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# The Decision for Shadow Education in Japan: Students' Choice or Parents' Pressure?

Steve R. ENTRICH\*

Following decision theory (Boudon, Raymond. 1974. *Education, Opportunity, and Social Inequality: Changing Prospects in Western Society*. New York: Wiley), social origin strongly affects educational decisions, especially at transition points in educational attainment. In Japan, the fierce competition in gaining access to the next level of schooling intensifies the impact of educational decisions on students' future careers. In addition to selecting a certain school, families are forced to decide whether or not to invest in shadow education. Thus far, socioeconomic background and parents' educational aspirations, in conjunction with students' academic achievement, have been deemed influential to such decisions in Japan. The agency of the student is rarely even considered. Based on calculations from the 2011 Hyōgo High School Students' (HHSS) survey, the theoretical approach presented in this article stresses the importance of acknowledging the existence of a multitude of actors involved in each phase of the decision-making process, including the students themselves, especially when explaining inequalities in modern societies.

**Keywords:** shadow education; educational aspirations; decision theory; juku; Hyōgo High School Students' survey 2011

## 1. Introduction

The future career of a student is strongly affected by the sum of investments in his or her educational pathway. This pathway is distinguished by a number of transitions to the next education level (Maaz *et al.* 2010). Therefore, the choices made in the educational attainment process are decisive in determining which step on the social ladder a student will end up on. Following Boudon's decision theory (Boudon 1974), social origin affects educational decision-making, especially at these transition points in educational attainment. Socioeconomic background and parents' educational aspirations in conjunction with students' academic achievement are believed to impact educational decisions. Differences in starting conditions at the beginning of a students' school career and parents' different cost-benefit considerations based on their educational aspirations and socioeconomic status (SES) result in educational as well as social inequality (Boudon 1974; Erikson and Jonsson 1996; Breen and Goldthorpe 1997; Esser 1999; Becker and Lauterbach 2010; Maaz *et al.* 2010; Furuta 2011). However, in international comparison it has been shown that differences in educational opportunities are more closely associated with the national characteristics of education systems than with the SES of a student (Marks 2005).

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In the case of Japan, recent changes in the schooling system have contributed to the belief that education has become more unequal (Fujita 2010). Even though the competition for access to high school and university is believed to have decreased due to low birth rates (e.g. Nakamura 2003) and the *yutori kyōiku* (no-pressure education) reforms, which aimed at the relaxation of the highly competitive and rigid education system<sup>1</sup> (Goodman 2003), the proclaimed end to the so-called ‘examination hell’ (*juken* or *shiken jigoku*) is still far from happening (Okada 2012: 145). Due to a steadily increasing percentage of students aiming to enter university,<sup>2</sup> and the revision of the *yutori* education program following the publication of the 2003 Programme for International Student Assessment (PISA) results and the decline in academic achievement debates (*gakuryoku teika ronsō*) (Takayama 2008), competition for access to university and high school has not decreased substantially, it is only going in a new direction (Kariya 2013a). Hence, it is of central importance to understand the role educational decisions play for educational and thus social inequalities in modern Japan.

At the transition to high school and university, Japanese families are confronted with two major decisions regarding students’ future careers. In addition to deciding which school to attend, families must decide whether or not an investment in supplementary private lessons is needed to increase the chances of successfully entering a chosen school (Takeuchi 1997: 183–184). Hence, due to the high competition for access to highly ranked schools, students’ school life is often strongly affected by *gakkōgai kyōiku*—education outside of school (Konakayama and Matsui 2008), often referred to as ‘shadow education’ (e.g. Stevenson and Baker 1992; Bray 1999, 2010; Baker *et al.* 2001; Dierkes 2008, 2010). Shadow education is ‘a set of educational activities that occur outside formal schooling and are designed to enhance the student’s formal school career. [It is supposed to] improve student’s chances of successfully moving through the allocation process [while it is] firmly rooted within the private sector’ (Stevenson and Baker 1992: 1639–1642). Thus, shadow education requires students’ time and effort and parents’ money. And since no such investment is made accidentally, participation in shadow education has to be understood as the result of a willful decision made by individuals.<sup>3</sup> In Japan, there is a strong belief among researchers as well as the Japanese public that investment in shadow education leads to a higher education level, consequently fostering educational inequality (Seiyama 1981; Seiyama and Noguchi 1984; Konakayama and Matsui 2008). And, although social inequality is believed to be ‘taken for granted’ (Urabe, Ono and Acosta 2013: 153) in Japan today, there is an increased concern and awareness regarding social and educational inequalities in relation to students’ out-of-school educational activities that has led to an increase in research activity recently [e.g. Kataoka 2001; Hamajima and Takeuchi 2002; Kita 2006; Benesse Education Research and Development Center (BERD) 2007; Mimizuka 2007; Konakayama and Matsui 2008; Ministry of Education, Culture, Sports, Science and Technology (MEXT) 2008, 2014; Tomura, Nishimaru and Oda 2011; Tobishima 2012]. In contrast to school choice in the regular schooling system, which has remained very limited despite recent reforms, the shadow education sector ‘has offered a much more developed model of school choice to Japanese parents and students on a large scale at least

1. Besides a variety of reforms, the curriculum was reduced by 30% and new methods to enter university were introduced, such as evaluation of practical tests, extra-curricular activities (e.g. *bukatsudō* or club activities), interviews, essays and *suisen nyūgakko* (a recommendation letter of the school principal) (Aspinall 2005: 210–212).
2. Since the 1970s a high percentage of high school graduates have strived to enter university, and today this still applies to the majority of students. More than 56% of the 18-year old age cohort entered university or junior colleges in 2012 (MEXT 2014). The enrolment rate of students in all types of higher education institutions topped 76% in 2005 (MEXT 2007: 10). Hence, tertiary education attendance has almost become ‘universal’ (Amano and Poole 2005: 689–690).
3. In this article, participation in shadow education is thus understood as the consequence of a decision to invest. The terms ‘investment’, ‘decision’ and ‘choice’ are thus used as synonymous.

since the 1970s' (Dierkes 2008: 236). Any analysis focusing on the decision for shadow education in Japan thus promises valuable insights into the consequences of school choice for educational and thus social inequality.

Research drawing on rational choice theories usually shows that family background strongly influences the making of educational decisions in a student's educational life course. It is not clear how much influence students themselves have on educational decisions, in particular whether or not they decide to participate in shadow education. Consequently, Lauterbach (2013) recently appealed for the expansion of Boudon's classic decision theory about social reproduction by recognizing students as investing actors rather than simple consumers of education. A strong impact of students' aspirations on the final decisions implies the need for a revision of the fundamentals of decision theory. Students who play an active or dominant part in the decision-making process describe a different cause for educational decisions than originally assumed. In this article, I argue that educational decisions are the cumulative outcome of all involved actors' preferences as reflected in their educational aspirations for a student's pathway. Since the decision for shadow education is believed to remain primarily with the parents, who decide whether they send their children to a cram school based on aspirations and SES, analyses concerning the impact of students' own career ambitions which are not based on social origin alone but are influenced by contextual factors and students' own ideas promise valuable findings for our understanding about the formation of individual educational pathways.

Using data from the 2011 Hyōgo High School Students (HHSS) survey, this article provides new findings on the impact of students' educational aspirations on decision-making regarding shadow education. Based on Boudon's decision theory and considering Seiyama's shadow education investment theory, a two-fold decision model is constructed stressing the importance of acknowledging students as actors besides their parents and recognizing structural contextual factors which are believed to exert a strong influence on the final decision. After the theoretical framework and data are discussed, binary logistic regression analyses are carried out to show the impact of students' educational aspirations on the decision for shadow education as a possible counterweight to parents' aspirations and social origins.

## 2. Theoretical Framework: Shadow Education and Decision-Making in Japan

### 2.1. The Role of Shadow Education in Japan

Japan has a single-track comprehensive school system inspired by the US' model. Japanese students attend primary school (*shōgakkō*) for six years before attending middle school (*chūgakkō*). After three years at middle school, almost all students (about 98%) go on to high school (*kōtōgakkō*) for another three years, although high school is not compulsory (Konakayama and Matsui 2008: 13). By attending high school, regardless of its classification as vocational (*senmongakka*) or academic (*futsūka*), every student has the opportunity to access higher education. However, the Japanese school system is highly stratified, especially at the high school level. Schools are ranked predominantly by the prestige they gain according to the percentage of their students that enter highly ranked universities by passing the difficult entrance examinations (*nyūgakushiken*) (Stevenson and Baker 1992: 1641; Ojima and von Below 2010: 277). Although the university entrance examination system has been criticized for decades because of the extraordinarily intense competition it produces, none of the reforms initiated in higher education show satisfying results yet (Kariya 2013a). Due to high schools' orientation toward university ranking, this competition has shifted to the high school entrance level as well, as

students also need to pass entrance exams to get into their chosen high school. Hence, general high academic standing in school and intense preparation before the transition to high school and university are essential for gaining entry into prestigious schools.

Consequently, in addition to enrolment in the regular schooling system, Japanese students of all ages are extensively involved in out-of-school educational activities. This fact has led Yuki, Sato and Hashisaka (1987) to characterize the Japanese education system as two-fold, possessing a dualistic structure (*kyōiku no nijūkōzō*) consisting of regular school and private supplementary schools, the *juku*. *Juku* are generally divided into two types: academic *juku* (*gakushūjuku*) and non-academic *juku*. Academic *juku* offer basic academic support (*dorirujuku*), private one-on-one tutoring (*kobetsujuku*), remedial classes (*hoshūjuku* and *kyōsaijuku*), enrichment lessons or the preparation for tests and (entrance-) exams (*shingakujuku* and *yobikō*<sup>4</sup>). The variety of support ranges from simple help with homework to courses that let students expand their knowledge beyond their peers' education level (Komiya 1993: 82–87; Roesgaard 2006: 29–42; Dierkes 2010: 26–27). Non-academic *juku* are related to school subjects in the arts, sports or other non-academic fields (*naraigoto*). In this paper only academic *juku* are considered.

Attending classes at *juku* has become very popular among students ever since the great *juku*-boom in the 1970s (Rohlen 1980). Because the Japanese government failed to aptly respond to the extraordinary increase of educational aspirations in the process of educational expansion, private operators offered educational support (Haasch 1979: 43–46). As a result, the supplementary education industry has expanded continuously. According to a recent estimation by the Yano Research Institute, the entire Japanese supplementary education industry generated approximately ¥2.46 trillion<sup>5</sup> (approximately US\$25 billion) in 2012. Even though the overall yearly income of this industry decreased slightly in the 2000s, a further increase can be seen since 2008. The biggest share of this market, approximately ¥938 billion, is held by the *juku*-industry (including *yobikō*), comprising almost 50,000 schools (BERD 2007: 2), and it shows a constant yearly market growth of 1.5% (Yano 2013). Hence, the *juku*-industry is an influential economic and educational factor in Japanese society.<sup>6</sup>

Besides *juku*-classes, lessons given by private home tutors (*katei kyōshi*) are possibly the most traditional type of shadow education. Private tutors generally teach on a one-on-one basis at their students' homes. In addition, correspondence courses (*tsūshin tensaku*) have been frequently used in Japan since the 1990s. These self-study courses are provided by large-scale *juku* and *yobikō*, which either send students study materials and exam sheets or provide online tutorials in exchange for fees. By sending their exam sheets back to the providers (via post or email), students' learning progress is constantly evaluated.

According to MEXT data, participation in one of the three described shadow education types varies according to whether students attend public or private schools. Whereas private primary and middle schools are unusual (only 1% and 7% of schools, respectively), more than 30% of all high schools and most institutions in higher education are private (tertiary sector A: 92.7%; sector B: 75.4%) [Organisation for Economic Co-operation and Development (OECD) 2010: 306–307]. Concerning public schools, in 2012, 41.9% of primary school students, 70.2% of middle school students, and 33.8% of high school students were enrolled at *juku*. These rates are generally higher for

4. *Yobikō* are preparatory schools for high school students and graduates preparing for university or college entrance exams (Stevenson and Baker 1992; Ono 2005).

5. ¥100 equals approximately US\$1 (US\$0.98).

6. Nevertheless, the *juku*-industry was ignored by the government until the introduction of the five-day school week in 2002, when the Ministry of Education invited some 200 *juku* representatives to discuss the possible educational opportunities that might be provided by *juku* (Dawson 2010: 18).

private school students, except for those in middle school (primary school: 71.1%; middle school: 52.8%; high school: 37.3%). In the case of correspondence courses and private tutors, the combined participation rates are generally lower and do not show very big differences for public (primary school: 36.8%; middle school: 35.6%; high school: 17.1%) and private school students (primary school: 38.5%; middle school: 30%; high school: 17.9%) (MEXT 2014). Private tutoring received at home is the least frequently used shadow education type in Japan (up to 7% in ninth grade). This might be due to the high costs associated with this particular type of shadow education. However, the average monthly expenses for private tutors are not much higher than those for *juku* classes and range from approximately ¥12,000 to ¥13,000 in the first three years of primary school to ¥26,000 in middle school. In contrast, expenses for correspondence courses are comparatively low (average ¥3,800 per month in early grades to ¥8,000 in middle school) (MEXT 2008: 6–7). Hence, correspondence courses seem to provide a comparably cheap alternative to *juku* and private tutors. In high school, the average expenses for private tutors and correspondence courses stay at the same level, whereas those for *juku* (and *yobikō*) seem to increase. Parents of private high school students, in particular, reported much higher costs (MEXT 2014), a fact supported by my fieldwork.<sup>7</sup>

Partly due to the high costs and the assumed positive effects of shadow education on students' academic achievement, the belief that an investment in shadow education inevitably increases educational and thus social inequality remains the prevalent opinion among the public and in academic research (Konakayama and Matsui 2008). To find a theoretical frame to empirically analyze this thesis and possibly disprove it, Seiyama (1981) introduced the 'shadow education investment theory'. According to this theory, parents with a higher SES are especially likely to use shadow education to increase their children's academic achievement and thus their education level, implying a causal connection between SES, amount of investment in shadow education, and students' academic achievement (Seiyama 1981: 173–178). Recent research has confirmed the strong influence of parents' SES on investment in shadow education<sup>8</sup> (e.g. Kataoka 2001; Konakayama and Matsui 2008; Tomura, Nishimaru and Oda 2011) and found generally positive effects of shadow education on academic achievement (e.g. Seiyama and Noguchi 1984; Kataoka 2001; Kita 2006; Mimizuka 2007; Konakayama and Matsui 2008; Yamamoto and Brinton 2010; Entrich 2014), and has thus strengthened the belief that shadow education contributes to social reproduction. However, variations in the choice to invest in shadow education have been found according to gender (e.g. Seiyama and Noguchi 1984), number of siblings (e.g. Tomura, Nishimaru and Oda 2011), grade and school type (e.g. Kataoka 2001; Konakayama and Matsui 2008; Tomura, Nishimaru and Oda 2011), ranking of high schools (e.g. Tomura, Nishimaru and Oda 2011; Kariya 2013b), students' academic standing in school (e.g. Seiyama and Noguchi 1984; Stevenson and Baker 1992), whether students have already invested a lot of time for extra-curricular lessons at an early age (Tobishima 2012), and, following Bourdieu's (1983) cultural capital theories, cultural background (e.g. Konakayama and Matsui 2008). In addition, previous research has shown that the location of a school affects whether students

7. From October 2012 to September 2013 I visited *juku* and interviewed the heads of *juku* of different sizes and organizations. During this period, I also collected questionnaires from 500 middle and high school students as well as 100 *juku* teachers at *juku* located in the Kansai area (Kyoto and Osaka), Shiga Prefecture (Kusatsu), Tokyo (Setagaya) and Fukushima Prefecture (Iwaki), inquiring about students' motivations to attend *juku*. In addition, I had personal conversations with students, parents and *juku* operators, as well as researchers in this field, in order to get a greater understanding about the functions and implications of the Japanese *juku*-industry and its connection to formal education.
8. Seiyama and Noguchi (1984) found differences between male and female middle school students in how the SES of parents affected shadow education investment in a *juku*. A positive correlation between SES and *juku* attendance in eighth grade was found for male students but not for female students, whose family background did not affect whether or not they participated in *juku* classes.

have the opportunity to participate in shadow education (Stevenson and Baker 1992). The effects of students' aspirations, as opposed to parental aspirations, on the decision of whether to invest in shadow education, remain unclear. However, to analyze the impact of students' own career ambitions on the decision for shadow education in Japan, the context in which this decision is formed has to be recognized.

## 2.2. Educational Decision-Making in Japan

Taking into account the classic work of Boudon (1974), individuals' educational decisions made within the context of a certain education system cause educational inequality (Maaz *et al.* 2010: 301). Primary as well as secondary effects of social origin can be identified as factors influencing the educational pathway of students. As an example of a primary effect, students from disadvantaged family backgrounds show less academic achievement than students from advantaged backgrounds. As an example of a secondary effect, different social classes have different educational aspirations, which results in different cost-benefit considerations and thus, educational decisions vary according to social origin (Becker and Lauterbach 2010: 15–18; Maaz *et al.* 2010: 301–304). However, decisions for children's educational pathways always highly depend on the structure of a country's education system and its institutional framework. Primary effects become more powerful for social reproduction if the performance-related selection of an education system is very rigid. An education system with a high level of stratification and segmentation of its educational courses, a high number of educational obstacles, and educational opportunities at transition points places more weight on educational aspirations (secondary effect) (Becker and Lauterbach 2010: 17). Even though Japan's education system is of a single track structure, high schools and universities are highly stratified (Ojima and von Below 2010: 277). Consequently, educational decisions in the Japanese context highly depend on educational aspirations (*shinro kibō*). Against the background of Japan's long economic recession and the emerging *kakusa shakai* (unequal society), certainties have been eroded (Fujita 2010: 32, 42), which has fostered insecurity about educational opportunities, leading to an even greater weight on individual decision-makers and their efforts to avert risk in accordance with insecurity theory (Hillmert 2005). Hence, from a rational choice perspective, the decision for the next school level and the decision for or against an investment in shadow education are closely knit. Both decisions depend on students' academic achievement levels and educational aspirations. To enter a highly ranked university, students need to gain acceptance to prestigious middle and—more importantly—high schools. To enter these schools successfully, shadow education is often seen as an indispensable investment to help pass the difficult entrance examinations or achieve a high academic standing in school and get an entrance recommendation. I was able to confirm these connections during my fieldwork.

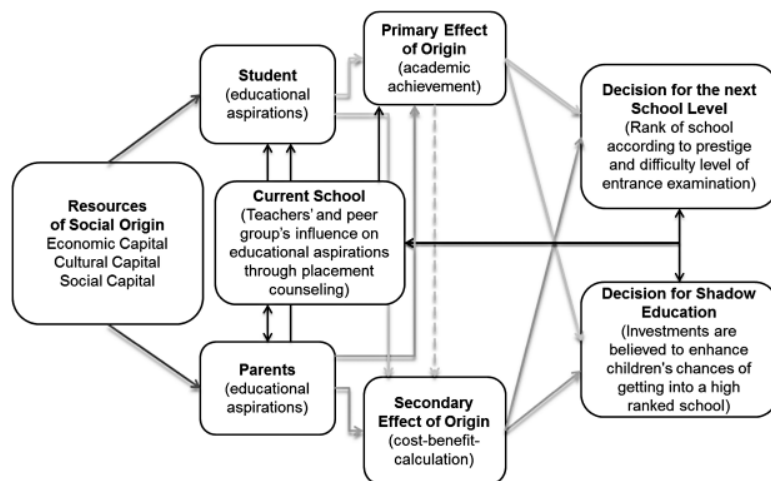
However, rational choice approaches usually include social origin variables without measuring the impact of educational aspirations separately. Any analysis concerned with educational decisions should separately measure the share of aspirations' effects on the final decision to show how important the secondary effect of origin proves in a certain context. Additionally, factors determining educational decisions that lie outside of the individual's agency need to be taken into consideration to show what remains of the effects of social origin and educational aspirations in particular on the decision (primary effect).

One issue that was recently considered by Lauterbach (2013) concerns the influence of students on decision-making, since research usually refers only to the parents as responsible decision-makers. We have to consider the possibility that students also calculate the possible outcomes and the costs

of their investment (time and effort), or simply develop divergent aspirations from their parents. Hence, a strong impact of students' own views on their future pathways could result in an alteration of the original secondary effect of social origin. By taking the initiative, students might simply follow another educational pathway than their parents had in mind and achieve a different social status than projected based on classic decision theory. Hence, following the argument put forth by Lauterbach, I expand Boudon's decision theory model by recognizing that students are in a position to make individual decisions regarding their future careers, especially older students (Figure 1).

The decision model presented here is two-fold, concentrating on the two main decisions in the context of schooling in Japan: school and shadow education. Both decisions are primarily made within families, by two groups of actors: parents and students. The formation of students' educational aspirations is strongly affected by their social, economic and cultural background and their parents' educational aspirations for them. In particular mothers' aspirations were found to show very strong effects on primary and middle school students' aspirations in regard to school choice (Hamajima and Takeuchi 2002: 5). However, there are several other factors we need to consider as influential for both parties' aspirations. Mimizuka (2009) showed that high school students' educational aspirations are more strongly affected by the rank of school attended, academic achievement and gender than by their parents' SES. Additionally, the shadow education sector affects students' career ambitions and thus possible differences in students' views on upcoming decisions regarding school choice or further shadow education investments. Thus, in my analysis I control for these factors in order to reveal whether students' aspirations affect the decision for shadow education. In the following, I will outline the possible influence of parents, student, school and *juku* on the final decision concerning shadow education.

In Japanese schools *shinro shidō*, or placement counseling, is practiced to 'construct' students' aspirations (LeTendre 1996). At the transition from middle to high school and high school to university, teachers strive to place all students in a suitable school. To achieve this goal, in addition to academic preparation, teachers provide their students with information about their future options and try to increase their students' motivation to perform well at high school and university entrance examinations. If a student fails to enter a chosen school, not only is the student blamed, but the student's family will often blame the school and its teachers as well. Hence, teachers try to point students into a direction that reflects the families' expectations



**Figure 1.** Expansion of Decision Theory Model Following Boudon (1974): A Two-Fold Multiple Actor Decision Model (Japanese Context).

and aspirations (*ibid.*: 198–199). Since many entrance exams are held on the same days, students' choices are severely constrained. Students who cannot enter their first choice school will either have to wait until the next year or apply to a lower ranked institution. Nowadays about 30% (up to 60% at top universities) of all high school graduates do not manage to get into their first choice university on the first try and become *rōnin* (students without a school affiliation) for a year (Ono 2005: 1). However, middle school graduates cannot afford to not enter a high school immediately. Therefore, an internal selection process takes place at Japanese schools: first, 'unsafe' choices are sorted out on the basis of students' academic achievement; second, recommendations for admission (*suisen nyūgakko*) as an alternative to entrance examinations are granted to students (LeTendre 1996: 198–200). Since students can apply to several high schools and universities, they are generally advised to apply to one highly ranked and one less prestigious high school, following the *suberidome* (insurance) principle (Watanabe 2013: 41). According to a recent study, sometimes teachers also advise parents to send their children to *juku* in order to assure entrance into the school or university they desire (Cook 2012). Besides their teachers, students' peers function as a possible influence on the decision for shadow education as well. In a 2007 MEXT survey, almost half of all students (6th grade: 48.2%; 9th grade: 49.1%) responded that they attend a *juku* to meet friends from school (MEXT 2008: 34). According to my own research, students often join classmates who already attend a *juku*. Many *juku* operators thus need no advertisement but manage to get enough students through word of mouth.

Parents also try to directly influence the aspirations of their children at home and through their correspondence with school teachers. They tend to follow teachers' advice if they are uncertain about the decision for a certain school (LeTendre 1996: 204). However, parents' willingness to invest large amounts of money for supplementary education primarily arises from their insecurity about what would happen if their children did not participate in such lessons. In the Japanese *gakureki shakai* (credentialist society), educational credentials are all that counts (Kikkawa 2006). In recent years, the PISA shock and the decline in academic achievement debates (Takayama 2008) have further contributed to parents' insecurity concerning their children's future (Bjork and Tsuneyoshi 2005: 623). Consequently, supplementary education is still considered a very effective security strategy.

The shadow education industry promises to get students into prestigious schools and into desired jobs by 'guaranteeing success'. To support students in their attempts to enter schools by entrance exam, the industry carries out mock exams (*mogi shiken*)<sup>9</sup> showing students what schools they have a high pass probability when taking the entrance exam (Watanabe 2013: 51–65). In addition to its original functions, the *juku* is a place where general information concerning school choice and entrance examinations is gathered. According to MEXT, one of parents' main reasons (34%) to send their children to *juku* is to obtain information about which high school they should pick, as well as information on the upcoming entrance examinations (MEXT 2008: 44).

In addition, students in Japan are generally made to believe that there is a causal relationship between effort and academic achievement (Takeuchi 1997: 189–191). My own fieldwork confirmed the ongoing essential role of this *ganbari*-ism (effort-ism) as a mechanism underlying educational decision-making. Parents, schools and *juku* teachers believe that only a massive investment of time, effort and money leads to success in entering highly ranked schools. Since people in Japan generally believe that every student has the same cognitive potential, those who do not succeed in the 'entrance examination war' (*juken sensō*) (Rohlen 1980: 220) have simply not put enough effort into it. Consequently, the decision for shadow education is a strategy to achieve a high education level.

According to a survey conducted by LeTendre (1996), approximately 95% of Japanese students believe that they alone are responsible for school choice—more than 60% wanted to attend a chosen

9. My own fieldwork revealed that mock exams remain highly important for high school and university entrance despite being banned from schools. In fact, this ban shifted even more importance to the shadow education sector.



school even if their parents or teachers were against it. It is reasonable to assume that this determination might also affect the families' decision for shadow education. Although parents' cost-benefit calculations regarding the decision for shadow education highly depend on their financial resources and aspirations, students might be less influenced by their parents' SES than predicted by classic decision theory or shadow education investment theory.

### 2.3. Research Hypothesis

The aim of this work is to clarify students' possible role in educational decision-making and thus the possible divergent effects of decisions leading to social inequality, concentrating on the choice for shadow education in Japan. As discussed above, educational decisions in the Japanese context are believed to depend on social origin, parents' educational aspirations, students' academic achievement and the attended school as roughly reflected in the rank of the school. Additionally, the shadow education sector itself plays a major role in this decision-making by providing parents and students with information on school transition and students' actual chances of entering a certain school based on mock exam outcomes. However, whether students' aspirations actually differ from parents' expectations, and thus divergent decisions are favored by the two groups, is unclear. As [Lauterbach \(2013\)](#) indicates, students have their own ideas about their future careers, which become stronger as they get older. It is possible that students do not follow their parents in their preferences and in the end decisions are made that reflect students' aspirations more than parents' aspirations. Whereas parents primarily consider the costs associated with shadow education and its assumed effects, students are in a better position to assess whether an investment is really necessary and what type of shadow education is most promising due to correspondence with their teachers and peers as well as their former experiences with shadow education. Hence, students might decide for or against an investment in shadow education even against their parents' wishes or prefer a different type of shadow education. If this is the case, existing decision theories need to be re-evaluated by focusing on both parties: parents and students. In conclusion, my research hypotheses read as follows:

- [H1] Educational decisions are the cumulative outcome of all involved actors' preferences as reflected in their educational aspirations. The impact of parents' aspirations on the decision for shadow education weakens with higher age of their child and students' aspirations become critical for the decision.
- [H2] High school students in particular have a greater say in the decision concerning shadow education, as well as what kind of shadow education is chosen. Hence, an alteration of social origin determination becomes possible, thus counteracting social reproduction.

In the following, the above stated hypotheses will be tested by analyzing the different effects of social origin and parents' aspirations in comparison to students' aspirations on the decision for shadow education while also controlling for contextual variables.

## 3. The Impact of Students' and Parents' Educational Aspirations on the Decision for Shadow Education in Japan

To obtain sound conclusions, I carried out the following analyses using data from the third HHSS survey (*Kōkōsei no shinro to seikatsu ni kansuru chōsa* = 'A survey concerning the pathway and life of high school students'), conducted in 2011. Following an introduction to the HHSS dataset, I introduce the dependent variables concerning shadow education participation before giving a closer look to students' and parents' educational aspirations, social origins and further contextual covariates.

Finally, I analyze the decision for shadow education using binary logistic regression. Whereas my first analysis investigates the changing influence of social origin and parents' and students' educational aspirations on the decision for shadow education from primary to high school, my second analysis concentrates on the decision for different types of shadow education during high school by also controlling for contextual variables.

### 3.1. Data and Methods

The HHSS survey is a cooperative research project of several universities across Japan and was conducted under the guidance of professors Fumiaki Ojima (Dōshisha University) and Sōhei Aramaki (Kyūshū University).<sup>10</sup> This survey provides a great amount of valuable data regarding the school life of high school students, their social backgrounds, and their expectations about life after school. Of particular interest for this study are students' career aspirations and their experiences with shadow education, which have also been surveyed in detail. In addition, the participating 12th grade students gave details about their involvement in shadow education during primary, middle and high school, as well as whether or not they had already decided on a certain future path before high school. The 2011 survey was conducted with a sample size of 3,826 12th grade students in total, spread across 17 high schools in Hyōgo Prefecture (Kansai area), west central Japan. Differently ranked high schools were chosen to reflect the current school life situation of high school students throughout the prefecture and to show diversity not just between students but between schools as well.

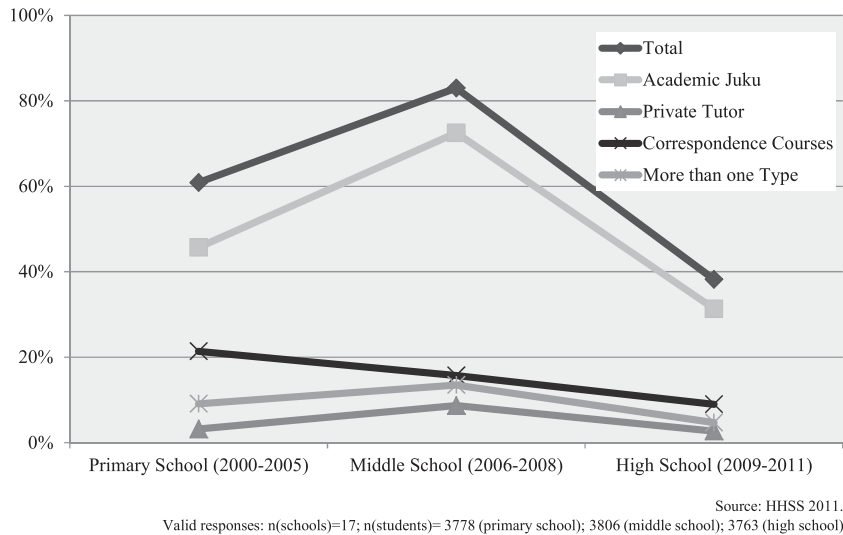
#### 3.1.1. Shadow Education Participation

Based on the discussion by [Stevenson and Baker \(1992\)](#), [Bray \(1999, 2010\)](#) defined shadow education as: (1) academic in nature, clearly excluding all non-academic forms of out-of-school education, like arts or sports lessons (*naraigoto*); (2) supplementary, meaning it does not cover classes outside the school curriculum; and (3) private, because it is commercial in nature and always fee-based ([Bray 2010](#): 4). The HHSS 2011 data fits the purpose of this analysis.

Students' actual participation in shadow education is used as a proxy for the families' decision to invest in shadow education. The following three major types of shadow education are included as dummy variables (1 = *yes*; 0 = *no*): *gakushūjuku* (academic *juku*, including *yobikō*), *katei kyōshi* (private home tutors) and *tsūshin tensaku* (correspondence courses). As illustrated in [Figure 2](#), a high percentage of the participating 12th graders received shadow education lessons from 2000 to 2005, when they were in primary school (61%), and from 2006 to 2008, when they attended middle school (83%), but to a lesser extent from 2009 to 2011, in high school (38%). While correspondence courses were used more often in earlier grades (21%), the investment ratios for private tutors (9%) and academic *juku* (73%) were highest in middle school, where the peak of out-of-school lesson attendance is reached.

However, since multiple responses were possible, we also find students who participated in more than one type of shadow education concurrently during their school life, but this only applies for students who aimed for university. In total, 9.1% of all students participated in more than one type of shadow education during primary school, 13.5% during middle school and 4.7% in high school. Most multiple users supplemented attendance at a *juku* with correspondence courses (7.8% in primary, 9.1% in middle, and 4.1% in high school). In contrast, students who participated in all three

10. Thanks to Professor Ojima I was directly included in the data evaluation process in 2012 and 2013. For further information about this survey see [Ojima and Aramaki \(2013\)](#).



**Figure 2.** HHSS 2011 ‘High School Students’ Experiences with Different Types of Shadow Education During Primary, Middle and High School’ (Multiple References Possible; in %).

types of shadow education at the same time are almost non-existent (<1%). Since this analysis focuses on the decision for an investment in shadow education per se, the actual intensity of participation is not included. The question is: what determines a family’s decision to invest in supplementary lessons in general? It goes without question that if one student attends *juku* classes once a week and another attends classes three times a week, different levels of support are received and the latter student might have an advantage. Also, different cost-benefit calculations apply for these cases. Hence, families with less financial resources might choose a different type of shadow education, which best fits their financial background and students’ supposed educational needs.

### 3.1.2. Educational Aspirations

In this analysis, educational aspirations (*shinro kibō*) are defined as future pathway goals parents have for their children, or students’ own career ambitions, respectively. To measure the educational aspirations, students were asked about their post-high school graduation plans. Students could choose between: (1) start working (including working at home) immediately after graduation; (2) four-year university; (3) junior college; (4) technical college; (5) some other institution; or (6) undecided. Using the same scale, students were asked whether they know about their parents’ aspirations for them. If students were not sure or did not know their parents’ aspirations, their answers were included in the ‘undecided’ category. Table 1 shows the final aspirations of parents and students, categorized on a five-degree scale from highest to lowest educational aspiration, excluding aspirations for other institutions (5).

Since all participating students were in 12th grade, the percentage of students still undecided regarding their future career was marginal (2.6%). The majority of all parents and students aim for university entrance (>50%). However, there is also a considerable percentage of students who did not know or were not sure about their parents’ expectations. In particular, the father’s wish for his child’s future career is often unknown by the child (23.9%). This suggests that parents’ influence on students’ aspirations for life after school was not very strong in these cases, and thus students themselves might have greater say in decision-making.

We assume that parents' aspirations were already present when their children attended primary school (2000–2005), and have remained relatively stable. I thus use the reported final aspirations throughout my analyses. In contrast, students' aspirations are formed over the courses of their school lives. Most students are unsure of their future career until they reach high school (Table 2). Still, we find considerable proportions of students who knew where they wanted to go after graduating from high school at the early stages of their educational lives, ranging from approximately 11% in primary school to 35% in middle school.

In addition to general aspirations, we have data on students' concrete goals concerning their entrance to university. Almost 60% of students have university aspirations, and the majority aims at first class universities (35%). However, only a few students think they can enter top universities without taking the entrance examination (8.5%). Careful preparation is thus essential, and an investment in shadow education promises a higher pass probability in these exams.

**Table 1.** Educational Aspirations of Parents and Students in High School (in %).

	University	Junior College	Technical College	No Decision Yet	Job	Valid Responses
Father	51.1	3.6	7.1	23.9	14.3	3,209
Mother	55.2	4.3	10.0	13.2	17.2	3,396
Student	57.7	4.9	15.6	2.6	19.1	3,510

Source: HHSS (2011).

**Table 2.** Educational Aspirations of Students and Planned University Entrance Method (in %).

	Primary School (2000–2005)	Middle School (2006–2009)	High School (2009–2011)	Planned Entrance Method	
				Exam	Other <sup>a</sup>
University	8.5	24.0	59.3	40.4	19.0
Definitely top university	—	—	13.8	11.7	2.2
If possible top university	—	—	21.3	15.0	6.3
Average university is enough	—	—	24.1	13.7	10.5
College <sup>b</sup>	1.0	4.3	17.8	5.3	14.6
Job	1.4	6.3	19.7	—	—
No decision yet	89.1	65.4	0.9	—	—
Valid responses	3,365	3,365	3,388	3,358	

<sup>a</sup>This category includes admission by recommendation, admission office or other possibilities.

<sup>b</sup>This category consists of junior and technical college.

Source: HHSS (2011).

To understand whether students' influence on the decision for shadow education gains import as they get older, a cross-temporal comparison of the effects of students' and parents' educational aspirations on investment in shadow education will be carried out in the Results section.

### 3.1.3. Social Origin

To reflect students' economic, social, and cultural status (ESCS), we created a variable including parents' occupation<sup>11</sup> and highest educational degree,<sup>12</sup> as well as household possessions<sup>13</sup> and number of books<sup>14</sup> as the cultural component. To reflect households' varying sizes and distribution of income, the number of siblings<sup>15</sup> is included as another social origin category. Previous research indicates that students without siblings are more likely to attend out-of-school classes since their parents can concentrate their resources on only one child (e.g. Tomura, Nishimaru and Oda 2011). Since Japanese parents traditionally have different ideas about the future of boys and girls and generally tend to invest more in the education of boys (Lee 2010: 1582), a dummy variable concerning gender (1 = *male*, 2 = *female*) is also included.

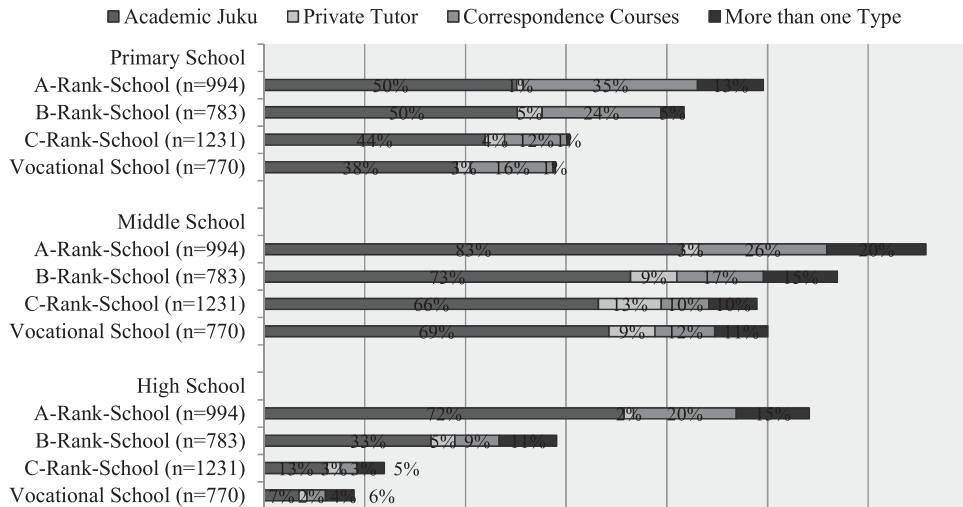
### 3.1.4. Control Variables

Regarding students' school background, institutional and structural contexts (such as placement counseling) as reflected in the stratification of high schools shall be controlled for. Following Shirakawa (2013), academic high schools were categorized based on the expected advancement ratio of students to higher education, students' socioeconomic background, and students' academic standing in middle school. Hence, the 14 academic high schools of this study were classified into three different ranks: A-, B-, and C-rank high schools. As a reference category, the presumedly less prestigious vocational schools were chosen.

Taking into account this high school stratification, we are able to differentiate students' participation ratios in shadow education. Figure 3 shows the percentage of students who participated in shadow education at the time they were in primary, middle and high school according to the rank of high school they finally attended.

In middle schools most parents seem to somehow manage the high costs for the participation in shadow education, as it appears to have become an accepted part of children's school life. In high school, however, a high diversity can be found. Clearly students that attend A-rank high schools have more experience with shadow education in general and continue to invest far more in shadow education after middle school (80.4%) than students in C-rank (17.9%) or vocational high schools (11.6%), where the majority quits their investment. This indicates that the additional financial, time and effort

11. Parents' occupational status is encoded as: (1) leading positions in companies with at least five employees; (2) regular full-time employees (such as *sarariman*); (3) part-time employees; (4) self-employed with less than four employees; (5) helping out in the family business; (6) other; (7) unemployed men or full-time housewives.
12. Parents' education is encoded as: (1) university degree or higher; (2) junior college; (3) technical college; (4) high school diploma; (5) middle school diploma.
13. The home possessions variable is a score variable consisting of the following 11 variables asking about students' and their households' possessions: Q20-1: own room (including a room shared with siblings); Q20-2: own passport; Q20-3: blu-ray/DVD recorder; Q20-4: digital camera; Q20-5: LCD/Plasma television; Q20-6: air cleaning machine; Q20-7: own computer; Q20-8: own mobile telephone; Q20-9: dishwasher; Q20-10: piano; Q20-11: water filter machine.
14. The definition of books in this survey excludes comicbooks, magazines, school textbooks or reference books.
15. This variable is recoded into a variable with three values: 1 = no siblings; 2 = one sibling, 3 = two or more siblings. These categories seem adequate, since only 7.5% of the students had more than two siblings in 2011.



Source: HHSS 2011.

Valid responses: n(schools)=17, n(students)=3778 (primary school), 3806 (middle school), 3763 (high school).

**Figure 3.** HHSS 2011 ‘High School Students’ Experiences with Different Types of Shadow Education in Primary, Middle and High School, According to High School Ranking’ (Multiple Responses Possible, in %).

investments are no longer considered worthwhile for students in C-rank high schools or vocational schools, since career aspirations make such an investment unnecessary.

In addition to this ranking, we need to consider whether students attend private or public schools, since students’ participation ratios vary between those schools (MEXT 2014). Hence, a dummy variable for type of school (1 = *public*, 2 = *private*) is included. Furthermore, previous research has shown that the location of a school has effects on whether or not students participate in shadow education, because there might be less availability in rural areas (Stevenson and Baker 1992: 1647–1650). Based on our data, we classified three areas: Metropolitan (high density areas with more than one million residents and more than 4,000 residents per square kilometer); urban (semi-dense areas with more than 100,000 but less than one million residents and more than 900 residents per square kilometer); and rural (less than 100,000 residents and less than 900 residents per square kilometer).

As stressed in decision theory, the academic achievement level of students is critical in making educational decisions. This includes the decision for shadow education, since students’ participation was found to vary according to academic standing (e.g. Seiyama and Noguchi 1984; Stevenson and Baker 1992), and thus academic achievement level needs to be included as an influential determinant in the decision for shadow education. Previous research has stressed that different types of shadow education are chosen according to academic standing and purpose of study (e.g. Komiyama 1993; Rohlen 1980; Roesgaard 2006). However, empirical evidence is scarce. In the following analysis, I will control for students’ academic standing in middle and high school,<sup>16</sup> in order to understand its influence on the choice of different types of shadow education.

16. Academic standing was coded on a five-degree scale ranging from 1 (*high academic standing*) to 5 (*low academic standing*).

### 3.2. Results

To ascertain the determinants for the decision to invest in shadow education, I conducted logistic regression analyses in the following manner: First, I analyzed what matters more from primary school to high school: social origin and parents' aspirations, or students' aspirations [H1]? Following this, I analyzed the determinants for shadow education participation in high school in more detail by adding the introduced contextual covariates and differentiating between the three different types of shadow education in Japan: private tutors, correspondence courses, and *juku*-lessons [H2]. However, as several colleagues have stressed (e.g. Mood 2010; Auspurg and Hinz 2011), logistic coefficients and the oft-displayed odds ratios are not suitable for comparison. Hence, I calculated the average marginal effects to solve the problem of comparing coefficients between groups.

#### 3.2.1. Decision for Shadow Education from Primary to High School

Table 3 shows a binary logistic regression predicting the influence of gender, family background and educational aspirations on students' participation in shadow education during primary, middle and high school. In Model 1, only the educational aspirations of parents were included to show the direct effects of social origin on decision-making as stressed by classic decision theory. In Model 2, students' aspirations were added.

According to Model 1, the impact of the ESCS of a student on his or her participation in *juku* lessons shows the strongest effect on the decision for shadow education, even though this influence varies in its intensity from primary to high school. ESCS thus explains from 38% (middle school) to 52% (high school) of the decision for shadow education. Additionally, students without siblings are up to 20% (primary school) more likely to receive supplementary lessons than students with two or more siblings. Gender also seems to play a role in decision-making. Although, traditionally, parents tended to invest more in education for boys than girls (Lee 2010: 1582), this seems not to be the case anymore. In our sample, boys are up to 11% (high school) less likely to receive supplementary lessons than girls. During middle school the difference is not as large, but it is still significant. It seems that it is no longer desirable for girls to either get married or join the workforce directly after graduation. Nowadays, first achieving a high education level and then deciding whether to pursue a career or a life as a housewife seems to be a more common security strategy.

Parents' aspirations for their children show very different effects between father and mother. Whereas the father's aspirations are not significant, mothers whose goal is to place their child in university have a strong positive influence on the decision for shadow education, which seems to be strongest in high school (21% higher likelihood). However, when we include students' own aspirations, we find considerable differences in the effects of mothers' aspirations. The small percentage of single-minded students who had already decided to attend university when they were in primary school increases one's likelihood to choose shadow education by 8% compared to their undecided peers. With higher age, the influence of students' own aspirations increases. Although no effect can be detected in middle school, where the majority of students are enrolled in shadow education apparently without having any real choice; in high school, the impact of students' aspirations becomes stronger than that of their mothers' aspirations if they have decided for university (mother: 8% increased likelihood; student: 26% increased likelihood). Further, parents' aspirations have a stronger affect on whether their child receives shadow education if they prefer that their child enters the labor market after graduation than parents who have not yet made a decision regarding their child's future. If a father has decided that his child should enter the job market, the students' likelihood of enrolling in shadow education during high school increases by 14%, but the mother's aspiration shows the

**Table 3.** Binary Logistic Regression Analysis Predicting Students' Participation in Shadow Education during Primary, Middle and High School (Average Marginal Effects).

		Primary School (2000–2005)		Middle School (2006–2008)		High School (2009–2011)		
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	
Social origin	Gender Male	-0.099***	-0.095***	-0.030*	-0.031*	-0.111***	-0.111***	
	ESCS	0.480***	0.461***	0.382***	0.381***	0.521***	0.487***	
	Siblings 0	0.202***	0.203***	0.065*	0.065*	0.155***	0.145***	
	1	0.045**	0.045*	0.046**	0.045**	0.062***	0.063**	
	Ref: 2 or more							
Educational aspirations	Father	University	0.009	0.004	-0.025	-0.027	0.046	0.024
		College <sup>a</sup>	-0.005	-0.001	0.060+	0.061*	-0.042	0.020
		Job	0.005	0.005	0.008	0.008	0.036	0.144*
		REF: no decision yet						
	Mother	University	0.143**	0.140**	0.106**	0.104**	0.211***	0.079+
		College <sup>a</sup>	0.084	0.091	0.040	0.046	-0.082+	-0.035
		Job	-0.042	-0.040	-0.017	-0.016	-0.201***	-0.187**
		REF: no decision yet						
	Student	University		0.082*		0.000		0.264***
		College <sup>a</sup>		-0.096		-0.057		0.007
		Job		0.030		-0.012		-0.059
		REF: no decision yet						
N (valid cases)		2,373		2,372		2,424		
Pseudo R <sup>2</sup> (McFadden)		0.062		0.064		0.185		
				0.054		0.200		

<sup>a</sup>This category consists of junior college and technical college aspirations.

\*\*\* $P < 0.001$ ; \*\* $P < 0.01$ ; \* $P < 0.05$ .

Source: HHSS (2011).

opposite effect: a decreased likelihood of 19%. Students thus seem to more strongly agree with their mother's aspirations, but oppose their father's wishes, if they themselves have decided on a different path. In addition, the generally strong effect of ESCS slightly decreases due to the consideration of students' aspirations, especially during high school.

To get more accurate results regarding the influence of educational aspirations as determinants of the decision for shadow education investments, the following section concentrates on the influence of social origin and educational aspirations on students' participation in different types of shadow education while also controlling for contextual covariates.

### 3.2.2. Decision for Different Shadow Education Types in High School

In Table 4 five models are presented, concentrating on high school only, and recoding the variables concerning educational aspirations. In high school the question is no longer whether parents and



**Table 4.** Binary Logistic Regression Analysis Predicting Students' Participation in Shadow Education during High School (Average Marginal Effects)

			Total	Academic <i>Juku</i>	Private Tutor	Corresp. Courses	
			Model 1	Model 2	Model 3	Model 4	Model 5
Social origin	Gender	Male	-0.102***	-0.043**	-0.021	0.004	-0.049***
	ESCS		0.364***	0.220**	0.345***	0.020	-0.015
	Siblings	0	0.135***	0.121***	0.075**	0.026	0.048*
		1	0.060**	0.027	0.029	-0.005	0.004
REF: 2 or more							
Schooling background	High school ranking	A-rank school		0.427***	0.378***	0.007	0.052*
		B-rank school		0.313***	0.292***	0.021	0.059*
		C-rank school		0.211***	0.186***	0.011	0.019
		REF: vocational school					
	Classification	Public school		0.253***	0.240***	0.004	0.082***
		REF: private school					
	School's location	Metropolitan area		0.109***	0.113***	0.004	0.001
		Urban area		-0.015	-0.006	-0.004	-0.057***
		REF: Rural area					
	Academic standing	Middle school		0.016*	0.013	-0.005	0.015*
High school			0.008	-0.006	-0.001	0.011*	
Shadow education experience	Primary school		0.111***	0.080***	0.011	0.078***	
	Middle school		0.205***	0.162***	0.038*	0.090**	
REF: no participation							
Educational aspirations	Father	University	-0.122*	-0.095*	-0.083	-0.001	-0.002
		College <sup>a</sup>	-0.088	-0.041	-0.048	-0.014	0.047
		no decision yet	-0.115*	-0.069	-0.095	0.005	0.029
		REF: Job					
	Mother	University	0.225***	0.149**	0.181***	0.009	0.008
		College <sup>a</sup>	0.123	0.079	0.101	0.010	0.020
		no decision yet	0.164**	0.136**	0.162**	0.005	0.042
		REF: Job					
	Student	University					
		Top Uni * entrance exam	0.534***	0.319***	0.228***	0.017	0.108***
		Average Uni * entrance exam	0.380***	0.213***	0.125*	0.011	0.141***
		Uni * other entrance method	0.112*	0.138**	0.069	0.018	0.054*
		College <sup>a</sup>	0.066	0.010	0.001	0.009	-0.010
		no decision yet	0.049	0.079	0.030	—	0.040
REF: Job							

Table 4. *Continued*

	Total		Academic <i>Juku</i>	Private Tutor	Corresp. Courses
<i>N</i> (valid cases)	2,350	2,324	2,324	2,307	2,324
Pseudo $R^2$ (McFadden)	0.274	0.419	0.395	0.079	0.219

<sup>a</sup>This category consists of junior college and technical college aspirations.

\*\*\* $P < 0.001$ ; \*\* $P < 0.01$ ; \* $P < 0.05$ .

Source: HHSS (2011).

students have made their decisions regarding students' future pathways, but how much these aspirations differ. Hence, students' and parents' aspirations for labor market entrance after graduation ('job') are used as a reference category in the following calculations. In addition, students' aspirations for university are further differentiated according to whether they intend to enter a top university or an average university, and through what entrance method they intend to enter.

Model 1 again shows similarly strong influences of social origin and educational aspirations. Students with the intention to enter a first class university by entrance exam are 53% (!) more likely to choose some kind of shadow education compared to peers with job aspirations. There are thus huge differences in the likelihood to take part in shadow education according to the rank of university a student intends to apply to, as well as the method of entrance he or she intends to use. If parents have high aspirations for their child (university), or are undecided about their child's future pathway, the child is either more (mother) or less likely (father) to receive supplementary lessons. This infers that fathers are either not as involved in the decision-making process for students' pathways or they do not see the necessity of attending additional lessons in the shadow education sector. Hence, the main decision-makers are students and their mothers. They both believe that an additional investment in shadow education might prove valuable if they have decided that the student should enter a university, especially if it is a first class university and they hope to enter via entrance examination.

By adding contextual variables in Model 2, this assumption is further supported. Contextual variables such as the diversity of high schools (ranking, classification and location) strongly affect the decision for shadow education. In addition, families in which the student has already participated in shadow education during primary or middle school are also more likely to choose shadow education in high school. Students' current (high school) or former (middle school) academic standing show comparably low or no effects. In contrast, the effects of social origin and educational aspirations decrease considerably and gender differences become less obvious (-6%). In particular, the ESCS' influence decreases heavily (-14%). The student and his or her mother thus see shadow education primarily as an investment in the child's future. Hence, students who intend to enter university by an alternative entrance method and not take the entrance exam do not see the need to receive supplementary lessons such as preparatory classes at *yobikō*, but choose to concentrate more on school instead. While additional lessons might help improve academic achievement, and thus help a student obtain a recommendation from their high school to a university, such an investment would be time-consuming, and it might seem more promising to increase the time-investment in school (e.g. club activities). In the end, female students aiming for a top university while attending a highly ranked public school in a metropolitan area and possessing a high ESCS but no siblings are most likely to enter the shadow education sector in high school, especially if they had previous experience with

shadow education. However, the decision is still strongly influenced by social origin, and thus we have to ask whether social inequalities are inevitably reproduced by these decisions.

Taking into account the diversity of the shadow education industry in Japan, the decision for shadow education differs considerably between the three main types as illustrated in Models 3–5. At first glance, the decision to attend a *juku* depends strongly on social origin, school background and educational aspirations, as it does for shadow education in general. However, a closer look reveals that gender differences are no longer found, and ESCS exerts a particularly high influence on the likelihood to choose *juku*, compared to other types of shadow education (+12.5%). Moreover, fathers' aspirations play no significant role for this decision, and while the influence of students' aspirations decreased, it remains one of the strongest predictors.

In contrast, the actual determinants for private tutoring at home are hard to detect (Model 4). This might be due to the relatively small number of students with very different backgrounds who actually use this kind of shadow education. Only shadow education experience during middle school significantly increases the likelihood of receiving lessons from a tutor.

For correspondence courses, no significant positive effects of students' ESCS can be detected (Model 5). If a decision for correspondence courses was made, school background generally played a less significant role compared to that when choosing a *juku*. However, two very clear differences are found: the possibility to choose correspondence courses is the same in rural and metropolitan areas, and students' with high academic standing in school show a higher likelihood to enroll in these courses. Due to the concept behind these courses, students have to learn autonomously, and students with low academic standing or learning deficits need to receive remedial tutoring, and might thus encounter difficulties with the self-study approach. Families of such students are thus more likely to choose *juku* with a focus on remedial teaching (*boshū* or *kyōsai*) or a private tutor. However, students' aspirations show the strongest influence on the decision for correspondence courses. When choosing this kind of shadow education it does not matter what parents actually wish for their child's pathway—students' aspirations decide. It is possible that students are free to choose these courses since they are easy accessible (mostly online), comparably cheap, and many students work part-time during high school,<sup>17</sup> so they might be able to pay the tuition themselves. Correspondence courses thus provide a real alternative for ambitious students.

#### 4. Discussion

I will now summarize the findings and implications of my analyses, with respect to my stated research theses. Concerning [H1]: even though social origin and mothers' aspirations strongly influence the decision for an investment in shadow education, students' own influence on the decision increases with age when they have made up their mind about their future path. Concerning [H2]: the decision for shadow education during high school depends more strongly on students' than parents' aspirations. When controlling for contextual variables such as school ranking and former experiences with shadow education, the effects of students' and parents' aspirations as well as social origin generally decreases, but they remain strong. However, the influence of social origin and educational aspiration varies according to type of shadow education: whereas an investment in *juku* depends highly on social origin, school background, and aspirations of parents and students, a decision to take correspondence courses is neither affected by social origin nor by parental aspirations, but mostly depends on students' own aspirations.

17. Of our sample (valid responses = 3,799), 22.9% responded that they work part-time (*arubaito*) outside of school.

In conclusion, we must acknowledge that the decisions for shadow education are made within family contexts, but without much influence of fathers. Mothers are simply much more involved in their children's school and out-of-school life. Hence, the future aspirations of mothers and students are very much in line with each other. However, although the mother's influence stays strong over time, the student gains more influence over the decision for shadow education as they grow older. In high school, the student might see the need to invest in shadow education to improve his or her chances to follow a desired pathway, even if the mother is not convinced. Students thus prove very resilient when they have decided to follow a certain path. In particular, if a mother has not made a clear decision for her child's future career or if the student is unaware of her choice, the student might use this freedom to increase his or her possibility of entering a highly ranked university by attending a *juku* during high school. The differences in the decision to seek a distinct type of shadow education reflect this freedom as well. Whereas enrolment in *juku* is still much more affected by social origin, the educational aspirations of parents, and school background, correspondence courses are easily accessible and affordable. Students thus do not depend as much on their parents' resources and approval to purchase these courses. In addition, students intending to enter a first class university via entrance exam proved to be most likely to attend shadow education. These students simply convinced their parents of the importance of participating in shadow education for their future career, and they may also make different decisions concerning shadow education investments.

This analysis also shows the importance of considering contextual background, such as school ranking, classification and location, and previous experience with shadow education, to loosen the impression that the decision to seek shadow education is a zero-sum game between parents and students. Only then, the actual impacts of social origin and educational aspirations become visible and allow us to verify whether this impact is significant against the structural background in which decisions are made. We found that highly ranked public high schools in metropolitan areas assemble a higher proportion of students who feel the need to invest in shadow education during high school. These schools push their students to enter highly ranked universities and thus ensure their own prestige stays high. The influence of students' social origin thus decreases when they are enrolled at such a highly ranked institution. However, if we believe that these schools determine where their students end up, students' own aspirations would not show the strong impact found in my analyses. Thus, even against the backgrounds of strong social origin and school influence, a clear and strong effect of students' own aspirations remains.

Two surprising results outside the main focus of this study have to be highlighted as well: (1) of the different types of shadow education, only the likelihood to take correspondence courses increases with high academic standing in school; and (2) girls are more likely to enter shadow education than boys. While I have attempted to give reasonable explanations for these findings, detailed analyses are necessary to explain these results satisfactorily.

In sum, an expansion of Boudon's classic decision theory has been proven to be necessary, and this should be acknowledged in future research. The same is true for future Japanese research on shadow education, which needs to also acknowledge the influence of students' own choices on the decision for shadow education. Shadow education does not automatically reproduce social inequality. On the one hand, there are different types of shadow education and not every type depends heavily on social origin, as we could see in the case of correspondence courses. In addition, future research should focus on the diversity of the *juku*-industry. As my research confirmed, different types of *juku* not only provide different learning opportunities, but often try to increase their number of students by also launching voucher-programs and creating individual curricula for those with less financial resources. Additionally, my analysis showed that students who intend to enter university via entrance

exams are much more likely to feel the need to receive supplementary lessons. A recent OECD report concluded that if more weight is placed on the recognition of recommendations and extracurricular activities instead of such exams, the dependence on *juku* would diminish (Jones 2011: 33–34). Based on the findings presented here, this seems reasonable. However, as Amano and Poole (2005: 694) argued, all reforms targeting entrance examinations might be useless in a society where the brand of a product is more important than its content. The ‘labelization’ (*gakkōreki*) of schooling institutions will not stop. On the other hand, students’ roles in decision-making could very possibly alter the potential impact of social origin; students could counteract social reproduction by getting involved themselves. According to a recent report by the OECD, one strong indicator of actual equal opportunities in education is the percentage of resilient students of a country (OECD 2011). By providing opportunities, shadow education might be one explanation for this resiliency of students.

The findings of this article provide a strong argument to not overlook students as actors who might choose divergent educational pathways, and thus impact educational decisions in several contexts. Whether similar findings are found in different national contexts, however, remains to be tested in future research through comparative case studies.

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