Hacettepe Üniversitesi Eğitim Fakültesi Dergisi (H. U. Journal of Education) 29(4), 93-114 [Ekim 2014]

The Sensitivity of Student Teachers' Higher Education Demand to Tuition and Support

Eğitim Fakültesi Öğrencilerinin Yükseköğretim Talebinin Öğrenim Ücreti ve Öğrenci Desteğine Duyarlılığı

Hüseyin ERGEN*

ABSTRACT: Cost of education is one of the factors determining higher education demand. In public universities no tuition policy means that tuition costs are subsidized by government budget. Equal or no tuition and equal support policy makes direct observations on sensitiveness of student teachers' demand to changes in tuition and support levels very difficult. In this study, subjective data were analyzed in order to understand how the cost factors were effective on student teachers' school choice behaviors. It is found that students' school choices were highly sensitive to changes in tuition and support levels, depending on their opinions. It is argued that no tuition and equal support policy does not ameliorate inequality in higher education demand, but may even worsens it. More equitable financing schemes in which more income sensitive supports, more income tax dependent public budgets for subsidy, and income contingent loan programs which favor lower income graduates for repayment are recommended.

Keywords: higher education demand, tuition, support, student teachers, financing of higher education.

ÖZ: Eğitimin maliyeti yükseköğretim talebini belirleyen faktörlerden biridir. Kamu üniversitelerinde öğrenim ücreti alınmaması, bu ücretlerin devlet tarafından sübvanse edildiği anlamına gelmektedir. Eşit ya da hiç öğrenim ücretinin yanında eşit öğrenci desteği politikası, eğitim fakültesi öğrencilerinin okul tercihlerinin öğrenim ücreti ve öğrenci desteğindeki değişikliklere ne kadar duyarlı olduğuna ilişkin doğrudan ölçümleri güçleştirmektedir. Bu çalışmada, maliyet faktörlerinin eğitim fakültesi öğrencilerinin okul tercihi davranışları üzerinde ne kadar etkili olduğunu anlamak için öznel veriler kullanılmıştır. Öğrenci görüşlerine dayalı olarak öğrencilerin okul tercihlerinin öğrenim ücreti ve öğrenci desteğindeki değişikliklere karşı oldukça duyarlı olduğu saptanmıştır. Öğrenim ücreti alınmaması ve eşit destek sağlanması politikasının yükseköğretim talebindeki eşitsizlikleri gidermediği, hatta kötüleştirebileceği iddia edilmektedir. Öğrenci desteğinin gelire daha duyarlı olduğu, sübvansiyonların daha fazla gelir vergisine dayanan bir bütçeden yapıldığı, geri ödemelerde düşük gelirli mezunları koruyan gelire dayalı borçlanma programlarını içeren daha eşitlikçi finansman sistemleri önerilmektedir.

Anahtar sözcükler: yükseköğretim talebi, öğrenim ücreti, öğrenci desteği, eğitim fakültesi öğrencileri, yükseköğretimin finansmanı.

1. INTRODUCTION

Individuals encounter certain risk and uncertainty carrying factors while they are making a decision on investing human capital through higher education. One of these factors is the size of higher education investment which is a big and indivisible one. Degree of risk averseness is assumed to increase with the size of investment, depending on future employment conditions and family income.

Price elasticity of the students' higher education demand from low income families is higher (Johns et al., 1986). For this reason, any decrease in higher education costs increases the engagement rates of them at an increasing rate. On the other hand, lowering the tuition fees brings about some financing problems from the supply side. One solution to this problem is to subsidize low income students to provide more equitable and more efficient participation rates to higher education, although this is a necessary but not a sufficient condition (Asplund et al., 2008). However, cost of different higher education programs are heterogeneous, which makes adoption of a certain government policy difficult (Dynarski, 2002). Optimum tax, fees and admission levels can be determined by means of a human capital modeling (Garratt and Marshall, 1995). A combination of different actions may be taken, but determination of the efficient type and level of

* Assist. Prof., Mersin University Faculty of Education, Mersin-Turkey, ergen@mersin.edu.tr.

government subsidy is still dependent on two other factors: accuracy of specification and the fairness of tax structure, both of which might be hampered by unrecorded economy.

There are significant differences across countries in relation to efforts given to promote financing schemes for higher education in such a way as to obtain funds dependent more and more private sources. More dramatic changes have occurred in Chile, Korea, the USA, Australia, Israel and New Zealand (Psacharopoulos, 2008). Not surprisingly, in more privately financed systems demand for education is determined by income related factors among others. Family background appears to be one of the most important factors which determine a child's probability of attending university (Asplund et al., 2008). In the USA, "students with low academic ability and from affluent families are often more likely to fulfill their college enrollment aspirations than those students who were high in achievement but poor." (Lillis, 2008). Ability of families to pay direct and indirect costs of higher education is the main question. This relationship further serves as a factor that maintains differences among income groups in the long run. Student choices are not merely dependent on cost of education on the other hand. They try to match their abilities with earnings expectations. Students with good expectations borrow more often (Oosterbeek and van den Broek, 2009). Direct effects of school quality and macroeconomic variables were found to be weak (Buss et al., 2004). Students' aspiration levels as reflected in social inequalities may also be influential on their choices (Page et al., 2007).

On the other hand, some countries have still adopted more publicly financed higher education systems. Most of the countries in continental Europe constitute main examples (Psacharopoulos, 2008). The effect of financial policies on demand in such countries is hard to specify. Effect of socioeconomic variables varies across countries (Asplund et al., 2008). Homogeneity of tuition fees complicates the school choice (Neil, 2009). In Turkey, tuition fees have not been collected in public universities since the beginning of 2012-13 school year. The amount of government grant and loans are equal for all undergraduate students. Loans are payable upon request, however grants are payable for limited students. This financing structure makes the analysis of effect of costs on demand difficult. Therefore, when asked to the students they do not report cost of education as a determining factor on their career choices. Rather, earning and employment expectations appear to be more influent factors (Ergen, 2013). Especially in contexts of economic crises employability of university graduates become a major factor for program choices of applicants both in developing and developed countries (Menon et al., 2012).

This article addresses the questions how cost of education and student support together influence higher education demand, particularly for student teachers' enrolled in faculties of education and whether cost effect changes among groups of students in a tuition free and equal grant and loan setting.

1.1. Cost of and Demand for Higher Education

Studies on the effect of cost of education on individuals' higher education decisions focus on effects of tuition and support, while most of the studies dealt with the effect of the former (McPherson and Schapiro, 1991; Hübner, 2012). Actually levels tuition and support may be interrelated (Koshal and Koshal, 2000). Economic rationale and empirical findings assert the idea that reduction in fees and increases in aids are correlated with higher education demand positively (Parker and Summers, 1993; Heckman et al., 1998b; Dynarski, 2002; Ichimura and Taber, 2002; Buss et al., 2004; Lillis, 2008; Hübner, 2012). Higher increases in demand means price elasticity of demand for education is elastic. The elasticity of demand for higher education becomes insignificant if the direct costs are low (Canton and de Jong, 2005). This is in accordance with the human capital model which sees higher education as an investment for increased future earnings.

Furthermore, income elasticity of demand for education is also quite elastic (Johns et al., 1986; Psacharopoulos and Papaconstantinou, 2005). In other words, demand responsiveness of

low income students to price cuts and grant increases is higher than that of middle income students which is higher than that of higher income students (McPherson and Schapiro, 1991). A subsidy may also increase elasticity of school choice for aid recipients relative to students who did not apply for or did not qualify for aid. (Parker and Summers, 1993).

Many higher education systems throughout Europe are faced with the problems of increasing capacity while improving efficiency and providing more equitable participation rates among income groups (Bevc and Uršič, 2008). Equality and efficiency are often considered as contradicting qualities. Efficiency may be indicated by the size of social returns to higher education; and equality is understood by means of the difference between social and private returns (Psacharopoulos, 2008). According to this definition, free tuition policy provides neither efficiency nor equity; free tuition subsidies the rich.

The inequality among income groups is not only an equality of access but also an equality of choice (Sazama, 1994). Financial aid appears to be one of three main determinants of college attendance of low income students, along with family income and, future earnings (Keane, 2002). The level of subsidy may depend on need, merit or some officially pre-determined packages (Singell Jr., 2002). It is shown that low income students benefit from need based grants in public flagship universities (Waddell and Singell Jr., 2011). Empirical evidence on the favorableness of merit based over need based aids is controversial (Monks, 2009).

Considering two types of students, low and high income, two demand curves showing different levels of price elasticity of higher education demand are depicted in Figure 1 (Belfield, 2000):

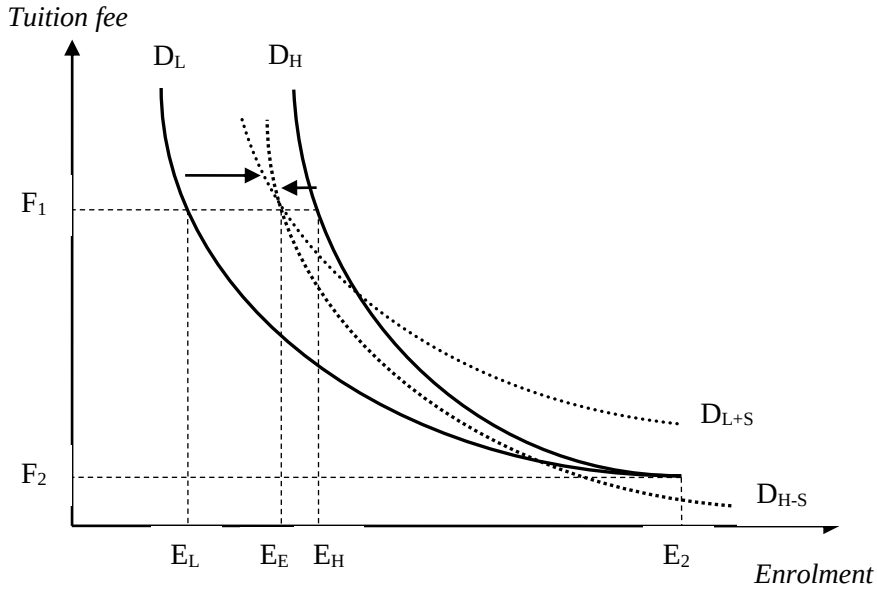

Figure 1. Demand for Higher Education: Low and High Income Individuals.

In the above Figure 1, DL and DH represents higher education demand curves of low income and high income individuals respectively. DL is less elastic compared to DH which shows less enrolment decreases in response to tuition fee increases. The low income students give a heavier weight to the risk component (Rochat and Demeulemeester, 2001). Assuming F1 as the cost covering level of fee, an enrolment difference between high and low income individuals (EH-EL) occurs if the costs are expected to be borne by students and families. This inequality is eliminated at F2 which requires external financing possibly from central government budget. If there is not enough resources to finance that level of enrolment, there is another solution for

elimination of inequality between income groups. This requires subsidizing low income individuals. A subsidy shifts demand of low income individuals from DL to DL+S in Figure 1. If this subsidy is financed from the government budget, and government budget depends on justice of taxation; then demand of high income individuals shrinks to DH-S and an equitable and cost covering tuition fee and enrolment rate is attained at a new equilibrium (F1,EE).

An increased subsidy may be financed directly from government budget, i.e. taxpayers. However there are other proposed forms of financing. One of them is revolving funds (Ziderman, 2002). This is a way of financing income contingent loans (ICL) in some countries. Of course, there are other financing forms of ICL, such as funding directly from tax revenues (Chapman and Ryan, 2005). Indeed, ICL's have been discussed since 1945 and defended for correction of credit market imperfections and preventing risks for investing in human capital (Nerlove, 1975). ICL's nevertheless, do not remove risks completely, because whoever borrowed will sooner or later has to repay. Repayment methods of ICL's may be designed so as to diminish for low income ones still after graduation (Harding, 1995; Guest, 2006; Chapman et al., 2010). The reason for this is that loans given to young people without any consideration of their future earnings, raises questions on excessive borrowings (Schwartz and Finnie, 2002). Therefore, repayments should be arranged with regard to expected earnings. There are also other forms of repayment. For example repayment at a fixed proportion of the income is found to be the best way to take into account the students' ability to pay (Vandenberghe and Debande, 2007). When future earning uncertainty and risk aversion of low income students considered, ICL's appear to be more advantageous to mortgage loans (Migali, 2012). On the other hand, ICL applications need not necessarily yield optimal fees and enrolments (Guest, 2006). Furthermore, privatization of higher education introduced in Chile in 1980s did not removed inequality gap (Espinoza and González, 2013). What's more, bankruptcy rates of students loan systems are not ignorable, although reorganization of loans have positive effects on human capital accumulation (Ionescu, 2011).

Another example of financing increased subsidy for low income students by increasing tuitions accruing to high income students is shown by Hilmer (2001) who demonstrated changes in school choices of low income students in a public university. Although the issue is still controversial, there is a worldwide trend toward sharing the cost between governments and families (or users), because higher education institutions are getting more and more out of public resources (Johnstone, 2004). It is defended for USA universities that "implementation of discriminatory tuitions can lead to an increase in enrollment, a reduction in the subsidy per student and, plausibly, to a reduction in the total subsidy" (Fethke, 2011). Another proposal for UK universities is introduction of a graduate tax in the form of income tax for graduates from higher education applicable for a certain period of their working life (Lincoln and Walker, 1993).

A government subsidy may take the form of grant, loan and tax cut. A tax cut may take the form of tax credits or tax deductions. Supporters of loan programs concentrate on income-contingent loans. Tax analyzers stress upon creating tax incentives for the employers who cover tuition payments for job-related education of employees (Steuerle, 1996). Whatever the method preferred is the aim of a subsidy program is equalization of opportunities among individuals from different income groups.

Success of a government action toward equalization of opportunities among income groups by subsidy programs requires not only justice of taxation but also reliable earnings data. Unrecorded economic activities impoverish government policies on the sides of both requirements. If unrecorded economy is large, it would be difficult to specify income groups. If government cannot determine income levels exactly, it may prefer to subsidize every enrolled student. Unrecorded economy also leads to unjust taxation, i.e. budget revenues are collected heavily through consumption taxes rather than income taxes.

There is some evidence that taxation policies affect schooling choices: flat taxation instead of progressive one effects human capital positively; switching from consumption tax to income tax affects human capital accumulation to some degree (Dupor et al., 1996; Heckman et al., 1998a). Switching to consumption tax, on the other hand, increases income inequality, although causes output increase (Heckman et al., 1998a). Consumption taxes also creates biases in favor of physical capital, since consumption is defined as output minus investment and human capital expenditures are accepted as consumption expenditures (Judd, 1998). Income tax is considered more favorable because of the belief that income best measures "ability to pay" but accrual income tax instead of conventional income tax is recommended (Kaplow, 1996). However, for financing of education from indirect taxes are politically more plausible in terms of voter support (Sanders and Lee, 2009).

An increase in higher education subsidies requires some extra resources. If this extra resource is created by extra taxation, the increase in indirect taxes results in a proportionally heavier burden on low income households. There is empirical evidence that different forms of subsidy differentiated according to income levels of families have positive effect on schooling (Ichimura and Taber, 2002). Therefore outward shifts should be observed for both demand curves as a result of a subsidy and demand curve of high income individuals shifts further, because burden of tax increase is proportionally low for them and the subsidy is available for everyone. The result of the government action is then, increased inequality. Figure 2 depicts a case where government subsidy depends on a budget financed heavily by indirect taxes and is available for anyone who applied for it:

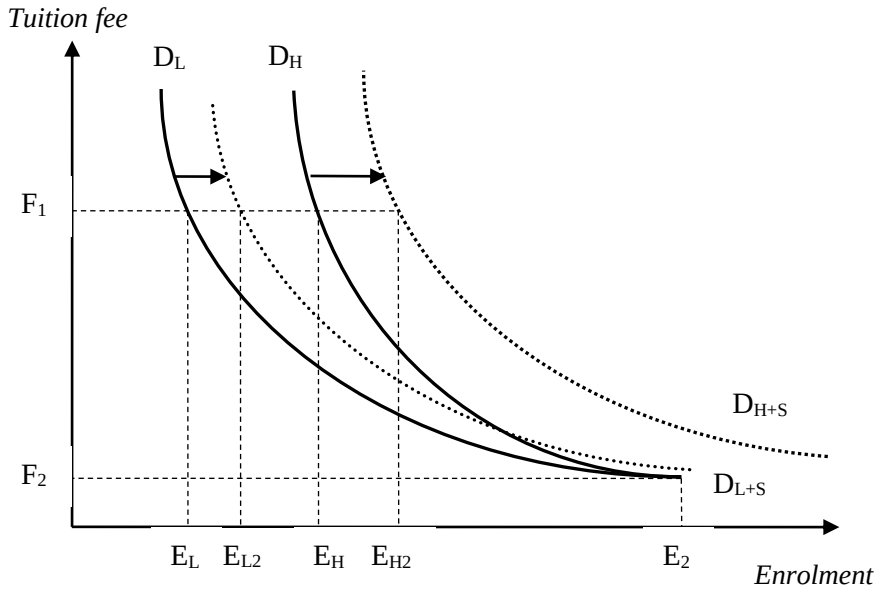

Figure 2. Effect of a Subsidy with Unrecorded Economy and Unjust Taxes.

The above figure shows that tax-based aids are not directly provided to low income students. Rather financial gains from aids are realized at the expense of eligible ones (Turner, 2012). That means public universities subsidize rich ones by transferring resources for higher education students who are already from high income families (González Rozada and Menendez, 2002). If the privileged secondary education and better preparation opportunities are available predominantly for high income students the result of extensive scholarships would be so. Higher education subsidies concentrated on financing upper-income students appear to be 'regressive' rather than 'progressive' (Johnson, 2006).

In free public education model elastic demand is out of concern. In extensively publicly financed systems demand is usually inelastic. In such systems higher quality is searched by restricting enrolments (Easton and Rockerbie, 2008). However restricting enrolments do not necessarily decrease grants, because search of high quality students may require increases in the level of grants provided (Easton and Rockerbie, 2008). Another point is that in free public university systems, universities usually finance their services to students by other forms of pricing or fees. These forms of fees are also equal for all students, meaning that the services in the school are financed by families on an equal base, which increases the cost for poorer families more (Psacharopoulos and Papaconstantinou, 2005).

Tuition increases and reductions in government supports to universities is a general trend internationally (Wu, 2009). Tuition fee system has been introduced in many countries where higher education was financed mainly from the public budget (McCaig, 2011). In American universities, a reduction in government spending on higher education usually met by an increase in tuitions (Fenton et al., 2001). Furthermore, a capacity increase by enrolment growth can have adverse impacts on institution financial condition, because size of the subsidy offered for new students increases (Martin, 2002). As a result, scholarships are generally rationed because of insufficient funds to fully meet needs of all applicants (Singell Jr., 2002). Therefore, increasing the domain of scholarships may cause problems in financing to hold the quality of education at certain level and weakens the effect of subsidy by holding the level of scholarships at certain levels for able and low income students. This case is not different from the case of free public university system with limited budget resources, where demand pressures for both enrolment and aid are severe. It is not surprising that equal and low level of subsidy for different income groups is not influent on demand and school choice of low income students, and government policy may become impotent. Even more, the effect of government intervention might be worsening in term of equality. And the reproduction of inequality results in a more elitist system of higher education (Strathdee, 2011).

The above discussion, to sum up, describes the relationship between higher education demand and the direct cost of higher education with a downward-sloping demand curve. The inherent features of the model are that income levels of families determine the elasticity, and opportunity costs and future earnings expectations determine the shape of demand curves, while changes in government's fiscal policies shift the curves. However school choice is a much more complex issue involving some social concerns such as freedom of choice, democracy, market economy, and some family and individual characteristics such as family's philosophical or religious beliefs and ability to choose and student's educational background (Levin, 1991). Moreover, information on cost of education and aid opportunities available to students also affect the optimality of school choice among low income students (Loyalka et al., 2013). These factors indirectly influence the relationship between cost of and demand for higher education. Voucher systems and charter schools were introduced for pre-college education in USA to respond the social concerns for a democratic society with a market economy. From the point of view of equality of opportunities; selective exams, guidance supports, quality increases in primary and secondary schooling are tools of better school choice.

1.2. Tuition and Support in Higher Education in Turkey

In 2012-13 school year there were 68 private higher education institutions (61 universities and 7 vocational higher education schools) in Turkey (ÖSYM [Assessment Selection and Placement Centre], 2013). Indeed these institutions are owned by foundations rather than private real or legal entities. Therefore it is disputed that they were *de jure* profit seeking institutions or not. In 2012-13 school year there were 250.791 students enrolled in these institutions making up of %5,36 of all (ISCED 5A, 5B and 6) higher education students (computed from data obtained from ÖSYM, 2013). Students in private institutions pay tuitions determined by their own entities.

They may be granted merit based fee cuts, and may benefit from public support. Discussion in this section mostly relates the students of public universities.

In Turkey, students enter standardized external examinations for university admissions after graduating from secondary education. Therefore, supply factors in secondary education appear to be significant determinants of university entrance (Güneş et al., 2012). From the demand side, family income is found not to be a directly relevant factor among the students who enrolled in higher education in Turkey (Ekinci, 2011). It is rather important when all of the applicants are considered. Participation rates of 18-23 years old population indicate that mainly high income groups benefit from the higher education services (Tomul, 2007). The profiles of enrolled students show that those from families with higher education who reside in metropolitan areas are placed at prestigious programs in majority (Ekinci, 2011). The proportion of the students from lower income families among those who benefit from higher education is lower than the contribution of their families within tax burden (Gölpek, 2011). It is computed that net effect of taxes upon higher income groups is negative, while net effect of higher education expenditures for income groups is, although unclear, in favor of upper-middle income groups (Pınar, 2005). Even their participation rates have declined over 30 years since 1980s, despite increases in expenditures on higher education within same period (Gölpek, 2011). On the other hand, when their major problems were asked, Turkish university students declare low levels of spending money and insufficient bursaries at the first priority; tuitions, vehicles and accommodation follow (Yavuzer et al., 2005; Şahin et al., 2009).

Distribution of income appears to be the most important factor affecting equality of opportunity in participation to higher education (Kandemir, 2010). The variables which were found to be related to school choice of Atatürk University students include family income, family structure and parental education and employment statuses (Özer and Çalmaşur, 2012). Higher income students may select private universities, but almost all of the students enrolled in public higher education institutions have spent some amount for preparation studies (Ekinci, 2009). These amounts constitute an important proportion of and rise with family income. Furthermore private part of unit student costs is higher than the publicly financed part in most publicly financed programs, except in medicine (Ekinci, 2009). However, tuition fees do not constitute an important part of private expenditures.

Starting from 2012-13 school year no tuition is paid by day shift students in public universities in Turkey. Before that the levels of fees were determined by cabinet at the beginning of each school year, generally at a rate not so much higher than inflation rate. Tuition fees are determined at the basis of program type. Evening shift (in Turkish *ikinci öğretim*, literally meaning "second education") students have been paying half of the unit cost determined for day students. Since the beginning of no tuition policy for day students, fees for evening students have not been increased. The principle that day shift students who have not complete their education within normal study period should pay the determined tuition fees will be applied starting from 2014-15 school year (Official Gazette, 2011). Student teachers in evening programs of faculties of education pay a yearly amount of TL 1.027 payable in two halves at the beginning of fall and spring semesters (Table 1).

Table 1: Amount of Tuition Payable by Students of Faculties of Education in Public Universities.

School year	Declared current expenditure per student			Evening shift
	Unit cost	Student contribution	Public contribution	Tuition fee
2009-10	2053	284	1769	1027
2010-11	2053	284	1769	1027
2011-12	2053	284	1769	1027
2012-13	2053	284	1769	1027
2013-14	2053	284	1769	1027

Source: Decisions of Council of Ministers (Official Gazette, 2009-2013).

In Turkey, there are mainly three sources of support for domestic higher education students: YURTKUR [Higher Education Credits and Dormitories Authority], private sector institutions and universities. All the sources from public institutions are combined in YURTKUR budget. Other sources usually follow rates determined by YURTKUR for need based bursaries. Some public universities and private sector institutions may grant higher merit based aids.

YURTKUR offer credit loans for students' life expenses since 1962, tuition fee loans since 1985, and bursaries which have an equivalent amount to credit loans since 2004 (YURTKUR, 2008). Accommodation services are also considered as support for students. Bursaries and loans from YURTKUR are paid monthly since 2005. YURTKUR has a performance goal for providing loans for every student who applied. Bursaries are gained on need basis in general and also there is a limited skill based bursaries for needy students who performed within top 100 in university entrance examinations (YURTKUR, 2008). Amount of support has been increasing steadily since 2010 (Table 2).

Table 2: Number of Domestic Students Obtained Support from YURTKUR and Size of the Expenditures.

	Number of students (000)				Expenditures (million TL)				Monthly bursaries and loans (TL)		
	Bursary	Credit	Tuition	Total	Bursary	Credit	Tuition	Total	Undergraduate	Master's	Doctorate
2010	234,1	611,9	478,6	1.324,6	526	1.335	153	2.014	200	400	600
2011	320,9	592,6	494,0	1.407,5	804	1.646	159	2.609	240	480	720
2012	348,9	667,4	509,8	1.526,1	1.021	1.943	163	3.127	260	520	780
2013	395,7	706,5	-	1.102,2	1.206	2.250	-	3.456	280	560	840

Source: YURTKUR (2014).
Note: "Bursary" is a non-refundable grant, "credit" is a loan for life expenses and "tuition" stands for loans for covering tuition. Starting from 2012-13 tuition fee loans have been abated.

1.3. Aim of the Study

In Turkey, students are placed at faculties of education through a central university entrance examination (ÖSYS). ÖSYS is a selective examination which aims at placing youth at programs in accordance with their interests, aptitudes and abilities. Furthermore, secondary education students may benefit from public and private guidance services. However research findings indicate that most of the students choose programs not only suitable to their abilities and satisfying their interests but also programs offering more future earnings and employability; and student teachers are not an exception (Korkut et al., 2012).

The rate of return to higher education is higher than returns to lower levels of education in Turkey (Tansel, 1994; Akkoyunlu Wigley, 2011). Teacher training and medicine programs are those which offer relatively more guarantee school-to-work transition in addition to higher returns. A recent study show that teaching profession is mostly preferred by students from families with lower-middle socio-economic status (Aksu et al., 2010). Among the

"motivation/reasons to choose teaching as a career" are interests a beliefs in abilities lead and job opportunities and working conditions follow (Aksu et al., 2010).

Process of entry into teaching profession starts with development of career goals and initial aspirations in high school throughout education system and people who are taken as models (Hanushek and Pace, 1995). Hanushek and Pace (1995) find out that females, those belonging to ethnic or racial minorities, and those who score lower in cognitive ability tests are more likely to be teachers in the USA. In general, school environment and family characteristics play important roles in determining student's school choice (Lillis, 2008).

There might be different urges for choosing teaching training programs in different countries. Several research designs can be formed to answer the question "who chooses to be a teacher?" In Turkey, several demand and supply side variables related to schooling can be considered. Among the supply side variables, availability of schools, cost of schooling, and quality of education can be mentioned. Cognitive abilities, personality traits, schooling tracks and family characteristics are among demand side variables. In addition there are some risks and uncertainties around demand such as imperfect knowledge about students' own abilities, risk of investment, and future expectations about earnings and employability (Caner and Okten, 2010; Ergen, 2013).

This study aims at understanding school choice behaviors of student teachers in relation to cost of education and supports available. Many of them are from middle and lower-middle income family backgrounds, indicating that their demand is elastic. Therefore they are not risk takers in general. Majoring in faculty of education in the neighborhood does not yield a worse end compared to same program at a privileged university and offers high probability of employability, although earnings are hardly differential among ability groups.

In particular, this study aims at determining the responses of student teachers to changes in tuition they pay and support they receive. So that it may be uncovered whether these students' choices would have been affected by financial factors. To measure the sensitiveness of students' choices to changes in levels of tuition fees and support, an approximation is made through subjective data. For this purpose it was tried to find answers to following questions:

- What are the levels of tuition student teachers pay and support they receive?
- Does probability of receiving support change depending on program of study, grade, shift of education, gender, family income, personal expenditure and economic activity?
- How the willingness to pay for higher education changes if there would be a tuition requirement?
- How the desire to study at current program changes if there would be adequate support?

2. METHOD

The research is designed as a survey with an availability sampling method.

2.1. Sample

In order to investigate the sensitivity of demand for teacher training programs to cost of education, student teachers from different programs of Faculty of Education at Mersin University were included in sample as a cluster. The sample of the study comprises 1st and 4th grade students from all day and evening shift programs in Mersin University Faculty of Education in 2013-14 Spring semester. The students participated voluntarily. There were 1.114 registered students, of which 657 participated (59%). Table 3 shows. number of students answered to questionnaire compared with the data obtained from Mersin University Registrar for registered students by the end of Spring 2012-13.

Table 3: Number of Registered and Participated Students.

Program	First Grade			Fourth Grade		
	Female	Male	Total	Female	Male	Total
Guidance and psychological counseling	19/28	23/25	42/53	22/25	14/18	36/43
English language teaching (I)	22/59	9/30	31/89	18/25	12/19	30/44
English language teaching (II)	23/42	9/15	32/57	17/25	13/11	30/36
Turkish language teaching (I)	17/31	4/29	21/60	16/31	13/30	29/61
Turkish language teaching (II)	–	–	–	10/19	23/45	33/64
Primary school teaching (I)	24/35	17/28	41/63	23/39	15/26	38/65
Primary school teaching (II)	–	–	–	18/32	14/26	32/58
Pre-primary teaching (I)	27/39	3/13	30/52	32/44	10/13	42/57
Pre-primary teaching (II)	29/37	8/13	37/50	26/46	3/4	29/50
Elementary math teaching	27/34	9/14	36/48	18/35	9/20	27/55
Elementary science teaching	23/41	4/8	27/49	21/31	13/29	34/60
Total	211/346	86/175	297/521	221/352	139/241	360/593

Note: (I) stands for day education and (II) for evening (second) education.

Although the sample size is considered to be 657, some respondents did not answered all the questions and their questionnaires were not excluded. For this reason sample size may shrink up to 609 for some questions and analyses.

2.2. Data Collection and Analysis

Demographic data and opinions of students were obtained through a questionnaire developed after a literature review, especially with the help of inspiration from YÖK [Higher Education Council of Turkey] (1998) and TUİK (2002). The questionnaire were administered to available students within a fortnight period between March 25 and April 5, 2013. Questionnaire includes personal information, family background, expenditure, income, tuition and support data and questions related to willingness to pay tuition and desire to receive a different education.

Data were analyzed by taking percentages. Answers to five questions were analyzed via chi-square test with respect to program, grade, education shift, gender, family income, economic activity and personal expenditures.

3. FINDINGS and DISCUSSION

3.1. Tuition and Support Levels and Probability of Receiving Support

Like in other public higher education institutions in Turkey, students in Mersin University Faculty of Education pay yearly amount of tuition fees determined by Council of Ministers. (see Table 4). Day shift students do not pay tuitions since the beginning of 2012-13 school year.

Table 4: Tuition Fees in Mersin University Faculty of Education (TL).

Since	Day shift tuition fee			Evening shift tuition fee		
	Fall payment	Spring payment	Total	Fall payment	Spring payment	Total
2009-10	184 (31) [1]	156 (25) [1]	340 (56) [1]	555	472	1.027

Source: Mersin University Registrar.

[1] Note: Numbers in parentheses show the amounts extra payments determined by university senate.

Responds to questionnaire show that 77% of the students receive grants or loans. The overwhelming source is YURTKUR. The amount of support is TL 280 for 92% of receivers by 2013. Some of the students also loan on tuition payments from public sources (Table 5).

Table 5: Answers of Students to Questions Related to Support (% of Total).

Grant and/or loan (Do you receive?)	Yes = 76,8	No = 23,2
Source (among those who say yes)[1]	Government = 96,4 private = 4,0	University = 1,4 Other = 3,8
Amount of grant and loan (monthly total, TL)	Mean = 292,4 (n = 500) Min = 100 (n = 2)	Mode = 280 (n = 461) Max = 2000 (n = 1)
Loan for tuition (Do you receive?) (If no, have you ever applied for?)[2]	Yes = 27,2 Yes = 36,1	No = 72,8 No = 63,9
Source of financing personal expenditures	Family = 70,2 Grant/Loan = 63,5	Work = 14,0 Only Grant/Loan = 19,9

[1] Note: Students may receive support from multiple sources.
[2] Note: Students were allowed to pick more than one choice.

Average level of support in this sample is TL 292. Their average monthly personal expenditure is computed as TL 408. Therefore it is found that average support to a student meets 72% of average personal expenditure.

If students are from low income families, as it was the case in this sample, subsidy to students is a more significant factor determining the students' demand for higher education. However, because there is little differentiation made among students from different family backgrounds, it is very difficult to make direct observation on sensitiveness of their demand on the changes in tuition and support levels. Financial aid recipients finish faster compared to those who did not receive among low income students; and their probability of graduation increases in Germany (Glocker, 2011). The level of financial aid to individual students vary across EU countries (Apslund et al., 2008). In most Latin American universities government subsidize higher education heavily as well (González Rozada and Menendez, 2002). If the universities are tuition free this means government subsidies the students from all income and ability groups. In addition if the provision of scholarship is extensive, government policy action toward providing equity and efficiency becomes ineffective. Therefore free public education does not necessarily benefit the poor ones.

Analysis of the data reveals that probability of receiving support changes depending on program of study, grade, education shift economic activity, family income and personal expenditures (Table 6).

Table 6: Changes in Probability of Receiving Support Depending on Some Variables.

Variable	N	df	χ^2	p
Program	654	6	15,952	0,014
Grade 1-4	654	1	9,353	0,002
Day/evening shift	654	1	4,240	0,039
Gender	654	1	0,305	0,581
Family income	646	11	21,409	0,029
Personal expenditure	653	8	29,786	0,000
Economic activity	654	1	9,149	0,002

Average probability of receiving support is 92,1% for psychological guidance and counseling students and 68,8% for pre-primary teaching students. Averages of other programs are around average (76,8%). Percentage of support receiving first grade students is 71,2% for all programs, while this ratio was 81,3% for fourth grade students. This may mean that probability of receiving support is decreasing over time, if non-receiver first graders would not receive later, off course. Day students receive support at a 79% rate, while the percentage for evening students is 71,5. Probability of receiving support does not change depending on gender.

The probability of receiving support is over 80% for students whose family earns a yearly amount of TL less than 20.000 reportedly. If declared family income is 20.000 or more this probability decreases to circa 60%. The percentage of students in family income groups are shown in Table 7.

Table 7: Family Income Reported by Students in the Sample (% of Total).

Family income (annual, TL)	10.000 or less = 49,5	10.000-20.000 = 24,4
	20.000-30.000 = 15,4	30.000-40.000 = 5,5
	40.000-50.000 = 1,7	50.000 or more = 3,4

Although family income appears to be a source of change in probability of receiving support (i.e. grant and/or loan), this does not mean that all the low income students are receivers and all the high income students are non-receivers. While 80% of 75% receives support, 60% of 25% also receives same amounts. One quarter of the students are over the sample average. This sample's average per family is nearly equal to GDP per capita in Turkey. Therefore, it can be claimed that indeed there are negligible number of students who are from high income families. Then, it is very difficult to elicit whether income groups receive different amounts of support by using only student teachers data.

In Table 6, it was shown that probability of receiving support changes depending on personal expenditure and economic activity. If monthly expenditure level is between TL 200 and TL 800, the probability is between 77% and 81%. If expenditure level is less than TL 200 and between TL 800 and TL 1.200 the percentage is around 65%. If the expenditure level falls below TL 200, this may mean that these students reside with their families in the neighborhood. The percentage of this group is 6,1. Those who expend more than TL 1.200 do not benefit from support. Percentage of students who participate in an economic activity to gain earning decreases to 65% from 78,9 which is the ratio for students who do not participate in labor force. Some detailed data related to earnings and expenditures are shown in Table 8.

Table 8: Personal Expenditures and Earnings of Students (%).

Level of expenditure (monthly TL)	200 or less = 13,3	200-400 = 47,5
	400-600 = 24,5	600-800 = 10,0
	800-1.000 = 3,1	1.000 or more = 1,6
Economic activity (Employed for pay?)	Yes = 15,4	No = 84,2
Level of earnings (monthly TL, among those who say yes)	200 or less = 84,9	200-300 = 6,0
	300-500 = 3,5	500 or more = 5,6

The tuition fees do not constitute an important part of students' personal expenditures. Only 8% of them placed it on the first place in the importance scale (Table 9).

Table 9: Type of Students' Personal Expenditures According to Importance Attached.

	Importance sequence						
Type of expenditure	1	2	3	4	5	None	Total
Clothing	16,0	34,1	22,2	12,6	5,3	9,7	100,0
Accommodation	37,1	15,8	5,0	3,2	2,4	36,4	100,0
Food	16,0	34,1	22,2	12,6	5,3	9,7	100,0
Textbook	3,3	6,1	17,2	16,6	16,0	40,8	100,0
Social activities	3,7	6,4	10,4	18,7	19,6	41,2	100,0
Tuition	7,9	4,6	4,9	6,5	5,0	71,1	100,0
Transportation	12,3	18,1	19,9	14,9	14,9	19,8	100,0
Other	1,4	1,1	1,5	0,8	4,3	91,0	100,0

Clothing, food and transportation are mostly included expenditure categories in students' baskets. If accommodation is important then it is the most urgent one. When it is not important it may show that students have chosen the school in the neighborhood of their family. Tuition appears to be least important category after the other expenditures (which may include electronic material, games, collection and alcohol and tobacco products. Similar findings can be found in literature: because of the lack of exogenous cost variation, the effect of tuition subsidies found weak in Canada (Neill, 2009).

3.2. Willingness to Pay Tuition

As much as the amount of tuition fee is negligible in most cases, the cost of education does not appear to be a determining factor for school choice for student teachers. If an analogy is made, they have some consumers' surplus, although teacher training education can be seen as an investment rather than a consumption good. For this purpose students were asked "if it was required, how much have you been willing to pay for the program you are currently studying at? Or leave?" The answers show up the maximum level of willingness to pay tuition for current program.

If they were required to pay tuition, 32,7% of the students would have quitted the program if the tuition amount were between TL 0 and TL 1.000. Another 36,6% is added to this group if there were a tuition fee between TL 1.000 and 2.000. Those who would have been added to possible quitters is 13,6, if tuitions were increased to an amount between TL 2.000 and TL 3.000. Size of additional sensitive groups decrease as 5,5%, 3,1%, 2,0% and 0,8% if additional TL 1.000's were added to fees. Only 5,6% of the student would have continue their education if the tuition is over TL 8.000.

Willingness to pay tuition for current program of study changes depending on program, education shift, family income and personal expenditure, while grade, gender and economic activity do not cause any change (Table 10).

Table 10: Changes in Willingness to Pay Tuition for Current Program Depending on Some Variables.

Variable	N	df	χ^2	p
Program	636	12	40,031	0,000
Grade 1-4	636	2	5,830	0,054
Day/evening shift	636	2	6,516	0,038
Gender	636	2	0,789	0,674
Family income	629	22	37,967	0,018
Personal expenditure	635	16	28,451	0,028
Economic activity	636	2	0,476	0,788

The students of psychological counseling and guidance and pre-primary teaching programs are reluctant to leave, while students of elementary mathematics and science teaching programs are least patient ones. This difference can be explained by perceived rate of employability. What is interesting is that three quarters of English language teaching program students would have been quitted after TL 2.000 level of tuition. They might have preferred private institutions. Day shift students are more fast leavers than evening shift students. The reason for this might be that there is no evening shift education for science and mathematics teaching programs.

Family income is a source of change in willingness to pay tuition. If yearly amount of family income is below TL 45.000 the potential school leaving rate after TL 2.000 level of tuition varies between 65% and 80%. Above TL 45.000, school leaving choice decreases to 40% and below after TL 2.000 level of tuition. Highest rates for potential school leaving belong to lowest levels of family income. Willingness to pay tuition increases with the level of personal expenditure. Those who expend lowest amount are most impatient ones.

In another study, it was found that family income has no effect on students' school choices in business and economics programs in non-prestigious higher education institutions, while family income determines the level of life expenses (Cavcar et al., 2005). Such students have selected programs because their university entrance grades allow them to do so. They only select cities, which is usually in neighborhood. On the other hand medical science students select programs of study mainly on the grounds of career choices even if they attend non-prestigious universities (Genç et al., 2007).

Students were also asked "how much have you been willing to pay If you had been placed at your first choice." The answers to this question then brings out the maximum level of willingness to pay tuition for most wanted program. The results show that 82,6% of the students would have quitted if the level of tuition is above TL 1.000, if they were placed in their first choice in the university entrance examination. This means that they are more impatient to increases in tuition in their first choice than in their current program. This may be explained by psychological reasons such as conservativeness towards holding the gained things.

Willingness to pay tuition for the program of first choice changes depending on personal expenditures and does not change if the other variables were considered (Table 11).

Table 11: Changes in Willingness to Pay Tuition for First Choice Depending on Some Variables.

Variable	N	df	χ^2	p
Program	616	6	10,371	0,110
Grade 1-4	616	1	1,001	0,317
Day/evening shift	616	1	1,303	0,254
Gender	616	1	0,417	0,518
Family income	609	11	15,987	0,142
Personal expenditure	616	8	22,613	0,004
Economic activity	616	1	0,423	0,515

The percentage of quitters among those who spend more than TL 1.000 per month are lower both after initiation of TL 1.000 TL and TL 2.000 levels of tuition.

The results of analyses for maximum level of willingness to pay tuition reveal that student teachers are highly responsive to changes in tuition fees. The elasticity decreases by low direct costs and increases by support to students (Canton and de Jong, 2005). There is no gender related changes in their responsiveness. This may mean that gender stereotypes do not work in teacher training programs. In the literature, some differences between male and female applicants are found on sensitiveness to differences in tuitions (Mueller and Rockerbie, 2005).

3.3. Desire to Receive Another Education

In order to learn their desire to study at another university, the students were asked "If you had had sufficient grant, at which university do you want to study? At a public university in İstanbul, Ankara, or İzmir; at a private university in İstanbul, Ankara, or İzmir; at the university where I am studying at; and other."

If there were sufficient amount of grants, only 18,2% of the student would have been preferred to stay in the current university. 69% of them would have preferred to study at a university in İstanbul, Ankara or İzmir, both public and private. 56,6% prefers public universities in these big cities.

The level of desire to leave university changes depending on program of study enrolled, while it does not change depending on other variables considered (Table 12).

Table 12: Changes in Desire to Study at Another University Depending on Some Variables.

Variable	N	df	χ^2	p
Program	650	6	16,018	0,014
Grade 1-4	650	1	3,639	0,056
Day/evening shift	650	1	0,732	0,392
Gender	650	1	0,574	0,448
Economic activity	650	1	0,280	0,597
Family income	642	11	7,439	0,762
Personal expenditure	649	8	8,668	0,371

Under convenient financial conditions, more students want to stay at current university in Turkish language, pre-primary and English language teaching programs (27,7%, 22,6% and 22,1% respectively). Primary teaching students have highest desire to leave university under beneficial conditions (9,9%).

In order to uncover their desire to study at another program, students were also asked "If you had had sufficient grant, at which program do you want to study? Business, economics; arts and science; engineering, fine arts and conservatory; program I am studying at; other (medicine, law, counseling (for those who are not enrolled in this program), physical therapy and rehabilitation)."

If there were sufficient financial resources 44,2% of the students still prefer to study at the current program. 10% percent would have preferred engineering programs, 11% would have preferred fine arts, and 28,6% would have preferred other programs. This means more than half of the students were not satisfied with their current program of study.

The level of desire to change program under convenient financial conditions changes depending on program, grade and gender, while it does not change depending on education shift, economic variables (Table 13).

Table 13: Changes in Desire to Study at Another Program Depending on Some Variables.

Variable	N	df	χ^2	p
Program	651	12	140,411	0,000
Grade 1-4	651	2	6,853	0,032
Day/evening shift	651	2	5,152	0,076
Gender	651	2	10,006	0,007
Family income	643	22	27,521	0,192
Personal expenditure	650	16	18,682	0,286
Economic activity	651	2	5,298	0,071

The 77,2% of psychological counseling and guidance students, 61,5% of English language teaching students were satisfied with their current program, while only 20,6% of elementary mathematics teaching students and 20% of elementary science teaching students were so. First grade students were more satisfied with their current program of study than fourth grade students (49,7% and 39,8% respectively). Female students were more satisfied with their current program of study than male students (47,9% and 37,2% respectively).

The results of the analyses related to desire to study at another university and program show that students' choices are highly sensitive to changes in the level of support.

4. CONCLUSION and RECOMMENDATIONS

Primary motivation for this study was to obtain a relevant answer to the problem of supplying good quality teachers. However it is hard to do this in a systematic way (Hanushek and Pace, 1995). What we know is high quality teachers are those who perform better in classroom. Teacher performance and the related rewards obtained are the outputs of schooling system

(Schacter and Thum, 2004). According to systems approach, outputs of a system determines the qualities of inputs in the next cycles in a process of interaction with other systems. Results of this study show that many of the student teachers are not satisfied with their current program of study and university. It seems that nearly half of them have preconceived opinions about their future job satisfaction. Motivation, in the company of skills, is one of the factors which make up an able teacher. According to human capital model, rate of return of teacher education is important for able students to choose the teaching profession. Rate of return increase may be ensured either by reductions in teacher training or increases in teacher salaries. Increasing teacher salaries may ameliorate expectations of students who apply for faculties of education and therefore increase the aptitude levels of applicants (Leigh, 2012). Cultural capital is also shown to be a an important issue for teacher training in development context (Aksu et al., 2010).

Results of the current study show that the student teachers' choices are highly sensitive towards changes in the levels of tuition and support according to subjective data gathered through opinions of registered students. The following conditions were given before the study: (1) students are required to pay either no tuition or equal amounts of tuition regardless of their income levels; (2) the main financial provider of support to students, YURTKUR aims at providing support to every and each student who ever applies for it; (3) the large size of unrecorded economy in Turkey makes the tax system more dependent on consumption taxes. The first and second conditions makes it very difficult to find direct observations on sensitiveness of students' choices towards changes in tuition and support in public universities in Turkey. Combined effect of these three conditions on higher education system is that subsidizing tuitions and providing support do not ameliorate the inequality in demand for higher education in favor of low income families.

It is concluded that the subsidy policy summarized in first and second conditions above does not remove the inequality in students' choices but only makes the price elasticity of student teachers' higher education demand directly unobservable.

Unregistered economy appears to be most important factor creating inequality among students from different income groups. It is found that there is not a relationship between size of the unregistered economy and the level of tax burden (Elgin, 2012). This means that increasing taxes on high income families do not necessarily increase the size of unregistered funds.

In the literature several policy alternatives to solve the financing problem on more equitable bases were generated. Increasing tuitions for high income students to subsidy low income ones alters the combination of program choices (Hilmer, 2001). Merit based financial support versus need based aids is getting greater attention USA, although it is controversial how much merit based financing of students is efficient, because such approaches are reducing opportunities for low income students. (Monks, 2009). The effect of ICL is found positive and more for middle income individuals (Chapman and Ryan, 2005). Benefits of ICL, compared to mortgage loans are higher for low income students, with easier repayments and higher subsidies (Migali, 2012).

Income-contingent loans (ICL) are getting more attention in recent years. There is also some proposals for Turkey (e.g. see Akça, 2011). It is recommended in relation to findings of this study that ICL's might be favorable for riskier programs such as business, economics, engineering and law. Student teachers who have low expectations and low future incomes compared to other professions can repay the loaned amounts only within longer periods such as twenty years. There must be o minimum amount of graduates' income which constitutes the condition of initiating repayment.

In the literature, differentiated tuitions are claimed to be more efficient (Fethke, 2011). Studies toward finding ways of not selecting students for higher education but strengthening them

for choosing for themselves should also be possible and can be done for Turkey before the reduction of demand pressure.

5. REFERENCES

Akça, M. H. (2011). Türkiye'de yükseköğretimin finansmanında yol ayrımı: etkin, adil ve cesur adımlar. Uluslararası Yükseköğretim Kongresi: Yeni Yönelişler ve Sorunlar (UYK-2011). 27-29 Mayıs 2011, İstanbul. Vol. 2, sec. X, pp. 1170–1182.

Akkoyunlu Wigley, A. (2011). Türkiye'de eğitimin değerinin ölçülmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 40*, 375–385.

Aksu, M., Engin Demir, C., Daloglu, A., Yildirim, S., and Kiraz, E. (2010). Who are the future teachers in Turkey? Characteristics of entering student teachers. *International Journal of Educational Development, 30*(1), 91–101.

Asplund, R., Ben Abdelkarim, O., and Skalli, A. (2008). An equity perspective on access to, enrolment in and finance of tertiary education. *Education Economics, 16*(3), 261–274.

Belfield, C. R. (2000). *Economic principles for education: Theory and evidence*. Edward Elgar: Cheltenham, UK.

Bevc, M. and Uršič, S. (2008). Relations between funding, equity, and efficiency of higher education. *Education Economics, 16*(3), 229–244.

Buss, C., Parker, J., and Rivenburg, J. (2004). Cost, quality and enrollment demand at liberal arts colleges. *Economics of Education Review, 23*(1), 57–65.

Caner, A. and Okten, C. (2010). Risk and career choice: Evidence from Turkey. *Economics of Education Review, 29*(6), 1060–1075.

Canton, E. and de Jong, F. (2005). The demand for higher education in The Netherlands, 1950-1999. *Economics of Education Review, 24*(6), 651–663.

Cavcar, E., Bulut, Z. A., and Karabulut, A. N. (2005). Öğrencilerin iktisadi ve idari bilimler fakültesini tercih nedenleri ve beklentileri (Muğla Üniversitesi örneği). *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi, 4*(7), 21–39.

Chapman, B. and Ryan, C. (2005). The access implications of income-contingent charges for higher education: Lessons from Australia. *Economics of Education Review, 29*(5) 685–694.

Chapman, B., Lounkaew, K., Polsiri, P., Sarachitti, R., and Sitthipongpanich, T. (2010). Thailand's Student Loans Fund: Interest rate subsidies and repayment burdens. *Economics of Education Review, 24*(5) 491–512.

Dupor, B., Lochner, L., Taber, C., and Wittekind M. B. (1996). Some effects of taxes on schooling and training. *American Economic Review, 86*(2), 340–346.

Dynarski, S. (2002). The behavioral and distributional implications of aid for college. *American Economic Review, 92*(2), 279–285.

Easton, S. T. and Rockerbie D. W. (2008). Optimal government subsidies to universities in the face of tuition and enrollment constraints. *Education Economics, 16*(2), 191–201.

Ekinci, C. E. (2009). Türkiye'de yükseköğretimde öğrenci harcama ve maliyetleri. *Eğitim ve Bilim, 34*(154), 119–133.

Ekinci, C. E. (2011). Bazı sosyoekonomik etmenlerin Türkiye'de yükseköğretime katılım üzerindeki etkileri. *Eğitim ve Bilim, 36*(160), 281–297.

Elgin, C. (2012). Vergiler ve kayıtdışı ekonomi: Bir değerlendirme ve Türkiye örneği. *ODTÜ Gelişme Dergisi, 39*(2), 237–258.

Ergen, H. (2013). Uncertainties and risks determining individual demand for higher education: A sample from Mersin University. *Eğitim ve Bilim, 38*(169), 432–445.

Espinoza, O. and González, L. E. (2013). Access to higher education in Chile: A public vs. private analysis. *Prospects, 43*(2), 199–214.

Fethke, G. (2011). A low-subsidy problem in public higher education. *Economics of Education Review, 30*(4), 617–626.

Fenton, R. J., Gardner, J., and Singh, S. (2001). Rethinking cuts in public higher education: An American example. *Education Economics, 9*(1), 53–68.

Garratt, R. and Marshall, J. M. (1995). Optimum college admissions, taxes and tuitions when completion is uncertain. *Education Economics, 3*(3), 219–234.

Genç, G., Kaya, A., and Genç, M. (2007). İnönü Üniversitesi Tıp Fakültesi öğrencilerinin meslek seçimini etkileyen faktörler. *İnönü Üniversitesi Eğitim Fakültesi Dergisi, 8*(14), 49–63.

Glocker, D. (2011). The effect of student aid on the duration of study. *Economics of Education Review, 30*(1), 177–190.

González Rozada, M. and Menendez, A. (2002). Public university in Argentina: subsidizing the rich? *Economics of Education Review, 21*(4), 341–351.

Gölpek, F. (2011). Türkiye'de adalet ilkesi bakımından yükseköğretimde finansman politikası: Kim faydalanıyor? Kim ödüyor? *Anadolu Üniversitesi Sosyal Bilimler Dergisi, 11*(3), 149–176.

Guest, R. (2006). The undergraduate fee and enrolment decisions facing Australian universities from 2005. *Education Economics, 14*(1), 59–73.

Güneş, S., Görmüş, Ş., Yeşilyurt, F. and Tuzcu, G. (2012). ÖSYS başarısını etkileyen faktörlerin analizi. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 11, 71–81.

Hanushek, E. A. and Pace, R. R. (1995). Who chooses to teach (and why)? *Economics of Education Review, 14*(2), 111–117.

Harding, A. (1995). Financing higher education: An assessment of income-contingent loan options and repayment 1 patterns over the life cycle. *Education Economics, 3*(2), 173–203.

Heckman, J. J., Lochner, L., and Taber, C. (1998a). Tax policy and human capital formation. *American Economic Review, 88*(2), 293–297.

Heckman, J. J., Lochner, L., and Taber, C. (1998b). General-equilibrium treatment effects: a study of tuition policy. *American Economic Review, 88*(2), 381–386.

Hilmer, M. J. (2001). Redistributive fee increases, net attendance costs, and the distribution of students at the public university. *Economics of Education Review, 20*(6), 551–562.

Hübner, M. (2012). Do tuition fees affect enrollment behavior? Evidence from a 'natural experiment' in Germany. *Economics of Education Review, 31*(6), 949–960.

Ichimura, H. and Taber, C. (2002). Semi-parametric reduced form estimation of tuition subsidies. *American Economic Review, 92*(2), 286–292.

Ionescu, F. (2011). Risky human capital and alternative bankruptcy regimes for student loans. *Journal of Human Capital, 5*(2), 153–206.

Johns, R. L., Morphet, E. L., and Alexander, K. (1983). *The economics and financing of education*. Englewoog Cliffs, N.J.: Prentice-Hall, Inc.

Johnson, W. R. (2006). Are subsidies to higher education regressive? *Education Finance and Policy, 1*(3), 288–315.

Johnstone, D. B. (2004). The economics and politics of cost sharing in higher education: Comparative perspectives. *Economics of Education Review, 23*(4), 403–410.

Judd, K. L. (1998). Taxation, uncertainty, and human capital. *American Economic Review, 88*(2), 289–292.

Kandemir, O. and Kaya, F. (2010). Gelir dağılımının yükseköğrenimde fırsat eşitliğine etkisi: Türkiye'de özel üniversite gerçeği. *Kastamonu Eğitim Dergisi, 18*(2), 557–566.

Kaplow, L. (1996). On the divergence between "ideal" and conventional income-tax treatment of human capital. *American Economic Review, 86*(2), 347–352.

Keane, M. P. (2002). Financial aid, borrowing constraints, and college attendance: evidence from structural estimates. *American Economic Review, 92*(2), 293–297.

Korkut-Owen, F., Kepir, D. D., Özdemir, S., Ulaş, Ö., and Yılmaz, O. (2012). Üniversite öğrencilerinin bölüm seçme nedenleri. *Mersin University Journal of the Faculty of Education, 8*(3), 135–151.

Koshal, R. K. and Koshal, M. (2000). State appropriation and higher education tuition: What is the relationship? *Education Economics, 8*(1), 81–89.

Leigh, A. (2012). Teacher pay and teacher aptitude. *Economics of Education Review, 31*(3), 41–53.

Levin, H. M. (1991). The economics of educational choice. *Economics of Education Review, 10*(2), 137–158.

Lillis, M. P. (2008). High-tuition, high-loan financing: Economic segregation in postsecondary education. *Journal of Education Finance, 34*(1), 15–30.

Lincoln, I. and Walker, A. (1993). İncreasing investment in higher education: The role of a graduate tax. *Education Economics, 1*(3), 211–226.

Loyalka, P., Song, Y., Wei, J., Zhong, W., and Rozelle, S. (2013). Information, college decisions and financial aid: Evidence from a cluster-randomized controlled trial in China. *Economics of Education Review, 36*, 26–40.

Martin, R. E. (2002). Tuition discounting: Theory and evidence. *Economics of Education Review, 21*(2), 125–136.

McCaig, C. (2011). Trajectories of higher education system differentiation: structural policy-making and the impact of tuition fees in England and Australia. *Journal of Education and Work, 24*(1-2), 7–25.

McPherson, M. S. and Schapiro, M. O. (1991). Does student aid affect college enrolment? New evidence on a persistent controversy. *American Economic Review, 81*(1), 309–318.

Menon, M. E., Pashourtidou, N., Polycarpou, A., and Pashardes, P. (2012). Students' expectations about earnings and employment and the experience of recent university graduates: Evidence from Cyprus. *International Journal of Educational Development, 32*(6), 805–813.

Migali, G. (2012). Funding higher education and wage uncertainty: Income contingent loan versus mortgage loan. *Economics of Education Review, 31*(6), 871–889.

Monks, J. (2009). The impact of merit-based financial aid on college enrollment: A field experiment. *Economics of Education Review, 28*(1), 99–106.

Mueller, R. E. and Rockerbie, D. (2005). Determining demand for university education in Ontario by type of student. *Economics of Education Review, 24*(4), 469–483.

Neill, C. (2009). Tuition fees and the demand for university places. *Economics of Education Review, 28*(5), 561–570.

Nerlove, M. (1975). Some problems in the use of income-contingent loans for the finance of higher education. *Journal of Political Economy, 83*(1), 157–183.

Official Gazette. (2009-2013). Decisions of council of ministers: 10.08.2009/15308 (no. 18.08.2009/27323); 27.08.2010/815 (no. 02.09.2010/27690); 22.08.2011/2174 (no. 26.08.2011/28037); 27.08.2012/3584 (no. 29.08.2012/28396); and 22.07.2013/5172 (no. 31.08.2013/28751).

Official Gazette. (2011). Aile ve Sosyal Politikalar Bakanlığının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname ile Bazı Kanun ve Kanun Hükmünde Kararnamelerde Değişiklik Yapılmasına Dair Kanun Hükmünde Kararname. No. KHK/662. Official Gazette no. 02.11.2011/28103 (Duplicate).

Oosterbeek, H., and van den Broek, A. (2009). An empirical analysis of borrowing behaviour of higher education students in the Netherlands. *Economics of Education Review, 28*(2), 170–177.

Özer, H. and Çalmaşur, G. (2012). Çok sınıflı logit model ile öğrencilerin fakülte tercihlerinin araştırılması (Atatürk Üniversitesi örneği). *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 28, 147–163.

ÖSYM [Assessment Selection and Placement Centre]. (2013). The 2012-2013 Academic year higher education statistics. YÖK: Ankara. Retrieved from http://www.osym.gov.tr/belge/1-19213/2012-2013-ogretim-yili-yuksekogretim-istatistikleri.html on July 13, 2014.

Page, L., Garbouab, L. L., and Montmarquette, C. (2007). Aspiration levels and educational choices: an experimental study. *Economics of Education Review, 26*(6), 748–758.

Parker, J. and Summers, J. (1993). Tuition and enrolment yield at selective liberal art colleges. *Economics of Education Review, 12*(4), 311–324.

Pınar, A. (2005). Devlet bütçesi topluma nasıl yansıyor? *Siyasa, 1*(1), 47–62.

Psacharopoulos, G. (2008). Funding universities for efficiency and equity: Research findings versus petty politics. *Education Economics, 16*(3), 245–260.

Psacharopoulos, G., and Papakonstantinou, G. (2005). The real university cost in a ''free'' higher education country. *Economics of Education Review, 24*(1), 103–108.

Rochat, D. and Demeulemeester, J.-L. (2001). Rational choice under unequal constraints: The example of Belgian higher education. *Economics of Education Review, 20*(1), 15–26.

Sanders, R. M. and Lee, S. (2009). Determinants of public support for education sales tax initiatives in Georgia. *Journal of Education Finance, 34*(2), 267–288.

Sazama, G. W. (1994). A measure of equality of choice in higher education. *Economics of Education Review, 13*(1), 79–88.

Schacter, J. and Thum, Y. M. (2004). Paying for high- and low-quality teaching. *Economics of Education Review, 23*(4), 411–430.

Schwartz, S. and Finnie, R. (2002). Student loans in Canada: An analysis of borrowing and repayment *Economics of Education Review, 21*(5), 497–512.

Singell Jr., L. D. (2002). Merit, need, and student self selection: is there discretion in the packaging of aid at a large public university? *Economics of Education Review, 21*(5), 445–454.

Steuerle, C. E. (1996). How should government allocate subsidies for human capital? *American Economic Review, 86*(2), 353–357.

Strathdee, R. (2011). Educational reform, inequality and the structure of higher education in New Zealand. *Journal of Education and Work, 24*(1-2), 27–48.

Şahin, İ., Şahin Fırat, N., Zoraloğlu, Y. R., and Açıkgöz, K. (2009). Üniversite öğrencilerinin sorunları. *e-Journal of New World Sciences Academy, 4*(4), 1435–1449.

Tansel, A. (1994). Wage employment, earning and returns to schooling for men and women in Turkey. *Economics of Education Review, 13*(4), 305–320.

Tomul, E. (2007). Türkiye'de eğitime katılım üzerinde gelirin etkisi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 22*(2007/2), 122–131.

Turner, N. (2012). Who benefits from student aid? The economic incidence of tax-based federal student aid. *Economics of Education Review, 31*(4), 463–481.

Vandenberghe, V. and Debande, O. (2007). Deferred and income-contingent tuition fees: an empirical assessment using Belgian, German and UK data. *Education Economics, 15*(4), 421–440.

Yavuzer, H., Meşeci, F., Demir, İ, and Sertelin, Ç. (2005). Günümüz üniversite gençliğinin sorunları. *Hasan Ali Yücel Eğitim Fakültesi Dergisi, 1*(1), 79–91.

YÖK [Higher Education Council of Turkey]. (1998), *Parental, income, educational expenditures, financial aid and job expectations of university students*. Second Industrial Training Project, April 14, 1988, Ankara: YÖK.

YURTKUR [Higher Education Credits and Dormitories Authority]. (2014). 2013 faaliyet raporu [2013annual perforrmance report]. Retrieved from https://www.kyk.gov.tr/Dosyalar/faaliyet2013.pdf on July 13, 2014.

YURTKUR. (2008). T.C. Yükseköğretim Kredi ve Yurtlar Kurumu stratejik planı 2009-2013 [Higher Education Credits and Dormitories Authority strategic plan 2009-2013]. Retrieved from http://eyurtkur.kyk.gov.tr/Dosyalar/Dosya/20092013plan03032013020009.pdf on September 25, 2013.

Waddell, G. R., and Singell Jr., L. D. (2011). Do no-loan policies change the matriculation patterns of low-income students? *Economics of Education Review, 30*(2), 203–214.

Ziderman, A. (2002). Financing student loans in Thailand: Revolving fund or open-ended commitment? *Economics of Education Review, 21*(4), 367–380.

Uzun Özet

Eğitime yapılan yatırımın büyüklüğü yükseköğretim talebinin önündeki risk ve belirsizliklerden biridir. Düşük gelirli öğrencilerin yüksek öğretim talebi öğrenim ücretlerine karşı daha esnektir. Öte yandan, farklı ve karmaşık finansman şemaları öğrenim ücretlerindeki değişikliğin farklı gelir gruplarındaki öğrencilerin yükseköğretim talebini nasıl etkilediğine ilişkin analizleri güçleştirmektedir. Öğrencilere yapılan sübvansiyonların düzeyinin yanı sıra, gereksinimi olanların doğru belirlenmesinin ve vergi sistemindeki adaletin önemi büyüktür. Kayıt dışı ekonomi kararların etkililiğini azaltmaktadır. Diğer faktörlerin yanında aile gelirinin öğrencilerin okul tercihlerini etkileyen önemli bir faktör olduğu anlaşılmaktadır. Öğrenim ücretleri ve öğrenci destekleri belirlenirken öğrenci ailelerinin gelir düzeyine dayalı bir ayırım yapılmadığı takdirde, eğitimin maliyetinin öğrencilerin okul tercihleri üzerinde etkili bir faktör olarak görünmediği ortaya çıkmaktadır. Bu çalışmada eğitimin maliyetinin eğitim fakültesi öğrencilerinin okul tercihleri üzerindeki etkisi analiz edilmektedir.

Eğitimin maliyetinin yükseköğretimle ilgili kararlar üzerideki etkisi öğrenim ücretleri ve öğrenci desteği çerçevesinde ele alınmaktadır. İktisaden düşük öğrenim ücretleri ve yüksek öğrenci desteğinin yüksek yükseköğretim talebiyle ilişkili olması gerekir. Düşük gelirlilerin yükseköğretim talebi daha esnektir. Bunun anlamı öğrenim ücretlerindeki değişikliklere daha fazla miktar tepkisi verilmesidir. Dolayısıyla öğrenim ücretleri arttıkça düşük ve yüksek gelir gruplarının talep ettikleri yükseköğretim

miktarları arasındaki fark açılmaktadır. Eşitliği sağlamanın bir yolu düşük gelirli öğrencilere sübvansiyon uygulamaktır. Sübvansiyonun devlet bütçesinden sağlandığı, devlet bütçesinin de gelir vergisine dayandığı varsayılırsa, düşük gelirlilere uygulanan bir sübvansiyon daha çok vergi ödeyen yüksek gelirlilerin talebini biraz daraltacak, düşük gelirlilerinkini ise genişletecektir. Böylece düşük ve yüksek gelirlilerin yükseköğretim talepleri eşitlenebilir.

Sübvansiyonlardaki artışın vergilerden finanse edilmesinden başka finansman yolları da vardır. Döner sermayeler bunlara bir örnek olabilir. Döner sermayelerle birlikte gelire dayalı borçlanma programları da geliştirilmiştir. Gelire dayalı kredilendirme mezunların gelecekteki gelir düzeyine göre geri ödeme yapmalarına imkan sağlayan bir yöntemdir. Öte yandan, bu yöntem düşük gelirlilerin önündeki riskleri tamamen ortadan kaldırmaz. Bu riski azaltacak geri ödeme şemaları geliştirilebilir. Ayrıca, gelire dayalı kredilendirmelerin eşitsizliği azalttığına dayalı bulgular sınırlıdır. Başka bir öneri, yüksek gelirli öğrencilerin öğrenim ücretlerinin arttırılarak elde edilen gelirin düşük gelirlilere sübvansiyon olarak ödenmesi şeklindedir. Bununla birlikte, tüm dünyada yükseköğretimin maliyetinin bir şekilde ailelere yansıtılmasının yolları aranmaktadır.

Devlet sübvansiyon burs, kredi veya vergi indirimi şeklinde yapılabilir. Yöntem ne olursa olsun amaç gelir grupları arasındaki eşitsizliğin giderilmesidir. Devletin bu tür bir müdahalesinin başarısı vergi sisteminin adaletli olmasına ve güvenilir bir kazanç veri setinin bulunmasına dayanır. Kayıt dışı ekonominin büyük olması durumunda ise, hem devletin tüketim vergilerine ağırlık vermesi nedeniyle vergi adaleti zayıflamakta hem de gelir gruplarının ve dolayısıyla destek sağlanması gerekenlerin belirlenmesi güçleşmektedir. Böylece yükseköğretim talep eden orta ve düşük gelirli aileler iki kez zararlı çıkmaktadır. Böyle bir durumda öğrencilere yapılan sübvansiyon artırılarak talepteki eşitsizliğin azaltılması mümkün olmayabilir. Dahası eşitsizlik daha da artabilir. Gelir vergisine ağırlık verilmesi düşük gelirli ailelerin yükseköğretim talebini artıracaktır. Ancak uygulanmasının bazı politik güçlükleri mevcuttur.

Öğrenim ücretlerinin kaldırılması, talep esnekliklerinin göz ardı edilmesi anlamına gelir. Devlet tarafından finanse edilen eğitim sistemlerinde talep genellikle esnek değildir. Böyle sistemlerde devletin yüklendiği finansman miktarı talep arttıkça artmaktadır. Kalite kaygıları ise bazı okullara öğrenci girişlerinin kısıtlanması yoluyla giderilmeye çalışılmaktadır. Bu durumda kalite için daha fazla öğrenci desteği gerekmekte, üniversiteler ise finansman kaynağı yaratmak için okulda verilen pek çok hizmeti ücretlendirmekte, bu ücretler de her gelir grubundan öğrenci için aynı olmaktadır. Dolayısıyla yükseköğretimin finansman sorunu sürüp gitmektedir.

Artan karmaşıklık, eğitimin maliyeti ile yükseköğretim talebi arasındaki ilişkinin doğrudan tespit edilmesini güçleştirmektedir.

Türkiye'de, diğer faktörlerin yanı sıra, aile geliri yükseköğretim talebini belirleyen önemli bir faktördür. Yükseköğretim hizmetlerinden yüksek gelir gruplarının daha fazla yararlandığı, düşük gelirlilerin vergi yüküne oransal olarak daha fazla katlandığı, dolayısıyla yükseköğretim sisteminin yüksek gelirli aileleri daha fazla finanse ettiği ortaya çıkmaktadır. Öte yandan 2012-13 öğretim yılı başından itibaren birinci öğretim için katkı payları kaldırılmıştır. Öğrenci desteklerinin her başvurana yapılmasının stratejik bir hedef olarak belirlendiği görülmektedir.

Bu çalışmada, eğitim fakültesi öğrencilerinin okul tercihleri ile eğitimin maliyeti arasındaki ilişkinin analiz edilmesi amaçlanmaktadır. Eşit öğrenim ücreti ve eşit destek politikası nedeniyle maliyet unsurlarının talep üzerindeki etkisinin doğrudan tespiti güçleştiğinden bu çalışmada öğrencilerin görüşleri alınarak okul tercihlerinin öğrenim ücretlerindeki ve öğrenci desteklerindeki artışa olan duyarlılığı anlaşılmaya çalışılmaktadır. Bu amaçla şu sorulara yanıt aranmıştır:

- Eğitim fakültesi öğrencilerinin elde ettiği destek ve ödedikleri öğrenim ücreti düzeyleri nedir?
- Öğrenci desteği alma olasılığı bölüm, sınıf, öğretim (1. ve 2.), cinsiyet, aile geliri, kişisel harcama ve iktisaden faal olma değişkenlerine dayalı olarak değişmekte midir?
- Eğer öğrenim ücreti ödenmesi söz konusu olsaydı öğrencilerin ödemeye razı oldukları miktar nasıl değişmektedir?
- Eğer yeteri kadar burs elde etmek mümkün olsaydı öğrencilerin okumayı tercih edecekleri okul ve program nasıl değişmektedir?

Bu sorulara cevap aramak için Mersin Üniversitesi Eğitim Fakültesi I. ve IV. sınıf öğrencilerine 2012-13 Bahar Dönemi sonunda bir anket uygulanmıştır. Elde edilen veriler yüzde alınarak ve $\chi 2$ testiyle analiz edilmiştir.

Öğrenciler Bakanlar Kurulu kararıyla belirlenen ücretleri ödemektedirler. Üniversite tarafından eklenen miktar düşüktür. Öğrencilerin %76,8'inin destek aldığı, bunun %96,4'ünün devlet desteği olduğu, ortalama alınan destek miktarının öğrenci başına aylık 292,4 TL olduğu, öğrencilerin %20'sinin destek sayesinde geçindiği hesaplanmıştır.

Psikolojik danışma ve rehberlik öğrencilerinin ortalamanın üstünde, okul öncesi öğretmenliği öğrencilerinin ortalamanın altında bir oranda destek aldığı ortaya çıkmıştır. Dördüncü sınıf öğrencileri birinci sınıf öğrencilerinden, birinci öğretim öğrencileri ikinci öğretim öğrencilerinden daha yüksek oranda destek almaktadır. Yıllık ortalama aile geliri 20.000 TL'nin üstünde ve altındaki öğrencilerin destekten yararlanma oranları değişmektedir (sırasıyla %60 ve %80). Alt gelir grubunda yer alan öğrenciler toplamın 3/4'ünü oluşturmaktadır. Alt gelir grubu destekten daha çok yararlanıyor olsa da, üst gelir grubunun bu şekilde tanımlanması zor görünmektedir. Zira yıllık ortalama aile geliri olan 20.000 TL, kişi başına GSYH'ye denk gelmektedir. Öğrencilerin ortalama aylık kişisel harcamaları 408 TL olarak hesaplanmıştır. Buna göre, ortalama eğitim fakültesi öğrencisinin elde ettiği destek harcamalarının %72'sini karşılamaktadır. Harcama türleri arasında öğrenim ücreti önemli bir yer tutmamaktadır. En yüksek ve en düşük harcama yapan öğrenci grupları diğerlerinden daha düşük oranda destekten yararlanmaktadır. Gelir elde etmek amacıyla iktisadi faaliyette bulunan öğrenciler çalışmayanlara göre daha az destek almaktadır.

Öğrencilerin öğrenim ücretlerindeki artışa duyarlı oldukları, yarıdan fazlasının 2.000 TL ve üzerindeki bir öğrenim ücreti düzeyinde potansiyel olarak okulu bırakma niyetlerinin olabileceği ortaya çıkmıştır. Birinci tercihleri için bu oran daha da artmaktadır. Öğrencilerin önemli bir bölümünün, yeterli finansman desteği olsaydı okuduğu üniversite ve programı bırakmak isteyebilecekleri gözlenmiştir. Bu bulgu da öğrencilerin desteğe duyarlılıklarını yüksek olduğu şeklinde yorumlanmıştır.

Eşit destek ve eşit ücret politikası nedeniyle öğrencilerin öğrenim ücreti ve öğrenci desteğine olan duyarlılıklarının doğrudan ölçülmesi güç olduğundan, bu çalışmada öznel veriler kullanılmış ve öğrenci duyarlılıklarının yüksek olduğu sonucuna varılmıştır. Bu nedenle, öğrenci desteğinin gelire daha duyarlı olduğu, sübvansiyonların daha fazla gelir vergisine dayanan bir bütçeden yapıldığı, geri ödemelerde düşük gelirli mezunları koruyan gelire dayalı borçlanma programlarını içeren daha eşitlikçi finansman sistemleri önerilmektedir.

Citation Information

Ergen, H., (2014). The sensitivity of student teachers' higher education demand to tuition and support. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi [Hacettepe University Journal of Education], 29*(4), 93-114.