INTERGENERATIONAL MOBILITY IN EDUCATION IN TURKEY

by Bahadır Cem Uyarer

Submitted to the Graduate School of Arts and Social Sciences

in partial fulfilment of the requirements for the degree of

Master of Public Policy

Sabancı University

August 2014

INTERGENERATIONAL MOBILITY IN EDUCATION IN TURKEY

APPROVED BY:

İzak Atiyas: …….……..…….

(Thesis Supervisor)

Alpay Filiztekin: …….……..……..

Cem Başlevent …….……..……

DATE OF APPROVAL: 05.08.2014

ABSTRACT

INTERGENERATIONAL MOBILITY IN EDUCATION IN TURKEY

Bahadir Cem Uyarer

Master of Public Policy, 2014

İzak Atiyas, Supervisor

Keywords: Intergenerational Mobility, education economics, education policy, educational mobility, education and social characteristics

Despite enactment of Constitution No. 42 "*No one shall be deprived of the right of education"*, there is substantial difference among individuals' educational levels. In addition, the centralized and egalitarian education system in Turkey reduces the cost of education for poor families, and so it should make intergenerational mobility easier. Nevertheless there is strong association between education level of individuals and their family background. In this thesis we try to figure out the degree of association between fathers' and individuals' education levels. During the analysis we use the Markov chain model and indices obtained from transition probability matrices. Also to add further controls we run OLS and ordered logit estimation. For genders, age groups, religiosity groups and ethnicities we run separate ordered logit regressions. Our results show that intergenerational mobility in Turkey is lower than Italy and the US. Our in-group comparisons show that female individuals are less mobile than male individuals and they are less likely to get further education. In terms of age groups, older age groups are less mobile and less likely to get further education. Kurdish individuals are more persistent at bottom category and less mobile than Turkish individuals. The negative effect of being Kurdish is higher at older age groups. In terms of religiosity levels, non believer individuals are more likely to get further education than remaining groups. In addition, pious individuals are less mobile. On the other hand, the negative effect of being female is higher among pious individuals compared to other religiosity levels.

ÖZET

TÜRKİYE'DE NESİLLER ARASI EĞİTİM HAREKETLİLİĞİ

Bahadır Cem Uyarer

Kamu Politikaları Yükseklisans Programı Tezi, 2014

İzak Atiyas, Danışman

Anahtar Sözcükler: Nesiller arası hareketlilik, eğitim ekonomisi, eğitim politikası, eğitim hareketliliği, eğitim ve sosyal yapı

Her ne kadar Anayasanın 42. Maddesi "*Kimse, eğitim ve öğrenim hakkından yoksun bırakılamaz."* hükmetse de, bireylerin eğitim seviyeleri arasında büyük farklılıklar vardır. Ek olarak, merkezi ve eşitlikçi eğitim sistemi eğitimin maliyetini yoksul aileler için düşürüp nesiller arası hareketliliği kolaylaştırmasına rağmen Türkiye'de, bireylerin eğitim seviyeleri, ailelerinin sosyo ekonomik durumuyla ilişkilidir. Bu tezde biz bireylerin eğitim seviyeleriyle babalarının eğitim seviyeleri arasındaki ilişki seviyesini ölçmeyi amaçladık. Bu analizde Markov zinciri modelini, geçişlilik olasılığından elde edilen indeksleri, en küçük kareler metodunu ve sıralı logit tahmin yöntemlerini kullandık. Cinsiyetler, yaş grupları, etnik kimlikler ve dindarlık seviyeleri için ayrı ayrı sıralı logit tahminleri yapılmıştır. Elde edilen sonuçlar, Türkiye'nin nesiller arası hareketliliğinin İtalya ve Amerikadan daha düşük olduğunu ortaya koymaktadır. Gruplar arası karşılaştırmalarımızda kadın bireylerin erkek bireylere göre daha az hareketli ve yüksek eğitim alma olasılıklarının daha düşük olduğu ortaya çıkmıştır. Daha yaşlı bireylerin daha az hareketli olduğu ve genç bireylerin yüksek eğitim alma olasılıklarının daha yüksek olduğunu bulunmuştur. Ek olarak Kürt bireylerin Türk bireylere göre daha az hareketli olduğu ve düşük eğitim seviyesinde kalma ihtimallerinin daha yüksek olduğu gösterilmiştir. Bireylerin dindarlık seviyeleri göz önünde bulundurulduğunda, daha dindar olan bireylerin nesiller arası hareketliliğinin ve ileri eğitim alma ihtimallerinin daha düşük olduğunu gözlenmiştir. Öte taraftan, dindar bireyler arasındaki kadınların daha az hareketli ve az eğitim alma olasılıklarının daha yüksek olduğunu saptanmıştır.

ACKNOWLEDGEMENTS

I am thankful for each individual who contributed to my thesis. First of all, my professor Alpay Filiztekin, pay substantial effort for my thesis. His advices, knowledge and guidance make this thesis possible. Also, I am thankful to my advisor İzak Atiyas and jury member Cem Başlevent for their valuable comments. In addition, I am extremely thankful to Ozan Bakış and Sezgin Polat. They provided the data for this study and made numerous contributions during our study.

On the other hand, I want to thank my family for their patience and support during our study. Also, for invaluable encouragements, I want to thank my dearest girlfriend Sinem Göçmen. In addition, for each phone call, I want to thank my class mate İbrahim Oker. I am thankful, to all my friends for their kind attitude during my stressful period. These people made me capable manage to write this thesis.

In sum, I am grateful to my all professors at Sabanci University. They both directly and indirectly contributed to my knowledge and passion that are crucial for this study.

TABLE OF CONTENTS

LIST OF TABLES

Chapter 1

Introduction

Intergenerational mobility is a measure of the degree to which income/education is transmitted from one generation to another. If there is high persistence among generations, there stands little chance for equality of opportunity which implies that a person by working hard can go as far as her/his talents allow without facing a barrier. Equality of opportunity is not only a matter of fairness or justice. As long as money cannot substitute innate ability, one can show that social welfare of a society will increase with the providing of equality of opportunity among the individuals of a society, since smart children from poor families will be more likely to contribute to the aggregate human capital (See Galor and Zeira, 1993). We conduct this analysis in order to comprehensively examine the intergenerational mobility level of Turkey. As we know from Baslevent (2012), there is strong an association between the education level of families and the educational level of next generations. Particularly for Turkey, Tansel (2002) in her work demonstrates that, this hypothesis holds for Turkey as well. Therefore, we can claim that, in Turkey education level of an individual is strictly associated with the educational level of previous generations. The results of the previous studies present that, the ignorance of the previous generations' one of the factors which constitutes an obstacle to increasing school attainment rate in Turkey. In addition, the level of association, - hence the level of obstacle or pushing force for getting further education- vary according to a number of variables such as gender, religiosity level, migration status and the ethnicity of individuals. Therefore in our analysis, we examine the association between the education levels of fathers and individuals by considering social and individual characteristics. We have several motivations to conduct this research to analyze intergenerational mobility with

consideration of several social and individual characteristics. First of all, as put forth by Aslankurt,

> "*Education is one of the key factors that determine the quality of human resources and thus competitiveness of a country. The steps that will enhance the access to and quality of education can facilitate economic growth by helping male the best use of human capital*[1]*. By the same token, a good education is critical for an individual born to a low-income family to be able to switch to an upper level of income. In other words, education can be major tool of intergenerational social mobility"*(Tepav, 2013, pg.1).

Moreover, as Barro (1991) demonstrates, the growth rate of real per capita GDP is positively related to initial human capital (proxied by school enrollment rates). Poor countries tend to catch up rich countries if the poor countries have high human capital per person, but not otherwise.

In this study, we study the intergenerational mobility level in education in Turkey via the Markov chain model, mobility indices and the ordered logit model. The main motivation of this study is raising a debate about the intergenerational mobility at Turkey. Although studies about intergenerational mobility are abundant for advanced countries, the number of related studies for Turkey is very limited (e.g.: Betam, 2013; Mercan, 2012). The previous studies relate the income levels of individuals through the consideration of the educational level of previous generations. While equations similar to Mincer's (1974) have been used in the previous studies, these works do not directly measure the mobility level of Turkey as done by some of the scholars for several countries (e.g.: Checchi et al., 1999). With this point, therefore, the first contribution of this thesis is a comparison of Turkey with other countries, through the widely accepted methodology for intergenerational mobility analysis. For instance, we find that, Turkey is less mobile than the US while the mobility levels are almost equal for Turkey and Italy. The second contribution is that for the first time we report the intergenerational mobility measures for different social groups, such as ethnic and religion sect groups of Turkey. Moreover, we try to examine whether educational mobility differs according to the level of religiosity.

In brief, the results of this study show that, female individuals are less likely to get more education than their fathers compared to the group of male individuals. Association between the education level of fathers and individuals differs according to

[1] OECD (2012), Economic Policy Reform 2012: Going for Growth, OECD Publishing http://dx.doi.org/10.1787/growth-2012-en

the religiosity levels and ethnicity of individuals. Pious and religious participants are less likely to get more education than their fathers compared to believer and non believer individuals. In this study above mentioned religiosity levels of individuals are based on the self reports of participants. We find that, religion sect does not matter in terms of obtained educational level and association between the education level of fathers and individuals. In terms of migration status, migrants and "fathers' migrant individuals" are more likely to get further education than their fathers compared to local individuals. We define "fathers' migrant individuals as" people who are migrants as a consequence of the migration of their families.. In other words, migration takes place as result of family decision. Also, among Kurdish individuals, persistence at bottom category is higher than Turkish individuals. That is, Kurdish individuals from low education category are less likely to achieve higher education categories than Turkish individuals.

The thesis is organized as follows; chapter one covers the introduction of this study. In this chapter, we present the underlying motivation behind this study and the importance of my research question. In the second chapter we provide literature review that covers mobility analysis according to their topics. Chapter three presents the data that we use at this study and the descriptive analysis of data. In chapter four, we analyze the mobility levels according to combined groups and present a comparison of these groups. With this aim, first, we use Markov Chains and Mobility Index which are obtained from the Markov chains. Second, we run OLS and ordered logit estimation with some further controls which are not included at Markov Chains method. Finally, we conclude by indicating the importance of my findings which may eventually pave the way for further research.

Chapter 2

Literature Review

2.1 Theoretical Studies

In spite of the fact that recent studies on intergenerational mobility are using empirical methods, when proper data about mobility was not available, there were substantial efforts to build theoretical models to understand intergenerational mobility. Scholars formulated several theoretical models in order to estimate the mobility level of societies. In the literature, there are several models that try to understand the causes of mobility and the factors that hinder it.

The main reference point for the empirical studies on income mobility literature is Becker and Tomes (1979). They established a micro economic theory in order to understand inequality and intergenerational mobility with the assumption that each family maximizes a utility function spanning several generations. The families' utilities depend on their consumption and the consumption quantity and quality of their next generation. According to the theory, the income of the second generation increases when they obtain more human and nonhuman capital from their families. In addition to this, their income depends on endowments which are genetically transmitted from their family such as race and capability to improve their skills. In other words, the future income of the second generation depends on both investment of their families and transmitted endowments. As a result, considering these parameters, the income of the second generation will be determined by the labor market. The intergenerational mobility measures the impact of the family on the second generations' income. They showed that family became crucial factor when the level of inheritability and the tendency for investment is large. In cases where these are small enough, the correlation between family income and the income of next generation becomes ignorable. Mulligan

(1997) added family priorities to the examination and extended the theoretical framework of Becker and Tomes.

A useful variant of the Becker-Tomes model was provided by Solon (2004). According to his theory, families are getting utility from their own consumption and their second generation's welfare as in the Becker-Tomes theory. They choose the level of investment in human capital and level of consumption of their children, in the constraint of their budget. The level of human capital received by children will be determined by both investments of their family and public resources. In addition to acquired human capital, individuals get endowments from their families. As a result, the income of the second generation depends on their human capital and return of that human capital. Solon examined the case in which the steady state was perturbed by an innovation to either earning returns to human capital or the progressivity of public investment in human capital. He measured the changes in intergenerational elasticity.

2.2 Data, Conceptualization and Methodology

Literature on the persistent inequality of opportunity, especially researches on social mobility, had been accelerated by benefiting from recently developed techniques. The most important finding was establishment of "log-multiplicative layer effect model" by Xie (1992). The main purpose of this model is comparing mobility tables that indicate associations between social origins and destinations. The model constrains the cross table variation that was found in the origin destination correlation to be the log multiplicative product of a common correlation way and table specific parameter. This model has some similarities with Yamaguchi's (1987) uniform layer effect model. Both models provide one parameter test and hence conduct and analysis of the difference in mobility between mobility tables. In terms of flexibility of specifying the origin destination correlation, the log multiplicative layer effect model is provided as well (Xie, 1992). Goodman et al. (1998) contributed to this model with the investigation of two empirical examples. Their related empirical examination with this context was cross national differences in the association between occupational origins and destinations in an intergenerational mobility table. Using these empirical examples they demonstrated a new level of flexibility within the model (Goodman et al., 1998). Other technical developments continuing, such as log linear models as logit models for individual level data, two sided logit model, and models which allow the simultaneous

modeling of the marginal and joint distributions of the mobility table (Breen, Jonsson; 2005). Because of shortage of data, in our analysis, we can only calculate educational mobility index. Thus, we do not use models similar to "log-multiplicative layer effect model".

2.3 Education and Social Mobility

Schooling is one important way in which next generations can escape from family-based poverty. In general, in the economic literature, human capital is measured by school attainment level of people, because measuring the productivity of individuals is nearly impossible. On the other hand, there is a vast literature that shows that schooling level is providing signals for employers about the productivity level of individuals. These are reasons why schooling level of people is main determinant of the income and welfare level for individuals because it is main determinant of occupational status. Therefore, in general, intergenerational mobility studies use schooling as a proxy in order to measure openness (intergenerational mobility) level of societies. Hence, the literature focuses on the association between fathers' education or income and next generations' education level. The reviewed studies are trying to understand the relationship between characteristics of the family and the educational and thus labor market outcomes of the next generation. In this way, they appoint mobility-openness level for certain societies.

In order to understand educational mobility, the empirical approach, uses various theories. In addition to that conceptualization also has various forms. In order to define social origins and destination level of individuals, there are three indicators which are commonly used at literature. These are prestige scales, socioeconomic indicators, social class features (Breen, Johnson; 2005).

In order to understand the empirical relationship between origin characteristics and educational attainment, several cross country analysis had been done and these studies are collected by Shavit and Blossfeld in the *Persistent Inequality* (1993). The book contains studies from six Western European, three Eastern European and four non-European countries. Hence, it provides wider comparable results about the effects of the origin on the school attainment of next generations. The striking findings of these studies were stability in effects of origin on educational attainment over time.

According to results, there were no equalization, except for Netherlands and Sweden, among social origins and next generations' school attainment. In contrast, some later studies proved that in other European countries equalization among origins have occurred. Jonsson et. al. (1996) show that in Germany, effects of the social origins on educational attainment for next generation were reduced over time. Then equalization among social origins in terms of educational attainment for next generation is established at least for Germany. In addition to Germany, various studies showed that Italy (Shavit & Westerbeek, 1998) has established equalization between social origin and school attainment as well. In terms of equalization among social origins, some countries have different progress over time. According to Breen and Whelan (1993) study, in Ireland the correlation between social origin and school attainment of second generation is constant over time. Same results were found for US as well (Hount et al., 1993). Moreover, the correlation thus social stagnation was found for post-Soviet Russia (Gerber, 2000). Even thought, provided information about certain countries, the evaluation of the level of opportunity inequality could not been showed. The data which necessary for evaluation is not proper for understand the underlying reasons. These studies only showed that, in terms of equalization of education there are differences among countries.

To asses educational attainment, in addition to social origins there were many other variants. Previous studies have shown the association between social origin and educational outcomes. Some scholars use rational choice model in order to explain inequalities in educational attainment (Boudan, 1974 and Gambetta, 1987). In the rational choice model, school attainment is the function of several parameters such as forgone income of individual, cost of attaining school, expected payoff after schooling. The decision is made by both families and the next generations. The government is a factor in rational choice theory as well. For instance, the cost of education, which has substantial effect on the decision, is strictly related with policies that are implemented by the government. The most famous model among economists was established by Breen and Goldthorpe (1997). The model they presented was tested by several scholars with empirical indices. Hillmert and Jacob (2003) used the rationale choice model in order to explain social inequality and access to higher education in Germany.

According to the findings of Breen and Jonsson (2000), the social origin has a stronger effect on school attainment for the younger offspring. Erikson (1996) confirmed the idea for Sweden and Scotland.

Above listed studies are eager to use, ethnicity, religiosity and sect variables in our study. On the other hand, the difference among cohorts in terms of mobility is another motivation for establishing age groups during our analysis.

2.4 Country-Based Comparisons

There is a vast amount of literature comparing countries according to their mobility levels. These studies focus on comparing Europe and the U.S., as most of the reliable data on mobility levels comes from these regions. Comparison within European has become a hot topic amongst economists as well. The Sutton Trust report provides sufficient comparison between Europe and North America in terms of intergenerational mobility (Blanden et. al., 2005). According to their findings, the mobility level of Britain and the US has very similar characteristics. Contrary, Canada and the Nordic countries are more mobile than Britain and US. Germany has a better position than US and Britain in terms of intergenerational mobility. In addition to these international comparisons, the report also evaluates the intergenerational mobility level of these countries. According to their results, the level of mobility among social classes has significantly decreased in Britain over time. The cohort born in 1958 has more chance than the cohort born in 1970 for go further from their families. Stability was founded for US over time. The underlying reason of increasing rigidity for Britain is increasing association between family income and educational attainment. These results are supportive for the above listed findings. Conversely, the rigidity of the US society depends on slightly different reasons. The income of the family in the US does not necessarily indicate an advantage in schooling, but the education advantage is worth more in the labor market. In addition to this, Hertz (2005) showed that race has substantial effect on the rigidity of the US society. According to his study, black families are more restricted than white families.

The general idea in comparing countries according to their rigidity level depends on the idea of comparing egalitarian policies. In other words, this theory states that countries with more egalitarian policies will be more open to intergenerational mobility.

However, as the outcomes of the policies will take various forms, this theory become problematic. Indeed, the taken form will be far away from intention of implemented policies. The empirical comparison also contains many problems as well. The differences about the conceptualization and the measurement methods between countries create obstacles for comparing countries.

Despite the obstacles of comparing countries in terms of their rigidity level, there is a vast literature on the openness levels of countries. In some studies, the definition of mobility analysis differs as absolute rates refer to the flow between social origins and destinations and the relative analysis of relative rates refers to form of odds ratios. Breen and Luijkx (2004a) analyzed data from eleven countries. Using 117 mobility surveys covering the period from 1970 to 2000, they found a convergent trend among countries in their absolute mobility rates and in their class structures. In the context of relative mobility rates, they found that countries differ; it is same for both sexes. Germany, France, Italy and Ireland were found to be the least mobile (relative) countries. On the contrary, Israel, Sweden, Norway, Hungary, Poland, and, by the 1990s, the Netherlands were found to be the most mobile (relative) countries. The study could not find any divergent characteristics among sexes. In contrast to absolute mobility, they could not see any evidence of convergence among countries in their relative mobility.

Erikson and Goldthorpe (1992) added US to their comparison. According to their findings, the US has similarities with European countries in their relative mobility levels. Although, they found slightly higher mobility, it was associated with the measurement errors. In addition to this, direct comparison was done by Hout and Dohan (1996). They compared the educational inequalities between US and Sweden. They found that their inequality levels are very similar.

Contrasting these results with the studies that are using income as a measurement of inequality of opportunity is providing interesting points. In studies that cover father to son income mobility, the U.S. is found to be more immobile than the previously compared countries. In the U.S. and England, father to son elasticity are nearly 0.45 and in Sweden and Finland the elasticity is 0.13 and 0.28. In Germany, it is 0.34 (Solon, 2002). Solon estimated these elasticity values by applying least squares to the regression of a logarithmic measures of son's earnings on a logarithmic measure of father's

earning, with controls for both son's and father's age. With this method, he tried to provide an answer to questions such as "if the fathers' earnings are fifty percent above the average in his generation, what percentage above the average should we predict the son's earnings will be in his own generation?" Also, if the variances in the logarithmic earnings variables are about the same in the son's and father's generations, elasticity will equal the correlation between the log earnings variables for the two generations. As a result, different directions were showed with the studies which are using educational attainment as a measure of social mobility. According to Breen (2005), this separation among results occurred because correlation between education and income is higher than Europe at US. Even though the U.S. is more open in terms of social mobility, the current inequalities are creating more deterioration for lower class and more profitable for remains (Breen, 2005)

In addition to the effects of schooling, the impact of different education institutions on intergenerational mobility had been stressed as well. Checchi et al. (1999) studied the effects of public schools on intergenerational mobility. Their study was based on a comparison between Italy and the U.S. These countries were selected because the Italian school system could be characterized as centralized and publicly financed through collected taxes. Therefore, for all citizens of Italy, the same quality and quantity of education is provided for free. On the other hand, the U.S. system is decentralized and mainly private. Public educational services are financed at the local level. and the proportion of students attending private school is very high. Due to this distinct education system, comparison was possible among these two countries. The prediction is that children from a low income Italian family have an equal chance to get quality of education as compared to children from high income Italian family. In contrast, it was predicated that, in the U.S., children from low-income families are disadvantaged by the private structure of the educational system. Because of this, it was thought that Italy would to be more equal and mobile than U.S.; however, the empirical results showed that although the first hypothesis holds, the second is falsified. The U.S. is more mobile than Italy. So that, with the assumption, the main goal of the public education system is providing equal opportunities to society and provide social mobility, Italian public school system failed. Despite the offered educational opportunities, Italy is faced with lower intergenerational mobility than the U.S. in terms of occupation and education level. Yet, these results do not prove the idea that public schooling leads to more social

rigidity. For instance, in Germany education is provided by the state as well, and Germany is more open to intergenerational mobility than the U.S. (Yuksel, 2009). This comparison suggests that decentralizing the schooling system creates more options in terms of education since education is fit to the demands of the labor market. In addition to this, higher variety among investment goods, in this case the investment goods are schools, increases the attractiveness of investment in education. In sum, in order to eliminate the effects of family background on the labor market outcomes of the second generation, purely centralized and uniform quality and quantity of education is not sufficient. It does not help children from poor families to compete with children that come from rich families in terms of obtaining education.

Intergenerational mobility has been examined with some macroeconomic indicators as well as micro models. For instance, the study of Hassler et al. (2002) examined the impacts of the labor market institutions and education policies on inequality and mobility. They showed how exogenous changes lead to different correlations between inequality and mobility. According to their results, differences in the amount of public subsidies to education and educational quality produce cross country patterns with a negative correlation between inequality and mobility. Differences in the labor market, such as differences in skill biased technology or wage compression creates positive correlation among inequality and mobility. They suggest that the causes of changing inequality over time and across countries will be understandable only with the observation of changes in mobility. In addition to these findings, they examined the effects of public education. They showed that the optimal amount of public education differs for skilled and unskilled individuals.

> *"if unskilled parents can make good use of education they tend to prefer more public education than skilled parents, since their share in its tax burden is smaller. But if unskilled parents are less effective in using education, as many empirical studies show, they might prefer to have less public education than skilled parents prefer"*(Hassler et al., 2002).

Despite striking findings, their study has some weaknesses. In order to conduct a macro model, Hassler et al. have made many strong assumptions which weaken their argument. For instance, in this model, parents cannot borrow against the future income of children and education must be financed by current income only. In addition to this, uncertainty is removed. They assumed that parents have perfect information about the educational ability of their children. These assumptions are too strong, because nearly

for all countries there are credit systems for families, uncertainty about return of education is stylized fact and ability of children cannot be monitor perfectly.

2.5 Explaining Change

There are substantial effort for understand the variations of relative social mobility levels. In order to understand the variation between countries, Sieben and Graaf (2001) presented a comparative analysis among siblings. In this analysis, they tested modernization and the socialist ideology hypothesis. They used survey data on brothers from England, Hungary, Netherlands, Scotland, Spain and the U.S. The data covers the period between from 1916 to 1990. According to their results, the effect of the origin class to next generation's educational attainment are getting smaller in the technologically advanced societies, and the effect of parental social class on occupational status of next generation are getting smaller in social-democratic and communist countries. In addition, according to their results the impact of the family on occupational status of their children is declining with modernization. In sum, the importance of the origin for sons in terms of schooling or occupational status was still there with diminishing volume.

The other way around, Erikson and Goldthorpe (1992) found that more equal societies provide more mobility for her citizens. Contrary, Breen and Luijkx (2004b) could not find any supportive evidence for this statement. Their comparison between European countries showed that social mobility is higher at state socialist countries such as Hungary and Poland and in social democrat countries such as Sweden and Norway. Although these findings suggest that more progressive policies create more mobile society, the high rankings of Israel and the Netherlands contradicted this idea (Breen, 2005).

In addition, the social characteristics, for instance modernization, inequality of condition, education system are being seen as underlying reason for differences among countries in their social mobility level. For instance, Biblarz et al. (1997) did an analysis in order to understand the effect of family types on mobility level. Their main question was "do children from alternative family structures experience different patterns of socioeconomic attainment and social mobility than children from two biological parent families?" According to their findings, different types of family structures during

childhood have varying effects on men's socioeconomic attainment and mobility. Taking occupational features as the constant, men who grew up in mother headed family structure do as well as men from two biological parent families. Contrary, there is a negative impact of other types of family structure on socioeconomic attainment.

As well as family structure, ethnicity and religion have an impact on mobility level. Khattab (2009) found some contributive answers to this question. His main questions were "Does education has similar effects on occupational attainment across ethnic and religious groups? Is the volume of the impact depends on skin color or religious structure? He used data from the 2001 UK Census. According to their results, ethnicity per se is not crucial factor but generates some differences as a proxy. Also he found that, color of the skin and religion are to a greater extent arguably the main parameters that create disadvantage among some groups. On the other hand, these parameters provide higher social mobility amongst others. The direction and the volume of the effects were found as dependent on whether specific culture is seen as compatible or friendly to the hegemonic culture.

According to Hout's (1998) study, socioeconomic statue become less important for both genders in terms of occupational mobility since 1972. Her result suggests that the correlation between socioeconomic origin and destination decreased by one-third between 1972-75 and 1982-85. According to her study, the underlying reason for these decreases is raising the number of workers with college degrees. The more the number of college graduates decreased the correlation between origin status and destination status. Although the correlation between origin status and destination status remains for college graduates, it is very strong among workers without degrees. Thus, the rising proportion of college graduates in the workforce creates a declining trend in the overall level of inequality of opportunity.

2.6 Mobility and Gender

In general, early researches on the mobility level of women showed that there are only few differences among genders (Dejong et al., 1971). For this study Dejong et al combined six samples which are covering period from 1955 to 1965. The data provided by The Opinion Research Center for six nations. They examined the following aspects of mobility: occupational inheritance, the presence of mobility, the direction of

mobility, the distance of mobility, the concentration of supply, the concentration of recruitment, the relative magnitudes of upward and downward mobility and the nature of barriers to mobility. According to their results, in each category, there is no major difference between males and females. But some other subsequent studies findings are contradictory with the Dejong et al findings. Havens (1972) showed the weaknesses of this study and she proved that the findings of this study are misleading. One of the main critiques was, according to Havens they employed a technique of analysis not designed for comparing populations with differences. In addition, they did not attend to important to documentable differences between the occupational distributions of females and males or to the differential rewards male and females receive for occupational activity. Also, they did not attend to specific differences by gender which could be observes in the data they had. According to Heaven, these are creating bias on their estimation. So that, the conclusion which they receive "essentially no differences between female and male patterns of mobility" is misleading.

2.7 Family Norms

As I mentioned above, the question "why children from richer or more elite origins experience higher welfare" has various answers. In this context, the interaction of parents with their children is essential, as well as education. In other words, families have a wider impact on their children rather than investing on them. Firstly, the relationship between children and family is kind of role modeling, it contains values, aspiration and norms (Jonsson, 2010). The transmission of these parameters creates differences among the offspring from different social origin groups. Jonsson's study is drawing only one description for the difference among the social origin's second generation. In addition to this, there are vast sociological literatures that try to understand the underlying reason for the different outcomes of the second generations from various social classes. In the context of this review, I focus on economic studies because sociological studies are out of our main examination.

Chapter 3

Data and Descriptive Statistics

3.1 Data

We use data from "Barometre Surveys" conducted by "*Konda Research and Consultancy"*. Konda is private firm that serves as independent research agency specialized on public opinion and market researches. The main aim of the "Barometre Surveys" is measuring political trends via regularly conducted surveys. In other words, used survey does not aim to measure the educational and social characteristics thus mobility of participants however it asks for individual characteristics of participants such as educational status, migration status, ethnicity, religiosity, religion sect etc. The underlying reason why we use this data is, asked question about fathers' educational status. It makes Barometre unique for this study. Moreover, due to repeated cross section structure of Barometre, it provides larger observations than any other dataset. In this study, we pooled surveys conducted at December 2010, April 2011, January 2012, November 2012 and January 2013, February 2013, March 2013, April 2013, May 2013, June 2013, July 2013, September 2013, October 2013, November 2013. Although Barometre conducted monthly between 2010-2013, remaining are excluded from study due to missing questions about fathers' educational status, participants' education status etc. In conclusion, we use 14 surveys out of 35 surveys conducted by Konda. As a result of excluded surveys from whole dataset, we obtained 36,425 observations that represent Turkey. From remaining surveys we drop observations that have missing response for questions that ask age, gender, educational status, father's educational status. After dropped observations, we run t-tests in order to make sure about randomness of missing

responses thus dropped observations[2]. Results show that, dropped observations do not create any significant difference at our sample. Therefore, we assume that, missing response for mentioned questions are random hence we excluded observations that contain missing response at this study. Furthermore, we restrict the age interval of participants from 18 to 80. During setting threshold, 80 were used for obtain valid response, on the other hand 18 is legal threshold for participate conducted survey without probation of any family member. In sum, after mentioned process we obtain 31,679 observations that is representative for Turkey.

3.2 Descriptive Statistics

In this section we try to describe our dataset according to individual and social characteristics of participants. Furthermore, brief information about educational status of participants and fathers' education of participants are given as well. Despite wider information about participants' political standing point and socio economic conditions, in this study we use variables that are related to educational status of participants. In addition, we use social and individual characteristics of participants as control variables. Used variables captured or created as follows: Questionnaire asks for educational status and fathers' educational status of participants. Although, responses are grouped as illiterate, literate without any degree, primary school graduate, middle school graduate, high school graduate, university graduate and graduate school; we combine illiterate and literate without any degree as No Degree. On the other hand, as a consequence of small proportion participants with graduate degree, University Graduates and Grad School Graduates were combined in University category. We take remaining categories as same. Therefore, we obtain four level educational status variables. We follow same procedure for fathers' education level as well. In this way, we create educational status and fathers' educational status variables with 4 categories. Furthermore, we assign schooling years for all categories respectively, 0, 2, 5, 8, 11, 15, and 17; for Illiterate, Literate, Primary School, Middle School, High School, University and Graduate School. This imputation is in line with literature (E.g.: Tansel and Bodur, 2012). In terms of age, we create age groups as 18-24, 25-39, 40-49 and 50 and beyond. During creation of age

[2] See Appendix 1 for t-tests results

group variable, education system changes[3] and household income over life cycles[4] were considered. 18–24 age group is established because they are affected by education reform, other age groups are established according to household income findings of Cilasun and Kırdar (2013). As other factors, during study we also consider ethnic origins, religiosity level, religion sects and migration status of participants. We create migration variable according to response of participants. At questionnaire there are 5 categories for migration status respectively, no migration, migrant, father is migrant, father and participant is migrant, father return homeland. We cluster these categories respectively as local, migrant and father's migrant. Thus, we categorize migration status to 3 out of 5. In terms of ethnicity we combine Kurdish and Zaza participants, also combine Arabic and others ethnicities. Hence, we obtain ethnicity variable that divide participants to 3 as Turkish, Kurdish and Others. In terms of religion sect we combine Others except Sunni and Alevi. Hence, we obtain religion sect variable that divide participants as Sunni, Alevi and Others. As last factor, we use religiosity level. The variable has four categories as Nonbeliever, Believer, Religious and Pious. Religiosity levels are self reported.

In this study our sample consists of 15,461 female and 16,218 male participants. In terms of percentage, 48.81 percent of sample is female and 51.19 percent is male. Average age of sample is 39.39; for female 38.86, for male 39.91. Age group includes 18 – 24 aged participants covers 16.70 percent, age group includes 25 – 39 aged participants covers 37.14 percent, age group includes 40 – 49 aged participants covers

[3] In Turkey at 1997 wide education reform has been initiated. The aim was increase compulsory-continues primary education for eight years as primary degree (Akyüz, 1998: 7). Despite anticipation of increasing compulsory primary schooling to eight years at 1973 as suggested law number 1739, it can be realized at 18th August 1997 with Law number 4306. With this law "primary education "*ilköğretim*" consists of eight years of schooling and in these schools there must continuous "*kesintisiz"* education and those who completed primary school, primary school "*ilköğretim"* diploma is issued" (Official Gazette,vol.23084., p.2). In addition, at Constitution No.42, "For all citizens; male or female, primary schooling is compulsory and for free at public schools" enacted. With this law, for every citizen basic degree education became compulsory.

[4] Cilasun and Kırdar (2013), show that in Turkey, household income increase between age 39 to 50 and reaching top amount at these ages. After age 50, household income is decreasing over time. On the other hand, at age 25 – 39 income increase more than previous ages but cannot reach pick amount. Although, they use five years age groups we combine the age groups because our study does not focus on life cycles.

21.36 percent, age group includes 50 and above aged participants covers 24.81 percent of total sample. Female participants 15.99 percent are at age group covers 18 – 24 aged, 38.80 percent are at age group covers 25-39 aged, 22.87 percent are at age group covers 40-49 aged and 22.24 percent are at age group covers 50 and above aged. Male participants 17.37 percent are at age group covers 18 – 24 aged, 35.45 percent are at age group covers 25-39 aged, 19.92 percent are at age group covers 40 – 49 aged and 27.26 percent are at age group covers 50 and above aged participants. Table 3.2.1 stands for provide information about gender, age distribution of sample. In addition, we provide age group distributions of Turkey obtained from Turkstat. It stands for readers whose want to compare our sample with Turkstat data.

Table 3.2.1: Gender and Age Groups

	Female	Female*	Male	Male*	Total	Total*
Number of Observations	15,461		16,218		31,679	
Distribution	48.81		51.19		100.00	
Age						
Mean	38.86		39.91		39.39	
St. Dev.	13.53		14.86		14.23	
Age Groups (%)						
18-24	15.99	14.46	17.37	14.94	16.70	13.68
25-39	38.90	37.66	35.45	37.59	37.14	38.07
40-49	22.87	20.30	19.92	20.70	21.36	20.47
50 above	22.24	27.58	27.26	26.98	24.81	27.78

**Source: TURKSTAT, Population Census 2013*[5]

Examination of educational status of participants shows that, on average female participants are less educated than male participants. 7.64 percent of participants have no educational degree; according to genders 12.35 percent of female, 3.14 percent of male has no educational degree. Highest proportion among categories is 36.43 percent that shows primary school graduates of total sample. 41.32 percent of female participants, 31.77 percent of male participants hold primary school degree. University degree holders consist of 13.17 percent of total sample. 10.3 percent of females have university degree, 15.9 percent of males hold university degree. In terms of schooling year, average of total sample is 8.13. It is slightly higher than compulsory schooling.

[5] We obtain data from address based population registration system. The data covers all population yet, in this study we analyze 18-80 aged participants. Therefore, we drop below 18 aged and above 80 aged participants and then calculate percentages.

Among male participants mean schooling year is 8.9 and among female participants mean schooling year is 7.27. For further examination see table 3.2.2.

Table 3.2.2: Educational Status

N=31679	Female	Female*	Male	Male*	Total	Total*
Education Categories (%)						
No degree	12.35	15.59	3.14	5.82	7.64	10.57
Primary School	41.32	37.70	31.77	29.11	36.43	33.95
Middle School	12.68	14.25	16.35	20.39	14.56	18.28
High School	23.35	17.38	32.85	24.18	28.21	18.24
University	10.30	11.88	15.90	16.94	13.17	14.38
Schooling Year						
Mean	7.27		8.95		8.13	
St. Dev.	4.19		3.84		4.10	

***Source: TURKSTAT, Census of Population*[6]

When we examine previous generations' educational status, we realize that there is substantial increase in education levels at current generation. 22.43 percent of participants' fathers' have no educational degree. It is far above when we compare to current generations no degree holders. Between male and female participants, there is no substantial difference in terms of previous generations' educational status. In terms of fathers' educational status, 54.97 percent of participants' fathers hold primary school degree. Respectively; 8.75, 9.89, 3.96 percents of fathers hold middle school, high school and university degrees. At previous generation of participant's average schooling year is 5.28. There is nearly three years difference between current and previous generations' average schooling years.

[6] TURKSTAT education data covers 25 and above aged observations. However, we also analyze 18-24 aged participants. In addition, at TURKSTAT data, 3.4 percent of total sample, 3.2 percent of female, 3.6 percent of male participants' educational status is unknown. In sum, these difference should be considered during comparison of two dataset.

Table 3.2.3: Father's Educational Status[7]

N=31679	Female	Male	Total
Father's Education (%)			
No degree	22.83	22.05	22.43
Primary School	55.33	54.64	54.97
Middle School	8.56	8.93	8.75
High School	9.62	10.14	9.89
University	3.67	4.24	3.96
Father's Schooling Year			
Mean	5.21	5.35	5.28
St. Dev.	3.53	3.60	3.57

In addition to age group, gender and educational status, we also consider migration status of participants. In our sample, 60.55 percent of participants are local; means that they do not migrated. According to gender, 58.73 percent of female participants, 62.25 percent of male participants are local. 26.33 percent of participants migrated as a consequence of their own decision. 27.58 percent of female, 25.16 percent of male participants migrated with their own decision. In terms of family base migrations, 13.12 percent of participants migrated from their homeland to host region. 13.68 percent of female participants, 12.59 percent of male participants migrated after their father. Further information can be obtained from table 3.2.4.

Table 3.2.4: Migration Status

N=24205	Female	Male	Total
Distribution (%)			
Local	58.73	62.25	60.55
Migrants	27.58	25.16	26.33
Fathers' Migrant	13.68	12.59	13.12

As social characteristics of participants we examine ethnicity, religiosity level and religious sect of participants. In terms ethnicity, 82.41 percent of our sample belong to Turkish ethnicity. Kurdish participants consist of 13.45 percent of total sample. Among genders there is no substantial difference in terms of ethnicity. 82.75 percent of female participants and 82.09 percent of male participants are Turkish. Kurdish female

[7] In our data set we have no information about participant's father's age. Hence, this variable can not be compared with TURKSTAT data.

participants are 13.21 and male participants are 13.68 percent of our sample. In terms of religiosity level very small proportion of participants report themselves as non believer. Only 2.11 percent of our sample is non believer; 1.72 percent of female, 2.48 percent of male participants report themselves as non believer. More than half of participants report themselves as religious. 59.35 percent of participants report themselves as religious; among female participants proportion of being religious is higher than male participants. 63.12 percent of female participants, 55.76 percent of male participants report themselves as religious. Among total sample 27.69 percent of participants report themselves as believer. Second less proportion is pious level religiosity. In sum 10.84 participants report themselves as pious; among female participants 11.65 percent, among male participants 10.07 percent pious self report religiosity level recorded. In terms of religious sects, vast proportion of participants reports themselves as Sunni. 92.89 percent of participants are Sunni; among female participants 92.91 percent, among male participants 92.88 percent of participants report themselves as Sunni. On the other hand, 4.96 percent of participants report their sect as Alevi; among female participants 5.09 percent, among male participants 4.84 percent participants report their sect as Alevi. In our sample, only 2.14 percent of participants report their religion sect as other. For detailed information about social characteristics of our sample see table 3.2.5.

Table 3.2.5: Social Characteristics

	Female	Male	Total
Ethnicity (%) N=31538			
Turkish	82.75	82.09	82.41
Kurdish	13.21	13.68	13.45
Others	4.05	4.23	4.14
Religiosity (%) N=31470			
Non Believer	1.72	2.48	2.11
Believer	23.51	31.69	27.69
Religious	63.12	55.76	59.35
Pious	11.65	10.07	10.84
Religion Sect (%) N=31429			
Sunni	92.91	92.88	92.89
Alevi	5.09	4.84	4.96
Others	2.00	2.28	2.14

Chapter 4

Analysis

4.1 Markov Chains

As initial step, education mobility is examined in this paper using first order Markov chain. Markov chain model have been used during analyzing income dynamics at literature several times (E.g.: Champernowne, 1953; Shorrocks, 1976), hence we use it at education analyze as well. One of the tempting features of using a Markov chain to model educational dynamics across individuals is the ability to examine differences in educational mobility over generations, among subgroups of the population.

Let s_t be a random variable that can assume only an integer values {1, 2, …., N }. Suppose that the probability that s_t equals some particular value j depends on the past only through the most recent value s_{t-1} :

$$P\{s_t = j \mid, s_{t-1} = k, \cdots\} = P\{s_t = j \mid s_{t-1} = i\} = p_{ij}, \tag{4.1}$$

Such a process is described as an N -state *Markov chain* with transition probabilities $\{p_{ij}\}_{i,j=1,2,\cdots,N}$. The transition probability p_{ij} gives the probability that state i will be followed by state j . Note that

$$p_{i1} + p_{i2} + \cdots + p_{iN} = 1 \tag{4.2}$$

It is often convenient to collect the transition probabilities is an $(N \times N)$ matrix **P** known as the *transition matrix:*

$$\mathbf{P} = \begin{bmatrix} p_{11} & p_{12} & \cdots & p_{1N} \\ p_{21} & p_{22} & \cdots & p_{2N} \\ \vdots & \vdots & \cdots & \vdots \\ p_{N1} & p_{N2} & \cdots & p_{NN} \end{bmatrix}$$

(4.3)

The row j, column i element of **P** is the transition probability p_{ij}; for example, the row 2, column 1 element gives the probability that state 1 will be followed by state 2 (Hamilton, 1994).

4.2 Mobility Index

In order to facilitate cross-group comparisons, researchers have developed a variety of mobility indices[8]. Perhaps the simplest and the most commonly used measure is *trace index* of mobility which was developed by Shorrocks (1978).

$$m = \frac{k - trace(\mathrm{P})}{k - 1} \tag{4.4}$$

Where P is the transition matrix and k is the number of educational categories. Recalling that the trace of a (square) matrix is the sum of its diagonal elements, note that zero mobility would imply $m = 0$ while perfect mobility would imply $m = 1$.

In this part of analysis, we try to figure out association between fathers' and individuals' education level. First of all we use Markov chain with educational categories. The aim is comparing fathers' and participants' educational status according to gender, age group and social characteristics. Furthermore, we calculate above mentioned mobility index. Thanks to comparison between individual and social characteristics mobility analysis became possible without any further control.

[8] For further instances see Shorrocks, 1978; Marshall and Zarkin, 1986.

As first step we give Markov chain of total sample and Mobility index. In the first step we aim figure out the educational mobility level of Turkey. In this way, we try to conduct country base comparison in terms of intergenerational mobility level. In table 4.2.1 we figure out participants' educational status Markov chain according to fathers' educational status. According to results, probability of remaining at same educational status with father's educational status respectively, 27.33 percent, 44.18 percent, 23.38 percent, 52.55 percent and 52.59 percent for no degree, primary school, middle school, high school and university. Probability of being university graduate with father from no degree category is 3.34 percent. On the other hand, university graduate fathers' next generations go university with 52.59 percent probability. In other words, among participants, probability of being university graduate is nearly 16 times more for participants whose father has university degree compared to participants whose fathers have no schooling degree. Mobility index of total sample is 0.75. This finding shows that, Turkey's intergenerational mobility level is lower than US and nearly same to Italy[9] (Checchi, 1999). In addition, Checchi compares probability to reach the two highest categories from the bottom category and persistence at top category. In terms of probability of being member of top two categories for participants whose father's has no educational degree is 12.85 percent in Turkey. This probability is substantially lower than both US (0.37) and Italy (0.27). Hence we can say that, in Turkey, persistence at bottom category is higher than US and Italy. On the other hand persistence at top two categories is substantially higher in Turkey compared to Italy (38.7 percent) and US (47.3 percent). In sum we can say that, despite similar mobility indices between Italy and Turkey, persistence at bottom and highest categories is higher in Turkey than Italy. In both manners US is more mobile than Turkey.

Table 4.2.1: Transition Probability of Individuals

Total (N=31679)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**27.33**	47.87	11.95	9.51	3.34	22.43
Primary School	2.49	**44.18**	16.24	27.15	9.94	54.97
Middle School	0.72	8.41	**23.38**	50.90	16.59	8.75
High School	0.54	5.36	6.96	**52.55**	34.58	9.89

[9] Italy's educational mobility has been found as 0.74 and US's mobility has been found as 0.85 by Checchi (1999) with same methodology.

University	0.64	3.51	5.42	37.85	**52.59**	3.96
Total	7.64	36.43	14.56	28.21	13.17	100.00

Mobility Index: 0.7499

As second step of mobility analysis we divide our sample according to genders. There are several motivation for analyze male and female individuals mobility levels separately. First of all, despite findings of Dejong et al. (1971) suggest no significant difference among genders in terms of intergenerational mobility, Havens (1972) opposes these findings. His argument based on methodological issues of Dejong's study. On the other hand, recent literature shows that, among genders, school attainment substantially changes in Turkey. For instance, Tansel's (2002) study shows that, after all individual and environmental controls, schooling attainment was strongly related to household permanent income. The striking point is effect of income on schooling of females is larger than that of males in all schooling levels. In addition, although both the males' and females' schooling were found to be strongly related to their parents' education, parental education effects were larger on females' than males' schooling. Moreover, at developing countries such as Turkey, educational characteristics of male and female individual should be considered as separate from each other.

> "*A common family practice in developing countries is the selective education of children –some go to school, while others stay home to help with household duties or go out to earn money. Thus, it is important to understand how family circumstances and work obligations that compete with schooling affect the educational attainment of boys and girls"*(Rankin and Aytac, 2006, p.28).

Therefore we examine intergenerational mobility level of male and female individuals separately.

Our results are in line with Tansel's (2002) findings and in contrast to Dejong (1971) findings. According to our mobility indices, male individuals (0.80) are more mobile than female individuals (0.70). On the other hand, probability of being university graduate for male participants whose fathers have no educational degree is three times more than female participants whose fathers have no educational degree. In addition, persistence at bottom level is nearly four times more among female individuals. As one more persistency indicator at bottom level, among male participants being no degree member with primary school graduate is 0.38 yet, among female participants probability of being no degree member with primary school graduate father is 4.66. It is nearly

three times more for female individuals. In sum, we can say that, there substantial persistence at bottom level of education for females compared to males. When we examine highest categories persistence levels do not differ substantially among male and female individuals. Table 4.2.2 stands for further information.

Table 4.2.2: Transition Probability of Female & Male Individuals

Female (N=15461)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**41.8**	43.87	7.71	5.07	1.56	22.83
Primary School	4.66	**53.06**	14.11	21.14	7.03	55.33
Middle School	1.44	12.02	**25.62**	47.32	13.61	8.56
High School	0.81	7.73	7.20	**52.05**	32.21	9.62
University	0.88	4.75	6.16	39.26	**48.94**	3.67
Total	12.35	41.32	12.68	23.35	10.30	100.00

Mobility Index: 0.6963

Male (N=16218)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**13.06**	51.82	16.14	13.90	5.09	22.05
Primary School	0.38	**35.61**	18.29	32.96	12.75	54.64
Middle School	0.07	5.11	**21.33**	54.18	19.32	8.93
High School	0.30	3.22	6.75	**53.01**	36.72	10.14
University	0.44	2.47	4.80	36.68	**55.60**	4.24
Total	3.14	31.77	16.35	32.85	15.90	100.00

Mobility Index: 0.8034

As third step of Markov chain and mobility indices analyses, we compare transition probabilities and mobility level of age groups. As mentioned before age groups established according to developments of educational system and income over life cycles. In these analyses we aim figure out the change among years in terms of mobility. Separation according to age groups seems necessary to us due to substantial improvements in the gross enrollment rates since 1960s (Tansel, 2002). She shows that, primary school gross enrollment rates increased from an overall 75 percent in 1960 to over 100 percent for males and females in 1993. The secondary school gross enrollment ratio was only 14 percent in 1960 and it increased to 50 percent for females and 74 percent for males in 1993. In sum, there was tremendous difference between years. In

this analysis, we do not aim to explain the difference. There will be several reasons under increased enrollment rates. More accessibility, higher return for schooling will be counted as factors that affect enrollment rates across years. Rather, here we focus on intergenerational mobility over age groups.

First of all, comparison between age groups shows that, persistence at bottom category is decreasing while individuals age decrease. This finding is in line with literature. In addition mobility level of age groups increases while their age decreases. This recovery, or less association between father's and next generation's educational status is figured out by Aslam and Kingdon (2012) for Pakistan as well.

At first age group (18 – 24) we observe high persistency at high school level. It is probably consequence of youthfulness of group. In other words, they still have chance for take further education. Although, there are chances for all individuals from each group, first group is too young hence they will go further. Therefore, this result cannot be interpreted as highest persistence at high school category at first age group, their age should be considered. Nevertheless, at first age group, probability of being member of top two categories from bottom category is higher than other age groups. For youngest age group, probability of being member of two top education categories from bottom category is 3 times more than oldest group. On the other hand, we compare the probability of being no degree category member despite fathers' from higher educational category. Results showed that individuals from oldest age group are four times more likely to fall into this situation than individual from youngest age group. For further queries see table 4.2.3.

Table 4.2.3: Transition Probability of Individuals According to Age Groups

18 - 24 (N=5289)	**Own Education**					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**14.75**	22.00	29.75	28.50	5.00	1.74
Primary School	0.86	**11.98**	26.29	51.03	9.84	8.09
Middle School	0.34	2.47	**28.09**	59.33	9.78	21.65
High School	0.45	1.90	9.30	**69.13**	19.22	55.64
University	0.88	1.10	7.06	64.24	**26.71**	12.88
Total	1.74	8.09	21.65	55.64	12.88	100.00
Mobility Index: 0.8733						
25- 39 (N=11764)	No Degree	Primary School	Middle School	High School	University	Total
No Degree	**19.42**	45.13	15.37	15.25	4.84	3.88
Primary School	1.77	**40.58**	15.24	30.13	12.28	31.98
Middle School	0.75	7.90	**18.54**	51.12	21.70	13.80
High School	0.14	4.84	4.70	**42.12**	48.19	31.21
University	0.19	3.36	3.18	21.68	**71.59**	19.12
Total	3.88	31.98	13.8	31.21	19.12	100.00
Mobility Index: 0.7693						
40 - 49 (N=6766)	No Degree	Primary School	Middle School	High School	University	Total
No Degree	**24.36**	53.64	12.15	7.45	2.41	8.00
Primary School	2.53	**54.91**	15.95	18.95	7.65	48.97
Middle School	1.05	15.45	**23.82**	41.10	18.59	14.65
High School	1.38	9.92	5.79	**48.21**	34.71	18.93
University	1.50	5.26	4.51	25.56	**63.16**	9.46
Total	8.00	48.97	14.65	18.93	9.46	100.00
Mobility Index: 0.7138						
50 and Above (N=7860)	No Degree	Primary School	Middle School	High School	University	Total
No Degree	**34.38**	49.32	7.98	5.44	2.87	16.92
Primary School	4.76	**59.58**	11.99	15.45	8.22	51.36
Middle School	1.35	19.19	**28.28**	37.37	13.80	10.83
High School	1.81	15.88	10.47	**44.04**	27.80	13.24
University	0.75	10.45	9.70	25.37	**53.73**	7.65
Total	16.92	51.36	10.83	13.24	7.65	100.00

Mobility Index: 0.6999

As fourth step of Markov chain and mobility indices analyses, we compare transition probabilities and mobility level of individuals according to their migration status. Association between migration and education has been examined by several scholars (E.g.: Dustman and Glitz, 2011; Cameron, 2012). The main assumption of the theoretical studies is that migrants are rationale individuals that try to maximize their utility subject to their budget constraints (Bauer and Zimmerman, 1999). According to this framework, underlying reason for labor migration is wage differential among regions. People migrate to region that wages are above the equilibrium levels until in host regions labor market equilibrium has been conducted. Sjaastad (1962) also add human capital framework to migration analysis. In his model, migration is considered as an investment problem that contains expected value and discount factor. In other words, people migrate, if returns of migrating, minus cost of migration is higher than potential return of staying at home region. This framework suggests that, the likelihood of migration decreases with age, increase with educational level (Zimmerman and Baur, 1999).

Particularly for Turkey there are only few studies that try to understand dynamics of internal migration. Gedik (1997) figure out that education, information level of the potential migrants, transportation facilities has effect on internal migration decision at Turkey. In addition, Filiztekin and Gokhan (2008) show that, economic factors such as income differentials, job seeking and social networks effect migration decision of individuals.

In our analyses, we do not conduct any causal relationship between educational status and migration decision. Since, we do not have information about when individuals migrate and why they migrate from their previous region. Rather, strong relationship between educational status and income level push us to evaluate mobility levels of individuals separately according to their migration status. In addition to that, high volume of internal migration at Turkey is underlying reason for this separation.

In our examination, we see that, locals are less mobile than migrants and family migrants. This result will be interpreted as migration or family migration take place in order to get further education. However, we cannot confirm this hypothesis. On the other hand, persistency at no degree category is also contributing to this hypothesis.

Apart from this difference, we cannot find any substantial difference among migration groups. Lack of information about, individuals obtained education after migration or before migration, also lack of information about their home region restrict us for further interpretation.

Table 4.2.4: Transition Probability of Individuals According to Migration Status

Local (N=14655)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**29.59**	46.8	11.96	9.23	2.42	23.96
Primary School	2.64	**45.28**	16.96	27.30	7.82	55.67
Middle School	0.96	8.92	**24.92**	52.15	13.06	8.57
High School	1.05	5.31	6.51	**57.34**	29.79	9.12
University	1.02	3.30	5.58	40.61	**49.49**	2.69
Total	8.76	37.76	15.19	28.20	10.10	100.00

Mobility Index: 0.7334

Migrants (N=6374)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**24.91**	49.55	12.18	8.49	4.87	22.54
Primary School	3.04	**47.04**	14.70	22.87	12.34	55.16
Middle School	1.12	8.18	**24.54**	47.77	18.40	8.44
High School	0.34	6.94	7.61	**47.55**	37.56	9.27
University	0.34	4.11	4.79	35.27	**55.48**	4.58
Total	7.44	38.64	13.85	24.58	15.48	100.00

Mobility Index: 0.7512

Father Migrants (N=3176)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**12.65**	51.99	17.33	13.82	4.22	13.44
Primary School	1.31	**33.38**	15.44	36.06	13.81	50.38
Middle School	0.00	7.16	**21.76**	48.76	22.31	11.43
High School	0.00	3.86	7.53	**48.26**	40.35	16.31
University	0.75	3.73	5.97	34.70	**54.85**	8.44
Total	2.42	25.57	14.33	36.40	21.28	100.00

Mobility Index: 0.8227

As fifth step of Markov chain and mobility indices analyses, we compare transition probabilities and mobility level of individuals according to their ethnicity. Similar analysis has been done in UK by Platt (2007). She tries to understand the role of social class and ethnic background in determining individuals' social class destination. At this study, she examine childhood for a group of children of different ethnic groups growing up in England such as Chinese, Other Black, Black African, Black Caribbean, Bangladeshi, Pakistani, Indian and White British. According to results of Platt, influence of previous generations' background on these children's sub sequent social position varied with ethnicity. For minority groups even after taking account educational differences, family backgrounds has smaller role. Individuals belong to minority group use of education in order to flow upper categories. The effect of education varies across ethnicities as well. One another study has been conducted by Connolly (2006). In this study, he examines the effects of social class, ethnicity and gender differences on General Certificate of Secondary Education. Their results show that, ethnicity create significant difference among individuals GCSE grades. In sum he find that, Chinese origin individuals between four and seven times more likely to achieve at least five higher grade GCSE passes than Black origin individuals after controlling for other characteristics'. Similar to UK, Turkey consists of several ethnic groups. Therefore, the first aim of the ethnicity base comparison is understand mobility differences among ethnicities if there exist. In addition, if there exist any persistency; understand which ethnicity persists at which educational category.

On the other hand, one another motivation of the ethnicity base comparison of mobility indices is Kurdish Issue. In Turkey, official education language is Turkish; hence individuals belong to other than Turkish ethnicity cannot take education in their mother tongue. This fact has been discussed over years, as an issue. There are several reports about deteriorating effects of taking education at foreign language for pupils (E.g.: ERG, November 2010). In addition, this issue initiates further social unrests.

> *"Oppression of the Kurdish language, which has been Turkish policy since the time of Ataturk and is enshrined in the Constitution of 1923, has been intensified in recent years. The deprivation of linguistic human right in Turkish Kurdistan has been formalized in the Turkish Constitution of 1982 and in several recent laws."*(Hassanpour et al, 1996, p.370).

As last motivation we should say that, in general Kurdish society lives in South Eastern regions and at this regions school dropout rates are higher than other regions (Tansel, 2002).

With above mentioned motivations, we analyze ethnicity based mobility and transition matrices. In contrast to, UK studies, we cannot find any substantial difference among ethnicities in terms of their mobility level. The global mobility index is 0.03 point higher for Turks compared to Kurds. Mobility level of individuals belonging to Kurdish ethnicity and other ethnicities are nearly same. Therefore, we cannot say that, there is substantial difference among individuals educational mobility level according to their ethnicity. However, we see some important differences in details. There is substantial difference between probability of being no degree with primary school graduate father among Kurdish and Turkish individuals. Kurdish individuals are nearly 4 times more likely to fall into this situation. Also persistence at bottom category is higher at individuals belong to other Kurdish ethnicity and other ethnicity when we compared to Turkish individuals. On the other hand, between Kurdish and Turkish individuals there is no substantial difference in terms of being member of top two categories from bottom categories. In contrast to suggestion of Turkey studies such as ERG Report, probability of achieving top two categories from bottom category is higher among Kurdish individuals compared to Turkish individuals. As remark we should consider that, in our data, questionnaire does not ask for mother tongue, it directly asks for ethnicity. In this analyses, we assume that, ethnicity determine the mother tongue as well. Further information can be obtained from table 4.2.5.

Table 4.2.5: Transition Probabilities of Individuals According to Ethnicity

Turkish (N=25991)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**22.14**	53.76	11.63	8.96	3.50	18.12
Primary School	1.80	**44.83**	15.99	27.6	9.78	57.80
Middle School	0.42	8.39	**22.75**	51.42	17.03	9.22
High School	0.50	5.06	6.93	**52.64**	34.87	10.72
University	0.46	3.34	5.47	38.13	**52.60**	4.15
Total	5.16	37.11	14.42	29.54	13.77	100.00

Mobility Index: 0.7626

Kurdish (N=4241)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**39.15**	34.34	12.39	11.13	2.98	46.62
Primary School	7.82	**38.96**	17.29	25.81	10.12	39.83
Middle School	3.65	9.85	**28.83**	45.26	12.41	6.46
High School	0.90	9.50	9.05	**50.23**	30.32	5.21
University	2.50	5.00	7.50	36.25	**48.75**	1.89
Total	21.69	32.75	15.14	21.69	8.72	100.00

Mobility Index: 0.7352

Others (N=1306)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**30.26**	45.38	12.82	8.21	3.33	29.86
Primary School	4.63	**42.58**	19.94	20.10	12.76	48.01
Middle School	0.00	5.49	**21.98**	54.95	17.58	6.97
High School	0.86	5.17	4.31	**53.45**	36.21	8.88
University	1.22	4.88	3.66	34.15	**56.10**	6.28
Total	11.41	35.15	15.54	22.82	15.08	100.00

Mobility Index: 0.7390

As sixth step of Markov chain and mobility indices analyses, we compare transition probabilities and mobility level of individuals according to their religiosity level. There are several studies that try to understand the relationship between education and religiosity level of individuals. For instance Photiadis and Biggar (1962) conduct a

study at South Dakota with 8,000 individuals. They use zero order correlations and partial correlation analysis. They find that, formal education and church participation are negatively related, after remaining variables are controlled. Mukhopadhyay (2011) examine religion, religiosity and educational attainment of immigrants to the USA. He shows that, affiliation with religion is not necessarily associated with an increase in educational attainment. Muslim and other religion immigrants have less education compared to immigrants who are not affiliated with any religion. On the other hand, he finds that, Jewish religion is associated with higher educational attainment for males. In terms of religiosity, their results show that, high religiosity level is associated with lower educational attainment. Particularly, females' education is affected by religiosity more than males.

For Turkey, there are very few studies concern religiosity and education. Meyersson (2014) compares to municipalities where this Islamic party barely won or lost elections. He finds that, Islamic rule increased female secular high school education. Effects on males are smaller. In addition, according to results of Meyersson, in the long run, the effect on female education remained persistent up to 17 years after.

In our analyses, we try to capture the mobility level of individuals according to their religiosity level. During analyses, we should consider the possible endogeneity issue. We do not know whether religiosity level is outcome of less education or less education is outcome of high religiosity level. Thus, in our analyses, we assume that religiosity level is exogenous for individuals. Moreover, in our sample, proportion of non believer individuals is substantially lower than other groups. This should be taken account. Despite mentioned issues, we find that, mobility level of non believer and believer individuals is very close yet, for the remaining groups the mobility level decreases while religiosity level increases. In terms of upward mobility, believer individuals' probability of achieving top two categories from bottom category is four times more than pious individuals. Furthermore, persistence at bottom category is highest among pious individuals. On the other hand, persistence at top category is higher at believer and non believer individuals than religious and pious individuals. Despite lack of gender base comparison, our results are in contrast to Meyersson's findings. For further queries see table 4.2.6.

Table 4.2.6: Transition Probabilities of Individuals According to Religiosity Level

Non Believer (N=664)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No degree	**21.62**	43.24	6.31	15.32	13.51	16.72
Primary School	0.46	**23.85**	9.17	39.45	27.06	32.83
Middle School	0.00	9.59	**13.7**	39.73	36.99	10.99
High School	0.00	0.74	0.74	**48.53**	50.00	20.48
University	0.00	0.00	1.59	34.92	**63.49**	18.98
Total	3.77	16.27	6.02	36.45	37.5	100.00
Mobility Index: 0.8220						
Believer (N=8715)	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**14.62**	45.59	17.08	16.75	5.96	14.04
Primary School	1.07	**31.37**	16.32	37.55	13.70	52.53
Middle School	0.39	4.72	**18.78**	54.77	21.34	11.67
High School	0.45	2.75	6.01	**53.45**	37.34	15.46
University	0.36	1.82	5.46	38.25	**54.1**	6.30
Total	2.75	23.97	14.43	39.14	19.70	100
Mobility Index: 0.8192						
Religious (N=18679)	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**27.88**	48.89	11.64	8.76	2.83	24.62
Primary School	2.72	**48.13**	16.52	24.04	8.59	57.08
Middle School	0.90	10.14	**24.90**	50.83	13.24	7.76
High School	0.55	7.38	8.07	**52.56**	31.44	7.83
University	1.19	5.73	6.72	38.34	**48.02**	2.71
Total	8.56	41.03	15.04	24.98	10.39	100.00
Mobility Index: 0.7462						
Pious (N=3412)	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**39.23**	46.98	8.19	4.09	1.51	32.94
Primary School	4.90	**55.82**	15.19	17.89	6.20	54.40
Middle School	1.42	14.22	**37.44**	37.44	9.48	6.18
High School	1.83	13.41	10.37	**50.61**	23.78	4.81
University	0.00	8.77	3.51	40.35	**47.37**	1.67
Total	15.77	47.51	13.83	16.50	6.39	100.00
Mobility Index: 0.6738						

As last step of Markov chain and mobility indices analyses, we compare transition probabilities and mobility level of individuals according to their religion sect. Despite lack of theoretical and empirical debate about relation between religion sect and educational status as we showed before, religiosity and other individual characteristics matter for educational mobility of individuals. Therefore, we take religion sect of individuals to account during mobility analysis. In addition, according to religion sects individuals religious attitudes differ, hence we examine mobility levels and transition matrices of individuals according to sects as well.

During analysis, we realize that, individuals belong to Alevi and other religious sect groups are substantially lower than Sunni participants. Hence, it restricts validity of our analysis. With awareness of this issue, nevertheless, we provide our results at below table. We can not find any substantial difference among mobility level between religious sects. Only, persistence level at bottom category is lower than Sunni and Alevi participants. Yet, again, shortage of observation numbers should be considered. For further information see table 4.2.7.

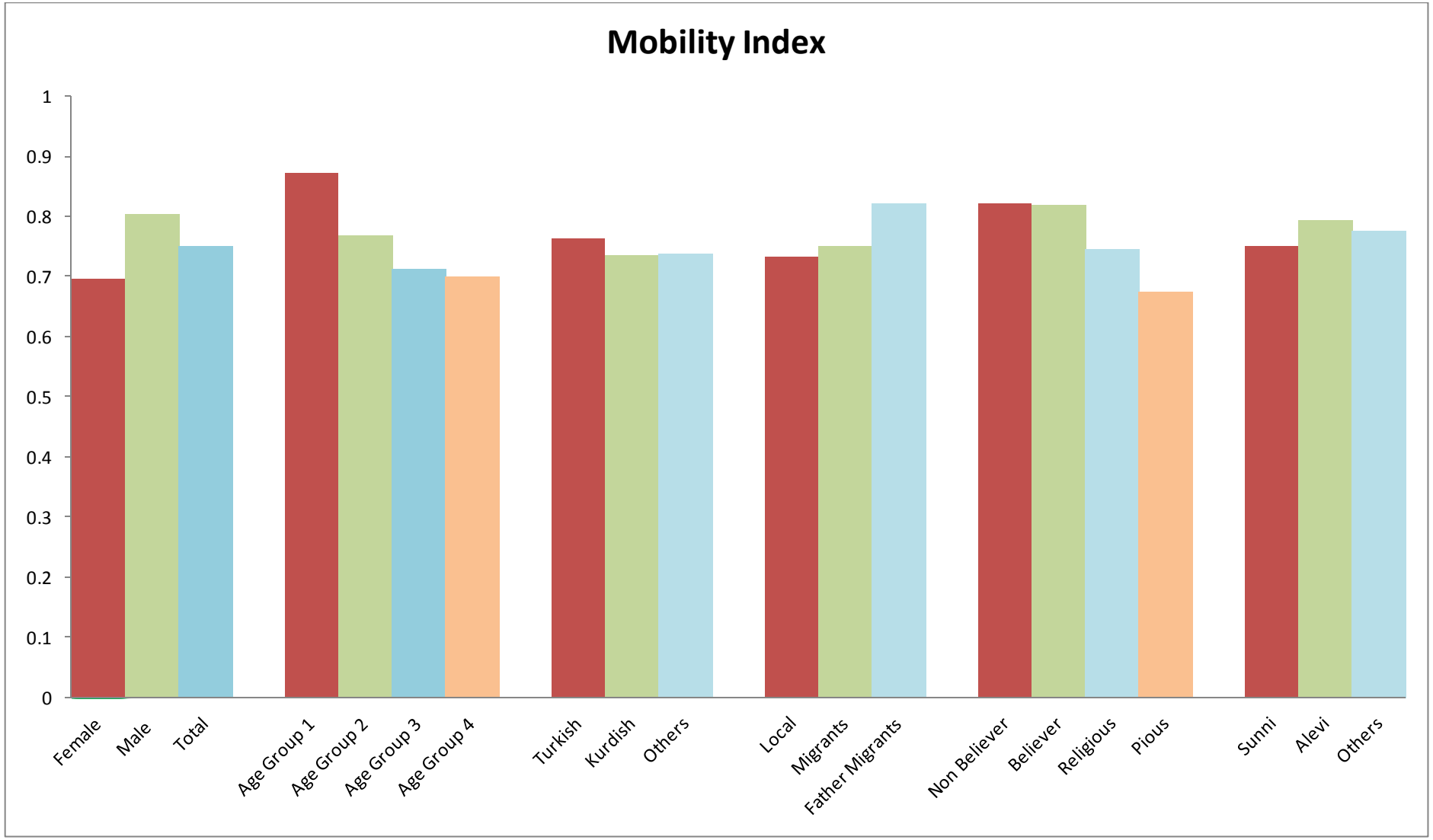
Table 4.2.7: Transition Probabilities of Individuals According to Religion Sects

Sunni (N=29195)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**27.83**	47.76	11.75	9.55	3.11	22.56
Primary School	2.54	**44.46**	16.20	27.14	9.66	55.23
Middle School	0.75	8.59	**23.73**	50.78	16.16	8.73
High School	0.56	5.57	7.28	**52.8**	33.79	9.78
University	0.74	3.90	5.76	38.63	**50.97**	3.69
Total	7.83	36.77	14.60	28.17	12.63	100.00
Mobility Index: 0.7505						
Alevi (N=1560)	Own Education					
	No Degree	Primary School	Middle School	High School	University	Total
Father Education						
No Degree	**21.3**	51.17	14.55	7.53	5.45	24.68
Primary School	1.95	**40.98**	15.98	28.90	12.20	52.56
Middle School	0.64	5.77	**20.51**	57.05	16.03	10.00
High School	0.68	4.79	3.42	**52.05**	39.04	9.36
University	0.00	1.89	5.66	45.28	**47.17**	3.40
Total	6.41	35.26	14.55	29.17	14.62	100.00
Mobility Index: 0.7949						
Others (N=674)	Own Education					
	No degree	Primary School	Middle School	High School	University	Total
Father Education						
No degree	**15.12**	41.86	16.28	15.12	11.63	12.76
Primary School	1.45	**42.90**	17.97	23.19	14.49	51.19
Middle School	0.00	10.00	**16.00**	42.00	32.00	7.42
High School	0.00	2.00	5.00	**46.00**	47.00	14.84
University	0.00	1.08	2.15	26.88	**69.89**	13.8
Total	2.67	28.49	13.50	27.45	27.89	100.00
Mobility Index: 0.7752						

In order to sum up Markov Chains and Mobility Index analysis we put graph 4.2.1. It provides brief information about mobility levels according to social and individual characteristics. As seen from graph, female participants are less mobile than male participants. Among age groups, the most mobile one is first group that consists of 18 – 24 aged participants. While age groups getting older mobility level decreases gradually,

there is no substantially difference between third and fourth age groups. Mobility levels of ethnic groups do not differ substantially. Nevertheless, most mobile ethnic group is Turkish. It means participants belong to Turkish ethnicity has lower associations between father 'education and their own education. The most persistent ethnic group is Kurdish. They are slightly less mobile than others. According to migration status, local group is less mobile than other migration groups. Also, family migrants are most mobile migration group. In the borders of religiosity level we can say that, despite found that non believers are more mobile than believers, the difference is substantially low. On the other hand, beyond believers, participants report themselves as religious and pious were found as less mobile than believer and non believer participants. Thus we can say that, while religiosity level increases educational mobility level decreases. When we compare sect groups' mobility levels, we find that, Alevi society is more mobile than Sunni society. Moreover they are more mobile than other in terms of educational status. Hence we can say that, in Alevi society, educational statuses of individuals are less associated with father's educational status. On the other hand people belong to other sect groups are more mobile than Sunni participants. In the borders of these findings we can say that, Sunni society is most persistent sect group in terms of educational status. As remark we should remember that, these results do not indicate any causality, these are only indicate association between father's educational status and next generation educational status according to social and individual characteristics. With other words, from this table we cannot say that religiosity level can be considered as determinant of educational status.

Graph 4.2.1: Mobility Indices According to Individual and Social Characteristics



4.3 Regression Analysis

Although obtained information about association between fathers' educational status and participant's educational status due to Markov chains and calculated mobility indices, we also run OLS estimation. In our estimation, dependent variable is years of schooling of participants. Regression analysis let us use some further controls during examination of association between father's schooling and participants' schooling such as birth region, resident region, urbanization level of resident region which were not controlled during Markov chain examination. From educational categories we impute years of schooling as explained at data section. We aware that categorical structure of dependent and independent variables violate the validity of OLS estimation results hence we further our examination with ordered logit estimation. Nevertheless, OLS results stand for provide brief information about association between fathers' and individuals' education with further controls which are missing at Markov Chains and mobility indices.

In model one; we regress years of schooling of individuals to fathers' years of schooling with control for migration status, birth region, resident region and urbanization level of resident place. The coefficient of father's years of schooling shows that, there is 55 percent association between father's and participants' years of schooling after added controls. According to results we can say that, father with one more extra year of schooling; participants get 0.55 years more education. This finding underpins our first discussion about mobility level of Turkey. Also high rate of association is in line with Baslevent's (2012) study.

In model two we add gender dummy to the regression analysis. At this model male participants are reference category. After gender control, coefficient of father's years of schooling does not change substantially. Again, we find that association between next and previous generation is 55 percent. Female participants get 1.64 year less educations when compared to male participants. As suggested by Tansel (2002), we find that being female effect mobility level thus education level of individuals.

In model three we add age group dummies to the regression analysis. 18-24 aged individuals taken as reference point. After controlling for age groups, coefficient of father's education become 0.45. It means, being next generation of fathers whose have

one more years of schooling increase schooling of individuals 0.45. On the other hand, being member of 25 - 39 age group effects schooling year -0.37, being member of 40 – 49 age group effects schooling year -1.59 and being 50 and above age group effects schooling -2.31. It is in line with previous findings that say younger age groups get more education than older ones. In addition, after controlling for age groups, decreased coefficient for father's schooling year figure out that, association between fathers' and next generations' schooling year is differ according to age groups.

In model four we add religiosity level as control variable to our analysis. The reference group is non believer participants. After controlling for religiosity level of participants, coefficient of father's years of schooling decreased to 0.438. Coefficients of religiosity levels are respectively, -0.7, -1.51, -2.51 for believer, religious and pious participants. These results indicate that, according to reference group of non believers, believer individuals get 0.7 more; religious individuals get 1.51 less and pious individuals get 2.01 less years of schooling. As remark, these results cannot be interpreted as causality rather they show association. Significance of religiosity level variables show that, religiosity level do matter for schooling year of individuals. It is supportive finding for our hypothesis that conducted at Markov chains analysis.

In model five we add ethnicities to the regression analysis as control variable. We take participants belong to Turkish ethnicity as reference group. After controlling for ethnicity, coefficient of father's years of schooling decreased to 0.431. Coefficient of added ethnicity dummies show that, Kurdish participants get 0.63 percent, participants belong to other ethnicities get 0.24 less years of schooling. In contrast to Markov chain analysis, OLS results indicate that, being Kurdish effect schooling year negatively. Effect of being member of other ethnicities is less significant than effect of being Kurdish. Our results is in line with Betam's study but in our results coefficient is fathers' education is three times more than their fathers' education coefficient.

In model six as last control we add control for religion sects. Participants belong to Sunni sect taken as control group. Adding sect control to the analysis does not create any difference at coefficient of father's years of schooling variables. It remains same as model five. On the other hand we find that control dummies of sects do not create statistically significant difference. Hence, we can say that schooling years of

participant's do not change significantly according to sects. For further information about OLS results see table 4.3.1.

In sum our OLS results show that, on years of schooling, being member of oldest age group and being pious has higher deteriorating effect than other variables. In addition, being female and being member of second oldest age group are most deteriorating effects on years of schooling. Being Kurdish has nearly smallest effect on schooling years of individuals.

Table 4.3.1: OLS Results

Dependent Variable: Years of Schooling	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Fathers' Years of Schooling	0.556***	0.551***	0.459***	0.438***	0.431***	0.431***
	(0.006)	(0.002)	(0.007)	(0.007)	(0.007)	(0.007)
Gender: Female	-	-1.647***	-1.722***	-1.629***	-1.637***	-1.636***
		(0.043)	(0.041)	(0.041)	(0.041)	(0.041)
Age Group: 25-39	-	-	-0.377***	-0.311***	-0.330***	-0.333***
			(0.058)	(0.058)	(0.058)	(0.058)
Age Group: 40-49	-	-	-1.590***	-1.452***	-1.495***	-1.506***
			(0.066)	(0.066)	(0.067)	(0.067)
Age Group: 50 and above	-	-	-2.312***	-2.118***	-2.181***	-2.189***
			(0.068)	(0.069)	(0.069)	(0.069)
Religion: Believer	-	-	-	-0.700***	-0.814***	-0.759***
				(0.153)	(0.154)	(0.162)
Religion: Religious	-	-	-	-1.511***	-1.615***	-1.556***
				(0.152)	(0.152)	(0.162)
Religion: Pious	-	-	-	-2.105***	-2.205***	-2.145***
				(0.162)	(0.162)	(0.171)
Ethnicity: Kurdish	-	-	-	-	-0.639***	-0.645***
					(0.081)	(0.081)
Ethnicity: Others	-	-	-	-	-0.247**	-0.254**
					(0.106)	(0.108)
Sect: Alevi	-	-	-	-	-	0.029
						(0.099)
Sect: Others	-	-	-	-	-	-0.033
						(0.163)
Migration Status	Yes	Yes	Yes	Yes	Yes	Yes
Region of Birth	Yes	Yes	Yes	Yes	Yes	Yes
Region of Resident	Yes	Yes	Yes	Yes	Yes	Yes
Rural / Urban	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,204	24,204	24,204	24,055	23,973	23,839
R-squared	0.309	0.349	0.39	0.403	0.405	0.405

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

As second step of regression analysis we run ordered logit model. As dependent variable we take educational categories of participants. As independent variables, fathers' educational status, age groups, religiosity level, ethnicities, migration status and religion sect dummies added. Furthermore, same as OLS estimation, we add control dummies for region of resident, region of birth and urbanization level of resident place to the analysis. For each gender and age group we run separate ordered logit estimation. Below tables indicate both coefficients of variables and marginal effects of control variables. In terms of coefficients, at ordered logit, sings of coefficient can only be interpreted. Positive signs indicate more likelihood, contrary negative sign of coefficients indicate less likelihood for each control variable to being member of further educational category.

In terms of used control variables, at father's educational status, we take individuals whose father's has no educational degree as reference category, at religiosity level we take participants belong to non believer category as reference group, among age groups, we take 18 – 24 aged participants as reference group, in terms of ethnicity we take Turkish participants as reference ethnicity, among religion sects, Sunni participants taken as reference group. Lastly, among participants' migration status, we take local participants as reference group.

In first model, we analyses male participants, in terms of effects of father's educational category and other social characteristics on their educational category. Given base probabilities indicate probability of being member of relevant educational status compared to reference participants. As mentioned above, reference participant is belong to first age group, belong to Sunni sect, belong to non believer group, local and Turkish. In sum, base probabilities of table 4.3.1 says that, reference category participants probability of being no degree member is 0.01, probability of being primary school graduate is 0.29, probability of being middle school graduate is 0.22, probability of being high school graduate is 0.36, probability of being university graduate is 0.09. Coefficients of father's educational status show that, participants whose fathers have no degree are less likely to be member of higher educational category than participants whose fathers belong to further educational categories. On the other hand, second age group is more likely to get further education than first age group; other older age groups are less likely than reference age groups in terms of taking further education. When we analyze the coefficients of religiosity level, we see that, all participants belong to other

religiosity level categories (believer, religious, pious) are less likely to get education than non believer participants. In terms of migration status of participants, when compared to reference group (locals); migrants and father's migrants are more likely to get further education. When we compare marginal effects, participants whose fathers hold primary school degree are 1 percent less likely be no degree, 21 percent less likely be primary school graduate, 2 percent less likely be middle school graduate; 16 percent more likely be high school and 9 percent more likely be university graduate than participants whose fathers' have no degree. Participants whose fathers hold middle school degree are 1 percent less likely to be no degree category member, 25 percent less likely be primary school graduate, 12 percent less likely be middle school graduate; 12 percent more likely be high school graduate and 27 more likely be university graduate than reference category. Participants with high school graduate fathers are 1percent less likely be no degree, 3 percent less likely be primary school graduate, 16 percent less likely be middle school graduate; 7 percent more likely be high school graduate and 41 percent more likely be university graduate than participants whose fathers have no degree. Participants whose fathers are university graduate, 1 percent less likely to be no degree, 29 percent less likely to be primary school graduate, 19 percent less likely to be middle school graduate, 5 percent less likely to be high school graduate and 55 percent more likely to be university graduate than reference group.

In sum, likelihood of being university graduate increases with father's educational status when we compare participants whose fathers' have no degree. However, it does not create substantial difference in terms of being no degree. Only university graduates father's decrease the likelihood of being high school graduate, it is consequence of high likelihood of being university graduate with university graduate father. In addition, among male individuals, being religious and pious has significant negative effect on being member of top category. Marginal effect of being Kurdish is less than effect of age groups and religiosity level. This finding is in line with results of Markov chain analysis. Further queries can be obtained from table 4.3.2.

Table 4.3.2: Ordered Logit Results - Male

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.015**	**0.295**	**0.225**	**0.369**	**0.096**
Fathers' Education	Primary School	1.076***	-0.018***	-0.213***	-0.029***	0.169***	0.091***
		(0.049)	(0.001)	(0.010)	(0.002)	(0.008)	(0.005)
	Middle School	1.832***	-0.015***	-0.254***	-0.129***	0.121***	0.276***
		(0.072)	(0.001)	(0.007)	(0.006)	(0.007)	(0.016)
	High School	2.442***	-0.018***	-0.300***	-0.164***	0.073***	0.410***
		(0.074)	(0.001)	(0.006)	(0.005)	(0.010)	(0.017)
	University	2.959***	-0.016***	-0.294***	-0.191***	-0.058***	0.559***
		(-0.108)	(-0.001)	(0.005)	(0.005)	(0.018)	(0.024)
	Age Group: 25-39	0.174***	-0.003***	-0.034***	-0.007***	0.028***	0.015***
		(-0.049)	(0.001)	(0.010)	(0.002)	(0.008)	(0.004)
	Age Group: 40-49	-0.559***	0.010***	0.116***	0.001***	-0.093***	-0.042***
		(0.057)	(0.001)	(0.012)	(0.001)	(0.010)	(0.004)
	Age Group: 50 and Above	-1.039***	0.021***	0.216***	0.010***	-0.170***	-0.076***
		(0.058)	(0.002)	(0.012)	(0.002)	(0.009)	(0.004)
	Believer	-0.688***	0.012***	0.141***	0.015***	-0.113***	-0.054**
		(0.123)	(0.003)	(0.026)	(0.002)	(0.020)	(0.009)
	Religious	-0.960***	0.014***	0.185***	0.036***	-0.147***	-0.088***
		(0.123)	(0.002)	(0.023)	(0.005)	(0.017)	(0.012)
	Pious	-1.245***	0.032***	0.263***	-0.020**	-0.202***	-0.074***
		(0.133)	(0.006)	(0.027)	(0.008)	(0.019)	(0.005)
	Kurdish	-0.225***	0.004***	0.046***	0.006***	-0.037***	-0.018***
		(0.065)	(0.001)	(0.014)	(0.001)	(0.011)	(0.005)
	Others	0.056	-0.001	-0.011	-0.002	0.009	0.005
		(0.087)	(0.001)	(0.017)	(0.004)	(0.014)	(0.008)

Table 4.3.2 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	-0.115	0.002	0.023	0.003*	-0.019	-0.010
	(0.082)	(0.001)	(0.017)	(0.002)	(0.014)	(0.007)
Others	0.106	-0.002	-0.021	-0.004	0.017	0.010
	(0.130)	(0.002)	(0.025)	(0.006)	(0.020)	(0.012)
Migrant	0.464***	-0.006***	-0.088***	-0.021***	0.071***	0.044***
	(0.069)	(0.001)	(0.012)	(0.004)	(0.010)	(0.007)
Fathers' Migrant	0.347***	-0.005***	-0.066***	-0.016***	0.053***	0.033***
	(0.062)	(0.001)	(0.011)	(0.004)	(0.009)	(0.007)
Constant cut1	-3.508					
	(0.171)					
Constant cut2	-0.144					
	(0.165)					
Constant cut3	0.796					
	(0.165)					
Constant cut4	2.902					
	(0.167)					
Observations	12,288	12,288	12,288	12,288	12,288	12,288

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

In second model, we analyze female participants with same control variables. Given base probabilities indicate probability of being member of relevant educational status compared to reference group. As mentioned above, reference participant is belong to first age group, belong to Sunni sect, belong to non believer group, local and Turkish. In sum, base probabilities of table 4.3.3 says that, reference category participants probability of being no degree member is 0.05, probability of being primary school graduate is 0.52, probability of being middle school graduate is 0.18, probability of being high school graduate is 0.21, probability of being university graduate is 0.04. These base probabilities say that, female reference individuals are less likely to be university and high school graduate than male reference individuals. Coefficients of father's educational status show that, participants whose fathers hold primary, middle, high school and university degree are more likely to get further education than reference category. Effect of fathers' education on individual's educational degree is higher on female individuals than male individuals. This finding supports our hypothesis conducted at Markov model. Fathers' educational degree has more effect on female individual's educational degree.

Same as male individuals, older age groups are less likely to get further education. Likelihood decreases gradually while age of individuals was increasing. In terms of religiosity, participants belong to believer, religious and pious category is less likely to get further education when we compare to reference group (non believer). As same as age groups, likelihood of getting further education decreases, while religiosity level increase. Participants belong to Kurdish and other ethnicities are less likely to get further education than Turkish participants. On the other hand, sect does not affect educational status of female participants significantly as same as male individuals. In terms of migration status of female participants, migrants are not significantly differ from locals in terms of educational status, yet family migrants are more likely to get further education than local female individuals.

When we consider marginal effects, we see that, female participants whose fathers hold primary school degree are 8 percent less likely be no degree, 26 percent less likely be primary school graduate than reference category. On the other hand, they are 8 percent more likely to be middle school, 21 percent more likely to be high school and 5 percent more likely to be university graduate than reference group. Female participants with middle school graduate fathers are 6 percent less likely to be no degree category

member, 44 percent less likely to be primary school graduate, 5 percent less likely to be middle school graduate, 31 percent more likely to high school, 25 percent more likely to be university graduate than reference category. Female participants whose fathers hold high school degree are 7 percent less likely to be no degree category member, 51 percent less likely to be primary school graduate, 9 percent less likely to be middle school graduate, 27 percent more likely to be high school graduate and 40 percent more likely to be university graduate than reference group. Female participants whose fathers hold university degree are 5 percent less likely to be no degree member, 51 percent less likely to be primary school graduate, and 13 percent less likely to be middle school graduate; 12 percent more likely to be high school graduate and 58 percent more likely to be university graduate than than reference female individuals. See table 4.3.3 for further information.

In sum, ordered logit estimation for male and female individuals shows that, if father's educational degree is higher than bottom category, individuals are more likely to be member of top category. More religious participants are less likely to reach top category than, less religious individuals.

Table 4.3.3: Results of Ordered Logit – Female

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.053**	**0.517**	**0.182**	**0.210**	**0.036**
Fathers' Education	Primary School	1.512***	-0.087***	-0.264***	0.083***	0.215***	0.053***
		(0.055)	(0.004)	(0.009)	(0.004)	(0.007)	(0.003)
	Middle School	2.554***	-0.060***	-0.449***	-0.054***	0.314***	0.250***
		(0.080)	(0.002)	(0.010)	(0.010)	(0.007)	(0.015)
	High School	3.324***	-0.070***	-0.517***	-0.090***	0.275***	0.402***
		(0.082)	(0.002)	(0.008)	(0.005)	(0.010)	(0.018)
	University	3.889***	-0.060***	-0.515***	-0.137***	0.129***	0.583***
		(0.116)	(0.002)	(0.007)	(0.005)	(0.019)	(0.026)
	Age Group: 25-39	-0.477***	0.025***	0.090***	-0.029***	-0.070***	-0.016***
		(0.053)	(0.003)	(0.010)	(0.004)	(0.008)	(0.002)
	Age Group: 40-49	-1.173***	0.081***	0.181***	-0.080***	-0.151***	-0.032***
		(0.061)	(0.006)	(0.007)	(0.005)	(0.007)	(0.002)
	Age Group: 50 and Above	-1.800***	0.150***	0.221***	-0.119***	-0.209***	-0.044***
		(0.065)	(0.009)	(0.006)	(0.005)	(0.006)	(0.002)
	Believer	-0.194	0.010	0.037	-0.012	-0.029	-0.007
		(0.153)	(0.009)	(0.028)	(0.010)	(0.022)	(0.005)
	Religious	-0.901***	0.0419***	0.178***	-0.044***	-0.140***	-0.036***
		(0.152)	(0.007)	(0.030)	(0.006)	(0.024)	(0.007)
	Pious	-1.389***	0.115***	0.174***	-0.098***	-0.159***	-0.032***
		(0.160)	(0.020)	(0.007)	(0.011)	(0.013)	(0.003)
	Kurdish	-0.603***	0.037***	0.103***	-0.041***	-0.082***	-0.017***
		(0.070)	(0.005)	(0.010)	(0.005)	(0.009)	(0.002)
	Others	-0.335***	0.020***	0.060***	0.022***	-0.047***	-0.010***
		(0.096)	(0.006)	(0.016)	(0.007)	(0.013)	(0.003)

Table 4.3.3 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	0.129	-0.006	-0.026	0.007	0.020	0.005
	(0.087)	(0.004)	(0.018)	(0.005)	(0.014)	(0.003)
Others	-0.098	0.005	0.019	-0.006	-0.015	-0.003
	(0.142)	(0.008)	(0.026)	(0.009)	(0.021)	(0.005)
Migrant	0.086	-0.004	-0.017	0.005	0.013	0.003
	(0.066)	(0.003)	(0.013)	(0.004)	(0.010)	(0.002)
Fathers' Migrant	0.335***	-0.015***	-0.068***	0.017***	0.053***	0.013***
	(0.063)	(0.003)	(0.013)	(0.003)	(0.010)	(0.003)
Constant cut1	-2.751					
	(0.191)					
Constant cut2	0.408					
	(0.191)					
Constant cut3	1.241					
	(0.191)					
Constant cut4	3.406					
	(0.192)					
Observations	11,551	11,551	11,551	11,551	11,551	11,551

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

In second part of ordered logit analysis we conduct regression analysis for each age group separately. In this way, we aim to see effect of fathers' educational status on next generation educational status for each age group. At regression models, as done at previous section, we add control variables for birth region, resident region and urbanization level of resident place of participants. At analysis we use same control variables such as religiosity level, sect, migration status, ethnicity of participants; only we add gender dummy to the model in order to capture the gender differences among age groups.

In first model of second part, we analyses age group consists of 18 – 24 aged participants. Given base probabilities indicate probability of being member of relevant educational status for reference participants. As mentioned above, reference participant is male, belong to Sunni sect, belong to non believer group, local and Turkish. In sum, base probabilities of table 4.3.4 says that, reference category participants probability of being no degree member is 0.01, probability of being primary school graduate is 0.06, probability of being middle school graduate is 0.22, probability of being high school graduate is 0.61, probability of being university graduate is 0.10. Coefficients of father's educational status show that, participants whose fathers hold primary, middle, high school and university degree are more likely to get further education than reference participants. When we consider the magnitudes of coefficients we can say that, father with higher schooling category increase the likelihood of getting further education. Female participants are less likely to get further education than male participants. In terms of religiosity levels, participants belong to believer, religious and pious categories are less likely to get further education than reference group. Furthermore, as indicated at previous tables while religiosity level increase likelihood of getting further education decreases gradually. At age group analysis, ethnicity difference is not similar to gender base analysis. Being Kurdish only differ from reference group at 0.1 level confidence interval in terms of likelihood of getting further education, beside likelihood of getting further education does not significantly differ from reference group (Turkish) at other ethnicities. Sects do not create any statistically significant difference in terms of getting further education among participants as well. When we consider migration status of participants belong to first age group, migrants and family migrants are more likely to get further education than local participants. Marginal effects indicate that, participants whose fathers hold primary school degree are 1 percent less likely to be no degree, 7

percent less likely to be primary school graduate, 17 percent less likely to be middle school graduate; 13 percent more likely to be high school graduate and 12 percent more likely to be university graduate than reference group. Participants whose fathers hold middle school degree are 1 percent less likely to be member of no degree category, 6 percent less likely to be primary school graduate, 17 percent less likely to be middle school graduate; 4 percent more likely to be high school graduate and 20 more likely to be university graduate than reference group. Participants whose fathers hold high school degree are 2 percent less likely to be member of no degree category, 9 percent less likely to be primary school graduate, and 24 percent less likely to be middle school graduate and 34 percent more likely to be university graduate than reference category. We cannot find statistically significant difference between participants with no degree father and participants with high school graduate in terms of their likelihood of being high school graduate. Participants whose fathers hold university degree are 1 percent less likely to be no degree, 7 percent less likely to be primary school graduate, 22 percent less likely to be middle school graduate, 16 percent less likely to be high school graduate and 47 percent more likely to be university graduate than reference category.

Table 4.3.4: Results of Ordered Logit – Age Group 1

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.012**	**0.063**	**0.220**	**0.606**	**0.096**
Fathers' Education	Primary School	1.331***	-0.017***	-0.076***	-0.173***	0.139***	0.126***
		(0.130)	(0.002)	(0.008)	(0.016)	(0.013)	(0.014)
	Middle School	1.564***	-0.013***	-0.063***	-0.177***	0.048***	0.204***
		(0.145)	(0.002)	(0.005)	(0.014)	(0.012)	(0.026)
	High School	2.367***	-0.019***	-0.090***	-0.243***	0.007	0.345***
		(0.147)	(0.002)	(0.006)	(0.012)	(0.019)	(0.030)
	University	2.644***	-0.015***	-0.072***	-0.222***	-0.159***	0.467***
		(0.174)	(0.002)	(0.004)	(0.009)	(0.033)	(0.040)
	Female	-0.312***	0.004***	0.018***	0.043***	-0.038***	-0.027***
		(0.063)	(0.001)	(0.004)	(0.009)	(0.008)	(0.006)
	Believer	-0.419**	0.006**	0.025**	0.058**	-0.053**	-0.035**
		(0.183)	(0.003)	(0.012)	(0.025)	(0.024)	(0.015)
	Religious	-0.753***	0.010***	0.044***	0.102***	-0.091***	-0.066***
		(0.185)	(0.003)	(0.011)	(0.025)	(0.022)	(0.017)
	Pious	-1.225***	0.027***	0.108***	0.154***	-0.219***	-0.071***
		(0.214)	(0.008)	(0.026)	(0.019)	(0.044)	(0.008)
	Kurdish	-0.191*	0.003	0.012*	0.027*	-0.025*	-0.016*
		(0.107)	(0.002)	(0.007)	(0.015)	(0.015)	(0.009)
	Others	-0.104	0.0014	0.006	0.015	-0.013	-0.009
		(0.160)	(0.002)	(0.010)	(0.022)	(0.022)	(0.013)
	Alevi	0.194	-0.002	-0.011	-0.026	0.021	0.018
		(0.152)	(0.002)	(0.008)	(0.020)	(0.014)	(0.015)
	Others	0.030	-0.000	-0.002	-0.004	0.004	0.003
		(0.219)	(0.003)	(0.012)	(0.030)	(0.026)	(0.020)

Table 4.3.4 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Migrants	0.379***	-0.004***	-0.020***	-0.051***	0.039***	0.036***
	(0.112)	(0.001)	(0.006)	(0.015)	(0.010)	(0.012)
Fathers' Migrant	0.201**	-0.002**	0.011**	-0.027**	0.023**	0.018*
	(0.098)	(0.001)	(0.005)	(0.013)	(0.010)	(0.009)
Constant cut1	-3.136					
	(0.289)					
Constant cut2	-1.283					
	(0.274)					
Constant cut3	0.345					
	(0.274)					
Constant cut4	3.447					
	(0.277)					
Observations	3,995	3,995	3,995	3,995	3,995	3,995

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

In second model of second part we analyses age group covers 25 – 39 aged participants. Given base probabilities indicate probability of being member of relevant educational status for reference participants. As mentioned above, reference participant is male, belong to Sunni sect, belong to non believer group, local and Turkish. In sum, base probabilities of table 4.3.5 says that, reference category participants probability of being no degree member is 0.02, probability of being primary school graduate is 0.30, probability of being middle school graduate is 0.18, probability of being high school graduate is 0.38, probability of being university graduate is 0.12. As first step, we interpret coefficients of control variables. Results show that, participants who have higher educated fathers are more likely to get further education than reference category. Likelihood of being member of higher educational category gradually increase with the participant's father's educational status. Coefficient of added gender dummy shows that, female participants are less likely to get further education when we compare with reference group of males. In addition, religiosity level of participants creates significant difference at likelihood of getting further education among participants. When we compare with the non believer participants, after controlling for other variables, believer, religious and pious religiosity reported participants are less likely to get further education. Likelihood decreases while religiosity level converges to pious. Between ethnicities, we cannot find significant difference compared to reference group. Among sects, there is no significant difference among participants belong to Sunni sect and belong to Alevi sect groups. On the other hand, participants belong to other sect groups significantly less likely to get further education than Sunni participants. According to migration status only family migrants are significantly more likely to get further education, between likelihood of getting further education of migrants and locals, we cannot find statistically significant difference. When we consider marginal effects of variables we see that, participants whose fathers hold primary school degree are 2 percent less likely to be no degree category member, 22 percent less likely to be primary school graduate, 3 percent less likely to be middle school graduate; 16 percent more likely to be high school graduate and 11 percent more likely to be university graduate than reference group. Participants whose fathers hold middle school diploma are 2 percent less likely to be no degree category member, 27 percent less likely to be primary school graduate, 12 percent less likely to be middle school graduate, 56 percent more likely to be high school graduate and 36 percent more likely to be university graduate than reference category. Participants whose fathers hold high degree are 3

percent less likely to be member of no degree category, 34 percent less likely to be primary school graduate, 16 percent less likely to be middle school graduate, 5 percent less likely to be high school graduate and 58 percent more likely to be university graduate than reference group participants. Participants whose fathers hold university degree are 2 percent less likely to be member of no degree category, 32 percent less likely to be primary school graduate, 18 percent less likely to be middle school graduate, 22 percent less likely to be high school graduate and 74 percent more likely to university graduate than participants whose fathers have no educational degree. Detailed results of ordered logit regression of age group consist of 25 – 39 aged participants given at table 4.3.5.

Table 4.3.5: Results of Ordered Logit – Age Group 2

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.020**	**0.295**	**0.184**	**0.383**	**0.117**
Fathers' Education	Primary School	1.098***	-0.025***	-0.217***	-0.026***	0.160***	0.107***
		(0.067)	(0.002)	(0.013)	(0.002)	(0.010)	(0.007)
	Middle School	2.066***	-0.022***	-0.274***	-0.122***	0.056***	0.362***
		(0.088)	(0.001)	(0.008)	(0.006)	(0.011)	(0.020)
	High School	3.080***	-0.027***	-0.342***	-0.158***	-0.054***	0.583***
		(0.092)	(0.002)	(0.007)	(0.005)	(0.013)	(0.018)
	University	3.883***	-0.023***	-0.320***	-0.176***	-0.225***	0.744***
		(0.134)	(0.001)	(0.006)	(0.005)	(0.014)	(0.017)
	Female	-0.983***	0.020***	0.190***	0.032***	-0.137***	-0.104***
		(0.042)	(0.001)	(0.008)	(0.002)	(0.006)	(0.005)
	Believer	-0.558***	0.012***	0.112***	0.014***	0.085***	-0.053***
		(0.161)	(0.004)	(0.033)	(0.003)	(0.025)	(0.014)
	Religious	-1.056***	0.020***	0.198***	0.040***	-0.139***	-0.119***
		(0.161)	(0.003)	(0.028)	(0.007)	(0.018)	(0.020)
	Pious	-1.440***	0.053***	0.290***	-0.024**	-0.223***	-0.096***
		(0.173)	(0.011)	(0.029)	(0.010)	(0.024)	(0.007)
	Kurdish	-0.320***	0.007***	0.065***	0.008***	-0.049***	-0.030***
		(0.073)	(0.002)	(0.015)	(0.001)	(0.012)	(0.006)
	Others	-0.099	0.002	0.020	0.003	-0.015	-0.010
		(0.108)	(0.002)	(0.022)	(0.003)	(0.017)	(0.010)
	Alevi	0.080	-0.002	-0.016	-0.003	0.012	0.009
		(0.093)	(0.002)	(0.018)	(0.004)	(0.013)	(0.010)
	Others	-0.329**	0.008*	0.067**	0.010***	-0.051**	-0.030**
		(0.160)	(0.004)	(0.034)	(0.001)	(0.026)	(0.013)

Table 4.3.5 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Migrant	0.115	-0.002	-0.0225	-0.004	0.017	0.012
	(0.076)	(0.001)	(0.015)	(0.003)	(0.011)	(0.008)
Fathers' Migrant	0.225***	-0.004***	-0.043***	-0.009***	0.031***	0.025***
	(0.073)	(0.001)	(0.014)	(0.003)	(0.009)	(0.009)
Constant cut1	-3.588***					
	(0.208)					
Constant cut2	-0.474**					
	(0.204)					
Constant cut3	0.299					
	(0.204)					
Constant cut4	2.321***					
	(0.205)					
Observations	8,918	8,918	8,918	8,918	8,918	8,918

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.6 stands for show detailed results of ordered logit estimation for age group consists of 40 – 49 aged participants. Given base probabilities indicate probability of being member of relevant educational status for reference participants. As mentioned above, reference participant is male, belong to Sunni sect, belong to non believer group, local and Turkish. In sum, base probabilities of table 4.3.6 says that, reference category participants' probability of being no degree member is 0.04, probability of being primary school graduate is 0.56, probability of being middle school graduate is 0.19, probability of being high school graduate is 0.17, probability of being university graduate is 0.04. As first step we interpret coefficients of control variables. Results show that, participants with higher educated fathers are more likely to get further education than participants whose fathers have no educational degree. When we compare the coefficients of father's educational status, we see that, while father's educational status increase, likelihood of getting further education increases as well. Added control for gender shows that, female participants are less likely to get further education than control group. Comparison of religiosity level of participants indicate that, believer, religious and pious groups are less likely to get further education than non believer group even after controlling for individual and social characteristics. Likelihood of getting further education decreases while, religiosity level converges to pious. Among ethnic groups, at third age group, we find statistically significant difference in terms of likelihood of getting further education. Results show that, participants belong to Kurdish and other ethnicities are less likely to get further education than participants belong to Turkish ethnicity. When we consider migration status of participants, migrants and family migrants are more likely to get further education than local participants. Between self migrants and family migrants, family migrants are more likely to get further education. According to results of estimation, sect of participants does not affect their educational status significantly. As second step of analysis, we interpret marginal effects. According to results, participants whose fathers' hold primary school degree are 5 percent less likely to be no degree category member, 21 percent less likely to hold primary school degree, 8 percent more likely to be middle school graduate, 13 percent more likely to be high school graduate and 4 percent more likely to be university graduate than reference group. Participants with middle school graduate fathers are 4 percent less likely to be no degree category member, 47 percent less likely to be primary school graduate, 4 percent less likely to be middle school graduate, 27 percent more likely to be high school graduate and 28

percent more likely to be university graduate than reference group. Participants with high school graduate fathers are 4 percent less likely to be member of no degree category, 52 percent less likely to be primary school graduate, 9 percent less likely to be middle school graduate, 23 percent more likely to be high school graduate and 43 more likely to be university graduate than reference group. Participants whose fathers hold university degree are 4 percent less likely to be no degree member, 55 percent less likely to be primary school graduate, 15 percent less likely to be middle school graduate, 6 percent more likely to be high school graduate and 68 percent more likely to be university graduate than reference participants.

Table 4.3.6: Results of Ordered Logit – Age Group 3

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.038**	**0.557**	**0.188**	**0.173**	**0.041**
Fathers' Education	Primary School	1.109***	-0.048***	-0.206***	0.081***	0.133***	0.041***
		(0.076)	(0.004)	(0.013)	(0.006)	(0.009)	(0.003)
	Middle School	2.507***	-0.041***	-0.468***	-0.044***	0.275***	0.277***
		(0.128)	(0.003)	(0.015)	(0.010)	(0.010)	(0.026)
	High School	3.172***	-0.044***	-0.525***	-0.090***	0.230***	0.429***
		(0.139)	(0.003)	(0.012)	(0.010)	(0.017)	(0.032)
	University	4.144***	-0.041***	-0.549***	-0.149***	0.0616*	0.677***
		(0.249)	(0.003)	(0.010)	(0.010)	(0.036)	(0.049)
	Female	-1.261***	0.048***	0.248***	-0.081***	-0.161***	-0.053***
		(0.058)	(0.003)	(0.012)	(0.005)	(0.008)	(0.004)
	Believer	-0.595**	0.026*	0.111**	-0.0461**	-0.071**	-0.021**
		(0.268)	(0.014)	(0.045)	(0.021)	(0.029)	(0.008)
	Religious	-1.109***	0.037***	0.230***	-0.065***	-0.150***	-0.052***
		(0.266)	(0.009)	(0.054)	(0.011)	(0.037)	(0.015)
	Pious	-1.425***	0.091***	0.193***	-0.111***	-0.136***	-0.036***
		(0.276)	(0.028)	(0.015)	(0.019)	(0.019)	(0.005)
	Kurdish	-0.770***	0.038***	0.132***	-0.062***	-0.085***	-0.024***
		(0.117)	(0.008)	(0.016)	(0.010)	(0.011)	(0.003)
	Others	-0.571***	0.027***	0.101***	-0.046***	-0.062***	-0.018***
		(0.142)	(0.009)	(0.021)	(0.012)	(0.014)	(-0.004)
	Alevi	-0.161	0.006	0.032	-0.012	-0.020	-0.006
		(0.139)	(0.006)	(0.026)	(0.011)	(0.017)	(0.005)
	Others	0.258	-0.009	-0.055	0.017	0.035	0.011
		(0.219)	(0.007)	(0.048)	(0.012)	(0.031)	(0.011)

Table 4.3.6 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Migrant	0.419***	-0.014***	-0.088***	0.028***	0.056***	0.018***
	(0.112)	(0.004)	(0.024)	(0.008)	(0.016)	(0.005)
Fathers' Migrant	0.741***	-0.021***	-0.161***	0.038***	0.106***	0.039***
	(0.107)	(0.003)	(0.024)	(0.004)	(0.017)	(0.007)
Constant cut1	-2.964					
	(0.322)					
Constant cut2	0.642					
	(0.319)					
Constant cut3	1.548					
	(0.320)					
Constant cut4	3.397					
	(0.323)					
Observations	5,070	5,070	5,070	5,070	5,070	5,070

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

In table 4.3.7 we represent ordered logit results and marginal effects of participants belong to oldest age group. Interpretation of below given coefficients show that, similar to other age groups, participants with primary, middle, high school and university graduate fathers are more likely to take further education than participants whose fathers have no educational degree. Moreover, while father's educational status increases likelihood of participants to get further education increases as well. As same as previous results, female participants are less likely to get further education than male participants after controlling for other individual and social characteristics. Participants belong to believer, religious and pious category is less likely to get further education than reference group of non believer participants. At this age group, according to results, being member of other ethnicities does not create statistically significant difference in terms of likelihood of getting further education. On the other hand, Kurdish participants are less likely to get further education than Turkish participants. Participants' sect does not create statistically significant difference at their likelihood of getting further education at age group consists of 50 and above aged participants. Coefficients of regression analysis show that, migrants and family migrants are more likely to get further education than local participants. According to marginal effects of father's educational status, participants whose fathers hold primary school degree are 12 percent less likely to be member of no degree category, 13 percent less likely to be primary school graduate, 9 percent more likely to be middle school graduate, 11 percent more likely to be high school graduate and 5 percent more likely to be university graduate than reference category. Participants with middle school graduate fathers are 1 percent less likely to be member of no degree category, 45 percent less likely to be primary school graduate, 5 percent more likely to be middle school graduate, 25 percent more likely to be high school graduate, 36 percent more likely to be university graduate than reference individuals.

Table 4.3.7: Results of Ordered Logit – Age Group 4

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.098**	**0.654**	**0.117**	**0.095**	**0.033**
Fathers' Education	Primary School	1.358***	-0.124***	-0.128***	0.094***	0.110***	0.048***
		(0.062)	(0.006)	(0.008)	(0.005)	(0.006)	(0.003)
	Middle School	2.478***	-0.097***	-0.453***	0.053***	0.253***	0.244***
		(0.130)	(0.004)	(0.021)	(0.008)	(0.010)	(0.025)
	High School	3.046***	-0.103***	-0.531***	0.0144	0.252***	0.367***
		(0.142)	(0.004)	(0.017)	(0.010)	(0.011)	(0.032)
	University	3.943***	-0.102***	-0.603***	-0.051***	0.158***	0.598***
		(0.223)	(0.004)	(0.014)	(0.012)	(0.028)	(0.051)
	Female	-1.442***	0.143***	0.110***	-0.098***	-0.109***	-0.046***
		(0.057)	(0.007)	(0.007)	(0.005)	(0.005)	(0.003)
	Believer	-0.732***	0.079***	0.042***	-0.050***	-0.050***	-0.019***
		(0.222)	(0.028)	(0.005)	(0.014)	(0.013)	(0.005)
	Religious	-1.217***	0.098***	0.143***	-0.085***	-0.107***	-0.048***
		(0.219)	(0.017)	(0.029)	(0.014)	(0.021)	(0.011)
	Pious	-1.613***	0.216***	0.007	-0.097***	-0.092***	-0.035***
		(0.226)	(0.042)	(0.021)	(0.011)	(0.010)	(0.004)
	Kurdish	-0.635***	0.069***	0.033***	-0.044***	-0.043***	-0.017***
		(0.119)	(0.016)	(0.003)	(0.008)	(0.007)	(0.003)
	Others	-0.035	0.003	0.003	-0.003	-0.003	-0.001
		(0.137)	(0.012)	(0.013)	(0.010)	(0.011)	(0.004)
	Alevi	-0.025	0.002	0.002	-0.002	-0.002	-0.001
		(0.132)	(0.012)	(0.012)	(0.010)	(0.010)	(0.004)
	Others	0.314	-0.025*	-0.038	0.023	0.028	0.012
		(0.202)	(0.014)	(0.029)	(0.015)	(0.020)	(0.009)

Table 4.3.7 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Migrant	0.236**	-0.020**	-0.025**	0.017**	0.020**	0.008**
	(0.105)	(0.009)	(0.012)	(0.008)	(0.009)	(0.004)
Fathers' Migrant	0.406***	-0.032***	-0.050***	0.030***	0.036***	0.016***
	(0.096)	(0.007)	(0.014)	(0.007)	(0.009)	(0.004)
Constant cut1	-2.567					
	(0.272)					
Constant cut2	0.761					
	(0.271)					
Constant cut3	1.554					
	(0.271)					
Constant cut4	2.998					
	(0.274)					
Observations	5,856	5,856	5,856	5,856	5,856	5,856

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.8 and 4.3.9 stand for show detailed results of ordered logit estimation for Kurdish and Turkish individuals. In this step of our analysis, we compare the ordered logit results of ethnic groups. Given base probabilities indicate probability of being member of relevant educational status for reference participants. In this analysis reference groups are individuals whose fathers' do not hold any schooling degree, belong to 18 – 24 age groups, male, non believer, and local and belong to Sunni sect group. According to base probabilities, among Turkish individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.021, 0.376, 0.213, 0.323, 0.068. On the other hand among Kurdish individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.131, 0.449, 0.205, 0.182, 0.033. These results show that, after controlling for other social and individual characteristics, probability of being member of bottom two categories is higher for Kurdish individuals than Turkish individuals. In contrast, probability of being member of top category is lower among Kurdish individuals. In addition, being member of second age group has no statistically significant effect on Turkish individuals, contrary; it has significant negative effect on Kurdish individuals. It means that, for Turkish individuals being member of first or second age group do not differ in terms of probability of getting higher education yet, for Kurdish individuals being member of older age group significantly differ. On the other hand, until comparison between ethnic groups, we cannot find any significant difference among groups in terms of their religion sect. In contrast, comparison between Turkish and Kurdish individuals' show that, being Alevi do matter for Kurdish individuals but do not matter for Turkish individuals in terms of obtained education. In sum, Kurdish Alevi individuals more likely to be member of top categories than Kurdish Sunni individuals. Religion sect has no significant effect on likelihood of Turkish individuals'. Also, although being migrant or family migrant have significant effect on Turkish individuals' education level, for Kurdish individuals' migration status has no significant effect on education level.

Table 4.3.8: Results of Ordered Logit – Turkish

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.021**	**0.376**	**0.213**	**0.321**	**0.068**
Fathers' Education	Primary School	1.328***	-0.032***	-0.281***	0.014***	0.218***	0.081***
		(0.044)	(0.002)	(0.009)	(0.002)	(0.007)	(0.003)
	Middle School	2.262***	-0.023***	-0.348***	-0.121***	0.186***	0.306***
		(0.060)	(0.001)	(0.006)	(0.004)	(0.006)	(0.013)
	High School	2.950***	-0.028***	-0.404***	-0.151***	0.131***	0.452***
		(0.062)	(0.001)	(0.005)	(0.004)	(0.009)	(0.014)
	University	3.488***	-0.024***	-0.386***	-0.182***	-0.024*	0.615***
		(0.087)	(0.001)	(0.005)	(0.004)	(0.014)	(0.018)
	Age Group: 25-39	-0.041	0.001	0.009	0.000	-0.007	-0.003
		(0.040)	(0.001)	(0.009)	(0.000)	(0.007)	(0.003)
	Age Group: 40-49	-0.711***	0.018***	0.156***	-0.015***	-0.120***	-0.038***
		(0.046)	(0.002)	(0.010)	(0.002)	(0.008)	(0.002)
	Age Group: 50 and Above	-1.244***	0.036***	0.264***	-0.035***	-0.202***	-0.063***
		(0.048)	(0.002)	(0.009)	(0.003)	(0.007)	(0.002)
	Female	-0.897***	0.019***	0.193***	-0.003*	-0.152***	-0.058***
		(0.028)	(0.001)	(0.006)	(0.001)	(0.005)	(0.002)
	Believer	-0.500***	0.012***	0.110***	-0.006**	-0.086***	-0.029***
		(0.116)	(0.003)	(0.025)	(0.003)	(0.020)	(0.006)
	Religious	-0.934***	0.018***	0.198***	0.006***	-0.157***	-0.065***
		(0.116)	(0.002)	(0.023)	(0.002)	(0.018)	(0.009)
	Pious	-1.353***	0.049***	0.276***	-0.061***	-0.207***	-0.057***
		(0.122)	(0.007)	(0.020)	(0.009)	(0.015)	(0.003)

Table 4.3.8 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	-0.125*	0.003*	0.028*	-0.001	-0.022*	-0.008*
	(0.071)	(0.002)	(0.016)	(0.001)	(0.012)	(0.004)
Others	-0.077	0.002	0.017	0.000	-0.013	-0.005
	(0.112)	(0.003)	(0.025)	(0.001)	(0.020)	(0.007)
Migrant	0.337***	-0.007***	-0.073***	-0.002**	0.058***	0.023***
	(0.051)	(0.001)	(0.011)	(0.001)	(0.009)	(0.004)
Fathers' Migrant	0.425***	-0.008***	-0.090***	-0.006***	0.073***	0.031***
	(0.048)	(0.001)	(0.010)	(0.002)	(0.008)	(0.004)
Constant cut1	-3.518					
	(0.147)					
Constant cut2	-0.100					
	(0.145)					
Constant cut3	0.767					
	(0.145)					
Constant cut4	2.931					
	(0.146)					
Observations	19,549	19,549	19,549	19,549	19,549	19,549

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.9: Results of Ordered Logit – Kurdish

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.131**	**0.449**	**0.205**	**0.182**	**0.033**
Fathers' Education	Primary School	1.094***	-0.118***	-0.146***	0.069***	0.154***	0.040***
		(0.080)	(0.009)	(0.012)	(0.006)	(0.012)	(0.004)
	Middle School	1.816***	-0.118***	-0.289***	0.003	0.275***	0.129***
		(0.146)	(0.007)	(0.021)	(0.012)	(0.018)	(0.019)
	High School	2.391***	-0.131***	-0.354***	-0.046***	0.311***	0.219***
		(0.164)	(0.006)	(0.018)	(0.015)	(0.013)	(0.029)
	University	3.025***	-0.130***	-0.398***	-0.108***	0.268***	0.368***
		(0.274)	(0.006)	(0.018)	(0.020)	(0.030)	(0.064)
	Age Group: 25-39	-0.561***	0.066***	0.069***	-0.042***	-0.075***	-0.018***
		(0.088)	(0.011)	(0.011)	(0.007)	(0.012)	(0.003)
	Age Group: 40-49	-1.443***	0.225***	0.079***	-0.118***	-0.153***	-0.033***
		(0.112)	(0.022)	(0.009)	(0.010)	(0.010)	(0.003)
	Age Group: 50 and Above	-2.007***	0.347***	0.038**	-0.155***	-0.189***	-0.040***
		(0.123)	(0.027)	(0.015)	(0.010)	(0.009)	(0.003)
	Female	-1.432***	0.172***	0.162***	-0.097***	-0.189***	-0.048***
		(0.071)	(0.010)	(0.010)	(0.007)	(0.010)	(0.004)
	Believer	-0.105	0.012	0.013	-0.008	-0.014	-0.003
		(0.207)	(0.025)	(0.025)	(0.016)	(0.027)	(0.006)
	Religious	-0.822***	0.088***	0.112***	-0.054***	-0.116***	-0.030***
		(0.203)	(0.021)	(0.028)	(0.011)	(0.030)	(0.008)
	Pious	-1.012***	0.149***	0.072***	-0.085***	-0.113***	-0.024***
		(0.219)	(0.040)	(0.006)	(0.019)	(0.020)	(0.004)

Table 4.3.9 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	0.682***	-0.063***	-0.106***	0.035***	0.104***	0.029***
	(0.147)	(0.011)	(0.026)	(0.005)	(0.025)	(0.008)
Others	0.091	-0.010	-0.012	0.007	0.013	0.003
	(0.300)	(0.032)	(0.042)	(0.021)	(0.043)	(0.011)
Migrant	-0.059	0.007	0.008	-0.004	-0.008	-0.002
	(0.184)	(0.021)	(0.023)	(0.014)	(0.025)	(0.006)
Fathers' Migrant	-0.039	0.005	0.005	-0.003	-0.005	-0.001
	(0.169)	(0.020)	(0.021)	(0.013)	(0.023)	(0.005)
Constant cut1	-2.905					
	(0.350)					
Constant cut2	-0.690					
	(0.348)					
Constant cut3	0.281					
	(0.347)					
Constant cut4	2.357					
	(0.350)					
Observations	3,293	3,293	3,293	3,293	3,293	3,293

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.10, 4.3.11, 4.3.12 and 4.3.13 stand for show detailed results of ordered logit estimation for Non believer, Believer, Religious and Pious individuals. In this step of our analysis, we compare the ordered logit results of individuals according to their religiosity level. Given base probabilities indicate probability of being member of relevant educational status for reference individuals. In this analysis reference groups are, individuals whose fathers' do not hold any schooling degree, belong to 18 – 24 age groups, male, belong to Turkish ethnicity, local and belong to Sunni sect group. According to base probabilities, among Non believer individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.009, 0.108, 0.068, 0.537, 0.278. Among believer individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.015, 0.210, 0.180, 0. 460, 0.135. Among religious individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.041, 0.460, 0.212, 0.240, 0.047. Among pious individuals who belong to reference category, probability of being no degree, primary school graduate, middle school graduate, high school graduate and university graduate is respectively; 0.076, 0.620, 0.167, 0.116, 0.020. These base probabilities show that, being member of bottom two category increase while religiosity level increasing for reference group individuals. Furthermore, probability of being member of top two category decrease while religiosity level increasing. According to marginal effects, being Kurdish has no significant effect on education level of non believer individuals, for believer individuals being Kurdish has barely significant effect. In contrast, among religious and pious individuals, being Kurdish has significant negative effect on likelihood of being top two category member. Except, believer and religious individuals, migration status of individuals has no significant effect on educational level of individuals. But, low amount of observations at non believer and pious individuals should be considered at this case. In terms of age groups, among religious and pious individuals being member of older age group decrease the likelihood of being top two categories. Among believer and non believer individuals, being

member of second age group increase the likelihood of being top category member. Negative effect of being female on educational level is highest among pious individuals. Pious female individuals are more likely to be member of bottom category than individuals who member of other religiosity levels.

Table 4.3.10: Results of Ordered Logit – Non Believer

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.009**	**0.108**	**0.068**	**0.537**	**0.278**
Fathers' Education	Primary School	1.903***	-0.014***	-0.147***	-0.075***	-0.175***	0.411***
		(0.313)	(0.004)	(0.026)	(0.017)	(0.041)	(0.065)
	Middle School	2.285***	-0.011***	-0.121***	-0.070***	-0.313***	0.515***
		(0.375)	(0.003)	(0.018)	(0.014)	(0.059)	(0.071)
	High School	3.133***	-0.016***	-0.173***	-0.093***	-0.372***	0.655***
		(0.383)	(0.005)	(0.023)	(0.018)	(0.046)	(0.055)
	University	3.384***	-0.016***	-0.171***	-0.093***	-0.407***	0.687***
		(0.401)	(0.005)	(0.023)	(0.018)	(0.044)	(0.050)
	Female	-0.501**	0.005**	0.050**	0.024**	0.019*	-0.098***
		(0.197)	(0.002)	(0.021)	(0.010)	(0.010)	(0.037)
	Age Group: 25-39	1.102***	-0.009***	-0.098***	-0.049***	-0.071***	0.228***
		(0.234)	(0.003)	(0.021)	(0.013)	(0.027)	(0.050)
	Age Group: 40-49	0.203	-0.002	-0.018	-0.009	-0.013	0.042
		(0.322)	(0.003)	(0.027)	(0.014)	(0.025)	(0.069)
	Age Group: 50 and Above	0.541*	-0.004*	-0.045**	-0.024*	-0.043	0.116
		(0.311)	(0.002)	(0.023)	(0.013)	(0.035)	(0.071)
	Kurdish	-0.421	0.004	0.043	0.021	0.012	-0.080
		(0.306)	(0.004)	(0.034)	(0.016)	(0.008)	(0.055)
	Others	0.018	0.000	-0.002	-0.001	-0.001	0.004
		(0.334)	(0.003)	(0.031)	(0.016)	(0.017)	(0.067)

Table 4.3.10 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	0.181	-0.002	-0.017	-0.008	-0.010	0.037
	(0.254)	(0.002)	(0.023)	(0.012)	(0.017)	(0.053)
Others	0.784***	-0.006**	-0.064***	-0.034***	-0.064**	0.169***
	(0.267)	(0.002)	(0.020)	(0.012)	(0.033)	(0.061)
Migrant	-0.014	0.000	0.001	0.001	0.001	-0.003
	(0.299)	(0.003)	(0.028)	(0.014)	(0.015)	(0.060)
Fathers' Migrant	0.150	-0.001	-0.014	-0.007	-0.009	0.031
	(0.288)	(0.002)	(0.026)	(0.013)	(0.019)	(0.060)
Constant cut1	-0.768					
	(0.606)					
Constant cut2	1.904					
	(0.586)					
Constant cut3	2.443					
	(0.588)					
Constant cut4	4.879					
	(0.621)					
Observations	498	498	498	498	498	498

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.11: Results of Ordered Logit – Believer

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.015**	**0.210**	**0.180**	**0.460**	**0.135**
Fathers' Education	Primary School	1.145***	-0.018***	-0.184***	-0.069***	0.138***	0.133***
		(0.078)	(0.002)	(0.013)	(0.005)	(0.010)	(0.009)
	Middle School	2.020***	-0.016***	-0.206***	-0.138***	-0.013	0.372***
		(0.101)	(0.001)	(0.007)	(0.007)	(0.014)	(0.023)
	High School	2.714***	-0.021***	-0.259***	-0.167***	-0.067***	0.513***
		(0.101)	(0.002)	(0.007)	(0.006)	(0.014)	(0.021)
	University	3.240***	-0.017***	-0.230***	-0.175***	-0.230***	0.652***
		(0.131)	(0.001)	(0.006)	(0.006)	(0.019)	(0.023)
	Female	-0.411***	0.006***	0.067***	0.026***	-0.053***	-0.047***
		(0.048)	(0.001)	(0.008)	(0.003)	(0.007)	(0.005)
	Age Group: 25-39	0.187***	-0.003***	-0.030***	-0.013***	0.023***	0.022***
		(0.059)	(0.001)	(0.009)	(0.004)	(0.007)	(0.007)
	Age Group: 40-49	-0.541***	0.009***	0.094***	0.030***	-0.077***	-0.056***
		(0.075)	(0.002)	(0.014)	(0.003)	(0.012)	(0.007)
	Age Group: 50 and Above	-0.878***	0.017***	0.159***	0.040***	-0.133***	-0.083***
		(0.081)	(0.002)	(0.016)	(0.003)	(0.014)	(0.006)
	Kurdish	0.180*	-0.002**	-0.028**	-0.013*	0.021**	0.022*
		(0.095)	(0.001)	(0.014)	(0.007)	(0.010)	(0.012)
	Others	-0.027	0.000	0.004	0.002	-0.003	-0.003
		(0.124)	(0.002)	(0.020)	(0.008)	(0.016)	(0.014)

Table 4.3.11 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	-0.198**	0.003**	0.033**	0.012**	-0.027**	-0.022**
	(0.085)	(0.001)	(0.015)	(0.005)	(0.012)	(0.009)
Others	0.218	-0.003	-0.033	-0.016	0.024	0.027
	(0.178)	(0.002)	(0.025)	(0.013)	(0.017)	(0.024)
Migrant	0.460***	-0.006***	-0.069***	-0.033***	0.049***	0.059***
	(0.084)	(0.001)	(0.012)	(0.006)	(0.007)	(0.012)
Fathers' Migrant	0.344***	-0.004***	-0.052***	-0.025***	0.037***	0.044***
	(0.074)	(0.001)	(0.011)	(0.006)	(0.007)	(0.010)
Constant cut1	-2.583					
	(0.161)					
Constant cut2	0.396					
	(0.149)					
Constant cut3	1.250					
	(0.149)					
Constant cut4	3.491					
	(0.154)					
Observations	6,525	6,525	6,525	6,525	6,525	6,525

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.12: Results of Ordered Logit – Religious

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.041**	**0.460**	**0.212**	**0.240**	**0.047**
Fathers' Education	Primary School	1.216***	-0.054***	-0.240***	0.057***	0.184***	0.053***
		(0.046)	(0.003)	(0.009)	(0.003)	(0.007)	(0.002)
	Middle School	2.148***	-0.043***	-0.379***	-0.069***	0.267***	0.224***
		(0.070)	(0.001)	(0.009)	(0.006)	(0.006)	(0.013)
	High School	2.872***	-0.049***	-0.444***	-0.115***	0.235***	0.373***
		(0.074)	(0.002)	(0.007)	(0.005)	(0.009)	(0.016)
	University	3.405***	-0.044***	-0.445***	-0.160***	0.115***	0.534***
		(0.115)	(0.002)	(0.006)	(0.006)	(0.019)	(0.027)
	Female	-1.160***	0.047***	0.235***	-0.046***	-0.181***	-0.056***
		(0.034)	(0.002)	(0.007)	(0.002)	(0.005)	(0.002)
	Age Group: 25-39	-0.381***	0.016***	0.079***	-0.019***	-0.060***	-0.017***
		(0.050)	(0.002)	(0.010)	(0.003)	(0.008)	(0.002)
	Age Group: 40-49	-1.099***	0.0588***	0.204***	-0.068***	-0.155***	-0.039***
		(0.056)	(0.004)	(0.009)	(0.004)	(0.007)	(0.002)
	Age Group: 50 and Above	-1.624***	0.098***	0.275***	-0.100***	-0.217***	-0.056***
		(0.058)	(0.005)	(0.007)	(0.005)	(0.007)	(0.002)
	Kurdish	-0.612***	0.030***	0.120***	-0.037***	-0.090***	-0.023***
		(0.062)	(0.004)	(0.011)	(0.005)	(0.008)	(0.002)
	Others	-0.157*	0.007*	0.033*	-0.008	-0.024*	-0.007*
		(0.087)	(0.004)	(0.018)	(0.005)	(0.013)	(0.003)

Table 4.3.12 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	0.035	-0.001	-0.007	0.002	0.006	0.002
	(0.100)	(0.004)	(0.021)	(0.004)	(0.016)	(0.005)
Others	-0.238*	0.011	0.049*	-0.013	-0.037*	-0.010*
	(0.144)	(0.007)	(0.029)	(0.009)	(0.021)	(0.005)
Migrant	0.189***	-0.007***	-0.040***	0.008***	0.031***	0.009***
	(0.063)	(0.002)	(0.014)	(0.002)	(0.010)	(0.003)
Fathers' Migrant	0.364***	-0.013***	-0.078***	0.012***	0.060***	0.019***
	(0.061)	(0.002)	(0.013)	(0.001)	(0.010)	(0.004)
Constant cut1	-2.858					
	(0.113)					
Constant cut2	0.292					
	(0.111)					
Constant cut3	1.198					
	(0.111)					
Constant cut4	3.288					
	(0.114)					
Observations	14,149	14,149	14,149	14,149	14,149	14,149

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

Table 4.3.13: Results of Ordered Logit – Pious

	VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
	Base Probability		**0.076**	**0.620**	**0.167**	**0.116**	**0.020**
Fathers' Education	Primary School	1.540***	-0.122***	-0.187***	0.131***	0.146***	0.031***
		(0.105)	(0.010)	(0.014)	(0.010)	(0.011)	(0.004)
	Middle School	2.340***	-0.079***	-0.444***	0.057***	0.327***	0.139***
		(0.174)	(0.005)	(0.028)	(0.014)	(0.022)	(0.023)
	High School	3.055***	-0.083***	-0.533***	-0.007	0.366***	0.257***
		(0.200)	(0.005)	(0.022)	(0.018)	(0.017)	(0.038)
	University	4.379***	-0.080***	-0.600***	-0.112***	0.205***	0.588***
		(0.349)	(0.005)	(0.016)	(0.016)	(0.057)	(0.080)
	Female	-1.564***	0.114***	0.211***	-0.132***	-0.158***	-0.035***
		(0.082)	(0.008)	(0.014)	(0.009)	(0.010)	(0.004)
	Age Group: 25-39	-0.577***	0.046***	0.069***	-0.053***	-0.052***	-0.010***
		(0.134)	(0.012)	(0.014)	(0.012)	(0.011)	(0.002)
	Age Group: 40-49	-1.188***	0.112***	0.103***	-0.103***	-0.094***	-0.018***
		(0.144)	(0.018)	(0.009)	(0.012)	(0.010)	(0.002)
	Age Group: 50 and Above	-1.885***	0.171***	0.182***	-0.154***	-0.164***	-0.035***
		(0.146)	(0.018)	(0.014)	(0.012)	(0.013)	(0.004)
	Kurdish	-0.440***	0.035***	0.052***	-0.041***	-0.039***	-0.008***
		(0.144)	(0.013)	(0.014)	(0.013)	(0.012)	(0.002)
	Others	-0.410**	0.034*	0.046***	-0.038**	-0.035**	-0.007**
		(0.189)	(0.018)	(0.016)	(0.017)	(0.014)	(0.003)

Table 4.3.13 Continue

VARIABLES	Coefficients	Marginal Effect - No Degree	Marginal Effect - Primary School	Marginal Effect - Middle School	Marginal Effect - High School	Marginal Effect - University
Alevi	0.088	-0.006	-0.013	0.008	0.009	0.002
	(0.237)	(0.016)	(0.036)	(0.022)	(0.025)	(0.005)
Others	-0.554	0.049	0.054***	-0.050*	-0.045*	-0.009**
	(0.351)	(0.038)	(0.019)	(0.030)	(0.023)	(0.004)
Migrant	0.217	-0.015	-0.032	0.020	0.022	0.005
	(0.159)	(0.010)	(0.025)	(0.015)	(0.017)	(0.003)
Fathers' Migrant	0.302**	-0.019**	-0.047*	0.028**	0.032*	0.007*
	(0.149)	(0.009)	(0.026)	(0.013)	(0.017)	(0.004)
Constant cut1	-2.803					
	(0.285)					
Constant cut2	0.521					
	(0.283)					
Constant cut3	1.534					
	(0.283)					
Constant cut4	3.566					
	(0.292)					
Observations	2,667	2,667	2,667	2,667	2,667	2,667

Standard errors in parentheses: *** p<0.01, ** p<0.05, *p<0.1

In sum, results of the ordered logit estimations are in line with our findings that obtained from Markov chain analysis. For male and female individuals, fathers' effect to being member of top category is nearly same if fathers' hold university degree. Hence we can say that, at top category, there is no discrimination against females in terms of educational attainment. Persistence level is same among male and female participants at top level. On the other hand, after controlling for other characteristics we see that, being Kurdish has significantly negative effect on likelihood of being member of top two categories for both male and female individuals. In terms of religiosity, both for males and females, religious individuals are less likely to get university and high school diploma. Among male individuals, being migrant or fathers' migrant increase the likelihood of being member of top two categories, among female individuals being migrant has no significant effect on probability of being top two categories.

Among age groups, effect of being female, on probability of being member of top category is lower at youngest age group. However, we cannot find linear relationship between age groups and effect of being female on being member of top category. In terms of effect of being Kurdish on probability of being member of top category, we see that, being Kurdish has barely significant effect on probability of being member of top category at youngest age group. Yet, while age group getting older, deteriorating effect of being Kurdish on probability of being top category is increasing. Has been found at gender examination, again in age group examination, we cannot find any difference among religion sects in terms of probability of being top category member. Effect of being pious on probability of being top category member varies across age groups. In all age groups, it has deteriorating effect on probability of being top category member. However, the effect is less at older age groups than younger age groups.

Among ethnic groups, we find that, Kurdish individuals are more likely to stagnate at bottom category than Turkish individuals. Therefore, we can say that, Kurdish individuals are less likely to get further education and less mobile than Turkish individuals. Also, ethnic group comparison shows that, being Alevi do matter for Kurdish individuals. Kurdish- Alevi individuals are more likely to get further education than Sunni- Kurdish individuals. First time we find significant effect of religion sect on education at our analysis.

Comparison among individuals according to their religiosity level shows that, more religious individuals are less likely to get further education. Also, more religious individuals are more likely to stagnate at bottom category. Negative effect of being Kurdish varies across individuals' religiosity level. Among pious and religious individuals being Kurdish has substantial significant negative effect on educational status. Although found negative effect of being female on likelihood of getting further education, among pious individuals negative effect of being female is more than individuals belong to other religiosity groups.

Chapter 5

Conclusion

In this part of the study, we indicate the main conclusion that can be captured from our results, and each one of them has substantial importance.

First of all, despite publicly funded, centrelized education instutitions and compulsory schooling law, family backgrounds do matter for next generations' educational attainment in Turkey. Indeed, the impact of families' educational level is higher than some other countries such as Italy and the US.

Second, as discussed by Tansel (2002) before, the effect of family background on next generations' educational attainment varies across male and female individuals. In particular, for female individuals persistency at bottom levels is substantially higher than male individuals. Yet, if fathers are members of the top category, probability of being in the top category for male and female individuals do not change substantially. In addition, religiosity level of individuals also affects the gap between the mobiliy of males and females. Third, schooling decisions of individuals do change according to their religiosity level. Even though the assumption that religiosity is exogenous from schooling level of individuals may be problematic, and, there may be an issue of endogeneity, more religious individuals appear less likely to get further education than less religious participants. For pious and religious individuals, persistence at bottom category is substantially higher than believer and non believer individuals. On the other hand, pious and religious individuals are more likely to be less?? Educated than their fathers and less likely to be members of top category from bottom category. In addition, after controlling for other social and individual characteristics, poises female individuals are substantially more likely to be members of bottom category than pious male individuals. Hence, we can say that, being pious creates more stagnation for females at

bottom level. Also, effect of being pious on bottom category members is gradually decreasing over years. In other words, younger pious individuals are less likely to be bottom category members compared to older pious individuals.

Fourth, ethnicity does matter for intergenerational mobility. Our results show that, for Kurdish individuals, persistence at bottom category is substantially higher than Turkish individuals. However, persistence at top category slightly differs among Kurdish and Turkish individuals. On the other hand, being backward educated compared to fathers is nearly eight times more among Kurdish individuals than Turkish individuals. After controlling for other variables, being Kurdish still significantly decreases the probability of being a university graduate except for the first age group. The deteriorating effect of being Kurdish decreases for younger individuals. Being male or female do not matter for Kurdish individuals in terms of persistence at both bottom and top category. This finding indicates that, as discussed before, centralized Turkish education system does not provide the same chance to get further education among ethnicities. It is underpinning discussion paper of ERG.

Fifth, among sect groups, there is no significant difference in terms of mobility. Only between Kurdish – Alevi and Kurdish – Sunni individuals we find some differences. Kurdish – Alevi individuals are more likely to get further education than Kurdish- Sunni individuals.

Sixth, older age groups are more persistent at the bottom category but at the youngest age group this persistence is substantially lower. We interpret this result as reflecting the positive impact of education reform in decreasing the persistence at bottom level for 18 – 24 aged participants. Younger age groups seem to be more able to get whatever level of education level they can obtain, independently of their previous generation.

Finally, these results only indicate the mobility level of different sub groups of Turkey. It does not properly conduct causal explanations for mobility and thus cannot suggest any policy recommendations on the issue. Therefore, it should be considered as an initial step of discussion about intergenerational education mobility in Turkey. In addition, necessity of causal relations, income and occupational mobility should be considered in further studies for Turkey. Furthermore, estimation of ordered logit regression may be conducted with some other reference categories and interaction terms

should be added. In this way for particular characteristics, effect of fathers' schooling on schooling level of individuals may be studies.

References

1. Akyüz, Y. (1999), *Türk Eğitim Tarihi (Başlangıçtan 1999'a)*, İstanbul: Alfa Basım Yayım Dağıtım

2. Aslam M. and Kingdon G. (2012), Can education be a path to gender equality in the labour market? An updata on Pakistan, *Comparative Education*,48(2), 211-229

3. Aslankurt, B. (2012), Intergenerational Mobility in Education: How Does Turkey Compare in Equality of Opportunity, *Economic Research Foundation of Turkey*, No.201302

4. Başlevent, C. (2012) "The Effect of Parents' Schooling and Employment Status on the Educational Attainment of Children", *paper presented at EcoMod 2012 held in Sevilla, Spain*, 4-6 July 2012.

5. Becker G.S. and N. Tomes (1979), An Equilibrium Theory of the Distribution of Income and Intergenerational Mobility, *Journal of Political Economy*, 87/6, 1153-189.

6. Biblarz, T.J., Raftery, A.E., Bucur, A. (1997), Family structure and social mobility, *Social Forces*, 75:1319–41

7. Bjorklund, A., Jantti, M. (2007), *Intergenerational income mobility and the role of family background*, Handbook of Economic Inequality, in W. Salverda, B. Nolan and T. Smeeding (ed.), Oxford: Oxford University Press. 2008

8. Boudon, R. (1974), *Education, Opportunity & Social Inequality*, New York: Wiley

9. Breen, R., Goldthorpe, J.H. (1997), Explaining educational differentials: towards a formal rational action theory, *Rationality and Society*, 9:275–305

10. Breen, R., Jonsson, J.O. (2005), Inequality of opportunity in Comparative Perspective: Recent Research on Educational Attainment and Social Mobility, *Annual Review of Sociology*, 31:223-43

11. Breen, R., Luijkx R. (2004a). Social mobility in Europe between 1970 and 2000. See Breen 2004, pp. 37–75

12. Breen, R., Luijkx, R. (2004b), Conclusions. Breen 2004, pp. 383–410

13. Breen, R., Whelan, C.T. (1993), From ascription to achievement? Origins, education and entry to the labor force in the Republic of Ireland during the twentieth century. *Acta Sociologica,* 36:3- 18

14. Cameron, S. (2012), Education, Urban Poverty and Migration: Evidence from Bangladesh and Vietnam, *UNICEF Office of Research Working Paper No:2012-15*

15. Champernowne, D. G. (1953), A model of income distribution, *Economic Journal*, 63(250), 318–351

16. Checchi, D., Ichino, A., and Rustichini, A. (1999), More equal but less mobile? Education financing and intergenerational mobility in Italy and in the US, *Journal of Public Economics,* 74/3, 351 – 393.

17. Cilasun, S. M. and Kırdar, M. G. (2013), Household Structure and Household Income and its Components over the Life – Cycle in Turkey, *İktisat işletme ve Finans*, 28(328): 89 -116

18. Connolly, P. (2006), The effects of social class and ethnicity on gender differences in GCSE attainment: a secondary analysis of the Youth Cohort Study of England and Wales 1997-2001

19. Dustmann C. and Glitz A. (2011), Migration and Education, Handbook of the Economics of Education, Vol.4, Edited by E. A. Hanushek, S. Machin and L. Woessman

20. ERG, *Eğitimde Çiftdillilik ve Eğitim: Sürdürülebilir Çözümler İçin Atılması Gereken Adımlar,* November 2010

21. Erikson R., Goldthorpe, J.H. (1992), *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Oxford: Clarendon

22. Erikson, R. (1996), *Explaining change in educational inequality—economic security and school reforms*, Boulder, CO: Westview Press

23. Galor, O. and Zeira, J. (1993), Income Distribution and Macro Economics, *The Review of Economic Studies*, 60(1), 35 – 52

24. Gambetta, D.(1987), *Were They Pushed or Did They Jump? Individual Decision Mechanisms in Education*. Cambridge, UK: Cambridge Univ. Press

25. Gedik, A. (1997), International Migration In Turkey, 1965-1985: Test of Conflicting Findings In the Literature, *Review of Urban and Regional Studies*, 9, 170-79

26. Gerber, T.P. (2000), Educational stratification in contemporary Russia: stability and change in the face of economic and institutional crisis, *Sociology of Education*, 73:219–46

27. Geweke, J. F., C. Marshall, and G. A. Zarkin (1986), Mobility indices in continuous time Markov chains, *Econometrica*, 54, 1407–1423

28. Gokhan, A. and Filiztekin A. (2008), *The Determinants of internal migration in Turkey*, ln: International Conference on Policy Modelling (EcoMod 2008), Berlin Germany

29. Goodman L.A., Hout, M. (1998). Statistical methods and graphical displays for analyzing how the association between two qualitative variables differs among countries, among groups, or over time: a modified regression type approach, *Sociological Methodoly*, 28:175–230

30. Hamilton, J. D. (1994), *Times Series Analysis*, US: Princeton University Press

31. Hassanpour A., Skutnabb-Kangas T. and Chyet M. (1996), The Non-Education of Kurds: A Kurdish Perspective, *International Review of Education*, 42(4), 367-379

32. Hassler, J., Rodrigues J.V. and Zeira J. (2007), Inequality and mobility, *Journal of Economic Growth*, 12/3, 221–259

33. Havens, M.E. (1972), Female Intergenerational Occupational Mobility: Comparison of Patterns?, *American Sociological Review*, 37:6, 774-777

34. Hertz, T. (2005), *Rags, riches and race: The intergenerational economic mobility of black and white families in the United States, Unequal Chances: Family Background and Economic Success*, New York: Princeton University Press. 165-91

35. Hillmert, S., Jacob, M. (2003). Social inequality in higher education: Is vocational training a pathway leading to or away from university? *European Sociological Review*, 19:319–34

36. Hout, M. (1988), More universalism, less structural mobility: the American occupational structure in the 1980s. American Journal of Sociology, 93:1358–400

37. Hout, M., Raftery, A., Bell, EO. (1993), *Making the grade. Educational stratification in the United States, 1925–89*, Boulder, Colo: Westview Press, 25-49

38. Hout,M., Dohan, D.P.(1996). Two paths to educational opportunity: class and educational selection in Sweden and the United States. See Erikson & Jonsson 1996a, pp. 207–32

39. http:www.meb.gov.tr/15.11.2013

40. Ishida, H. (1993), *Social Mobility in Contemporary Japan*. Stanford, CA: Stanford Univ.Press

41. Jonsson, J.O. (2010), Child Well-Being and Intergenerational Inequality, *Child. Ind. Res.* 3:1-10

42. Jonsson, J.O., Erikson, R. (2000), Understanding educational inequality. The Swedish experience. *L'Ann´ ee sociologique,* 50:345–82

43. Jonsson, J.O., Mills,C., Muller, W. (1996). A half century of increasing educational openness? Social class, gender and educational attainment in Sweden, Germany and Britain. In R. Erikson & J. O. Jonssons (Eds.), *Can education be equalized? The Swedish case in comparative perspective (pp. 183-206).* Boulder, CO: Westview Press

44. Khattab, N. (2009), Ethno-religious Background as a Determinant of Educational and Occupational Attainment in Britain, *Sociology*, 43:304, 304-322

45. Kolaşin U. G. and Yontar Y. M. (2012), Babanın Eğitimi Çocuğun Ücretini Etkiliyor, *Betam Araştırma Notu,* 12/128

46. Mercan, M. A. (2012), Intergenerational Income Mobility in Turkey, *Iktisat Işletme ve Finans,* 318(27), 83-94

47. Meyersson, E. (2014), Islamic Rule and the Empowerment of the Poor and Pious, *Econometrica*, 82(1), 229-269

48. Morgan J. and David M. (1963), Education and Income, *The Quarterly Journal of Economics*, 77(3), 423 – 437

49. Mukhopadhyay S. (2009), Religion, Religiosity and Educational Attainment of Immigrants to the USA, No 09-003, Working Papers, University of Nevada, Reno, Department of Economics.

50. Mulligan, C.B. (1997), *Parental Priorities and Economic Inequality*, Chicago: Chicago University Press

51. OECD(2012), Economic Policy Reforms 2012: Going for Growth, *OECD Publishing* http://dx.doi.org/10.1787/growth-2012-en

52. Photiadis J. D. And Biggar J. (1962), Religiosity, Education and Ethnic Distance, *American J*ournal of Sociology, 67(6), 666-672

53. Platt, L. (2007), Making education count: the effects of ethnicity and qualifications on intergenerational social class mobility, *The Sociological Review*, 55(3), 485-508

54. Rankin, B. H. and Aytac, I.A. (2006), Gender Inequaility in Schooling: The Case of Turkey, *Sociology of Education*,79, 25

55. Resmi Gazete (1997), 18 Ağustos 1997, Sayı: 23084, Yasama Bölümü

56. Shavit, Y., Westerbeek, K. (1998), Educational stratification in Italy: reforms, expansion, and equality of opportunity. *European Sociological Review,* 14:33–47

57. Shavit,Y., Blossfeld H.P., (1993), *Persistent Inequality*: *Changing Educational Attainment in Thirteen Countries,* Boulder, CO: Westview

58. Shorrocks, A. F. (1976), Income mobility and the Markov assumption, *Economic Journal*, 86, 566–578

59. Shorrocks, A. F. (1978), The measurement of mobility, *Econometrica*, 46, 1013–1024

60. Sieben, I., de Graaf P.M.(2001), Testing the modernization hypothesis and the socialist ideology hypothesis: a comparative sibling analysis of educational attainment and occupational status, *Br. J. Sociol*, 52:441–67

61. Sjaastad, L. A. (1962), The Costs and Returns of Human Migration, *Journal of Political Economy*, 70, 80 – 93

62. Solon, G. (2002), Cross-country differences in intergenerational earnings mobility, *Journal of Economic Perspective*, 16:59–66

63. Solon, G. (2004), *A Model of Intergenerational Mobility Variation Over Time and Place*, in M. Corak (ed.), Generational Income Mobility in North America and Europe. Cambridge; Cambridge University Press, 38-47.

64. Tansel A. (2002), Determinants of School Attainment of Boys and Girls in Turkey: individual, household and community factors, *Economics of Education Review*, 21, 455-470

65. Tansel, A. and Bodur, F. B. (2012), Wage Inequality and Return to Education in Turkey: A Quantile Regression Analysis, *Review of Development Economics*, 16(1), 107-121

66. Xie, Y. (1992), The log-multiplicative layer effect model for comparing mobility tables, *American Sociological Review,* 57:380–95

67. Yamaguchi, K. (1987), Models for Comparing Mobility Tables: Toward Parsimony and Substance, *American Sociological Review,* 52:482-94.

68. Yuksel, M. (2009), Intergenerational Mobility of Immigrants in Germany: Moving with Natives or Stuck in their Neighborhoods?, *IZA Discussion Paper no.4677*

69. Zimmerman, F. K. and Bauer, T. (1999), Assesment of Possible Migration Pressure and Its labor Market Impact Following EU Enlargement To Central And Estern Europe, *Iza Research Report No:3*

Appendix 1

Two-sample t test with unequal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
own edu	36124	3.976276	0.007114	1.352136	3.962332	3.99022
own edu_01	31679	3.984848	0.007523	1.33903	3.970102	3.999594
combined	67803	3.980281	0.005169	1.346026	3.970149	3.990413
diff		-0.00857	0.010354		-0.0288661	0.0117224

diff = mean(own edu) - mean(own edu_01) t = -0.8279

Ho: diff = 0 Satterthwaite's degrees of freedom = 66811.9

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.2039 Pr(|T| > |t|) = 0.4078 Pr(T > t) = 0.7961

Two-sample t test with equal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
own edu	36124	3.976276	0.007114	1.352136	3.962332	3.99022
own edu_01	31679	3.984848	0.007523	1.33903	3.970102	3.999594
combined	67803	3.980281	0.005169	1.346026	3.970149	3.990413
diff		-0.00857	0.010361		-0.02888	0.011735

diff = mean(own edu) - mean(own edu_01) t = -0.8273

Ho: diff = 0 degrees of freedom = 67801

Ha: diff < 0 Ha:diff!= 0 Ha: diff > 0

Pr(T < t) = 0.2040 Pr(T >t)=0.4081 Pr(T > t) = 0.7960

Two-sample t test with unequal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
father edu	33560	5.206943	0.0202	3.700512	5.16735	5.246535
father edu_01	31679	5.207361	0.020484	3.645858	5.167212	5.247511
combined	65239	5.207146	0.014384	3.674046	5.178953	5.235339
diff		-0.00042	0.028769		-0.056805	0.0559679

diff = mean(father edu) - mean(father edu_01) t = -0.0145

Ho: diff = 0 Satterthwaite's degrees of freedom = 65117.7

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.4942 Pr(T > t) = 0.9884 Pr(T > t) = 0.5058

Two-sample t test with equal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
father edu	33560	5.206943	0.0202	3.700512	5.16735	5.246535
father edu_01	31679	5.207361	0.020484	3.645858	5.167212	5.247511
combined	65239	5.207146	0.014384	3.674046	5.178953	5.235339
diff		-0.00042	0.028781		-0.05683	0.055992

diff = mean(father edu) - mean(father edu_01) t = -0.0145
Ho: diff = 0 degrees of freedom = 65237
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) =0.4942 Pr(T > t) 0.9884 Pr(T > t) = 0.5058

Two-sample t test with unequal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Gender	36405	1.515451	0.002635	0.502782	1.510286	1.520616
Gender_01	31679	1.511948	0.002809	0.499865	1.506443	1.517453
combined	68084	1.513821	0.001922	0.501426	1.510055	1.517588
diff		0.003503	0.003851		-0.004045	0.0110514

diff = mean (Gender) - mean(Gender_01) t = 0.9097
Ho: diff = 0 Satterthwaite's degrees of freedom = 66892.3
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8185 Pr(T > t) = 0.3630 Pr(T > t) = 0.1815

Two-sample t test with equal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Gender	36405	1.515451	0.002635	0.502782	1.510286	1.520616
Gender_01	31679	1.511948	0.002809	0.499865	1.506443	1.517453
combined	68084	1.513821	0.001922	0.501426	1.510055	1.517588
diff		0.003503	0.003853		-0.00405	0.011055

diff = mean(Gender) - mean(Gender_01) t = 0.9093
Ho: diff = 0 degrees of freedom = 68082
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8184 Pr(T > t) 0.3632 Pr(T > t) = 0.1816

Two-sample t test with unequal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Income	35413	1572.61	7.932285	1492.724	1557.063	1588.158
Income_01	31679	1561.986	7.848196	1396.869	1546.603	1577.368
combined	67092	1567.594	5.591255	1448.254	1556.635	1578.552
diff		10.62469	11.15864		-11.24625	32.49562

diff = mean(Income) - mean(Income_01) t = 0.9521

Ho: diff = 0 Satterthwaite's degrees of freedom = 66954

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.8295 Pr(T > t) = 0.3410 Pr(T > t) = 0.1705