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Does Getting into a First-Choice University Affect Learning Attitude in Japan?

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Abstract

In Japan, one in two people attends university after graduating from high school, and the annual university dropout rate is low. However, more than 80% of university students study for less than 10 hours a week outside of class. If high school graduates cannot pass the first-choice university exams and enter a university that is not their first-choice university, they might lose motivation to study harder because they cannot receive the desired education or curriculum. To investigate whether those who pass the entrance exam for their first-choice university spend more time studying outside class than those who do not, I used microdata on Japanese university students. From the OLS estimations, I found that whether students study is likely to be more influenced by their satisfaction with their university life than by whether they were able to enroll in their first-choice university. Additional ordered probit estimations concerning students' learning attitudes revealed that students who were dissatisfied with their first choice displayed higher levels of laziness than students who were satisfied with their first choice.

Keywords: First-Choice University, Japanese University Students, Learning Attitude, Satisfaction with University Life, Study Time

1. Introduction

The Japanese university enrollment rate in 2022 was 56.6% (Note 1). In other words, one in two people attended university after graduating from high school. Graduates from highly selective universities receive very high wages, and many students want to enter such universities; however, not all students can attend their first-choice university, and only a limited number of applicants are successful. As Ono (2004) points out, university quality has an important effect on earnings in the Japanese labor market. Ono (2004) also noted that “examination hell” is an expression that means cramming and preparing for the entrance exam to get into a good university. Some students, even prospective *Ronin* students, aim to attend universities with difficult entrance exams to increase their lifetime wages (Note 2). On the contrary, because of the declining birth rate in Japan, high school graduates with low academic ability can enroll in universities if they do not choose a university. Thus, the gap between universities that are difficult to enroll in and those that are easy to enroll in is widening (Note 3).

As Vansteenkiste et al. (2009) pointed out, autonomous motivation is related to higher psychological well-being, greater use of adaptive metacognitive strategies, greater determination and will, better cognitive processing, and higher grades. If we follow this idea, university students might study longer when they pass the first-choice university entrance exams, because passing the first-choice university is thought to increase autonomous motivation. However, if their goal is to enter a prestigious university, the amount of time they spend studying will be short.

Tables 1 and 2 present the study hours per week of Japanese university students investigated by the National Institute for Educational Policy Research (2016), where more than 80% of university students study less than 10 hours a week outside of class. This trend does not vary according to the type of university or students' grades. According to the Ministry of Education, Culture, Sports, Science and Technology of Japan (2022b), the annual university dropout rate in Japan is 1.95%. This means that almost 90% of Japanese university students can obtain a bachelor's degree without studying for long hours outside of class. In other words, almost all Japanese students can graduate from university with little study beyond their regular classes.

Table 1: Class preparation and review hours per week

Hours per week	Whole	National University	Public University	Private University	First Grade	Second Grade	Third Grade	Forth Grade
0	21.1	20.5	19.9	21.3	11.9	11.8	14.7	44.5
1~5	51.9	45.5	49.7	53.5	58.0	55.9	55.9	40.6
6~10	15.8	19.3	18.3	14.9	19.3	19.3	17.1	8.0
11~15	5.7	7.2	6.3	5.3	6.3	7.7	6.1	2.6
16~20	2.2	3.8	2.1	1.9	2.1	2.6	2.5	1.4
21~25	1.1	1.4	1.1	1.1	1.0	1.0	1.4	0.9
26~30	0.5	0.6	0.8	0.4	0.2	0.5	0.7	0.4
31~	0.9	1.1	1.1	0.8	0.5	0.6	0.9	0.8
Unknown	0.7	0.7	0.8	0.7	0.7	0.5	0.6	0.9
Total (%)	100	100	100	100	100	100	100	100

Source: National Institute for Educational Policy Research (2016), *Investigative Research on the Learning Situation of University Students*

Table 2: Study hours not related to classes per week

Hours per week	Whole	National University	Public University	Private University	First Grade	Second Grade	Third Grade	Forth Grade
0	44.7	42.8	42.8	45.2	52.8	48.8	35.6	43.0
1~5	35.7	35.1	33.7	35.9	35.4	36.9	41.3	30.7
6~10	9.2	9.8	11.0	8.9	6.4	7.4	11.2	11.3
11~15	3.7	4.2	4.2	3.6	2.0	2.9	4.6	5.2
16~20	1.9	2.2	2.1	1.8	1.0	1.3	2.1	2.9
21~25	1.2	1.4	1.7	1.1	0.7	0.5	1.4	1.8
26~30	0.7	0.8	1.1	0.6	0.1	0.3	1.1	3.0
31~	2.0	2.8	2.2	1.8	0.6	0.6	1.8	3.5
Unknown	1.0	0.8	1.2	1.0	1.0	1.3	0.9	0.6
Total (%)	100	100	100	100	100	100	100	100

Source: National Institute for Educational Policy Research (2016), *Investigative Research on the Learning Situation of University Students*

If high school graduates cannot pass the first-choice university exams and enter a university that is not their first-choice university, they might lose motivation to study harder because they cannot receive the desired education or

curriculum. On the other hand, even though they enter a university that is not their first choice, they might study hard to catch up and gain an advantage in job searches.

Therefore, this study aims to analyze whether those who pass the entrance exam for their first-choice university spend more time studying outside of class than those who cannot. Additionally, I examined the effects of passing the entrance exam to their first-choice university on students' learning attitudes. The remainder of this paper is organized as follows: The relevant literature is discussed in Section 2. Section 3 describes the data and variables used in the estimations, and Section 4 presents the estimation results. Finally, Section 5 summarizes the major findings.

2. Literature Review

In this section, I review previous studies that have investigated the study time of university students and their motivation to study. I focused mainly on the studies conducted on Japanese university students.

Vansteenkiste et al. (2009) studied 484 first-year students from four Belgian teacher training institutions. They conducted cluster analyses and found four clusters: a good-quality motivation cluster with high scores on autonomous motivation and low scores on controlled motivation; a high-quantity motivation cluster with high scores on both autonomous and controlled motivation; a poor-quality motivation cluster with low scores on autonomous motivation but high scores on controlled motivation; and a low-quantity motivation cluster with low scores on both autonomous and controlled motivation. They found that the high-quality motivation group displayed an optimal pattern of educational outcomes.

Saitou (2002) investigated the relationship between motivation for university applications and stress after university enrollment. He collected a sample of 525 students from four Japanese universities. From the results of the factor analysis, he observed five main factors: (1) because of their parents' orders and their friends going to university; (2) because they want to enjoy their free time; (3) because they do not want to work immediately after graduating from high school; (4) because they want to develop their talents and learn manners; and (5) because they want to study at a university. He found that if students' motivation was (4) or (5), they were less likely to experience stress during university life.

Yajima (2005) collected a sample of 207 students from two universities in Japan to consider students' adaptation to university conditions along with the Self-Rating Depression Scale. He found that students who attended their first-choice universities were less likely to experience depression. His correlation analysis revealed a negative correlation between satisfaction with university life and working part-time. He guessed that one of the reasons students drop out of school is because part-time jobs become interesting, and they end up doing part-time jobs all the time. He argued that, to reduce the proportion of such students, support is needed to increase their satisfaction with their university lives.

Hatano and Mizokami (2013) focused on freshmen attending a university in Kyoto Prefecture and examined university students' learning from the perspective of their attitude toward learning and the time spent learning using the Active Class Attitude Scale. They also examined correlations between active class attitudes and in-class, out-of-class, and independent learning times. These correlation analyses revealed that active class attitudes were positively and significantly correlated with all types of study time.

Morozumi (2011) considered the effects of household income on the time spent learning using microdata from Japanese university students. She confirmed that students whose parents did not provide any living expenses spent a very short time learning, undertook long part-time jobs, and obtained poor test scores. Furthermore, she found that, although students who take out educational loans have good grades, they do not seem to have much time to prepare and review their studies. Students whose parents provide all tuition fees and living expenses have less time for part-time jobs, but they do not have much time to study and improve their test scores either.

Osumi et al. (2013) targeted 189 freshmen and surveyed them three times (April, July, and October 2007) to explore the factors that affect the degree and change in freshmen's feelings of adjustment to university. Participants were asked whether they were enrolled in their first-choice universities, their level of confidence during the entrance exams, their degree of adjustment to university life, and their relationships with their friends. They found that freshmen who entered their first-choice university and had a good time with their friends displayed high adjustment to their university life immediately after enrollment, and their adjustment levels declined gradually.

Kurokawa and Kawahara (2020) investigated the effects of the frequency of class attendance, time spent preparing and reviewing, academic ability before admission, and level of interest in class on test scores using microdata from students affiliated with a certain university in Japan. Multiple regression analyses revealed that all variables had a positive and significant effect on test scores. However, they estimated that more than 60 min of preparation and review per class were not very effective.

From these studies, a close relationship was observed between acceptance into a university of one's first choice and adapting to the university. As Kurokawa and Kawahara (2020) have pointed out, spending time on preparation and review has a positive effect on test scores. However, Japanese university students generally do not study outside of class, and these previous studies did not investigate the relationship between acceptance into their first-choice university and time spent studying outside of class. Thus, I investigated the direct effect of passing the entrance exam of their first-choice university on study time outside of class. Additionally, I examined the effect of passing the entrance exam to their first-choice university on students' learning attitudes.

3. Data

This section explains the data used for the estimation. For the analysis, I used the data from the "Career Awareness Survey of University Students, 2019," which targets first- and third-grade university students in Japan. The respondents of the "Career Awareness Survey of University Students, 2019" comprised 1031 first-grade students (563 males and 468 females) and 1031 third-grade students (563 males and 468 females).

In the first analysis, the dependent variable was time spent on class preparation, review, or study hours unrelated to classes. Respondents reported how much time they spent each week in classes, preparing for and reviewing classes, studying unrelated to classes, playing with friends, participating in club activities, working part-time, volunteering, watching TV, talking on the phone, using social media, surfing the internet, playing games, reading manga, and commuting to school. Some respondents were excluded from the analysis because their total working time exceeded 130 hours per week, which made their responses unreliable (Note 4).

To investigate the effects of passing the entrance exam for their first-choice university on study hours outside class, I created two types of dummy variables concerning their first-choice university. The first dummy variable was simply whether the university in which they were currently enrolled was their first choice at the time they took the entrance exam. I describe this type of dummy variable as "first-choice." The second dummy variable was a combination of whether the university was their first choice and whether they were satisfied with it. Thus, the respondents were divided into four types: 1) first choice and satisfied; 2) first choice but dissatisfied; 3) not first choice but satisfied; and 4) not first choice and dissatisfied. When I used the second type as the independent variable, respondents under type 4 (not first choice and dissatisfied) were the reference group.

To account for differences in individual attributes and faculties, several dummy variables were used as independent variables. If the respondent is female, the female dummy variable is equal to 1, otherwise 0. The third-grade dummy variable takes a value of 1 if the respondent is a third-grade university student (the reference group is a first-grade university student). In Japan, national and public universities are more difficult for admission than private universities. This is because national and public universities have lower tuition fees than private universities and have more entrance exam subjects. For example, the annual tuition fees of national and public universities are about 3600 US dollars, while those of private schools are about 6300 US dollars. For many subjects taken at national and public universities, taking a first exam (approximately seven subjects) and a second exam (approximately three subjects) is necessary. However, most private universities only require students to take two

or three subjects, and the exam complexity varies greatly depending on the university. To reflect this situation, I introduced public and private dummies (the reference group was a national university).

The curriculum also varies greatly, depending on the faculty. For example, science departments conduct many experiments, and nursing and medical schools provide considerable practical training. However, many classes in the liberal arts departments are lecture-based. To control for faculty differences, I used faculty dummy variables and adopted the humanities as the reference group.

I also considered students' academic abilities. If students had very good grades at the time of admission, their tuition fees were reduced or waived (tuition fee exemption dummy and grant-type scholarship dummy). In Japan, parents sometimes pay for university students' tuition and living expenses, but families that are not economically well-off often opt for educational loans to attend higher education. If a student takes out an educational loan, the dummy variable for educational loans equals 1.

To investigate the effect of passing the entrance exam for their first-choice university on students' learning attitude, I adopted four indicators: periodic examination results, motivation to learn (self-evaluation), performing tasks with minimal effort, and the mindset that students just need to get the credit. Concerning periodic examination results, this variable takes the value 5 if respondents answered that they scored 80 or above in 80% or more of their courses. This variable takes 1 if the respondent answered that they scored 80 or above in less than 20% of their courses. Thus, this variable had a high value when the proportion of participants with high scores increased. For motivation to learn (self-evaluation), respondents were asked the following question: "Do you think you have a strong desire to learn?" If the respondents strongly agreed with this question, this variable was scored 4. If the respondent strongly disagreed with this question, this variable was scored 1. The remaining two indicators were regarding laziness. If the respondent answered "strongly agree" to the question "Do you approach tasks with minimal effort?", they were assigned a value of 5. Those who tackled a task with great effort were assigned a value of 1. For this variable, higher numbers indicated laziness. Similarly, the question "Do you go to class thinking that all you need to do is get the credits?" is the same concept. If respondents were only concerned about getting credits, the variable was scored 5. On the other hand, if the respondent wanted to receive a good evaluation and not just credits, the variable was scored at 1. Table 3 presents the descriptive statistics.

Table 3: Descriptive statistics

Variable	Obs	Mean	SD	Min	Max
Periodic examination results	1,837	3.71	1.14	1	5
Motivation to learn (self-evaluation)	1,947	2.42	0.90	1	4
Perform tasks with minimal effort	1,947	3.14	1.11	1	5
Mindset that I just need to get the credits	1,947	2.98	1.24	1	5
Class preparation and review	1,947	4.51	4.77	0	50
Study hours unrelated to classes	1,947	2.17	4.68	0	70
Humanities (reference)	1,947	0.21	0.41	0	1
Social science	1,947	0.27	0.44	0	1
Science course	1,947	0.27	0.45	0	1
Art	1,947	0.03	0.18	0	1
Liberal arts and science	1,947	0.04	0.20	0	1
Medical course (4-year)	1,947	0.09	0.29	0	1
Medical course (6-year)	1,947	0.05	0.22	0	1
Other faculties	1,947	0.03	0.17	0	1
Variable	Obs	Mean	SD	Min	Max
Female	1,947	0.46	0.50	0	1
Third grade	1,947	0.50	0.50	0	1
National school (reference)	1,947	0.27	0.45	0	1
Public school	1,947	0.09	0.28	0	1
Private school	1,947	0.64	0.48	0	1
First-choice	1,947	0.52	0.50	0	1
First-choice and satisfied	1,947	0.42	0.49	0	1
First-choice but dissatisfied	1,947	0.10	0.30	0	1
Not first-choice but satisfied	1,947	0.35	0.48	0	1
Not first-choice and dissatisfied (reference)	1,947	0.13	0.34	0	1
Tuition fee exemption	1,947	0.15	0.36	0	1
Grant-type scholarship	1,947	0.08	0.27	0	1
Education loan	1,947	0.34	0.47	0	1

4. Estimation results

In this section, I first examined the effects of passing the entrance exam for their first-choice university on study hours outside class. Table 4 presents the estimation outcomes using OLS. I used the time spent on class preparation and review as dependent variables in models (1) and (2). Compared with students at national universities, students

at private universities spend significantly less time preparing and reviewing. Because the coefficients of the science and medical course dummies (both 4th-year and 6th-year) are positive and statistically significant, science students and students aiming to obtain national qualifications (such as doctors and nurses) spend more time preparing and reviewing than liberal arts students.

The coefficient of the first-choice dummy is negative but insignificant. Being accepted by the first-choice university did not seem to increase university students' study time. In Model (2), I changed the types of dummy variables concerning first-choice universities. None of the coefficients were significant; therefore, at first glance, it appears as if there was no difference. However, the signs of first choice and satisfied and the sign of first choice but dissatisfied are the opposite. When I conducted the F test to determine whether these coefficients were equal, they were rejected at the 5% significance level. Thus, students who were admitted to their first-choice university but were dissatisfied with their university life spent less time on class preparation and review than those who were admitted to their first-choice university and were satisfied with their university life.

In Models (3) and (4), study hours unrelated to classes were used as the dependent variable. The coefficient of the third-grade dummy is positive and significant. Because study hours unrelated to classes include preparation for job hunting and graduate school entrance exams, and because this survey was conducted in November-December, third-grade students are likely to spend more time studying for unrelated classes than first-grade students (Note 5). National university students spent more time studying outside of class than other types of university students. Contrary to models (1) and (2), the coefficients of the science and medical course dummies (both 4-year and 6-year) are negative and statistically significant. These students have long class hours and long preparation and review classes; therefore, it seems that they do not have time for studies unrelated to their classes. In Model (3), the coefficient of the first-choice dummy variable is negative at the 10% significance level. This suggests that students admitted to their first-choice university may have a shorter time to study for unrelated classes than other students. In Model (4), the sign of the first choice and satisfied and the sign of the first choice but dissatisfied are the same. I conducted an F-test to determine whether these coefficients were equal and could not reject this hypothesis. Concerning study hours unrelated to classes, study time does not seem to have much to do with whether students enter their first-choice university or are satisfied with their university.

Table 4: Estimation results (spending time on study outside of classes as a dependent variable)

Independent variables	Class preparation and review				Study hours unrelated to classes			
	Model (1)		Model (2)		Model (3)		Model (4)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. err.	Coef.	Std. Err.
Female	0.2139	0.2103	0.1915	0.2097	-0.3960 *	0.2189	-0.3870 *	0.2200
Third grade	-0.1143	0.2075	-0.1023	0.2075	1.1298 ***	0.2079	1.1396 ***	0.2079
Public school	0.1700	0.4961	0.2588	0.4984	-1.0610 ***	0.3363	-1.0737 ***	0.3366
Private school	-1.0142 ***	0.2707	-0.9415 ***	0.2726	-0.8003 ***	0.2939	-0.8062 ***	0.2891
Social science	-0.3279	0.2154	-0.3532	0.2150	0.3546	0.3263	0.3637	0.3263
Science course	1.7405 ***	0.2921	1.7350 ***	0.2921	-0.5755 *	0.3072	-0.5730 *	0.3081
Art	1.2515 *	0.6695	1.2538 *	0.6658	1.7360 *	1.0512	1.7437 *	1.0515
Liberal arts and science	0.7271	0.4746	0.7375	0.4685	-0.2151	0.4022	-0.2006	0.4045
Medical course (4-year)	1.6732 ***	0.4197	1.7056 ***	0.4202	-0.9117 ***	0.2702	-0.9030 ***	0.2696
Medical course (6-year)	2.8043 ***	0.7371	2.7311 ***	0.7335	-0.8338 *	0.4352	-0.7852 *	0.4449
Other faculties	0.7676	0.6502	0.7020	0.6415	-0.9453 ***	0.3379	-0.9184 ***	0.3394
First-choice	-0.0725	0.2133	-	-	-0.3825 *	0.1982	-	-
First-choice and satisfied [1]	-	-	0.4623	0.3517	-	-	-0.7506 *	0.4034
First-choice but dissatisfied [2]	-	-	-0.4336	0.3999	-	-	-0.8404	0.5138
Not first-choice but satisfied	-	-	0.4820	0.3575	-	-	-0.5310	0.4081
Tuition fee exemption	0.1018	0.3098	0.0941	0.3087	-0.1051	0.2641	-0.0924	0.2624
Grant-type scholarship	0.5840	0.4508	0.5672	0.4506	0.3789	0.3882	0.3863	0.3879
Education loan	0.0323	0.2316	0.0417	0.2311	-0.2293	0.2168	-0.2359	0.2161
Constant	4.2957 ***	0.3425	3.9019 ***	0.4391	2.8202 ***	0.3859	3.1928 ***	0.4678
Observation	1,947		1,947		1,947		1,947	
R ²	0.0657		0.0695		0.0368		0.0381	
F	-		4.46		-		1.91	
Prob > F ([1]-[2]=0)	-		0.0117		-		0.1491	

Note: Standard errors are robust.

* Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

Next, I examined the effect of passing the entrance exam for their first-choice university on their periodic examination results, motivation to learn (self-evaluation), performing tasks with minimal effort, and the mindset that students just need to obtain credit. An ordered probit model was adopted for these estimations because the dependent variable was a discrete ordinal variable. In Models (5) and (6), the periodic examination result was used as the dependent variable.

Naturally, the results indicate that the longer students spend preparing and reviewing, the better their periodic examination results. Female students had better test scores than male students. The test results for third-grade students were significantly lower than those for first-grade students. This may be because third-grade students focus on job-hunting. Students belonging to the faculty of science and medical courses (both 4-year and 6-year) are supposed to spend a lot of time studying, but their grades are poor. These students may have to spend considerable time preparing and reviewing because it is difficult to earn credit. The coefficient of the tuition fee exemption is positive and highly significant. Students who scored sufficiently well to qualify for tuition exemptions on entrance exams also tended to score well on regular university exams. For the first-choice dummy variable, the coefficient is negative and significant at the 10% level. At first glance, it appears that students admitted to their first-choice universities were doing worse. In Model (6), I used dummy variables that are combinations of whether the university is their first choice and whether they are satisfied with it. I found that the sign of first choice and satisfied and the sign of first choice but dissatisfied were opposite. When a chi-square-test was conducted to determine whether these coefficients were equal, they were rejected at the 10% significance level.

Models (7) and (8) indicate the estimation results using the motivation to learn (self-evaluation) as the dependent variable. Students who spend a lot of time preparing and reviewing consider themselves highly motivated to learn. Students at national universities rated themselves as having high motivation to learn, while students at public and private universities rated themselves as having low motivation to learn. In Model (7), the coefficient of the first-choice dummy is negative and insignificant. On the other hand, the sign of the first choice and satisfied and the sign of the first choice but dissatisfied are the opposite. Moreover, the coefficient of the first-choice but dissatisfied dummy variable was negative and highly significant. This means that students with first-choice but dissatisfied have a lower self-evaluation of motivation to learn than students with not first-choice but are dissatisfied.

Table 5: Estimation results (students' motivation as a dependent variable)

Independent variables	Periodic examination results				Motivation to learn (self-evaluation)			
	Model (5)		Model (6)		Model (7)		Model (8)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Class preparation and review	0.0328 ***	0.0069	0.0320 ***	0.0069	0.0378 ***	0.0057	0.0364 ***	0.0057
Female	0.2641 ***	0.0561	0.2592 ***	0.0560	0.1062 **	0.0531	0.0986 *	0.0531
Third grade	-0.2285 ***	0.0497	-0.2270 ***	0.0499	0.0068	0.0487	0.0136	0.0487
Public school	-0.2744 ***	0.0989	-0.2591 ***	0.0995	-0.2688 ***	0.0950	-0.2309 **	0.0960
Private school	-0.0556	0.0605	-0.0430	0.0608	-0.1570 ***	0.0597	-0.1281 **	0.0600
Social science	-0.1624 **	0.0735	-0.1679 **	0.0735	0.0253	0.0733	0.0146	0.0736
Science course	-0.1932 **	0.0777	-0.1944 **	0.0777	-0.0410	0.0761	-0.0412	0.0762
Art	-0.1490	0.1445	-0.1546	0.1446	-0.0670	0.1389	-0.0625	0.1402
Liberal arts and science	0.1728	0.1469	0.1801	0.1463	0.0485	0.1159	0.0579	0.1167
Medical course (4-year)	-0.1955 *	0.1009	-0.1891 *	0.1008	-0.1116	0.0987	-0.0932	0.0984
Medical course (6-year)	-0.4102 ***	0.1329	-0.4234 ***	0.1340	0.0582	0.1140	0.0398	0.1146
Other faculties	-0.3518 **	0.1485	-0.3657 **	0.1489	-0.1716	0.1554	-0.1980	0.1550
First-choice	-0.0986 *	0.0514	-	-	-0.0388	0.0496	-	-
First-choice and satisfied [1]	-	-	0.0167	0.0839	-	-	0.1311	0.0843
First-choice but dissatisfied [2]	-	-	-0.1403	0.1090	-	-	-0.2957 ***	0.1069
Not first-choice but satisfied	-	-	0.1149	0.0844	-	-	0.1147	0.0856
Tuition fee exemption	0.2208 ***	0.0742	0.2196 ***	0.0739	0.0835	0.0699	0.0834	0.0700
Grant-type scholarship	0.0249	0.0985	0.0214	0.0986	0.0700	0.0905	0.0661	0.0907
Education loan	0.0153	0.0529	0.0173	0.0530	0.0253	0.0511	0.0279	0.0512
Observation	1,837		1,837		1,947		1,947	
Pseudo R ²	0.0232		0.0241		0.0151		0.0204	
chi ²	-		3.09		-		25.27	
Prob > chi ² ([1]-[2]=0)	-		0.0786		-		0	

Note: Standard errors are robust.

* Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

Table 6 presents the estimation results using students' laziness as the dependent variable. From the results of Models (9) and (10), it appears that male students tend to perform tasks with minimal effort compared to female students. In Model (10), the coefficient of the first-choice and satisfied dummies is negative and slightly significant, and that of the first-choice but dissatisfied dummy is positive. When a chi-square test was conducted to determine whether these coefficients were equal, they were rejected at the 5% significance level. This means that students who are satisfied with their university life are willing to strive to do better, but those who are dissatisfied with their university life tend to tackle tasks with minimal effort. Even within the same group of students who entered their first-choice university, there were differences in motivation.

In Models (11) and (12), the dependent variable was university students who attend class with the mindset of only acquiring the credits. The negative and significant coefficient of the female dummy means that male students tend to think that getting credit is sufficient. It can also be seen that third-grade students do not care about the quality

of their grades and tend to think that it is sufficient to obtain credits. The coefficient of the tuition fee exemption is negative and highly significant. Students who are exempted from tuition fees are concerned about the quality of their grades and remain eligible for tuition exemption. The coefficient of the first-choice dummy in Model (11) is insignificant. However, in Model (12), the coefficient of the first-choice and satisfied dummy is negative, and that of the first-choice but the dissatisfied dummy is positive and slightly significant. When a chi-square test was conducted to determine whether these coefficients were equal, they were rejected at the 1% significance level. Thus, students with first-choice but dissatisfied had higher levels of laziness than students with first-choice and satisfied. Surprisingly, students who did not get into their first choice but were satisfied seemed to be the most concerned about the quality of their grades out of the four groups.

Table 6: Estimation results (students' laziness as a dependent variable)

Independent variables	Perform tasks with minimal effort				Mindset that I just need to get the credits			
	Model (9)		Model (10)		Model (11)		Model (12)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Female	-0.1866 ***	0.0515	-0.1820 ***	0.0515	-0.1224 **	0.0511	-0.1147 **	0.0512
Third grade	0.0617	0.0476	0.0598	0.0477	0.0956 **	0.0475	0.0917 *	0.0476
Public school	0.0432	0.0999	0.0244	0.1003	0.1721 *	0.0957	0.1405	0.0965
Private school	-0.0886	0.0573	-0.1039 *	0.0574	0.0724	0.0580	0.0468	0.0582
Social science	0.0211	0.0706	0.0269	0.0708	0.0828	0.0711	0.0923	0.0714
Science course	-0.0941	0.0724	-0.0929	0.0723	-0.0106	0.0742	-0.0081	0.0742
Art	-0.1068	0.1370	-0.1077	0.1378	0.0487	0.1309	0.0488	0.1312
Liberal arts and science	-0.2458 **	0.1174	-0.2478 **	0.1161	-0.0560	0.1249	-0.0603	0.1240
Medical course (4-year)	-0.0583	0.0982	-0.0644	0.0979	-0.0567	0.0996	-0.0689	0.0996
Medical course (6-year)	0.0531	0.1185	0.0711	0.1198	0.0948	0.1080	0.1213	0.1083
Other faculties	0.1067	0.1592	0.1222	0.1585	0.0916	0.1565	0.1170	0.1548
First-choice	-0.0070	0.0486	-	-	0.0740	0.0486	-	-
First-choice and satisfied [1]	-	-	-0.1349 *	0.0800	-	-	-0.1185	0.0816
First-choice but dissatisfied [2]	-	-	0.0462	0.1074	-	-	0.2052 *	0.1062
Not first-choice but satisfied	-	-	-0.1247	0.0811	-	-	-0.1735 **	0.0820
Tuition fee exemption	0.0288	0.0674	0.0309	0.0675	-0.1424 **	0.0697	-0.1403 **	0.0697
Grant-type scholarship	-0.1177	0.0926	-0.1147	0.0925	-0.0690	0.0901	-0.0634	0.0897
Education loan	0.0295	0.0501	0.0274	0.0501	0.0332	0.0502	0.0297	0.0501
Observation	1,947		1,947		1,947		1,947	
Pseudo R ²	0.0051		0.0063		0.0045		0.0078	
chi ²	-		4.23		-		14.08	
Prob > chi ² ([1]-[2]=0)	-		0.0397		-		0	

Note: Standard errors are robust.

* Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

5. Conclusion

In this study, using data on Japanese university students, I investigated whether those who passed the entrance exam for their first-choice university spent more time studying outside of class than those who did not. Second, I examined the effects of passing the entrance exam for their first-choice university on learning attitudes.

The estimation results regarding spending time on class preparation and review revealed that enrollment in a first-choice university had no effect on students' study hours outside of class at a glance. However, when I used dummy variables that are combinations of whether the university is their first choice and whether they are satisfied with it as independent variables, I found that the sign of the first-choice and satisfied dummy and the sign of the first-choice but dissatisfied dummy were opposite. The hypothesis that these coefficients are equal was rejected at the

5% significance level using the F-test. Whether students study is likely to be more influenced by whether they are satisfied with their university life than by whether they are able to get into their first-choice university.

For estimation results on students' learning attitudes, I found that students who can enroll in the first-choice universities but are dissatisfied with university life tend to think that all they need to do is get credits and not to care about the quality of credit, and to put minimal effort into studying. Surprisingly, students who did not get into their first choice but were satisfied seemed to be the most concerned about the quality of their grades out of the four groups.

The finding that the effect of satisfaction with university life is greater than that of enrollment in first-choice universities is important. In particular, students who passed their first-choice university but were dissatisfied with their university life had poor study times and attitudes toward studying. To increase the study time of university students, it seems important to deal with students who passed their first-choice university but were dissatisfied with their university life. Therefore, it may be necessary to introduce a curriculum that increases student satisfaction. Overall, it is true that Japanese university students spend less time studying outside of class. In the data used for the analysis, the average weekly preparation and review times were only 4 h and 30 min. This was approximately 38 min/day. It is clear that even students who are satisfied with their university life spend less time studying outside of class. Japanese university students' goal is to enter university, and they do not seem to take actions such as accumulating human capital subsequently. The Japanese government is implementing a policy to increase subsidies by increasing the capacity of its data science departments. Additionally, the Japanese government is attempting to enhance active learning subjects. Future research should verify whether such policies have a positive impact on increasing students' independent study time and on their independent learning attitudes.

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Notes

Note 1. See Ministry of Education, Culture, Sports, Science and Technology of Japan (2022a).

Note 2. *Ronin* means a high school graduate who has failed the university entrance exam and spends years outside of high school preparing for the next year's university entrance exam. According to Ono (2007), typically 30% of students choose the *Ronin* option. In recent years, the ratio of *Ronin* has been about 20%.

Note 3. Yajima (2005) pointed out that some students lack basic academic skills or are unable to keep up with classes because some universities are in a situation where there is no selection, such as a shortage of full numbers.

Note 4. A week has 168 hours. These questions do not include the minimum amount of time necessary for daily activities such as sleeping, eating, drinking, and bathing. However, if the total time spent on studying, club activities, leisure time, etc. exceeds 130 hours, then it is unlikely that the data is accurate because the time spent sleeping, eating, and bathing has not been considered.

Note 5. School in Japan starts in April. Many Japanese university students begin job hunting in their third year, and more than 80% have a job offer by the summer of their fourth year.