the Variables

Variable	Definition	Mean	Std.Dev.	Min	Max	Cases
D_1996	A 0-1 dummy variable which takes 1 in 1996, and 0 otherwise.	0.31	0.46	0	1	4682
D_2001	A 0-1 dummy variable which takes 1 in 2001, and 0 otherwise.	0.26	0.44	0	1	4682
D_2006	A 0-1 dummy variable which takes 1 in 2006, and 0 otherwise.	0.22	0.42	0	1	4682
METRO	A 0-1 dummy variable which takes 1 if the child lives in the Tokyo, Osaka, or Nagoya metropolitan area, and 0 otherwise.	0.30	0.46	0	1	4682
FEMALE	A 0-1 dummy variable which takes 1 if the responder is a female sample, and 0 otherwise.	0.48	0.50	0	1	4682
AGE_2	A 0-1 dummy variable which takes 1 if the responder is the age between 15 to 19, and 0 otherwise.	0.61	0.49	0	1	4682
EDU_LOW	A 0-1 dummy variable which takes 1 if the child does not go to any school after high school graduate or junior high school graduate for the year, and 0 otherwise.	0.08	0.28	0	1	4682
KAIGO	A 0-1 dummy variable which takes 1 if the child's family is devoted to any family member's care for the year, and 0 otherwise.	0.01	0.11	0	1	4682
JOB	A 0-1 dummy variable which takes 1 if the child was engaged in full-time employment for the year, and 0 otherwise.	0.12	0.32	0	1	4682
I1	A 0-1 dummy variable which takes 1 if the annual family income is less than 3 million yen, and 0 otherwise.	0.08	0.28	0	1	4682
I3	A 0-1 dummy variable which takes 1 if the annual family income is between 6 million yen and 8.99 million yen, and 0 otherwise.	0.29	0.46	0	1	4682
I4	A 0-1 dummy variable which takes 1 if the annual family income is over 9 million yen, and 0 otherwise.	0.21	0.41	0	1	4682

Table 3: Cont.

Variable	Definition	Mean	Std.Dev.	Min	Max	Cases
CLA_CON	A 0-1 dummy variable which takes 1 if the child attended any classical music concert in the year, and 0 otherwise.	0.13	0.33	0	1	4682
CLA_PAR	A 0-1 dummy variable which takes 1 if the child attended any classical music concert **with his/her parent** in the year, and 0 otherwise.	0.05	0.23	0	1	4534
POP_CON	A 0-1 dummy variable which takes 1 if the child attended any popular music concert in the year, and 0 otherwise.	0.15	0.35	0	1	4682
POP_PAR	A 0-1 dummy variable which takes 1 if the child attended any popular music concert **with his/her parent** in the year, and 0 otherwise.	0.05	0.22	0	1	4682
CLA_REC	A 0-1 dummy variable which takes 1 if a child listened to any recorded classical music like a CD or DVD in the year, otherwise 0.	0.32	0.47	0	1	2283
POP_REC	A 0-1 dummy variable which takes 1 if a child listened to any recorded popular music like a CD or DVD in the year, otherwise 0.	0.61	0.49	0	1	1049
CLA_0	A 0-1 dummy variable which takes 1 if the child did not attend any classical music concert in the year, and 0 otherwise.	0.87	0.34	0	1	4682
CLA_1	A 0-1 dummy variable which takes 1 if the child attended one classical music concert in the year, and 0 otherwise.	0.10	0.30	0	1	4682
CLA_2	A 0-1 dummy variable which takes 1 if the child attended two classical music concerts in the year, and 0 otherwise.	0.02	0.12	0	1	4682
CLA_3	A 0-1 dummy variable which takes 1 if the child attended three classical music concerts in the year, and 0 otherwise.	0.01	0.08	0	1	4682
CLA_4more	A 0-1 dummy variable which takes 1 if the child attended four or more classical music concerts in the year, and 0 otherwise.	0.00	0.07	0	1	4682

Table 4: Correlation coefficients

	d_1996	d_2001	d_2006	metro	female	age_2	edu_low	kaigo	job	i1	i3	i4	cla_con	cla_par	pop_con	pop_par	cla_rec	pop_rec
d_1996	1.00																	
d_2001	-0.40	1.00																
d_2006	-0.36	-0.32	1.00															
metro	-0.01	0.01	-0.01	1.00														
Female	0.00	-0.01	-0.02	-0.01	1.00													
age_2	-0.16	-0.09	-0.12	0.02	0.00	1.00												
edu_low	-0.07	-0.04	-0.06	0.02	-0.05	0.24	1.00											
kaigo	-0.02	-0.01	0.01	0.03	0.03	0.02	-0.01	1.00										
job	-0.09	-0.01	-0.01	0.07	0.01	0.29	0.59	0.01	1.00									
i1	-0.05	0.01	0.04	-0.10	-0.03	0.05	0.06	0.01	0.05	1.00								
i3	0.02	0.01	-0.02	0.05	0.01	-0.03	-0.03	-0.03	-0.02	-0.20	1.00							
i4	0.04	0.00	-0.02	0.15	0.00	0.02	-0.05	-0.01	-0.04	-0.16	-0.34	1.00						
cla_con	0.01	-0.01	-0.01	-0.03	0.18	-0.05	-0.07	0.01	-0.06	-0.04	0.00	0.05	1.00					
cla_par	0.12	-0.30	0.10	0.02	-0.08	0.06	0.05	-0.01	0.03	0.02	-0.01	-0.02	-0.48	1.00				
pop_con	-0.03	0.00	-0.06	0.03	0.16	0.12	0.00	0.00	0.04	-0.02	0.03	0.04	0.23	-0.11	1.00			
pop_par	-0.06	-0.14	0.27	0.00	0.04	-0.05	-0.04	0.01	-0.03	-0.04	0.04	0.02	0.04	0.04	0.20	1.00		
cla_rec	-0.65	0.61	0.55	0.00	-0.02	-0.18	-0.08	0.00	-0.02	0.04	-0.01	-0.02	-0.02	-0.18	-0.05	0.11	1.00	
pop_rec	-0.56	#DIV/0!	1.00	-0.01	-0.03	-0.19	-0.08	0.01	-0.02	0.05	-0.03	-0.03	-0.02	0.21	-0.07	0.24	1.00	1.00

Table 5: Determinants of Attending Classical Music Concerts

Dependent Variable/ Model	(5-1)	(5-2)	(5-3)
Constant	-2.329***	-2.265***	-4.341***
	(0.171)	(0.171)	(0.392)
D_1996	-0.220	-0.255*	
	(0.144)	(0.144)	
D_2001	-0.263*	-0.302**	
	(0.148)	(0.149)	
D_2006	-0.199	-0.253	
	(0.155)	(0.156)	
METRO	-0.306***	-0.324***	0.211
	(0.107)	(0.106)	(0.244)
FEMALE	0.966***	0.950***	0.859***
	(0.100)	(0.100)	(0.232)
AGE_2	-0.487***	-0.504***	-0.853***
	(0.110)	(0.108)	(0.240)
KAIGO	0.313	0.285	0.304
	(0.385)	(0.385)	(0.820)
JOB	-0.582***		-0.996*
	(0.185)		(0.527)
EDU_LOW		-0.981***	
		(0.263)	
I1	-0.256	-0.264	
	(0.203)	(0.204)	
I3	0.087	0.083	
	(0.114)	(0.114)	
I4	0.425***	0.411***	
	(0.120)	(0.120)	
POP_CON	1.395***	1.382***	1.414***
	(0.105)	(0.105)	(0.272)
CLA_PAR			2.081***
			(0.233)
CLA_REC			1.720***
			(0.365)
loglikelihood	-1583.378	-1580.048	-282.736
AIC	3192.800	3186.100	583.500
sample size	4682	4682	1049

Notes:

[1] For each explanatory variable reports the estimated coefficient, and the second line reports the estimated standard error.

*, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 6: Determinants of Attending Popular Music Concert

Dependent Variable/ Model	(6-1)	(6-2)	(6-3)
Constant	-2.995***	-2.979***	-4.106***
	(0.162)	(0.163)	(0.325)
D_1996	-0.253**	-0.266**	
	(0.124)	(0.124)	
D_2001	-0.099	-0.106	
	(0.124)	(0.125)	
D_2006	-0.424***	-0.431***	
	(0.138)	(0.139)	
METRO	0.194**	0.207**	-0.080
	(0.095)	(0.094)	(0.237)
FEMALE	0.771***	0.771***	0.599***
	(0.091)	(0.091)	(0.223)
AGE_2	0.774***	0.812***	0.388
	(0.109)	(0.107)	(0.244)
KAIGO	-0.330	-0.330	0.133
	(0.400)	(0.400)	(0.812)
JOB	0.162		1.144***
	(0.129)		(0.308)
EDU_LOW		-0.113	
		(0.160)	
I1	0.046	0.055	
	(0.174)	(0.174)	
I3	0.266**	0.257**	
	(0.106)	(0.106)	
I4	0.228**	0.214*	
	(0.116)	(0.116)	
CLA_CON	1.404***	1.390***	1.598***
	(0.105)	(0.105)	(0.260)
POP_PAR			1.457***
			(0.237)
POP_REC			0.908***
			(0.268)
loglikelihood	-1762.951	-1763.474	-300.862
AIC	3551.900	3552.900	619.700
sample size	4682	4682	1049

Notes:

[1] For each explanatory variable reports the estimated coefficient, and the second line reports the estimated standard error.

*, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 7: Determinants of the Frequency of Classical Music Concert Attendance

Dependent variable	Model (7)
Constant	-2.011***
	(0.164)
D_1996	-0.415***
	(0.136)
D_2001	-0.431***
	(0.140)
D_2006	-0.440***
	(0.147)
METRO	-0.230**
	(0.103)
FEMALE	0.971***
	(0.096)
AGE_2	-0.288***
	(9.105)
JOB	-0.380**
	(0.173)
I1	-0.171
	(0.197)
I3	0.118
	(0.109)
I4	0.329***
	(0.115)
Threshold parameter for index	
μ_1	1.694***
	(0.082)
μ_2	2.578***
	(0.133)
μ_3	3.421***
	(0.206)
Chi^2	167.280
loglikelihood	-2136.688
AIC	4301.400
sample size	4682

Notes:
[1] Explanatory variable is the frequency with which a teenage child attends concerts (CLA_0, CLA_1, CLA_2, CLA_3, and CLA_4more).
[2] For each explanatory variable reports the estimated coefficient, and the second line reports the estimated standard error.
*, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.