THE DYNAMICS OF POVERTY IN TURKEY

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ABSTRACT

THE DYNAMICS OF POVERTY IN TURKEY

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Poverty analysis has been confined to incidence studies in Turkey. In the last decade research has focused on poverty persistence referred to as 'new poverty', but it has not been quantified. In this thesis, we examine poverty dynamics in Turkey using the panel feature of the Survey of Income and Living Conditions for the years 2006 and 2007. Our aim is to contribute to the understanding of poverty persistence in Turkey and provide an input to the policy development to combat it. Firstly, we examine poverty transitions. Our results suggest that changes in earnings are important for transitions and individuals who experience poverty are more likely to experience it again. Heterogeneity among individuals and the causal link between past and current poverty (true state dependence) are processes that generate persistence. Secondly, we employ endogenous selection model to distinguish these processes. The results suggest that true state dependence is significant even after controlling for individual and household level characteristics. We search the source of state dependence in poverty in the labor market. Employing a similar model as in poverty persistence, a significant true state dependence in low-pay is found. When the poor are caught in low-pay trap, they are also caught in poverty trap. Lastly, we analyze whether social assistance is a remedy for state dependence in poverty. We find the effect of social assistance on poverty (direct effects) to be small. The analysis of potential work disincentive effects (indirect) of social assistance indicates that it leads to slower entry into employment.

Keywords: Poverty, dynamic poverty, state dependence, social assistance, unemployment duration.

ÖZ

TÜRKİYE'NİN YOKSULLUK DİNAMİKLERİ

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Türkiye'de yoksullukla ilgili çalışmalar yoksulluğun büyüklüğü ile sınırlıdır. Son dönemde yoksullukla ilgili tartışmalarda 'yeni yoksulluk' olarak nitelendirilen kalıcı yoksulluktan bahsedilse de, bu konuda henüz nicel bir çalışma yapılmamıştır. Bu tezde Türkiye'de yoksulluk dinamikleri 2006 ve 2007 yılları için Gelir ve Yaşam Koşulları panel verisi kullanılarak incelenmiştir. Amacımız, kalıcı yoksullukla ilgili hususları aydınlatmak ve buna ilişkin çözüm önerilerine katkıda bulunmaktır. İlk olarak, yoksulluk geçişleri incelenmektedir. Bulgular, yoksul ve yoksul olmama durumları arasındaki geçişlerde emek gelirinin çok önemli olduğunu ve bugün yoksul olan kişilerin önümüzdeki dönemde de yoksul olma ihtimalinin bugün yoksul olmayan kişilere göre daha yüksek olduğunu göstermektedir. Kişiler arasındaki farklılıklar ve bir önceki yoksullukla bugünkü yoksulluk arasındaki nedensellik ilişkisi (duruma bağımlılık) yoksulluktaki kalıcılığı ortaya çıkaran etmenlerdir. Bu iki etkiyi ayırt edebilmek için dışsal seçim modeli uygulanmıştır. Buna göre, kişiye ve haneye ilişkin özellikler kontrol edildikten sonra bile, kalıcı yoksullukta önemli oranda duruma bağımlılık olduğu görülmüştür. Yoksulluktaki duruma bağımlılığın sebebi işgücü piyasasında aranmıştır. Kalıcı yoksulluk için yapılan modele benzer bir modelle; düşük ücretli işlerde çalışmanın bir sonraki dönemde de düşük ücretli işlerde çalışma olasılığı üzerinde önemli bir etkisinin olduğu bulunmuştur. Yoksullar düşük-ücret tuzağına yakalandıklarında, yoksulluk tuzağına da yakalanmaktadırlar. Son olarak, sosyal yardımın yoksulluktaki duruma bağımlılık için bir çözüm olup olamayacağı sorgulanmıştır. Bulgular, sosyal yardımın yoksulluk üzerindeki etkisinin (doğrudan etki) sınırlı olduğunu götermektedir. Sosyal yardımın çalışma üzerinde yarattığı negatif etki (dolaylı etki) ise sosyal yardım almanın işsizlikten istihdama geçişi yavaşlattığı yönündedir.

Anahtar Kelimeler: Yoksulluk, dinamik yoksulluk, duruma bağımlılık, sosyal yardım, işsiz kalma süresi.

To my Son, ALPER ŞEKER

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CHAPTER 1

INTRODUCTION

1.1. Motivation and Aims of the Study

Poverty is on the top of the agenda of policymakers and policy analysts around the world as it is both a cause and result of economic and social development. In fact, as argued in the Human Development Report (2000: 73) "eradication of poverty is more than a major development challenge - it is a human rights challenge". There are almost 1.5 billion people living in poverty. Perhaps more importantly, they are likely to remain in poverty for long periods of time. In other words, poverty is a persistent condition for some. Therefore, in order to grasp a more comprehensive picture of poverty and understand its full dimensions, we need to turn our attention from aggregate levels of poverty (snapshots), to the individuals in poverty (videos) and put the light on the humanitarian and individual aspects of it.

Fully addressing poverty requires a wider appreciation of all aspects of the lives of the poor. Adam Smith defines non poor situation as not being "ashamed to appear in the public". Perhaps not in the same form, but poverty remains a problem in many part of the world and is not only confined to developing countries. While some countries are still dealing with hunger, some are concerned about relative deprivation. The number of people in developing regions living on less $1.25 a day is 1.4 billion indicating a 27% poverty rate. This rate reaches 51% in Sub-Saharan Africa (UN, 2010). The Millennium Declaration, which was accepted in United Nations Summit in 2000, emphasizes the development efforts that have improved the lives of hundreds of millions of people around the world. One of the goals set in that summit is to halve extreme poverty by 2015. In developed countries extreme poverty is not

a problem any longer. The main concern instead is relative deprivation; the proportion of individuals who lag behind the rest of the society. According to 2009 figures in EU-27 the poverty rate is 16.3% and in the US it is around 24%.[1] In Turkey, the proportion of individuals living less than $1.25 a day or in hunger is almost non-existent. However, relative deprivation remains an issue; in 2009 an estimated 23.8% of the population was living in poverty, which puts Turkey behind many EU countries. The proportion of individuals in absolute poverty, which includes the cost of food and non-food expenditures, was about 18% in 2009. Despite the 2008-2009 global financial crises, these figures represent an improved situation; in just over five years the prevalence of absolute poverty went down by 10 percentage points. While this figure was 28.3% in 2003, it reduced to 17.8% and slightly increased in 2009 to 18.1%.

Most individuals are not passive when it comes to their livelihoods. Most struggle to make ends meet and hopefully do more than that. Because of this, poverty is not a static phenomenon; people fall in and out of it. In fact, life is experienced as a series of events, not as a series of static positions. It is those events which often help to define us (Ellwood, 1998: 49). However, it is agreed that the longer a person has been poor, the less likely it is that he or she will escape poverty (see for example, Bane and Ellwood, 1986; Jenkins, 2000; Oxley et al., 2000). Claims about dependency and separate life styles among the poor rest on assumptions about the long-term effects of poverty (Bane and Ellwood, 1986). If poverty persists for many years, policymakers have good reasons to be concerned about the consequences of such long-term deprivation. In addition, since government programs frequently provide assistance to the poor, it is important to document the extent to which certain individuals remain in poverty, and eligible for public assistance, year after year (Stevens, 1999).

[1] The share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income. The figure for EU-27 belongs to 2009, for US, 2004.

Understanding poverty persistence is therefore important to fully understand the experiences of the poor but also to develop appropriate policies to combat poverty.

Poverty research has focused on the issue of poverty persistence in the last decade. Poverty persistence may be due to heterogeneity; individual characteristics such as low endowments of human capital, unemployment experience, low intelligence, lack of abilities etc. make certain individuals particularly poverty-prone. Alternatively, past poverty experience may cause current poverty status. This phenomenon is referred to as "state dependency" in poverty. Past experience may have a behavioral effect in the sense that an identical individual who did not experience the event would behave differently in the future than an individual who experienced the event (Heckman, 1981a). Poverty experience may lead to demoralization, loss of motivation or depreciation of human capital making it less likely that the individual takes up a job if unemployed, or it may lead to low-quality jobs or unstable employment, increasing the risk of remaining in poverty (Biewen, 2009). Many of the sources of state dependence in poverty are thought to lie in the labor market (Cappelari and Jenkins, 2002: 65). Distinguishing between true state dependence and heterogeneity is crucial since their policy implications are different. If persistence of poverty is (at least partly) due to true state dependence, then it makes sense to somehow lift the individual out of poverty at once in order to reduce his/her chance of experiencing poverty in the future. But if the persistence of poverty is due to heterogeneity than policies enhancing human capital would be more effective. For example as Jenkins (2000) mentions, the researchers in the US and UK have long drawn attention to the differences between the poverty experience of the population over a period of time and poverty at a one particular time, and emphasized that the design of anti-poverty policy measures should depend on whether poverty is a short-

duration event or a long-duration event concentrated amongst particularly identifiable groups in the population.

Persistent poverty may change the attitudes and poverty may become a culture and could no longer be solved through income transfers. For example, social exclusion is used for defining this type of poverty in the EU and underclass in the US. Although lack of income and/or other factors like discrimination may cause the emergence of such a culture, it has been argued that large social transfers to this segment may be associated with the beginning of this type of poverty. Integration of these groups into the society is a harder task than alleviation of income poverty. The problem of social exclusion has been addressed at the Lisbon Summit in 2000, which contributed to the reinforcement of the social inclusion strategy and thus, the European Social Model, with its aim to make a decisive impact on eradicating poverty by 2010.

For Turkey a similar concept was started to be used especially since the beginning of 2000. The arguments about "new poverty" in Turkey basically indicate that while before the mid 90s, certain legal and illegal mechanisms such as irregular housing (*gecekondu*s), less rigid delienation of formal/informal sector, urban-rural linkages, existed that allowed the poor to move out of poverty, in the last decade these mecahnisms have been exhausted. In other words, while poverty was solved automatically within a dynamic framework, nowadays this situation has changed. In most general terms "new poverty" refers to a poverty trap (Buğra and Keyder, 2003; Kalaycıoğlu and Rittersberger, 2002; Işık and Pınarcıoğlu, 2008). It is claimed that poverty was a transitory phenomenon until a decade ago since the poor had a chance to work in the formal sector, where wages are higher and could find a place to live – in squatter districts - and benefit from social networks. However, these mechanisms have lost their sustainability since the beginning of 1990s and poverty has become a permanent situation for some. Since until recently only

static analyses of poverty could be carried out due to lack of panel data, the size of this problem and its roots have not been quantified. The significant decrease in poverty rate from 2003 to 2006 (by over 10% points) may have also led attention to be paid more on exits. Although there have been significant exits from poverty, there could still be a static group stuck below the poverty line for long periods due to heterogeneity and/or state dependence in poverty. Poverty persistence problem is likely to be aggravated since 2006 due to the significant drop in rate of decline in poverty since then.

Although social transfers have relatively higher share in poor households' income, earnings changes are most important trigger events for poverty transitions (Jarvis and Jenkins, 1997; Jenkins, 2000; Antolin et al., 1999). Therefore, people caught in low-pay trap are probably also caught in poverty trap. In some countries, a high degree of state dependence in low-pay is found (see for example, Stewart and Swaffield, 1999; Stewart 2005; Uhlendorff, 2006; Clark and Kanellopoulos, 2009). They argue that finding a job is not a guarantee for escaping from poverty; many poor people remain in poverty despite the fact that they work. Employers may view low paid employment with another firm as an indicator of an individual's low productivity. On the supply side, low paid employment may reduce subsequent human capital accumulation thereby keep productivity at low levels and a spell of low paid employment may influence an individual's perception of his productivity which discourages him from applying for better paid jobs. Therefore, it is possible that being low paid in one period may itself increase the probability of being low paid in the next period, giving rise to state dependency in low pay (Stewart and Swaffield, 1999: 30). In Turkey, the majority of households rely on labor market income for their livelihoods. According to Survey of Income and Living Condition Survey results, 59% of total household income is comprised of earnings. Within this context, it is expected that the less paid employment a potential income earner has, the worse off he or she is

economically. If true state dependence in poverty is significant in Turkey, the possible source of this is expected to lie in the labor market.

As mentioned above, if there is true state dependence in poverty, short-terms policies like social assistance programs lifting needy out of poverty should be used. In fact, in Turkey, there has been a significant increase in total social assistance but it still needs to be enhanced in terms of efficiency (Demir, 2008). On the other hand, although social assistance programs may be a cure for poverty persistence it may be a reason of it. In the empirical literature, there is a consensus regarding the existence of work disincentives of welfare payments[2] (see for example Levy, 1979; Moffitt, 1983; Meyer and Rosenbaum, 2001). The diversification of social assistance programs according to the characteristics of poor has therefore a vital importance. To induce welfare recipients to invest in more productive jobs and thus, to decrease the negative effects of social transfers on labor supply, workfare programs have been developed in many countries. Bearing in mind the adverse effects of social assistance established in other countries, it makes sense to also analyze the incentive and disincentive effects of social assistance programs on poverty in Turkey.

In this study, our broad goal is to understand the dynamics of poverty using the panel feature of the Survey of Income and Living Conditions (SILC) of Turkish Statistical Institute (Turkstat) for the years 2006 and 2007. In the light of the above explanations, we wish to better understand the process (heterogeneity and/or true state dependence) that may generate persistence in poverty. Since earnings are the most important income source of households in Turkey, the reason behind the state dependence in poverty is thought to be in

[2] Most of these studies take into account social transfers which is a broader concept than social assistance and try to find the effect of social transfers on labor supply.

the labor market. It is also useful to check whether labor market really leads to a state dependence in poverty. Besides, direct and indirect effects of social assistance implementations, which have started to be widely used in Turkey for poverty alleviation and which are also suggested as potential sources of state dependence, are also investigated. This study brings an insight to these areas. The findings of this study would contribute to our understanding of poverty persistence in Turkey and provide an input to the development of policies to combat it.

We hypothesized that there is state dependence in poverty primarily because of state dependence in low-pay. Social assistance which is advocated as a remedy for state dependence may actually fail to break this state dependence.
Within this framework, the questions we ask are:

- Is there a meaningful transition in poverty? How big is it? How does it compare to the rates in other countries?
- What are the characteristics of individuals making transition out of poverty and staying in poverty?
- What are the trigger events for transition?
- Is there a state dependence in poverty?
- Is there a state dependence in low-pay?
- How effective is social assistance in reducing poverty?
- What are the effects of social assistance on employment and unemployment durations?

1.2. The Significance of the Study

While we know much about poverty in a static context - poverty rates and the characteristics of the poor in any given year - our understanding of poverty dynamics in Turkey remains very limited. This is a serious shortcoming, since many of the most important aspects of poverty relate to its dynamic element. It is generally agreed that, for a deeper understanding of the poverty phenomenon

and for the design of policy interventions, the "static" approach measuring the spread and intensity of poverty at a given moment in time is insufficient (Jenkins, 2000; Bane and Ellwood, 1986). For example, to understand the hardship of poverty requires knowing whether it is a relatively short or long-term experience to identify the correlates of movements into or out of poverty necessitates observing those transitions, and to place poverty spells in a broader context depends on observing the rate at which individuals move back into poverty after escaping it (Finnie and Sweetman, 2003).

The sort of longitudinal data that follow individuals over time, which is required for the study of income dynamics in general and poverty dynamics in particular, did not exist in Turkey until very recently. The availability of longitudinal income and poverty data, SILC, now makes a comprehensive analysis of transitions, correlates of transitions, characteristics of individuals making transitions, and state dependence in poverty possible. This study is the first one analyzing poverty in Turkey in a dynamic perspective. The first two rounds (2006 and 2007) of SILC are used to understand the dynamics of poverty in Turkey.

This study provides the magnitudes of poverty transition in Turkey for 2006 and 2007. Individual characteristics and events associated with poverty transitions are also provided. It documents the size of the 'persistent poverty' problem and causes of it: true state dependence and/or heterogeneity. Although new poverty discussions have been made since at least the early 2000, there has been no study attempting to quantify it. If there is a 'new poverty', it is probably the people who are persistently poor who should be of primary concern. The studies of new poverty are mainly in the sociology literature and are based on qualitative and case studies. They do not analyze, as we do, the processes that can lead to poverty persistence.

This study also provides the main reason of state dependence in poverty: state dependence in low-pay. Although, inaccessibility of formal jobs is shown as a reason for new poverty, there has not been any study that analyzes the magnitude and reasons for state dependence in low pay. There are some studies, however, that have attempted to decompose the wage gap between formal and informal sector jobs. They have pointed to the increasing unexplained part in wage gap. Due mainly to the lack of panel data transition from informal to formal jobs could not be analyzed in terms of individual characteristics and state dependence. We do not make differentiation as formal and informal sector jobs, but compare low-pay and high-pay jobs. We analyze state dependence in low pay and its causes: heterogeneity and/or true state dependence. Our result may also provide an insight for segmentation in the labor market.

An additional contribution of this study is that we look at whether social assistance programs create disincentives for work. A duration analysis carried out for this purpose provides the effect of social assistance receipt on employment and unemployment durations as well as the main characteristics of those individuals who are most likely to become long-term unemployed and long-term employed.

1.3 Organization of the Study

This thesis is comprised of seven chapters. Following the introductory chapter, Chapter 2 describes the basic concepts used in the study and a review of the relevant theoretical and empirical literature. In Chapter 3, we provide a description of the SILC, which is the main data source we use in this study. We compare and contrast SILC to Household Budget Surveys (HBS), which we also employ in this study, and discuss the possible problems associated with SILC and HBS. In this Chapter we also construct the poverty line to be used and obtain poverty rates. We compare our poverty rates to that of Turkstat,

which are based on HBS. Then, some descriptive analysis about the profiles of the poor are provided. In Chapter 4, we utilize the panel feature of SILC and quantify poverty transitions. The characteristics of the people who are persistently poor and those making transitions out of low income as well as trigger events for poverty entry and exits are investigated in this chapter. We also conduct sensitivity analysis to see how robust our results are to changes in the poverty line. Chapter 5 is devoted to determination of the size of poverty persistence and to the process leading to persistence. The main reason for poverty persistence, low-pay persistence, is also discussed in this chapter. We again use the panel feature of SILC. In the first part of this Chapter, we present our empirical model, which is a bivariate model with endogenous selection. We provide the estimation results and using these we estimate true state dependence in poverty. We again test the robustness of our results to poverty line changes. In the second part of the chapter transitions between low-pay, high-pay and no-pay are examined. Then, estimation results for low-pay persistence and true state dependence are presented. In Chapter 6 we focus on the effect of social assistance receipt on unemployment and employment durations. We use the monthly data from SILC for the analysis in this part. Following the description of the empirical model we provide non-parametric as well as the parametric estimation results. Since, benefiting from social assistance may be associated with particular characteristics of individuals that make them less/more employable/unemployable; we estimate a hazard model jointly with a probit model, which takes into account social assistance receipt. Discrete time non-proportional hazard (logit) model is used for estimation. Firstly, the joint estimation results for unemployment duration model and social assistance probit model, then the estimation results for employment duration model and social assistance probit model are provided. We also carry out robustness checks by estimating the model in different ways. Chapter 7 concludes the thesis.

CHAPTER 2

BASIC CONCEPTS, DEFINITIONS AND LITERATURE SURVEY

This chapter firstly presents the main concepts and definitions used in the thesis; poverty, unit of analysis, equivalence scale, poverty line and measures of poverty. Among various definitions and uses of these concepts, which poverty definition, equivalence scale, poverty line and measure of poverty are used in the thesis are determined in this chapter. Then, literature review is provided in the breakdown of theoretical and empirical. Theoretical part of the literature survey is based on the main theories used to explain poverty. Empirical part is divided into two parts: international literature and literature for Turkey.

2.1. Basic Concepts and Definitions in the Study

2.1.1. Poverty

To determine poverty, we need to evaluate living standards by which we measure poverty. In fact, the concept of the standard of living itself is a difficult, but central, issue in studying poverty (Sen, 1985: 19). Adam Smith defines the situation of non-poverty as not being "ashamed to appear in the public" and points out the necessary commodities for this achievement. Sen argues that it is the capability to function that has to be put at the center stage of assessment of the standard of living. Capabilities are like being healthy, being educated, and also various social achievements including being able to take part in the life of the society as Adam Smith emphasized (Sen, 2006: 35). In fact, Sen (2004) defines poverty as lack of capabilities rather than lack of income. Higher income will help the achievement of a larger capability to function, but it is only a mean and capability also depends on other factors like

personal or societal (Sen, 2006: 34-35). In other words, Smith and Sen point out non-monetary aspects of poverty besides monetary aspects.

The UNDP's Human Development Reports (annual since 1990) have defined human development as a process of enlarging people's choices. Income is a good proxy for other human choices since access to income is necessary for most of the other choices. However, as Sen (2004) indicates Human Development Reports also define income as a mean. In fact, country experiences show several cases of high human development at modest income levels and poor levels of human development at high income levels (UNDP, 1990: 10). Because of this, in Human Development Reports, human development is measured using health, education as well as income indicator.

In developing indicators to evaluate the standard of living we are confronted with two main challenges: relevance and usability. The indicators chosen need to relate closely to the complexity of living standards. But usability requires that they are simple enough to be measured (Sen, 1985: 20). It is difficult to include all relevant factors about non-monetary poverty dimension, since we cannot even measure some of them. For example, although UNDP includes education and health dimension of well-being, it is criticized by not including quality of education besides educational attainment. Income or consumption is widely used to evaluate standard of living and thus poverty because they are relatively easy to be measured. Besides this, although not enough, they are highly relevant for deprivation especially in less developed or developing countries. Wealth could also be used for measurement of poverty (e.g., Caner and Wolff, 2004; Haveman and Wolff, 2004). In fact, it is argued that it is more stable than income. However, the challenge is the insufficient information about wealth in the surveys using in analyses of poverty.

2.1.2. Unit of analysis and equivalence scale

Any poverty analysis should begin by deciding on the unit of analysis. Some studies use households and some use individuals as the unit of analysis. If the individual is taken as the unit of analysis, then there would be a number of individuals with virtually no recorded income, notably children and non-working individuals without any labor or non-labor income. However, these people might be enjoying high standards of living as a result of sharing the incomes of their households. As long as there is income sharing, it would be quite incorrect to count such individuals among the poor. If the extent of these intra-family transfers was known with reasonable accuracy, it would then be possible assign an income to these individuals and, therefore, retain the individual as the unit of analysis. Such calculations of intra-family sharing are usually not possible due to lack of data relating to individual's share of household income and/or consumption within households. Therefore, a wider unit of analysis than the single individual may be more appropriate. A natural candidate is the nuclear or extended family. Adopting this unit would be equivalent to assuming that all income received by members of the family are shared. This means that the relative differences in income decrease. If we were to go beyond the nuclear or extended family, and take the household[3] (where non-family members also reside) as the basic unit, then the degree of dispersion would be still further reduced. We would be assuming in effect that not only the family but also other household members pooled their income equally (Atkinson, 1975: 41-42). In fact, casual observations and what little empirical evidence we have based on the allocation of leisure time and private consumption goods do point that income sharing indeed takes place (e.g., Bonke and Poulsen, 2007).

[3] A household is technically defined as a group consisting of one or more people, whether they are related or not, living in the same housing, sharing their incomes and expenditures and participating in household management and unpaid household services.

When household (or family for that matter) is taken as the unit of analysis, the need to adjust household income for household size arises. The assumption upheld is that household income is distributed across members of the households according to their needs. The simplest way of adjusting household income for its size is to treat all members as having the same needs and to calculate the income per head. This does not however recognize the variation of need with age and the possible economies of scale. In order to allow for these factors, attempts have been made to construct "adult equivalence scales" to allow comparison across different types of units (Atkinson, 1975: 42). A number of adult equivalence scales are widely used in the literature. These include the OECD equivalence scale, Eurostat equivalence scale and square root of household size equivalence scale. These scales differ from each other according to the weights they assign to the needs of children and adults and the amount of economies of scale assumed to take place.[4]

Following the general practice in the literature, in this study, we adjust the household annual disposable income by an adult equivalence scale. The scale we employ is the Eurostat equivalence scale, which counts the first adult in the household as 1, additional adults (individuals 14 and above) as 0.5 and children (younger than 14 years) as 0.3 adults. Equivalent income of household is found by dividing the household income by the total of adult equivalents. This figure is compared with the poverty line. If equivalent income is less than the poverty line, then the household is called "poor". To calculate individual poverty from these calculations, we just multiply the number of poor households by the related household sizes.

[4] For details of construction of adult equivalance scales, see Atkinson (1975).

2.1.3. Poverty line

The choice of the poverty line

Consistent with the concepts of absolute and relative poverty, two different poverty lines can be determined. Absolute poverty is an inability to meet basic requirements of life. It is regarded as a situation of insufficient command over resources, independent of the general welfare level in society. Relative poverty, on the other hand, is seen as a situation of purely relative deprivation. The choice of one approach over the other has important implications for social policy; absolute poverty may be reduced by economic growth, while relative poverty will only decrease when income inequality decreases (Hagenaars and Prag, 1985: 139). There are many views that relative poverty lines are rough measures of income inequality, and not of poverty. In fact, families that are below a poverty line set according to income distribution cannot be called poor families any more, only low income families. And so it is not surprising that Eurostat no longer uses the expression "poverty rate", but "at risk of poverty rate" (Sucur, 2005: 34). The analyses based on these two approaches may give very different results in terms of poverty statistics.[5]

For the purposes of anti-poverty policies, if poverty line is absolute then poverty comparisons made are consistent in the sense that two individuals with the same level of welfare are treated the same way (Ravallion, 1998: 5). However, absolute poverty is of little relevance for some countries where the number of poor by this standard is so low. Since relative poverty line increases with income increase, relative poverty is of more relevance to high-income countries. Also, relative poverty line is appropriate if one's goal is to identify and target today's poor (World Bank, 2005: 48). Since it is hard to find the same

[5] See for example Notten and Neubourg (2007). They use absolute and relative monetary poverty lines to explore the differences between the outcomes in terms of the headcount index and poverty profiles.

absolute poverty line for different countries, to make international comparisons of poverty rates, relative poverty is more suitable.

Therefore, when choosing between absolute and relative poverty, the most important thing to consider is whether only price increases will be reflected in determining the poverty line or if general welfare increases will also be taken into account in the calculations.

The details of absolute poverty line

There are mainly two ways of defining absolute poverty and establishing the poverty line. One way is to define an "objective" poverty line. The key idea here is that the poverty line should be set at a level that enables individuals to achieve certain capabilities including a healthy and active life and full participation in society. The second way is to define a "subjective" poverty line. That is, poverty could be measured by asking people to define a poverty line, and using this to measure the extent of poverty. For example, in the 2003 Household Budget Survey[6] (HBS) the following question is posed to the respondent: "What should be your monthly incomes to keep your life: 1) at minimum level 2) at a normal level and 3) at a good level. On the other hand, the most common way of making objective absolute poverty line operational is the cost-of-basic needs approach, while the food energy intake method has been suggested as an alternative when the data available are more limited (World Bank, 2005: 50-64).

Almost all absolute poverty lines are set in terms of the cost of buying a basket of goods (the "commodity-based poverty line"). In cost-of-basic-needs approach, a consumption bundle is determined firstly, and then cost of this

[6] HBS is conducted by Turkstat since 2002 to estimate consumption-based poverty rates, like food and non-food poverty rate.

bundle is set as the poverty line. In this consumption bundle both food and non-food components could be included. There are four steps in calculating the cost of the consumption basket. In the first step, food component is determined by the energy requirement of a person for daily activities. Different calorie amounts are taken for energy requirement. For example, 2100 calories is a calorie amount that is also considered to be appropriate by FAO. However, in Colombia for example, the calorie requirement corresponds to 2297 calories, owing to special conditions (like climate, environmental factors) in that country. In the second step, the cost of the determined calorie requirement is calculated by considering the consumption patterns of the people close to the poverty line. In the third step the non-food cost is calculated. More common method for adding non-food component to the basket is by taking the share of non-food expenditures of some pre-determined income quintiles and calculating the expenditure of non-food part by using food share's expenditure. For this purpose, Ravallion (1998) has proposed two methods. The first method takes the form of dividing the cost of the food basket to the food expenditure share in total consumption of the people around the poverty line. The second method adds the average non-food expenditures of the people around the poverty line to the cost of the food basket. Ravallion states that, while the first method gives an upper limit for the non-food necessities, the second method gives a lower limit. Finally, at the last step, the poverty line is calculated by adding together the cost of the food and non-food baskets. In both methods, poverty line is calculated every year.

Rather than calculating the absolute poverty line every year or every time a suitable dataset is available, the thresholds of the absolute poverty line could be simply updated by inflation (Carraro, 2006: 22). In fact, for the beginning year, either a relative income threshold or an absolute threshold could be used as poverty line. In the following years, it could be updated by inflation. For example, Förster and d'Ercole (2005) for OECD countires set poverty

threshold at 50% of median equivalised disposable income in the base year and kept it unchanged in real terms in the following years. In fact, this is the way how OECD estimates the annual absolute poverty line. In the USA, until very recently, the poverty threshold calculated by Orshansky at the beginning of 1960s is inflated by cost of living was used as the poverty threshold.

The details of absolute poverty line used by Turkstat

Turkstat uses cost-of-basic needs approach in calculating the official poverty rate (the food and non-food poverty rate). The methodology is as follows. In determining the food basket that forms the basis of food poverty, the 2003 HBS data is used. In the 2003 HBS, the third and fourth deciles ordered according to food expenditures are taken as the reference group and 80 food items that have the highest share in the food consumption of these households are designated as the food basket. The quantities of these 80 items are calculated based on a diet that satisfies 2100 calories of food intake per day.[7] First of all, the calorie value of each item is calculated using the calorie quantity corresponds to 100 grams of each item. Then, these values are added up. In the next step, this total calorie value is divided by 2100 to obtain a ratio. Using this ratio the amount by which each item should appear in the basket is found. In other words, the quantity of each item in the basket is divided by this rate and thereby the quantities by which the 80 items should appear in the basket are found. This basket which is constructed using the 2003 data is priced every year. In order to do so, for each year, the prices of the 80 items are obtained from the relevant HBS data. The cost of this basket valued at current prices is called the food poverty line.

[7] The food basket that forms the basis of the poverty line includes bread and cereals, meat, fish, milk, yogurt, egg, oil and fats, fruits, vegetables, sugar, jam, honey, chocalate, tomato paste, tea, coffee, cacao and non-alcoholic beverages. While the item that has the highest share in the basket is bread, the items with the lowest share are salami, honey, snacks, baklava.

While Turkstat uses the food consumption of the third and fourth deciles as the reference group, for example the first 20% of households could also be used. In fact, the method used by Turkstat is based on the food consumption patterns of the individuals above the poverty line. Therefore, one can expect the poverty line calculated using this method to be higher than those computed using some alternative methods. The basket corresponding to 2100 calories could also be priced differently. For example, suppose that the amount spent on food by a household in the bottom 20% is 100 liras and that this corresponds to a calorie intake of 2000. If the household spends 100 liras for 2000 calories, then it will spend 105 liras for 2100 calories and thus, the cost of the basket for this household will be 105 liras. The food poverty line could also be calculated by taking the average of this value calculated separately for all households in this group. However, in pricing the basket Turkstat uses not the prices of the reference group but the average prices paid by all the households in the survey.

For the non-food part of the basket, the non-food consumption share of people who are just above food poverty line is used (while in 2003 this share was 60%, it became 65% in 2009). The cost of non-food part of basket is calculated from the cost of food basket by dividing the cost of the food basket to the food consumption share of the people a little above the poverty line. In this calculation, different approaches are observed from one country to another. For example, households below, but close to the poverty line could also be taken as the reference group. In Venezuela, the poverty line is found by multiplying the food cost by two. On the other hand, in Turkey the poverty line is found by multiplying the food cost by approximately 2.8 in 2008. In Peru, a methodology similar to Turkey is used.

In sum, the consumption basket used by Turkstat to calculate food and non-food poverty lines was constructed in 2003 and has been preserved since then. However, pricing the basket has been done every year using average market

prices from HBS results. The non-food cost is calculated every year and added to the food-cost to obtain the poverty line. For this, the non-food consumption share in total consumption of households a little above the poverty line is used. The cost of the food basket is divided by this ratio to arrive at the amount of non-food expenditures. The annual changes in the cost of the basket is found to be higher than that the Consumer Price Index (CPI). This means that the average food prices in the basket obtained from HBS increase faster than the CPI for food products. If the poverty line determined in 2003 were inflated every year in accordance with the changes in CPI, a lower poverty line would have resulted. Moreover, year to year increases in the share of non-food expenditures also affect the poverty line. The increase in the non-food expenditure share and therefore, the decrease in the food expenditures share (a likely consequence of a general welfare increase) leads to the cost of the food basket to be divided by a relatively smaller food expenditure share, resulting in a higher figure to be obtained for non-food expenditures. In these respects, the food and non-food poverty rates calculated by Turkstat have a relative aspect to them as well.

To identify the poor, the poverty line found using the method above is compared to the consumption expenditures of the individual. For this purpose the following steps are taken. The total monthly spending is calculated from the household expenditures module of HBS. The cost of basic needs may vary among the different regions of the country and over time. In order to have a nationally comparable consumption aggregate over time, the spending data need to be adjusted for regional and over time price differences. The HBS data is collected every year over a 12 month period. Therefore, an adjustment needs to be made for data collected at different times over the 12 month period to reflect inflation over time. In 2003, the food basket used in the calculation of the poverty line was changed so that 2003 became the benchmark year for poverty analysis. Also, the index used to adjust cost-of- living differences

among regions was expanded to cover more geographical areas.[8] The consumption aggregate at the household level, adjusted for price differences over time and location, is then divided by the adult equivalence measure in order to get the adult equivalence and economies of scale adjusted consumption aggregate at the individual level. This individual level consumption aggregate is then compared to the national poverty line for the determination of poverty status.

The details of relative poverty line used by Turkstat

While relative poverty calculations depend on consumption expenditures in HBS, it is based on income in Survey of Income and Living Condition (SILC). In HBS, the poverty line is defined as the 50 percent of the median value of the adult equivalent consumption. The relative poverty rate is calculated as the share of the household population in total population whose consumption expenditure per equivalised person is under the relative poverty line. On the other hand, for the calculations of the relative poverty rates Turkstat has specified various relative poverty lines (40%, 50%, 60%, or 70%) that are determined based on the adult equivalent disposable household income at the median. Whether or not a person is poor is determined by comparing these poverty lines with income per equivalised person.

Poverty line used in this study

To be able to analyze poverty dynamically, mostly SILC will be used in this study.[9] The poverty rate that could be calculated using SILC, in turn, is based on income, because in SILC no expenditure data is available. As a matter of

[8] In 2002, an index was built reflecting price differences for 7 geographical regions, urban and rural areas and 12 months resulting in an index that took on 168 different values (7x2x12=168). In the consequent years starting in 2003, an index was built using 12 NUTS1 regions, urban and rural areas and 12 months. This has resulted in an index that takes on 288 values (12x2x12=288).

[9] The details of the data set are provided in the next Chapter.

fact, Turkstat calculates relative poverty rates based on income using the SILC data.

In determining both the poverty line and the poverty rate, households' disposable income will be taken as the basis. Household income equals the sum of labor, non-labor income and transfer incomes received by all household members. Household net annual disposable income is calculated as the total of individual incomes of all members of the household (total of the income in cash or in-kind such as salary-wage, profits, pensions, survivors' benefits, old-age income, grants, etc.) minus taxes paid during the reference period of income and regular transfers to other households or persons (Turkstat, 2011). Household disposable income is divided by equivalence scale to obtain adult equivalent income.

In the thesis, we utilize both the absolute and relative poverty in our analyses. Further explanation on the operational definitions of relative and absolute poverty is given in Chapter 3 where the data is explained.

2.1.4. Measures of poverty

After deciding on the indicator of welfare and the poverty line, an appropriate measure of poverty should be decided. The most commonly used measures in the literature are; headcount index, poverty gap index, squared poverty gap index and the Sen index. Besides these, the Sen-Shorrocks-Thon index, Watts index, Foster-Greer-Thorbecke index are also used as measures of poverty. In our study, we use headcount index and poverty gap index. Details of these indexes are given below.

a. Headcount index

Headcount index is the most commonly used measure of poverty. It is just the ratio of the total number of poor people to total population.

Poverty rate: $P = \frac{q}{n}$, where q is the number of poor people and n is the total population.

The main advantages of the headcount index are that its calculation is easy and it is easily understood. However, headcount index does not measure the depth of poverty. This means that headcount index is insensitive to poor individual's income changes unless they cross the poverty line. In other words, if a policy targeting the poor does not push the poor above poverty line, although it increases the incomes of the poor, the head count index does not register a change, implying that the policy has be ineffective. Headcount index does not measure the severity of poverty either. It is insensitive to transfers among poor people, i.e. it remains at the same level in the case of transfers from a poor person to a less poor or to a poorer one. This undesirable property also implies that the poverty rate could be decreased more easily by decreasing the poverty rate among the poor who are closest to the poverty line. However, changing the distribution below the poverty line in favor of the less poor may not be regarded as a desirable policy. Hence, for policy purposes, it might be desirable to complement the headcount index with another index that is sensitive to the depth and/or severity of poverty.

b. Poverty gap index

The poverty gap index gives information about the depth of poverty. Poverty gap index is based on "poverty gap" which is the difference between the poverty line and the poor individual's income. Poverty gap is calculated for individuals below poverty line, that is, it could not be negative. It shows the total income required to lift the poor above the poverty line.

Poverty gap = $I = \sum_{i=1}^{q} (z - y_i)$, where z is poverty line, y is income, i is individual and q is total number of poor people.

Poverty gap index is equal to ratio of average poverty gap (i.e. how much it would cost per person to lift the poor above the poverty line) to the poverty line:

Poverty gap index: $PG = \frac{\sum_{i=1}^{q} (z - y_i)/n}{z}$, where n is total population.

In case of a change in a poor person's income, both the poverty gap and poverty gap ratio change. Headcount index changes if the position of this person according to poverty line changes. If there is an increase in poor person's income while the number of people living below poverty line remains constant (i.e. the increase in income is not high enough to push that person above the poverty line), the headcount index does not change but the poverty gap decreases.

Eurostat and Turkstat use a different version of the poverty gap rate. Instead of finding the difference of each adult equivalent income from the poverty line, they use median adult equivalent income to represent poor individual's adult equivalent incomes. It is subtracted from the poverty line an averaged over the poverty line. That is:

Poverty gap rate= ((Poverty threshold - Equivalised median income per poors)/Poverty threshod)*100

Box 1. Selected poverty measures other than headcount index and poverty gap index

Squared poverty gap index: In squared poverty gap index, a higher weight is given to poor people further away from the poverty line. This is achieved by taking the square of the ratio of poverty gap to the poverty line.

Squared poverty gap index: $\text{SPG} = \frac{\sum_{i=1}^{q}\left((z - y_i)/z\right)^2}{n}$

The headcount index, poverty gap index and squared poverty gap index could all be obtained from a single equation. Foster, Greer and Thorbecke (1984) develop the following formulation:

$$P_\alpha = \frac{\sum_{i=1}^{q}\left((z - y_i)/z\right)^\alpha}{n}\ ,\ \alpha \geq 0$$

α is a measure of the sensitivity of the index to poverty. As α increases, more weight is given to the poor whose income-poverty line difference is more.

According to this;

If α=0 then the index turns out to be headcount index,

If α=1 then the index turns out to be poverty gap index,

If α=2 then the index turns out to be squared poverty gap index.

Sen Index: Besides the number of poor people, depth of poverty, the Sen index also takes into account inequality among the poor.

Sen Index: $P_s = PG_p + PG(1 - G_p)$, where P is headcount rate, PG is the poverty gap index and G_p is Gini coefficient among the poor. If G_p =1 then there is perfect inequality among the poor, the Sen index is equal to the headcount rate. If G_p =0 then there is perfect equality among the poor, the Sen index equals the poverty gap ratio.

2.1.5. Static versus dynamic analysis of poverty

Poverty could be analyzed in a static or in a dynamic way. Static analyses of poverty provide the amount and the incidence of poverty in a population; however this is an incomplete picture of poverty. In order to get a more complete picture, static analysis should be supplemented by longitudinal information (Devicienti, 2000: 2). Because, knowing that 10 percent of the population is poor in a given year leaves open the question whether for these individuals poverty is persistent or temporary (Biewen, 2003: 2). "If one takes the dynamic perspective, the salient research questions change from 'who is most likely to be poor at the moment?' to 'who is most likely to remain poor and who is most at risk of becoming poor?" (Cappelari and Jenkins, 2002: 3).

The dynamic analysis makes possible comprehensive analyses of, for example, the extent of transitory poverty and chronic poverty, triggering events of beginning and ending of poverty. In fact, longitudinal analysis is an essential ingredient in policy formulation. For instance, researchers in the US and UK have long drawn attention to the differences between the poverty experience of the population over a period of time and the poverty at a one particular time. They emphasized that the anti-poverty policy measures should be differentiated depending on the duration of poverty (Jenkins, 2000: 532). Besides, the poverty turnover could not be understood from static analyses. While the static poverty rate is low, if there is much turnover amongst the poor then poverty is said to be a widespread phenomenon. For example, Antolin et al. (1999) show for Canada, US, UK and Germany that while poverty is short-term event for many, the share of the population that was in poverty at least once over the six-year period is large.

2.2. Literature Review

There is a huge amount of literature about poverty. Since our aim is to understand the dynamics of poverty and especially the existence, reason and

solution to poverty persistence, we focus on these issues in this part. Firstly, the theories which could be used in explaining poverty dynamics are presented. Secondly, the studies about poverty dynamics and persistence of poverty for other countries are summarized. Lastly, poverty studies for Turkey are provided.

2.2.1. Theoretical literature review

Main theories in poverty dynamics literature

The probability of an individual being poor depends on the income flows into the household in which the individual lives and the households' needs (Burgess and Propper, 1998: 9). Since poverty is determined by the income to needs ratio, poverty changes when income and/or needs changes. While the changes in needs would be caused by a departure or entrance of another family member, changes in income would be caused by variations in head's earnings, wife's earnings, other members' earnings, or other sources of income, especially transfer income. Income, in turn, depends on the labor supply decisions (the number of earners per family and hours worked), wage rates, and the amount of unearned income received (property income, government transfers, and private transfers) (Sawhill, 1988: 1086).

It is difficult to find a comprehensive theory of poverty dynamics. Perhaps this is because poverty is too complex to model. A complete explanation of poverty would require many interrelated theories: theories of family composition, earnings, asset accumulation, transfer programs, and the macro economy, to name a few. Complicating the task further, a complete poverty theory would need to be based upon the family. But despite these challenges a few researchers in the poverty dynamics literature have indeed attempted to model poverty dynamics. The most comprehensive model in this literature, developed by Burgess and Propper (1998), incorporates both household composition and

labor market participation decisions in predicting patterns of poverty dynamics (Cellini et al., 2008: 583).

Although it is difficult to find a comprehensive theory for poverty dynamics, there are some theories that have implications for poverty dynamics. The relevance of these theories to poverty is limited to the dimensions of poverty included within the main model.

a. Human capital theory

Human capital represents the investment people make in themselves that enhance their economic productivity. Education plays a significant role in the economy of a nation. Education augments individual's human capital and leads to greater output for society and enhanced earnings for the individual worker. It increases the chances of employment in the labor market, and allows people to reap pecuniary and non-pecuniary returns and gives them opportunities for job mobility (Olaniyan and Okemakinde, 2008: 158-160). Schultz (1961) emphasizes that the differentials in earnings correspond closely with differentials in education and he says that human capital investment is a policy enlarging the range of choices available. Becker (1962, 1975) also indicates that investment in human capital (on the job-training, education, other knowledge) has an important effect on observed earnings, besides the effects of physical capital, ability or institutions.[10] Becker (1975: 231) says that "…some persons earn more than others simply because they invest more in themselves. Because "abler" persons tend to invest more than others, the distribution of

[10] There are lots of studies indicating human capital as an important factor for earnings. Sakamota and Powers (1995) find that education is the major determinant of the sector of one's first job for Japanese men; Sunde (2001) shows that education is responsible for the divergent developments in earnings inequality for OECD countries. In fact, Card (1999) surveys the literature on the relationship between education and earnings and he concludes that average return to education is not much below the estimate that emerges from standard human capital earnings function fit by OLS.

earnings would be very unequal and skewed even if "ability" were symmetrically and not too unequally distributed."

If human capital theorists are correct in arguing that education is the primary cause of higher earnings, then it obviously makes sense to provide more education to low-income groups of society to reduce poverty and the degree of income inequality (Olaniyan and Okemakinde, 2008: 161). Because, without growth in human capital, there would be only hard, manual work and poverty except for those who have income from property (Schultz, 1961: 16). Therefore, human capital theory is relevant for poverty to the extent that education explains earnings and earnings explain poverty. Human capital theorists mainly take into account supply side of labor. However, there exist important differences on the demand side of labor which imply differences in the same workers' wages which can not be explained by workers' characteristics.

b. Segmented labor market theory

Segmented labor market theory can be considered within structural theories attempting to explain poverty. Structural theories consider social and economic system as the determinants of poverty. Structural explanations contend that macro-level labor market and demographic conditions put people at risk of poverty, and differences in these structural factors account for variation in poverty (Brady, 2006: 154). For example, Beeghley (1988) examines the structural factors producing a high rate of poverty are the reproduction of the class system, macroeconomic policies, the vicious circle of poverty, the structure of the electoral process, the structure of the economy, institutionalized gender discrimination, and institutionalized ethnic discrimination.

According to Michael J. Piore and other segmented labor market economists, “the problem of poverty could be best understood in terms of a dual labor market… The poor are confined to the secondary labor market. Eliminating poverty requires that they gain access to primary employment" (Cain, 1976: 1218). In fact, the basic hypothesis of "dual labor market" is that the labor market is divided into two distinct sectors with little mobility between them. The former (i.e. primary sector) offers jobs with relatively high wages, good working conditions, chances of advancement, equity and due process in the administration of work rules, and employment stability. Jobs in the secondary sector, by contrast, tend to be low-paid, with poorer working conditions and little chance of advancement; and characterized by considerable instability in jobs and a high turnover among the labor force (Kalleberg and Sorensen, 1979: 356-357). In fact, segmented labor market theory takes into account demand side of labor contrary to neoclassical economic theory (Lang and Dickens, 1987: 8).

Another labor market theory used for explaining poverty is that of discrimination which is closely related to the segmentation theory. Labor market discrimination is thought to be exist whenever some groups in the society (white and nonwhite; men and women etc.), perfectly substitutable in production, do not receive the same return even when employed in the same segment of the labor market (Barros et al., 2000: 4).

According to segmented labor market theory; the segment, which people enter, change people’s attitudes and choices which makes it hard for them to leave this segment. The ‘entrapment’ hypothesis, which is deduced from segmented labor market theory, assumes that unsuccessful entry has long-lasting negative consequences for the subsequent work history because workers are ‘trapped’ in a given labor market segment. Since the constituting features of the labor market segments are the limited mobility flows between them, entrants in low

secondary labor market segment are more likely to be entrapped there (Scherer, 2004: 371).

Entrapment hypothesis is supported by signaling theory. According to signaling theory, certain signals help solve the problem of insufficient information faced by employers (Scherer, 2004: 372). The employer may not be sure of the productivity of an individual before hiring him. In fact, the information about productivity may not be available immediately after hiring neither. Because of this, employer uses the information about observable characteristics and attributes of the individual (e.g., education, previous work, sex, criminal records). Employer will have probability assessment over productivity of individual given combinations of indices and signals *conditional on previous experience in the labor market* (Spence, 1973: 357). Therefore, previous occupational career may serve as a signal of the worker's potential productivity, besides his/her education level. This may have important implications for poverty persistence. If employment is important for poverty transition and such a hypothesis is valid, then it is less possible for people to escape from poverty.

On the supply side, low-paid employment may reduce subsequent human capital accumulation (or causing the depreciation of human capital not currently being used) thereby, keeping productivity low. In addition, a spell of low-paid employment may influence an individual's perception of his productivity and discourage him from applying for high-paid jobs (Stewart and Swaffield, 1999: 30).

Therefore, being in secondary segment in one period may itself increase the probability of being low-paid in the next period, relative to another individual with identical characteristics who was not in the secondary segment in the first period; this phenomenon is called "state dependence". Therefore, high

correlation between earnings and poverty and state dependence in bad jobs may lead to state dependence in poverty.

On the other hand, the stepping-stone hypothesis predicts that non-optimal entry positions are transitional steps for the subsequent career. In other words, an individual could manage to transit to optimal jobs while entry into employment is non-optimal (low-paid, temporary etc.). It is argued that there is no negative consequence of non-optimal entry, but it brings relative advantages, for instance, temporary jobs may allow individuals to acquire some additional human capital. According to the stepping-stone hypothesis, larger mobility steps are necessary to make up for the initial disadvantages of non-optimal occupational entry positions (Scherer, 2004). Therefore, although signaling theory predicts that having had a temporary job may be a signal for low-productivity, stepping-stone hypothesis predicts that it may bring relative advantages. According to stepping-stone hypothesis, while a poor started his career in low-paid jobs, he eventually catches up non-poor and therefore, could escape from poverty.

c. Other theories

Human capital and segmented labor market theories mainly focus on earnings. However, non-labor income may be an important component of total household income. Therefore, the relevance of these two theories for poverty is limited by the relevance of poverty for earnings. Since people tend to smooth their consumption according to future income expectations, the relationship between today's earnings and poverty situation of the individual is weakened. This is especially the case where consumption is used as an indicator of welfare for poverty calculations. Therefore, permanent income and life-cycle hypotheses and cultural poverty hypothesis could help explain poverty dynamics as well.

Friedman's permanent income theory is a theory of consumption in which expected consumption is proportional to permanent income but not to the current level of income. Friedman distinguishes between income as recorded, which he terms measured income, and income to which consumers adapt their behavior, which he calls permanent income. In fact, the consumption of a person is determined by longer-range income considerations plus transitory factors affecting consumption directly (Friedman, 1957: 221). According to life-cycle theory, which takes its basis from two studies that Modigliani wrote with Brumberg between 1952 and 1954, resources that a representative consumer allocates to consumption at any age, will depend only on his/her life resources and not on his/her current income. Permanent income hypothesis differs from the life cycle hypothesis primarily in that life cycle hypothesis models rational consumption and saving decisions under the assumption that life is indefinitely long (Modigliani, 1986: 299).

However, these theories are difficult to adapt to poverty analysis.[11] In principle the income of each family member could be modeled individually, allowing for simultaneous influences from and to family structure. However, such models are difficult to develop (Bane and Ellwood, 1986: 3). Besides, these hypotheses do not allow for an individual's income stream to change which is an important drawback for analyzing poverty transitions where one of the primary aims is to analyze the effects of events such as changes in demographics on poverty (Cellini et al., 2008: 584). Also, if current income is used as an indicator of welfare, these theories become less relevant.

Another theory that explains poverty is the cultural poverty theory. Contrary to structural poverty theories seeking the causes of poverty in the economic and

[11] Lillard and Willis (1978) derive probabilities of various time sequences of low-earnings status using the estimates of permanent and transitory components of male earnings. It largely mirrors theoretical decomposition of permanent and transitory income.

social system; cultural poverty theories seek the causes of poverty within the individual. Oscar Lewis' (1966) "culture of poverty" is the most prominent and controversial theory of culture and poverty. Lewis argues that this culture emerges when populations are socially and economically marginalized from society. More specifically, according to the culture of poverty perspective, the poor remains in poverty not merely as a result of their economic conditions but also because of cultural values and practices they develop (Lamont and Small, 2008: 78). Culture based theories have an important implication in common: poverty among certain groups will be persistent because the culture of poverty is passed from one generation to another (Cellini et al., 2008: 586).

Culture of poverty may also be a result of state dependence in poverty. Spending some time below the poverty line may lead to changes in attitudes and therefore people may not want to exit from poverty. In fact, the poor may have entered poverty due to structural reasons; however they may remain in it due to the choices they make. Since spending time under poverty may lead to adverse effects, it is important to get people out of poverty.

In the case of cultural poverty, the poor segment lives as excluded from the other part of the society. The "underclass" in the US, "social exclusion" in Europe and "marginality" in Latin America are concepts referring to this type of poverty. The underclass in the US is argued to mainly comprise of African Americans. According to some views, these people do not want to work and social assistance allows them to live without any labor income. On the other hand, others argue that adverse economic conditions such as increasing unemployment and decreasing opportunities for decent jobs where these people live lead to such segments (Katz, 1992; Wilson, 2002). Although the term 'social exclusion' was used in the academic discussions of the 1960s and 1970s, it was not placed in a European Union context until the beginning of the 1990s, when it became a broader social policy issue. Social exclusion means

turning attention to the problem that comes with high unemployment rates, increasing inequality and poverty, i.e. that people have fewer opportunities to participate in economic and social life (Böhnke, 2004). Marginality expresses a state of non-integration to society in Latin America similar to the other two concepts. Whatever the reason that leads individuals to fall into poverty, getting them out and re-integrating them with the society at large becomes a difficult process.

Social assistance and poverty persistence

According to the theories proposed above, poverty persistence may be due to low human capital, low rate of transition from secondary segment in the labor market to the primary segment and cultural reasons. In fact, the first two may result in poverty persistence and the last one may cause poverty to become a way of life. If persistence of poverty is due to cultural reasons, then it may be more difficult to break it.

Persistence of poverty may result from individual characteristics and/or experience of poverty in the past. The distinction between two has two different policy implications. If individual heterogeneity defines the duration of poverty as implied by human capital theory then anti-poverty policies should focus on schemes such as education, development of skills. On the other hand, if poverty itself causes the future poverty independently from individual characteristics then it is important to break the "vicious circle" of poverty and to bring individuals out of poverty using short-term policies like social benefits (Andriopoulou and Tsakloglou, 2010).

Therefore, in the case of state dependence in poverty, the prevention of the initial poverty experience becomes an important policy objective. For this purpose, policies reducing short-run poverty incidence especially social assistance programs are advised. While social assistance programs help people

to escape from poverty in the short-run, they may have also disincentive effects. Because, state dependence in poverty may be due to adverse incentives which make it not worthwhile for the individual to take up a job if unemployed, or even to keep a low-paid job if employed especially because of welfare payments (Biewen, 2009). In fact, it has been argued that reliance on social assistance benefits reduces the need to seek employment and therefore, traps people in poverty. The mechanism through which the work disincentives operate is derived from the traditional theory of income leisure choice. In the economic literature the incentive argument plays an important role: If the difference between the level of social assistance and potential income from a job is too small, taking up a job becomes unattractive for the individual (see for example Ochel 2003). In fact, not only social assistance policy, but any policy changing the relative price of work and leisure or modifying income levels would be expected to alter labor market behavior of individuals (Burkhauser et al., 1995: 12).

A welfare program that includes a cash grant and a tax on labor earnings[12] is expected to reduce labor supply. An alternative approach to improving the income status of low-income persons while keeping them attached to the labor market is earned income tax credit type programs. Earned income tax credit subsidizes work, it does not provide cash grant, and instead increases the net wage for non-workers who enter the labor force. As a result, tax credits on earned income create work incentives and draw many persons into the labor force (Borjas, 2000: 55-66). It has also been argued that social transfers help improve employment conditions. These are important features of some social assistance programs which are designed to help the poor find good jobs while helping them financially. By this way, people could find a chance to look for

[12] Although welfare recipients can work, the amount of the cash grant is often reduced by some specific amount for every dollar earned in the labor market.

better jobs or invest in their human capital during the period that they receive social transfers. To force welfare recipients to invest in more productive jobs and thus to decrease the negative effects of social transfers on labor supply, workfare programs have been developed. When people benefit from these programs, they have to meet certain participation requirements, like vocational training, rehabilitation, and work experience. Therefore, the effect of social transfers on labor supply depends on the characteristics of transfer schemes.

2.2.2. Empirical literature review

a. International literature

The availability of longitudinal data on income in the 1990s has led to a substantial growth in the number of studies on poverty dynamics. Since the panel data are available mostly for the US and EU countries, the literature is mostly comprised of studies on these countries. Different methodologies allow different questions to be asked: "Is poverty a more common experience when viewed longitudinally rather than cross-sectionally?"; "How long does poverty last?"; "What are the beginning and ending events of poverty?"; "Which groups make up the short and longer-term poor?"; "What are the exit and entry rates of poverty?"; "What is/are the reason/s of poverty persistence?".

Most of studies find high turnover amongst the poor; individuals below the poverty line are not the same individuals across years. Due to high exit and entry rates, poverty is more widespread than what static rates suggest. For example, Andriopoulou and Tsakloglou (2011) analyze the poverty dynamics in 14 European countries[13] in a seven-year period and find that the prevalence poverty rate, which measures the proportion of individuals that experience poverty at least once in the whole period of the survey to the total population,

[13] Austria, Belgium, Germany, Denmark, France, Spain, Greece, Finland, Italy, Ireland, Luxembourg, the Netherlands, Portugal, UK.

is almost double than the poverty rate. This is an indication that mobility exists and that for a substantial proportion of the population poverty is a transient situation. Layte and Whealan (2002) also indicate that poverty is a more common experience when viewed longitudinally rather than cross-sectionally for EU countries.[14] According to Oxley et al. (2000), the share of the population that was in poverty at least once over the six-year period is large (between 12 and 38% of the population) for Canada, Germany, the Netherlands, Sweden, the United Kingdom and the United States.

In many studies, re-entry rates to poverty can be examined thanks to longer periods in data sets. For example, Martin and Cowell (2006) find for Spain that one half of the individuals who start a poverty spell in Spain exit poverty a year later, and among those who exit poverty, one in eight return to it shortly after exit. Duncan et al. (1993) study poverty dynamics in eight countries (US, Canada, France, Germany, the Netherlands, Luxembourg, Ireland and Sweden) and find large mobility among the poor in all these countries. Jenkins (2000) finds for Britain that about one-fifth of those leaving a poverty spell will have experienced another spell within the subsequent five years. There are many other studies indicating the same results: the longer the duration of the non-poverty spell, the less probable a return to poverty becomes (see for example; Jarvis and Jenkins, 1997; Bane and Ellwood, 1986; Devicienti, 2000; Stevens, 1994).

The socio-economic correlates of poverty dynamics is also examined a lot in the literature. Applying the method of Bane and Ellwood (1986); changes in earnings, changes in non-labor income and changes in household composition are investigated as trigger events of poverty entry and exits. For example; Bane

[14] Denmark, the Netherlands, Belgium, France, Italy, Ireland, Spain, Greece, Portugal, Germany and UK.

and Ellwood (1986) and McKernan and Ratcliffe (2002) examine the most common events associated with poverty exits in the US; Oxley et al. (2000) for six OECD countries. According to their results; employment and earnings related factors account for most exits. Besides earned income, in countries with generous social welfare benefits, like Denmark and France, unearned income is also closely associated with poverty endings. Demographic events also account for more than 10% of endings in most countries. For poverty beginnings, earnings are still the most important factor; however demographic events become more prevalent in the case of entries (see for example Jenkins, 2000; Oxley et al., 2000; Jarvis and Jenkins, 1997).

Most of the studies have found that the longer a person has been poor, the less likely it is that he or she will escape poverty (see for example, Bane and Ellwood (1986) for US; Jenkins (2000) for Britain; Antolin et al. (1999) for Canada and Germany). This may be due to duration dependence because long periods of poverty lead to changing attitudes towards work or erosion of human capital. Alternatively, a sorting process may happen where those best able to exit do so, leaving an increasingly adverse pool of poor (Antolin et al., 1999). The first reason implies true state dependence. According to Heckman (1981a), true state dependence means that the experience of poverty in one year per se raises the risk of being poor also in the next year. On the other hand, the second one refers to individual heterogeneity. In the last decade, poverty dynamics research has focused on the issue of state dependence in poverty. In other words, researchers consistently try to distinguish between true state dependence and individual heterogeneity. Most studies find significant poverty state dependence (for example, Cappellari and Jenkins (2004a) for Britain, Ayllon (2008) for Spain, Buddelmeyer and Verick (2007) for Australia, Andriopoulou and Tsakloglou (2011) for 14 European countries, Biewen (2009) for Germany), separately from the persistence caused by heterogeneity. In fact, the probability of being poor is higher for individuals who were poor in

the last period as compared to those who were non-poor. More than half of this probability is due to being in the state of poverty in the last period and is not to do with individual characteristics. Therefore, human capital theory is not enough to explain the poverty transitions alone.

Since the most important trigger event for poverty transitions is found to be earnings change, many of the sources of state dependence in poverty lie in the labor market (Cappelari and Jenkins, 2002). Tomlinson and Walker (2010) analyze the state dependence in Britain in both qualitative and quantitative methods and conclude that there is state dependence in low-pay which leads in turn to higher poverty. Stewart and Swaffield (1999) and Stewart (2005) also find true state dependence in to be high in low-for Britain. Besides these, Cappelari (1999) for Italy, Uhlendorff (2006) for Germany and Clark and Kanellopoulos (2009) for 12 EU countries[15] conclude high state dependence in low-pay and even higher transitions from low-pay to no-pay.

In the case of poverty state dependence, prevention of initial poverty becomes an important policy tool and social assistance programs are widely used for this purpose. However, due to possible work disincentive it may create, instead of decreasing state dependence social assistance programs may even increase it. There are many studies on the adverse effects of social transfer programs which could be used for the prevention of state dependence. In the empirical literature, there is a consensus regarding the existence of work disincentive effects of welfare payments[16] (see for example Danziger et al., 1981; Levy, 1979; Moffitt, 1983; Meyer and Rosenbaum, 2001; Blau and Robins, 1983;

[15] Austria, Belgium, Germany, Denmark, France, Spain, Greece, Italy, Ireland, Portugal, UK., the Netherlands.

[16] Most of these studies take into account social transfers which is a broader concept than social assistance and try to find the effect of social transfers on labor supply.

Chen and Klaauw, 2008; Schneider and Uhlendorff, 2004). Both static and dynamic analyses are used for this purpose.

In dynamic analyses the following questions are examined: "Do social assistance recipients remain unemployed longer than non recipients?" and "Are recipients more likely to leave employment than non recipients?". To answer these quesitons, duration analysis is carried out. For example, Pelizzari (2004) analyzes the effect of social assistance receipt on unemployment duration in EU countries (Austria, Belgium, Denmark, Finland, France, Germany) and conclude that the receipt of social assistance increase the duration of unemployment. Erbenova et al. (1998) find a similar result for the Czech Republic. Blau and Robins (1986) derive estimates for welfare-non welfare differences in labor market flows among the states of employment, unemployment and non-participation for US. Blau and Robins (1986) find that the biggest work disincentive effect occur on transition rates into employment for the US. However, Earle and Pauna (1998) for Romania and Lubyova and Ours (1998) for the Slovak Republic find that social assistance for unemployed individuals does not have a significant effect on unemployment duration, mostly due to job search requirements for social assistance eligibility. There are comparatively fewer studies on the effect of social assistance programs on exit rates from employment. Blau and Robins (1986) find that the receipt of social assistance increases the risk of exiting employment but this effect is less than the case of unemployment. Ham and Sheppard (2001) find that an important social assistance program in the US, namely Aid to Families with Dependent Children (AFDC), have no effect on exits from employment, but have a significantly negative effect on exits from unemployment.

b. Poverty literature in Turkey

Several studies have been undertaken in Turkey that try to explain and quantify poverty prevalence in a static framework. Due to lack of officially set poverty

line and rates, it could be said that the poverty literature in Turkey started with measurement issues. Because of this, there are only a few studies that examine poverty policies prior to 2000s. The studies about poverty could be grouped as follows: studies about the measurement of poverty and describing the profiles of the poor; studies that investigate the relations between poverty and macro economic policies; fiscal policies and some sectoral policies and studies that focus on the changing form of poverty especially after 2000. Some these studies are provided below.

In Turkey, an official poverty line was first announced in 2004 based on the results of the 2002 Household Budget Survey. Because of the lack of a poverty definition prior this date, early studies focused on the measurement of poverty and providing a description of the poor. Some of these studies are; Dağdemir (1992), Erdoğan (1996), Dumanlı (1996), Dansuk (1997), Uygur and Kasnakoğlu (1998), Erdoğan (1998), Erdoğan (2002), Alıcı (2002) and Pamuk (2002) and Dayıoğlu (2007). These studies determined a poverty line based on consumption expenditures on food items or total consumption using Household Income and Expenditures Surveys of 1987 and 1994. These studies provide poverty profiles in terms of age, gender, education, employment status and sector, home ownership, and housing facilities.

Another group of studies investigated the association between macro-economic, fiscal and sectoral policies (education, health, social security etc.) and poverty. Some of these studies are; Celasun (1986), Dağdemir (1999), World Bank (2000, 2003), World Bank and State Institute of Statistics (2005), Pınar (2004). Celasun (1986) analyzes the effects of changes in internal terms of trade over the 1973–78 and 1978–83 periods on income distribution and poverty. According to his results, the discrepancies between mean incomes of agriculture and non-agricultural sectors as well as income inequality within the agricultural sector are the two main causes of inequality in Turkey. In the

1973–78 period, the increase in the incomes of low-income groups working in the agricultural sector was above the average due to the relative improvement of agricultural sector in the economy. However, in the 1978–83 period, due to the deterioration of internal terms of trade against agriculture income inequality and poverty increased.

Dağdemir (1999) focuses on the poverty problem in Turkey during the economic recession period of 1987–1994. Besides the headcount rate, the change in poverty is analyzed using the poverty gap measure and income inequality among the poor. World Bank (2000) using the Household Income and Expenditures Surveys (1987 and 1994) investigates the associations of poverty with economic growth, employment and public expenditures. World Bank (2003) looks at the relationship between poverty and economic development and the poverty impact of the earthquake in 1999. It reaches the conclusion that while there was not so much change in inequality and poverty in the 1994–2001 period, poverty in urban areas increased mainly due to the financial crisis of 2001. In the qualitative part of the research it is found that the poor relies on networks of family, relatives and neighbors, but these networks were strained to the limit by economic shocks and the financial crisis. World Bank and State Institute of Statistics (2005) use the 2002 Household Budget Survey to analyze poverty in terms of macroeconomic variables, and individual characteristics such as education, health, labor force participation and social protection. Pınar (2004) focuses on the effects of public expenditures and taxes on income inequality using the 1994 Household Income and Consumption Survey and the 2002 Household Budget Survey. According to his results, expenditures and social transfers favorably affect the low-income groups.

There are also some studies following human development approach focusing on the education, health and income in measuring welfare (see Akder, 2000

and UNDP, 2001). Another method of defining poverty is to give attention to the voices of the poor. Erdoğan (2002) is an example of such an analysis, which is mainly based on interviews and focus group surveys with the poor in İstanbul and Ankara.

Recent academic work has focused on the changing forms of poverty in Turkey. The arguments about "new poverty" in Turkey basically indicate that while before the mid 90s, certain legal and illegal mechanisms such as irregular housing (*gecekondu*s), less rigid delienation of formal/informal sector, urban-rural linkages, existed that allowed the poor to move out of poverty, in the last decade these mechanisms have been exhausted. In other words, while poverty was solved automatically within a dynamic framework, nowadays this situation has changed. The concept of "new poverty", in its most general terms refers to permanent poverty. The new poverty is not of a nature to disappear with better performance of the economy or higher growth rates in the economy. When people remain in poverty for a long time, as cultural poverty theories predict it becomes a persistent condition of life. People accept that way of living and do not make an effort to change it. It is asserted a segment like the underclass in the U.S. or the socially excluded groups in the European Union emerges. It has been argued that, while the reason behind this segment's inability to escape poverty is economic exclusion, economic exclusion itself brings with it social exclusion and thereby, causes one to face other aspects of poverty that are far beyond the monetary dimensions of it. Although structural factors and/or individual characteristics lead to poverty, persistence in it may be due to just the experience of it.

Qualitative research and case studies have been used to understand the new poverty in Turkey. For example Buğra and Keyder (2003) study new forms of poverty that are the result of a series of structural changes in Turkey and around the world, with specific reference to İstanbul. The research is mainly

based on face-face interviews. Kalaycıoğlu and Rittersberger (2002) study changing nature of poverty via interviews conducted with immigrants and poor in Ankara, İstanbul, İzmir and Mersin. Işık and Pınarcıoglu (2001) discuss poverty as a dynamic process and try to understand the ways people develop to maintain their livelihoods especially after 1980 with specific reference to Sultanbeyli in İstanbul. Adaman and Keyder (2006) focus on the poor and socially excluded people in slums of the selected cities (Adana, Ankara, Diyarbakır, Gaziantep, İstanbul and İzmir) via interviews and meetings with socially excluded groups. Keyder (2005) studies the social exclusion in İstanbul focusing on mainly changes in the nature of employment, the commodification of land and housing.

The debate on new poverty emphasizes that the exit from poverty has become harder for some. There may be several reasons for this; education is one of them. Since individuals who fall in poverty have generally lower education levels, they have lower chances of obtaining a well-paid formal sector job as what the human capital theory would predict. As mentioned above, education could explain poverty to the extent that education explains earnings and earnings explain income of the poor. Although education has been an important factor in determining entry into the labor market and level of earnings; its importance has increased over time with the increase in the general education level and that of the labor force. According to 1988 Labor Force Survey results, while 15% of labor force has high school and above education this rate increased to 36.2% in 2010. Tansel (2001) indicates the increasing level of education among public employees. She shows that State Owned Enterprise (SOE) workers (regular or casual) were mostly illiterate or non-graduates in the period between 1979-1989. The percentage of tertiary level educated public administration employees at SOEs was 15% in 1979 but increased to 20% in 1989. Private sector formal wage earners' average educational attainment is even lower than of SOE workers. According to 2008 Household Budget

Survey, the proportion of individuals working in the public sector or SOEs with primary education is only 12% and 49% of individuals in the public sector or in SOEs is university-educated. Thus, since there are more educated individuals ready to work, we can say that the probability of a less educated (often poor) person getting a regular and well-paid job has decreased. Furthermore, there is the argument in the literature that skill-biased technological change has been instrumental in increasing the returns to education gap amongst different schooling levels pushing the less educated further down the income distribution (e.g., OECD, 2008). Besides these, as poverty prolongs, the chance of getting education also decreases not only for adults in the poor household but also for children which leads to a vicious circle of poverty.

Another important issue emphasized in the discussions of new poverty is the change in the structure of the labor market. Current process of technological change has labor saving character and new investments create less employment. This is widely referred to as "jobless growth". Furthermore, as a result globalization, labor intensive jobs are being exported to low-income countries with lower labor costs. Finally, when there is economic growth in Turkey, the sectors that contribute most to this growth are export-oriented industries that can respond easily to fluctuations in demand with their flexible production structures. The forms of employment in these sectors are based on informal use of labor (Buğra and Keyder, 2003: 11). Therefore, the demand side of the issue does not predict a bright feature for the poor. Although informal employment[17] has been decreasing overall (from 55.6% in 1989 to 43.3% in 2010 according to Household Labor Force Survey), the percentage of poor, employed informally, has increased (72.4% in 2003 and 86.8% in 2006).

[17] The rates provided here refer to the rate of employed individuals working without social security.

The declining public sector would also aggravate the incidence of poverty in the informal sector (see Tansel, 2001; Boratav et al., 2000). While public sector employment was a way for alleviating poverty, with the decline in the size of public employment (following privatization) and increasing share of more educated employees in this sector, the chance of the poor to work formally has decreased further. The poor have access to informal employment but this does not guarantee a way out of poverty.

Adaman and Keyder (2006) conclude that high incidence of social exclusion is associated with unemployment or employment in the informal sector. Kalaycıoğlu and Rittersberger (2002) also emphasize that poverty becomes more prevalent after 1985 since it has become hard to find a formal job and therefore, informal job earnings have become the most important source of poor households' incomes. One reason of the increasing rate of the poor employed in the informal sector could be the self-selection process, where those best able to move to the formal sector do so, leaving a pool of individuals with increasingly adverse characteristics as what the human capital theory would predict. Taymaz (2009)[18] indicates such a process and says that more educated entrepreneurs and workers move to the formal sector. In fact, according to discussions about new poverty, informal employment was previously a temporary situation; the poor could transit to formal jobs after working for a while in the informal sector (e.g., Buğra and Keyder, 2003; Boratav et al., 1998). Buğra and Keyder (2006) indicate that jobs with social security act as a channel for the full social integration of the rural-urban immigrants and say that decreasing chance of formal employment may lead to less integration of the poor into the society. Besides the human capital theory,

[18] The study based on World Bank survey which was conducted at the end of 2008, and it includes questions about the characteristics of the firms (sector, products, output, number of employees, etc.), registration status, and a large number of questions about the perceptions of the respondent on informality, the role of the state, trust in various institutions, etc. There are about 1,000 firms surveyed.

the segmented labor market theory could also explain (at least partly) the high incidence of poor in the informal sector and the low transition from informal to formal jobs. As poor people find jobs mostly in the informal sector and exits from informal to formal jobs are limited, they may not even search for formal jobs after a while. Because as segmented theory predicts, attitudes towards work may change and human capital may depreciate as more time passes in the informal sector. Or, even if they search for a job in the formal sector, the previous occupational career may act as a signal for individual's potential productivity. Therefore, informal jobs might be a trap for poor people. All these predictions of the human capital theory and/or segmented labor market theory contribute to widen the productivity gap between informal and formal firms. The important implication of the productivity gap is the large wage gap between formal and informal sector. This worsens the situation for the poor.

Studies on labor market segmentation focus on the wage gap between the formal and informal sector and the reasons for this gap. The first empirical work on the segmented labor market is by Tunalı and Ercan (1998). They find a wage gap between the large scale firms and the small-scale firms by using 1988 Household Labor Force Survey data. Boratav et al. (2000) analyze the results of the Household Labor Force Survey and Annual Manufacturing Industry Statistics before and after 1989 for the manufacturing industry. They find that although there was a wage expansion in the post-1988 period, mostly formal workers benefited from it. They conclude a widening of the gap between earnings of different labor categories and an intensification of duality in the labor market. İlkkaracan et al. (2010), on the other hand, analyzes the extent to which the formal and informal sector wage gap can be accounted for by productivity differences as reflected in human capital endowments, as well as industry and geographical distribution. They examine the formal versus informal labor market segmentation and explore the changes in the size of wage gap between two sectors from 1988 to 2007 using 1988-2007 Household

Labor Force Surveys. They employ a two-stage estimation method since the distribution of workers among formal and informal sectors may not be random and that the unobserved worker characteristics influencing sectoral allocation also have an influence on their wages. For wage gap decomposition, they use the Oaxaca decomposition methodology. They find that the wage differential between the two sectors has doubled in the period under investigation and the sources of the wage differences have turned increasingly from human capital endowment differences in 1988 to differences in occupational and industrial distribution. Moreover, the unexplained component has become the largest contributor to the wage gap. They conclude that there has been an increasing segmentation in the labor market into its formal and informal components. Besides these studies, Tansel (1999), Levent et al. (2004), Angel and Urdinola (2009) and Ercan and Dayıoğlu (2010) also indicate a high wage gap between formal and informal sector even when observable characteristics are controlled for. Therefore, there may be state dependence in informal jobs due to changing attitudes towards work, erosion of human capital or because previous occupational career may serve as a signal of individual's potential productivity.

Another important issue, which should be focused on in discussing new poverty is the home-ownership. While, immigrants to urban areas could build their own houses before 1980s, newcomers could not find such a chance. Having a house is an important source of income regardless of whether it is commercialized or not. Başlevent and Dayıoğlu (2005) show that home-ownership has an equalizing effect on income distribution. The history of immigrants from rural to urban could be recounted in three stages. The immigrants in pre-1980 period built squatter houses (*gecekondu*) illegally on the outskirts of large cities on land owned either by state and municipalities or even by individuals. This informal invasion however did not pose much threat to the formal segments since they lived at the margin. Besides, the lands at which immigrants built shack houses were not profitable for formal urban

development. In the post-1980 period, squatter houses were no longer only a place to survive but also they became a source of upward mobility for the poor. With the soaring values of squatter houses and enactment of amnesties encouraged their owners to build multi-floor structures (Pınarcıoğlu and Işık, 2008: 1357). Keleş (2002) also indicates that the commercialization of *gecekondus* accelerated in the post-1980 period. Besides, as cities enlarge the proximity of *gecekondu* areas to the city centre increased and provisioning of public utilities to these districts contributed to the commercialization of *gecekondus* (Başlevent and Dayıoğlu, 2005: 33). Therefore, besides benefiting from the services of the house, early-comers started to earn an income by renting the upper floors in their housing structure. All these helped them to move out of poverty.

In the post-1980 period, it was less possible to build *gecekondus* since there was very little land left to invade. New-comers to urban areas mostly became tenants in the *gecekondus* owned by early-comers. In this period, the share of tenants in the squatter areas increased. The new comers, however, benefited from the networks of early-comers. They were sure to survive, find a place to live and secure a job (Işık and Pınarcıoğlu, 2001). Therefore, immigrants from rural to urban areas lived in poverty for a limited period (Buğra and Keyder, 2003). After some time the employed people living in the *gecekondu* were able to acquire a job with social security (Alpar and Yener, 1993: 63). Besides, new arrivals could continue to rely on especially in-kind income supplements received from rural areas due to the continuing ties with rural areas (Buğra and Keyder, 2006). In fact, Işık and Pınarcıoğlu (2001) refer to this type of poverty as "poverty-in-turn" which is a way for moving out of poverty using other poor segments on the basis of unequal power relations.

At the beginning of 2000s, the situation of immigrants to urban areas worsened. There was no longer the possibility of land occupation and squatter

housing construction (Keyder, 2005: 130). Because, only a limited land had been left for the next round of squatting and wealthier sections of the city were also active in investing on the outskirts. Therefore, they could not build their own houses. At the same time, wealthier sections started to buy land in the unregistered land markets. This meant that early-comers who owned *gecekondus* were no longer in need of networking with new comers. Earlier, they have kept such a relationship due to rent they received. Instead, they started to search for ways for getting legal rights for their land and buildings (Pınarcıoğlu and Işık, 2008). Therefore, individuals who immigrated in the late of 1990s, have lost their hope of becoming homeowners as well as and even networking with early-comers. Therefore, as stated in Buğra and Keyder (2003) while immigrants from rural to urban areas lived in poverty for a limited period, this was not true anymore.

Structural poverty in rural areas is well documented. Akder (2000) analyzes rural poverty with human development approach and finds that low human development is widespread in rural areas. He indicates that rural poverty is not a new phenomenon. Especially in East and Southeast Anatolia it has been well known for many years. The roots of poverty in those areas are geographic (weather conditions and infertile land) and socio-economic (e.g., low educational attainment, migration). World Bank (2000) finds that low productivity in agriculture (linked to poor endowments, poor infrastructure and poor access to labor markets) is the major factor behind rural patterns of poverty. There is a significant discrepancy between agriculture's share in employment and in what it obtains from national income. These structural reasons make poverty in rural areas more persistent.

The new poverty, no doubt, impacts on rural poverty as well due to forward and backward leakages. Migration is a potential route out of poverty. Through remittances migration helps keep poverty down in rural areas. As migrants lose

ground in urban areas, the remittances sent back decreases, reducing the buffer against the poverty risk in rural areas. The reduced livelihoods of migrants may also induce return migration to rural areas increasing the population pressure on available resources. Hence, although the new poverty may seem especially relevant for urban poverty, it has important implications for rural areas as well and is best regarded as an all encompassing phenomenon.

As in theoretical and empirical literature provided above, researchers pointing "new poverty" in Turkey also indicate social assistance programs for alleviating poverty. In fact, according to the literature, if there is a state dependence in poverty then short-term measures may lead to long-term benefits. However, social assistance programs, as given above, may have some adverse effects which may lead to state dependence in poverty rather than solving the problem of state dependence.

As far as we know, there is no study in Turkey about the effect of social assistance on employment and/or unemployment duration. Angel-Urdinola et al. (2009) analyze whether having green card contributes to higher informality in Turkey by using the regression discontinuity method. Estimates provide that around the income level, which is the income threshold for green card eligibility, there is no discontinuity. In other words, people having income below and above the threshold do not differ in terms working informally. The main reason for this situation is presented as the high wage gap between formal and informal sectors. Besides, there are some studies analyzing the duration of unemployment in Turkey. Tansel and Taşçı (2004), Tansel and Taşçı (2010)[19] study the factors affecting the duration of unemployment, Şahin and Kızılırmak (2007) study the factors affecting the duration of unemployment benefit in Turkey. Besides these, Tansel and Taşçı (2005) analyze the transition

[19] Tansel and Taşçı (2010) is a revised version of Tansel and Taşçı (2004).

probabilities between different labor market states. These studies do not take into account social assistance receipt as a factor explaining the unemployment duration.

CHAPTER 3

DATA AND STATIC ANALYSIS OF POVERTY

The first part of this chapter describes the data used in the analysis. Since our data has a panel feature, attrition is a potential problem. We address this problem in this chapter and examine whether it creates a problem for our analysis. In the second part of this chapter, we describe how we establish the poverty lines used in this thesis. Using these thresholds, poverty rates are presented. Both the poverty lines used in this analysis as well as the poverty rates obtained are compared to those of Turkstat. As mentioned in the previous Chapter, poverty persistence may arise due to observed/unobserved characteristics of the poor and/or the poverty experience. In order to shed light on discussions about whether heterogeneity between the poor and non-poor cause poverty to persist over time, in this chapter we describe the characteristics of the poor. If the characteristics of the poor are different from the non-poor, there may be a self-selection process in poverty; while some "more able" individuals are able to exit poverty, others have a difficult time escaping poverty. For this purpose, we examine the poor and non-poor in terms of demographics, education, income sources and employment situations.

3.1. Data

3.1.1. Description of data

The focus of this study is not the level of poverty, but the dynamics and persistence of poverty i.e. the flows into and out of poverty and the time spent in poverty. Such work requires data sets that follow individuals through time (panels). In fact, individuals are characterized in two ways: first, in terms of personal characteristics (for example, age, sex and education attainment) and,

second, in terms of household characteristics (for example, the household size, the age and work attachment of the head of household). If each individual is followed over time, then it could be identified whether "events", such as changes in employment within the household, coincide with movements into or out of poverty. Moreover, the relationship between the persistence of poverty and individual or household characteristics can be determined.

In Turkey, a panel data set where the same individuals are followed over time was not available until very recently. In 2006, Turkstat conducted the Survey of Income and Living Condition (SILC), which carried a panel feature. This survey collected information about a broad range of individual and household characteristics as well as income. Our research is based on panel data from years 2006 to 2007 of SILC.

Data similar to SILC have been constructed long before in the European Union countries. In 1994, the European Community Household Panel (ECHP) was launched in European countries. The ECHP spans the period 1994-2001. Comparative poverty dynamics analyses have been conducted in the European Union countries with the help of this data set. In 2001, Eurostat passed a regulation[20] to launch a new survey called the "European Union Income and Living Condition Survey (EU-SILC)" to produce income distribution, poverty and living conditions indicators. The regulation was put into effect in 2003 and many EU countries started conducting SILC.

In Turkey, the application of the survey was started in 2006 within the framework of the European Union Compliance Program and was carried out yearly using panel survey techniques. The aim of the survey is to produce data on income distribution comparable with the EU countries, relative income

[20] European Parliament and Council Regulation No: 1177/2003/EC of 16/06/2003.

poverty, living conditions and social exclusion. In the survey, to calculate indicators like income, poverty, social exclusion and other living condition indicators, the following areas are covered: housing, economic situation, social exclusion, ownership of assets, education, demography, health status, labor status and income status (Turkstat, 2011). Up to 2006, income distribution figures were produced from Household Budget Survey (HBS) implemented since 2002.[21] Poverty figures have also been announced from HBS. These poverty figures are consumption-based. HBS does not have a panel feature. Turkstat still continues to produce consumption-based poverty from HBS.[22] Since the application of SILC, income-based poverty figures are also announced by Turkstat as well. Perhaps, the most important aspect of SILC is that it can be used to carry out dynamic poverty analysis.

SILC covers non-institutional population[23] residing in Turkey. The Survey in 2006 was applied to approximately 10,920 households, where 42,795 persons were found. The same figures in 2007 were 10,796 and 42,458, respectively. In the panel part of the data 29,448 individuals could be observed in both years. Panel attrition is discussed in the following section. Respondents in the sample are planned to be followed for a period of four years[24] in Turkey. Two kinds of data are produced from SILC: a cross-section data and a panel data. The results of the 2006-2009 cross sectional data have been announced by Turkstat. Cross-

[21] Before HBS, Income and Consumption Expenditures Surveys (1987 and 1994) were used for income distribution figures.

[22] In this thesis, HBS data is also used for some of the analysis. Its availability since 2002 allows us to make poverty comparisons across time.

[23] Institutional population such as those living in military baracks, in hospitals, prisons, elderly homes and the like are excluded.

[24] This is the minimum panel duration according to the EU-SILC design.

section data allows analysis to be conducted at Nuts-1[25] level, whereas the panel data only allows an urban-rural distinction. In our analysis, both cross section and panel parts of the survey will be utilized.

SILC uses a rotational design, which refers to sample selection based on a number of subsamples or replications, each of them similar in size and design and representative of the whole population. From one year to the next, some households are retained, while others are dropped and replaced by new households. This design aims to be the most cost effective and efficient for satisfying both cross-sectional and longitudinal requirements (Eurostat, 2005). According to this methodology Turkstat plans to keep 75% of the sample in the panel frame from one year to another. Panel application starts with the selection of the basic sample, which represents the target population. Individuals aged 13 years and older in the basic frame are planned to be followed for a period of four years. It is important to note that the reference period for income information is the previous calendar year. So, for example, income information of 2007 field application refers to 2006 (Turkstat, 2011). The original sample members are re-interviewed each year, and if they split off from their original households to form new households, all adult members of these new households are also interviewed.

Although SILC is applied yearly, monthly economic activity data are also collected. Therefore by utilizing 2006-2007 SILC data, 24 months of continuous labor force history can be constructed for each person. This allows us to follow the labor force status of individuals monthly. In the last Chapter, we exploit this feature of the panel to analyze employment and unemployment duration of social assistance recipients and non-recipients.

[25] It is comprised of 13 regions.

The main problem with income surveys is that individuals tend to understate their incomes. One of the most important features of SILC is that this possibility, in especially the later applications of the survey, is greatly reduced not only because the survey includes very detailed questions about income sources, which help reduce recall errors, but also because of the knowledge of past income from earlier applications. Therefore, the likelihood that a lower income is reported erroneously is reduced. In cases where the respondent reports too high or a too low income in comparison to the previous application, it is likely that he/she will be questioned by the interviewer about any possible errors in either the previous or current year's income. Of course, this does rule out the possibility that households systematically under-report their incomes. However, in comparison to income information obtained from HBS, which only includes a single application on a yearly basis, the chances of corrections to household income is considerably higher in SILC. For this reason, the possibility of under-reporting the income level is much higher in HBS than in SILC.

The choice of poverty lines used in the study

The discussion related with the poverty line was presented in the previous Chapter. In this thesis, both absolute and relative poverty rates will be used. In calculating both the absolute and relative poverty rates, first of all, a poverty line needs to be determined. In 2006, the poverty line is determined as 55% of the median equivalized disposable income[26]. Eurostat calculates poverty rates according to 40%, 50%, 60% or 70% of the median equivalised disposable income. The reason we have set the threshold at 55% is to obtain a poverty rate

[26] Household disposable income is calculated by using personal incomes of household members. The personal income covers the total of monetary income and income in kind such as the income earned by the members, income of capital and property (wage, interest, profit, rent) and social transfers. The household disposable income was obtained from the annual personal income of each member in the household by subtracting the taxes, fees and given aids to another household. Equivalized household disposable income is obtained by dividing household disposable income to equivalance scale of the household.

from SILC that is close to the rate calculated by Turkstat using the HBS (20.5% in 2005). In other words, for the 2006 SILC a relative poverty threshold is specified. Here, another option could have been to use the poverty threshold announced by the Turkstat based on consumption poverty convert it to income terms and apply that to 2006. However, the incomes obtained from HBS are considerably lower than that of SILC. We conjecture that this is because of a greater downward bias in HBS incomes than SILC incomes for reasons explained earlier. Therefore, we chose to set 2006 poverty line afresh using 2006 incomes. For absolute poverty, we inflate the poverty line set for 2006 by 12.96%. This rate is what is used by Turkstat to inflate the consumption based poverty rate from 2005 to 2006.[27] As it was mentioned in the previous chapter, most of this increase is due the increase in prices. In fact, during the same period the CPI has increased by 9.65%.[28] The poverty line that is specified in this way for 2007 depends mostly on price increases; welfare increases are not reflected in the calculations. However, from 2006 to 2007, significant improvements have taken place in the general welfare of the public, especially among lower income households. This is quite clear when we look at changes in household disposable incomes over time.[29]

[27] While in 2005 the poverty threshold announced for one person household was 216 TL, in 2006 the same number was 244 TL.

[28] Another question is why we do not increase the poverty line by the increase in CPI. The answer lies in the change in the cost of the basket used by Turkstat for poverty line determination. It is constituted of goods consumed by low-income groups. However, in CPI the composition of the basket reflects the consumption patterns of the general population. Since our target population is the poor population, how much they pay for their needs is more important to us. For this reason, we take into account the increase in the poverty line announced by Turkstat.

[29] The cumulative distribution functions for earnings and adult equivalent income are presented in Appendix A1.

Over the studied period, according to SILC data, equivalised disposable personal incomes have increased by 10.5%, on average.[30] The median disposable income has increased by 13.85%. However, the increase is higher for lower income groups. While the average disposable income of the lowest 10% has increased by 30%, the increase among the second lowest 10% has been 23%. The HBS data also show an improvement over time, though as noted earlier, it generally reports lower incomes. Accordingly to HBS data, over the studied period, average disposable income has increased by 2% and the median disposable income by 4%. The increase for the bottom 10% has been 19%, while for the second lowest 10%, the increase has been 13%. So, although the rate of increase in disposable incomes in the two surveys is different, they both show that lower income groups have benefited disproportionately more from the general improvement in income. In both SILC and HBS, when we move from lower income groups to the higher ones, income increases diminish.

The poverty threshold needs to be set higher if one wants to reflect not only the price inflation but welfare increases to the threshold. As noted above, correcting for inflation, the median income has increased by 13.8% over the studied period. Taking the welfare increase into account in addition to price increase is equivalent to measuring relative poverty. For this reason, a relative poverty threshold is specified for 2007 SILC based on the 55% of the median equivalised personal disposable income. Therefore, we have two poverty lines in 2007; one that is the inflated version of the poverty line in 2006 (which is equivalent to 55% of the median income in 2006) and two, that is 55% of the median equivalised income in 2007. In the next chapter, the poverty rate in 2006 and 2007 will be analyzed using these two thresholds.

[30] Corrected for price increases.

3.1.2. Detecting attrition

In panel data, there are some individuals which could not be followed in the next wave of the study. If participants and non-participants are systematically different, results may be biased in unknown ways (Cuddeback et al., 2004: 19). In this part, we try to determine whether attrition in the sample causes sample selection bias. For this purpose, firstly we look at 2006 and 2007 surveys in terms of droppers and stayers. We analyze the reasons for attrition. Secondly, to determine whether attrition causes sample selection bias, we look at the characteristics of droppers, stayers, individuals in the original sample and in the new sample. Attrition would not be a problem if the remaining sample was not different from the original sample. Then, we formally test for the existence of attrition by running a bivariate probit with selection where poverty and retention status are modeled simultaneously. Since our main concern is to look at poverty transitions, we analyze whether determinants of poverty in 2007 differ according to the chosen sample: one that includes the original sample members, and the other that includes stayers only. If there is no correlation between the error terms of poverty and retention equations then taking into account stayers only would not cause a problem.

Reasons for attrition

There may be several reasons for attrition. In Table 3.1, we see the number of droppers, stayers, joiners and the reasons for attrition. Table 3.1 indicates that 90.7% of the individuals surveyed in 2006 remained in the 2007 sample, implying an attrition rate of 9.3%. The actual number of attritors is shown in the fifth row of Table 3.1, which is 3,034 individuals from 1,317 households.

Table 3.1 Number of Attritors by Reasons of Attrition

		2006	2007
Remaining in the sample	Total number of individuals	32,482	29,448
	As a percentage of 2006	100.0	90.7
Joiners in 2007		-	2,106
Attritors	Total attrition (individuals that were in 2006 sample but not in 2007)		3,034
	Address is found but survey could not be conducted	-	1,462 (48.2)
	Address could not be found	-	694 (22.9)
	Could not get information about household	-	173 (5.7)
	Died	-	143 (4.7)
	Moved out of country		13 (0.4)
	Other	-	10 (0.3)
	Individual left household but no information is available about his/her new address		540 (17.8)

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Figure in parentheses shows attrition rates as a percent of the total attritors in 2006.

Selection bias occurs when non-participation is non-random. In other words, attrition bias occurs when drop-outs from the sample share unique characteristics. However, if there are no unique characteristics among droppers, then there is no attrition bias, even though the sample has decreased in size (Miller and Hollist, 2007: 57-58). Since our survey has two rounds we cannot talk about a systematic drop-out. However, we could check whether the remaining sample becomes different from the original sample. For this purpose, below we look at some characteristics of droppers, stayers and individuals in the original sample (Table 3.2). Among individual characteristics we consider age, education and sex. Among household characteristics, we consider household size and composition (number of children). We find the droppers to be younger. While 58.4% of droppers are less than 30 years old,

the same rate for stayers is 52.4%. Mean years of education is higher among droppers compared to stayers. This causes a very small decline in the mean years of education in the new sample that does not include droppers. It is also seen that women are less likely to leave the sample. Although, the mean household size and number of children is lower among droppers, they are not drastically different between the original and the remaining sample.

Table 3.2 Some Characteristics of Droppers, Stayers, Original and New Sample Members

	Droppers	Stayers (Remaining sample)	t-test	Original sample	New sample (with new entrants)
Age<30 (%)	58.4	52.4	p<0.001	52.9	52.8
Age>29 (%)	41.2	47.6	p<0.001	47.1	47.2
Mean years of education	7.0	5.9	p<0.001	6.0	6.0
% of women	47.4	51.8	p<0.001	51.4	51.4
Mean household size	4.6	5.0	p<0.001	4.9	5.1
% Rural residence	31.7	42.8	p<0.001	41.7	42.6
Mean number of children (<aged 15)	1.5	1.7	p<0.001	1.7	1.7
Percentage of total poor in 2006	20.1	25.9	p<0.001	25.0	n.a

Source: Author's own calculations based on 2006-2007 SILC data.

Selection model for detecting attrition

It is usually the case that attrition is more widespread among individuals with more unstable earnings and is concentrated among individuals with lower socioeconomic status. For example, Fitzgerald et al. (1998) make similar

observations as above for attritions from the Michigan Panel Study on Income Dynamics. Since we try to follow low-income group in our study, it is important to check for attrition. We utilize a bivariate probit model with sample selection with a focus to test for attrition bias.[31] The test relies on the correlation of error terms between the two equations. The correlation coefficient (rho) has a potential range between -1 and +1 and is an indicator of the likely range of selection bias. A correlation with an absolute value of 1 would mean that the regression coefficients of the selection model and the regression coefficients of the substantive model were estimated by identical processes (i.e., potential selection bias). Conversely, a value of rho closer to zero would suggest that data are missing randomly or the regression coefficients of the selection model and the substantive model could be estimated independently, i.e., less evidence of selection bias (Cuddeback et al., 2004: 27). Intuitively, if unobserved factors that cause an unusually high likelihood of attrition do not affect the likelihood of poverty (so that rho is insignificant), we can be sure that attrition does not pose a problem. However, if the result, for instance, turns out that unobserved factors that cause an unusually high likelihood of attrition also bring about a higher likelihood of poverty, then ignoring attrition would lead to biased and inconsistent estimators.

Our substantive model is poverty in 2007 in which the dependent variable takes the value one if the individuals is poor in 2007 and 0 otherwise. The selection model is retention equation in which the dependent variable takes the value of one if the individual is a stayer and zero if a dropper. The covariates refer to the individual (age and sex), to the household head (education and employment), and to the household itself (household composition, number of

[31] The details of the model are presented in Chapter 5 with an application to poverty persistence equation.

workers, home ownership). As pointed by Wooldridge (2002), in order to identify the model, we need to use an exclusion restriction that is, a variable that influences the probability of sample retention but has no effect on the probability of poverty transition. The instrument we use for identification is whether the speaker of the household has changed. The idea is that those households that change speakers might be less interested in the survey or have less time for it and therefore, may have a smaller probability of remaining in the panel. The instrument proves to be valid in our model. Tests indicate that the change in household's speaker could be excluded from the poverty equation. Also, the instrument increases the precision of the retention equation. Cappelari and Jenkins (2002) use a dummy variable indicating whether the individual was an original sample member or a joiner as an instrument. They also suggest that the change in the speaker of household could have served as an instrument.

The results of the model are presented in Appendix A1. The correlation between the error terms of poverty and retention equations is very close to zero (0.015) and contrary to our expectations it is positive. More importantly, we could not reject the null hypotheses of the independence of the two equations at 1% significance level. This means that income retention process is ignorable. In other words, we could estimate poverty equation only for those who remained in the sample.

Variable addition test for detecting attrition

Verbeek and Nijman (1992) propose a simple variable addition test for detecting attrition. The main idea is that the outcome of interest is modeled with related explanatory variables. Then some test variables about attrition is added to the model. This model is estimated using unbalanced data. The t-ratios on the added variables are used as indicators of attrition. Since our outcome of interest is poverty, we estimate a regression in which the dependent

variable is the poverty status in 2006, which takes the value of one if the individual is poor and zero otherwise. The same covariates used in Table A.1.1 (provided in Appendix A1) are also used for this test. The test variables are the variable indicating whether or not the speaker of the household changed from year 2006 to 2007 and the retention variable. We find that these test variables are insignificant individually and jointly ($p<0.01$). The intuition behind this test is that, if attrition is random, indicators of an individual pattern of survey responses (the variable indicating whether or not the speaker of the household changed from year 2006 to 2007 and the retention variable) should not be associated with the outcome of interest (poverty) after controlling for the observed covariates (Jones et al., 2005: 12).

Since all findings about attrition indicate a random attrition, we could use balanced panel for further analysis in this study.

3.2. Static Poverty Analysis

In this section, we first present poverty trends in Turkey according to both Turkstat figures and the figures derived from our data. Secondly, we examine the profiles of the poor population in terms of demographic, income, employment and education characteristics. Our aim is to find out whether the poor are different in terms of their observable characteristics as compared to the non-poor.

3.2.1. Poverty rates

Poverty rates estimated by Turkstat

As given in the previous Chapter, Turkstat estimates food and non food poverty rates from HBS and income based relative poverty from SILC. Food and non-food poverty rate has declined by 10 percentage point over the 2003-2009 period (from 28.1% to 18.1%). While the reduction in poverty occurred at a faster rate before 2006, the rate of decline has slowdown since then. Income-

based relative poverty rate estimated by Turkstat also declined from 2006 to 2007 then it slightly increased. As given in Section 3.1.1 above, in SILC the reference period for income is the year preceding the survey. This means that while relative poverty rate decreased from 2005 to 2006, it then went up. Although the rates differ, the trend given by the two poverty rates is the same. They both point to an improvement that only reverses recently, most likely due to the 2008-2009 global financial crisis.

The decrease in poverty rates has come about due to two reasons: (1) an increase in average income (and therefore, average well-being) and (2) re-distribution of income towards the poor. Over the 2003-2008 period, our calculations show that the increase in mean equivalised household disposable income contributed more to the decrease in poverty than the improvement in income distribution. While 68% of the decrease in poverty rate comes from income growth, 32% of it comes from redistribution. These ratios are calculated using a poverty decomposition technique where improvement in poverty is attributed to growth and redistribution components. The growth component represents the change in poverty attributable to changes in mean welfare when holding the relative distribution of the reference year constant. The redistribution component represents the change in poverty attributable to changes in the distribution curve holding mean welfare constant (Datt and Ravallion, 1992). Aran et al. (2010) also find that growth played a dominant role in overall poverty reduction for the 2003-2006 period for Turkey.

The decomposition analysis indicates that poverty is sensitive to economic growth. Figure 3.1 indicates that the decrease in poverty in 2003-2006 is high. However, although the employment rate is expected to improve with growth, employment only increases about 4% over the 2004-2006 period. Unemployment rate slightly decreased between 2004 and 2006 (from 10.8% to 10.2%). But, the earnings and especially transfer income has increased in real

terms in the 2003-2006 period (Yükseler and Türkan, 2008). With the improvement in macro economic indicators, more resources have become available for social transfers since 2003. Increasing amount of social transfers helped to reduce income inequality and therefore, poverty (Demir, 2008). Therefore, over the period of our analysis (2005-2006), the association between earnings and poverty is expected to be high. Besides this, social transfers continued to increase in this period also.

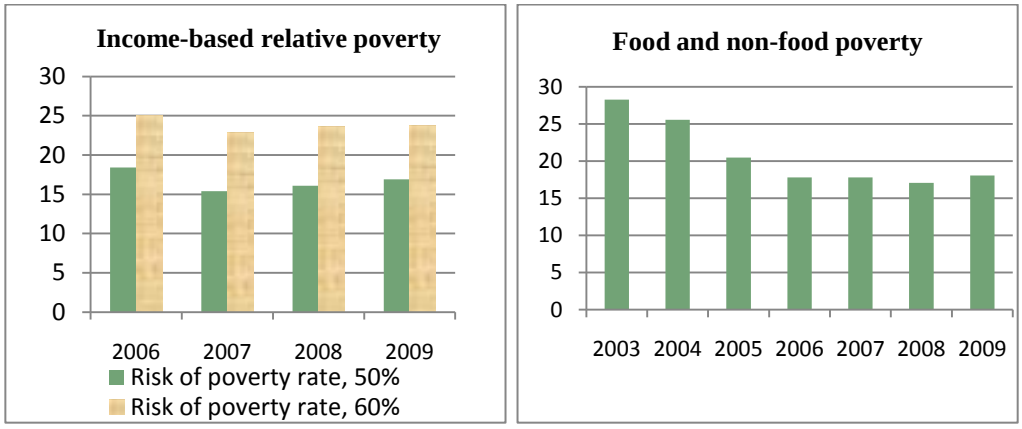

Figure 3.1 Relative and Absolute Poverty Rates in Turkey, (%)

Source: Turkstat

Figure 3.1 shows that the decrease in poverty rate in 2008 was very low and in 2009 poverty rate increased one percentage point. An important reason for this situation is the decline in economic growth (while the GDP growth was 10% in 2004 it decreased to 0.7% in 2008 and -4.7% in 2009) after 2007. Employment increased by less (2.6%) in the 2007-2009 period as compared to the 2004-2006 period. Besides, the increase in average annual earnings in 2006-2009 has been less than the increase in average annual earnings in the 2003-2005

period.[32] If we look at the poverty statistics in detail, it is seen that poverty rates went down mainly among the unemployed, economically inactive people and people younger than 15 years rather than working people in 2008. This may imply that social transfer payments prevented the poverty rate from increasing further in 2008. In fact, social transfers also helped reduce poverty before 2008 as well. In fact, pensions increased by more than 7% in real terms in the 2003-2009 period.[33] Unemployment benefits increased in 2008 according to Law number 5763 put into force in 2008. While public social assistance expenditures were around 0.6% of GDP in 2003, they increased to 1.2% of GDP in 2010. Most of the social assistance recipients are individuals without social insurance. This means that social assistance programs are heavily concentrated in helping non-working individuals and those working in the informal sector. Furthermore, since 2007 we see individuals reverting to agriculture, due to limited job opportunities in urban areas due to the economic crisis. Migration back to rural areas is possibly a survival strategy since in rural areas they can at least meet their food expenditures. While in 2007 2,578 thousand people were employed in agriculture, this figure increased to 2,959 thousand in 2010. Although the general poverty rate increased from 2008 to 2009, the poverty rate in agricultural sector declined by 5 percentage points.

Poverty rates used in this study

In the previous Chapter, we discussed in detail the methodology we employ in constructing the poverty line and calculating poverty rates. In this section we present these poverty rates. As noted earlier, poverty rates refer to the 2005-

[32] From the results of HBS and SILC results announced by Turkstat (http://www.tuik.gov.tr/VeriBilgi.do?tb_id=24&ust_id=7).

[33] According to fiscal statistics of the Social Security Institution, lowest pension for insured and pensioners working under a service contract increased by 8.8% in real terms in 2003–2009. The same rate for insured and pensioners of self-employed is 12.6% and for insured and pensioners of civil servants is 7.3%.

2006 period due to the reference period for income being the year preceding the survey. The results are provided in Table 3.3.

Table 3.3 Poverty Figures

	Absolute poverty		**Relative poverty**	
	2005 (2006 SILC)	***2006 (2007 SILC)***	***2005 (2006 SILC)***	***2006 (2007 SILC)***
Poverty line (TL)	2596.24	2932.44	2596.24	3271.00
Poverty rate (%)	21.2	15.8	21.2	19.8
Poverty gap rate (%)	7.3	4.6	7.3	6.0

Source: Author's own calculations based on 2006-2007 SILC data.

According to the absolute poverty line, poverty rate decreased from 21.2% in 2005 to 15.8% in 2006. If we use relative poverty line for 2007 SILC, then poverty rate becomes 19.8% in 2006.[34] Since welfare increases are also taken into account in relative poverty rates, it is not surprising that it produces a higher poverty rate. The main reasons behind the decline in poverty are provided in the previous section. However, the decline in absolute poverty rate is higher in our figures than Turkstat's. In fact, as noted earlier, earnings and household disposable income improved according to both data sources. However, the improvement in SILC is higher, especially for low income households.[35] We conjecture that this is because of the panel feature of SILC. As mentioned in Section 3.1.1 above, since the situation of households are

[34] According to the cumulative distribution function of adult equivalent income presented in Appendix A1, the cumulative distribution function for 2006 first-order stochastically dominates the curve for 2005. In other words, no matter where the poverty line is drawn, poverty rate in 2006 would be lower in 2006 than in 2005.

[35] In Appendix A1, the cumulative distribution functions for earnings, income and expenditures from HBS and SILC are provided.

known better in the second round of SILC, it is less possible for households to declare their income lower than the actual level. On the other hand, the decline in relative poverty rate is similar to the Turkstat's figures given in Figure 3.1.
Poverty is more widespread in rural areas. Approximately 55% of the poor in terms of absolute poverty line and 51.7% in terms of the relative poverty line live in rural areas. This implies a higher poverty rate in rural areas. In fact, the poverty rate in rural areas is three times as large as the poverty rate in urban areas (28.8% and 10.2% according to absolute poverty line and 34.4% and 13.7% according to relative poverty line, respectively).

Parallel to the decline in the poverty rate, poverty gap rate also declined. This means that besides the incidence of poverty, the poverty deficit of the poor relative to the poverty line also decreased. While the poverty gap index was 7.3% in 2005 it decreased to 4.6% in 2006. The decrease in poverty gap may stem from the decrease in the number of the poor and/or decrease in the poverty deficit of the poor. To see whether the second effect is valid for Turkey, we should look at the distribution of the poor population according to the poverty line. In Table 3.4, proportions of people according to some pre-determined income brackets are presented for the years 2005 and 2006. To ease presentation and discussion, we categorize individuals as having an income that is 50%, 75%, 100% 125%, and 200% of the poverty line. The individuals having less income less than the half of the poverty line are called extremely poor; having higher than half of the poverty line but less than 75% of it are called moderate poor and having income higher than 75% of poverty line but lower than poverty line are called transitory poor. Those who are not poor, but are near the poverty line (with incomes less than 1.25 times the poverty line) are transient vulnerable; having income higher than 125% of poverty line but less than 2 times of it are transient non-poor and those with income higher than 2 times of poverty line are rich.

It is seen in Table 3.4 that the proportion of transient poor in total poor population increased from 2005 to 2006. While its ratio in poor population was 38% in 2005, it increased to 47% in 2006. Besides, the share of extremely poor in poor population decreased from 25.9% to 17.6%. As a result, we can say that the decrease in poverty gap index comes from both the decrease in the number of the poor and the decrease in the income deficits of the poor. It should be noted that while poverty rate decreased from 2005 to 2006, an important proportion of the population (8.8%) has income which is close to the poverty line although they are above the poverty line. This group has a high risk of poverty. The slower decrease in poverty after 2006 may be due to the new entries into poverty especially from this group.

Table 3.4 Proportions of the Population in Various Income Brackets

	2005		**2006**	
	Share in total population (%)	**Share (a) (%)**	**Share in total population (%)**	**Share (a) (%)**
NON POOR				
-Rich	44.8	56.9	51.1	60.6
-Transient non poor	24.0	30.5	24.4	29.0
-Transient vulnerable	10.0	12.6	8.8	10.4
Total	**78.8**	**100.0**	**84.2**	**100.0**
POOR				
-Transient poor	8.1	38.1	7.4	47.2
-Moderate poor	7.7	36.0	5.6	35.2
-Extremely poor	5.5	25.9	2.8	17.6
Total	**21.2**	**100.0**	**15.8**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.
Note:
[a] For non-poor, the share is in total non-poor population; for poor, the share is in total poor population.
[b] AEI: adult equivalent income, z: absolute poverty line; Rich: AEI>2z; Transient poor: 1.25z<AEI <2z; Transient vulnerable: z< AEI <1.25z; Transient poor: 0.75z<AEI <z; Moderate poor: 0.5z<AEI<0.75z; Extremely poor: AEI<0.5z

3.2.2. Poverty profiles

This section focuses on the profiles of the poor in Turkey in a static manner. The profiles of poverty considered in this section include distribution of the poor across employment sector and status, level of educational attainment, age groups and the demographic composition of the household. To explore the profile of the poor, absolute poverty line is used. However, all of the characteristics of the poor are robust to changes in the measurement of poverty.

a. Age structure, household size and composition

The age profile of the poor reveals a high rate of child poverty in Turkey. As of 2006, 41.1% of the poor are made up of 0-14-year-olds. Their share in total population is only 28%. This means that approximately one-in-four children aged 14 and below live in poverty. The share of elderly among the poor (7%) does not differ significantly from their share in the general population. In fact, the poverty rate among the elderly is lower than the general poverty rate (11.1% and 15.8%, respectively). The pension income of the elderly and/or their savings must be buffering them against the risk of poverty. Another poverty reduction strategy is to live with their married children and poor their incomes. In fact, in some cases, elderly members in the household may help their immediate families from falling into poverty by choosing to cohabit with them.

Household size and adult equivalent among the poor are also high mainly due to higher number of children in these households. Therefore, the share of the working age population is lower and the dependency ratio is higher among the poor population. This is parallel to the findings in the poverty literature in Turkey (e.g., Alıcı, 2002; World Bank and State Institute of Statistics, 2005). This means that among the poor, fewer individuals could join the labor market not only because they are too young to work but the need for adults to look after a larger number of children. High numbers of children and high

dependency rates decrease the income share of household members in poor households.

Table 3.5 Age Composition and Household Characteristics by Poverty Status, 2006

	Poor	Non-poor	Total population
Age Composition (%)			
0-14	41.4	24.9	27.5
15-24	16.1	16.6	16.5
25-44	26.1	32.3	31.3
45-64	11.4	19.3	18.0
65+	5.0	7.0	6.7
Total	100.0	100.0	100.0
Average household size	6.0	4.0	4.2
Adult Equivalent	2.9	2.2	2.3
Average number of children (0-14)	2.5	1.0	1.2
Dependency ratio (a)	92.6	52.8	62.0

Source: Author's own calculations based on 2006-2007 SILC data.
Note: [a] Dependency ratio is defined as the ratio of the number of people in the age groups 0–14 years and above 65 years to the number of people of working age (15–64 years)

In Turkey, approximately 18% of households are extended households.[36] This structure is especially common among the poor (27.3% of poor households). Living in extended households may be due to cultural or economic reasons or both. Although, it is a characteristic of poor households, the share of extended

[36] According to Turkstat definition extended households are households consisting of mother, father and/or children as well as grandmother, grandfather, uncle, aunt etc. and where at least two generations live together.

households has increased from 2003-2008.[37] The share of extended households is especially high among the transient vulnerable group[38]. This means that some of the non-poor would have been in poverty had they not extended their households and/or lived in extended households. In extended households, resources are pooled together to capture the economies of scale. Another advantage of extended households is that the presence of non-nuclear members in the household increases the flexibility of household members in coping with economic hardship by facilitating alternative work arrangements among nuclear members.

Aside from extended households, the poverty rate among households with one adult and child(ren) is also high. Although this family structure constitutes less than 1% for all households, the poverty rate among them is 30.7% (while the general poverty rate is 15.8%). The rate decreases to 6% for one-adult households without children.

Aran et al. (2010) indicate that the share of the poor living in large households has increased over the 2003-2006 period. They also indicate an increasing share of children in the poor population in that period. Therefore, with the decline in the poverty rate, poverty has started to concentrate in a group of people living in households with more children.

b. Income sources of households

Whether poor or not, earnings constitute the main source of livelihood for the majority of people in Turkey. In fact, around 59% of total household income originates from earnings for poor and non-poor households. In other words,

[37] Household Budget Survey (2003 and 2008) results.

[38] This group is defined as follows: income is above the poverty line but below 1.25% of the poverty line.

living standards depend heavily on earning opportunities. Within this context, the worse are the labor market outcomes of individuals the lower are their economic well-being. This result parallels the findings in the poverty literature in Turkey. For example, World Bank (2000) finds that earnings constitute 74% of total household income for the poor.

Non-labor income constitutes about 39-41% of household income. The slightly higher rate of non-labor income among the poor stems mainly from imputed rents. Although, average value of imputed rental income is lower for the poor, it is an important source of income. The income equalizing impact of imputed rents is noted by Başlevent and Dayıoğlu (2005) and Dayıoğlu and Başlevent (2006). In fact, as discussed for example in Keyder (2005), Buğra and Keyder (2006), Işık and Pınarcıoğlu (2001) irregular housing has been instrumental in alleviating poverty.

Of the total income, transfers make up around 18% of the household income for both the poor and non-poor. However, while the contributory transfer share is higher than non-contributory transfers in non-poor's income; contributory and non-contributory transfers are equally important for the poor. Since, target population of non-contributory transfers is the poor population, this is an expected result. In many developed countries, poor people receive more than 50% of their income from transfers.[39] However, this may be due to adverse labor supply effects of transfer payments. Especially in countries with generous social assistance payments, some people may prefer to live with this type of income and not work and therefore, their labor income becomes relatively low. Although, the share of social assistance in household income in Turkey is not as high as in some countries, its share is on the rise. While the share of transfer

[39] For example, 74.5% of total income of the households in the poorest quintile in Portugal was made up of transfer incomes in 2001 (Budria, 2007).

income in total income was around 19.5% in 2003, it increased to 22% in 2006.[40] The increase in this share may bring some adverse effects. Whether such adverse effects exist in Turkey is investigated in the last Chapter.

Table 3.6 Income Components of Poor and Non-poor, 2006

Share in household income (%)	Poor	Non-poor
Earnings	59.4	59.0
Non-labor income	39.3	41.2
- Rental, property income and imputed rent	*21.7*	*22.6*
- Transfers		
Contributory transfers	*9.9*	*16.0*
Non-contributory transfers	*9.0*	*2.4*
Total income	**100**	**100**

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Non-contributory transfers refer to social assistance.

Although labor income is the most important income source for the poor, there is a big discrepancy in the income levels of the non-poor and poor. Figure 3.2 shows that the differential between the earnings of the poor and non-poor is quite substantial. Employed non-poor earn much more than employed poor at all points of the distribution. In fact, earnings of the non-poor are on average three times as large as the earnings of the poor. Yemstov (2001) finds that the wages of the working-poor are on average 44% less than wages of the non-poor in Turkey for 1994.[41] This implies that the wage gap between poor and non-poor has increased over time. Therefore, in terms of earnings alone, the difference between the poor and the non-poor has become more apparent.

[40] Household Budget Survey data is used.

[41] The poverty line used in that study includes the cost of food expenditures.

In order to understand the reason/s for such a big wage gap; educational attainment, employment status and the sector of economic activity of poor and non-poor individuals are investigated below.

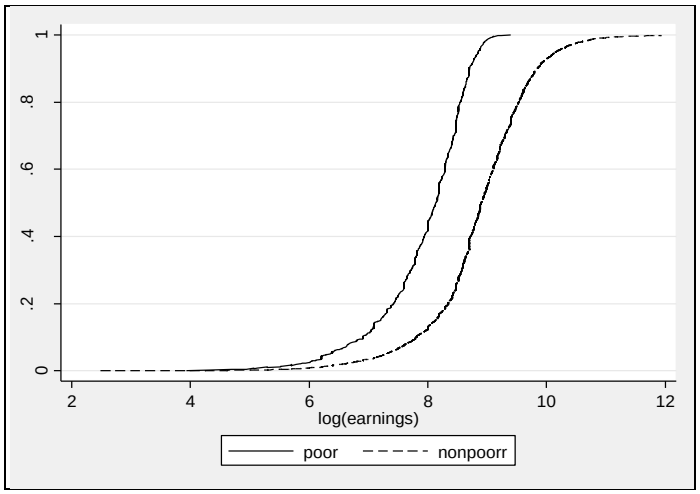

Figure 3.2 Cumulative Distribution of Earnings by Poverty Status

Source: Author's own calculations based on 2006-2007 SILC data.

Education

As discussed in the previous Chapter, according to the labor supply theory educational attainment determines an individual's ease and/or segment of entry into the work force, as well as the type of employment he/she obtains. Education is strongly correlated with the poverty risk. In Table 3.7, it can be seen that the poor have lower educational attainment as compared to the non-poor. While only 6.6% of the poor have high school and above education, the same rate for non-poor is 26.6%. Dansuk (1997), Alıcı (2002), Erdoğan (2002) also show that poverty is more widespread among less educated individuals. With the decline in poverty since 2003, the gap between poor and non-poor in terms of education has widened. While the difference between the proportion of illiterates among poor and non-poor was 8 percentage points in 2003, it

increased to 20 percentage points in 2006. Based on these figures, it seems that the more educated are able to escape poverty easier than the less educated.

Table 3.7 Education and Poverty Level, (%)

	Poor	Non-poor	Total
Illiterate	30.1	10.2	13.2
Literate without a diploma	14.0	6.6	7.7
Primary school	40.1	44.5	43.8
Secondary school	9.2	12.3	11.8
High school and equivalent vocational school	6.1	17.8	16.0
University, faculty, masters, doctorate	0.5	8.8	7.5
Total	**100.0**	**100.0**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.

Taymaz (2009) finds that more educated entrepreneurs and workers enter the formal sector in Turkey. By this way, they could escape from poverty as well. Although the non-poor still have higher levels of educational attainment, the difference between employed poor and non-poor is not as drastic as presented in Table 3.8. Therefore, education may explain poverty better than it explains returns to labor.

Table 3.8 Education Level of Employed People, (%)

	Poor	Non-poor
Illiterate	13.2	2.5
Literate without a diploma	10.8	3.6
Primary school	55.2	43.6
Secondary school	11.8	13.8
High school and equivalent vocational school	8.0	21.4
University, faculty, masters, doctorate	1.0	15.2
Total	**100.0**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.

Education is both a reason and a result of poverty. Low education levels lead to low incomes, which in turn, lead to low school attendance of children, perpetuating poverty (Carneiro, 2003: 4). Those who are deprived of even basic education in childhood tend to have poor prospects in the labor market. Therefore, it is especially important for children in poor households to get higher levels of education. However, while the proportion of individuals continuing on their schooling after 15 years old is 4.9% among the poor, the same rate for non-poor is 7.9%. This in turn implies lower opportunities in the labor market for those individuals and higher risks of poverty.

c. Employment status and sector

Employment status (employment, unemployment, non-participation and informality) are close correlates of poverty risks in Turkey. In both poor and non-poor households, most of the household heads are gainfully-employed. In Table 3.9, poverty profile of households according to employment status of the head is presented. While 60.2% of poor households have a gainfully employed head, the same rate for non-poor is 66.4%. Poverty rate amongst the household with employed head is less than the poverty rate amongst household with non-employed head.

Table 3.9 Poverty Profile by Employment Status of Household Heads, (%)

	Poverty rate	**Poor**	**Non-poor**	**Total Population**
Employed	10.5	60.2	66.4	65.7
Wage earner	*5.0*	*15.3*	*37.6*	*35.0*
Casual worker	*31.3*	*18.8*	*5.3*	*6.9*
Employer	*1.3*	*0.7*	*6.3*	*5.7*
Own-account	*16.1*	*25.0*	*0.5*	*17.7*
Not employed	13.3	39.8	33.6	35.3
Total	**11.5 (a)**	**100.0**	**100.0**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.
Note: [a] Household poverty rate.

Although, most of the poor and non-poor household heads are gainfully-employed, there are important differences between them in terms of employment status. While wage earners and employers are more widespread amongst non-poor household heads, casual and own-account worker is more widespread amongst the poor heads. Poverty risks of casual and own-account workers are even higher than households with non-employed heads.

Besides the household head, other household members' employment status is also important for determining the poverty risk of the household. The percentage of households with two or more gainfully-employed individuals is lower among the poor than the non-poor (15.2% and 25.3% respectively). This is mainly due to the higher share of unpaid-family workers in the poor population. Contrary to household head's employment status, approximately one-third of gainfully employed household members are employed as wage earners. However, the same rate for non-poor is 71.1%. The rest of the gainfully-employed members in poor households are employed as causal or own-account workers like their household head.

Table 3.10 Employment Shares by Sector and Poverty Level, 2006, (%)

	Poor			Non-Poor			Poverty rate
	Urban	**Rural**	**All**	**Urban**	**Rural**	**All**	**All**
Agriculture	10.5	64.2	42.1	3.0	43.4	13.0	25.4
Industry	20.9	6.8	12.6	29.2	16.5	26.0	4.9
Services	48.6	19.1	31.2	61.0	34.7	54.3	5.7
Construction	20.1	10.0	14.1	6.8	6.4	6.7	18.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**9.5**

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Only gainfully-employed individuals are included. The individuals are 15+ age.

Sector of employment might be another factor associated with the low-pay of the poor. The poor in rural areas are mostly employed in the agricultural sector, where the poverty rate is high. Although the poverty rate has decreased in the agricultural sector between 2003 and 2006, the decline is slower than the decline in other sectors and among the unemployed and inactive populations. Divided ownership structure, insufficiency of jobs outside agriculture, low productivity and underemployment in agriculture are the primary factors that lead to poverty among people who work in agriculture. In constructing Table 3.10 we excluded unpaid family workers. However, parallel to high rate of poverty in agriculture, poverty rate amongst unpaid family workers is also high (20.6%).

Following agriculture, the construction sector, which is the main sector of employment for the urban poor, has the second highest poverty rate (18.2%). High poverty risks in construction can be linked to the casualization of work in this sector.

d. Informal employment[42]

Informal employment acts as a buffer when people could not find jobs in the formal sector and need to work. Most of the employed poor are not covered by social insurance. In fact, 84.7% of the poor who are gainfully employed has no social insurance. The same rate for the non-poor is 36.4%. Parallel to this, the

[42] There are various definitions for informal economic activities. Yet, different definitions could be categorized in two groups, which are accurately defined by ILO. First one is related to the dualistic and segmented nature of the labor market, and this category is defined as employment in informal sector by ILO. Employment in the informal sector covers all jobs in informal sectors enterprises. The second one refers to the legal status of the economic activity and under this definition employment is defined as informal if it is legal but not recorded/registered (Taymaz: 2009). In this part, informal employment is defined as the workers without social security. The analyses in this section are based on data from cross-section part of SILC. Because, we do not have information about social security registration in panel part of the survey. These rates are calculated only for gainfully-employed individuals. The overall rate is 41.8%.

poverty rate is much higher for individuals employed without social insurance (approximately 20 percentage points).

The wage gap between formal and informal sector workers is large (Figure 3.3). Since most of the poor are employed in the informal sector, this wage gap directly translates into a wage gap between the poor and the non-poor. The wage gap between formal and informal sectors is noted in many studies (e.g., Taymaz, 2009; Angel-Urdinola et al., 2009; Angel-Urdinola, 2009; İlkkaracan et al., 2010; Tansel, 1999; Levent et al., 2004; Dayıoğlu and Ercan, 2009).

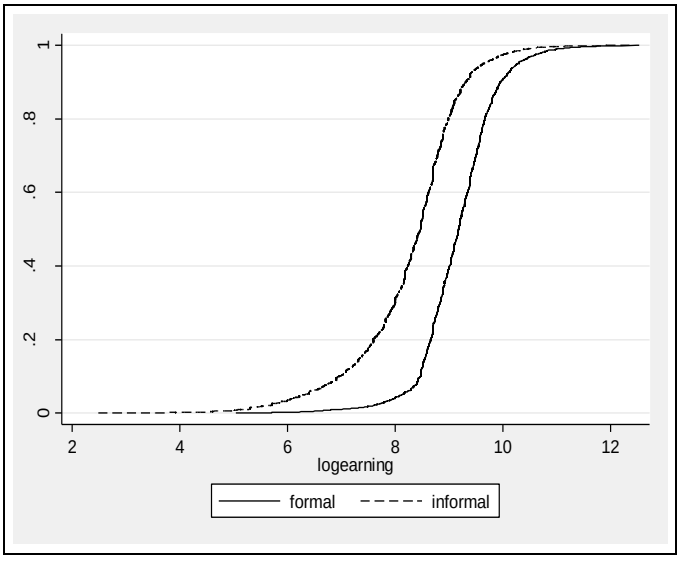

Figure 3.3 Cumulative Distribution of Earnings by Informality

Source: Author's own calculations based on 2006-2007 SILC data.

Individuals in informal employment generally face higher risks of income poverty due to lower earnings. Some workers who would otherwise be unemployed accept to work in the informal sector at the expense of lower and intermittent wages and absence of social protection. Part of the wage gap is

related to productivity differences. Indeed, there is a significant productivity gap between informal and formal firms, and a wage gap between informal and formal workers, and the findings are robust with respect to sectors (manufacturing and services), firm size and gender (Taymaz, 2009: 39).

Informal employment has become even more widespread amongst the poor.[43] While 72.4% of the employed poor were in the informal sector in 2003, this rate increased to 86.8% in 2006. Increasing informality among the working poor is to do with the increasing share of employment in non-agricultural sectors without social security registration. The percentage of poor individuals working without social security in the agricultural sector did not change much over the years (92% and 94% in 2003 and 2006, respectively). However, the proportion of poor people working in non-agricultural sector without social security increased from 62% to 79.5% from 2003 to 2006. Over the same period, informal employment decreased overall. While it might not be possible for individuals working in the formal sector to avoid poverty altogether, lower wages in the informal sector certainly increases the risk in the latter. However, the process of self-selection (where individuals with inferior attributes are concentrated in the informal sector) certainly contributes to the widening of the gap between the poor and the non-poor. Thus, it is important to provide skill building opportunities for poor people.

Conclusion

Although the decline in the poverty rate has slowed down since 2006, it decreased by a significant amount from 2003 to 2006. Poverty is more widespread among households with more children, less educated individuals, individuals working in agricultural and in the construction sector mostly without social security registration. Furthermore, we have established that a

[43] The figures in this paragraph belong to 2003 and 2006 HBS data.

greater proportion of poor has adverse characteristics in 2006 than in 2003. For instance, the difference between poor and non-poor in terms of educational attainment has increased over time. Therefore, the decline in poverty may be a process of sorting where those best able to exit to do so, leaving a pool of individuals with increasingly adverse characteristics. Therefore, poverty persistence may be explained by the heterogeneity among the poor and non-poor. However, the question is "to what extent" can individual or household level heterogeneity is able to explain poverty persistence since it may also to do with the past poverty experience. This issue is examined in Chapter 5.

Another important finding in this section is that poor households rely on employment as their primary source of income and there are important differences in the educational levels of the poor and the non-poor. Both demand side and supply side theories stress the importance of schooling in determining earnings. Low levels of education means low productivity, increased likelihood of casual work and informal sector work translating into lower earnings. Low employment earnings translate into low household incomes and an increased risk of poverty. As discussed in many studies (e.g., Yemstov, 2001; Angel-Urdinola, 2009) besides low levels of schooling, employment in the informal sector and casual work, there may be other factors explaining low-pay. A possible candidate for low-pay may be that the low-pay generates low-pay, just like poverty generates poverty through state dependence. These issues will be discussed in Chapter 5.

CHAPTER 4

TRANSITIONS INTO AND OUT OF POVERTY

The analysis in the previous Chapter has provided some idea about the prevalence and characteristics of poverty in Turkey that may help design policies against poverty. But, as emphasized in previous Chapters, dynamic analysis is necessary to better understand the characteristics of poverty and reasons for it, which is important in formulating efficient anti-poverty policies. Knowing that 15.8% percent of the population is poor in a given year leaves open the question whether poverty is persistent or temporary for these individuals. In this Chapter, the transition of poverty will be examined using the panel feature of SILC data. In accordance with our aim, the following questions will be investigated in this Chapter.

- Is there a meaningful transition in poverty? How big is transition?
- How does the transition rate compare with the rates in other countries?
- What are the characteristics of individuals making transitions out of poverty and individuals staying in poverty?
- What are the trigger events in transitions?

For this purpose, firstly we present the broad patterns of poverty transition in our sample. Secondly, we analyze the individuals making transition in and out of poverty with respect to their income levels before and after transition. Thirdly, some individual and household level characteristics of individuals making a transition and those staying in poverty are provided. Lastly, we investigate the trigger events for transitions by exploring the associations between transitions and income events.

4.1. Broad Patterns of Poverty Dynamics

Transition rates

This section examines mobility in and out of poverty for the period 2005-2006 in an effort to understand whether poverty in Turkey is of short or long duration. If we only take into account people who have non missing income in both periods we get poverty transition matrix presented in Table 4.1 below. The entry and exit rates presented in the Table 4.1 measure the probability of escaping/entering poverty in period t, conditional on being poor/non-poor in period t-1.

Table 4.1 Raw Poverty Transition Matrix, (%)

Poverty status, year t-1	**Poverty status, year t**	
Absolute poverty	**Not poor**	**Poor**
Not poor	94.1	5.9
Poor	47.6	52.4
All	**84.2**	**15.8**
Relative poverty	**Not poor**	**Poor**
Not poor	91.4	8.6
Poor	38.3	61.7
All	**80.2**	**19.8**

Source: Author's own calculations based on 2006-2007 SILC data.

Taking absolute poverty as our measure, the results in Table 4.1 shows that a substantial proportion, about 47.6%, of those who were poor the first year was no longer poor in the following year. Similar to the findings of Cappelari and Jenkins (2002) who use British panel data, we find that the chances of being poor in a given year differ substantially depending on the poverty status in the previous year. In fact, the poverty rate of individuals who were poor in the previous year is 46.5 percentage points higher than the poverty rate of those who were non-poor in the previous year. There are also new entrants to poverty

who constitute 5.9% of non-poor in t-1. If we were to use relative poverty as our measure, transition out of poverty decreases somewhat (to 38.8 percent) while transition into poverty increases (to 8.6 percent). Notwithstanding these differences, the general picture remains the same. More importantly, irrespective of the measure we use, we observe the previous poverty status to affect the poverty status today.

Andriopoulou and Tsakloglou (2011) analyze poverty dynamics in 14 European countries[44] over a seven-year period. They find that the probability of exiting poverty in year t, while being poor in year t-1 attains its highest values in the Netherlands and Denmark (46% and 44%, respectively). In Spain both exit and entry rates are high implying high mobility over and under the poverty line. While the annual exit rate is 39.1% in Spain, the annual entry rate is 9.5%. Ayllon (2008) finds the exit rate to be 41.2% for Spain. The probability of entering poverty is about 7% in the EU when these 14 countries are considered together. Since the period investigated here is not as long as that of the European studies, our rates are not exactly comparable. Nevertheless, the figures provided in Table 4.1 both for entry and exit are not very different from the rates reported for the European countries. Furthermore, exit rates are likely to go down as the time period increases, i.e. the available evidence from other countries indicate that the likelihood of exit decreases with time. Another reason why our rates are somewhat higher is related to attrition. Andriopoulou and Tsakloglou (2011) consider all spells observed for waves 1-7. In other words, missing values are also taken into account. Because of this, the rates they calculate are lower than the case where only a balanced sample is used. In fact, Cappelari and Jenkins (2002) find the exit rate to be 41.5% for the UK using the British Household Panel, where they only consider individuals

[44] Countries included are Austria, Belgium, Germany, Denmark, France, Spain, Greece, Finland, Italy, Ireland, Luxembourg, the Netherlands, Portugal, and the UK.

observed in all waves. For Australia, the exit rate is found to be 44.7% (Buddelmeyer and Verick, 2007). Since in our sample attrition is low, the figures presented above do not change much when individuals observed in t-1 but not observed in t are also considered.

Normally, a spell of poverty begins when an individual who was observed to be non-poor in the previous period is observed to be poor in the next period. Similarly, poverty ends when an individual who was observed to be poor in the previous period is observed to be non-poor in the next period. The problem we want to note is that unlike employment or even welfare receipt, poverty is not a clear-cut state. The poverty line is an arbitrarily defined concept, and small "random" changes in income can move people across the poverty line, even though no change of any significance to the individual involved has occurred (Bane and Ellwood, 1986: 7). This problem is called measurement error, which occurs when either total household income or the household equivalent scale are measured with error. Measurement error can cause a false beginning or ending since individuals identified as poor at the beginning may have actually been non-poor and/or individuals identified as being non-poor at the beginning may have been poor. While errors in observed income will approximately offset each other in aggregate estimates of the proportion poor, estimates of the amount of poverty transition will likely be significantly biased by the existence of measurement error; more movement will be observed than actually occurs (McGarry, 1995: 115).

Measurement error can be corrected in various ways. While in some studies small movements in income are not regarded as transition (e.g., Oxley et al., 2000) in others income is predicted and the true poverty transition is calculated using predicted income (e.g., McGarry, 1995). Measurement error arises predominantly from inaccurate measurement of income that leads to misclassification of those cases with incomes close to the poverty threshold

(Breen and Moisio, 2004: 171). Taking this fact into account, Bane and Ellwood (1986), for instance, ignore one period spells if the associated income change is less than the one-half of the ratio of income to the poverty line. Antolin et al. (1999) call small movements around the poverty line "noise". Essentially, they ignore individuals who enter poverty with incomes between the poverty line and 10% above it before transition, and between the poverty line and 10% below it.

Table 4.2 Raw Poverty Transition Matrix, (%)

	Absolute poverty		**Relative poverty**	
	Poverty status, year t			
Poverty status, year t-1	Not poor	Poor	Not poor	Poor
Not poor	94.10	5.90	91.45	8.55
Poor	47.63	52.37	38.32	61.68
Income change< one-half of the ratio of income to the poverty line				
Not poor	97.29	2.71	96.77	3.23
Poor	42.86	57.14	36.61	63.39
10% band around poverty line				
Not poor	94.57	5.43	91.72	8.28
Poor	46.94	53.06	37.80	62.20
20% band around poverty line				
Not poor	95.35	4.65	93.00	7.00
Poor	44.89	55.11	34.91	65.09

Source: Author's own calculations based on 2006-2007 SILC data.

There may be measurement error in our transition rates as well. Following Bane and Ellwood (1986) and Antolin et al. (1999), we ignore small transitions around the poverty line. We do this by ignoring transitions initiated by income changes that are less than a half of the ratio of income to the poverty line. In a second exercise, we draw a 10% band around the poverty line and ignore transitions that occur within this band. In a third exercise, we expand the band to 20%. In each case we re-calculate the transition rates (Table 4.2). Naturally,

when we ignore small changes around the poverty line, transition rates decrease. Based on raw transition rates we had established that 5.9% of the non-poor enter into poverty in the next period, when transitions with income change less than one-half of the needs standard are excluded, this rate decreases to 2.7%. When transitions between the poverty line and 10% above it are ignored, the rate of movement into poverty does not change much (from 5.9% to 5.4%). When the band is increased to 20%, entry rate decreases to 4.65%.

Repeating the same exercises for transition out of poverty, we find the transition rate to drop but again not so drastically. Ignoring transitions with income changes less than one-half of income to poverty line ratio, an important proportion of transitions appear to result from high income changes (42.86%). Transition out of poverty between 10% (20%) below the poverty line and 10% (20%) above the poverty line is also not so much. Although, an important amount of transitions out of poverty comes from the poor with incomes close to the poverty line, their income change is higher. The amounts of income changes in transitions will be provided in the following sections.

Prevalence of poverty

Poverty situation could be better or worse than what the static poverty rates suggest. It might be, for instance, more widespread than the static poverty rates suggest. Or, it might be less widespread than persistence poverty figures suggest. In fact, in our case, the share of individuals who are poor in both years (11.1%) is lower than the static poverty rates. However, it is also useful to compare the static poverty rates with the *prevalence poverty rate*. The prevalence poverty rate measures the proportion of individuals experiencing poverty at least once in the period investigated. If prevalence poverty rate is low and equals to cross sectional poverty rate, then income mobility is low and same individuals remain in poor in all waves. If prevalence poverty rate is high

then the probability of being poor is more equally shared (Andriopoulou and Tsakloglou, 2011: 7). In our sample, the share of the population that was in poverty at least once over the two-year period is higher (25.9%) than the average poverty rate (18.5%).[45] In other words, while poverty is a short-term event for many, it is a much more widespread than what static poverty rates suggest. The same results are obtained when we measure poverty in relative terms.

Table 4.3 Poverty Rates, Gross Rates of Entry and Exit and the Share of Individuals in Poverty over Two-Year Period

	Poverty rates (%)		Entrants into poverty as a percentage of:			Exits from poverty as a percentage of:		Percentage of total people:	
	2006	2007	Poor	Not poor	Total	Poor	Total	Poor in both years	Prevalence rate
Abs. line	21.2	15.8	21.9	5.9	4.7	47.6	10.1	11.1	25.9
Rel. line	21.2	19.8	31.7	8.6	6.7	38.3	8.1	13.1	28.0

Source: Author's own calculations based on 2006-2007 SILC data.

The prevalence rate is even higher in some other countries. For example, Andriopoulou and Tsakloglou (2011) find that in 14 European countries, the prevalence rate is almost double the headcount ratio for a seven-year period.[46] In Spain while the average poverty rate is 19.3%, the prevalence rate is 38.6%. This is consistent with the high exit and entry rates in Spain. In Portugal, while

[45] This is a simple average of the two poverty rates pertaining to 2006 and 2007 obtained from the two cross-sections.

[46] Andriopoulou and Tsakloglou (2010) use relative poverty as their measure.

the static poverty rate is 21.4%, the prevalence rate is 40.0%. Greece and the UK have the highest prevalence poverty rates: 42.3% and 42.1%, respectively. Jenkins (2000) also finds high prevalence poverty rate in the UK. In Canada and the US the prevalence rates are much above the static rates also (Oxley et al., 2000). In fact, in Canada, the prevalence poverty rate is almost 2.5 times of the average static poverty rate. Antolin et al. (1999) find that the share of individuals who were poor throughout the six-year period was low, in the range of 2 to 6 percent of the population for Canada, Germany, the United Kingdom and the United States. But the share of the population that was in poverty at least once over the six-year period was found in the range of 20 and 38 percent of the population. Layte and Whelan (2002) using 5-waves of the European Community Household Panel Survey find that poverty is a more common experience when measured longitudinally (roughly twice the size of the cross-sectional estimate).

In our sample the turnover among the poor is not as high as in these countries. One reason might be related to our time period being shorter. Or, perhaps, poverty is really more permanent in our sample. According to our results, an important portion of poor could not escape poverty from one year to the next especially when relative poverty line is used. The reason for this situation could either be their characteristic (both observed and unobserved) and/or being poor may simply increase their probability of remaining in poverty. These issues will be discussed in the next Chapter.

4.1.1 Transition according to income groups

The changes in the incomes of those who fall into and climb out of poverty are of interest as well: Were the movers' incomes in the previous year near the poverty line or were they far away from it? Some individuals may escape poverty, without realizing a huge change in their income. Krause (1998) finds that while transitory poor, who tend to have short-spells of poverty, is

widespread for Germany "the very experience of poverty seems to imply lower incomes even in years when families are not poor".

In Table 4.4, we tabulate the income levels of individuals as a proportion of the poverty line against the transition rates. We categorize individuals as having an income that is 50%, 75%, 100% 125%, and 200% of the poverty line. As expected, a large percentage of individuals who exit or fall into poverty has incomes very near the poverty line. In fact, 48.6% of individuals who exit poverty and 47.4% of those who enter poverty make transitions from points near to the poverty line.

Table 4.4 Income Level with Respect to Poverty Line of Those Who Enter or Exit Poverty, (%)

	Entering poverty	Entry rate	Exiting poverty	Exit rate
Income range before transit (relative to poverty line)				
*0.75*z<=AEI<z*			48.6	60.8
*0.5*z<=AEI<0.75*z*			35.8	47.4
*AEI<0.5*z*			15.6	28.7
Total			**100.0**	**47.6**
*z<=AEI<1.25*z*	47.4	22.2		
*1.25*z<=AEI<2*z*	39.8	7.7		
*AEI>=2*z*	12.8	1.3		
Total	**100.0**	**5.9**		

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Based on absolute poverty. AEI: adult equivalent income, z: poverty line.

What this exercise tells us is that those near the poverty line are more likely to fall into poverty. Among those who are not poor, but are near the poverty line (with incomes less than 1.25 times the poverty line), 22.2% fall into poverty the following year. The same figure for individuals with incomes twice the

poverty line is 1.3%. Martin and Cowell (2006) also find that 32.5% of the non-poor with incomes near the poverty line (up to 10 percentage points higher than the poverty line) fall into poverty in the next year by using data spanning period of 1993-2000 in Spain.

Similar to entry, the poor near the poverty line have a higher likelihood of exiting poverty. In fact, 48.6% of all exits originate from the poor with incomes just below the poverty line, only 15.6% of extremely poor could manage to escape from poverty. Martin and Cowell (2006) find for Spain that 40% of individuals who exit poverty make transitions from points near to the poverty line and only 8.2% of poorest people (with income less than 20% of median income) could manage to escape poverty.

As presented above, in Turkey a large proportion of individuals have income levels that are near the poverty line and therefore, they are at risk of poverty. The implication of this finding is that following the 2008-2009 global financial crisis the proportion of individual falling into poverty might have increased and, this in turn probably reduced the decrease in poverty rate after 2006.

4.1.2 How much does income change during transitions?

Income changes in transitions are discussed in the framework of measurement error in previous section. In this section, we provide the income levels of those who make a transition into or out of poverty after transition. Because, if individuals transiting out of poverty have incomes near the poverty line, then this implies that the risk of poverty is still high for those individuals. On the other hand, if individuals falling in poverty have income levels near the poverty line after the transition, it may be said that their chance of escaping poverty is higher. In fact, if we had a longer time period, we could analyze the re-entry rates of poor who could manage to escape poverty. The distribution of income changes by size are shown in Table 4.5 in the form of transition

matrices for entry and exit. Each cell shows the share of individuals who shift from an originating income range (shown in the first column) to the ending income range (shown in the second row). To ease discussion, for individuals exiting poverty we define three income ranges: 1st income range covers individuals who have incomes above the poverty line but less than 1.25 times the poverty line; 2nd income range covers individuals with incomes between 1.25 to twice the poverty line; and 3rd income range covers individuals with incomes equal to or more than twice the poverty line. For individuals entering into poverty; 1st income range refers to those with incomes less than the poverty line but not lower than 75% of it; 2nd income range covers individuals with incomes between 75% and half the poverty line; and 3rd income range individuals with incomes less than half the poverty line.

Table 4.5 shows that most individuals exiting poverty fall within the 1st or the 2nd income range. For example, 49.7% of individuals who have an income that is not less than 75% of the poverty line before exiting poverty have incomes that are in the 2nd income range after the transition. This implies that these individuals are better insulated against the risk of falling back into poverty. As illustrated earlier, the poverty risk is higher for individuals with income near the poverty line. In most of the studies, individuals moving out of poverty are found to have incomes near the poverty line. For example, Jarvis and Jenkins (1998) examine the mobility patterns by income for Britain and find that although half of the poorest tenth are no longer in the poorest tenth in the next period, about half of these leavers move only to the second poorest decile. This finding concurs with the high prevalence rate of poverty in Britain. Martin and Cowell (2006) find for Spain that more than half of the non-poor individuals making transition into poverty and who are near the poverty line before transition end up with incomes near the poverty line after the transition. The income range of individuals after making a transition out of poverty is mostly near the poverty line in Canada, Germany, UK and US as well (Antolin et al.,

1999). In fact, over 60% of poor individuals making a transition out of poverty move to the income range which is near the poverty line.

Table 4.5 Distribution of Transitions by Size of Income Changes, (%)

	Exits from poverty: Income range after transit (relative to the poverty line)			
	z<=AEI<1.25*z (1st range)	***1.25*z<=AEI<2*z (2nd range)***	***AEI>=2*z (3rd range)***	***Total***
Income range before transit (relative to the poverty line)				
*0.75*z<=AEI<z*	31.8	49.7	18.5	100.0
*0.5*z<=AEI<0.75*z*	39.0	43.5	17.5	100.0
*AEI<0.5*z*	42.5	39.6	17.9	100.0
	Entry into poverty: Income range after transit (relative to the poverty line)			
	0.75*z<=AEI<z (1st range)	***0.5*z<=AEI<0.75*z (2nd range)***	***AEI<0.5*z (3rd range)***	***Total***
Income range before transit (relative to the poverty line)				
*z<=AEI<1.25*z*	60.8	28.2	11.0	100.0
*1.25*z<=AEI<2*z*	66.0	26.7	7.3	100.0
*AEI>=2*z*	61.5	25.4	13.0 (a)	100.0

Source: Author's own calculations based on 2006-2007 SILC data.
Note:
[a] There are less than 30 observations.
[b] AEI: Adult equivalent income.

Table 4.5 also shows that movements into poverty happen with lower income changes than movements out of poverty. In fact, most of the poverty entries occur with relatively small income decrease. More than 60% of the non-poor individuals end up in the 1st income range after the transition. For example, 60.8% of non-poor individuals with incomes no more than 1.25 times the povery line end up in the 1st income range after the transition. Although, the primary aim should be to keep people from falling into poverty, these results are nevertheless not that grim since the necessary income to lift these people out of poverty is not as much as the income needed for poorest segment. The observed changes in income levels as individuals enter poverty are similar to

those found elsewhere. Martin and Cowell (2006), for instance, find for Spain that 71% of those who enter poverty end up in the group with incomes between 40% and 60% of the median income (while the poverty rate is set at 60% of the median). Antolin et al. (1999) also find higher proportion of individuals transiting to poverty in the income ranges near the poverty line for Canada, US, Germany and UK. For example, in Canada approximately 77% of non-poor end up with income below the poverty line and above 65% of it after transition. The same rate is 78.8%, 78% and 68% for Germany, UK and US, respectively.

4.2. Who Stays Poor in both Years? Who Moves out of Poverty?

It is important to distinguish the causes of long- and short-term poverty in order to tailor anti-poverty policy measures. Being poor in all years may systematically associated with having some particular set of characteristics, or the persistently poor simply a random subset of those who are poor at a particular point in time (Jarvis and Jenkins, 1997: 133). Since we have a two-year panel, we cannot talk about long-term poverty. But, we can investigate the characteristics of poor who manage to escape from poverty and the poor who could not. We call individuals who remain poor in both years as the "persistent poor" and individuals who exit poverty the "transitory poor". Table 4.6 provides the characteristics of persistent poor, transient poor and the characteristics of all people in 2006.

Table 4.6 shows that transitory poor and persistent poor differ in terms of individual and household characteristics. We conjecture that these differences deepen as time passes. The transitory poor look more like the non-poor. But, the persistent poor are mostly comprised of children, less-educated individuals, those who work casually or on own-account, those who live in rural areas and those with fewer gainfully employed persons in the household. Having children is an important indicator of poverty persistence. It can be seen in Table 4.6 that there are more dependent children amongst the persistently poor than amongst

the transitory poor (46.8% compared with 35.9%). This implies that individuals who could not escape from poverty mostly live in households with children. Jarvis and Jenkins (1997) find a similar result for Britain (35% compared with 28%). In fact, over 91% of individuals who are persistently poor live in households with children. The same rate for transitory poor is 82.8%. According to Antolin et al. (1999), persistent poverty is mostly observed among one-adult households and having children worsens the situation. For example in Germany, 14.4% of households are comprised of one-adult-without children but they constitute 30.2% of the persistently poor. If the single adult has a child then the rates become 2.7% and 29.4%, respectively.

Table 4.6 Characteristics of Persistent and Transitory Poor, (%)

	Absolute poverty		**Relative poverty**		**All people in 2006**
	Poor in both years	**Poor in 2006**	**Poor in both years**	**Poor in 2006**	
Person type					
Male adult	23.9	30.8	24.6	31.4	34.3
Female adult	29.3	33.3	29.6	33.8	36.5
Child	46.8	35.9	45.9	34.8	29.2
Age composition					
0-14	46.8	35.9	45.9	34.8	29.2
15-34	28.3	34.4	29.5	34.0	33.3
35-44	10.6	14.2	10.8	14.7	14.0
45-59	8.3	9.4	8.0	10.1	14.1
60+	6.0	6.1	5.8	6.5	9.0
Education					
Illiterate	34.7	18.0	32.3	17.4	12.4
Not illiterate but not completed a school	14.9	11.7	14.6	11.3	7.5
Primary education	34.5	45.3	36.1	45.6	40.4
Secondary education	11.9	15.8	12.3	16.0	14.9

Table 4.6 (continued)

High school	4.0	8.8	4.5	9.1	17.3
Tertiary education or more	0.1	0.5	0.2	0.5	7.4
Gainfully employed	31.0	37.0	32.3	37.0	40.7
Employment status					
- wage earner	15.6	28.1	17.9	28.3	49.9
- casual worker	29.7	19.7	28.5	18.9	9.6
- employee	0.8	2.2	1.1	2.1	5.8
- own-account	31.9	27.0	30.9	27.1	19.4
-unpaid family worker	21.9	23.0	21.6	23.6	15.4
Place of residence					
- Rural	56.5	42.5	55.0	41.4	30.0
- Urban	43.5	57.5	45.0	58.6	70.0
Household type					
Household with children	91.7	82.8	91.2	81.5	71.0
Household without children	8.3	17.2	8.8	18.5	29.0
Household economic status					
No gainfully employed	25.2	13.6	23.2	14.0	14.8
Household head is employed only	52.7	58.5	54.9	56.5	49.6
Two or more workers	10.1	13.9	10.3	14.5	21.1
One worker (not head)	12.0	14.0	11.7	15.0	14.6
All	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.

If we look at age composition, the persistently poor group is overrepresented by younger individuals. In fact, 75% of the persistently poor are composed of individuals less than 35 years of age. Although the education level of transitory poor is low compared to the population average, education level of persistent

poor is even lower. Nearly half of the persistent poor individuals did not even attend school.

In 75% of persistently poor households there is at least one gainfully-employed individual. This is parallel to the findings from Chapter 3. Despite this high rate of employment they could not escape from poverty. According to employment status, the difference between persistently poor and transitory poor is that casual workers are more widespread among the former. This implies mostly irregular and unregistered work. Since productivity is generally lower in irregular and unregistered work, it is important that these workers are supported by skill training programs. Since wage earners are more widespread amongst the transitory poor, they could manage to escape from poverty by increasing their earnings. The events associated with poverty transition are examined in the following section.

The concentration of the persistent poor among the less educated, and in households with more children probably reflects the fact that many of these conditions, when they occur, tend to last for a long time. We examine the reasons behind the persistence poverty in the next Chapter in detail where we try to understand to what extent individual and household characteristics affect persistence.

4.3. The Factors Associated with Poverty Transition

The main aim of this section is to establish the main socio-economic correlates of transitions into and out of poverty in our sample. We examine the roles played by income events using a method pioneered by Bane and Ellwood (1986). The material presented in this section provides a clearer picture of factors which accompany transitions.

Bane and Ellwood (1986) develop the notion of spells of poverty (that is consecutive years in which total income was less than the poverty line), using exit probabilities to examine the length of time that people are poor and beginning and ending events to understand why people move into and out of poverty. They classify beginning and ending events into mutually exclusive categories. Thus, they look for the primary reason the change in the family's poverty situation. They develop a hierarchical classification system. They first look for a significant family structure change defined as a change in household headship. If such a change has occurred, they associate the beginning or ending of poverty to that event. In families where no change in headship has occurred over the studies period, they look for a change in the income/needs ratio. Needs dominated changes are rare and they are typically brought about by the birth of a child or by the departure of members from the household. The remaining changes are income changes. They determine the component of family income that has changed the most: heads' earnings, wife's earnings, others' earnings, or transfer income.

Since our data set is comprised of two years only and family structure is defined at the time of the survey whereas income is reported for the previous year, we could not see the demographic events which happened before transitions. Because of this, we analyze only income events which associate with transitions. However, we think that excluding demographic events from the analysis would not change the picture since the investigated period is short and so the rate of occurrence of demographic events is low. For example, only 4% of all individuals experienced household head change in 2007. The cases of needs dominated changes are even less than the cases of household head changes (3%). The studies (e.g., Jenkins, 2000; Stevens, 1994) using this method also conclude that income events are the most common events associating with poverty transitions.

In such a system, when income and demographic events occur simultaneously, it is not possible to unravel the separate effects of these events. A person may be divorced and gave up her job, but only one event is assigned to transition In Jenkins (2000), it is said that "the Bane and Ellwood approach provides a particularly useful framework for isolating the salient facts about poverty dynamics and its socioeconomics correlates. But this social arithmetic is not modeling".

There are a lot of studies that use this method. Jenkins (2000) uses this method for the dynamic poverty analysis for Britain. Stevens (1994) extends Bane and Ellwood's analysis and studies an extended period (Bane and Ellwood (1986) study the 1970-82 period using the Panel Study of Income Dynamics (PSID)). Layte and Whelan (2002) uses trigger event approach of Bane and Ellwood (1986) to understand what types of events are more likely to lead to entry into and exit from poverty and whether the importance of these events differ between 11 EU countries.

In our analysis, we examine seven types of income events: household head's labor earnings, other nuclear members' labor earnings, non-nuclear members' labor earnings, contributory transfers, non-contributory transfers, rental and property income and other income (labor earning of household members less than 15, imputed income for members of household with whom no interview could be carried out, tax payments, transfers to other households, pension premiums, imputed rental income).

4.3.1. The factors associated with poverty endings

We have found earlier that using absolute poverty (relative poverty) as our yardstick 47.6% (38.3%) of individuals manage to escape from poverty from

one year to another. We present some characteristics of these individuals in the previous section.[47] In this section we analyze the income events that are associated with poverty endings. Table 4.7 summarizes the classification of spell endings by type. According to Table 4.7, changes in labor earnings account for 66.6% of all spell endings. Bane and Ellwood (1986), McKernan and Ratcliffe (2002) also find that employment events are most common events associated with poverty exits in the US. According to these studies, more than half of endings are associated with employment events in the US. Oxley et al. (2000) examine the trigger events of poverty transitions for six OECD countries. According to their results; employment and earnings related factors account for 40.4% of total exits in Canada, 48.8% in Germany, 51.5% in Sweden, 42.7% in the UK and 66.8% in the US.

The increase in the earnings of the household head is the most common event in ending poverty spells. Increase in earnings is mostly realized through a raise rather than obtaining employment. The pay increase is experienced mostly in the same job rather than in a new job with higher earnings. In fact, in approximately 89% of transitions due to the increase in head's earnings, the earnings increase occur in the same job. The earnings of other household members are also important in moving people out of poverty. Totally 23.5% of all the spells of poverty end with changes in the earnings of other nuclear and non-nuclear household members. Contrary to the case of the household head, in 40.1% of the cases, the endings are associating with members obtaining new jobs. The secondary earners are often critical for a family to escape from poverty (Bane and Ellwood, 1986: 20). Bane and Ellwood (1986) find for US that 23% of all spell endings are associated with an increase in labor earnings

[47] Absolute poverty rate is used in this section. However, the rates found are very close to the values when relative poverty is used. The results for relative poverty are provided in Appendix A1.

of household members other than household head. Jenkins (2000) finds the same rate as 29% for Britain.

Table 4.7 Poverty Spell Ending Types, (%)

Ending type: Primary Reason for Ending	Percentage of all spell endings	Cumulative percentage
Income event: Rise in income from		
Head's earnings	43.1	43.1
Other nuclear members' earnings	21.1	64.2
Non-nuclear members' earnings	2.4	66.6
Social assistance income	5.7	72.3
Other transfer income (mostly contributory)	4.4	76.7
Rental and property income	11.4	88.1
Other income increase or decrease in expenditures	11.9	
All spell endings	100.0	

Source: Author's own calculations based on 2006-2007 SILC data.

Changes in unearned income are also associated with poverty exits. Transfer payments account for 10.1% of spell endings. Totally 5.7% of all endings of spells of poverty are brought about by increases in social assistance income. Layte and Whelan (2002) indicate that smaller proportion of transitions are due to the changes in social welfare payments (not including pensions) in sub-protective and liberal regimes as compared to social democratic regimes. They find that change in social welfare payments account for higher rates of poverty endings in Denmark, in France and in Italy. However, lower rates in Germany and in the UK. Although the usual definition of Italy is given as sub-protective, social welfare payments are important for poverty exits in Italy.

Rental and property income is the other important income component whose change is associated with 11.4% of exits from poverty. Increase in property

income may be due to new holdings of properties and/or increases in their value. In fact, a half of the endings associated with rental and property income is due to an increase in the value of holdings and the other half is due to new holdings. Other income increases and/or expenditure decreases (like taxes, pension premiums) account for 11.9% of the endings. Imputed rental income is an important component in other income. Although the value of imputed rental income for poor is nearly half of the imputed rental income of the non-poor, having a home help them escape poverty. This is important because, according to Pınarcıoğlu and Işık (2008) newcomers to urban areas since early 1990s have a reduced chance of owning a house due to the decline in irregular housing opportunities.

In Figure 4.1, ending events are given according to each person's household type. There are important differences in poverty spell ending types among different household types. Amongst married-couples-with-children, the change in household head's earnings is the most important factor in explaining exits from poverty. In households without children, household head's earnings account for less of the poverty exits. Especially in households with old-aged heads, only 46% of poverty exits are associated with earnings change. In these households, unearned income accounts for more of the poverty endings. In households with children, parents may feel more responsibility to supply for their families. Besides this, since nuclear families with children are younger, their savings are less and therefore, their incomes from non-labor sources are lower.

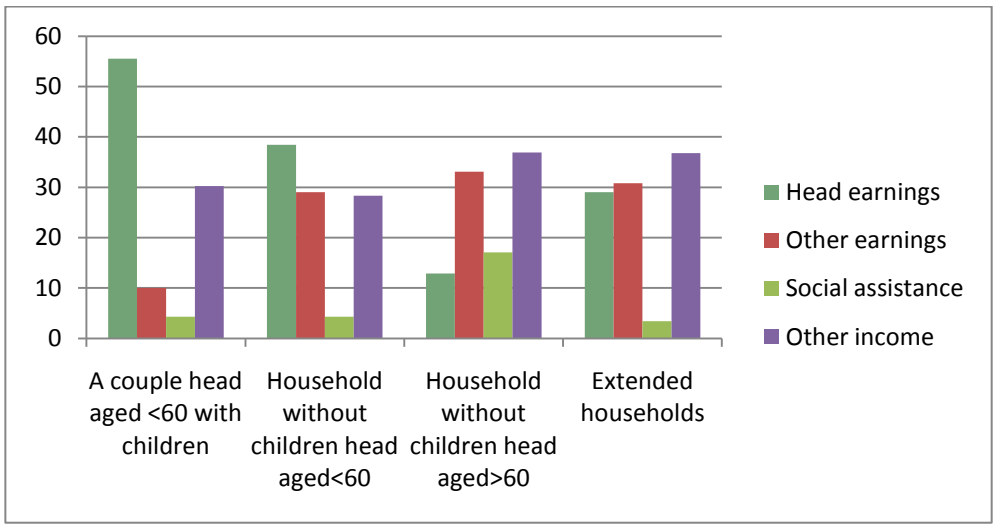

Figure 4.1 Poverty Spell Ending Types by Person's Household Type

Source: Author's own calculations based on 2006-2007 SILC data.
Notes:
[a] Other income includes, non-contributory transfers, rental and property income and other income given in Table 4.7.
[b] Children defined as aged 0-14.

It is important to note that changes in the earnings of household members other than the head are associated more closely with endings in households without children. This may imply lower labor market participation of the spouse when there is a child in the household. In extended households, other nuclear members' earnings are very important in exiting poverty. This result is expected since being in an extended household increases the flexibility of household members to allocate more time to employment. Also, as Gurak and Kritz (1996) proposed, the presence of other adults broadens the network information on employment possibilities. Tunalı and Başlevent (2002) find that extended households are expected to create more advantageous conditions for participation for women compared to nuclear households that are similar in the age composition of children.

Hence, trigger events change according to household type. In households with an elderly head, unearned income is associated with more poverty endings. One of the reasons for this is the lower labor supply of the elderly and therefore, their labor market earnings. On the other hand, old age individuals could compensate the loss in earnings less well than younger individuals. Furthermore, if savings is assumed to increase with age, other income type is expected to be higher in these households. Therefore, an elderly member in the household may reduce the risk of poverty. In contrast, younger household heads have a higher chance of participating in the labor market. In fact, the main trigger event for these households is the change in earnings of the head. In the previous Chapter, we found that most of the persistent poor are comprised of individuals less than 35 years of age. As mentioned above, the most important route out of poverty for these individuals is a change in their earnings. When they cannot earn high enough wages, the risk of poverty increases for them.

4.3.2. The factors associated with poverty beginnings

The rate of entry into poverty using the absolute (relative) measure was found to be 5.9% (8.6%). Table 4.8 displays the breakdowns of events triggering entry into poverty. With a rate of 73.5%, a fall in labor incomes is the most important event associated with poverty entry. 47.4% points of the 73.5% is due to a change in head's earnings. The change in head's earnings mostly happens because of a decrease in head's earnings (76% of the beginnings associated with decrease in head's earnings) rather than him/her leaving employment. However, 47% of the beginnings associated with decrease in other or non-nuclear members' earnings is to do with secondary earners leaving employment.

Table 4.8 Poverty Spell Beginning Types, (%)

Beginning type: Primary Reason for Beginning	Percentage of all spell beginnings	Cumulative percentage
Income event: Fall in income from		
Head's earnings	47.4	47.4
Other nuclear members' earnings	21.8	69.2
Non-nuclear members' earnings	4.3	73.5
Social assistance income	5.6	79.1
Contributory transfer	2.5	81.6
Rental and property income	11.7	93.3
Other income decrease or increase in expenditures	6.7	
All spell endings	100	

Source: Author's own calculations based on 2006-2007 SILC data.

In most studies, earnings changes are found to be more important trigger events for exits rather than entries. Bane and Ellwood (1986) find that although earnings change accounts for 49.3% of entries, it does for 73.2% of exits in the US. For Britain the same figures are 46.9% and 62.1%, respectively (Jenkins, 2000). Oxley et al. (2000) find a similar result for Canada, UK and US. However, according to our figures, earnings are more important for entry than exit. Earnings decreases happen in two ways; either the employed members stay in the labor market but experience a decline in earnings or they leave employment. In other countries, this situation may be less prevalent or may not be as closely associated with poverty beginnings. In Turkey, exiting the labor market or experiencing a decline in earnings may be more prevalent due to a large share of informality in labor market. Therefore, getting a job especially regular employment becomes even more crucial in fending off the risk of poverty.

Social assistance is also important for poverty beginnings. Totally 5.6% of spell beginnings is associated with a decline in social assistance income. The association of social assistance payments with poverty beginnings is nearly the same as the association of it with poverty endings. This result is interesting since we would expect that in most contexts social assistance payments would be more important in poverty exits than entries since this income type is assumed to replace others that have fallen. In fact, Jenkins (2000) and Bane and Ellwood (1986) find that social assistance income is more important for exits than entries for Britain and the US. Layte and Whelan (2002) indicate a similar result like ours for the Netherlands. Therefore, it seems that for some individuals social assistance is consistent and important component of their incomes in Turkey. Social assistance is an important tool for alleviating poverty, but its potential adverse effects must also be considered in policy design. In the last Chapter, the benefits and adverse effects of social assistance are discussed in detail.

In Figure 4.2, beginning events are given according to each person's household type.[48] The same pattern in Figure 4.1 above could also be seen in Figure 4.2. Amongst married-couples-with-children, household head's earnings are the most important factor associated with poverty entry. In households headed by older individuals and in extended households, earnings of household members other than the household head accounts for 42.3% and 34.2% of total event beginnings, respectively. The proportion of households with older heads falling into poverty is considerably less than other household types. In fact, as explained above, old-aged individuals help alleviate poverty rather than increasing its risk.

[48] Not all household types in Figure 4.2 are provided due to small number of observations transiting into poverty in those households.

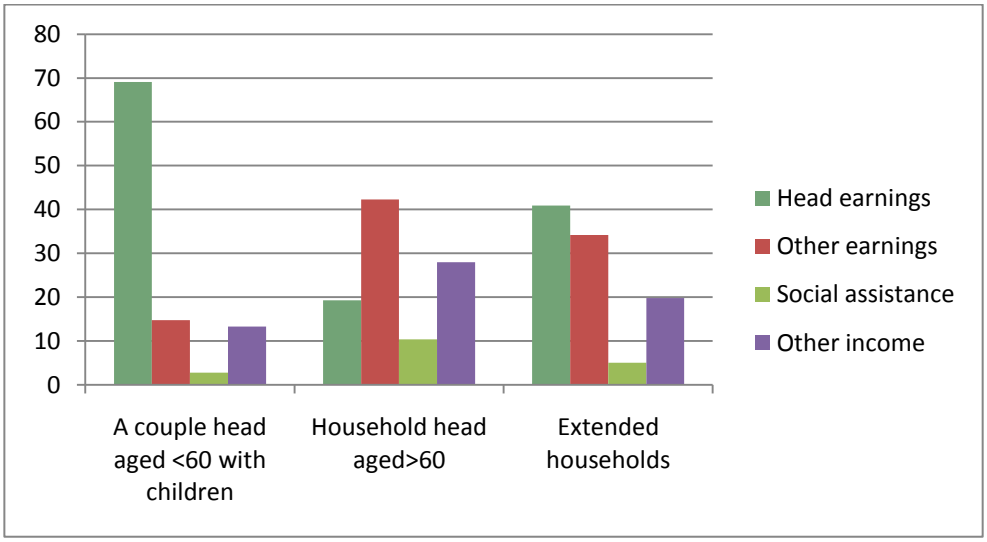

Figure 4.2 Poverty Spell Beginning Types by Person's Household Type

Source: Author's own calculations based on 2006-2007 SILC data.
Notes:
[a] Other income includes, non-contributory transfers, rental and property income and other income given in Table 4.8.
[b] Children defined as aged 0-14.

In conclusion, we find that changes in labor earnings make up the largest part of total transitions. In other words, income dynamics are associated with earnings dynamics more closely. However, earnings dynamics is not all about household head's earnings dynamics, but rather a mixture of household head's and other members' earnings dynamics. In households with children, earnings become especially important. Therefore, increase in earnings is the most important route out of poverty. Parallel to this, earnings changes are also associated with most of the poverty beginnings. Some poor individuals could increase their earnings and therefore find a way out of poverty. However, some could not. Therefore, the earning dynamics of the poor who could not escape poverty need to be investigated in more detail. As given above, nearly half of the poor could not escape poverty, although most of them were either employed or lived in a household with employed individuals. Rental and property income and social assistance income are other important income

sources associated especially with poverty endings. In fact, the interesting finding about social assistance is that it is equally important for poverty entry and exit.

CHAPTER 5

POVERTY PERSISTENCE

Poverty may not be a temporary phenomenon for many but might actually become a trap. In other words, the experience of poverty in one year might raise the risk of poverty in the ensuing periods. This is said to cause a vicious circle of poverty. The evidence for Turkey presented in the previous Chapter has also shown that about half of the poor stay poor in the following year as well. However, this does not go to prove that there is a poverty trap. Because, poor people have may have some characteristics that make them particularly poverty-prone. In this chapter, we try to find the size of the genuine casual effect of poverty experience in one period on future poverty. The distinction between true state dependence and individual heterogeneity has important policy implications also. If there is evidence that poverty has a tendency to reproduce itself, then the existing mechanisms or policies should be checked as to what extent they may be a part of this problem. There are a number of different mechanisms that might explain such a casual effect. As illustrated in Chapter 3 most of the poor individuals in Turkey are employed. Therefore, in this Chapter we also investigate the role of the labor market in giving rise to state dependence.

5.1. True State Dependence versus Heterogeneity

In the previous Chapter, we found that there is a considerable turnover amongst the poor in Turkey. However, while a substantial proportion, about 47.6%, of those who were poor in the first year were no longer poor in the following year; about 52.4% of those who were poor in one year could not escape poverty in the following year. And, 5.9% of those who were not poor in the

first year fell into poverty in the following year. The difference between these rates is high. This suggests that there is a considerable state dependence in poverty. In other words, the probability of being poor in year t is higher among those who were poor in year t-1 than among those who were non poor in year t-1. However, these transition probabilities are aggregate probabilities. High state dependence in aggregate probabilities has two possible explanations (Heckman, 1981a: 91). One explanation is "heterogeneity". That is, state dependence may be attributed to sorting effects in the sense that the individuals that escape poverty may posses certain observed or unobserved characteristics and, thus, differ in a systematic way from the individuals that remain poor (Andriopoulou and Tsakloglou, 2010). The alternative possibility is that there is "true state dependence" in poverty for individuals. In other words, being poor in one period may itself increase the probability of being poor in the next period, relative to another individual with identical characteristics who was not poor in the first period (Stewart and Swaffield, 1999: 30). In this case, past experience has a "behavioral effect" in the sense that an identical individual who did not experience the event would behave differently in the future than an individual who experienced the event (Heckman, 1981a: 91). In order to obtain the measure of true state dependence, observed as well as unobserved heterogeneity has to be controlled.

If true state dependence is significant compared to the individual heterogeneity, then it is important to break the "vicious circle" of poverty to bring individuals out of poverty using social benefits policy. However, if individual heterogeneity defines the duration of poverty, then anti-poverty policies should focus on schemes such as education, development of personal skills and capacities or other labor market and social policies (Andriopoulou and Tsakloglou, 2010: 2).

5.2. Modeling Poverty Persistence

In this part, a bivariate model with endogenous selection that addresses the initial conditions problem is presented for modeling poverty persistence.

Initial conditions problem

A vitally important issue to address in the context of modeling poverty transitions concerns the initial condition problem. The set of individuals at risk of exiting or entering poverty may not be a random sample of population. This is known as "initial conditions" problem (Heckman, 1981b: 179). A positive result in terms of true state dependence may be due to the fact that individuals with higher tendency to remain permanently poor may be over-represented in the sample (Cappelari and Jenkins, 2004a). Initial condition problem arises when the start of the observation period does not coincide with the start of stochastic process generating individuals' poverty experience. Initial conditions problem must be dealt with in order to disentangle the effects of state dependence and unobserved heterogeneity (Arulampalam et al., 2000: 26).

In studies analyzing state dependence in poverty transitions, the initial conditions problem is often taken into account (e.g., Cappelari and Jenkins, 2002; Andriopoulou and Tsakloglou, 2011; Ayllon, 2008; Buddelmeyer and Verick, 2007).[49] Besides poverty transition models, initial conditions problem is also tackled in the unemployment and earnings dynamics literature (e.g., Arulampalam et al., 2000; Stewart and Swaffield, 1999; Uhlendorff, 2006).

Considering in terms of transitions at a single point in time, initial conditions problem can be viewed as a problem of endogenous selection. Conditioning on being poor at time t-1 to model the probability of a transition out of poverty at

[49] While in some of these studies initial condition is controlled by including lag of poverty status and initial poverty status in poverty equation of year t, in some bivariate or trivariate probit models are used.

time t will result in a selection bias in the estimates if the initial condition (being poor in t-1) is not exogenous. Since year t information is used only for those poor in t-1, a bivariate probit model with endogenous selection could be used. For example, for poverty persistence, current year's poverty should be estimated for the sample consisting of poor only in t-1. However, error terms of two equations are allowed to correlate for the full sample in t-1 (Stewart and Swaffield, 1999: 24). In models with endogenous sample selection, there is one equation describing the binary outcome of interest and a second equation that characterizes whether the first outcome is observed or not. If the cross-equation error terms are correlated, sample selection is 'endogenous', in which case estimating a univariate probit model for the binary outcome of interest gives inconsistent estimators of the parameters of interest (Cappelari and Jenkins, 2006: 16). When initial condition is controlled for, all left censored spells could be included in the analysis.

The model

In this section, the model used for estimating persistence in poverty, a bivariate model with endogenous selection, is presented. The model applied in this section is mainly based on Stewart and Swaffield (1999). Stewart and Swaffield (1999) model transitions controlling for endogeneity of initial conditions and provided estimates of the degree of state dependence in low pay in Britain. We apply Stewart and Swaffield (1999) model for poverty persistence.

In the literature, dynamic random effects model (DRE) is also used for the purpose of examining poverty persistence. Initial condition problem is addressed in DRE. However, in DRE, initial (first year's) poverty status is used as an explanatory variable besides last year's poverty status in poverty transition equation. Since there is no instrument variable problem and standard random effects software could be used for estimation, DRE is used widely in

the literature. For example, Andriopoulou and Tsakloglou (2011) analyze the true state dependence in 14 European countries with DRE. Poggi (2007) analyzes the causes leading to social exclusion dynamics by using DRE. Hansen et al. (2006) quantify the state dependence in Canadian social assistance system by DRE. However, since our data is a two-year panel last year's poverty and initial poverty status are the same. Wooldridge (2005) states that at least four observations are necessary to consistently estimate parameters in dynamic panel models, which account for state dependence, serial correlation, and neglected heterogeneity. In our model (bivariate probit model with endogenous selection), initial condition is controlled by jointly estimating current and last year's poverty equations and including exclusion restrictions, which affect last year's poverty but not the poverty transition.

Cappelari and Jenkins (2004a) apply Stewart and Swaffield's (1999) model for estimating poverty entry and persistence. But, they additionally include a retention equation besides current and last year's poverty equations. In other words, besides controlling initial conditions problem, they also control for potentially non-random selection into the sub-sample of individuals for whom two consecutive household incomes are observed. Essentially they are correcting for attrition, i.e. some individuals leave the panel between t and t-1 and therefore, their incomes are not observed in period t. Therefore, their model is a trivariate model that includes: the determination of poverty status in period t-1 (to account for the initial conditions problem), the determination of whether incomes are observed at both t-1 and t (income retention) and the determination of poverty status in period t.

Before applying Stewart and Swaffield's model to our data, we have tried to see whether attrition is a problem in our case. As discussed in Section 3.1.2 the number of individuals who are lost in the second year (3,034 cases out of 32,482 individuals) is quite small. The attrition in our sample (at 9.3%) is less

than what is reported in Cappelari and Jenkins (2004a) at 10.9%, Ayllon (2008) at 14.4% and Buddelmeyer and Verick (2007) at around 13%. The lower attrition rate in our data is probably to do with the fact that our panel covers only two years. Attrition usually increases with time as respondents become increasingly unwilling to participate in the survey and/or it becomes increasing difficult to locate individuals as their likelihood of changing residences increases as time goes by. Natural reasons such as death and illness also increase attrition. An added factor to explain the low attrition rate in our data is the generally higher response rate in Turkish household surveys as compared to surveys elsewhere in the developed countries. Our low attrition rate is encouraging but still it may be a problem in data analysis if it is systematic. To see if individuals lost to the data in year 2007 are any different from stayers, we contrasted the observable characteristics of the two groups in Chapter 3. Although, the mean household size and number of children is lower and education level is higher on average among droppers, they are not drastically different between the original and the remaining sample. Based on these analyses, we arrived at the conclusion that based on observables these two groups are not different from each other. However, they might still differ in terms of unobservable characteristics. To check this, we estimated an endogenous selection model in Chapter 3 to see whether attrition is non-random or not. The results indicate that unobserved factors that cause an unusually high likelihood of attrition do not affect the likelihood of poverty. Also, we estimated a simpler version of a trivatiate model of Cappelari and Jenkins (2004a) which showed no significant correlation between error terms of retention equation and current or last year's poverty status. Based on this evidence, we could not say attrition is non-random in our sample. Therefore, in our model we ignore attrition and include individuals who are present in both years of the survey.

Below, following Stewart and Swaffield (1999) we present the bivariate probit model with endogenous selection between two consecutive years, t–1 and t.

Consider the transitions between years t-1 and t of a sample of individuals. Suppose that individual income in year t-1 is generated by the process:

$$g_1(y^*_{it-1}) = x'_{it-1}\beta^* + \varepsilon_{i1}, \qquad \text{i=1,...,N} \tag{1}$$

where y^*_{it-1} is income at the survey point in year t-1, x_{it-1} is a vector of poverty-determining characteristics and g_1 is a suitable monotonic (but unspecified) transformation such that ε_{i1} is distributed N(0, 1); the poverty line is defined as λ_{t-1}, and an indicator variable y_{it-1}=1 if individual i is poor and =0 if not, i.e.

$$P[y_{it-1} = 1] = P[y^*_{it-1} \prec \lambda_{t-1}] = \Phi\{g_1(\lambda_{t-1}) - x'_{it-1}\beta^*\} \tag{2}$$

where Φ is the standard normal cumulative distribution function, giving a probit model for the probability of poor.

Suppose next that the process determining the poverty situation in year t depends on whether or not the individual was poor in year t-1. Suppose that, if y_{it-1}=1, the process is given by

$$g_2(y^*_{it}) = z'_{it}\gamma^* + \varepsilon_{i2}, \qquad \text{i=1,…,N} \tag{3}$$

For those with y_{it-1}=0, a different g* vector is allowed to apply, but the same error process is assumed. Note that, although the above relationship is defined specifically for those with y_{it-1}=1, it is assumed that the distribution of ε_{i2} is

defined over all individuals. The distribution of (ε_{i1}, ε_{i2}) is assumed to be bivariate standard normal with correlation ρ. The probability of individual i being poor in both years is therefore given by:

$$P[y_{it-1}=1, y_{it}=1] = \Phi_2(x'_{it-1}\beta, z'_{it}\gamma; \rho), \quad (4)$$

where $\gamma_j = -\gamma_j^*$ for the slope coefficients and $g_2(\lambda_t) - \gamma_0^*$ for the intercept, γ_t being the threshold in year t, and where Φ_2 is the cumulative distribution function of the bivariate standard normal. Note that, as with the specification for period t-1, the function g_2 does not need to be specified. The conditional probability of being poor in year t given being poor in year t-1 is then given by:

$$P[y_{it}=1 \mid y_{it-1}=1] = \Phi_2(x'_{it-1}\beta, z'_{it}\gamma; \rho) / \Phi(x'_{it-1}\beta) \quad (5)$$

In the special case where ρ=0, this simplifies to

$$P[y_{it}=1 \mid y_{it-1}=1] = \Phi(z'_{it-1}\gamma) \quad (6)$$

In this case the conditional probability of remaining poor can be modeled by a simple probit model; i.e. γ can be estimated using a probit for y_{it} over the sample with y_{it-1}=1. A corresponding model can be constructed for those non-poor in year t-1.

An obvious problem with simple probit models is that they take the initial poverty status (that in year t-1) to be exogenous (ρ=0). This requires the observed persistence in poverty to be due entirely to observed explanatory variables. Correlation across time between the unobservables ($\rho \neq 0$) will generate a sample selection bias as a result of conditioning on being poor (or

conditional on being non-poor) in year t-1. This is the initial conditions problem, mentioned above. Bivariate model with endogenous selection model requires identification restrictions. There should be at least one additional variables in x_{t-1} in (1) that is not in z_t in (3). This variable acts as an instrument for endogenous selection into the initial state.

For individuals who were poor in year t-1, the terms in the joint distribution of y_{it-1} and y_{it} are given by equation (4) and

$$P[y_{it-1}=1, y_{it}=0]=\Phi_2\left(x_{it-1}^{'}\beta,-z_{it}^{'}\gamma;-\rho\right) \tag{7}$$

The log-likelihood contribution for individual i is given by:

$$\begin{aligned}\ln L_i &= y_{it-1}y_{it}\ln\Phi_2\left(x_{it-1}^{'}\beta, z_{it}^{'}\gamma;\rho\right)+y_{it-1}\left(1-y_{it}\right)\ln\Phi_2\left(x_{it-1}^{'}\beta,-z_{it}^{'}\gamma;-\rho\right)\\ &+\left(1-y_{it-1}\right)\ln\Phi\left(-x_{it-1}^{'}\beta\right)\end{aligned} \tag{8}$$

A corresponding model can also be constructed for those non-poor in year t-1.

State dependence

After estimating the conditional poverty equation, true state dependence of poverty can be found using these estimates. We calculate both aggregate state dependence (state dependence due to both true state dependence and individual heterogeneity) and true state dependence. Aggregate and true state dependence are explained in Section 5.1 above.

To calculate true state dependence the estimated coefficients of the model presented above are used. Firstly, using the covariates' estimates, the predicted conditional probability of being poor at t given being poor at t-1, as given by (5) above, is calculated for each individual, for his/her given set of

characteristics. These are then averaged over the poor at t-1 and then, the non-poor at t-1. The difference between the two is the contribution that is not due to state dependence. The true state dependence effect is the difference between the average predicted probability of being poor at t given being poor at t-1 over the sample who were non-poor at t-1 and the raw aggregate probability of being poor at t over the same sample (Stewart and Swaffield, 1999: 38-39).

By using equation (5) we could find mean and median duration of poverty spells. In a stationary environment all rates reach steady-state values, then the mean duration of poverty spell is $1/(1-P[y_{it}=1 \mid y_{it=1}=1])$. Median duration is $\log(0.5)/\log(P[y_{it}=1 \mid y_{it=1}=1])$ (Cappelari and Jenkins, 2002: 8).

Variable definitions and identification

For the estimation of the model, the SILC data described in Chapter 2 is used. The estimation sample is restricted to individuals aged 15 years and older. In the previous Chapter we have found that labor market changes are the main drivers of poverty transitions. Since children less than 15 should not be in the labor market, their poverty status could only change with changes in the status of adults in the household. In other words, since poverty situation of children depends on adults, it is more useful to restrict our sample to working age population. In fact, since most of the poor households have higher number of children, the inclusion of children in the analysis would cause a higher poverty persistence rate. But we do control for the number of children in the household.

The notion of absolute poverty is used in identifying the poor. However, later in the Chapter we also present the results when instead relative poverty is used in identifying the poor. The covariates used are mostly variables about demographic composition and labor market attachment of the household where the individual lives. All covariates are measured using the values in t-1. The covariates refer to the individual (age, sex, education), to the household head

(age, education and employment), and to the household itself (household age composition, number of workers).

As Wooldridge (2002) points out, in order to identify the model, exclusion restrictions are needed. We need an instrument that affects initial poverty status but not poverty transition. In the literature, indicators of parental socio-economic status, measured when the respondent was for example 14 years old, are commonly used for this purpose.[50] Our data set does not include such variables. Instead of parental variables, Ayllon (2008) uses a dummy in the initial conditions equation that identifies whether the household head suffers from a chronic disease. Our data set also includes various health variables. More specifically, three questions measure the health status of the individual. The first question is about the subjective evaluation of the person's health situation; the individual is asked about his/her general health situation. The answer is marked on a scale of five from "very good" to "very bad". The second question asks about whether the individual has a chronic illness or disease such as high blood pressure, asthma, diabetes, rheumatism and the like. This question can be considered as an objective evaluation of the person's health situation. The final question asks whether the daily activities of the individual have been restricted due to an illness/disease that he/she has experienced for at least the past six months. The answers are marked on a scale of three, from "yes, very much", "yes" and "not at all". We use the final question as instrument taking value zero if the answer is "not at all" and one if "yes, very much" or "yes".[51] It is important to note that this instrument is not based on a small number of occurrences in our sample. In fact, in our sample,

[50] For example, Cappelari and Jenkins (2002), Buddelmeyer and Verick (2007).

[51] We also tried using the time between the household head's first job and his school leaving age. However, it did not function well as instrument.

26.1% of individuals (aged 15+) live in a household with a head who has such a health problem. This rate is 38% for the poor and 23.6% for the non-poor.[52]

5.3. Results[53]

Testing the exogeneity of initial conditions and instrument validity

Before proceeding to the estimates for the conditional poverty equation, sample means with predicted values generated from the estimates are compared to test how good our model is at fitting data. The sample proportion of households who were poor in t-1 is 0.1742, which compares closely to the predicted proportion of 0.1745. Also, the predictions for conditional poverty are also good in replicating the sample. In the case of remaining in poverty, the sample and predicted means are 0.4756 and 0.4753 respectively.

We test for possible ignorability of initial conditions by testing significance of the correlation coefficient associated with conditional current poverty and last year's poverty equations. We find that the correlation between unobservables affecting initial poverty and conditional current poverty is positive but statistically insignificant. The instrument is found to be valid. In fact, this variable is found to be statistically significant in selection equation ($p<0.01$) and could be excluded from the conditional current poverty equation ($p<0.01$).

[52] For urban area, we use the same instrument for endogenous selection of the initial state. In urban area, 24.5% of individuals live in households in which the head experiences such a problem. This rate for the poor and the non-poor is 36.1% and 22.1%, respectively. For rural area, besides the head, we take into account the health problem of other household members, since other health indicators did not function well as instruments. Totally 43.6% of individuals live in households where there is at least one member with such an illness. The same rates for the poor and the non-poor are 54.3% and 41.3%, respectively.

[53] Separate models for rural and urban samples are also run. The results of these models are presented in Appendix A1.

The impacts of the explanatory variables on transition probability

The impacts of explanatory variables on conditional current poverty equation are given in Table 5.1. The signs of most of the covariates are in the expected direction, though some of the covariates are statistically insignificant at the 10 percent level or better. In fact, almost all of the covariates are found to be significant if poverty status in 2007 is estimated by a probit model. Also, if poverty status in 2007 is estimated for the sample of poor in 2006, more significant coefficients are obtained. Since we estimate conditional poverty status it is not surprising to find some insignificant coefficients. In fact, there are more statistically significant coefficients in initial poverty status equation. This suggests that the weaker effects observed in the transition model can be ascribed to the effects of endogeneity being accounted for (Cappelari and Jenkins, 2002).

Table 5.1 indicates that although the magnitudes differ, the factors affecting poverty equation also affects poverty persistence. Individuals older than 25 years have a lower probability of being poor and remaining poor as compared to those aged less than 25. Education is an important determinant of poverty persistence: as the education level of the individual or household head increases both the probability of being poor and remaining poor decreases. Also in the previous Chapter, we saw that the education level of the persistently poor differs from the transitory poor and the total population. Devicienti (2000) finds for Britain that individuals with high-educated heads have 17% higher probability of leaving poverty than those living with a low-educated head. Cappelari and Jenkins (2002), Ayllon (2008) and Buddelmeyer and Verick (2007) also find strong effect of education on poverty persistence for Britain, Spain and Australia, respectively.

Table 5.1 Poverty Persistence Coefficients

Variables	**Probability of being poor in 2007, conditional on being poor in 2006**	**Poverty equation Dependent variable=1 if poor, 0 if not poor in 2006**
Female	-0.0912* (0.0484)	-0.125*** (0.0193)
Age (ref. Age<25)		
Age (24<&<40)	-0.173 (0.113)	-0.299*** (0.0416)
Age (39<&<55)	-0.215* (0.126)	-0.364*** (0.0351)
Age (>54)	-0.370* (0.206)	-0.605*** (0.0519)
Education (ref. no education)		
Primary education	-0.440*** (0.119)	-0.386*** (0.0430)
Secondary education	-0.453*** (0.170)	-0.516*** (0.0545)
High school or above	-0.740*** (0.258)	-0.795*** (0.0663)
Age of head (ref. Age<25)		
Age (24<&<40)	1.491*** (0.351)	0.119 (0.235)
Age (39<&<55)	1.490*** (0.364)	0.0340 (0.234)
Age (>54)	1.621*** (0.438)	-0.276 (0.241)
Education of head (ref. no education)		
Primary education	-0.152 (0.187)	-0.413*** (0.0713)
Secondary education	-0.405 (0.285)	-0.659*** (0.101)
High school or above	-0.484 (0.375)	-0.880*** (0.103)
Household head employment status (ref. not employed)		
Wage earner	-0.647*** (0.215)	-0.577*** (0.0703)
Causal worker	0.202 (0.166)	0.408*** (0.0895)

Table 5.1 (continued)

Employer	-0.653 (0.441)	-0.810*** (0.136)
Own account	-0.197* (0.116)	-0.0781 (0.0710)
Number of children (age<5)	0.234*** (0.0704)	0.219*** (0.0382)
Number of children (age>4&age<12)	0.233*** (0.0835)	0.265*** (0.0281)
Number of children (age>11&age<15)	0.302*** (0.0938)	0.258*** (0.0480)
Number of old-aged (age>64)	0.120 (0.0809)	0.00477 (0.0535)
Number of gainfully employed household members	-0.397*** (0.116)	-0.351*** (0.0433)
Number of unpaid employed household members	-0.101 (0.0618)	0.0392 (0.0408)
Household head have a health problem		0.280*** (0.0530)
Constant	-1.478*** (0.407)	0.124 (0.240)
Correlation (rho)	0.3003 (0.5239)	
LR test of indep. eqns. (rho = 0):	chi2(1) = 0.29 Prob > chi2 = 0.5905	
Log pseudolikelihood	-10631.84	
Observations	20,416	20,416

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

An important insight provided by poverty persistence results is the role of employment in affecting the vulnerability of households of becoming and remaining poor. When household head is a salary worker or self-employed, the likelihood of finding his/her household in poverty at a given point in time and the probability of the household to remain in poverty are lower than individuals with non-working heads. Having a household head who is a casual worker increases the probability of poverty persistence risk. As discussed in the

previous Chapter, this type of employment is widespread among persistently poor population. Besides the household head, as the number of gainfully employed individuals in the household increases, the probability of poverty persistence decreases. The number of unpaid family workers, on the other hand, neither affects the poverty risk nor its persistence. These findings are parallel to the findings from transition analyses in the previous sections where changes in earnings of head and other household members are found to be the main trigger events for transitions. Antolin et al. (1999) also find that employment significantly reduces the length of poverty spells and the impact strengthens with the increase in the number of workers in the household for Canada, Germany, UK and US. The importance of secondary earners in lifting up the household above the poverty threshold is highlighted in many other studies also (for example, Devicienti, 2000; Jenkins, 2000).

The number of children in the household is another factor that increases the probability of falling into poverty and remaining in it. Devicienti (2000) also finds that someone living in a household with three children has a 55% lower probability of leaving poverty than someone living in a household where there are not any children. Ayllon (2008) finds a similar result for Spain.

State Dependence in poverty

How much state dependence is there in the conditional probability of remaining poor? To calculate state dependence, the model estimates presented in Table 5.1 above are used. The raw aggregate probabilities of being poor at t for those poor at t-1 and for those non-poor at t-1 are given in the third and fourth rows of Table 5.2. It is seen that the difference is high. This means that the probability of being poor at t is higher among those who are poor at t-1 than among those who are non-poor at t-1. However, this is aggregate state dependence. That is, as said above; both heterogeneity among individuals and true state dependence are included in this amount. To estimate the true state

dependence effect, firstly the predicted conditional probability of being poor at t (given that the individual was poor at t-1) is calculated for each individual, for his/her given set of characteristics. These are then averaged over first those poor at t-1 and then those non-poor at t-1. These averages are presented in the seventh and eighth rows of Table 5.2. The difference between these two rows, presented in the ninth row of Table 5.2, is the contribution that is not due to true state dependence. The true state dependence effect presented in the tenth row of Table 5.2 is calculated as the difference between the average probability of being poor at t given being poor at t-1 over the sample who were in fact non-poor at t-1 and the raw aggregate probability of being poor at t over the same sample.

Table 5.2 State Dependence in Poverty

	Pr (poor in t | poor in t-1)
Raw aggregate probabilities of being poor in year t, given	
Poor at t-1	0.476
Non Poor at t-1	0.049
Difference	0.427 (row3-row4)
Endogenous selection model	
Average over poor at t-1	0.475
Average over non poor at t-1	0.282
Difference	0.193 (row7-row8)
State dependence effect	0.233 (row8-row4)
Share of state dependence effect (%)	54.6

Source: Author's own calculations based on Table 5.1.

Based on the parameter estimates in Table 5.1, we find aggregate state dependence as 0.426 (row 9+row10). The estimates in Table 5.2 show that the contribution of true state dependence to aggregate state dependence is considerable: 54.6% of the difference in aggregate probabilities is due to being poor at t-1, holding observable and unobservable characteristics fixed. The remaining of the difference is due to observed and unobserved characteristics. In other words, being poor in one period itself increases the probability of being poor in the next period regardless of the observed or unobserved characteristics.

According to the estimates of the same model for rural and urban samples (see Appendix A1), although true state dependence in both areas are high, it is even higher in rural areas. While 70.9% of the difference in aggregate probabilities is due to being poor at t-1 in rural areas, the same rate for urban areas is 48.2%. This may imply that poor and non-poor in urban areas differ more in terms of observable and unobservable characteristics than those in rural areas. In other words, the characteristics of the poor and non-poor are more similar in rural areas. Because of this, the experience of poverty becomes more important in explaining poverty persistence in rural areas. For example, education levels are more different among urban residents than rural ones. And, since poor have mostly low education level, education becomes a more important factor in explaining poverty in urban areas.

Most studies in the literature find poverty state dependence to remain significant even after controlling for individual heterogeneity. Biewen (2004) finds that about half of poverty persistence is due to state dependence, while the other half is due to observed and unobserved characteristics for Germany. Buddelmeyer and Verick (2006) analyze state dependence in Australia and conclude that 51.8% of the unconditional state dependence is true state dependence. The same rate found by Cappelari and Jenkins (2004a) is 59.8%

for Britain. For Spain, Ayllon (2008) finds that more than 50% of aggregate state dependence in poverty status is due to past poverty experience.

Robustness check

In this section, we check the robustness of our results to a change in the poverty line. In the previous Chapter, the results for poverty transition are provided both for absolute and relative poverty. In this Chapter, we carried out the main analysis based on absolute poverty. In this section, we re-calculate the poverty status in 2006 using a relative poverty line that is set at 55% of the median income in both years and, we check whether the degree of state dependence changes or not.

In the previous Chapter we found that the transition rate is lower in the case of relative poverty due to higher poverty line. The results of the poverty persistence model are provided in Appendix A1. Similar to our findings for absolute poverty, when we use relative poverty status in the model we find rho to be positive but not statistically significant. Although there are less significant coefficients in relative poverty analysis as compared to absolute poverty analysis, the signs are mostly similar and in the expected direction. In the methodology we employ since poverty status is estimated with initial poverty status accounted for, the variables explaining initial poverty status would also explain the current poverty status. Because of this, most of the covariates significant in initial poverty equation would not be significant in current poverty equation.

Finally, the measures of aggregate state dependence and true state dependence given in Table 5.3 support our main finding on the importance of true state dependence. The estimated share of true state dependence in aggregate state dependence is higher in relative poverty case. While 54.6% of aggregate state dependence could not be explained by individual characteristics in absolute

poverty case, the same rate is 64.3% in the relative poverty case. This is expected since, as said above, when the poverty line is set low, the characteristics of poor become even more different than the characteristics of the non-poor. In such a case, heterogeneity matters for state dependence more. However, when poverty line is set high, the characteristics of poor and non-poor may not be so different. In such a case aggregate state dependence is explained by true state dependence more.

Table 5.3 State Dependence in poverty (relative poverty)

	Pr (poor in t | poor in t-1)
Raw aggregate probabilities of being poor in year t, given	
Poor at t-1	0.569
Non Poor at t-1	0.071
Difference	0.498 (row3-row4)
Endogenous selection model	
Average over poor at t-1	0.569
Average over non poor at t-1	0.391
Difference	0.178 (row7-row8)
State dependence effect	0.320 (row8-row4)
Share of state dependence effect (%)	64.3

Source: Author's own calculations based on Table A.1.5 in Appendix A1.

In conclusion, we find that poverty has a tendency to reproduce itself. Poverty is persistent for some and most of this persistency is mainly due to past poverty experience rather than individual heterogeneity. This means that we can talk about poverty trap for Turkey. This result supports the arguments on "new

poverty" in Turkey. We are able to quantify and show that a large part of persistency in poverty is due to state dependence. Next, we try to answer the following question: "what is the reason behind state dependence in poverty?".

5.4. The Main Reason of State Dependence in Poverty

As Heckman (1981a) argues, as a consequence of experiencing poverty, preferences or constraints relevant to future outcomes may be altered. There are a number of ways in which true state dependence may emerge. For example, past poverty may result in demoralization, loss of motivation or depreciation of human capital, which makes it less likely that the individual takes up a job if unemployed, or which may lead to a series of low-quality jobs or unstable employment, increasing the risk of remaining in poverty. Another reason is that being poor may be associated with adverse incentives, which make it not worthwhile for the individual to take up a job if unemployed, or even to keep a low-paid job is employed especially due to welfare payments. In a similar way, poverty experience may be associated with a change in the living environment and an increase in bad contacts, which may have negative effects on the quality of job opportunities or which may lead to participation in culture of dependency where welfare receipt is the accepted way of living (Biewen, 2009: 1095). In fact, many of the sources of state dependence in poverty lie in the labor market (Cappelari and Jenkins, 2002: 65).

Information on the worker's productivity is imperfect. This is especially true for workers without work experiences. Although educational attainment is a signal of their productivity for employers, not all uncertainty can be resolved. Because of this, employer may offer an initial wage which is lower than the marginal productivity of worker until additional information about productivity of worker is revealed. After a certain period employer has gained more information on the worker's productivity. Then according to productivity of worker, employer increases the wage of worker. In contrast, low-productivity

labor market entrants will remain trapped in low pay or will be forced into unemployment or inactivity (Pavlopoulos and Fouarge, 2010: 909). Employers may view low paid employment with another firm as an indicator of an individual's low productivity. On the supply side, low paid employment may reduce subsequent human capital accumulation (or causing the depreciation of human capital not currently being used) thereby keeping productivity at low levels. In addition, a spell of low paid employment may influence an individual's perception of his productivity and discourage him from applying for better paid jobs. Therefore, being low paid in one period may itself increase the probability of being low paid in the next period, relative to another individual with identical characteristics who was not low paid in the first period (Stewart and Swaffield, 1999: 30).

According to this literature, if there is true state dependence in poverty then short-term measures, which move the poor out of poverty, would have long-run effects. Social assistance can be an important tool in getting the poor out of poverty quickly. However, social assistance may also be a reason for state dependence. We discuss social assistance in terms of state dependence in the next Chapter.

In previous sections, we find that most of the working age poor are employed and most of the poverty transitions are associated with earnings changes. Because of this, in order to explain the state dependence in poverty, we examine whether there is a trap in low pay.

5.4.1. Low-pay and poverty

Before moving on to examining low-pay transitions, in this section we briefly give some descriptive relationship between poverty and low-pay. In Table 5.4, the distributions of gainfully employed poor and non-poor according to their pay status are presented. For this analysis we refer to individuals with monthly

earnings less than half the mean of monthly earnings as low-paid. According to Table 5.4, 22.6% of individuals work in a low-paid job. Low-pay incidence is higher in Turkey when compared with the EU. In EU-13 (except Luxembourg and Sweden from EU-15), low pay concerns 15.1% of EU workers. Highest incidences of low-pay are in UK and Ireland (19.4% and 18.7% respectively in 2000) and lowest in Denmark and Italy (8.6% and 9.7%, respectively in 2000) (European Commission, 2004: 168).

The low-pay incidence is higher when the poor are considered. Low-pay concerns 59.6% of the gainfully-employed poor in Turkey. Parallel to this, the poverty rate among low-paid is higher than the poverty rate among high-paid individuals.

Table 5.4 Distribution of Low-Paid According to Poverty Status and Distribution of Poor According to Pay Status, 2006, (%)

	Poor	Non-poor	Total	Poor	Non-poor	All
Low-paid	36.4	63.6	100.0	59.6	16.7	22.6
High-paid	7.2	92.3	100.0	40.4	83.3	77.4
Total	-	-	-	**100.0**	**100.0**	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Low-pay threshold is half of mean monthly earnings of all gainfully-employed individuals except employers.

The extent of low pay at any point in time is a cause of concern since it measures the proportion of workers lagging behind in the wage distribution. It is also important for economy as a whole as it signals low productivity or low quality jobs. However, the issue becomes more crucial in a dynamic context. Because, some people may be trapped in low-pay and hence do not have prospects of career that evolves over time (European Commission, 2004: 169).

Since low-pay concerns mostly poor people, the transition from low-pay to high pay is crucial for poor to transit out of poverty.

5.4.2. Aggregate transition rates into and out of low-pay

We present low-pay transition matrix in Table 5.5 where we could see the aggregate state dependence in low-pay and the transition from low-pay to high-pay and to no-pay (not gainfully employed status) status. In Table 5.5, there are three low-pay definitions. In the first one, only wage earners and casual workers are taken into account. In the second one, wage earner, casual workers and own-account workers (excluding employers) are taken into account. In the third one, all gainfully employed individuals (including employers) are included. In the lower part of the table (in the seventh and eighth rows) the transition probabilities are calculated only for individuals working in both years.

According to Table 5.5, the probability of being low-paid is much higher for those who have been low-paid in the previous year. According to the first threshold, 37.2% of individuals who were low-paid in the first year remain low-paid in the second year also. On the other hand, only 6.6% of the previously high-paid individuals are low paid in the next year. According to the second threshold, the exit rate from low-pay is lower than the rate in the first threshold. Therefore, it could be concluded that individuals working on own-account have even lower probability of exiting low-pay than wage earner and casual workers. This finding can be connected to the findings of Taymaz (2009) on informal own-account workers. Taymaz (2009) finds that own-account workers, who are less educated, are negatively selected into the informal sector where earnings, access to training, formal credits etc. are lower.

Table 5.5 Transition Probabilities between Labor Market States, (%)

	Year t								
	1st low-pay threshold (a)			***2nd low-pay threshold (b)***			***3rd low-pay threshold (c)***		
In year t-1	**Low-pay**	**High-pay**	**No-pay**	**Low-pay**	**High-pay**	**No-pay**	**Low-pay**	**High-pay**	**No-pay**
Low-pay	37.2	41.2	21.6	44.4	35.7	19.9	49.9	31.3	18.7
High-pay	6.6	85.0	8.4	6.8	84.9	8.3	9.9	82.4	7.7
No-pay	5.4	7.6	87.1	4.9	8.0	87.1	5.5	7.4	87.1
Individuals employed in both 2006 and 2007 are taken into account									
Low-pay	50.5	49.5	-	54.1	45.9	-	63.1	36.9	-
High-pay	7.3	92.7	-	7.2	92.8	-	10.3	89.7	-

Source: Author's own calculations based on 2006-2007 SILC data.
Notes:
[a] half of mean monthly earning, not including employers or own-account workers.
[b] half of mean monthly earning, not including employers.
[c] half of mean monthly earning, including all gainfully-employed.

According to the second part of Table 5.5, we still observe a much higher probability of being low-paid for those who were low paid in the previous period compared to previously high-paid individuals. In fact, according to the first threshold 50.5% of individuals who were low-paid in the first year remain low-paid in the second year also. In EU countries the same rate ranges from 38.7% to 65%. The probability of a worker staying low paid between two successive years is higher in Portugal and Germany, but lower in Belgium and Austria (Clark and Kanellopoulos, 2009). However, the probability of being low-paid is 7.3% for individuals who have been high-paid in the previous period. This rate is higher than most of the EU countries but similar to the rate for Spain (7.4%) (Clark and Kanellopoulos, 2009). It should be noted that these figures do not include the self-employed and own-account workers. Own-

account work and self-employment constitute a bigger share of total employment in Turkey than in EU-15. While the share of the self-employed and own-account workers in total employment is 9.9% in EU-15, it is 30.8% in Turkey (2009 figure). Besides, an important portion of the poor in Turkey is employed on own-account. Because of this, the figures excluding own-account work may not give the exact idea about state dependence in low-pay for Turkey. When own-account work is also included, low pay persistence increases to 44.4% from 37.2%.

Table 5.5 shows that the transition rate from low-pay to no-pay is also high for low-paid individuals. As in low-pay, no-pay is also more possible for low-paid individuals than high-paid ones. This is parallel to the findings in the literature for other countries, namely "low pay-no pay cycle". For example, Stewart (2005) finds that low-wage jobs are the main conduit for repeat unemployment in Britain. Uhlendorff (2006) finds evidence for low pay-no pay cycle for Germany. Pavlopoulos and Fouarge (2010) compares Germany and UK in terms of low pay persistency and conclude that while in the UK low pay persistence is higher, in Germany the transition from low pay to high pay is higher. Since individuals occupying lower segment of the labor market are mostly poor, it could be said that poor people are most prone to experience low-pay and low pay-no pay cycle and therefore, a poverty cycle. If we take into account transition out of low-pay towards no-pay besides persistence in low-pay, then the picture worsens for low-pay individuals. According to European Commission (2004), in EU-13 (except Luxembourg and Sweden from EU-15) the transition rate from low-pay to no-pay is found as 17.5% in 2000-2001 period compared to 21.6% in Turkey (Table 5.5).

Looking at the issue from the bright side, an important portion of individuals are able to move to high-pay while they were low-paid in the previous period. However, it should be noted that a high-pay job does not necessarily mean a

formal sector job. The transition rate from low-pay to high-pay is 41.2% for the first threshold (Table 5.5). When own-account workers are included it decreases to 35.7%. These findings, in fact, parallel to the findings of the previous Chapter. Because, in the previous Chapter, we found that the main trigger event bringing about poverty exits is earnings change. Hence, it can be said that while earnings of some individuals increase and as a result they could manage to escape from poverty; some individuals' earnings remain low and as a result they remain in poverty.

The transition rates from low-pay to high-pay differ among countries in EU-15. Germany and UK show the lowest exit probabilities from low-pay to high-pay. In Germany, while 30% of low-paid individual could manage to move to a high-paid job after one year, the same rate for Denmark and Finland is around 50% (European Commission, 2004). Uhlendorff (2006) finds the transition rate from low-pay to high-pay as 48.3% for Germany. Stewart and Swaffield (1999) find the same rate as 32% for Britain.

All the measures about low-pay persistence suggest that there is high persistence in low pay and the question is how much of it is due to workers' (either observed or unobserved) characteristics and how much of it stems from true state dependence. For this purpose, we model low-pay persistence in the next section.

5.4.3. Low-pay persistence

State dependence in low-paid is studied widely in the literature (see for example Stewart and Swaffield, 1999; Stewart, 2005; Uhlendorff, 2006; Clark and Kanellopoulos, 2009). In this part, in order to estimate state dependence in low-pay, the low-pay transition model is estimated using the same methodology applied for poverty transition above.

Variable definitions and identification

Low-paid are defined as the gainfully employed individuals whose earnings are less than the half of the average of monthly earnings in the related year. The sample is restricted to individuals who are gainfully-employed in both periods. Employers are not included.[54] We estimate current year's and past year's low-paid status jointly due to possible endogeneity between them. The dependent variable in both year is whether the individual is low-paid or not. It takes the value of one if the individual is low-paid and zero otherwise. Since we are interested in low-pay persistence, current year's low-paid status is estimated for the sample of t-1 consisting of low-paid only.

As explanatory variables we use gender, age, education, marriage, sector of employment, job occupation, job experience and the number of working hours per week. These variables are similar to those commonly used in this context (e.g., Cappelari and Jenkins, 2004b; Steweart, 2005). The instrument used to define the exclusion condition for identification is the variable indicating whether the household head has a chronic disease. For low-pay transition equations, the instruments related to parental background variables and variables related to labor market entry could also be used (Stewart, 2005: 13). For example, a variable indicating that the first labor market spell after end of schooling was an employment spell or an indicator whether the first job held was temporary or not could be used for this purpose. Since in our data there is no information about parental background or first job entry, we could not use these variables as instruments. However, health is an important variable affecting the situation in a given point in time but not transition. Our instrument, whether the head has a chronic disease, affects the individual in the household because it may lead the individual to take up the first job that comes

[54] A model including only wage earners and casual workers is also estimated and state dependence effect is derived. The results are presented in Appendix A1.

along to support his family, which may not be the best match given his/her productivity level, instead of for instance, furthering his schooling or looking for a better job. If the individual is the household head himself/herself, then due to his/her health situation his likelihood of working in a low-paid job might be higher.

The results

When we turn to the low-paid transition model, firstly we test for possible ignorability of initial conditions by testing the significance of the correlation coefficient associated with conditional low-paid status and last year's low-paid status. The correlation coefficient between unobservables affecting these two equations is found to be positive but statistically insignificant. This means that an individual, who is more likely to be low-paid in period t-1, other things being equal, is more likely to be low-paid in period t as well but this effect is not found to be significant. The model is good at fitting data. The sample proportion of individuals who were low-paid in t-1 is 0.1857, which compares closely to the predicted proportion of 0.1850. Also, the predictions for conditional low-paid are also good in replicating sample. In the case of remaining in low-paid, the sample and predicted means are 0.5404 and 0.5396.

The results of the model, provided in Table 5.6, indicate that female workers are less likely than their male counterparts to move up the wage ladder. In fact, European Commission (2004) also finds for EU-13 (except Luxembourg and Sweden from EU-15) that being female increases the probability of remaining in low-paid jobs. Stewart and Swaffield (1999) find a positive coefficient for the gender variable (female=1) in the equation of low-pay persistency for Britain also. The age effect is found to be non-linear: as age increases, the risks of being and remaining low-paid first decrease, and then increase. Although the coefficient of age (higher than 54) is negative in the low-pay equation, it is low and insignificant. Uhlendorff (2006) and European Commission (2004) also

find that age has a U-shaped influence on the probability of being and remaining low-paid.

Table 5.6 Low-Pay Persistence Coefficients

Variables	**Probability of being low-paid in 2007, conditional on being low-paid in 2006**	**Low-pay equation Dependent variable=1 if low-paid, 0 if high-paid 2006**
Female	0.578*** (0.108)	0.252*** (0.0653)
Age Ref.(Age<25)		
Age (24<&<40)	-0.228 (0.251)	-0.365*** (0.0950)
Age (39<&<55)	0.0591 (0.357)	-0.340*** (0.113)
Age (>54)	0.397 (0.299)	-0.0246 (0.140)
Education (ref. no education)		
Primary education	-0.209 (0.179)	-0.310*** (0.0843)
Secondary education	-0.0640 (0.216)	-0.229** (0.105)
High school or above	-0.828** (0.363)	-0.881*** (0.107)
Married	-0.0892 (0.134)	-0.0512 (0.0746)
Logarithm of experience	-0.0334 (0.0741)	-0.0883** (0.0401)
Sector of employment (ref. agriculture)		
Sector of employment (Industry)	-1.172** (0.542)	-1.334*** (0.0917)
Sector of employment (Services)	-0.946** (0.406)	-1.068*** (0.0702)
Occupation (ref. high-skilled) (a)		
Medium-skilled	0.335 (0.225)	0.328*** (0.0870)

Table 5.6 (continued)

Low-skilled	0.296 (0.283)	0.400*** (0.0888)
Logarithm of number of working hours per week	-0.396** (0.201)	-0.475*** (0.0735)
Head has a chronic disease		0.275*** (0.0639)
Constant	1.492** (0.617)	2.390*** (0.331)
Correlation (rho)	0.5586 (0.7339)	
LR test of indep. eqns. (rho = 0):	chi2(1) = 0.35 Prob > chi2 = 0.5543	
Log pseudo likelihood	-3247,586	
Observations	5,827	5,827

Source: Author's own calculations based on 2006-2007 SILC data.
Note : Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
[a] The classification is based on International Standard Classification of Occupations–88 (ISCO-88). High-skilled occupation is the first three occupation in ISCO–88, namely legislators, senior officials, managers, professionals, technicians and associate professionals. Medium skilled occupation is the second three occupations: clerks, service workers and shop and market sales workers, skilled agricultural and fishery workers. Low-skilled occupation is the last three in ISCO-88: craft and related trade workers, plant and machine operators and assemblers, elementary occupations.

Higher education is associated with a higher probability of being in a high-paid job. Stewart and Swaffield (1999) and Uhlendorff (2006) find similar results for Britain and Germany, respectively. Pavlopoulos and Fouarge (2010) find that secondary and tertiary education graduates have a better chance of escaping low pay than the low educated in UK. Also, European Commission (2004) indicates that the effect of education is highly significant for escaping from low-pay in EU-15. Being married decreases the probability of remaining in a low-paid job. This may be partly to do with the greater family responsibility of married individuals and therefore, their greater effort to move to high-paid jobs. Also being married increases the opportunity to look for a job over a longer period of time due to the earnings of the partner, hence

resulting in a better match of the individual's skills with the job. With respect to economic sectors, the probabilities of moving up the wage ladder are greater in industry and services sector when compared with agricultural sector. Low productivity in agricultural sector is an important source of this result. The share of agricultural sector in GDP was 8.3% in 2009 while 24.7% of total employment was in agriculture in the same year. The same rates were 19.1% and 19.4% for industry, and 72.6% and 55.9% for services sector, respectively (DPT, 2010). Occupation status has also significant effects on the probability of being low-pay. The first three occupations in ISCO-88 classification (refer to as high-skilled in the Table 5.6) are found to increase the likelihood of moving up the wage ladder than medium-skilled and low-skilled occupations (the second and the last three occupation in ISCO-88, respectively).

State dependence in low-pay

Using the coefficient estimates of low-paid transition equation, we could find out whether there is state dependence in the conditional probability of remaining low-paid (Table 5.7). According to Table 5.7, the experience of low pay itself increases the chance of being trapped in the low pay state. In fact, 57.1% of the difference in aggregate probabilities is due to the fact of being low-paid at t-1, holding observable and unobservable characteristics fixed. When only wage earner and causal workers are considered, state dependence effect increases to 77.1%. Therefore, the heterogeneity in the group of wage earner and causal workers is less than the heterogeneity in the group composed of wage earner, causal and own-account workers. In the literature, the true state dependence shares for low pay in aggregate state dependence for wage earners and causal workers are high also. For example, Stewart and Swaffield (1999) find true state dependence in low-pay at approximately 70% for Britain. Cappelari (1999) finds the same rate for Italy as 68.6%. Therefore, besides enhancing human capital, it is important to support low-paid individuals by

increasing their self-confidence and by providing them with job-search assistance.

Table 5.7 State Dependence in Low-Paid Status

	Pr (low-paid in t | low-paid in t-1)	**Pr (low-paid in t | low-paid in t-1)**
	with own-account	***without own-account***
Raw aggregate probabilities of being low-paid in year t, given		
Low-paid at t-1	0.540	0.505
High paid at t-1	0.072	0.073
Difference	0.468 (row3-row4)	0.432
Endogenous selection model		
Average over low-paid at t-1	0.540	0.505
Average over high at t-1	0.339	0.407
Difference	0.201 (row7-row8)	0.098
State dependence effect	0.267 (row7-row4)	0.334
State dependence effect share (%)	57.1	77.1

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Calculations are based on estimated model provided in Table 5.6 and Table A.1.6.

If the same model is run for rural and urban samples separately, we find that in both cases, the experience of low pay at a given point in time is more important than the characteristics of individual for remaining in low-pay.[55] As mentioned above, once a person finds a job, the job he/she takes may be perceived as

[55] The results are provided in Appendix A1.

his/her performance indicator or he/she does not desire to make an effort to find a better job because of a lower perception of his/her capabilities. Also, low paid employment may reduce human capital accumulation (or causing the depreciation of human capital) thereby keeping productivity at low levels.

The contribution of true state dependence rates to aggregate state dependence is higher in rural areas. While the true state dependence explains 68.9% of aggregate state dependence in urban areas, the same rate is 74.8% in urban areas. This situation arises from the fact that the heterogeneity among workers, whose earnings around low-pay threshold, is higher in urban than rural areas.

5.4.4. The implications of low-pay transition for poverty transition

Besides the negative implications of its incidence, low-pay is even more crucial in a dynamic context. High state dependence in low-pay is associated prevalence of state dependence in poverty. When people get caught in low-paid jobs, they could not manage to escape from poverty. Because, the main source of income is earnings and increase in earnings is the best way to move out of poverty. In fact, 45.2% of individuals remaining poor in both years also remain low-paid in both years. The same rate for individuals moving out of poverty and for individuals who did not experience poverty in either time period are 25% and 7.9%, respectively.

While being in low-paid jobs increases the risk of poverty (while the poverty rate among low-paid people is 36.4%, the same rate among high-paid workers is 7.2% in 2006), since there is high state dependence in low-paid jobs being in low-paid jobs increases the risk of recurrent poverty. Therefore, simply having some form of work may not in itself be enough to prevent poverty persistence (Tomlinson and Walker, 2010: 19).

High state dependence in low-pay and the strong association between poverty and earnings' change suggest that segmented labor market theory could be used for explaining poverty.[56] Since there is high state dependence in low-pay, it can be said that some workers in the secondary sector are caught in a trap. Contrary to what human capital theories might predict, even if these workers had skills, they would still find it difficult to escape from the secondary into the primary sector. This would lead in turn to higher poverty (Tomlinson and Walker, 2010: 18). On the other hand, poverty increases the probability of low-pay because, poor people have less chance to get education (due to imperfect capital market for instance) and they enter the labor market mostly as low paid. This process sets off the poverty trap; low-pay leading to poverty, poverty leading to low-pay. In fact, Biewen (2009) finds that lagged poverty significantly reduces the employment probability in Germany. This would increase the risk of perpetuating poverty. According to Michael J. Piore and other segmented labor market economists, the problem of poverty could "be best understood in terms of a dual labor market. The poor are confined to the secondary labor market. Eliminating poverty requires that they gain access to primary employment" (Cain, 1976: 1218). Stewart (2005) finds that in terms of future employment prospects, low-paid jobs are closer to unemployment rather than high wage jobs in Britain. He concludes that a low-paid job does not augment a person's human capital significantly more than unemployment.

On the other hand, according to our results some low-paid individuals manage to move to high-paid jobs. This increases their likelihood of moving out of poverty (as shown in Section 4.3.1). Although there is high state dependence in low-paid jobs, the aggregate state dependence is higher in non-working case. Thus, it can be said that low-paid jobs might be stepping stones to high-paid jobs for some when compared with non-working case. Uhlendorff (2006) for

[56] Main theories explaining poverty are presented in Chapter 2.

Germany and Mosthaf et al. (2009) for German women find that low-paid jobs could be a stepping stone for high-paid jobs.

Since there is high state dependence in poverty, the prevention of the initial poverty experience becomes an important policy objective. For this purpose, policies reducing short-run poverty incidence will have longer run effects. Social assistance programs could be used for this purpose. While social assistance programs help people escape poverty in the short-run, they may also have disincentive effects. In fact, it has been also argued that reliance on social assistance benefits without the need to seek employment traps people in poverty. Therefore, the role of social assistance in reducing state dependence in poverty needs to be investigated. Does it create some disincentive effects in terms of labor supply? These issues will be discussed in the next Chapter.

CHAPTER 6

LABOR SUPPLY RESPONSE TO SOCIAL ASSISTANCE PROGRAMS

In the previous chapter, controlling for other covariates, we found poverty persistency to be mostly due to past poverty experience. This implies that poverty today is an important cause of future poverty. Social assistance programs can potentially act to break the vicious circle of poverty. However, both direct and indirect effects of social assistance programs should be investigated before implementation. Direct impact of social assistance on poverty is the difference between the proportion of people with pre-assistance income below the poverty line and the proportion of people with post-assistance income below the poverty line. To have an efficient direct impact, social assistance should reach all the poor and make transfers to these individuals up to the level at which poverty is eliminated. On the other hand, individuals do not, in fact, experience the pre-social assistance levels of income. Eligibility is decided by past income received by the individual. In addition, individuals presumably know that such programs are available to them. Therefore, their actions and decisions would be different if the social assistance programs did not exist. Their incomes in a world without recourse to income support would look very different from the incomes hypothetically ascribed to them by subtracting social assistance payments from their income (Darity and Myers, 1987: 217). This is the indirect effect of social assistance and the widely known mechanism through which social assistance payments can have negative effects on labor supply. This concern is widespread among countries providing generous social assistance benefits. Social security systems have been reformed especially in the EU from ‘passive’ to ‘active’ programs to

promote self-sufficiency through labor market inclusion and the reduction of social security dependency (Berkel, 2007).[57]

In a study carried out on the behalf of the OECD, Eardley et al. (1996, 13) claim that due to "the limited social assistance regimes of southern Europe, including Turkey: here the debate on labor market disincentives is less relevant". Although in Turkey social assistance transfers are still low when compared with European Union countries, they have been on the rise in recent years. In spite of the increase in GDP, while the ratio of total public social assistance payments to GDP was 0.6% in 2003, it became 1.2% in 2010. The share of social assistance benefits in household incomes has been increasing as well.

During the 2011 elections, the resources devoted to social assistance, being one of most popular topics, were promised to be increased further and social assistance was also promised to be given on a more regular basis. On the other hand, there were some views indicating that social assistance may cause "dependency", and may induce people benefiting from social assistance not to work but to live on those benefits. Hence, implementing work-fare programs in Turkey, like in most of the EU countries and US, has been suggested as a way to eliminate work disincentives of the beneficiaries of social assistance programs. In addition, with the new action plan entitled "Establishing Relationship between Social Assistance System and Labor Market, and Activating Social Assistance System Action Plan" enacted in the Economic Coordination Council in 1 April 2010, able bodied individuals applying for social assistance benefits are to register with the Turkish Employment Agency so that they can be included in special active labor market programs and

[57] In the United Kingdom, some reforms in social assistance programs include higher benefits to working lone parents. In the US, Earned Tax Credit Programme and Temporary Assistance for Needy Families are some examples.

assisted in job search and/or provided with vocational training. Thus, the aim is to reduce dependency on social assistance and eliminate poverty through active labor market programs.

Although the amount of social assistance has been increasing, the amount given out is still low so that its effectiveness in pulling the poor out of poverty is questionable.[58] Since there are limited resources to be allocated to social assistance programs in Turkey, there is a need to increase the cost efficiency of these programs. Therefore, it is crucial to determine to what extent the poor are able to benefit from social assistance and to what extent is their poverty decreased. Besides direct effects, the probable indirect effects of social assistance; its effects on employment and unemployment, should also be examined. If the target population, who are in need, are not able to benefit from social assistance programs or the non-poor benefit from these programs, social assistance system can not fully fulfill its aim of reducing poverty. Furthermore, if social assistance affects the labor market negatively, then poverty alleviation may not be sustainable.

The aim of this Chapter is to study the efficiency of social assistance programs and the labor market disincentives created. First we present a brief overview of social assistance programs in Turkey. Then, the efficiency of social assistance programs on poverty is analyzed using SILC data. In third and fourth parts, the association between labor supply and social assistance programs and the effect of social assistance programs on duration of employment and unemployment are analyzed.

[58] The effectiveness of social transfers comprising social assistance is analyzed in Demir (2008) in detail.

6.1. Social Assistance in Turkey

a. Social security system

In Turkey, social security system aiming to protect individuals from loss of income includes two components: the contributory regime and the non-contributory regime. Social insurance, social services and assistance are the main tools of the system. While social insurance requires the beneficiary to contribute to the system to benefit from it, social services and assistance programs are non-contributory. Social insurance benefits are designed to cover contingencies like old age, sickness, disability, unemployment and maternity. Social insurance programs cover employed individuals (employed with social security registration), individuals who could afford to pay premiums even if they do not work (voluntary) and the dependencies of insured individuals.

Social insurance programs may not be enough to make ends meet. There may be individuals ineligible for social insurance benefits. Social assistance programs protect individuals who are not under the coverage of social insurance system (i.e. covers those who are not employed, or could not afford to pay premiums or dependents of uninsured individuals) against risks.[59] Social services aim to remove material and social deprivations of individuals experiencing difficulties in terms of making ends meet, thereby increasing the material and psychological well-being of individuals and preventing social problems. The main difference between social benefit and social insurance systems is that the latter is based on previous payments (premiums) of individual who are insured. However, social services and assistance are mainly financed by taxes. While social assistance and services are designed to help the needy, the social services system covers everyone who could potentially experience difficulties at some point in their lives.

[59] When social insurance benefits are not enough to cover the needs of family of the insured individual, social assistance programs support this family. But, in Turkey, most of the social assistance programs cover individuals without social insurance.

b. Social assistance programs

In Turkey, there are several public institutions implementing several social assistance programs. These programs could be grouped as follows: old age/disability assistance, non-contributory health insurance (Green Card system[60]), assistance for family and children (in-kind), assistance for family and children (in cash), assistance for education of individuals 18 years and over. Besides these, individuals could get social assistance from non-governmental organizations and private individuals. A brief description of social assistance programs is provided in Table 6.1.

Table 6.1 Main Social Assistance Programs in Turkey

	Management	Description	Eligibility
Old age/disability assistance	Social Security Institution (SSI), Social Services and Child Protection Institution (SHCEK)	- In cash and in-kind -For poor individuals aged 65 and over or disabled, monthly salary is paid. - The cost of private care centers and monthly net minimum wage to people who provide home care for disabled people is paid.	- Having monthly income less than the amount of assistance. - No income or salary from SSI -Does not have any allowance higher than the set threshold. - Does not have any regular income secured by a Law or court decision. - If the individual is cared in a public institution, then any payment higher than or equal to the set threshold is made.
Non-contributory health insurance	Ministry of Health (MoH), SSI	- In kind -Meets the medical expenses of the poor not covered by SSI.	- Green card is given to individuals who are not under the coverage of SSI and have an income or share of household income less than one third of the net minimum wage.

[60]The Law No: 5510 ends the Green Card program and foresees that the individuals under the coverage of Green Card program will be under the coverage of Universal Health Insurance. In this new implementation, Social Security Institution will be the responsible institution from paying these premiums. The related articles of this Law have not been come into effect yet, but expected to be in the beginning of 2012.

Table 6.1 (continued)

Assistance for family and children (in kind)	Ministry of Education (MoE), SHCEK, Social Assistance and Solidarity Fund (SYDTF), The General Directorate of Foundations, Turkish Coal Works (TCW), Turkish Coal Institution, Local authorities	- MoE meets school expenses of poor students at primary, secondary and higher education levels. - SHCEK provides in-kind benefits according to "In-Kind and In-Cash Assistance Regulations" especially to children in need of protection and vulnerable people and families. - SYDTF provides education materials, transportation, food and housing assistance to poor students. - SYDTF provides food, housing, coal etc. for poor families. The cost of coal is met by TCW - Health benefits are provided in Vakıf Gureba Hospital affiliated to General Directorate of Foundations. - General Directorate of Foundations provides cooked and dried food for the poor. - Local authorities provide food, clothing, coal etc.	- -For MoE's boarding schools: being successful in the exam administered by MoE, having Turkish or North Cyprus citizenship, fulfilling the registration requirements of the school to which the student wants to go to, being successful in school, per capita income of household should not exceed four times the fee of the boarding school. - SHCEK provides in-kind assistance for: children who are provided care in an institution or those who can be cared by their own families through economic support; primary and secondary school students who have no decree of protection yet cannot continue their education; Individuals who cannot meet their basic needs because of extraordinary disasters, illnesses or accidents etc. - For SYDTF assistance, mostly poor individuals not have social insurance are targeted. - For food assistance of General Directorate of Foundations; the individual should not have any income or salary from SSI and should not have any allowance; is not under care or does not have regular income secured by a Law or court decision; does not have any rental and property income or income from these sources should not exceed the amount of monthly payment of General Directorate of Foundations; should have a disability of 40% or more or be a poor orphan child. - For health assistance of General Directorate of Foundations, a poverty certificate from *muhtar* is needed.

Table 6.1 (continued)

Assistance for family and children (in cash)	MoE, SHCEK, SYDTF, The General Directorate of Foundations, Higher Education Credit and Hostels Institution, Local authorities	-MoE provides scholarship for poor students at primary, secondary and higher education levels. -Salary is paid primarily to children in need of protection and vulnerable people and families by SHCEK. - Social Assistance and Solidarity Fund finances the expenses of conditional health and education assistance. In some cases cash assistance is also provided. - The General Directorate of Foundations makes monthly payments to poor, disabled or orphans. - The General Directorate of Foundations gives scholarships to students in primary or secondary education levels. - Higher Education Credit and Hostels Institution, provides scholarship for poor students at higher education levels. - Local authorities provide cash assistance.	- For MoE scholarships, the same criteria for MOE's boarding schools apply. - For assistance given by SHCEK, the same criteria for in-kind assistance made by SHCEK apply. - For SYDTF assistances, poor individuals mainly not under the coverage of SSI are targeted. - For monthly payments of the General Directorate of Foundations, the criteria for food assistance of the General Directorate of Foundations apply. - Scholarships of General Directorate of Foundations are given out to students who are not under public care, not receive scholarship from any public institution. Besides these, numbers of student in the family, number of household members, the employment status of parents etc. are taken into account. - Scholarships of Higher Education Credit and Hostels Institution are given out to full-time students who do not work, receive regular income or any other scholarship. The continuation of the scholarship is conditional on student success.
Non-public social assistance	NGO, individuals etc.	- Various social assistance is provided.	

Source: MoE, MoH, SYDGM, SHÇEK, SSI, The General Directorate of Foundations, Higher Education Credit and Hostels Institution, Turkish Coal Institution, TCW, SPO.

In Turkey, public social assistance expenditures constitute a smaller part of social security expenditures. While total social insurance expenditure except

health amounted to 7.4% of GDP in 2009; the same rate for social assistance, including Green Card, is 1.4%. The expenditure on social assistance in Turkey is below the OECD and EU average. In OECD the rate of social assistance to GDP is 2.5%.[61] There are some countries in Eastern Europe and Central Asia (ECA) where the rate of social assistance to GDP is close to our figure. For example, in Bulgaria public social assistance expenditures amount to around 1.4% of GDP, in Romania 1.2%, in Poland 1% of GDP and in Azerbaijan 0.5% of GDP (Lindert and Schwarz, 2009).[62]

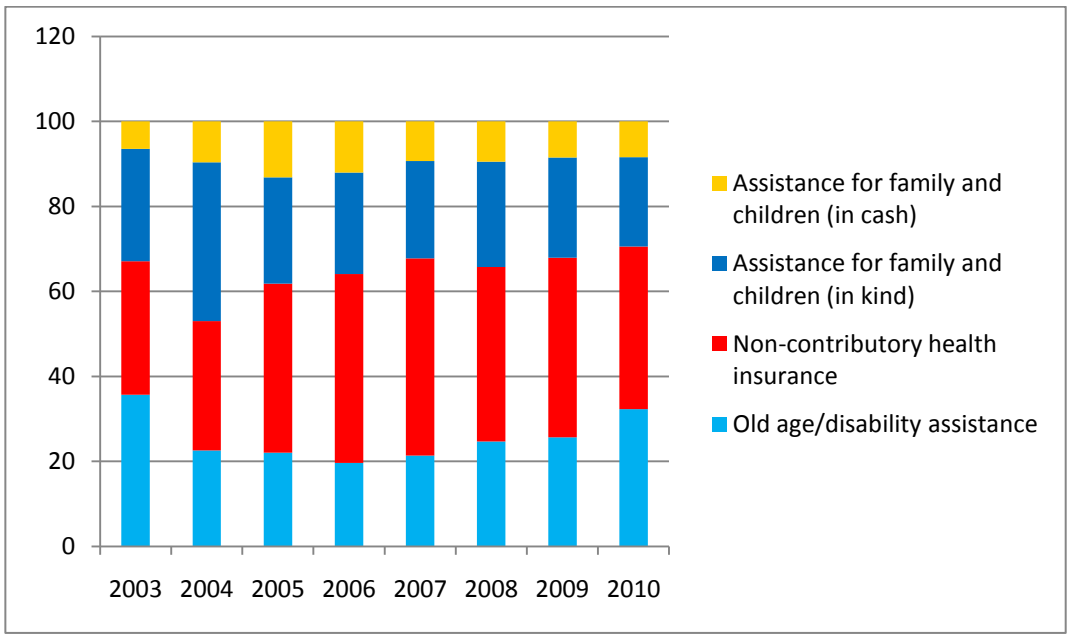

Figure 6.1 Distribution of Social Assistance Expenditures according to Social Assistance Programs, (%)

Source: Ministry of Health, Ministry of Education, State Planning Organization, Social Security Institution, SHCEK, General Directorate of Social Assistance and Solidarity, General Directorate of Foundations, Higher Education Credit and Hostels Institution, Turkish Coal Works (TCW), Turkish Coal Institution.

[61] Data for years 2005/2007.

[62] Data for years 2005/2007. In 2007, data for Turkey was 1%.

Although, total social expenditures as a percentage of GDP is low in Turkey when compared with OECD or EU averages, it has been growing rapidly. While this figure was 0.6% in 2003, it increased to 1.2% in 2010. This increase is mainly driven by increases in in-cash and in-kind assistance to families and children. In Figure 6.1, the distribution of total public social assistance expenditures among different programs is provided. After 2005, Green Card expenditures have the highest share in total expenditures. The share of old age/disability assistance has been increasing mainly due to the increase in care assistance.

In SILC, information on the amount of social assistance received by households is collected, though not at the detail presented in Table 6.1. Since our aim is not to analyze the efficiency or effects of specific social assistance programs, this will not be a problem. Furthermore, since SILC uses the Eurostat questionnaire, social assistance programs are categorized somewhat differently from Table 6.1. In SILC, social assistance programs are grouped as follows: child benefits in kind, child benefits in cash, housing assistance, other social assistance (in kind), other social assistance (in cash), assistance for education of individuals aged 15 and above, regular assistance from members of other private households (in kind), regular assistance from members of other private households (in cash). Ownership of green card is also included in the questionnaire but no value is imputed for it.[63] Since in Turkey, most of the social assistance programs target the family, it is difficult to distinguish child assistance from family assistance. For example, SHCEK provides assistance to poor families, but mainly due to care of children. In such a case, it is optional whether to classify this type of assistance under child assistance or other assistance. Although housing assistance is widespread in the EU, this is not the

[63] The respondents could have been asked whether they made use of their green card in the reference period and the amount they would have spent had they needed to pay for the health service they received.

case in Turkey. Social Assistance and Solidarity Foundations (SYDV) sometimes provide this type of assistance to needy people. It is also rather difficult to identify housing assistance from the figures provided by social assistance institutions. In Table 6.2, the relationship between these two groupings is provided.

Table 6.2 Relation between the Social Assistance Types in SILC and the Main Social Assistance Programs

		Main social assistance programs in Turkey				
		Old age/ disability assistance	**Non-contributory health insurance (Green Card)**	**Assist. for family and children (in kind)**	**Assist. for family and children (in cash)**	**Non-public social assist.**
Social assistance in SILC	Child assistance (in-kind)			X		X
	Child assistance (in-cash)				X	X
	Housing assistance			X		X
	Other social assistance (in kind)			X		X
	Other social assistance (in cash)	X			X	X
	Non-contributory health insurance (Green Card)		X			X
	Social assistance for education for individuals aged 15+				X	X

Table 6.2 (continued)

Social assistance in SILC	Social assistance received from member/s of other private households (in kind)					X
	Social assistance received from member/s of other private households (in cash)					X

In Table 6.3, the distribution of total social assistance expenditures is given using SILC data and the categorization used there. According to this table, social assistance in cash constitutes the most important part (69.6%) of social assistance. Child assistance in cash constitutes the most important part of total assistance at 31.1%. Other in-kind social assistance has the second biggest share at 26.2%. The smallest component of total assistance is housing benefits. As noted earlier, green card expenditures are not recorded in the data. All we know is whether the individual has a green card or not. However, as given in Figure 6.1 above, green card expenditures constitute an important part of total expenditures. In fact, if we were to impute a value to the green card owners in the data based on the expenditures of Ministry of Health on green card, highest share (30.2%) of social assistance expenditures would belong to green card scheme.

Table 6.3 Distribution of Total Social Assistance Expenditures in SILC

Assistance type	*Share in total (%)*
Child assistance (in-kind)	3.3
Child assistance (in-cash)	31.1
Housing assistance	1.0
Other social assistance (in-kind)	26.2
Other social assistance (in-cash)	14.8
Social assistance for education for aged 15+	23.7
Green Card	-
Total	**100.0**

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Social assistance received from member/s of other private households is not included.

When the shares of social assistance programs in total expenditures in SILC are compared to institutional figures illustrated in Figure 6.1 with the help of the conversion Table 6.2, we see that expenditure shares of the programs given by the two sources are not that different, except for the share of other social assistance (in-cash) which is lower in SILC data.

6.2. The Efficiency of Social Assistance Payments

As discussed in the previous section, social assistance programs implemented by various agencies tend to overlap. But perhaps the most important problem with the current social assistance system is that it lacks objectivity in identifying the poor and distributing assistance[64], which partly stems from the

[64] For example, the resources of Social Assistance and Solidarity Fund are distributed via Social Assistance and Solidarity Foundations. At the provincial/district level, Fund's boards assess applications for social assistance, and decide the amount and type of assistance to be provided. These boards consists of governor/district governor, mayor, health manager, education manager, agriculture manager, the chair of the Social Services and Child Protection general directorate, religious officials, *muhtars* (one of them is village *muhtar*, other one is neighborhood *muhtar*), two representatives from NGOs and two social assistance beneficiaries. It is good to have local people on the board since they know the region well, they can assess

lack of a database for the poor. All these problems have caused inefficiencies in the system. To solve these problems, important changes have been implemented since 2009. In order to provide effective and sufficient services to the needy within the social assistance system, there have been attempts to create objective criteria to identify the poor and to increase communication and coordination between institutions functioning in this area. In this context, in order to make the social assistance programs carried out with the resources of the Social Assistance and Solidarity Fund (SYDTF) more transparent, the Formulation of a Point System Project has been launched by the General Directorate of Social Assistance and Solidarity (SYDGM) in 2009. The aim of the project is to come up with objective criteria to identify the needy. Other development in this area is the "The Unified Social Assistance Services Project" aiming to increase the communication and coordination between institutions functioning in this area.

In this part, we analyze how well the social assistance programs target the poor. We also analyze the association between poverty and social assistance via before-after analysis.

a. Distribution of social assistance among the poor population

The main aim of social assistance programs is to alleviate poverty. Their target group is the poor population. In this part, we try to analyze whether social assistance is received by the poor or not. The effectiveness of social assistance programs could be measured by the degree at which they reach target population, and the degree at which the assistance provided meets the needs of the poor.

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the welfare of the applicant correctly. However, due to lack of objective criteria for poverty, it is possible that in different provinces/districts, people with the same socio-economic situation get different amounts of assistance. Or, while one could get the benefit, the other could not.

Table 6.4 Percentage of Individuals Receiving Social Assistance, (%)

	Receiving social assistance	Not receiving social assistance	Row Total	Distribution of social assistance	Distribution in total sample
Extreme poor	89.1	10.9	100.0	14.2	4.8
Moderate poor	68.4	31.6	100.0	13.6	6.0
Transient poor	56.5	43.5	100.0	14.0	7.5
Transient vulnerable	46.9	53.1	100.0	12.9	8.3
Transient non poor	27.3	72.7	100.0	21.5	23.8
Rich	14.4	85.6	100.0	23.7	49.6
All sample	30.2	69.8	100.0	100.0	100.0

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Income groups are formed according to pre-assistance income. Income groups are defined in the same way as Table 3.4.

Table 6.4 shows the proportion of households that have received some type of social assistance, according to poverty status before the receipt of benefits. Totally 30.2% of individuals receive assistance from public or private sources. If we exclude social assistance received from member of other private households, the same rate is 18.7%; if we exclude green card recipients, it decreases further to 15.1%. As expected, the proportion of individuals receiving social assistance decreases as their income increases. However, an important proportion of the poor population does not get any kind of assistance. While 89% of extreme poor receives social assistance, the same rate for transient poor is 56.5%.

The Table 6.4 indicates that 21.5% of non-poor receive some kind of social assistance as well. When social assistance received from member of other private households is excluded, this rate is 10.3%, when green card is also dropped; the rate declines to 6.1% but nevertheless, remains significant.

Although the proportion on non-poor receiving assistance looks low, this figure must be judged against the fact that the number of non-poor is higher than the poor in all income levels. Therefore, the number of non-poor receiving social assistance is quite high. In Table 6.4, the distribution of social assistance according to poverty situation of individuals is also presented. According to that, while 42% of total social assistance goes to poor individuals, the remaining part is received by non-poor. Thus, most of the social assistance is received by the non-poor. Although 14.4% of the non-poor get social assistance, this constitutes 23.7% of total social assistance. These findings raise the issue of effectiveness of targeting mechanism of these programs. If the non-poor group is divided according to income groups as transient vulnerable, transient non-poor and rich, it is found that as income level increases the proportion receiving social assistance decreases. However, when the population shares of high income groups are considered, the issue of targeting problem remains valid. We conjecture that either the targeting mechanism is faulty in the sense that it identifies the wrong people as poor, which would not be too far fetched given the lack of objectivity and transparency in the distribution system or that once the poor start receiving transfers even though they move out of poverty the transfers continue. Keyder and Üstündağ (2006) also indicate lack of objectivity and transparency in the social assistance system according to their survey (based on interviews) results conducted in Adıyaman, Diyarbakır and Van. Şenses (1999) emphasize the same issues with specific reference to social assistance of SYDTF.

b. Effectiveness of social assistance programs

The targeting problem of social assistance programs leads to an inefficient use social assistance budget. If social assistance expenditures allocated to the poor are not enough, then program efficiency would be less. In this part, the

effectiveness of social assistance programs is assessed using three methods. Firstly, poverty rates before and after social assistance is compared.[65] Income after social assistance equals to disposable income used in this study. Income before social assistance is calculated by subtracting all social assistance benefits from disposable income. As noted earlier, this probably underestimates what the income would have been in the absence of social assistance because we are ignoring potential labor supply responses to lower levels of income. Hence, the impact of social assistance on poverty is probably overestimated. Secondly, the effect of social assistance receipt on the income position of the poor is investigated. In this assessment, movements from one income level to another are identified. Lastly, poverty gap is used to see how closely poor individuals are brought to the poverty line following social assistance.

Table 6.5 Poverty Rate Before and After Social Assistance, (%)

	Before Assistance	***After Assistance***
Extreme poverty (AEI<0.5*z)	4.8	2.8
Moderate poverty (AEI>=0.5*z& AEI<0.75*z)	6.0	5.6
Transient poverty (AEI>=0.75*z)	7.5	7.4
Near poverty (AEI>=z & AEI<1.25*z)	8.3	8.8
All poverty	18.3	15.8

Source: Author's own calculations based on 2006-2007 SILC data.
Note: AEI: Adult equivalent income; z= poverty line

[65] Note that in this analysis the green card system is ignored. Hence, to the extent that health expenditures constitute an important item in the budget of poor families, the effectiveness of the social assistance system is underestimated.

Table 6.5 reports the effects of social assistance on poverty rates across various income brackets. Given the poor targeting illustrated above and the small amount of transfers, social assistance receipt is not expected to make a big difference in the incidence of poverty. Indeed, 18.3% of individuals would be in poverty in the case of no social assistance, as opposed to 15.8% when taking into account social assistance. The share of the population living in extreme poverty would reduce from 4.8% to 2.8% with social assistance payments. The shares of individuals living in moderate and transient poverty decrease with social assistance. However, the proportion living near poverty slightly increases from 8.3% to 8.8%. This means that more individuals enter in this bracket with social assistance than individuals leaving this bracket. Table 6.5 indicates that individuals move to higher income brackets with social assistance. Because, there is a decline in the shares of individuals living in extreme, moderate and transient poverty, there is an increase in the shares of individuals living in near and no poverty.

Table 6.6 Effects of Social Assistance: Movement between Income Brackets, (%)

	Extreme poverty	Moderate Poverty	Transient poverty	Not poor	Total
Extreme poverty	57.7	25.6	7.8	8.9	100.0
Moderate Poverty	-	72.0	16.2	11.8	100.0
Transient poverty	-	-	81.4	18.6	100.0

Source: Author's own calculations based on 2006-2007 SILC data.

Table 6.6 focuses on individuals that receive social assistance; individuals not receiving assistance are ignored. More than half of the individuals remain in the same income bracket after social assistance. The rate of individuals

crossing poverty line with the receipt of social assistance increases as their before social assistance income increases. Totally 42.3% of extremely poor individuals move up to a higher income bracket with the receipt of social assistance. 28% of moderate poor move to an upper poverty bracket and 11.8% cross the poverty line. In the case of the transient poor, while 81.4% remain in the same income bracket following the receipt of social assistance, 18.6% exit poverty.

To see the effect of social assistance on poverty, as a last exercise we use the poverty gap measure. As introduced in Chapter 2, poverty gap is simply the sum of distances between income and poverty line for the poor, while poverty gap ratio is the ratio that obtains when poverty gap is divided by the poverty line. This measure is useful in the sense that it assesses the necessary resources needed to eradicate poverty. While the poverty gap ratio is 6.3% before social assistance, this figure decreases to 4.6% after social assistance. In fact, the total poverty gap for social assistance beneficiaries decreases by 36.9%. Thus, it could be said that the improvement in terms of poverty gap is higher than the improvement in terms of poverty rate. This is because in poverty rate calculations, if an individual does not cross the poverty line the measure does not record a change. However, in poverty gap calculations every amount of assistance regardless of whether it pushes the individual above the poverty line or not is taken into account.

In the previous part, we have seen that more than half of the social assistance is received by the non-poor. This obviously decreases the efficiency of social assistance programs. Another factor that reduces the effectiveness of social assistance programs in alleviating poverty might be the inadequacy of social assistance. It might be reaching the poor, but it may not be enough to lift the poor above the poverty line. Based on our findings we can say that inadequacy

of social assistance is a problem: the majority of the poor could not cross poverty line even after they receive social assistance.

Besides their role in reducing poverty, another issue about social assistance programs is whether they produce negative incentives (for instance, through negative labor supply effects) and therefore, unintentionally keep the poor in poverty. As noted earlier, in the before-after analysis performed above individuals do not, in fact, experience the pre-social assistance levels of income. Eligibility is decided by past income received by the individual. In addition, individuals presumably know that such programs are available to them. Therefore, their actions and decisions would be different if the social assistance programs did not exist. Their incomes in a world without recourse to income support would look very different from the incomes hypothetically ascribed to them by subtracting social assistance payments from their income (Darity and Myers, 1987: 217). In fact, estimates produced by the studies investigating the impact of government transfers on poverty are likely to be an upper bound (Hoynes et al., 2006: 61).

6.3. Persistence in Social Assistance

In the previous Chapter, we found that employment is the main event triggering poverty exists and entry. Also, a high state dependence in poverty was found. This call for short term measures like social assistance programs to alleviate poverty. However, it is useful to evaluate the mechanism in which social assistance payments can produce poverty, rather than alleviate it. For this purpose, in this part we first analyze whether there is persistence in the receipt of social assistance. Then, we look at labor force status and transitions from one market state to another for individuals receiving social assistance.

It is expected that some individuals stay in social assistance system for a long time due to their disabilities and/or age. However, for individuals who can

work social assistance receipt is expected to be short-term. In fact, if receipt of social assistance is mostly a short term event, then the social assistance system might better be regarded as providing most recipients with short term insurance against income losses. But, if most people receiving social assistance do so for a long time, then the issue of dependence arises. In this situation, it is important to determine the nature and the extent of such dependence and whether the social assistance system itself causes recipients to become dependent (Duncan et al., 1995: 73-74).

In Table 6.7 below, we tabulate social assistance receipt status in 2005 and 2006. It can be concluded that there is a state dependence in social assistance receipt: past recipients benefit more than the non-recipients. While 74% of the past recipients benefit from social assistance at time t, the same rate for non-recipients is 11.4%.

Table 6.7 Transition Matrix for Social Assistance Receipt, (%)

	State in 2006	
State in 2005	**Receipt**	**No Receipt**
Receipt	74.0	26.0
No Receipt	11.4	88.6

Source: Author's own calculations based on 2006-2007 SILC data.

The duration of social assistance receipt changes from country to country. While the receipt is relatively short-term in Germany and the United States, it is somewhat longer in Canada. In Germany, after two years the percentage of individuals who continue to receive social assistance is 15%. The same rate in the United States is 33% and it is 40% in Canada (Duncan et al., 1995: 76-77). Therefore, our figures imply a high state dependence when compared with these countries. High state dependence in social assistance may be due to the

small amount of social assistance given out which may be insufficient to eliminate poverty. Besides, the lack of a strong auditing system detecting non-poor social assistance recipients may cause some non-eligible individuals to stay in the system. This also increases the persistence in receipt. Secondly, social assistance programs may have perverse effects of perpetuating the poverty status of those who are already poor. Any one of these or all them may cause high persistence.

Employment situation of social assistance recipients

Before moving onto the labor supply effect of social assistance, we present the employment situation of social assistance recipients and non-recipients. Table 6.8 indicates that a smaller proportion of social assistance recipients are employed as compared to non-recipients ($p<0.01$).

Table 6.8 Employment Situation According to Recipient of Social Assistance, (%)

	Recipients	**Non recipients**
Employed	41.6	47.2
- Wage earner	*16.1*	*25.5*
- Casual worker	*8.0*	*3.4*
- Employee	*1.0*	*3.1*
- Own account	*9.2*	*8.3*
- Unpaid family worker	*7.3*	*6.9*
Not employed	58.4	52.8

Source: Author's own calculations based on 2006-2007 SILC data.
Note. Covers individuals aged 15 and above.

Social assistance recipients and non-recipients also differ in terms of status in employment. While 25.5% of non-recipients work as wage earners, the same rate for recipients is 16.1%. In fact, the proportion of wage earners among

recipients is higher than the proportion of wage earners among the poor due to some non-poor beneficiaries. Causal work, which is widespread among the poor, is more likely to be observed among individuals who receive assistance than those who do not. Own-account work and unpaid family work are only slightly higher among social assistance recipients.

6.4. The Effect of Social Assistance on Labor Supply

The arguments about the labor supply effect of social assistance are provided in Chapter 2. Our aim in this section is to analyze the effects of social assistance on employment and unemployment. We ask the following two related questions: (1) Is it the case that individuals receiving social assistance have shorter employment durations? and (2) Is it the case that individuals receiving social assistance experience longer durations of unemployment? In this section, firstly we present the methodology used in analyzing the effects of social assistance on the durations of employment and unemployment. Then, estimation results are presented and discussed. Robustness checks are provided at the end of the section.

6.4.1. Methodology

A brief review of methodologies

Different approaches are used in the literature to investigate the effect of welfare programs on labor supply. For a long time, the basic static model of labor supply was used to analyze the work incentives of welfare programs. The static model is still used in analyzing simple program changes and conducting comparative statics though it is being gradually replaced by dynamic models. Welfare applications have some unique features. For example, the means-testing in a welfare program necessarily creates non-convexity in the budget set somewhere over the range of earnings, at the very least at the point where income rises to the point of ineligibility. Besides, participation in welfare itself

is a choice variable. This is another feature of welfare program analysis (Moffitt, 2002: 10).

More recently, natural experiments have been used in analyzing program effects.[66] For this purpose, a treatment and a control group are formed. While the treatment group is formed by welfare beneficiaries, control group is formed by non beneficiaries. These models are estimated by difference-in-difference estimators. Another popular approach is the instrumental variable estimation technique. In this estimation, grouping of treatment and control group differs from difference-in-difference estimation. In fact, the treatment group is determined according to a discontinuous function of an observable variable. For example, Chen and Klaauw (2008) assess the work disincentive effect of disability program in the United States. Since eligibility determination process is based in part on individual's age, they form groups according to age. In a means tested welfare benefit, if there is a threshold for eligibility, it would be appropriate to form groups just below and just above the threshold and compare them according to labor supply behavior. Eissa and Liebman (1996) compare the change in labor supply for women with children to the change in labor supply for women with no children to see the effect of EITC (Earned Income Tax Credit) expanded by Tax Reform Act of 1986 on single women with children.

These approaches[67] have an important drawback. Treatment and control groups may differ in their preferences for working. It may be the difference in average characteristics rather than welfare receipt that leads to lower supply of labor for

[66] The basic idea in natural experimental approach is to compare at least two groups, one of which experienced a specific policy change, and another with similar characteristics whose behavior was unaffected by this policy change. The second group is control group in experimental terminology (Blundell and MaCurdy, 1999:1608).

[67] Besides these most popular approaches, there are other methods used in this analysis, like probit model, linear partial regressions, fixed effect model, random effect model etc.

beneficiaries. Moffitt (1983) argues that only those with relatively low distastes for welfare or low tastes for work will participate in the welfare program. This means that, welfare recipients are a self-selected sample of the population who would have lower labor supply than non recipients even in the absence of the program. Due to this, he estimates a simultaneous model for labor supply and welfare participation. Joint estimation eliminates the "selection bias" arising when recipients and non recipients are directly compared or estimating labor supply with exogenous recipient variable.

Dynamic aspects of work disincentive provide a natural framework for addressing a number of important questions about the effects of welfare payments on labor market dynamics, including the following: “Do social assistance recipients remain unemployed longer than non recipients? Are recipients more likely to leave employment than non recipients?” (Blau and Robins, 1986: 83-84). Blau and Robins (1983) derives estimates for welfare-non welfare differences in labor market flows among the states of employment, unemployment and non-participation. However, they do not take into account the heterogeneity in the population in both tastes for work and distastes for welfare (for example, stigma). Although, Moffitt (1983) examines this issue within a static framework, it should be taken into account in a dynamic analysis also. Schneider and Uhlendorff (2004) use duration models to investigate the effect of social assistance on transition from welfare to work for Germany by taking into account unobserved heterogeneity.[68]

In our analysis, we look at the dynamic aspects of work disincentives. Individual labor market histories are utilized to estimate transition rates from

[68] The effect of unemployment benefit on unemployment duration is studied a lot in the literature. Bover et al. (2002) analyze this effect by estimating unemployment duration and benefit duration model jointly.

employment to unemployment[69] and unemployment to employment to investigate the effect of social assistance programs on these transition rates. As we found in the previous section, although there are fewer employed individuals among social assistance recipients than non recipients, transitions of recipients among employment and unemployment are also high. By dynamic modeling this transition could be taken into account. Following Moffitt (1983), in our models, joint estimations of social assistance receipt and employment/unemployment duration will be done to correct the heterogeneity in the population in both tastes for work and distastes for welfare. As far as we know, there is no study in Turkey about the effect of social assistance on employment and/or unemployment duration. Angel-Urdinola et al. (2009) analyzes whether social assistance contributes to higher informality in Turkey using the regression discontinuity method. Regression discontinuity method is similar to the instrumental variable method mentioned above. They mainly focus on Green Card program. Estimates do not provide evidence of a discontinuity at the threshold of Green Card eligibility suggesting that the program may not be introducing significant distortions on the probability of working in the informal sector around the eligibility income level. The main reason for this situation is suggested as the high wage gap between formal and informal sectors. However, they look at informal employment around the income eligibility threshold. In other words, they do not compare a treatment and a control group in terms of informal employment. However, in order to determine the impact of a social assistance program on labor market outcomes, one would compare individuals who benefit from the program (treatment group) with very similar individuals who do not benefit from the program (control group) given that they are eligible to receive the program. But, since the outcome of interest is at the same time one of the green card eligibility

[69] In fact, "unemployed" is broad definition in our analysis. Because, the only condition that "searching a job" is met for unemployment definition. As known, in order to identify an unemployed additional questions should be asked.

requirements, a control group is not available in that case unless a control group was created during program implementation by the designers of the program.[70] Apart from Angel-Urdinola et al. (1999), there are some studies that analyze the duration of unemployment in Turkey. Tansel and Taşçı (2004), Tansel and Taşçı (2010) study the factors affecting the duration of unemployment, Şahin and Kızılırmak (2007) study the factors affecting the duration of unemployment benefits in Turkey. Besides these, Tansel and Taşçı (2005) analyze the transition probabilities between different labor market states. However, none of these studies look at how social assistance benefits affect the duration of employment and unemployment for program recipients.

Details of the methodology

The approach taken in this part of the study to analyze the effect of social assistance receipt on labor market flows is based on survival analysis using duration models. Survival analysis is based on modeling time to a specific event. Durations and transitions are the main concerns of survival analysis. For example, in the life cycle of an individual, he or she might be single, married, cohabiting or divorced. Therefore, a survival analysis could be made for one of these states. In examining the transition from one state to another, the duration till the time at which the event occurs is conducted. In this respect, T is a random variable and follows a certain distribution. The cumulative distribution of duration T specifies the probability that the random variable T is less than t, $F(t)=Pr(T\leq t)$. In addition, the probability of remaining in the initial state beyond time t, called the survivor function, is:

[70] Rather than natural experiments control experiments are also becoming popular in economics where at the time of the creation of treatment groups, control groups are also formed by program designers. The latter are constructed from individuals who are eligible for the program under normal circumstances but are rejected program treatment because they have been purposely selected as control groups.

$$S(t)=1-F(t)=Pr(T>=t) \quad (1)$$

In survival analysis, the probability of changing the state could also be examined. For example, consider an individual whose labor market status is recorded over time. At any given moment, the individual occupies one of two states: employment or unemployment provided that he/she is not out of labor market. If the individual is employed or unemployed at time t, then the probability of individual leaving his/her initial state at a later time $t+\Delta t$ can be analyzed. In other words, one can compute the probability of a person leaving employment/unemployment between t and Δt conditional on the person has not left employment/unemployment prior to t. This probability is called the hazard rate and is expressed as:

$$h(t)=\lim_{\Delta t\to 0}\frac{Pr(t+\Delta t>T>t|T>t)}{\Delta t} \quad (2)$$

The unconditional probability of an event occurring at time t_i is denoted by:

$$f(t)=Pr(T=t_i) \quad (3)$$

Since the probability distribution function defined in (3) expresses the unconditional probability of an event occurring at time t, the hazard rate could also be written as:

$$h(t)=\frac{f(t)}{S(t)} \quad (4)$$

In other words, the probability of a spell lasting for example 3 months is F, equivalently the probability of a spell lasting three months or more is S and the probability that spell ends between 3 and $3+\Delta$ months is $f^*\Delta$, while the

probability that a spell ends between 3 and $3+\Delta$ conditional on having lasted 3 months is $h^*\Delta$ (Kiefer, 1988: 652).

In duration models, parametric, semi-parametric and non-parametric methods are used. In non-parametric models, there is neither parametric specification for duration nor for explanatory variables. This means that variables like age and gender that can potentially affecting duration cannot be taken into account. Because of this, in duration models, mostly parametric and semi-parametric methods are used. In parametric models, both for duration and effects of explanatory variables, a parametric form is used. Exponential, Weibull, Gompertz distributions are examples of distributions used in parametric models. In semi-parametric models, although the effects of explanatory variables are used as if they have specific parametric distribution, there is no parametric specification for duration, like Cox proportional hazard model. Cox proportional hazard model is commonly used in literature. But, since each individual's conditional probabilities could be found and added to the log likelihood function at each survival time and only one event at each possible survival time is assumed, Cox model is more appropriate to be used for continuous time duration analysis. The intuition is that in the absence of a baseline hazard function, the model could be estimated only with the order of the durations (Kiefer, 1988: 668). In our data, more than one event is possible in survival times since the data is available in months. Also, it is difficult to properly control for unobserved heterogeneity in Cox model (Hess and Persson, 2010: 2). In our model, since we use grouped duration analysis, the distribution for effect of explanatory variables could be logit, probit or cloglog. However, in our estimation we treat the duration non-parametrically by creating interval-specific dummy variables. Although our data set contains 24 months, since in some months there are no events or less than 30 events, we

grouped some months to ensure that all intervals have failures[71]. Because of this, we grouped the months ensuring that at least 30 failures in each group. By taking duration as non-parametric, duration dependency is allowed to vary from one interval to another. That is why the model is called as "semi-parametric" rather than parametric model.

In our models, the main interest is to analyze the durations of employment and unemployment through hazard rates for both states. Since T is discrete time random variable, we use grouped duration model. In fact, T is generally assumed to be positive continuous random variable. However, many economic data provide observations on failure times which are aggregated to form discrete intervals. Thus, one typically observes spell durations in weeks, or job tenure in years, rather than as continuous realizations. Kiefer (1988) calls this type of data as grouped duration data. Grouped duration data can be handled by describing a mapping from continuous time specification to the discrete observations (Sueyoshi, 1995: 412-413).

Consider a set of arbitrarily chosen durations t_j for j=1,…,J. For example, in our data t_j is the month of unemployment/employment observed in the sample. The time is divided into j half-open intervals $[t_{k-1}, t_k)$ until period t_j. Survival to time t_j is the same as surviving each of these intervals. So, the survivor function for the k^{th} interval can be defined as:

$$\alpha_k(X,\beta) = S\langle t_k, X, \beta \,|\, T \geq t_{k-1}\rangle = \exp\left(-\int_{t_{k-1}}^{t_k} \lambda(s, X, \beta) ds \right) \qquad (5)$$

[71] Jenkins (2005: 5) says that "if there are duration intervals with no events, then either must refine the grouping on the survival time dimension, or else one must drop the relevant person months from the estimation".

From equation (5), the survivor function at an arbitrary t_j may be written as:

$$S(t_j, X, \beta) = \prod_{k=1}^{j} \alpha_k(X, \beta) \tag{6}$$

The loglikelihood function depends on the survivor functions. While the probability of surviving in the first j-1 intervals, but not surviving at jth is:

$$S(t_{j-1}, X, \beta) - S(t_j, X, \beta) = (1 - \alpha_j(X, \beta)) \prod_{k=1}^{j=1} \alpha_k(X, \beta) \tag{7}$$

and the probability of surviving in the jth interval also (censored spell) is:

$$S(t_{j-1}, X, \beta) - S(t_j, X, \beta) = \prod_{k=1}^{j=1} \alpha_k(X, \beta) \tag{8}$$

Then likelihood function can be written as:

$$\log L(\theta) = \sum_{t=1}^{N^*} \log \left\{ (1 - \alpha_{Y_i}(X_i, \theta))^{1-c_i} \prod_{k=1}^{Y_i - 1} \alpha_k(X_i, \theta) \right\} \tag{9}$$

Where Y_i represents the interval associated with the observed grouped duration, c_i is right-censored indicator (1=censored), X_i is the vector of explanatory variables, N^* is the number of individuals (Sueyoshi, 1995: 413).

For estimation of parameters, θ, functional form of hazard rate should be specified. If the duration of interest T is in the interval $[t_{j-1}, t_j)$, we define a time-varying index function; $Z_j(t) = X\beta + \gamma_j(t)$ and the grouped hazard function at t as:

$$h_j(t, X, \beta) = \gamma_j^{'}(t)\left\{\frac{f_j\left(Z_j(t)\right)}{1-F_j\left(Z_j(t)\right)}\right\} \tag{10}$$

F_j and f_j are cumulative distribution and density functions (Sueyoshi, 1995: 414). In grouped duration analysis, the most commonly encountered specifications are the normal, logistic and extreme value minimum distributions. These distributions lead to probit, logit and cloglog models respectively.

Among discrete time models, cloglog is the only proportional hazard model like Cox model. Proportional hazard model is characterized by the assumption that baseline hazard function[72] is proportional to the hazard function. That is, the baseline hazard depends only on time, while covariates do not depend on time. We test the proportionality assumption. Moreover, since three models mentioned above are non-nested, we use AIC information criteria in order to choose which model fits best.

Alternative specifications about the hazards are provided by Sueyoshi (1995). Since one of the proportionality test fail, we do not choose cloglog model.[73] According to AIC, the best model is found to be the logit model. Although, we estimate proportional hazard model, our main model is the logit model. The logit model is specified as:

$$\log it\left[h(j, X)\right] = \log\left[\frac{h(j, X)}{1-h(j, X)}\right] = \gamma_j + \beta^{'} X \tag{11}$$

[72] Baseline hazard is the hazard when all covariates are equal to zero.

[73] Test results are provided in Appendix A1.

$h(j, X)$ is discrete hazard rate for month j, γ_j is the logit function of duration term (baseline hazard). The equation (6) can be written alternatively as:

$$h(j, X) = \frac{1}{1 + \exp\left(-\gamma_j - \beta' X\right)} \tag{12}$$

In our model, we control both for observed and unobserved characteristics. In fact, the unobserved heterogeneity term, δ, is added to the equation (7), the model becomes:

$$h(j, X\ ) = \frac{1}{1 + \exp\left(-\gamma_j - \beta' X - \delta\right)} \tag{13}$$

where $\delta \approx N(0, \sigma_\delta^2)$.

Unobserved heterogeneity arises if there remain some differences in the hazards after including all relevant observed factors. There are several reasons why these factors are relevant, for example, omitted variables (unobservable in the data or intrinsically unobservable such as motivation), measurement errors in observed survival times or regressors. If unobserved heterogeneity is not taken into account then the estimated coefficients would be biased and the model would underestimate the positive duration dependence, proportionality assumption would no longer be constant, underestimation of the true proportionate response of the hazard to a change in a regressor k from the model without unobserved heterogeneity (Jenkins, 2005: 81). In the case of ignoring unobserved heterogeneity, subjects with relatively high hazard rates because of unobserved reasons leave the state of interest first, so that samples of survivors are selected. Differences between these samples at different times reflect this selection effect as well as behavioral differences (Abbring and Berg, 2007: 87).

In our models we assume a Gaussian distribution with unit mean and variance σ^2 for unobserved heterogeneity. There are also other distributions for unobserved heterogeneity, namely gamma and discrete. However, Nicoletti and Rondinelli (2010) find that discrete time models could be well estimated even when the unobserved heterogeneity is erroneously assumed to follow normal distribution instead of gamma or discrete distributions.

Our aim is to see the effect of social assistance receipt on duration of employment and duration of unemployment. However, if benefiting from social assistance is associated with particular characteristics of individuals that make them less employable/unemployable, we expect this to cause bias in the measured effect of social assistance (Bover et al., 2002: 224). For this reason, the effect of social assistance receipt on duration of employment is attempted to be found by including social assistance receipt as an explanatory variable in the duration model and estimating the duration model jointly with a probit model in which the dichotomous variable is receipt of social assistance by using a multi process model. The same is done also for duration of unemployment. Hence, we have two multi process models.

If we look at the models:

Joint model for unemployment duration:

Probit model: $z_i^u = \gamma' X_i^u + \varepsilon^u + u_i^u$ (14)

Hazard model: $h^u\left(j, X\right) = \frac{1}{1+\exp\left(-\alpha_j^u - \beta' W^u - \delta^u\right)}$ (15)

Logistic hazard of employment is assumed to depend on the unemployment duration at month j through a function α_j. Here, we assume that α_j is a piece-wise linear spline with nodes spaced at months 3, 5, 6, 8 and 12.

Social assistance equation, equation (14), is a probit equation showing the propensity of social assistance receipt. z_i^s indicates the propensity of social assistance receipt. If $z_i^s \prec 0$ then the individual i is not benefiting from any social assistance ($z_i = 0$), and if $z_i^s \succ 0$ then the individual i is benefiting from social assistance ($z_i^s = 1$). Observed characteristics are captured by X_i; unmeasured characteristics are represented by ε and u_i. In fact, ε is the unobserved heterogeneity component.

Equations (14) and (15) together define a multi-process model. The equations are linked in two ways. First, the social assistance receipt indicator, dependent variable of the probit model, is a variable in the hazard model. Second, we allow for the possibility of non zero correlation between the unmeasured individual-specific components. From the estimation of these two equations we get a correlation coefficient for δ and ε, namely "Rho". A statistically significant Rho means that equations (14) and (15) must be estimated simultaneously. The model is estimated by the method of maximum likelihood using the software package aML (Lillard and Panis, 2003).

Joint model for employment duration:

Probit model: $z_i^e = \gamma' X_i^e + \varepsilon^e + u_i^e$ (16)

Hazard model: $h^e\left(j, X\right) = \dfrac{1}{1+\exp\left(-\alpha_j^e - \beta' W^e - \delta^e\right)}$ (17)

For employment duration model also, the baseline hazard function is specified as in unemployment duration model. The probit model of social assistance receipt is specified in the same manner as well. The covariates X_i^e and W^e are as given in data section below. X_i^u and X_i^e must contain at least one variable not contained in W^u and W^e in equations (15) and (17), respectively.

In the following section, we present the data and variables used in the model and then the results of the non-parametric and semi-parametric estimation both for employment and unemployment durations.

6.4.2. Data and variable definitions

In this part of the study, we use monthly labor force data (the only variable available on a monthly basis) from SILC. Using this variable we construct 24 months of continuous labor force history for each individual. We restrict our sample to individuals between 15-64 years of age. Although in Turkey working age population is defined as 15+, the age group 15-64 has stronger attachment to the labor force. Since we are interested in employment and unemployment durations, for persons older than 64, exits from employment and unemployment are relatively more likely to involve withdrawal from the labor force.

Other variables used in the study are annual data. In fact, most of the covariates used in this part do not change monthly like age, education, and gender. Place of residence is observed on an annual basis. However, in the data 99.4% of individuals in 2007 remained in the same residence where they lived in 2006. Therefore, monthly changes in place of residence are expected to be less than this figure. The key variable in this part is the receipt of social assistance. Although receipt of social assistance is not asked on a monthly basis, knowledge about availability of social assistance at future date can be expected to have an effect on current exit rates from employment or unemployment

(Bover et al. 2002: 226). In fact, we had found earlier that all of the social assistance beneficiaries in t-1 were still beneficiaries in t.

The variables used in this part are summarized as follows:

- Social assistance receipt: it is a dummy variable taking the value of 1 if the individual receives social assistance and 0 otherwise. A person is defined as a social assistance recipient if the household where he/she lives receives social assistance and/or he/she receives education assistance and/or he/she has green card.
- Employment: An individual is employed if he/she is a wage earner, casual worker, own account worker, employer or unpaid family worker in the reference month.
- Unemployment: A broad definition of unemployment is used, where if the individual has no job in the reference month but defines himself/herself as unemployed; he/she is treated at such.[74]
- Female: it is a dummy variable taking the value of 1 if female, and 0 otherwise.
- Married: it is a dummy variable taking the value of 1 if the individual is married and 0 otherwise.
- Education: it is a dummy variable taking the value 0 if no school is completed, 1 if the educational attainment is primary education, 2 if secondary education, 3 if high school and above years of schooling completed.
- Age: it is a set of four dummies. Age 15-24 (base), Age 25-34, Age 35-44, Age 45-64.

[74] This means that some of the unemployed might be classified as out of labor force if a stricter definition of unemployment – as formally used by Turkstat – is used. In SILC, there are no questions on job search in monthly data.

- Place of residence: it is a dummy variable taking the value of 1 if the residence is urban (defined as settlements with population more than 20,001) and 0 otherwise.
- Logarithm of experience: indicates the logarithm of years spent in regular job/s.
- Employment status: In employment duration model, it is a dummy variable taking the value of 1 if the status is employer or own account, and 0 otherwise.[75] In the unemployment duration model, it refers to the employment situation in the last job. If the person was not employed then it takes the value 0, if employed as a wage earner or casual worker then takes the value of 1, if employed on own-account or as an employer it takes the value 2.
- Number of workers in the household: It measures the number of workers in gainful employment in the household.
- Timing of the beginning of employment/unemployment: it is a set of four dummies. If the employment/unemployment spell starts during the January- March period it takes the value 0, if it starts during April-June it takes the value 1, if it starts during July-September it takes the value 2, and if it starts during October-December it takes the value 3.
- Duration: Durations are period specific constants that measure the duration dependence.
- Household size: this variable is used in social assistance but not in the duration model, to control for possible changes in household size.

In joint estimation, to identify the effect social assistance receipt on employment and unemployment durations we use the health situation of the individual as an instrument. Our instrument for both employment and

[75] In data, we could not distinguish employer, own account and unpaid family workers. Wage earners and casual workers are also given jointly.

unemployment duration models is the indicator of chronic disease which does not make general health situation bad. As mentioned in Chapter 5, in our survey, three questions measure the health status of the individual. The first question is about the subjective evaluation of the person's general health situation; the second question is about whether the individual has a chronic illness/disease and the third question is whether the daily activities of the individual is restricted due to an illness that has lasted more than six months. In this section we use a combination of first and second questions as an instrument. Since the health situation of the individual is expected to affect his/her employment and unemployment durations, we take into account other household members' health situations. An added reason for considering not the individual in question but the other household members is that social assistance is given by taking into account the characteristics of household. Therefore, the health situation of household members is expected to affect social assistance receipt but not the employment/unemployment duration of the individual in question. Our instrument is the number of household members who have a chronic disease but whose general health situation is "very good", "good" or "not bad". We do not consider household members who suffer from a chronic disease and at the same time have bad health since they might need the attention of the individual in question and therefore have a direct effect on his/her employment or unemployment duration. Indeed, we also experimented with such variables, but they proved not to be appropriate instruments. Our instrument, the number of household members rather than the individual in interest, affects the probability of receiving social assistance significantly ($p<0.01$) but it does not affect employment and unemployment duration.

Two analysis files were prepared for this part of the study. The files contain information on employment spells and unemployment spells for a period of 24 months. For the purposes of this section, each individual is included at most once in each spell file. Although multiple spells of a given type exist for some

individuals, we use only the most recent spell for each person as in Blau and Robins (1986).

Table 6.9 Some Characteristics of Employed and Unemployed Social Assistance Recipients and Non Recipients

	Unemployment		Employment	
	Social assistance recipients	**Social assistance non recipients**	**Social assistance recipients**	**Social assistance non recipients**
Male (%)	89.0	80.5	66.5	69.8
Age (%)				
- *15-29*	30.0	41.3	22.9	19.8
- *30-44*	46.1	41.4	47.3	43.9
- *45-64*	24.0	17.2	29.8	36.3
Married (%)	65.0	41.0	72.8	71.7
Urban (%)	67.6	78.9	57.0	67.6
Mean household size	5.4 (2.61)	4.8 (2.13)	5.1 (2.55)	4.3 (2.01)
Education (ref. no school completed)				
-*No school completed*	17.3	5.8	19.6	8.2
- *Primary educ.*	42.9	32.6	44.8	41.3
- *Secondary educ.*	20.3	19.4	15.3	15.0
- *High school and above*	19.5	42.2	20.3	35.5
Employment status				
- *Not employed*	12.3	19.1	-	-
- *Regular employee or casual worker*	76.5	69.7	60.7	62.0
-*Own account worker, self employed, unpaid family worker*	11.2	11.2	39.3	38.0

Source: Author's own calculations based on 2006-2007 SILC data.
Note: standard deviation in parentheses.

Table 6.9 provides basic characteristics of social assistance recipients and non-recipients separately for employed and unemployed individuals. According to

Table 6.9, for both recipients and non-recipients, unemployed individuals mostly come from the middle age group. The proportion of the youth among the unemployed is lower among the recipients as compared to non-recipients. A plausible explanation for this is that when young, recipient group could able to be employed in jobs lower quality since they have low educational attainment. Besides, younger individuals are preferred due to high level of physical effort in those kind of jobs. However, since non-recipients mostly have higher level of education, they may not prefer to work in low-pay jobs and they prefer to wait for high-pay jobs.

Married individuals are more common among recipients than non- recipients. This is parallel to the age distribution. Since most of the unemployed recipients are aged between 30 and 44, they are expected to be married. For both recipients and non-recipients, most of unemployed live in urban areas. This ratio is particularly higher among non-recipients. Since most of the individuals who live in rural areas are employed in the agricultural sector, unemployment is expected to be less in rural areas. Household size is larger and education level is lower for recipients than for non–recipients, which was the case for the poor population as well. Unemployed recipients, who have not worked before, constitute a higher share in non-recipient unemployed individuals. As said above, mostly due to education, they are expected to enter labor market later than recipients.

The differences between recipients and non-recipients are less for employed individuals than for unemployed ones. Gender, age structure, employment status[76] and marital status of employed recipients and non-recipients are

[76] Since monthly employment status in data is given by groups of "casual or regular employee" and "employer or self employed", the percentages of employer and self employed could not be decomposed. This may be another reason for similar rates of employment status between social assistance recipients and non recipients.

approximately the same. While employed social assistance recipients mostly live in rural areas, non-recipients mostly live in urban areas. In fact, this is the general structure of social assistance beneficiaries. As found in previous sections, they mostly live in rural areas. Besides, household size is larger and education level is lower for recipients than non-recipients as in the case of the unemployed.

6.4.3. Results

6.4.3.1. Non-parametric duration analysis

In this section, we present Kaplan Meier estimates of the proportion of individuals remaining unemployed/employed after a given period of time. In this analysis, the estimated rates for recipients and non-recipients are not adjusted for differences in observed characteristics of the two groups. Later, we present estimates that are adjusted for such differences.

a. Unemployment duration

In this part, we present non-parametric analysis results for unemployment duration for social assistance recipients and non-recipients. Firstly, we test the equality of Kaplan Meier estimates of unemployment exit rates for social assistance recipients and non-recipients using the logrank test. We find that the estimated rates are not equal[77] for these two groups ($p<0.05$).

Figure 6.2 shows the estimated hazard rates of social assistance recipients and non- recipients. As time passes, the probability of leaving unemployment increases for both groups. However, the probability is higher for non-recipients. While 31.4% of unemployed non- recipients find a job in first five months, the same rate for non-recipients is 26.9%. After seven months, while

[77] In this test, we also control for place of residence and gender. Still, we find a significant difference between the two groups.

40.8% of recipients are still unemployed, for non-recipients the same rate is 35.3%.

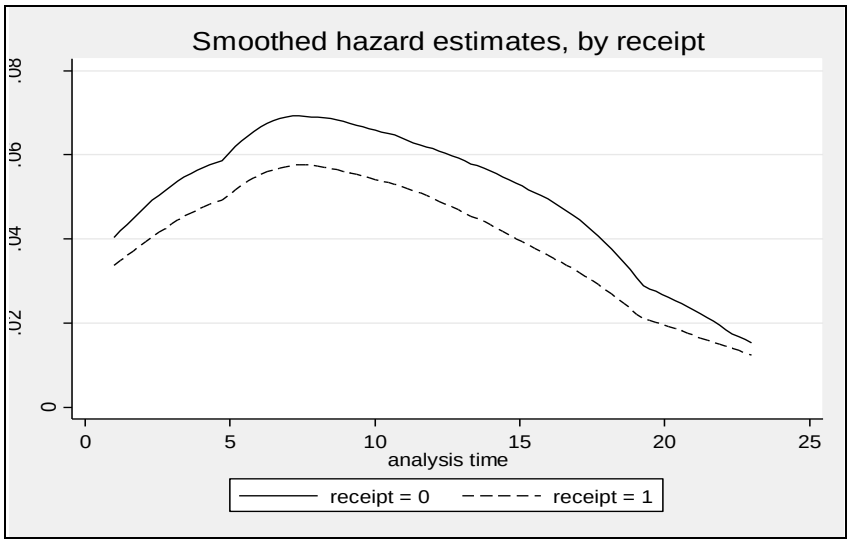

Figure 6.2 Smoothed Hazard Estimates for Unemployment by Social Assistance Receipt

Source: Author's own calculations based on 2006-2007 SILC data.

b. Employment duration

The equality of Kaplan Meier estimates of employment exit rates of social assistance recipients and non-recipients are tested using logrank test. We find that the estimated rates are not equal[78] for these two groups ($p<0.001$). In fact, according to Figure 6.3 estimated hazard rate of social assistance recipients is higher than of non-recipients, especially in the first 12 months the difference is larger. Therefore, social assistance beneficiaries are more likely to leave employment than non-recipients. In fact, while 6.4% of social assistance

[78] In this test, we also take into account that the difference between the estimated rates might be due to gender or urban-rural differences. However, we still find a significant difference between these groups.

recipients leave employment in the first five months, the same rate for non-recipients is 1.8%. After seven months, while 96.8% of non-recipients are still employed, for recipients the same rate is 88.5%. Although there is significant difference between these two groups in terms of employment duration, it would be wrong to attribute the difference to social assistance without controlling for observed and unobserved characteristics.

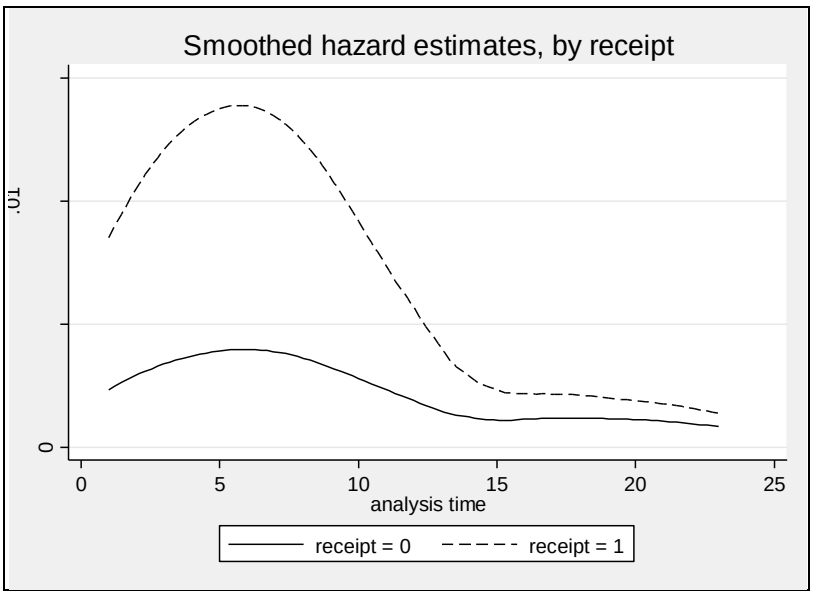

Figure 6.3 Smoothed Hazard Estimates for Employment by Social Assistance Receipt

Source: Author's own calculations based on 2006-2007 SILC data.

According to Kaplan Meier non-parametric duration analysis, it is seen that social assistance beneficiaries are more likely to leave employment and less likely to enter employment than non-recipients. In the following sections, we analyze the effect of social assistance on unemployment and employment durations by taking into account observed and unobserved characteristics.

6.4.3.2. Semi-parametric estimation

In the previous section, we present the results of non-parametric method for employment and unemployment durations. However, in non-parametric approach we could not include the effects of covariates which may affect the durations analyzed. In other words, the results presented do not allow the transition rates to vary across individuals. Such an analysis of duration may be misleading. Since the sample of recipients and non-recipients is not randomly drawn, a simple comparison between their survival rates might be confounded by individual characteristics which are associated with the receipt of social assistance (Tatsiramos, 2006: 10). In this section, we attempt to differentiate transition rates across individuals on the basis of their observed and unobserved characteristics.

a. Leaving unemployment

In the literature, the effect of social assistance receipt is found to occur mostly through delayed entry into employment rather than early exit from employment. Because of this, there are lots of studies providing evidence on the negative effect of social assistance on unemployment duration.

We now turn to the estimation of the model for the hazard of leaving unemployment. The results are presented in Table 6.10. First of all it should be noted that there are unmeasured individual-specific characteristics which affect unemployment duration and receipt of social assistance. We establish this since we find that the standard deviations of unobserved heterogeneity term in the duration and social assistance models are significantly different from zero. Furthermore, we find a significant correlation between unobserved factors affecting unemployed duration and social assistance receipt. In other words, receiving social assistance is associated with particular characteristics that make workers less employable.

Table 6.10 Joint Estimates of Hazard for Leaving Unemployment and the Probit for Social Assistance Receipt with Unobserved Heterogeneity

	Hazard model for unemployment		*Probit model for social assistance receipt*	
Variable	***Coefficient***	***Standard error***	***Coefficient***	***Standard error***
Male	0.017	0.118	0.192**	0.094
Age (ref. 15-24)				
- Age (25-39)	-0.268**	0.119	0.056	0.062
- Age (40-64)	-0.796***	0.170	0.116	0.087
Marital status (ref. not married)	0.646***	0.112	0.453***	0.049
Education (ref. no school completed)				
- Primary education	0.703***	0.146	-0.284***	0.070
- Secondary education	0.491***	0.157	-0.265***	0.049
- High school and above	0.772***	0.153	-0.588***	0.073
Logarithm of experience	0.260***	0.059	0.054*	0.023
Employment status in previous job (ref. not employed)				
- Wage earner	1.924***	0.226	0.289***	0.045
- Own account or employer	1.947***	0.255	0.111	0.117
Social assistance receipt	-0.707***	0.105	-	-
Number of workers in the household	0.419***	0.046	-0.346***	0.037
Place of resident (ref. Urban)	-0.210**	0.097	0.333***	0.081
Household size	-	-	0.113***	0.015
Health situation (=1 if having a chronic disease but general health situation is not bad)	-	-	-0.111***	0.012
Season of the beginning of unemployment (ref. January-March)				
-Season (April-June)	0.390***	0.139	-	-

Tablo 6.10 (continued)

-Season (July-September)	0.447***	0.114	-	-
-Season (October-December)	1.207***	0.129	-	-
Duration 1 (month<3)	-6.995***	0.432	-	-
Duration 2 (>=3&<5)	-6.256***	0.378	-	-
Duration 3 (>=5&<6)	-6.287***	0.366	-	-
Duration 4 (>=6&<8)	-5.754***	0.331	-	-
Duration 5 (>=8&<12)	-5.794***	0.302	-	-
Duration 6 (>=12)	-4.560***	0.250	-	-
Constant	-	-	-2.097***	0.137
Standard deviation of unobserved heterogeneity component	1.051***	0.145	1.464***	0.048
Correlation between unobserved heterogeneity terms of equations	0.319*** (0.035)			
Log likelihood	-10310.99			
Number of observation	2,674			

Source: Author's own calculations based on 2006-2007 SILC data.

Our results given in Table 6.10 indicate that social assistance induces people to look for jobs longer. Using the estimation results, the predicted hazard rates (the predicted probability of finding a job) could be calculated to better understand the difference between recipients and non-recipients. We consider a married urban resident at age 25-39, with primary level education, who is previously employed as an employer/own account with all other characteristics set at their mean values. According to this, the predicted hazard rate of unemployment in the first four months is 26.6% for non-recipients, while it is 14% for recipients. There are many studies which have found lower hazard rate for unemployment for social assistance recipients in other countries as well. For example, Pelizzari (2004) finds the coefficient of social assistance receipt in unemployment duration model for some EU countries (Austria, Belgium,

Denmark, Finland, France, Germany) to be negative, implying approximately 34.5% lower hazard, on average, for social assistance recipients. Erbenova et al. (1998) analyze the effect of social assistance receipt on unemployment duration in Czech Republic and find that while the transition probability for non-recipients in the first 9-months is 52.1%, it is 32.6% for recipients. These rates are higher than the rates found for Turkey. We conjecture that this is because in the Czech Republic, unemployment rate is lower than in Turkey. Schneider and Uhlendorff (2004) in Germany find a positive effect of the ratio between potential labor income and the welfare level on the probability of a transition to employment. However, Earle and Pauna (1998) for Romania and Lubyova and Ours (1998) for the Slovak Republic find that social assistance for unemployed individuals does not have a significant effect on unemployment duration, mostly due to the some job search requirements for social assistance eligibility.

Although we tend to think of unemployment as something negative, looking for jobs longer might increase finding more qualified jobs. For instance, like social assistance, unemployment insurance providing income support to the unemployed is found to increase the quality of post-unemployment jobs (see Caliendo et al., 2009; Ehrenberg and Oaxaca, 1976; Acemoğlu, 2001). Long-run effects of social assistance programs in terms of sustainable labor market inclusion are studied far less. Nonetheless, an important difference exists between programs such as unemployment insurance and social benefits of the type studied here. Eligibility in unemployment insurance requires that recipients have worked previously in formal jobs for a number of years. In Turkey the current eligibility requirements are that they should have at least worked continuously for 120 days and contribute to the system at least for 180 days within the three years just prior to the job lose. Past experience will surely help unemployment insurance recipients to obtain better jobs. In contrast, social assistance recipients might not have work before either in the formal or

informal sector. Therefore, it is not clear that even though social assistance recipients look for jobs for a longer time, their unemployment spell will end with more qualified jobs. To the contrary, for those who do not have previous work experience, social assistance may even lead them to become discourage workers.[79] In fact, as unemployment lengthens, there will be a gradual loss of search efficiency and productivity such that a transition into non-participation may become more likely as unemployment proceeds. Rosholm and Toomet (2004) also find that hazard rate of unemployment into employment exhibits negative duration dependence and hazard rate into out-of-labor exhibits positive duration dependence. Frijters et al. (2009: 15) analyze persistency in the labor market for Germany and draw the conclusion that "longer previous spells of non-employment on transition rates to work is negative for those who have a long uninterrupted spell of non-employment". Another important difference between unemployment insurance and social assistance benefits is that the former is given out for a set time period while the latter is open-ended. People could benefit from social assistance as long as they are in need. According to studies on unemployment insurance, the hazard from unemployment rises as duration increases and as an individual gets closer to benefit exhaustion. The unlimited benefit possibility of social assistance may decrease the job search effort. Therefore, although social assistance is a policy tool for alleviating state dependence in poverty, it may contribute to it as well. Hence, it is crucial to keep or establish a connection between labor market and social assistance through effective job search supports. Vodovipec (1998) indicates such a poverty trap for Slovenia where the benefit system creates disincentive due to high effective tax rate on transition from unemployment to employment. He says that the access to the benefit is too easy; there is no legal basis to enforce active job search and even availability for work as

[79] According to the discrete time hazard models (logit, probit) estimation for unemployment duration to out of labor force, the receipt of social assistance increases the probability of being out of labor force.

requirements for keeping benefits. On the other hand, Lorentzen and Dahl (2005) find that active labor market programs directed to social assistance beneficiaries yield positive and in most cases significant effect on subsequent employment and earnings in Norway.

Although social assistance benefits are less than average wages in the formal sector, still the beneficiaries may not want to lose a regular income flow from social assistance and therefore may think twice before they start working in the formal sector or they may choose to work in the informal sector where detection of employment is hard. For instance, participation in public works programs is rather low mostly because participants do not want to lose their right to free health services through the green card system. Since these programs are temporary (limited at most to six months) social assistance recipients do not wish to work for a short time. Recognizing this problem, to encourage social assistance recipients to take up formal sector jobs, a law is passed (Law no. 6111 dated at 13/02/2011) to suspend rather than cancel the green card ownership in cases where the beneficiaries start working in the formal sector. Suspension rather than cancellation means that should the beneficiaries lose their formal sector jobs they would not need to go through the application and review process to obtain green card beneficiary status again. Moreover, the difference between social assistance payments and wages in formal jobs declines when the wage is at the minimum wage level. In addition, because of the deficiencies in social assistance system; it is prone to abuse as well. For instance, some people receive benefits from multiple sources so that the amount received in assistance can be multiples of the average amount, therefore, they may prefer to go on receiving social assistance rather than to work. Employment in the informal sector does not disqualify the person from obtaining green card. Indeed, 21% of informal sector workers hold green card. In fact, green card ownership makes it easier to qualify for other types of social assistance since green card status signals need. While 64% of green card

holders benefit from at least one of the other social assistance programs, the same rate for individuals without green card is 23.8%. Hence, green card holders working informally may receive other social assistance as well and therefore, they may not even look for formal jobs because of the income received through social assistance and green card. Hence, social assistance system may create a poverty trap, as it encourages working in the informal sector. This means that instead of alleviating, social assistance may increase state dependence in poverty since the receipt of social assistance may create disincentives about working in the formal sector. Thus, in order to prevent such problems, it would be reasonable to provide social assistance to those working in the informal sector yet who are in need.

When we come to the effects of other variables in the model, we observe a positive but an insignificant coefficient for the gender dummy indicating that females are not any more likely to endure longer unemployment spells as compared to males. This is in contrast to the findings of Tansel and Taşçı (2004, 2010) who note that the probability of finding work is lower for women as compared to men. Our result may differ because as noted earlier a broader definition of unemployment is used in SILC.

Being married increases the hazard rate of leaving unemployment probably due to responsibilities marriage brings. As age increases, the probability of leaving unemployment decreases. This is parallel to the findings of Tansel and Taşçı (2010) for Turkey and many other studies for other countries (e.g., Meghir et al., 1989 for Greece; Tatsiramos, 2006 for eight EU countries). OECD statistics also show that for most of the OECD countries unemployment duration increases with age.

The probability of leaving unemployment is greater for previously employed individuals. This is perhaps because they are more efficient in job search.

Having prior job experience probably increases their chances of finding work too. Longer durations in employment are associated with increases in human capital, improvements in networks and work habits that are likely to decrease the probability of unemployment. Thus, a person who enters unemployment after a long employment spell may have 'positive' lagged duration effects which act to increase the probability of exiting unemployment (Black et al., 2005: 11). Additionally, it is found that the employment status of other household members significantly affects duration of unemployment as well. Indeed, number of workers in the household increases the probability of being employed. This is parallel to the findings in the literature that the presence of other adults broadens network information on employment possibilities.

b. Leaving employment

In this part, we provide the estimated effect of social assistance receipt on the hazard rate of employment. In Table 6.11, the estimation results of the model for the hazard of leaving employment with unobserved heterogeneity, which entails endogenising social assistance receipt, are provided.

Firstly, the standard deviation of unobserved heterogeneity term in the duration model and social assistance models are found to be significantly different from zero. The correlation between the unobserved terms of the two equations is found to be significant as well. The correlation coefficient is positive which implies that unobserved characteristics that increase the likelihood that the individual receives social assistance also increases his/her hazard rate of employment. For instance, individuals who have unexceptionally lower taste for work will have lower employment duration and a higher likelihood of receiving social assistance. They will not only be more aware of available social assistance programs but will make the effort of applying and qualifying for social assistance.

Table 6.11 Joint Estimates of Hazard for Leaving Employment and the Probit for Social Assistance Receipt with Unobserved Heterogeneity

	Hazard model for employment		*Probit model for social assistance receipt*	
Variable	***Coefficient***	***Standard error***	***Coefficient***	***Standard error***
Male	1.584***	0.134	0.022	0.044
Age (ref. 15-24)				
- Age (25-39)	-0.019	0.108	-0.056	0.049
- Age (40-64)	-0.148	0.134	-0.064	0.054
Marital status (ref. not married)	-0.634***	0.107	-0.032	0.031
Education (ref. no school completed)				
- Primary education	-0.500***	0.117	-0.086**	0.041
- Secondary education	-0.574***	0.134	-0.128**	0.056
- High school and above	-1.296***	0.140	-0.077	0.052
Logarithm of experience	-0.056	0.055	0.048***	0.014
Wage earner or casual workers (ref. employer, own account or unpaid family workers)	1.854***	0.112	0.039	0.025
Social assistance receipt	0.081	0.130	-	-
Number of workers in the household	-0.362***	0.038	-0.141***	0.009
Place of resident (ref. Rural)	-0.293***	0.079	-0.022	0.038
Household size	-	-	0.018**	0.007
Health situation (=1 if having a chronic disease but general health situation is not bad)	-	-	-0.124***	0.007
Season of the beginning of employment (ref. January-March)				
-Season (April-June)	1.994***	0.106	-	-

Table 6.11 (continued)

-Season (July-September)	1.437***	0.153	-	-
-Season (October-December)	-0.020	0.131	-	-
Duration 1 (month<3)	-7.372***	0.250	-	-
Duration 2 (>=3&<5)	-6.653***	0.246	-	-
Duration 3 (>=5&<6)	-6.427***	0.265	-	-
Duration 4 (>=6&<8)	-5.621***	0.242	-	-
Duration 5 (>=8&<12)	-6.676***	0.251	-	-
Duration 6 (>=12)	-7.397***	0.232	-	-
Constant	-	-	-7.552***	0.191
Standard deviation of unobserved heterogeneity component	0.844	0.093	14.921***	0.273
Correlation between unobserved heterogeneity terms of equations (Rho)	0.542*** (0.0023)			
Log likelihood	-31411.59			
Number of observations	6,287			

Source: Author's own calculations based on 2006-2007 SILC data.

The effect of social assistance receipt on employment duration is positive. That is, the probability of leaving employment increases with the receipt of social assistance. However, this effect is not significant. In other words, leaving employment could not be explained by the receipt of social assistance. On the other hand, as given above, Kaplan Meier estimates of employment duration indicate that social assistance beneficiaries have higher exit rates than non-beneficiaries. Yet, as it is seen from the above model, we could not find evidence that the receipt of social assistance negatively impacts on employment duration. Instead, we explain the difference in Kaplan Meier

estimates with observable and unobservable factors between social assistance beneficiaries and non-beneficiaries. Blau and Robins (1986) find that although the welfare-non welfare differences for hazard rates of unemployment into employment and out of labor force into employment are only slightly affected by adjusting for the effects of personal characteristics, the differences for the hazard rate of employment into unemployment and out of labor force are reduced considerably. They conclude that the biggest work disincentive effect occur on transition rates into employment for the US. Ham and Sheppard (2001) find that an important social assistance program in US, namely Aid to Families with Dependent Children (AFDC), have no effect on exits from employment, but have a significantly negative effect on exits from unemployment.

As given above, most public social assistance programs in Turkey display some features that could potentially influence individuals' choices between working in the formal and informal sector. As mentioned earlier, this is because not having social security registration is a prerequisite for eligibility of most programs. Nevertheless, we would not expect individuals to leave their formal sector jobs to benefit from social assistance because average wages in the formal sector is considerably higher than average amount of social assistance.[80] In addition, it can be argued that receiving social assistance is not likely to affect employment hazard in informal jobs either. This is because employment in the informal sector does not prevent the receipt of social assistance and average social assistance benefits is less than average earning in the informal sector too. Angel-Urdinola et al. (2009) find that social assistance receipt does not increase the share of individuals working in the unregistered

[80] While the average earning in formal sector is 14,846 TL per year, average amount of social assistance for a household is 1,919 TL per year (calculated by using cross section part of SILC).

sector in Turkey. The existence of a very large differential in wages between formal and informal workers is given as the main reason for this finding.

Now, we turn to the other covariates in the model. Being male increases the hazard rate of leaving employment. Being married also implies a lower hazard rate of leaving employment. As noted earlier, being married also increases the hazard rate of leaving unemployment. These results are probably to do with increased responsibility to provide for the family so that married people are more likely to leave unemployment and more likely to enter employment. Tansel and Taşçı (2005) also find that the probability of remaining employed for a married individual is higher than for a non-married individual. Tatsiramos (2006) also finds a negative relationship between hazard rate of leaving employment and being married for eight European Union countries. Although the coefficients are not significant, it could be said that as age increases, the probability of leaving employment decreases.

Education and experience are found to negatively affect the hazard rate of leaving employment. Tatsiramos (2006) also finds that in seven of eight EU countries, as education increases the probability of leaving employment decreases. Employment status affect the duration of employment significantly. Employer or own account workers have higher employment durations than wage earners and casual workers. This is mainly due to the fact that wage earners and casual workers work for a wage. Since they work for someone else, if they are unhappy with their job they will seek another job with another employer or perhaps, set up their own business. Individuals working on own account have a greater flexibility of changing the work they do (for instance by changing the sector they work in) without changing their status. Examining the coefficient of the urban dummy, we observe that residing in an urban area increases the duration of employment. This may due to the structure of the agricultural sector, which entails seasonal and temporary work.

As mentioned above, instead of imposing a functional form, we capture duration dependence in a very flexible way by introducing an additive dummy variable for time intervals. The results indicate non-monotonic duration dependence. However it can be said that the hazard rate of leaving employment decreases in the first seven months of employment and then increases again.

c. Robustness check

In the above analysis, we used a discrete time model, namely logit, in estimations. As an additional exercise, we carry out a proportional hazard model for both employment and unemployment as well.[81] The result that the social assistance receipt does not affect employment duration, but does affect unemployment duration is also confirmed with the proportional hazard model.[82]

We also estimate discrete time models independently from social assistance equation by taking into account unobserved heterogeneity. In other words, in these models we do not endogeneise social assistance receipt. Following Sueyoshi (1995), we estimate three models: cloglog, logit and probit. Nicoletti and Rondinelli (2010) show that assuming normal or cloglog error distribution instead of a logistic one seems to cause a slight bias in duration dependence but only a proportional rescaling of the covariate coefficients. Besides these concerns, there are no major biases in estimating the survival and expected duration functions. According to all three discrete time hazard models estimated separately from social assistance equation, the effect of social assistance on unemployment hazard is found to be negative and statistically

[81] In aML proportional hazard model is predetermined as a continuous model. Due to this, duration coefficients are found to be a bit tilted. Commonly in multiprocess models, the interactions of parameter with duration spline of hazard model gives tilted duration coefficients (Lillard and Panis, 2003).

[82] The results of the models are presented in Appendix A1.

significant ($p<0.01$). Besides, the sign and significance of most of the other covariates are same across all equations. For employment duration, in all three models, the variable indicating the receipt of social assistance is found to be statistically significant ($p<0.01$). In other words, according to these models the receipt of social assistance decreases the duration of employment. Therefore, we conclude that there must be some unobserved characteristics that affect both the receipt of assistance and employment exit. We arrive at this conclusion because we have found earlier that the correlation between unobservable terms determining the duration of employment and social assistance receipt is statistically significant. Other covariates in these models have the same sign and mostly with the same significance level with the model estimated jointly with social assistance equation.

d. Conclusion

In this chapter, we tried to investigate both direct and indirect effects of social assistance payments. Due to faulty targeting mechanism in social assistance programs and/or low level of benefits, the effect of social assistance on poverty is limited according to before-after analysis. The indirect effect of social assistance payments is that social assistance payments can have negative effects on labor supply. According to the results of employment and unemployment duration models; social assistance receipt has no significant impact on employment duration but increases unemployment duration. It may not be easy to give up employment once employed; but, it may be easier to wait for a longer time to take up employment once unemployed. Nonetheless, if social assistance payments increases in the future – and this is what is promised by both the ruling part and the opposition should they assume office - there is the danger that social assistance programs may induce negative labor supply responses. Therefore, there is a need to restructure the assistance programs. With its current structure, social assistance may increase state dependence in poverty. Furthermore, it may also decrease the incentive to work

in the formal sector. In that respect, making social assistance available to all poor regardless of whether they are employed in the informal or the formal sector and establishing the link between benefits and the labor market would be important. Moreover, directing social assistance recipients to formal jobs would help decrease poverty and encourage a larger number of them to get formal jobs.

CHAPTER 7

SUMMARY OF THE FINDINGS, CONLUSIONS AND POLICY IMPLICATIONS

This thesis centers on the dynamics of poverty, analysis of which is necessary for a deeper understanding of the poverty phenomenon and for the design of policy interventions. The main purpose of this study is to discover whether and to what extent being poor affects the probability of remaining poor (i.e. true state dependence). Yet, answering that question is not enough. The subsequent "why" and "is social assistance really a remedy" are the questions that drive the details of this study. The way to answer these questions is to use dynamic analysis techniques.

The challenge of poverty persistence is that it may lead to social exclusion. It is a well-established finding that individuals who experience poverty are more likely to experience poverty in the future periods. When poverty becomes "vicious circle" for some, it becomes more difficult to escape from it and even poverty may become a more complex problem beyond income. In Chapter 2, we surveyed the theoretical and vast empirical literature about poverty persistence by trying to give a picture of the many controversies surrounding poverty persistence from its roots to its solutions. The recent debate on "new poverty" in Turkey parallels the persistent poverty arguments. The claim being that while poverty was a transitory phenomenon in the past, it is more persistent today.

Turkey has experienced a rapid improvement in poverty between 2003 and 2006. Since then poverty seems to have reaches a plateau. Poverty decrease

comes mainly from growth in income/consumption rather than redistribution. Although, earnings and social transfer payments increased in the 2003–2006 period, employment has not increased as much. The decline in economic growth after 2007 and the economic crisis experienced in 2008 contributed to the slowdown of the decrease in poverty. According to the results of static poverty analysis (Chapter 3), poverty is widespread among individuals who are less educated, who live in crowded households with children, and among individuals working in the agricultural sector and among those who work casually. We also found that living standards depend heavily on earning opportunities. Within this context, it is expected that the less paid employment a potential income earner has, the worse off he or she is economically. If the poor individuals' characteristics are analyzed for 2003 and 2006, it can be seen that the poor has increasingly more adverse characteristics over time. Indeed, the decline in poverty could be a process of sorting, that is, some "more able" individuals might be able to exit poverty, leaving behind a group with inferior characteristics or circumstances. Poverty is widespread in rural areas. With the increase in urbanization, it is expected that the poor would have better access to education opportunities. Thus, poverty may decline because of the negative association between poverty and education.

In order to explore whether the probability of being poor in a given year differs depending on poverty status in the previous year, we first discussed the broad patterns of poverty transitions (Chapter 4). Our findings indicated a substantial aggregate state dependence in poverty. The chances of being poor in a given year differ substantially depending on the poverty status in the previous year. According to broad patterns, the poverty rate among those who were poor in the previous year was about 47 percentage points higher than the poverty rate among those who were non-poor in the previous year. We have also established that an important portion of the poor could escape from poverty (47.6% of the poor according to absolute poverty; 38.3% according to relative

poverty). We also investigated transitions initiated by small changes in income. The exit rate was still high even when we ignored small changes in income (above 40% for absolute poverty case and above 30% for relative poverty case). The prevalence poverty rate, which measures the proportion of individuals experiencing poverty at least once during the analysis periods, is higher than static poverty rates, suggesting that poverty is much more widespread than what static rates suggest.

In Chapter 4, we also examined whether transitions may be linked to certain "events" which can propel households into poverty or permit them to exit. The relative roles played by income events were investigated by classifying beginning and ending events according to a hierarchical classification system into mutually exclusive categories following Bane and Ellwood (1986). An important finding is that earnings' change is the most important trigger event for both exits and entries. In fact, 66.6% of total exits and 73.5% of total entries are associated with changes in earnings. Therefore, as found in Chapter 3, since labor income constitutes the most important part of household incomes, staying or leaving poverty is mostly related with earnings.

The characteristics of stayers and escapers were also investigated in Chapter 4 to see whether escapers systematically differ from stayers. According to that analysis, the following groups tend to be over-represented among the poor in both periods: individuals living in household with more children and fewer worker (i.e. higher dependency ratio), less-educated individuals, individuals working as casual workers or on own-account, and individuals living in rural areas. There are some differences between stayers and escapers regarding individual and household characteristics. The escapers appear to look more like the non-poor than the stayers. In particular, the short-term poor have higher level of education, live in households with fewer children and more workers, and are less likely to work causally or on own-account. Therefore, aggregate

state dependence may be attributed at least partly to the sorting effect (individuals with "favorable" characteristics tend to leave poverty earlier). An important question here is as to what extent heterogeneity explains poverty persistence.

In Chapter 5, we tried to answer the question of whether and to what extent the aggregate state dependence found in Chapter 4 could be attributed to true state dependence and to what extent to heterogeneity. For this purpose, we estimated a bivariate model with endogenous selection for poverty persistence. Bivariate model is used to address the initial conditions problem. In our model, initial condition was controlled by jointly estimating current and last year's poverty equations and including exclusion restrictions, which affect last year's poverty but not the poverty transition. We used the dummy variable indicating whether the daily activities of the household head have been limited due to an illness/disease that he/she has experienced for at least the past six months as an exclusion restriction. We found the correlation between unobservables affecting initial poverty and conditional current poverty to be positive but statistically insignificant. This means that sample selection could be treated as "exogenous". The estimated parameters indicated the following: First, as age and education level increases, the probability of being poor and remaining poor decreases. Second, the role of employment in affecting the vulnerability of households to becoming and remaining poor was found to be important. Third, the probability of being and remaining poor was found to be lower for households with a wage earner head than for households with a casual worker head. Fourth, besides the household head, as the number of gainfully employed individuals in the household increases, the probability of poverty persistence was found to decrease. Finally, number of children in the household is another key characteristic related to the probability of falling into poverty and remaining in it. As number of children increases the probability of poverty persistence also increases.

True state dependence share in aggregate state dependence was calculated using poverty persistence estimation results. We found that poverty state dependence remains significant even when controlling for unobserved heterogeneity. In fact, 54.6% of aggregate state dependence is due to true state dependence, i.e. the experience of poverty in one year raises substantially the risk of being poor in the next year. The same rate increased to 64.3% when we use the relative poverty rate. There are a number of different mechanisms that may give rise to such an effect. For example, being poor may lead to demoralization, loss of motivation or depreciation of human capital. Or, low income may be associated with adverse incentives, especially due to social welfare payments. All these make it less likely that the individual takes up a job if unemployed, or may lead to a series of low-quality jobs or unstable employment, increasing the risk of remaining in or returning to poverty. Since earnings constitutes the most important part of total household income and the change in it is associated with most of the poverty entry and exits, we investigated the low-pay transition to explain the true state dependence in poverty.

Low-pay persistence and its relation with poverty were also discussed in Chapter 5. Low-pay, the threshold of which is set at half of mean earnings, is closely related with poverty since 59.6% of the poor are employed as low-paid. In fact, the poverty rate among the low-paid was found to be 36.4% while it is 7.2% for high-paid individuals. According to the transition matrix, we observed a much higher probability of being low-paid for those who have been low paid in the previous period compared to previously high-paid individuals. Besides, the probability of being no-pay at time t is higher for individuals who were low-paid in time t-1. This process is the so-called “low pay-no pay cycle”. However, for some individuals low-pay jobs may become a stepping stone for high-pay jobs. Because, over 35% of individuals could manage to transit to high-pay jobs while they were in low-pay ones. Since the main trigger

event for poverty exits is earnings' change, it can be said that while earnings of some individuals increase and as a result they could manage to escape from poverty; some individuals' earnings remain low and as a result they remain in poverty.

Low-pay persistence was estimated by employing the same methodology used in estimating poverty persistence. Our instrument was whether the household head has a chronic disease, which affects the individual in the household, because it may lead the individual to take up the first job that comes along to support his family. The results of the model indicated the following: First, female workers are less likely than their male counterparts to move up the wage ladder. Second, being married decreases the probability of remaining in a low-paid job. Third, as education level increases the risk of being low-paid decreases. With respect to the economic sector, the probabilities of moving up the wage ladder are higher in industry and services sector when compared to the agricultural sector. In order to distinguish the causes of low-pay into differences in workers' propensity to work and the causal link between past pay status and current pay status; we used the low-pay persistence equation estimates. According to our results, 57.1% of the difference in aggregate probabilities is due to being low-paid at t-1, holding observable and unobservable characteristics fixed. If only wage earners and casual workers are taken into account, this rate increases to 77.1%. There may be several reasons of true state dependence in low-pay. First, being low-paid in the previous job may be an indicator of an individual's low productivity. Second, low paid employment may reduce subsequent human capital accumulation thereby keep the productivity at low levels. Third, a spell of low paid employment may influence an individual's perception of his/her productivity and discourage him/her from applying for better paid jobs. When people are trapped in low-paid jobs, they also get trapped in poverty. This is due to the fact that the main source of income is earnings and change in earnings is the main route out of

poverty. In fact, 45.2% of individuals remaining poor in both years also remain low-paid in both years. High state dependence in low-pay and the strong association between poverty and earnings' change suggest that segmented labor market theory could be of use in understanding poverty along with the human capital theory. This occurs because an important proportion of low-pay persistence may not be explained by individual heterogeneity. According to the segmented labor market theory individual choices and attitudes may change due to the segment they work making it hard to exit that segment. In fact, although we do not attempt to show the segmentation in the labor market, our findings do give some idea on that topic.

High true state dependence in poverty has important consequences for policy design because it calls for a comprehensive and coordinated strategy against poverty that should focus both on income-support policies (in order to break poverty's vicious cycle) and on individual heterogeneity (e.g. acquisition of education and skills). In Chapter 6, we analyzed both the direct and indirect effects of social assistance implementations on poverty. Direct impact of social assistance on poverty is the difference between the proportion of people with pre-assistance income below the poverty line and the proportion of people with post-assistance income below the poverty line. On the other hand, the indirect effect of social assistance is the widely known mechanism through which social assistance payments can have negative effects on labor supply. In Chapter 6, first social assistance programs and expenditures were discussed. In Turkey, public social assistance expenditures constitute a small part of social security expenditures which is lower than the OECD and EU averages. However, it has been growing rapidly, while total social expenditures as a percentage of GDP was 0.6% in 2003, it increased to 1.2% in 2010. Nevertheless, the system has some problems: social assistance programs implemented by various agencies tend to overlap. Another important problem with the current social assistance system is that it lacks objectivity in

identifying the poor and distributing assistance, which partly stems from the lack of a database for the poor. To solve these problems, important changes have been implemented since 2009. We measured the effectiveness of social assistance programs by the degree at which they reach the target population and the degree at which the assistance provided meet the needs of the poor (Chapter 6). We found that 58% of total social assistance (including private social assistance) goes to non-poor individuals. Due to targeting problems and the small amount of transfers, social assistance receipt does not make a big difference in the incidence of poverty. By performing a before-and-after analysis, we found that poverty rate declines from 18.3% to 15.8% with the receipt of social assistance. However, the improvement in terms of the poverty gap measure, which is simply the sum of distances between incomes of the poor and the poverty line is higher than the improvement in terms of the poverty rate. The poverty gap was found to decline by 36.9% with social assistance.

Social assistance beneficiaries are mostly beneficiaries from the previous period. The small amount of social assistance given out which may be insufficient to eliminate poverty and the lack of a strong auditing system detecting non-poor social assistance recipients may lead to non-eligible individuals to remain in the system. Thus, social assistance programs may have perverse effects of perpetuating the poverty status of those who are already poor. Any one of these factors or all them may cause high persistence in social assistance receipt. Considering this possibility, next we analyzed whether social assistance receipt leads to longer unemployment and shorter employment durations (Chapter 6). Survival analysis was used to analyze the effect of social assistance receipt on labor market flows. The effect of social assistance receipt on duration of employment was found by including social assistance receipt as an explanatory variable in the duration model and estimating the duration model jointly with a probit model in which the

dichotomous variable was social assistance receipt using a multi process model. We carried out this strategy because we conjecture that benefiting from social assistance may be associated with particular characteristics of individuals that make them less/more employable/unemployable. This problem of selection bias can be overcome by joint estimation. Two multi-process models were estimated: one for employment and one for unemployment.

Employment and unemployment duration models were estimated using a discrete time hazard model, namely logit. The logit model was found to be the best performing model among discrete time models (proportional hazard and probit model). Before providing the results of the multi-process model, firstly we provided the results from non-parametric duration analyses where the estimated rates for social assistance recipients and non-recipients were not adjusted for differences in observed characteristics of the two groups. According to the results of the non-parametric duration analyses, social assistance beneficiaries are more likely to leave employment and less likely to enter employment than non-recipients. When we controled for observed and unobserved heterogeneity, we found that social assistance induces people to look for jobs longer. In other words, social assistance receipt increases the duration of unemployment. This result is parallel to most findings in the literature about the effects of welfare payments on unemployment duration. However, the effect of receipt of social assistance on the probability of leaving employment was found to be insignificant. In Turkey, most public social assistance programs display some features that could potentially influence individuals' choices between working in the formal and informal sector. This is because not having social security registration is a prerequisite for eligibility for most programs. Nevertheless, since average wages in the formal sector is considerably higher than average amount of social assistance, we would not expect individuals to leave their formal sector jobs to benefit from social assistance. In addition, it can be argued that receiving social assistance is not

likely to affect employment hazard in informal jobs either. This is because employment in the informal sector does not prevent the receipt of social assistance and also average social assistance benefits is less than average earning in the informal sector too.

Policy recommendations

During the 2011 elections, the most important subject discussed was poverty. In fact, what distinguished the recent elections from the previous ones was the heavy emphasis on poverty reduction strategies proposed by different political parties. However, it should be noted that poverty reduction is a long-term process. Political parties come to power for five years in Turkey, which is relatively short and may lead to unfinished jobs at the end of the term. The new government may choose not to continue with the program put together by the previous government. The current social assistance system needs to be restructured but while doing so, a long-term perspective should be adopted. Besides, the restructured system should be flexible enough to respond to emerging needs. This is because poverty is a dynamic process. For example, we have shown that poverty has become more permanent and thus, the social assistance system should have the capability of responding to new poverty issues.

Using a single policy instrument to decrease poverty would neither be correct nor sufficient. In other words, there should be two main objectives; protection and promotion. Protection means that poor people should be supported by social assistance programs in order to help sustain their livelihoods. Promotion means providing opportunities like education, training support which lead to increase in productivity and therefore, earnings. These policies should be applied in a coordinated fashion. First of all, to break the vicious circle of poverty, children should be paid more attention. Skill building is important especially for children of poor households and thus, education may be the most

important policy tool to break that circle. Early childhood education and basic education should be guaranteed for children in poor households. However, it is important to provide lifelong learning opportunities as well.

In order to combat poverty more efficiently, there must be a differentiation among the poor: those capable of working and those who cannot. For individuals who are not able to work, *regular social assistance programs* can be useful for alleviating poverty. On the other hand, for the poor, who could work, social assistance payments should be complemented with *promotion* policies.

This thesis shows that while some part of the state dependence in poverty could be explained by heterogeneity between individuals, a significant part is due to true state dependence. The policies that are to be applied to the poor who can work, should take into account that these people have low endowment and have state dependencies. Besides, in the light of the increase in the total amount of social assistance and our findings, there is a need to redesign the assistance programs to encourage working in order to decrease their negative indirect effects on labor supply. Therefore, it is crucial to keep or establish a connection between labor market and social assistance through effective job search supports for individuals who are able to work. Therefore, social assistances given to these people should be implemented together with activation policies. In fact, since poor individuals have low levels of education and limited job skills they will have a difficult time securing a decent job.

The first step in activation policy should be the improvement of human capital. Considering that these individuals are less educated and that they have limited opportunities to improve their skills due the jobs they hold, a wide range of learning opportunities should be provided for those individuals. The second step should involve services that support the job search efforts of these people.

Work search support and skill training programs should be accompanied by social assistance receipt. Quick reemployment and/or better employment bonuses should be given (positive incentives like subsidies). On the other hand, there should be support services (personal advisors) to change the way these people regard themselves (positive impact on individuals' self-confidence). Therefore, there should be mutual responsibilities between the state and the beneficiaries of social assistance. The state should provide social assistance, training, job search support, and counseling services. Beneficiaries should engage in job search and/or join in training activities and should be required to accept decent job offers. Job retention is a challenge after providing job to these individuals; therefore, support should continue after placement.

Another problem related with the current social assistance system is that it targets people working in informal jobs. Hence, social assistance system may encourage employment in the informal sector. This means that instead of alleviating, social assistance may increase state dependence in poverty since the receipt of social assistance may create disincentives for employment in the formal sector. This situation discourages people from working in the formal sector and is unfair for the poor people working in the formal sector. Thus, in order to prevent such problems, it would be reasonable to provide social assistance to those working in the formal sector yet who are in need. Besides; some formal workers, especially those who work for minimum wages, may also experience poverty, especially if they have children. Therefore, it is important to make amendments to the current regulations allowing formal workers to benefit from social assistance.

Perhaps the biggest challenge to the social assistance program in Turkey is that it is difficult to identify who is poor and who is not poor, which leads to leakages in the system mentioned earlier and exclusions of others who are in need. Identification is a challenge since the social assistance program is means-

tested yet it is difficult to ascertain the income levels of the poor households due primarily to the lack of a data base on individual incomes. Hence, the poverty status is determined on the basis of a questionnaire filled in by the applicants. The questionnaire includes a series of questions that try to indirectly estimate the incomes of the applicants. The exclusion of formal sector workers from the system is due to the conjecture that formal sector work guarantees a certain standard of living. Hence, there is a need to come up with a better evaluation system that maximizes the coverage yet remains cost-effective.

Recommendations for future studies

The data set used in this thesis comes from the panel feature of the Survey of Income and Living Condition for the years 2006 and 2007. An increase in the number of the years for which a given individual is followed would strengthen the analysis. This is because individuals/households may only temporarily exit poverty, re-entry rates into poverty should also be estimated as the number of years in the data set increases. The rates and characteristics of individuals who are poor for one year, two years, three years etc. should be derived to see for which groups and to what extent poverty is a persistent condition of life. Duration dependent exit probabilities could be estimated using hazard models. By this way one could see whether exit rates decrease as more time is spent below the poverty line. By this way, one could analyze how to adjust our findings to duration dependence models that are also relevant in the description of individual and household characteristics associated with poverty dynamics.

Interventions that aim to reduce poverty might be more effective if they can be more precisely targeted towards specific high risk groups, for example children, individuals employed in the agricultural sector. For this purpose, dynamic poverty analysis should be carried out for specific high-risk groups. These groups should be followed over time. For example, although food

poverty rate is below 1%, there are indeed some individuals suffering from lack of food. In other words, although it does not seem a problem in aggregate terms, it might be a problem for a group of individuals. Therefore, it is important to follow these individuals over time to see the changes in their situation. Some qualitative modules could also be added to surveys specially targeting such groups.

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APPENDICES

A1. TABLES AND FIGURES

Table A1.1 Conditional Probability of Being Poor in 2007

	Poverty equation Dependent variable=1 if poor, 0 if not poor in 2007		Retention equation Dependent variable=1 if stayer, 0 if dropper.	
	Coefficient	**Standard error**	**Coefficient**	**Standard error**
Female (Ref. male)	-0.295***	0.077	-0.251	0.081
Age Ref.(Age<25)				
Age (24<&<40)	0.740**	0.308	0.363**	0.180
Age (39<&<55)	0.711**	0.309	0.551***	0.182
Age (>54)	0.352	0.313	0.283	0.189
Education of household head (ref. no education)				
Primary education	-0.582***	0.058	0.063	0.078
Secondary education	-0.875***	0.098	-0.237**	0.111
High school or above	-1.265***	0.098	-.210**	0.092
Household head employment status (ref. not employed)				
Wage earner	-0.459***	0.083	0.003	0.090
Causal worker	0.519***	0.092	0.104	0.133
Employer	-0.781***	0.165	-0.213*	0.125
Own account	0.095	0.071	-0.051	0.093
Number of children (age<5)	0.326***	0.031	0.019	0.043
Number of children (age>4&age<12)	0.299***	0.024	0.076**	0.037
Number of children (age>11&age<15)	0.305***	0.039	0.010	0.061

Table A.1 (continued)

Number of old-aged (age>64)	0.027	0.044	-0.078	0.052
Number of gainfully employed household members	-0.290***	0.042	0.155***	0.044
Number of unpaid employed household members	0.048	0.032	0.058	0.048
Home ownership=not have a home	-0.044	0.052	-0.242***	0.060
Constant	-1.383***	0.315	2.001***	0.204
Speaker of household=1 if change (instrument)	-	-	-2.171***	0.059
Correlation (rho)	0.015			
LR test of indep. eqns. (rho = 0):	chi2(1) = 0.02 Prob > chi2 = 0.8975			
Loglikelihood	-3475.503			

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.2 Poverty Spell Ending Types (relative poverty), (%)

Ending type: Primary Reason for Ending	**Percentage of all spell endings**	**Cumulative percentage**
Income event: Rise in income from		
Head's earnings	41.2	41.2
Other nuclear's earnings	22.5	63.7
Non-nuclear earnings	2.6	66.3
Social assistance income	5.9	72.2
Other transfer income (mostly contributory)	5.0	77.2
Rental and property income	11.6	88.8
Other income increase or decrease in expenditures	11.2	
All spell endings	100.0	

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.3 Poverty Spell Beginning Types (relative poverty), (%)

Beginning type: Primary Reason for Beginning	Percentage of all spell beginnings	Cumulative percentage
Income event: Fall in income from		
Head's earnings	49.0	49.0
Other nuclear members' earnings	17.8	66.8
Non-nuclear members' earnings	3.3	70.1
Social assistance income	6.7	76.8
Contributory transfer	2.5	79.3
Rental and property income	11.1	90.4
Other income decrease or increase in expenditures	9.6	
All spell beginnings	100.0	

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.4 Probability of Being Poor in 2007, Conditional on Being Poor in 2006, Rural-Urban

Variables	**Rural**	**Urban**
Female	-0.0126 (0.0616)	-0.135*** (0.0485)
Age (ref. Age<25)		
Age (24<&<40)	-0.0154 (0.126)	-0.190* (0.0989)
Age (39<&<55)	-0.0893 (0.0972)	-0.258*** (0.0801)
Age (>54)	-0.255* (0.131)	-0.149 (0.123)
Education (ref. no education)		
Primary education	-0.221** (0.112)	-0.517*** (0.102)
Secondary education	-0.0833 (0.173)	-0.452*** (0.124)
High school or above	-0.819*** (0.235)	-0.616*** (0.150)
Age of head (ref. Age<25)		
Age (24<&<40)	0.203 (0.746)	1.419** (0.576)
Age (39<&<55)	0.156 (0.749)	1.454** (0.579)

Table A1.4 (continued)

Age (>54)	0.699 (0.765)	1.729*** (0.604)
Education of head (ref. no education)		
Primary education	0.0718 (0.186)	-0.151 (0.161)
Secondary education	-0.000727 (0.348)	-0.287 (0.237)
High school or above	-0.297 (0.546)	-0.183 (0.255)
Household head employment status (ref. not employed)		
Wage earner	-0.264 (0.292)	-0.370** (0.157)
Causal worker	-0.332 (0.221)	0.366** (0.178)
Employer (a)	-0.173 (0.209)	0.423 (0.389)
Own account		-0.149 (0.204)
Number of children (age<5)	0.0478 (0.0748)	0.257*** (0.0752)
Number of children (age>4&age<12)	0.130** (0.0610)	0.258*** (0.0693)
Number of children (age>11&age<15)	0.369*** (0.109)	0.258*** (0.0975)
Number of old-aged (age>64)	-0.264** (0.122)	0.190 (0.173)
Number of gainfully employed household members	-0.280** (0.143)	-0.399*** (0.140)
Number of unpaid employed household members	-0.120 (0.0881)	-0.283 (0.232)
Constant	-0.334 (0.761)	-1.368** (0.587)
Log pseudolikelihood	-950.2926	-1096.3074

Source: Author's own calculations based on 2006-2007 SILC data.
Note:
[a] In the model for rural, own-account and employer are grouped.
Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A1.5 Poverty Persistence Coefficients (relative poverty)

Variables	**Probability of being poor in 2007, conditional on being poor in 2006**	**Poverty equation Dependent variable=1 if poor, 0 if not poor in 2006**
Female	-0.0952* (0.0499)	-0.125*** (0.0192)
Age (ref. Age<25)		
Age (24<&<40)	-0.139 (0.119)	-0.299*** (0.0416)
Age (39<&<55)	-0.251** (0.126)	-0.364*** (0.0350)
Age (>54)	-0.378* (0.212)	-0.605*** (0.0518)
Education (ref. no education)		
Primary education	-0.400*** (0.129)	-0.386*** (0.0429)
Secondary education	-0.471*** (0.172)	-0.517*** (0.0544)
High school or above	-0.757*** (0.262)	-0.795*** (0.0662)
Age of head (ref. Age<25)		
Age (24<&<40)	0.181 (0.358)	0.119 (0.235)
Age (39<&<55)	0.199 (0.357)	0.0331 (0.235)
Age (>54)	0.259 (0.391)	-0.276 (0.241)
Education of head (ref. no education)		
Primary education	-0.251 (0.185)	-0.411*** (0.0720)
Secondary education	-0.400 (0.294)	-0.658*** (0.102)
High school or above	-0.354 (0.399)	-0.879*** (0.104)
Household head employment status (ref. not employed)		
Wage earner	-0.468* (0.243)	-0.577*** (0.0703)
Causal worker	0.244 (0.169)	0.408*** (0.0895)

Table A1.5 (continued)

Employer	-0.432 (0.446)	-0.810*** (0.136)
Own account	-0.102 (0.121)	-0.0782 (0.0710)
Number of children (age<5)	0.213*** (0.0771)	0.218*** (0.0381)
Number of children (age>4&age<12)	0.231*** (0.0874)	0.266*** (0.0281)
Number of children (age>11&age<15)	0.219** (0.104)	0.258*** (0.0480)
Number of old-aged (age>64)	0.0733 (0.0819)	0.00497 (0.0535)
Number of gainfully employed household members	-0.372*** (0.120)	-0.351*** (0.0433)
Number of unpaid employed household members	-0.0971 (0.0615)	0.0394 (0.0407)
Household head have a health problem		0.280*** (0.0530)
Constant	0.108 (0.523)	0.124 (0.240)
Correlation (rho)	0.2915 (0.5280)	
LR test of indep. eqns. (rho = 0):	chi2(1) = 0.27 Prob > chi2 = 0.6030	
Log pseudolikelihood	-10591.66	

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A1.6 Low-Pay Persistence Coefficients (not including own-account)

Variables	**Probability of being low-paid in 2007, conditional on being low-paid in 2006**	**Low-pay equation Dependent variable=1 if low-paid, 0 if high-paid 2006**
Female	0.559** (0.219)	0.121 (0.0847)
Age Ref.(Age<25)		
Age (24<&<40)	-0.0823 (0.418)	-0.443*** (0.106)
Age (39<&<55)	0.244 (0.658)	-0.479*** (0.133)
Age (>54)	0.780** (0.330)	0.367* (0.212)
Education (ref. no education)		
Primary education	-0.186 (0.351)	-0.414*** (0.132)
Secondary education	-0.166 (0.464)	-0.484*** (0.152)
High school or above	-0.722 (0.724)	-1.094*** (0.150)
Married	-0.341** (0.166)	-0.171* (0.0952)
Logarithm of experience	-0.186* (0.104)	-0.193*** (0.0511)
Sector of employment (ref. agriculture)		
Sector of employment (Industry)	-1.011 (0.642)	-1.204*** (0.138)
Sector of employment (Services)	-0.495 (0.601)	-0.874*** (0.135)
Occupation (ref. low-skilled)		
Medium-skilled	0.194 (0.446)	0.454*** (0.110)
High skilled	0.466 (0.454)	0.602*** (0.121)
Logarithm of number of working hours per week	-0.382* (0.215)	-0.373*** (0.108)

Table A.1.6 (continued)

Head has a chronic disease		0.199*** (0.0738)
Constant	1.709** (0.836)	2.384*** (0.487)
Correlation (rho)	0.5416 (0.9579)	
LR test of indep. eqns. (rho = 0):	chi2(1) = 0.20 Prob > chi2 = 0.6546	
Log pseudo likelihood	-1735,249	

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A.1.7 Probability of being low-paid in 2007, conditional on being low-paid in 2006, Urban

Variables	**Including own-account workers**	**Not including own-account workers**
Female	0.726*** (0.167)	0.683*** (0.170)
Age Ref.(Age<25)		
Age (24<&<40)	0.0995 (0.226)	-0.0850 (0.228)
Age (39<&<55)	0.424 (0.302)	0.231 (0.317)
Age (>54)	0.899** (0.359)	0.260 (0.431)
Education (ref. no education)		
Primary education	-0.139 (0.196)	-0.0826 (0.241)
Secondary education	-0.0135 (0.243)	0.110 (0.296)
High school or above	-0.423* (0.245)	-0.250 (0.279)
Married	-0.115 (0.193)	0.0236 (0.203)
Logarithm of experience	-0.112 (0.0943)	-0.0262 (0.0954)
Sector of employment (ref. agriculture)		
Sector of employment (Industry)	-0.920*** (0.305)	-0.681 (0.414)

Table A.1.7 (continued)

Sector of employment (Services)	-0.667** (0.260)	-0.479 (0.404)
Occupation (ref. high-skilled)		
Medium-skilled	0.479* (0.260)	0.547** (0.260)
Low-skilled	0.435* (0.249)	0.406 (0.257)
Logarithm of number of working hours per week	-0.346** (0.143)	-0.236 (0.152)
Constant	1.720** (0.722)	1.160 (0.802)
Log pseudo likelihood	-342,9845	-326,3311

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A1.8 Probability of Being Low-Paid in 2007, Conditional on Being Low-Paid in 2006, Rural

Variables	**Including own-account workers**	**Not including own-account workers**
Female	0.282** (0.126)	0.272 (0.192)
Age Ref.(Age<25)		
Age (24<&<40)	0.170 (0.197)	0.220 (0.227)
Age (39<&<55)	0.332 (0.241)	0.462 (0.297)
Age (>54)	0.247 (0.276)	0.477 (0.510)
Education (ref. no education)		
Primary education	-0.356*** (0.128)	-0.495* (0.282)
Secondary education	-0.181 (0.180)	-0.192 (0.311)
High school or above	-0.743*** (0.206)	-0.735** (0.344)
Married	-0.140 (0.158)	-0.328 (0.220)
Logarithm of experience	-0.145* (0.0834)	-0.0713 (0.101)

Table A1.8 (continued)

Sector of employment (ref. agriculture)		
Sector of employment (Industry)	-0.825*** (0.175)	-1.108*** (0.236)
Sector of employment (Services)	-0.511*** (0.118)	-0.694*** (0.198)
Logarithm of number of working hours per week	-0.373*** (0.126)	-0.0821 (0.189)
Constant	2.709*** (0.545)	1.820** (0.804)
Log pseudo likelihood	-601,7805	-244,0009

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A1.9 State Dependence in Low-Pay, Rural-Urban

	Rural	**Urban**
	Pr (poor in t | poor in t-1)	**Pr (poor in t | poor in t-1)**
Raw aggregate probabilities of being poor in year t, given		
Poor at t-1	0.696	0.505
Non Poor at t-1	0.235	0.069
Difference	0.461 (row3-row4)	0.436 (row3-row4)
Endogenous selection model		
Average over poor at t-1	0.697	0.506
Average over non poor at t-1	0.581	0.370
Difference	0.116 (row7-row8)	0.136 (row7-row8)
State dependence effect	0.345 (row8-row4)	0.301 (row8-row4)
State dependence effect share (%)	74.8	68.9

Note: Own-account workers are included.
Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.10 Testing for Proportionality for Unemployment Duration

First test				
Proportional hazard model	***Exponential model***	***LR test PH&exponential***	***Critical value***	***Decision***
-3868.3647	-3941.0972	145.4650	11.0704	Accept PHM
Second test				
Proportional hazard model	***Non proportional hazard model***	***LR test PH&NPH***	***Critical value***	***Decision***
-3868.3647	-4391.65546	1046.5815	101.8794	Reject PHM

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.11 Testing for Proportionality for Employment Duration

First test				
Proportional hazard model	***Exponential model***	***LR test PH&exponential***	***Critical value***	***Decision***
-4213.8209	-4399.8817	372.1256	11.0704	Accept PHM
Second test				
Proportional hazard model	***Non proportional hazard model***	***LR test PH&NPH***	***Critical value***	***Decision***
-4213.8209	-4262.2129	98.7840	96.2166	Reject PHM

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.12 Joint Estimates of Proportional Hazard for Leaving Unemployment and the Probit for Social Assistance Receipt with Unobserved Heterogeneity

Variable	***Coefficient***	***Standard error***
Female	-0.432***	0.1733
Age (ref. 15-24)		
- Age (25-34)	-0.045	0.1828
- Age (35-44)	-0.442*	0.2408
- Age (45-64)	-1.746***	0.3057
Marital status (ref. not married)	0.603***	0.1830

Table A.1.12 (continued)

Education (years)	0.030	0.0201
Logarithm of experience	0.507***	0.0907
Employment status in previous job (ref. not employed)		
- Wage earner	3.956***	0.3447
- Own account or employee	3.870***	0.3991
Social assistance receipt	-0.371**	0.1854
Number of workers in the household	0.543***	0.0737
Place of resident (ref. Rural)	-0.032	0.1392
Season of the beginning of unemployment (ref. January-March)		
-Season (April-June)	0.222	0.2046
-Season (July-September)	-0.083	0.2043
-Season (October-December)	1.053***	0.1880
Duration 1 (month<3)	2.299***	0.1976
Duration 2 (>=3&<5)	-0.759**	0.3005
Duration 3 (>=5&<6)	1.105***	0.1536
Duration 4 (>=6&<8)	-0.475***	0.1126
Duration 5 (>=8&<12)	0.694***	0.0636
Duration 6 (>=12)	-0.094**	0.0363
Constant	-15.014***	0.9389
Standard deviation of unobserved heterogeneity component in duration model	3.253***	0.2003
Standard deviation of unobserved heterogeneity component in social assistance model	2.546***	0.7842
Correlation between unobserved heterogeneity terms of equations	0.0104	0.0496
Log likelihood	-4652.73	
Number of observation	2,488	

Source: Author's own calculations based on 2006-2007 SILC data.

Table A.1.13 Joint Estimates of Proportional Hazard for Leaving Employment and the Probit for Social Assistance Receipt with Unobserved Heterogeneity

Variable	*Coefficient*	*Standard error*
Female	-1.747***	0.1355
Age (ref. 15-24)		
- Age (25-34)	0.470***	0.1289
- Age (35-44)	0.415***	0.1480
- Age (45-64)	0.365**	0.1766
Marital status (ref. not married)	-0.478***	0.1125
Education (years)	-0.062***	0.0133
Logarithm of experience	-0.051	0.0592
Employer or own-account (ref. wage earners)	-1.855***	0.1145
Having health insurance	-1.385***	0.1446
Social assistance receipt	0.590	0.3977
Number of workers in the household	-0.178***	0.0469
Place of resident (ref. Rural)	-0.134*	0.0762
Season of the beginning of employment (ref. January-March)		
-Season (April-June)	0.352***	0.1098
-Season (July-September)	0.968***	0.1427
-Season (October-December)	-0.114	0.1252
Duration 1 (month<3)	0.412***	0.1078
Duration 2 (>=3&<5)	-0.256	0.1699
Duration 3 (>=5&<6)	1.636***	0.3164
Duration 4 (>=6&<8)	-0.597***	0.1133
Duration 5 (>=8&<12)	-0.425***	0.0643
Duration 6 (>=12)	0.072**	0.0293
Constant	-2.592***	0.4611
Standard deviation of unobserved heterogeneity component in duration model	0.249	0.4800

Table A1.13 (continued)

Standard deviation of unobserved heterogeneity component in social assistance model	4.707**	2.0468
Correlation between unobserved heterogeneity terms of equations (Rho)	-0.464***	0.1173
Log likelihood	-8844.66	
Number of observations	10,776	

Source: Author's own calculations based on 2006-2007 SILC data.

Table A1.14 Discrete Time Hazard Models for Unemployment Estimated Independently from Social Assistance Equation

Variable	***Probit***	***Logit***	***Cloglog***
Male	0.0585 (0.0684)	0.124 (0.139)	0.116 (0.124)
Age (ref. 15-24)			
- Age (25-39)	-0.172** (0.0738)	-0.354** (0.147)	-0.322** (0.131)
- Age (40-64)	-0.431*** (0.109)	-0.869*** (0.212)	-0.777*** (0.186)
Marital status (ref. not married)	0.367*** (0.0741)	0.736*** (0.142)	0.658*** (0.125)
Education (ref. no school completed)			
- Primary education	0.235*** (0.0882)	0.468*** (0.175)	0.412*** (0.155)
- Secondary education	0.120 (0.0954)	0.243 (0.193)	0.212 (0.173)
- High school and above	0.283*** (0.0983)	0.574*** (0.193)	0.506*** (0.171)
Logarithm of experience	0.0998*** (0.0365)	0.205*** (0.0712)	0.182*** (0.0630)
Employment status in previous job (ref. not employed)			
- Wage earner	1.289*** (0.184)	2.715*** (0.296)	2.487*** (0.246)

Table A1.14 (continued)

- Own account or employer	1.311*** (0.200)	2.758*** (0.330)	2.520*** (0.277)
Social assistance receipt	-0.152*** (0.0524)	-0.297*** (0.104)	-0.268*** (0.0933)
Number of workers in the household	0.222*** (0.0333)	0.439*** (0.0597)	0.385*** (0.0506)
Place of resident (ref. Urban)	0.0693 (0.0516)	0.151 (0.103)	0.140 (0.0919)
Season of the beginning of unemployment (ref. January-March)			
-Season (April-June)	0.224** (0.0895)	0.455*** (0.176)	0.401** (0.156)
-Season (July-September)	0.185*** (0.0691)	0.365*** (0.137)	0.318*** (0.122)
-Season (October-December)	0.620*** (0.0914)	1.223*** (0.164)	1.076*** (0.139)
Duration 1 (month<3)	-4.083*** (0.407)	-8.069*** (0.636)	-7.529*** (0.511)
Duration 2 (>=3&<5)	-3.620*** (0.335)	-7.121*** (0.531)	-6.700*** (0.432)
Duration 3 (>=5&<6)	-3.598*** (0.305)	-7.041*** (0.490)	-6.639*** (0.401)
Duration 4 (>=6&<8)	-3.304*** (0.270)	-6.465*** (0.439)	-6.135*** (0.362)
Duration 5 (>=8&<12)	-3.312*** (0.234)	-6.445*** (0.389)	-6.141*** (0.324)
Duration 6 (>=12)	-2.644*** (0.165)	-5.115*** (0.301)	-4.970*** (0.262)
Unobserved Heterogeneity	Accept (p<0.01)	Accept (p<0.01)	Accept (p<0.01)

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A1.15 Discrete Time Hazard Models for Employment Estimated Independently from Social Assistance Equation

Variable	*Probit*	*Logit*	*Cloglog*
Male	-0.757*** (0.075)	-1.668*** (0.153)	-1.628*** (0.150)
Age (ref. 15-24)			
- Age (25-39)	0.220*** (0.071)	0.432*** (0.149)	0.416*** (0.145)
- Age (40-64)	0.152* (0.091)	0.308 (0.106)	0.295 (0.185)
Marital status (ref. not married)	-0.385*** (0.062)	-0.814*** (0.127)	-0.787*** (0.124)
Education (ref. no school completed)			
- Primary education	-0.323*** (0.065)	-0.689*** (0.128)	-0.663*** (0.123)
- Secondary education	-0.326*** (0.075)	-0.706*** (0.149)	-0.681*** (0.144)
- High school and above	-0.740*** (0.084)	-1.595*** (0.163)	-1.544*** (0.159)
Logarithm of experience	-0.091*** (0.032)	-0.157*** (0.675)	-0.147** (0.066)
Employment status in previous job (ref. not employed)			
- Own account or employer	-0.897*** (0.072)	-2.070*** (0.137)	-2.032*** (0.134)
Social assistance receipt	0.495*** (0.047)	1.075*** (0.094)	1.045*** (0.092)
Number of workers in the household	-0.185*** (0.025)	-0.402*** (0.531)	-0.387*** (0.051)
Place of resident (ref. Urban)	-0.132*** (0.043)	-0.347*** (0.888)	-0.345*** (0.086)
Season of the beginning of unemployment (ref. January-March)			
-Season (April-June)	1.159*** (0.087)	2.277 *** (0.162)	2.191*** (0.161)

Table A1.15 (continued)

-Season (July-September)	0.809*** (0.098)	1.589*** (0.193)	1.532*** (0.189)
-Season (October-December)	0.099*** (0.065)	0.168 (0.140)	0.161 (0.137)
Duration 1 (month<3)	-2.620*** (0.152)	-4.662*** (0.313)	-4.649 *** (0.314)
Duration 2 (>=3&<5)	-2.118*** (0.127)	-3.632*** (0.271)	-3.655 *** (0.271)
Duration 3 (>=5&<6)	-1.968*** (0.126)	-3.359*** (0.268)	-3.380*** (0.263)
Duration 4 (>=6&<8)	-1.551*** (0.109)	-2.500*** (0.234)	-2.551 *** (0.229)
Duration 5 (>=8&<12)	-1.970*** (0.111)	-3.539*** (0.237)	-3.571*** (0.230)
Duration 6 (>=12)	-2.205*** (0.109)	-4.267*** (0.235)	-4.299*** (0.229)
Unobserved Heterogeneity	Accept (p<0.01)	Accept (p<0.01)	Accept (p<0.01)

Source: Author's own calculations based on 2006-2007 SILC data.
Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Distribution functions

HBS **SILC**

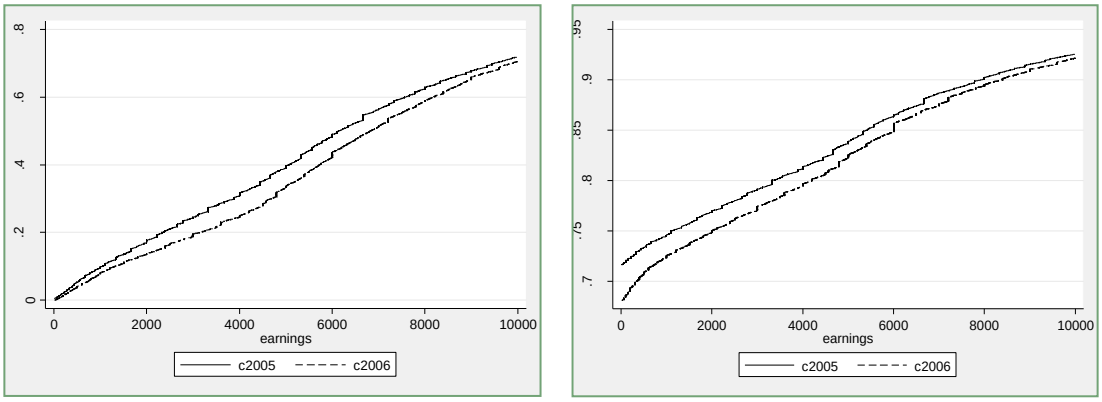

Figure A.1.1 Cumulative Distribution Function of Earnings

Source: Author's own calculations based on 2006-2007 SILC data.

HBS **SILC**

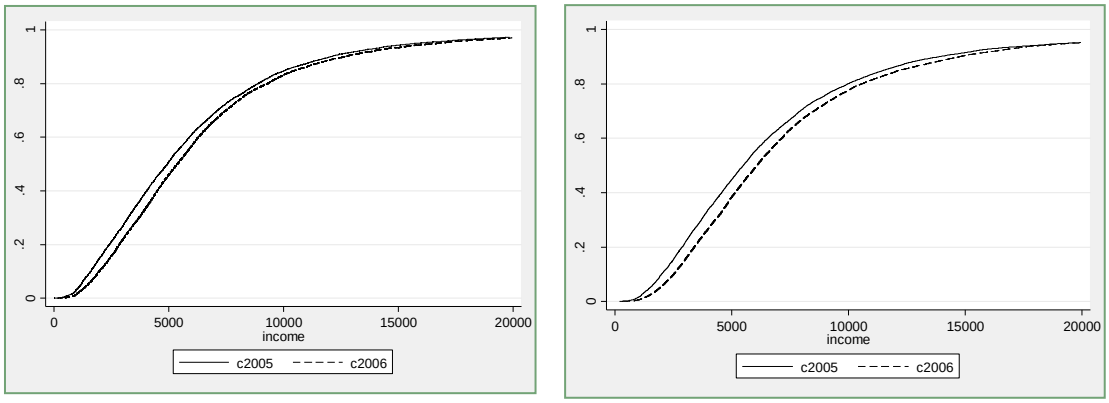

Figure A.1.2 Cumulative Distribution Function of Adult Equivalent Income

Source: Author's own calculations based on 2006-2007 SILC data.

HBS

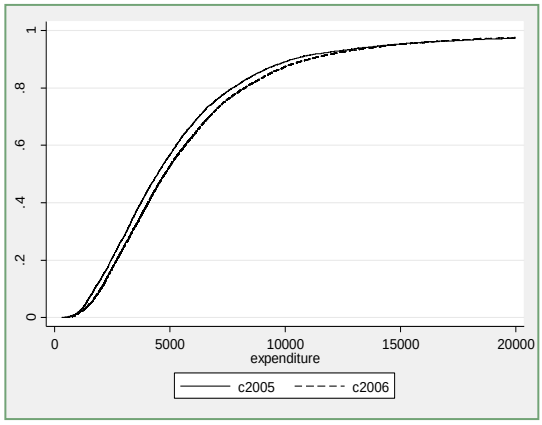

Figure A.1.3 Cumulative Distribution Function of Adult Equivalent Expenditure

Source: Author's own calculations based on 2006-2007 SILC data.

A2. CURRICULUM VITAE

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MS	METU Economics	2003
BS	METU Mathematics	2001
Minor	METU Economics	2011
High School	Ankara High School	1996

WORK EXPERIENCE

Year	Place	Enrollment
2004 - Present	State Planning Organization	Expert
2002- 2004	METU Department of Mathematics	Teaching and Research Assistant

FOREIGN LANGUAGES

Advanced English

PUBLICATIONS

1. HACIMAHMUTOĞLU H. and DEMİR ŞEKER S. "Sosyal Yardım Yararlanıcılarına Özel Hizmetlerin Geliştirilmesi", Uluslararası Yoksullukla Mücadele Stratejileri Sempozyumu: Deneyimler ve Yeni Fikirler, 13-15 Ekim 2010, İstanbul (2011).

2. ARAN A. M. , SARICA Ö., YAZICI H. and DEMİR ŞEKER S. "Poverty and Inequality Changes in Turkey (2003-2006)". Paper Prepared for State Planning Organization and World Bank Welfare and Social Policy Analytical Work Program, Working Paper Number 1. (2010)

3. DEMİR ŞEKER S. "Türkiye'de Sosyal Transferlerin Yoksulluk Üzerindeki Etkileri", Devlet Planlama Teşkilatı (Uzmanlık Tezi), Ankara. (2008)

4. DEMİR ŞEKER S. “Birleşmiş Milletler Kalkınma Programı İnsani Gelişme Endeksi ve Türkiye Açısından Değerlendirme”, Devlet Planlama Teşkilatı, Ankara. (2006)

SOFTWARE KNOWLEDGE

Pascal programming, STATA, SPSS (with certificate), Amos (with certificate), ANSWER Tree (with certificate), Matlab, Eviews, MS Office Programs (Word, Excel, PowerPoint).

A3. TURKISH SUMMARY

Yoksulluk öteden beri gerek politika yapıcıların gerekse politika analistlerinin gündeminde olmuş bir konudur. Çünkü yoksulluk ekonomik ve sosyal kalkınmanın hem sebebi hem de sonucudur. Dünyada yaklaşık 1,5 milyar kişi yoksullukla karşı karşıyadır. Ancak, daha da önemli bir konu bazı kişiler için yoksulluğun kalıcı hale gelmesi ve yoksulluktan çıkışın gittikçe zorlaşmasıdır. Yoksulluğu daha iyi anlayabilmek için, toplam yoksulluk oranlarının yanısıra, yoksul kişilerin kendilerine odaklanmak ve yoksulluğun insani boyutlarına dikkat çekmek gerekmektedir. Ulusal ve uluslar arası düzeyde yoksulluğun azaltılmasına ilişkin birçok girişimde bulunulmaktadır. 2000 yılında kabul edilen Bin Yıl Kalkınma Hedeflerinde 2015 yılına kadar aşırı yoksulluğun (food poverty) yarıya düşürülmesi hedeflenmiştir. Her ne kadar, aşırı yoksulluk gelişmiş ülkeler için artık bir sorun teşkil etmese de, Sahra altı Afrika'da günlük geliri 1,25 ABD Dolarının altında gelire sahip olan nüfusun oranı %51'dir. Gelişmiş ülkelerde ise, göreli yoksulluk ön plana çıkmaktadır. Diğer bir deyişle gelişmiş ülkelerde yoksulluk, toplumun genel refah düzeyinin gerisinde kalma durumu olarak tanımlanmaktadır. Buna göre AB-27'de 2009 yılı itibarıyla yoksulluk oranı %16,3'tür. Ülkemizde açlıkla karşı karşıya olan ve/veya günlük geliri 1,25 ABD Dolarının altında olan nüfus yok denecek kadar azdır. Ancak, göreli yoksulluk oranı %23,8 olup bu oran AB–27 ortalamasının oldukça üstündedir. Bunun yanı sıra, 2009 yılı itibarıyla gıda ve gıda dışı harcamaları içeren yoksulluk sınırı altındaki nüfusun oranı %18'dir.

Toplam yoksulluk oranları statik bir durumu ifade etse de, yoksulluk dinamik bir süreçte belirlenir. İnsanlar zaman zaman yoksulluğa düşerler ve yoksulluktan çıkarlar. Ancak, bu konudaki ortak kanı, yoksul olarak kalınan sürenin uzamasının yoksulluktan çıkışı zorlaştırdığıdır (örneğin; Bane ve Ellwood, 1986; Jenkins, 2000; Oxley vd., 2000). Bazı kişilerin uzun süre yoksul durumda kalmaları, hem insani boyutları hem de bu kişilere sosyal

yardım sağlanması nedeniyle mali boyutları nedeniyle, politika yapıcıların dikkatini çeken bir husustur. Yoksulluktaki kalıcılığın sebeplerini ve sonuçlarını anlayabilmek, yoksulluğu daha iyi kavramak ve bu yönde oluşturulacak politikalara ışık tutmak için büyük önem taşımaktadır.

Son dönemlerde, uluslar arası literatürde yoksulluk araştırmalarının, kalıcı yoksulluk üzerine yoğunlaştığı görülmektedir. Ülkemizde ise, bugüne kadar kalıcı yoksullukla ilgili herhangi bir niceliksel çalışma yapılamamıştır. Bunun en önemli nedeni, bu konunun analiz edilmesinde gerekli olan panel veri eksikliğidir. Ülkemizde yapılan bir takım niteliksel araştırmalar ile vaka analizlerinde, yoksulluğun daha önceleri (özellikle 1990 öncesi) kendiliğinden çözülebildiğine ancak artık yoksulluktan kurtulmanın giderek zorlaştığına işaret etmektedir (örneğin; Buğra ve Keyder, 2003; Işık ve Pınarcıoğlu, 2008; Kalaycıoğlu ve Rittersberger, 2002). Yoksullar geçmiş dönemlerde formal işlerde istihdam imkânı bulabilmekte, kırdan kente geldiklerinde yaşayabilecekleri bir yer (genellikle gecekondu) edinebilmekte ve bunlar sayesinde de sosyal hayata katılabilmekteydiler. Ancak, 1990'ların başından itibaren bu süreç değişmiş ve yoksulluk kalıcı hale gelmeye başlamıştır. Ekonomik büyümenin daha az istihdam yaratması, kamuda istihdam imkânlarının azalması ve işgücünün eğitim düzeyinin giderek yükselmesi, eğitim düzeyi ortalamanın çok gerisinde olan yoksul kesimin formal işlerde istihdam edilmesini zorlaştırmaktadır. Daha çok informal işlerde istihdam edilen yoksul kesim için, informalden formale geçiş umudu giderek azalmıştır. Diğer taraftan, kırdan kente göç eden kesim 1980 öncesinde kendi evlerini yaparak ev sahibi olma imkânı bulabilirken, gecekondu yapılabilecek alanların giderek azalması nedeniyle özellikle 1980 sonrasında gelen kişiler için ev sahibi olma şansları azalmıştır. Bu kişiler, daha önce kente gelmiş yakınlarının yanlarında kiralık ev bulabilmiş ve bu yakınlarının sosyal ağlarından faydalanabilmişlerdir (Işık ve Pınarcıoğlu, 2001). Ancak, 2000'li yıllardan sonra gelen kesim için ev sahibi olmak zaten çok zor olmakla birlikte artık

yakınlarının yanında kiracı olma şansları ve buna paralel olarak sosyal ağlardan yararlanma şansları da azalmıştır. Çünkü kente daha önce gelip ev sahibi olabilmiş kesimin bulunduğu bölgeler zengin kesim için de cazip hale gelmiş ve ev sahibi olan söz konusu kesim evlerinin yasal tapularını alabilme çabası içerisine girmişlerdir. Dolayısıyla, daha önceleri, aldıkları kira nedeniyle kente yeni gelen kesimle ilişkilerini sürdürürken, artık buna ihtiyaçları kalmamıştır. Sonuç olarak yoksul kesimin, yoksulluktan çıkış yolları kapanmış denilebilir. "Yeni yoksulluk" denilen daha çok kalıcı yoksulluğu işaret eden bu durumun zamanla Amerika'daki veya Avrupa'daki örnekler gibi toplumdan dışlanan grupların oluşmasına yol açabileceği de tartışılmaktadır (Buğra ve Keyder, 2006; Işık ve Pınarcıoğlu, 2008).

Kalıcı yoksulluk iki nedenle oluşabilmektedir: Birincisi, yoksulluğa girişte olduğu gibi, yoksul kişilerin beşeri sermayelerinin düşük oluşu, işsizlik sürelerinin uzaması, beceri düzeylerinin düşük oluşu gibi görülebilen veya görülemeyen bir takım özellikler yoksulluğun kalıcı olmasına neden olabilmektedir. Diğer taraftan, geçmiş yoksulluk deneyimi de yoksulluğun devamına neden olabilir. Diğer bir deyişle, yoksulluk deneyimi kişilerin davranışlarında bu deneyimi hiç yaşamamış kişilere göre değişikliğe neden olabilir (Heckman 1981a). Duruma bağımlılık olarak adlandırılan söz konusu husus, yoksulluğun kişilerin motivasyonlarını ve umutlarını kaybetmeleri ve beşeri sermaye gelişimlerinin azalması ile ortaya çıkabilmektedir (Biewen, 2009). Kalıcı yoksulluğa neden olan bu iki etkeni ayrıştırmak önerdikleri politikaların farklılıklarından dolayı büyük önem taşımaktadır. Eğer, kalıcı yoksulluğa kişilerin özellikleri yol açıyorsa, beşeri sermayeyi geliştirici politikalara ağırlık vermek yoksullukla mücadele açısından daha etkin bir yol olacaktır. Ancak, eğer duruma bağımlılık kalıcı yoksulluğa neden olan daha önemli bir etken ise, bu durum insanların yoksulluktan bir an önce kurtarılmaları gereğine işaret etmektedir. Diğer bir deyişle, kısa vadeli

önlemler alarak uzun vadeli sonuçlar elde edilebilir. Kişilerin yoksulluktan kısa vadede çıkarılmaları ise sosyal yardım uygulamaları ile mümkün olmaktadır.

Kişiler arasındaki farklılıklar ve duruma bağımlılık faktörlerinin kalıcı yoksulluğu ne ölçüde etkilediği konusunda yapılan çalışmaların çoğunluğunda, yoksullukta önemli bir duruma bağımlılık olduğu görülmüştür (örneğin, İngiltere için Cappellari ve Jenkins, 2004, İspanya için Ayllon, 2008, Avustralya için Buddelmeyer ve Verick, 2007, 14 tane Avrupa Birliği ülkesi için Andriopoulou ve Tsakloglou, 2008, Almanya için Biewen, 2009). Geçen dönemde yoksul olanlar için bu dönem yoksul olma ihtimali olmayanlara göre daha yüksek olup, aradaki farkın yarısından fazlasının kişilerin özellikleri ile değil, bir önceki dönem yoksul olma durumu ile açıklanabildiği görülmüştür.

Yoksulluktaki duruma bağımlılığın büyük ölçüde işgücü piyasasından kaynaklanabileceği düşünülmektedir (Cappelari ve Jenkins, 2002). Kişilerin işgücü piyasasında sürekli düşük gelir elde etmeleri ve yüksek gelirli işlere geçememeleri yoksulluğun da devam etmesine neden olmaktadır. Beşeri sermaye teorisine göre, kişilerin kazanç düzeyleri büyük ölçüde eğitimleri ile belirlenmektedir (Becker, 1975). Diğer taraftan, katmanlı işgücü piyasası teorisine göre, işgücü piyasasının alt katmanında (genellikle güvencesiz ve düşük ücretlerin olduğu işler) yer alan kişiler için bir üst katmana (daha yüksek gelirli ve genellikle güvenceli işler) geçişte zorluklar bulunmaktadır. Bu durum kişilerin özelliklerinden ziyade, işgücü piyasasının yapısından kaynaklanmaktadır. Diğer bir deyişle, aynı özellikte olmasına rağmen bir kişi alt katmanda, diğer kişi üst katmanda çalışıyor ise bu kişiler farklı ücretler elde edebilmektedirler. Ayrıca, alt katmandaki kişilerin üst katmana geçiş yolları da tıkalıdır. Belirli bir süre sonra alt katmandaki kişiler umutlarını kaybedebilmekte ve daha iyi işlerde çalışmak için bir çaba göstermeyebilmektedir. Bu durum ise bir kısır döngüye dönüşmektedir (Kalleberg and Sorensen, 1979). Dolayısıyla, kişiler işgücü piyasasının alt

katmanında kaldıkları sürece yoksulluktan çıkma şansları da düşmektedir (Cain, 1976). Önceki iş tecrübelerinin görece iyi olmayan işlerde olması, başlangıçta işveren tarafından bir üretkenlik göstergesi olarak alınacaktır. Çünkü kişilerin eğitim düzeyleri üretkenliklerinin önemli bir göstergesi olmakla birlikte, önceki iş tecrübeleri de bir o kadar önem taşımaktadır. Signaling teori olarak da bilinen bu teoriye göre, alt katmanda çalışmış olmak üst katmana geçişin önünde önemli bir engeldir. Diğer taraftan, düşük ücretli/nitelikli işlerin üst katmana geçişte bir basamak olabileceği yönünde de görüşler mevcuttur (Scherer, 2004). Signaling teorinin aksine, stepping-stone teorisi, başlangıçta düşük ücretli işlerde çalışmanın kişilerin beşeri sermayelerini geliştirmeleri için fırsat olabileceğini ve yüksek ücretli işlere geçmelerinin daha kolay olacağını savunmaktadır.

Ampirik literatürde, düşük ücretli işlerde çalışmanın duruma bağımlılık sonucu olduğunu gösteren çalışmalar mevcuttur. Diğer bir deyişle, beşeri sermaye teorisinin aksine, bazı kişiler özellikleri yeterli olsa bile düşük ücretli işlerden çıkmamaktadırlar. Düşük ücretli işlerin motivasyonu düşürmesi, beşeri sermaye yatırımını azaltması, zaman zaman işverenler için bir üretkenlik göstergesi olması düşük ücretli işlerdeki duruma bağımlılığı açıklayabilir. Örneğin, Stewart ve Swaffield (1999) İngiltere için, Cappelari (1999) İtalya için, Uhlendorff (2006) ise Almanya için düşük ücretli işlerde önemli oranda bir duruma bağımlılık olduğunu ve ayrıca düşük ücretli işlerde çalışan kişler arasında istihdam dışına çıkanların oranlarının da daha fazla olduğunu göstermişlerdir. Dolayısıyla, beşeri sermaye teorisi tek başına düşük ücretli işlerde çalışmayı ve dolayısıyla yoksulluğu açıklamakta yeterli değildir.

Sosyal yardımların yoksulluktaki duruma bağımlılık için kısa vadeli bir araç olmakla birlikte uzun vadeli sonuçları olan bir çözüm önerisi olduğu yukarıda belirtilmişti. Ancak, sosyal yardımlarla ilgili tartışmalarda sosyal yardımların yoksulluk üzerindeki doğrudan etkilerinin yanısıra dolaylı etkileri de oldukça

tartışılmaktadır. Sosyal yardımların yoksulluk üzerindeki dolaylı etkisi işgücü arzını olumsuz etkilemesi şeklindedir. Dolayısıyla, sosyal yardımlar yoksulluktan çıkış için bir çözüm olabileceği gibi yoksul kalmayı teşvik de edebilir. Bu kapsamda yapılan çalışmalar sonucunda literatürde, sosyal yardımların işgücü arzını olumsuz etkilediği yönünde görüş birliği mevcuttur (örneğin, Danziger vd., 1981; Levy, 1979; Moffitt, 1983; Meyer ve Rosenbaum, 2001; Blau ve Robins, 1983; Chen ve Klaauw, 2008; Schneider ve Uhlendorff, 2004).

Türkiye örneğine gelecek olursak, "yeni yoksulluk" kavramı ile ortaya sürülen ve ülkemizde oluşmaya başlayan kalıcı yoksullukta hangi faktörün ne kadar etkili olduğu hususu bugüne kadar netleştirilememiştir. Ayrıca, sosyal yardımların doğrudan etkileri çalışılmakla birlikte dolaylı etkileri üzerinde herhangi bir çalışma mevcut değildir. Bu tezde, 2006 ve 2007 yılları için TÜİK tarafından yapılan Gelir ve Yaşam Koşulları panel verisi kullanılarak Türkiye'deki yoksulluk dinamiği araştırılmıştır. Yukarıdaki açıklamalar doğrultusunda, kalıcı yoksulluğa neden olan faktörlerin (özellikler arasındaki farklılıklar ve duruma bağımlılık) ayrıştırılması yapılmıştır. Ücret geliri yoksullar için de toplam gelirin en önemli bileşeni olduğundan, düşük ücretli işlerde çalışmada bir duruma bağımlılık olup olmadığı sorgulanmıştır. Ülkemizde son dönemlerde artan miktarlarda uygulanan ve yoksulluktaki duruma bağımlılık için de bir çözüm önerisi olarak sunulan sosyal yardımların doğrudan ve dolaylı etkileri incelenmiştir. Bu kapsamda aşağıdaki sorulara yanıt bulunmaya çalışılmıştır:

- Yoksullukta önemli geçişler (yoksulken yoksul olmama, yoksul değilken yoksul olma) var mıdır? Geçişler diğer ülkelerle karşılaştırıldığında ne kadar büyüklüktedir?
- Yoksulluktan çıkmayı başarabilen ve başaramayan kesimlerin kişisel ve haneye ilişkin özellikleri nasıldır?

- Yoksulluktaki geçişleri tetikleyen olaylar nelerdir?
- Yoksullukta duruma bağımlılık var mıdır?
- Düşük ücrette duruma bağımlılık var mıdır?
- Sosyal yardımlar yoksulluğu azaltmada ne kadar etkilidir?
- Sosyal yardımların istihdam ve işsizlik süreleri üzerindeki etkileri nelerdir?

Her ne kadar, statik anlamda yoksulluk çalışması fazla ise de, yoksulluğun dinamik olarak incelendiği niceliksel olarak yapılmış bir çalışma bulunmamaktadır. Kişileri yıllar itibarıyla takip edebileceğimiz bir veri setinin yakın zamana kadar olmayışının bu alanın boş kalmasında önemli olduğu düşünülmektedir. TÜİK, 2006 yılında panel niteliği de taşıyan Gelir ve Yaşam Koşulları Araştırmasına (SILC) başlamıştır. Söz konusu araştırma, kişilere ve haneye ilişkin sosyo-ekonomik durumu ortaya koyabilecek sorular içermektedir. Çalışmamızda, Gelir ve Yaşam Koşulları Araştırmasının mevcut olan ilk iki yılının (2006 ve 2007) sonuçları kullanılmıştır. Çalışmada bulunan sonuçlara geçmeden önce birkaç metodolojik hususu belirtmekte fayda görülmektedir. Çalışmada yoksulluk ölçümü gelir bazlı yapılmıştır. Bunun en önemli sebebi, SILC'de yoksulluk ölçümüne ilişkin bir tek gelir bilgisinin olmasıdır. İkinci husus, yoksulluk ölçümünde kullanılan yoksulluk sınırıdır. Çalışmada hem mutlak hem de göreli yoksulluk sınırı kullanılmıştır.

Çalışmada ilk olarak yoksullukla ilgili statik bir analiz yapılmış ve yoksul kesimin özellikleri incelenmiştir. Yoksullukta 2003 yılından bugüne önemli bir düşüş yaşanmıştır. 2003 yılında %28 seviyesinde olan gıda ve gıda dışı harcamaları içeren yoksulluk sınırı altındaki nüfusun oranı 2009 yılında %18'e gerilemiştir. Yoksulluğun eğitim düzeyi düşük olan kişiler, kalabalık ve özellikle çok çocuklu haneler ile geçici ve güvencesi olmayan işlerde çalışanlar arasında yaygın olduğu görülmüştür. Yoksulluktaki düşüşle birlikte, 2003 yılından 2009 yılına yoksul nüfusun özelliklerinin daha fazla dezavantaj

yaratacak bir biçime girdiği görülmüştür. Diğer bir deyişle, yoksullar arasındaki eğitim düzeyi 2009 yılında 2003 yılına göre daha düşük, yoksul kesimde geçici ve güvencesiz işlerde çalışanların oranı daha yüksek, bağımlı fertlerin oranı daha fazladır. Bu durum, görece daha iyi özelliklere sahip kişilerin yoksulluktan çıkmayı başarabildiklerini ancak daha dezavantajlı özelliklere sahip kişilerin yoksullukta kaldıklarını işaret etmektedir. Diğer bir deyişle, yukarıda bahsedilen "kişilerin özelliklerinin" yoksulluktaki kalıcılık üzerinde etkisi olduğu söylenebilir. Ancak, bu hususun diğer faktör (duruma bağımlılık) göz önüne alınarak gösterilmesi gerekmektedir. Statik analizlerden çıkan diğer önemli bir sonuç da, yoksul kesimin en önemli gelir kaynağının işgücü geliri olduğudur. Bunun yanı sıra, sosyal transferlerin toplam gelir içindeki payı da artış göstermektedir. İşgücünden elde edilen gelirin düşük oluşu hane gelirlerinin daha düşük oluşuna ve dolayısıyla yoksulluğa neden olmaktadır.

Çalışmanın dinamik analizine yoksulluktaki geçişlerin incelenmesi ile başlanmıştır. Buna göre, bir önceki dönem yoksul olanların %47,6'sı yoksul kalmaya devam etmektedir. Diğer taraftan, bir önceki dönem yoksul olmayan kesimin %5,9'u da yoksul duruma düşmüştür. Söz konusu analiz göreli yoksulluk için de yapılmıştır. Göreli yoksulluk sınırının mutlak yoksulluğa göre daha yüksek olması nedeniyle yoksulluktan çıkış oranı daha düşüktür (%38,3). Ancak yoksulluğa giriş oranı daha fazladır (%8,6). Bilindiği gibi yoksulluk, istihdam veya sosyal yardım alma gibi kesin çizgilerle belirlenecek bir kavram değildir. Yoksulluk sınırı rastgele belirlenmektedir. Dolayısıyla, bazı küçük gelir artışları/azalışları kişileri yoksulluk sınırının üzerine/altına taşıyabilir. Ancak, gelir ölçümünde bir yanlışlık (ölçüm hatası) söz konusu ise, bu artış veya azalışlar anlamlı olmayabilir. Dolayısıyla, küçük gelir değişiklikleri aslında önceki veya sonraki gelir ölçümündeki küçük bir ölçüm hatasından da kaynaklanabilir. Bu nedenle, yoksulluktaki geçişler ölçüm hatası dikkate alınarak tekrar hesaplanmıştır. Söz konusu hesaplamada, küçük gelir

değişiklikleri ile ortaya çıkan geçişler dikkate alınmamıştır. Ancak, çıkan sonuçlara göre yoksul kesimin yaklaşık %40'ından fazlasının (mutlak yoksulluk oranına göre) yoksulluktan çıktığı gözlenmiştir. Diğer bir deyişle, yoksul kesimin yaklaşık %60'ı yoksul kalmaya devam etmektedir.

Yoksul kalmaya devam etme durumunun kişilerin özellikleri ile ne kadar ilintili olduğu konusunda fikir vermesi açısından, yoksulluktan çıkamayan kesim ile çıkabilen kesimin özellikleri karşılaştırılmıştır. Buna göre, gerek yoksulluktan çıkabilen gerekse çıkamayan kesim, hiç yoksul olmayanlara göre daha dezavatajlı özelliklere sahiptir. Diğer taraftan, yoksulluktan çıkabilen kesim özellikleri itibarıyla yoksul olmayan kesime daha yakındır. Diğer bir deyişle, daha eğitimli, çocuk sayısının daha az olduğu, hanede çalışan sayısının daha fazla olduğu haneler yoksulluktan çıkmayı başarabilmişlerdir. Bu durum, yoksulluktan çıkışın doğal bir seçim süreci olduğuna, daha iyi özelliklere sahip kişilerin çıkarken görece daha dezavantajlı özelliklere sahip kesimin kaldığına işaret etmektedir.

Yoksulluk geçişleri ile ilgili analizlerde son olarak, geçişleri tetikleyen gelir değişimlerine yer verilmiştir. Örneğin, yoksul değilken yoksul duruma düşen kesimin hangi gelir türünün en fazla arttığına bakılmıştır. Tetikleyici unsurlar hiyerarşik bir şekilde incelendiğinden, gelir değişimlerinden yalnızca biri tetikleyici olay (trigger event) olarak alınmıştır. Söz konusu yöntem Bane ve Ellwood (1986) tarafından bulunmuş olup, literatürde sıkça kullanılmaktadır (örneğin; Jenkins, 2000). Çıkan sonuçlara göre, işgücü gelirlerindeki değişimin gerek yoksulluğa girişi gerekse çıkışı tetikleyen en önemli unsur olduğu görülmüştür. Yoksulluktan çıkışların %66,6'sında, girişlerin ise %73,5'inde geçişle birlikte en fazla değişen gelir türü işgücü geliridir.

Yoksulluktan çıkamayan kesimin yoksullukta kalış nedenleri yukarıda bahsedildiği gibi özellikler arasındaki farklılık ve duruma bağımlılık faktörleri

çerçevesinde analiz edilmiştir. Bunun için, içsel seçim modeli kullanılmıştır. Seçim modelinin kullanılmasındaki en önemli sebep, ilk periyotta yoksul olup ikinci periyotta da yoksul olanların rassal olmayabilmesidir. Bu nedenle, ilk yıldaki yoksulluk denklemi ile bir sonraki yılın yoksulluk denklemi birlikte tahmin edilmiştir. Ayrıca, kalıcı yoksulluk konusu analiz edilmek istendiğinden bir önceki dönem yoksul olan kesim için bu dönemki yoksulluk durumu inceleneceğinden seçim modeli kullanılmıştır. Çıkan sonuçlara göre; eğitim durumunun düşüklüğü, hanede çocuk sayısının fazla oluşu, çalışan sayısının az oluşu yoksul olma ihtimali ile yoksul kalma ihtimalini artırıcı yönde etki yapmaktadır. Hanehalkı reisinin ücretli veya işveren olarak çalışması da yevmiyeli, kendi hesabına veya ücretsiz aile işçisi olarak çalışan hane reislerinin olduğu hanelere göre gerek yoksul olma gerekse yoksullukta kalma ihtimalini azaltıcı yönde etki yapmaktadır. Söz konusu regresyon sonuçları kullanılarak yoksulluktaki duruma bağımlılık hesaplanmıştır. Diğer bir deyişle, "Bir önceki dönem yoksul olan kesimin bir sonraki dönem de yoksul olma ihtimaliyle, yoksul olmayan kesim için geçerli olan aynı ihtimal arasındaki fark nereden kaynaklanmaktadır?" sorusunun cevabı aranmıştır. Çıkan sonuçlara göre, söz konusu farkın %45,4'ü yoksul kalan ve yoksulluktan çıkan kesimin özellikleri arasındaki farklılıktan kaynaklanırken, geri kalanı duruma bağımlılıktan kaynaklanmaktadır. Diğer bir deyişle, bir önceki dönem yoksul olmak diğer değişkenler de dikkate alındığında tek başına yoksul kalmayı pozitif yönde etkilemektedir.

Gerek yoksul gerekse yoksul olmayan hanelerin en önemli gelir kaynaklarının işgücü geliri olması ve yoksulluğa giriş ve çıkışların en fazla işgücü gelirindeki değişimle birlikte gerçekleşmesi nedenlerinden dolayı yoksulluktaki duruma bağımlılığın nedenleri işgücü piyasasında aranmıştır. Bu kapsamda düşük ücretli çalışmada duruma bağımlılık olup olmadığı analiz edilmiştir. Düşük ücret, literatürde genel olarak yapıldığı gibi ortalama gelirin yarısı olarak belirlenmiştir. Yoksul kesimin yaklaşık %60'ının düşük ücretle çalıştığı

görülmüştür. Aynı oran yoksul olmayan kesim için %17'dir. Dolayısıyla, yoksulluk düşük ücretle oldukça bağlantılıdır. Öncelikle düşük ücret, yüksek ücret ve çalışmama arasındaki geçişlere bakılmıştır. Buna göre, bir dönem önce düşük ücretle çalışan kesimin %44'ü bir sonraki dönemde de düşük ücretle çalışmaya devam etmektedir. Aynı oran, yüksek ücretle çalışanlar için %6,8'dir. Düşük gelirle çalışmanın diğer bir olumsuz yönü de, işten çıkışların yüksek ücretlilere göre daha fazla olmasıdır (low pay-no pay cycle). Ancak, düşük ücretle çalışan kesimdeki kişilerin yaklaşık %35'inin bir sonraki dönem yüksek ücret elde ettikleri görülmüştür. Diğer bir deyişle, bazı çalışanlar için düşük ücret yalnızca bir basamak olmuştur. Aslında bu sonuç, yoksulluktan çıkışı en fazla işgücü gelirindeki değişimin etkilemesi hususu ile örtüşmektedir. Nitekim incelenen dönemde yoksulluktan önemli oranda bir çıkış olmuş ve bu çıkışların büyük bir bölümünde de işgücü gelirinin arttığı görülmüştür. Dolayısıyla, düşük ücretten yüksek ücrete geçebilen kişilerin yoksulluktan çıkabilen grupta yer alma ihtimalinin yüksek olduğu söylenebilir.

Düşük ücrette duruma bağımlılık olup olmadığı hususu yoksullukta olduğu gibi içsel seçim modeli kullanılarak bulunmuştur. Açıklayıcı değişkenler olarak; cinsiyet, yaş, eğitim, evlilik durumu, çalışılan sektör, işteki durum, iş tecrübesi ve çalışma saati kullanılmıştır. Sonuçlar, kadınların düşük ücrette kalma olasılıklarının daha fazla olduğunu, eğitimle birlikte düşük ücret alma ve düşük ücretli işlerde kalma olasılığının azaldığını, sanayi ve hizmetler sektöründe çalışanların tarım sektörüne göre düşük ücret almaya devam etme olasılıklarının daha az olduğunu işaret etmektedir. Söz konusu sonuçlar kullanılarak, düşük ücretteki duruma bağımlılık oranı %57 olarak hesaplanmıştır. Diğer bir ifadeyle, düşük ücretliler ve yüksek ücretliler arasında bir sonraki dönemde düşük ücretli olma olasılıkları arasındaki farkın %57'si duruma bağımlılıktan kaynaklanmaktadır. Bu durumun farklı nedenleri olabilir. Birincisi, kişilerin düşük ücretli bir işte çalışması, işverenler tarafından üretkenliğin bir göstergesi olarak algılanabilir. İkinci olarak, düşük ücretli

işlerde beşeri sermayeyi geliştirme şansı çok daha düşüktür. Son olarak, çalışılan işin niteliği ve ücreti kişinin kendisine ve geleceğine bakış açısını olumsuz yönde etkileyebilir. Bu durumda kişi yüksek ücretli bir işe girmek için çaba göstermeyebilir.

Yukarıda da belirtildiği gibi yoksullukta duruma bağımlılığın olduğu durumlarda kısa vadede kişileri yoksulluktan çıkarmak uzun vadeli olumlu sonuçları beraberinde getirecektir. Bu kapsamda, çalışmamızda son olarak sosyal yardımların yoksulluk üzerindeki doğrudan ve dolaylı etkileri incelenmiştir. Doğrudan etki; sosyal yardım öncesi yoksul nüfus oranı ile sosyal yardım sonrası yoksul nüfus oranı arasındaki farka eşittir. Dolaylı etki ise, sosyal yardımların işgücü arzını azaltıcı yönde yapacağı etkidir. Öncelikle Türkiye'deki sosyal yardım programları ve bu kapsamaki harcamalar incelenmiştir. Her ne kadar, sosyal yardım harcamalarının GSYH'ya oranı OECD veya AB ortalaması ile karşılaştırıldığında düşük olsa da, son dönemde önemli oranda artış göstermiştir. 2003 yılında GSYH'nın %0,6'sı olan toplam kamu sosyal yardım harcaması 2010 yılında %1,2'ye yükselmiştir. Ancak, sistemin bir takım problemleri bulunmaktadır. Farklı kurumlar tarafından aynı tür yardımların yapılması ve ortak bir izleme ve denetleme mekanizmasının olmayışı, ortak norm ve standartların eksikliği gibi hususlar sistemin etkinliğini azaltmaktadır. Nitekim analizlerimiz sonucunda, toplam sosyal yardımların (kamu dışından yapılan yardımları da içermektedir) %58'inin yoksul olmayan kişilere yapıldığı görülmektedir. Söz konusu hedefleme sorunu, sosyal yardımların yoksulluk üzerindeki etkisini de zayıflatmaktadır. Sosyal yardım öncesi %18,3 olan yoksulluk oranı sosyal yardımlarla birlikte %15,8'e gerilemektedir. Yoksulluk açığı ise %36,9 oranında azalmaktadır.

Sosyal yardım yararlanıcılarının büyük ölçüde bir önceki dönemki yararlanıcılardan oluştuğu gözlenmiştir. Bu durum, yapılan sosyal yardımların miktar olarak düşük olmasından dolayı insanları yoksulluktan çıkarmaya

yetmemesinden veya denetim mekanizmalarının eksikliğinden dolayı kişilerin yoksulluktan çıksalar bile sosyal yardım almaya devam etmelerinden kaynaklanmaktadır. Sosyal yardım sisteminin bu haliyle kişilerin işgücü arzı üzerinde de olumsuz etkiler yapabileceği düşünülmektedir. Bu kapsamda, sosyal yardım almanın istihdam ve işsizlik sürelerini nasıl etkilediği ortaya konulmaya çalışılmıştır. Bunun için, sosyal yardım alma durumu istihdam süresi modeline açıklayıcı değişken olarak koyulmuş ve bu model sosyal yardım alma durumunun bağımlı değişken olduğu probit modelle birlikte tahmin edilmiştir. Ortak tahmin yapılmasının nedeni ise, sosyal yardım alma durumunun kişilerin istihdam edilebilirliğini belirleyen bir takım faktörlerle korelasyonunun olma ihtimalidir. Aynı modelleme işsizlik süresi için de yapılmıştır.

İstihdam ve işsizlik süresi modelleri kesit zamanlı hazard modeli (logit) kullanılarak tahmin edilmiştir. Logit bu kapsamda kullanılabilecek modeller içerisinde (proportional hazard, probit model ve logit) en iyi model olarak bulunmuştur. Parametrik olmayan tahmin sonuçlarına göre, sosyal yardım alanların almayanlara göre istihdam sürelerinin daha kısa; işsiz kalma sürelerinin ise daha uzun olduğu görülmüştür. Ancak, bu sonuçlar kişilerin gözlenebilir ve gözlenemeyen özelliklerini dikkate almamaktadır. Söz konusu özellikleri de dikkate aldığımızda, sosyal yardım almanın işsizlik süresini uzattığı görülmüştür. Diğer taraftan, sosyal yardım alma durumunun istihdam süresi üzerinde anlamlı bir etkisi bulunamamıştır. Türkiye'deki sosyal yardım sistemi kişilerin formal veya enformal çalışma kararlarını etkileyecek bir yapıdadır. Çünkü pek çok sosyal yardım programında, sosyal sigorta kaydının olmaması bir ön koşuldur. Ancak, formal sektördeki ortalama ücretin enformal sektöre göre çok yüksek olması kişilerin sosyal yardım alabilmek için formal işlerini bırakmalarına neden olabilecek bir husus değildir. Aynı şekilde sosyal yardımların enformal sektörde çalışma kararını da etkilemeyeceği düşünülmektedir. Çünkü enformal sektörde çalışmak sosyal yardım almanın

önünde bir engel değildir. Ayrıca, enformal sektördeki ortalama ücret, ortalama sosyal yardım miktarından da daha yüksektir.

Politika önerileri

2011 genel seçimleri süresince yoksulluk gündeme gelen en önemli konulardan biri olmuştur. Aslında, söz konusu seçimleri diğer seçimlerden farklı kılan en önemli özelliği farklı siyasi partilerin yoksulluğu azaltma yönünde önerdiği farklı stratejilerdir. Ancak, yoksullukla mücadelenin uzun soluklu bir süreç olduğu gözden kaçırılmamalıdır. Siyasi partilerin iktidar sürelerinin (5 yıl) sonunda tamamlanmamış işler olmayabilmektedir. Yeni hükümet ise bir önceki hükümetin bıraktığı yerden devam etmeyebilir. Ülkemizde mevcut sosyal yardım sisteminin yeniden yapılandırmaya ihtiyacı bulunmakta ancak bunun uzun vadeli bir bakış açısı ile yapılması gerekmektedir. Bunun yanı sıra, yeni sistem değişen ihtiyaçlara cevap verebilecek esneklikte olabilmelidir. Çünkü, yoksulluk dinamik bir süreçtir. Örneğin, bu tezde gösterildiği üzere yoksulluk artık daha kalıcı bir hal almıştır ve sosyal yardım sisteminin bu yeni duruma cevap verebilecek nitelikte olması gerekmektedir.

Yoksulluğa tek bir politika aracı ile müdahale etmek ilgili politikaları eşgüdümlü bir biçimde uygulamak kadar olumlu sonuç vermeyecektir. Bu kapsamda kişilerin hem korunması hem de geliştirilmesi önem taşımaktadır. Koruma, kişilerin yoksul kaldıkları sürece sosyal yardımlarla desteklenmesine karşılık gelmektedir. Geliştirme ise, kişilere eğitim gibi imkanlar sunularak verimliliklerinin ve dolayısıyla kazançlarının artırılması anlamına gelmektedir. Söz konusu iki unsurum eşgüdümlü bir biçimde uygulanması önem arz etmektedir. Yoksullukla mücadelede çocuklara özel önem gösterilmelidir. Yoksulluk zincirinin kırılmasında yoksul çocukların temel eğitimden başlamak üzere gerekli eğitimlerini tamamlamaları sağlanmalıdır. Bunun yanısıra, yaşam boyu öğrenim fırsatlarının sunulması da önem arz etmektedir.

Etkin bir yoksullukla mücadele için, uygulanan politikalarda yoksul kesim içinde çalışabilir durumdakiler ve çalışamaz durumdakiler şeklinde bir farklılaşmaya gidilmelidir. Çalışabilir durumda olmayan kişilerin düzenli sosyal yardımlarla desteklenmeleri büyük önem arz etmektedir. Çalışabilir durumdaki yoksul kesim için ise sosyal yardım uygulamaları bu kesimin daha iyi işlerde istihdam edilmelerine yönelik programlar ile birlikte uygulanmalıdır.

Bu çalışmanın sonuçlarına göre, yoksul kişilerin yoksul kalmaya devam etmeleri hem kişilerin özelliklerinden hem de duruma bağımlılıktan kaynaklanmaktadır. Dolayısıyla, uygulanacak politikalarda kişilerin hem bilgi ve beceri düzeylerinin düşük olduğu hem de yoksul kalmanın getirdiği olumsuz etkileri taşıdıkları dikkate alınmalıdır. Bunun yanısıra, sosyal yardımlara ilişkin bulguların gösterdiği gibi, sosyal yardımların işgücü arzı üzerinde olumsuz bir etkisi olabilir. Bu nedenle, sosyal yardımlarla işgücü piyasası arasındaki bağlantının kurulması oldukça önemlidir. Sosyal yardımlar çalışabilir durumdaki yoksul kesim için bir takım aktivasyon politikaları (mesleki eğitim, staj gibi) ile birlikte yürütülmelidir.

Aktivasyon politikalarının iki ayağı olmalıdır. Bunlardan ilki, beşeri sermayeyi artırmaya yönelik faaliyetleri içermelidir. Yoksul kesimin genellikle eğitim düzeyinin düşük oluşu bu kişileri işgücü piyasasında da dezavantajlı duruma düşürmektedir. Bu kişilere ayrıca iş arama destekleri verilmelidir. Tüm bunlar yapılırken, kişiye sosyal yardım verilerek hayatlarını idame ettirmeleri de sağlanmalıdır. Ayrıca, bu kişilerin kendilerine güvenlerini artırmaya yönelik bir takım danışmanlık hizmetleri de sunulmalıdır. Bu sistemde hem yararlanıcının hem de devletin karşılıklı sorumlulukları bulunmaktadır. Devlet, kişiye sosyal yardım sağlamak, iş arama desteği, danışmanlık hizmeti, mesleki eğitim verme gibi yükümlülüklere sahip iken, yararlanıcının da gerekli eğitimlere katılması, aktif bir biçimde iş araması ve teklif edilen uygun işleri kabul etmesi gibi sorumlulukları mevcuttur.

Sosyal yardım sistemi ile ilgili ortaya çıkan bir sorun da, sosyal yardımların yoksulluktaki duruma bağımlılığı önlemek yerine duruma bağımlılığa yol açabilecek bir yapıda olmasıdır. Bunun önemli nedenlerinden biri, sosyal yardımların çoğunlukla enformal çalışan kesime gitmesidir. Bu da, kişilerin formal işlerde iş arama çabasını azaltabilir. Ayrıca, formal sektörde ancak en düşük ücretle çalışan çocuklu haneler için yoksulluk durumu söz konusu olabilir. Dolayısıyla, uygulamanın yarattığı bir haksızlık da söz konusudur. Bu nedenle, gerekli yasal düzenlemelerin yapılarak kayıtlı çalışan muhtaç kesimin de sosyal yardımlardan yararlanabilmesi sağlanmalıdır.

Sosyal yardım sistemi ile ilgili en önemli sorunlardan biri şüphesiz yoksul ve yoksul olmayan ayrımının yapılmasının zorluğudur. Söz konusu durum, haketmeyen kişilerin sistemden yararlanmasına ancak hakeden bazı kesimlerin yararlanamamasına yol açmaktadır. Kişilerin gelirlerinin görülebildiği bir veri tabanının olmayışı, yoksul kesimin tespit edilmesinin önündeki önemli bir zorluktur. Sistemdeki değerlendirme mekanizmasının iyileştirilmesi önem arz etmektedir.

İleride yapılacak çalışmalar için öneriler

Bu çalışmada kullanılan veri seti 2006 ve 2007 yıllarını kapsayan ve panel özelliğe sahip Gelir ve Yaşam Koşulları Araştırması'dır. Araştırma kapsamındaki yıl sayısının artması yapılan analizleri daha da güçlendirecektir. Daha uzun dönemli bir veri seti bu kişilerin yoksulluğa yeniden grime oranlarının da görülmesini sağlayacaktır. Ayrıca, yoksullukta kalma sürelerine göre kişilerin özelliklerini bilinmesi de hangi gruplar için yoksulluğun daha kalıcı olduğunun ortaya çıkarılmasında önemli olacaktır. Hazard modeller kullanılarak yoksullukta kalınan süreye göre değişen çıkış olasılıkları hesaplanabilir. Bu şekilde, yoksul kalınarak geçirilen süre arttıkça, çıkış

olasılığının nasıl etkilendiği de görülebilir. Ayrıca böylelikle, hazard modellerle bu çalışmanın bulgularının ne ölçüde uyuştuğu da test edilebilir.

Yoksulluk riskine en fazla maruz kalan grupların (çocuklar, tarım sektöründe çalışanlar gibi) yoksulluk durumları daha iyi anlaşıldıkça yoksullukla mücadele daha etkin olacaktır. Bu nedenle, bu kesimlere yönelik dinamik yoksulluk analizleri yapılmalıdır. Bu kesimin durumundaki değişiklikler zaman süreci içinde izlenmelidir. Yapılan anket çalışmalarına niteliksel bir takım modüller eklenip bu kişilere yönelik daha ayrıntılı çalışmalar da gerçekleştirilebilir. Örneğin, gıda yoksulluk oranı %1'in altındadır ancak bu gıda yoksulluğuna maruz kalan bir kesimin varlığını da göstermektedir. Dolayısıyla, toplamda rakam çok yüksek olmasa da, gıda yoksulluğu ile karşı karşıya olan bazı insanlar bulunmaktadır. Bu kişilerin de zamanla hangi süreçlerden geçtiklerinin izlenmesi önem taşımaktadır.