

## Uncertainties and Risks Determining Individual Demand for Higher Education: A Sample from Mersin University

### Bireylerin Yükseköğretim Talebini Etkileyen Belirsizlik ve Riskler: Mersin Üniversitesi Örneği

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#### *Abstract*

There are some risks and uncertainties like imperfect intrapersonal assessments, size of investment in education, unknown future demand conditions in labor market, and students' distorted knowledge about the quality of schooling around decision to enter higher education. These risks and uncertainties may cause underinvestment in higher education and/or influence program choices. In a group of higher education students from Mersin University Department of English Language Teaching (in Mersin, Turkey), opinions on these factors or conditions were gathered through a questionnaire. Results show that students have learned from their previous attainments so they are mostly aware of their abilities, have considered future employment conditions, and their assessments on quality of schooling were distorted. Although they are risk averse, they did not consider the cost of higher education as a criterion for school choice. It is recommended that risks and uncertainties around higher education demand should be examined together with students' secondary school and family backgrounds.

*Keywords:* Higher education demand, human capital, teacher training, opinions of higher education students, Turkey.

#### *Öz*

Yükseköğrenime devam etme kararını verirken bireyler kendi yeteneklerini yeterince iyi değerlendirememeye, eğitim yatırımının büyüklüğü, gelecekte işgücü piyasalarındaki talep koşulları ve çarpık kalite algısı gibi faktörlerden kaynaklanan birtakım risk ve belirsizliklerle karşı karşıya kalırlar. Bu risk ve belirsizlikler yükseköğretime eksik yatırım yapmaya neden olabileceği gibi program tercihlerini de etkileyebilir. Bu çalışmada Mersin Üniversitesi Eğitim Fakültesi İngilizce Öğretmenliği Bölümü'nden bir grup öğrencinin bu faktör veya koşullarla ilgili görüşleri bir anket aracılığıyla temin edilmiştir. Sonuçlar, öğrencilerin önceki eğitim yaşantıları dolayısıyla yeteneklerinden haberdar olduklarını, gelecekteki istihdam koşullarını önemsediklerini ve aldıkları eğitimin kalitesiyle ilgili algılarının çarpık olduğunu göstermektedir. Öğrencilerin risk almaktan kaçındıkları halde eğitim maliyetlerinin yükseköğretim tercihlerini etkileyen temel bir faktör olmadığı ortaya çıkmaktadır. Yükseköğretim talebini belirleyen risk ve belirsizliklerin öğrencilerin ortaöğretim ve aile geçmişleriyle birlikte incelenmesi önerilmektedir.

*Anahtar Sözcükler:* Yükseköğretim talebi, insan sermayesi, öğretmen yetiştirme, yükseköğretim öğrencilerinin görüşleri, Türkiye.

#### Introduction

Human capital model assumes that people demand education for two reasons: first, because of its consumption value; and second, to invest in human capital in order to obtain higher future earnings.

Human capital means productive skills and knowledge accumulated in people. Just

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like investments in physical capital, investments in human capital yield a return. This return is measured by earnings differential that occur during the productive life of the capital. By comparing the earnings differential with the cost of investment, a rate of return is calculated. That is, rate of return of obtaining an educational degree is obtained by comparing the lifelong earnings of people obtained and did not complete that level of education with cost of that level.

The main rationale here can be explained by human capital chain: Higher education leads to more skill and knowledge accumulation which increases employment opportunities which increases productivity which increases earnings which in turn increases investments in education. Off course some social, cultural, occupational and other factors influence this process (Tilak, 2002).

There is a good deal of literature on the calculation of rate of returns of education. In general it can be concluded that returns to higher education are higher and private returns to higher education exceeds social returns. (McMahon, 1999; Psacharopoulos & Patrinos, 2004). Putting aside the fact that these evidence lead to discussions in financing of higher education; according to human capital model, earnings can be increased by obtaining higher levels of education.

There are some signaling and overeducation arguments in contrary to the link between skill accumulation and increases in earnings. However, seeing education as a signal or stressing upon mismatches in labor market do not hamper construction of a demand function for education. Factors determining higher education demand can be expressed as follows (Belfield, 2000, p. 54):

$$HED_i = f_i (F_i, X_i, Y_i, SES_i, FE_i).$$

F: Tuition fee and other direct expenditures that individual and family encounters.

X: Prices of other goods and services (substitute and complementary goods and services).

Y: Income level of individual or family.

SES: Income distribution (differences among socio-economic groups).

FE: Opportunity cost of education (forgone earnings).

Aside from the above determining factors there are also some other risks and uncertainties influencing the individual's preferences related to investing in higher education. While the quantity of schooling is a way to consider the match between schooling and jobs, workers may also be mismatched if the level of schooling is appropriate but the type of schooling is not. For example, an individual who has a major in education may prefer to work as a policeman or join in the army. Individuals select a college major based on a variety of factors including expected earnings, patterns of labor force participation, uncertainty, non-price preferences, and the likelihood of graduation (Robst, 2007).

For an individual who is about to continue higher education, it's assumed that previous levels of education have prepared the students for next level by achieving aims of schooling pertaining to that level. However, it is also widely believed that many of the students do not know whether they should attain higher education and/or take which type of education on which field. In theory individuals might know the costs that will be incurred by them and the earnings premia that will be obtained throughout the life circle. Individuals in fact could not make perfect decisions because of some uncertainties and risks depending largely on imperfect intrapersonal assessments, size of the investment in education, unknown future demand conditions in labor market, and students' distorted knowledge about the quality of schooling (Belfield, 2000).

#### *Imperfect Intrapersonal Assessments*

Educational achievement may be defined in two ways: internally and externally. Internal efficiency problem encountered by the individual depends on effort and previous learning outcomes in addition to individual's ability to learn the content and context related to type of education involved. External efficiency may be explained by employment opportunities after graduation and/or lifelong earning premium. Ability plays important roles for the both. Ability

may be decomposed into cognitive and non-cognitive dimensions. Cognitive abilities might be general or major specific (Bartolj & Polanec, 2012). Self-confidence is an example to non-cognitive abilities and can be defined as “the beliefs over one’s unknown level of cognitive ability”. There is experimental evidence that people are substantially uncertain about their relative ability and this imperfect knowledge of one’s ability might be transmitted inter-generationally (Filippin & Paccagnella, 2012).

Many university students do not take right type and amount of education because either they do not know their abilities are suitable for which one or they are wrongly oriented (Belfield, 2000). Their true ability might be higher or lower than their self-confidence (Filippin & Paccagnella, 2012). If it is lower the student will probably fail, which results cost-ineffectiveness; and if it is higher the student will be more successful than s/he expects, which results in lower potential use and therefore lower future earning differential. However there are some mechanisms in many education systems which are set for overcoming this uncertainty. Some students may assess their abilities after 12 years pre-university education; i.e. high school education may provide some of them to make right decisions. Also, they may obtain career guidance offered both by public and private institutions. Moreover, highly selective entrance examinations may match the able ones with the institutions which require higher qualifications. These possibilities favor the human capital model which considers individuals as rational benefit maximizers and as those who do this under satisfactory job conditions which yield maximum productivity. As marginal productivity is equal to individual worker’s wage, ability and training match is important.

On the other hand, these precautionary conditions do not provide individual with perfect decision because the decision on the demand for education is not only subject to ability constraints but also individual’s tastes and preferences which may also lead job satisfaction (Hilmer & Hilmer, 2012). However individual’s preferences are usually influenced by family, peer and media factors. These out-of-school effects result in a mismatch because of imperfect information. University applicants tend to prefer programs which are popular among peer groups or favored in the vicinities.

#### *Size of the Investment in Education*

When investing in an asset, a stream of risky returns is expected in the future. Investing in human capital through higher education is usually a big one considering the resources allocated by the individual and the family. Variables such as the length of study, the amount of fees, and the workload can influence the probability to enroll (Brunori et al., 2012). Furthermore, accumulated capital as a result of investment is not tradable (Saks & Shore, 2005). Therefore it is critical that the education will pay off. Another difficulty is that investing in higher education is usually an indivisible one; one has to finish all to obtain benefits resulting from the investment within a specified period. These difficulties bring out some extra risk. The opportunity cost of education and the financial constraints are important for the risk averse applicants.

Level of tuition fees, credit availabilities, repayment conditions, and expectations on future earnings determine the decision to select universities and programs. High income students may prefer studying in private universities or studying abroad, while low income students may prefer low cost public universities.

If we relate risk aversion with the income level, it is obvious that high levels of direct and indirect costs of education are influential more on low income students because of their demand’s high price elasticity (Belfied, 2000). Inequalities in distribution of income increase the volatility of demand for higher education for low income families. It is shown that relationship between net social welfare expenditure and university enrolment rates is stronger for low income regions (Di Pietro, 2003).

Credit and scholarship availabilities and the level and form of public subsidies for low income students may increase and shape their demands, making them risk takers to some degree.

In a study carried out in USA it is found that a tuition assistance grant program has increased the enrollments (Abraham & Clark, 2006). Moreover, risk-averse parents may pursue secondary education tracks that allow their children enter university programs more or less guaranteeing future employment opportunities or may prefer low profile secondary education track that allow limited access to university education (Wölfel & Heineck, 2012). A negative relationship between risk aversion and schooling is found at lower levels of schooling (up to high school grade) and it reverts to positive for college and higher degrees (Belzil & Leonardi, 2007).

Cost of education is heterogeneous, meaning that some programs are more costly than others (Courtioux, 2012). For Turkey, it can be said that investment in programs whose graduates in largely public institutions such as medicine and teacher training is less risky (Caner & Okten, 2010). Considering these programs, prestige of the university selected is relatively less important. Risk taker university applicants may prefer such programs like business, engineering or law programs of prestigious universities.

#### *Future Employment Opportunities*

Although it is shown that individuals' lifetime unemployment duration decreases more or less monotonically with educational attainment (Schmillen & Möller, 2012), another difficulty for individuals to make the decision on investing in higher education is unknown demand conditions in labor market after graduation. Economic growth may alter input combinations in final goods in commodity market. This may result in some economic adjustments. If these adjustments are not immediately made, a structural unemployment may occur in some regions, some industries and/or some occupations where labor demand decrease in accordance with the supply conditions.

Furthermore, conjunctural unemployment which arises out of deficiencies in aggregate demand may also leave some skilled labor unemployed. In developing country context expansion of higher education may be expected to lower rate of returns due to increase in time spent in job seeking and supply pressure on wages. However, despite rapid expansion in higher education, rate of returns were calculated as steadily increasing in China (Li et al., 2008). Expansion of education may also cause uncertainty because "expansion draws less able people into the educated pool" (Mohapatra & Luckert, 2012).

If it is not demanded as much as supplied in the market, the value of a labor skill declines (Belfield, 2000). A solution for this problem might be human power planning. However many governments are contended with imposing quotas on higher education enrolments due to critics of such planning methods which also fall short of predicting future demand conditions. Another solution would be more flexible labor skills obtained by some additional education. But if it is not flexible enough its value will depreciate. Therefore if individuals are not clear about future employment opportunities they would underinvest in higher education. For the individuals who want to invest, these unknown future conditions direct them to choose programs which other people do.

On the other hand value of a labor skill may also rise unexpectedly in the future. For example, benefits of learning a foreign language depends on the number of speakers of that language in tourism, commerce etc. sectors in the country. Also, knowledge of nuclear or space sciences may be more valuable if governments stimulate investments where little or nothing was invested previously.

#### *Distorted Assessment about Quality of Schooling*

School quality is also an important factor causing uncertainty (Belfied, 2000). Individuals may assess school quality wrongly. There is little problem with highly selective and well reputed institutions or programs. School quality (implies rank of the university and better teaching) and selectivity (implies competitiveness of the entrance to the university) are found to be related to increase in earnings in most of the studies (Broecke, 2012). For others school quality is usually

assessed after experience, i.e. at later grades of schooling. If students could not make school and work connections, they started to question workloads they had encountered. "What has this school work got to do with my future job?" question came. Therefore if students cannot observe school quality and future requirements for employment and promotion, they try to find easy and cheap ways for skill acquisition.

This issue is important for teachers' job satisfaction as well as student motivation. If students collectively force easy education, some schools will arise offering this type of education. This may even result in disappearance of high quality schools and therefore all the schools in this case will provide only signaling opportunities instead of human capital accumulation.

### Method

This study aims at determining the opinions of higher education students on the risks and uncertainties around their enrolments in the past. Therefore in this study students' opinions are used rather than actual cost and earnings data. Although this approach has a weakness in that students might not accurately express their expectations, expectations might have a more serious influence on school choice than current wages do. This approach also has an advantage: "expected benefits from schooling options that are not chosen are not measured indirectly by construction, but simply by asking what individuals would expect" (Scweri et al., 2011). Many scholars are reluctant to collect subjective data, however, research findings show that student expectation are not necessarily unrealistic (Botelho & Pinto, 2004; Menon, 2008).

The sample comprises senior grade students in English Language Teaching Department in Mersin University Faculty of Education in Mersin, Turkey. There were 65 registered students in 2011-12 academic year, 61 of them participated (see Table 1).

Table 1.

*Information on the Study Group (n = 61)*

		f	%		f	%		f	%
Shift	<i>Evening:</i>	20	32.8	<i>Day:</i>	41	67.2			
Gender	<i>Female:</i>	45	73.8	<i>Male:</i>	16	26.2			
<i>Parental education</i>									
Maternal	<i>Tertiary</i>	3	4.9	<i>Secondary:</i>	19	31.2	<i>Below secondary:</i>	39	63.9
Paternal	<i>Tertiary</i>	4	6.6	<i>Secondary:</i>	31	50.8	<i>Below secondary:</i>	26	42.6
<i>Parental employment</i>									
Maternal	<i>Employed:</i>	2	3.3	<i>Not-employed:</i>	53	86.9	<i>Retired:</i>	6	9.8
Paternal	<i>Employed:</i>	28	45.9	<i>Not-employed:</i>	5	8.2	<i>Retired:</i>	28	45.9

Average parental education level and employment status of students are below the Turkey averages of teacher training students (compared with the data from Aksu et al., 2010).

The rationale for selecting this group came from the fact that the entrance rank of the program declined gradually from 2007 to 2011 and the rank of the graduates in Public Personnel Selection Examination (KPSS) fluctuated (see Table 2a and b). Although the numbers in Table 2a show that minimum points are not comparable through years, it is obvious that rank of the entrants is declining. The numbers in Table 2b show that 2012 graduates have scored above average on English language test, educational sciences test and general aptitude test; whereas they have performed poor on general knowledge test, which is indicative of their university entrance examination (ÖSYS) rank. The fluctuations in other sub-scores indicate that exam performance of students depend largely on group behavior rather than courses taken throughout the program.

Table 2a.

*Data on the Performance of Program Students: University Entrance Examination - Day Shift (Evening Shift).*

Years	Choices	Placements	Scores and ÖSYM ranks		
			Minimum	Maximum	Rank*
2000-01	m	32 (0)	170.908	180.242	m
2001-02	m	32 (0)	173.399	177.413	m
2002-03	m	42 (42)	175.556 (171.684)	188.168 (173.884)	m
2003-04	m	42 (42)	357.620 (350.791)	373.786 (356.538)	m
2004-05	m	42 (42)	362.589 (358.704)	371.627 (362.781)	m
2005-06	m	41 (41)	362.916 (360.447)	386.625 (363.083)	m
2006-07	m	41 (31)	341.595 (338.166)	360.514 (341.182)	m
2007-08	m	41 (31)	342.205 (336.555)	370.662 (342.062)	2130 (3190)
2008-09	1303 (1737)	41 (41)	350.018 (343.263)	372.607 (349.984)	2460 (4230)
2009-10	880 (1061)	41 (41)	333.538 (321.930)	358.738 (333.407)	2920 (4980)
2010-11	1253 (1441)	47 (47)	461.741 (417.339)	508.091 (468.099)	3480 (6090)
2011-12	687 (1059)	47 (47)	419.675 (384.547)	488.940 (464.361)	3890 (5990)
2012-13	1462	52	419.036	510.778	7580

Source: ÖSYM (2001-2012), ÖSYM (2008-2012).

*Abbreviations:* m for missing (ÖSYM has not published).

\* Rank: Approximate achievement rank of the student entered to the program with the lowest point including 0,8 weighted secondary education achievement score.

Table 2b.

*Data on the Performance of Program Students: Public Personnel Selection Examination KPSS Ranks within Same Program Group in Turkey and Number of Graduates (Day Shift-Evening Shift).*

Years	Graduates and KPSS ranks					
	Number of graduates	Number of entrants	General knowledge	General aptitude	English language	Educational sciences
2004	11 (11-0)	17	6/26	3/26	-	8/26
2005	29 (29-0)	43	5/26	12/26	15/26	20/26
2006	70 (34-36)	82	7/30	21/30	13/30	8/30
2007	57 (42-15)	86	18/31	5/31	15/31	4/31
2008	64 (32-32)	127	20/33	12/33	5/33	11/33
2009	85 (37-48)	159	27/39	15/39	22/39	11/39
2010	69 (37-32)	190	25/38	12/38	17/38	16/38
2011	54 (32-22)	179	20/38	9/38	3/38	6/38
2012	65 (42-23)	181	21/38	8/38	3/38	5/38

Source: ÖSYM (2004-12), and Mersin University Registrar.

A questionnaire was developed after a literature review to find out students' opinions on the issue. Questionnaire was reviewed by four scholars of whom two were instructors who have been working for the department since its foundation and two were professors from department of educational sciences. Some amelioration was done. Questionnaire was applied to the students by

the author after final examination of fourth year course. Only fourth year students were included in the sample, because the fourth part of the questionnaire is only applicable for senior students. Students' responds were analyzed by frequencies and percentages to find out consistencies or inconsistencies with the theory.

### Results and Discussion

According to opinions of the students, they had been aware of their abilities to a large extent although they declared little contribution of guidance services they had received. This awareness is partly comes from the replacements in secondary education. Also they believe that university entrance examinations helped them choose a program with a relatively high proportion. On the other hand, many of them think that there is a mismatch between their abilities and the requirements of the program they have entered (Table 3).

Table 3.

*Inability to Evaluate Own Abilities (n = 61) (in %)*

Questions	Yes	No	Partly
Did you know which higher education program is suitable for your abilities?	72.1	3.3	24.6
Do you think that primary and secondary education you have received had provided you become aware of your abilities?	36.1	27.9	36.1
Do you think that secondary education you have obtained had helped you to select a program which is suitable to your abilities?	47.5	23.0	29.5
Do you think that you have received a sufficient guidance to select a program which is suitable to your abilities?	9.8	73.8	16.4
Do you think that the guidance you have received that supported you had directed you towards a program which is suitable to your abilities?	18.0	59.0	23.0
Dou you think that the university entrance examination that you have entered had placed you at a program which is suitable to your abilities?	42.6	23.0	34.4
Do you think that your abilities are beyond the requirements of the program which you are currently studying at?	34.4	36.1	29.5
Do you think that your abilities are beyond the requirements of the profession you will conduct after graduation?	29.5	34.4	36.1
Do you think that the program which you are currently studying at will provide you to find a job which is suitable to your abilities?	50.8	9.8	39.3
Do you think that the program which you are currently studying at will provide you to achieve a life standard which is suitable to your abilities?	31.1	23.0	45.9

Findings represented in Table 3 support the discussion above. Students learned from their previous attainments and replacements in secondary education and strictly regulated external examinations might have made them choose the program. According to PISA results it can be claimed that secondary education helps students poorly to prepare for higher education, as Turkish students' performance is low. However, one of the best performing countries in PISA is Korea whose high schools were found to fail to help students to develop the skills needed for higher education (Jang & Kim, 2004). The answers to 3<sup>rd</sup> question in above Table 3, on the other hand, show that secondary education may prepare to higher levels, if the program in secondary school (i.e., foreign languages) and that in higher education matches.

Possible mismatches might have resulted from peer and family effects and future employment conditions. Robst (2007) finds that 45 percent of workers report that their job is only partially related or not related to their field of study and that workers who are mismatched earn less than matched workers with the same amount of schooling.

Answers of the students to the questions related to financial risks show that when they were choosing the program they have entered, the cost of university education was not a very important issue in most cases. Two seemingly contrary results are that they have mostly chosen a nearby institution and many of them would have liked to study abroad (Table 4).

Table 4.

*Inability to Take Risk Due to the Size of the Investment in Education (n = 61) (in %)*

Questions	Yes	No	Partly
Did you select the program which you are currently studying at according to the cost of education (tuition fee and other expenditures)?	14.8	59.0	26.2
Do you think that you could not attend the university in case there were no loan and scholarship opportunities?	18.0	65.6	16.4
Did you choose a city where your family resides or near to them when you have selected the program which you are currently studying at?	70.5	19.7	9.8
Would have you selected another program or university if you have found your socioeconomic status was sufficient?	49.2	32.8	18.0
Would have you wished to study at a private university if you have found your socioeconomic status was sufficient?	27.9	62.3	9.8
Would have you wished to study at a university abroad if you have found your socioeconomic status was sufficient?	86.9	6.6	6.6

Students' responses related to risks in investing higher education imply that they made decisions about choosing the program without considering the cost of education. This may be considered partly because of publicly financing of direct costs of higher education in public universities in Turkey to a large extent. An analysis on USA data reveals that education career is relatively safe along with health care and engineering careers, compared to business, sales and entertainment careers (Saks & Shore, 2005). In Turkey teacher training and medicine programs can also be seen as safer in terms of future income. Therefore these students from faculty of education can be classified as risk averse. However if they were so, the cost of education must be more influential. For Turkish students it was found that "father's income, self-employment status and social security status are important factors influencing an individual in choosing a riskier career" (Caner & Okten, 2010).

Students' responses related to risk of investment should be explained by other reasons. Risk aversion is mostly related to wealth or socioeconomic status, however this sample does not show a sufficient variance in variables related to such factors. Students have not thought about the cost of education while making their choices. For the students from low-income families there might be some causes more influential than the cost of education such as student background and family environment. (Stinebrickner & Stinebrickner, 2003). When results in Table 4 is considered together with the results shown in Table 3, the type and quality of secondary education the student obtained are more meaningful for school choice. Considering together with the student characteristics shown in Table 1, family resources are not influential in terms of financing but, perhaps, in terms of the factors such as encouragement and provision of learning environment at home. In a study that investigates the effect of tuition costs to college continuation, factors other than cost of education such as educational background, institutional support and opportunity cost were emphasized (Dynarski, 2008).

Another reason seems to be the result of patriarchal understanding of education at home and school: children have no responsibility other than the performance goals in examinations, which adults were expecting from them. The high percentage of positive answer to the question 3 in above Table 4 might be subjected to other explanations than the cost of education, such as altruism and convenience. Responses of the students from a U.S. sample indicates that "students claiming it important to be well-off financially are significantly more likely to attend top public



universities and major in Business or Engineering while students claiming it important to live near family are significantly less likely to attend top quality private institutions and significantly more likely to major in education" (Hilmer & Hilmer, 2012). In both students' and employers' mind a baccalaureate degree in education from top level or low level universities does not result in very much employment and wage differentials. There is also some evidence that because of economic recession and slow recovery resident students crowd out non-resident students (Winters, 2012).

Many of the Turkish youth want to go abroad (Akşit et al., 2011), therefore the willingness to study abroad might be considered as a result of other social factors (media, internet, peer effects, etc.) beside the cost of education.

Findings related to future employment conditions show that the students were largely aware of the employment conditions they will have encountered. Nearly half of them have found the earnings they will obtain as not satisfying. Most of them do not assess their profession as providing a guarantee job. A considerable part of them think that some other program or university would have provided them with higher probability of future employment (Table 5).

Table 5.

*Inability to Know Employment Conditions in Future (n = 61) (%)*

Questions	Yes	No	Partly
Do you think that the probability of finding a job is high after graduating from the program which you are currently studying at?	49.2	4.9	45.9
Did you select the program which you are currently studying at because you thought that you will obtain a satisfactory earning from the profession/ job you will conduct after graduation?	24.6	49.2	26.2
Did you select the program which you are currently studying at because you thought that it will provide you a guarantee job?	39.3	23.0	37.7
Do you think that you would have selected another program if there had been no unemployment problem?	36.1	45.9	18.0
Do you think that probability of finding a job is higher when you compare your current perceptions with those you had had before entering university?	36.1	41.0	23.0
Dou you think that according to your current perceptions, the probability of finding a job would have been higher if you had selected another program or university?	36.1	29.5	34.4

Future employment conditions seem to be one of the major factors influencing the decision to choose the program. This percentage is higher than Aksu et al. (2010) found for Turkish teacher training students countrywide. However, earnings expectation in future is not higher as much as employment expectations for some of the students. Nearly half of them would have chosen another program or university in case there were no employment handicaps. In a study with a Swiss students sample it is found that "higher wage risk for educational groups is associated with higher mean wages" (Scweri et al., 2011). Opinions of the students involved in this study support this finding: The program is not relatively risky in relation to future employment possibilities and wage levels and variances are low.

In other fields, the positive answers to 1<sup>st</sup> question above would not be so higher because of the expansion in higher education. In Turkey higher education has expanded to a large extent in recent years. Expansion increases uncertainty in rate of returns to education in a developing country context (Mohapatra & Luckert, 2012). In teacher training fields there are two reasons for this: supply of labor in that field increase and number of potential suppliers graduated from the fields which Ministry of National Education considers as substitutes increase.

Students' responds to 2<sup>nd</sup> question in above Table 5 indicate that students are realistic about the future earning differential that higher education results. Similar findings were obtained in the literature (Botelho & Pinto, 2004; Menon, 2008). Another finding in these studies is that expectations of female students are lower than that of male students, which current study supports (63% of males ticked up 'no', while 44% of females ticked up 'no'). This finding implies that male students' dissatisfaction about teacher salaries is more serious. In another study it is found that the "students with higher perceived relative ability have both higher expected wages and better expected job prospects" (Brunello et al., 2004), which contradict the findings of the current study. The reason would stem from the sample characteristics: the sample of the mentioned study was chosen among business and economics students in Europe.

The answers to 3<sup>rd</sup> question in above Table 5 seem at moderate level, albeit positive. This is possibly because of the few alternatives the students have faced while applying to university placement examinations. Some of them chose this program because they could do, considering the specialization program in high school provides them higher scores for the programs which accepts entrants with coinciding exam field. This result is consistent with the answers presented in Table 3.

Students' perceptions related to the quality of education offered at the program have changed during their school life to a certain extent. Most of the students are contented with the knowledge and skills they have been taught through the program. On the other hand, much more of them find the workload they have bear in program activities heavier than necessary and a considerable part of them have thought about shifting to another institution because of this reason. Finally, nearly half of them did not consider moving to easier and cheaper institutions albeit they think that there were such ones (Table 6).

Table 6.

*Distortedness of Knowledge on Quality of Education (n = 61) (%)*

Questions	Yes	No	Partly
Did you think that the program which you are currently studying at was offering quality education before you entered university?	34.4	42.6	23.0
Do you think that the program which you are currently studying at offers quality education?	54.1	19.7	26.2
Do you think that there was a program or university offering quality education, which you would have entered with the score you obtained when you entered your current program?	49.2	32.8	18.0
Do you think that the program which you are currently studying at provides you with knowledge and skills to perform a sound profession?	63.9	4.9	31.1
Do you think that the work load students bear (lessons, homework, projects etc.) is heavier than necessary in the program you are currently studying at?	82.0	6.6	11.5
Do you think that the work load you bear at the program you are currently studying has the quality of preparing you to the profession?	42.6	14.8	42.6
Have you ever planned to pass to another program or university because of the workload you bear?	62.3	26.2	11.5
Are you contented that you will graduate from this program?	80.3	6.6	13.1
Do you think that graduating from this program will hinder you to easily find a job in future?	9.8	82.0	8.2
Do you think that the current program has provided you with skills and knowledge that you will use when performing profession?	62.3	8.2	29.5

Do you think that you will better appreciate the acquisitions from this program in your future professional life?	63.9	13.1	23.0
Do you think that you have gained more skills and knowledge in this program when you compare yourself with your colleagues from other programs or universities?	59.0	23.0	18.0
Have you ever wished studying at an easier and cheaper program?	29.5	49.2	21.3
Do you think that there are other programs or universities which are easier and cheaper and yield the same result?	59.0	31.1	9.8

Findings related to students' opinions about quality of schooling reveal that the perceptions of students are distorted. Even if most of them stated that they had not wished studying at easier and cheaper program, they had planned quitting. This is because most of them are contended with the education they have received. Findings of a study on a sample of university students from UK show that "people who attended more selective institutions are less likely to say that they would study at a different institution if they could do it all over again" (Broecke, 2012). The major problem with the opinions of participant students would be that their concern for human capital accumulation by means of a quality education is overwhelmed by their concern for KPSS (teacher placement examination). They perceive a tradeoff between efforts for studying on program courses and efforts for preparation to external examinations.

Although limited research is available, the findings show that school quality has strong positive effects on earnings (Bedi, 1997). School quality means much more than this in the case of teacher training programs, because increased teacher quality will further increase the quality of education for next generations. If school choice is possible in primary and secondary levels of education, demand for teachers with high-quality college education will rise (Hoxby, 2002). The answers to above questions show that the students' have a short-term perspective about the teaching profession, although they feel the effect of learning on their self-development. This bias may be attributed to burden of external examinations.

### Conclusion

Findings of the study show that students think that they were aware of their abilities and the program requirements were below their abilities. Academic aptitude is a key determinant of the demand for higher education and ability has a positive effect on the probability of college attendance (Light & Strayer, 2000). The answers related the evaluation of students' own abilities reveal that the secondary education background is important for program choice, as specialization area in high school strictly determines the program selected.

Students did not laid stress on cost of education while choosing the program. If the parental characteristics are considered this finding, family background appear another factor that identifies risks and uncertainties. Therefore it can be concluded that beside cognitive skills, non-cognitive skill accumulation which can transmit intergenerationally is an important identifier of higher education demand. Among the non-cognitive skills self confidence is a possible candidate for explaining the ability-school choice relation (Filippin & Paccagnella, 2012). Locus of control is another non-cognitive factor that determines an individual decision on higher education: "teenagers with an internal locus of control should be more likely to make educational investments" (Coleman & DeLeire, 2003).

In Turkey higher education is financed largely from the central government budget, therefore tuition fees do not constitute a risk over higher education investment. Therefore there is an equity-efficiency tradeoff which does not favor efficiency. However the result seems neither equitable nor efficient. It is not equitable because students from all income levels pay little or no tuition. It is not efficient because students do not relate their abilities, future employment conditions, school quality and costs of education altogether with future earnings. This may cause inefficient

use of resources allocated to higher education. Such a financing policy do not necessarily foster social equity. Like in Turkey, higher education is also expanding in South Africa. In a study of higher education in that country it is concluded that “popularized, accelerated expansion of and increased access to higher education have not significantly improved the achievement of social equity, social justice and social development because of the external influence of global competitiveness” (Ntshoe, 2003).

There is a possible solution for this problem: high income families contribute to costs and substantial scholarship opportunities for students from low income families are made available. However, the size of informal or unrecorded economy hampers such efforts. It is not easy to compare family incomes to specify those who are eligible for public support when limited information related to family incomes are available. Another possibility is income-contingent loans which are implemented in some countries such as UK, Australia and New Zealand. Income contingent loans are repayable conditionally with the income level obtained after graduation. These type of loans are defended because of their strength “(1) to generalize a financial arrangement less costly than scholarships, (2) to increase enrolment of students from low-income families, (3) to enable people to choose careers that are less lucrative but productive of positive externalities, (4) to increase resources for higher education, and (5) to put in place financial arrangements that are more income progressive.” (Chapman, 2006; as cited in Courtioux, 2012).

One of the most important sources of risk and uncertainty that students face appears to be future employment conditions and future earnings. The program choice of the students participated in this study seems to be affected largely by this factor. Although the data collected in this study presents indirect information, i.e. students opinions rather than the objective data, it is claimed in this study that the expectations of students are important for higher education demand. Previous research findings indicate that students appear to be aware of the positive relationship between education and earnings, and that their expectations regarding future earnings are largely realistic (Botelho & Pinto, 2004; Menon, 2008). Students’ expectations about future earnings and employment opportunities are affected by, *inter alia*, their secondary education background as well (Menon et al., 2012).

The distortion in quality perceptions of students raises a question whether high quality or low quality schools provide more likelihood of graduation. If school quality and student ability are linked, then a match problem arises. “In making attendance decisions, however, students tend to sort themselves by ability: low-ability students are more likely to attend low-quality colleges than high-quality colleges, while the most-able students are more likely to attend select colleges than lower quality schools”. Light and Strayer (2000) show that “student of all ability levels have higher chances of graduating if the quality level of their college matches their observed skill level.”

Quality of higher education is important for demand because “once individuals participate in higher education, high-quality educational systems raise the investments in higher schooling made by each person” (Castelló-Climent & Hidalgo-Cabrillana, 2012). Quality of the higher education should be examined together with quality of secondary education which “affects decisions to enter higher education, and once enrolled, how much to invest in higher schooling” (Castelló-Climent & Hidalgo-Cabrillana, 2012). Quality of education contributes economic growth as well as the quantity of it does, by expanding access to more agents and by increasing the investment made by each agent. School quality may be more important for the economic prospects of developing nations. Further, if school quality has a strong impact on earnings then it might be more productive to allocate resources to ‘deepening’ the existing education system rather than expanding the education system” (Bedi, 1997).

Distortedness of perceptions of higher education received is partially attributable to the efficiency-equity tradeoff discussed above. If the human capital accumulation is not perceived as an important factor for future earnings, then higher education have only a signaling value, and students feel themselves as overeducated. Therefore it is important that students’ perceptions on quality of education should not be distorted from a human capital point of view.

On the basis of the results of the study it is recommended that risks and uncertainties around higher education demand should be examined together with students' secondary education and family backgrounds. It is also recommended that more efficient and still more equitable methods of public financing of higher education should be generated.

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