POVERTY DYNAMICS IN TURKEY

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This paper examines poverty dynamics in Turkey using a nationally representative panel data covering the 2005–08 period. The aim is to understand mobility in and out of poverty and its correlates. We find that almost a quarter of the poor are persistently poor. The conditional and unconditional exit rates that we estimate are within the range of values reported for developed countries in the literature. That the income events—but not transfers—dominate both poverty entries and exits is indicative of the major role labor markets play in the lives of the poor. In particular, we argue that given the characteristics of the poor and modest levels of social assistance, the reason for mobility rates close to European averages must be sought in the informal economy.

1. INTRODUCTION

Poverty has long been a neglected issue in both the politics and public discussion in Turkey. This is not due to generous public assistance programs or the unusually small poverty incidence, but mainly due to the general acceptance that because of close kin and family ties and informal networks, the poor are helped out and poverty spells do not last long. Indeed, due to informal networks but also Turkey's agrarian base, food poverty has always been very low at around 1 percent despite some 17–28 percent poverty incidence measured on the basis of the food and non-food basic consumption basket (TurkStat, 2011). However, recent changes in economic and social relations are pointing to the emergence of a new form of poverty that is likely to be more permanent in nature.

Starting in the 1950s, a massive migration flow from rural to urban areas occurred in Turkey in search of better livelihoods. Two important factors caused the move to be poverty uplifting: (1) the availability of jobs in urban areas; and (2) cheap housing through shanty towns (Öncü, 1988; Buğra, 1998; Işık and

Pınarcıoğlu, 2001; Buğra and Keyder, 2003). The industrialization effort of Turkey in the 1950s and 1960s meant that jobs were available in big cities. The rural masses used their kinship ties not only in obtaining jobs but also in locating urban land to invade. Indeed, an important characteristic of the early squatter settlements (*gecekondu*s) was the concentration of migrants from the same geographic region. In the post-1980 period, the adoption of neo-liberal economic policies brought with it an unprecedented increase in the informal economy. The rapid growth in services, changing industrial relations, in particular the loss in union power, and practices like outsourcing deteriorated the position of the urban working poor. The deterioration of internal terms of trade against agriculture (Celasun, 1986), however, continued to create an important push factor out of rural areas. Since the 1990s, deliberate government efforts to regularize shanty towns have further reduced the possibility of building irregular settlements, thereby eliminating an important mechanism that enabled the integration of the poor in society (Buğra and Keyder, 2003; Pınarcıoğlu and Işık, 2008).

The changing structure of the economy toward informality has meant more precarious livelihoods for the urban poor. Close to 30 percent of the urban work-force are employed without any social security coverage (TurkStat, 2009). The McKinsey Global Institute (2003) estimates the productivity gap between formal and informal businesses in Turkey to be in the order of 30–40 percent—a figure not too different from the rates estimated in Latin American countries (Perry *et al.*, 2007). Taymaz (2009) finds even higher productivity gaps. Under these circumstances it is, perhaps, not surprising that wages in the informal sector are considerably lower than in the formal sector. Dayıoğlu and Ercan (2009) find monthly earnings of informal wage workers to be 47.8 percent of formal sector workers. Furthermore, Taymaz (2009) finds the assignment to the informal sector to be non-random: both wage workers and entrepreneurs are negatively selected to the informal sector in terms of education and experience.

Another important change affecting the new poor has been the urban–rural link. Early comers to the city maintained their relations with their extended families in rural areas so that when the going got tough they could seek refuge in rural areas where family based farming meant that they could always obtain work. However, the agricultural sector is also being transformed in Turkey. Although small scale family establishments still dominate agricultural production, the implementation of agricultural reform policies in the early 2000s, whose aim has been to align the agricultural sector with the workings of the market economy, essentially meant that certain agricultural activities were no longer economically viable. The drastic fall in the number of family-run establishments weakened the urban–rural tie and resulted in the loss of a valuable source of livelihood in crisis situations.

Understanding the nature of poverty, that is what proportion of the population is in poverty for how long and the composition of the poor, carries great importance in shaping social policy. While the static aspects of poverty have been the subject of various studies in Turkey (Akder, 2000; TÜSİAD, 2000; World Bank, 2003; World Bank and TurkStat, 2005; Yükseler and Türkan, 2008), the dynamic aspects have not been quantified before. Empirical work elsewhere has shown that static poverty analysis falls short of depicting the poverty experiences of individuals especially as it relates to poverty persistence (Bane and Ellwood,

1986; Jenkins, 2000). For instance, longitudinal studies have shown that poverty is more prevalent than static analysis suggests but that a small proportion of individuals remain in poverty for long periods of time. As Jenkins (2000) argues, "a dynamic perspective leads to different anti-poverty measures" (p. 532). In developing countries where social policy is often not at the top of governments' agendas, and therefore limited resources are available for social programs, careful targeting requires that all aspects of poverty be understood.

This paper examines the transition in and out of poverty and its main correlates in Turkey using a nationally representative panel data. Throughout the analysis we look for signs of permanency in poverty and try to understand the reasons behind it. The paper contributes to the poverty literature by providing a case study on poverty dynamics from a developing country. This is also the first large scale quantitative study that analyzes poverty dynamics in Turkey.

The paper is organized as follows. Section 2 presents the data and methodology used in the paper. Section 3 discusses poverty incidence based on cross-sectional data. Section 4 analyzes exit and entry rates into poverty using longitudinal data. Section 5 considers poverty persistence: Section 5.1 discusses persistence on the basis of single spells and estimates the mean duration of poverty spells, while Section 5.2 looks at re-entry. Section 6 discusses income and demographic events that push individuals into poverty and pull them out. Section 7 describes the characteristics of the poor and persistent poor. Section 8 concludes.

2. Data and Methodology

The empirical analysis in this paper is based on the Survey on Income and Living Conditions (SILC) of the Turkish Statistical Institute (TurkStat). SILC is the only survey in Turkey that carries a panel feature. The first round of the survey was carried out in 2006 so that we are able to use four rounds of the survey for analyses. In each round approximately 12,800 households are interviewed. In 2006, 12,736 households were visited and interviews were conducted with 30,407 individuals above the age of 14.[1] Out of these, 6411 individuals were followed for a period of four years. In this study we consider individuals of all ages (adults and children) so that in a four-year balanced panel we have 8962 observations.

The main variable of interest is household income, which is the sum of cash and in-kind incomes of all household members net of taxes but inclusive of transfers accruing to the household over a period of one year. All information is collected retrospectively in the month of the interview, which is between April and July of each year. The reference period for all income related information is the previous calendar year but it is the previous week for most labor market indicators. The poverty status of individuals is determined by comparing household income corrected for household size and composition to the poverty line determined for the year in question. We use the Eurostat adult equivalence scale in correcting the household income, which counts the first adult in the household as 1, additional adults as 0.5, and children (individuals younger than 14) as 0.3 adult equivalents. The poverty line is a relative one, taking the value of 60 percent of the median

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[1]The non-response rate among households was 8.9 percent. Among individuals it was 0.1 percent.

income in each year under study. Hence, if an individual's equivalized household income falls below the poverty line we designate that person to be poor.

An important aim in the poverty dynamics literature is to identify the transient poor from the permanent poor. Transient poverty is thought of as a short-term phenomenon with perhaps not as serious effects on individual well-being as compared to permanent poverty, which implies a permanent state of low welfare. The empirical work in identifying the two has mainly proceeded in two directions. One strand of literature is based on Bane and Ellwood (1986) who introduced to the poverty literature a spell-based approach to measuring poverty. They define a poverty spell to mean ". . . continuous periods during which income falls below the poverty line" (p. 6). Exits from poverty, therefore, refer to the ending of a poverty spell. Individuals who remain in poverty for a large number of periods (in short-panels this is often defined as the entire observation window) are defined as permanently poor. The other strand of literature can be referred to as the "components-approach," where the welfare indicator (often income or consumption) is modeled and an attempt is made to rid the welfare indicator of transitory shocks (Jenkins, 2000; Yaqub, 2000). Permanent poverty is defined on the basis of the welfare indicator purged of transitory shocks. As Yaqub (2000, p. 4) argues, these two approaches have different implications. While the "spells-approach" distinguishes between individuals who are permanently poor and those who are not, the "components-approach" distinguishes individuals' chronic poverty from transitory poverty.

This study follows the "spells-approach" in analyzing poverty dynamics in Turkey and identifying the long-term poor.[2] We follow Bane and Ellwood (1986) and estimate exit probabilities non-parametrically, taking into account the time spent in poverty. Using these exit probabilities it is then possible to estimate the length of time that people are poor. Using the U.S. Panel Study on Income Dynamics (PSID) from 1970 to 1982, Bane and Ellwood (1986) find that most poor experience poverty for short periods of time but that the majority of people who are poor at a point in time experience long spells of poverty. They estimate the average duration of poverty for individuals beginning a poverty spell to be 4.2 years. In duration analysis incorporating left-censored observations—i.e., individuals who happen to be poor at the start of the observation period—is not straightforward. Given that we have a short-panel, we ignore left-censored observations so that the risk set at the beginning is comprised of individuals who happen to be poor in either wave 2 or 3 and not poor in the previous wave.[3] Individuals exit the risk set when they become non-poor in later waves (i.e., in waves 3 or 4). Those who remain poor at the end of the 4th wave are the right-censored observations, and we also take them into account in calculating exit probabilities.

The analysis of Bane and Ellwood—as well as ours—is based on single spells of poverty. In other words, individuals who experience poverty at any time during the four-year period exit the risk set regardless of whether they go on to

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[2]See Bane and Ellwood (1986), Stevens (1999), and Jenkins (2000) for a critique of the components-approach.

[3]Ignoring left-censored observations may bias the exit rates upwards since these observations are more likely to come from the long-term poor who have lower exit rates. This point must be kept in mind in interpreting the results. For a discussion and application, see Arranz and Canto (2010).

become poor in a later wave. This is criticized by Stevens (1999) who suggests that the occurrence of multiple spells of poverty leads to the underestimation of poverty persistence. Using PSID but a longer time period than Bane and Ellwood, Stevens estimates that half of those who escape poverty fall back in within the next four years. Given that we only have four years and income has a reference period of one year, incorporating multiple spells in our analysis is difficult. Instead, we estimate re-entry rates in much the same way as exit rates to get an idea about the size of potential underestimation. In calculating re-entry rates, our risk set consists of individuals who happen to be non-poor in waves 2 or 3 but poor in the pervious wave.[4] Individuals exit the risk set when they become poor in later waves. If they do not, they constitute the right-censored observations.

Besides estimating exit and re-entry probabilities non-parametrically by taking into account the length of the poverty spell, we also carry out simpler analyses to depict transition rates in and out of poverty. For these analyses, we make a note of changes in the poverty status of individuals over the four-year period and then pool the data on transitions to calculate the transition rates. By construction, unconditional exit and entry rates include both left- and right-censored observations.

3. Incidence of Poverty: Cross-Sectional Evidence

Poverty statistics in Turkey have a short history dating back to 2002 when the Turkish Statistical Institute launched its annual budget survey. In that year, the Institute estimated the incidence of poverty on the basis of the basic needs basket at 27 percent. Favorable economic conditions over the 2002–06 period, as well as improved social assistance were instrumental in reducing poverty to 20.5 percent in 2005. The SILC, which was launched for the first time in 2006, put relative poverty in 2005 at 18.4 percent when half the median income is taken as the poverty line. Poverty incidence increases to 25 percent when the poverty line is set at 60 percent of the median income.

Over the studied period, the poverty rate—measured at 60 percent of the median income—fluctuates between 22.8 percent and 25 percent (Appendix Figure 1A). Regardless of whether we use 50 or 60 percent of the median income as the poverty line, we find the poverty rate to register a drop from 2005 to 2006. However, a year later, the poverty rate increases again, reaching 24 percent as measured by 60 percent of the median income. The poverty rate in 2008 remains at its 2007 level when measured at 60 percent of the median income, but continues to rise when measured at half the median income.[5] Both measures, however, identify 2005 as the worst and 2006 as the best year in terms of the poverty incidence. Taking the 2005–08 period as a whole, and using 60 percent of the median income as our yardstick, we find the average poverty incidence to be 23.8 percent. This

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[4]In calculating re-entry rates, we also take into account individuals who are poor in the beginning of the observation period.

[5]The global financial crisis hit Turkey in the last quarter of 2008. In that year, the economy continued to grow but at a rather slow rate of 0.7 percent. The growth rates in 2005, 2006, and 2007 were 8.4 percent, 6.9 percent, and 4.7 percent, respectively (TurkStat, 2009).

figure is considerably higher than the EU-27 rate, which fluctuates around 16–17 percent (Appendix Figure A1). In the remainder of the paper, we set the poverty line at 60 percent of the median income primarily to render our results comparable with other studies in the literature, where the most common approach is to use 60 percent of the median as the poverty line.

4. Poverty Transition Rates

The current poverty status depends heavily on the previous poverty status with a sizeable proportion of poor/non-poor at time $t - 1$ remaining poor/non-poor at time t as well. For instance, 91.4 percent of the non-poor at time $t - 1$ are also not poor at time t (Appendix Table A1). Notwithstanding this observation, we also find that a significant proportion of poor individuals—35 percent—escape poverty the following year, so that 65 percent of the poor at time $t - 1$ remain poor at time t. There are also new entrants to poverty who constitute 8.6 percent of the non-poor at $t - 1$.[6]

Some of the movement in and out of poverty may result from measurement error in income and/or the adult equivalence scale. In other words, although the position of the individual is not changed, we might be recording a transition in or out of poverty. To see how sensitive our estimates are to measurement error, we draw a 10 percent band around the poverty line so that we disregard small movements in and out of poverty. In an alternative exercise, we expand this band to 20 percent. With a 10 percent band, the transition rates change only slightly: we observe a 0.4 and 1.1 percentage point drop in the entry and exit rates, respectively (Appendix Table A1). Increasing the band to 20 percent causes the entry rate to drop by 1.5 percentage points to 7.1 percent. Owing to a relatively lower base, this change affects the entry rate by 17.4 percent. In the case of the exit rate, the change is in the order of 6.4 percentage points (or 18.3 percent). Hence, as long as the measurement error problem is not severe—and there is no reason to think that it is—the exit and entry rates reported above are likely to reflect true life experiences of individuals in Turkey.

Next, we examine the proportion of individuals making a transition by size of income changes. We find that 39–51 percent of the poor from various income groups escape poverty by simply moving to an income level just above the poverty line (i.e., they have incomes that are no greater than 1.25 times the poverty line after the move) (Appendix Table A2). These individuals can still be considered under the risk of poverty. Our examination also shows that movements into poverty happen with smaller income changes than movements out of poverty. Between 63 and 72 percent of the non-poor from various income ranges enter poverty due to an income drop that puts them just below the poverty line (i.e., to an income level that is no less than 75 percent of the poverty line). Moving to a very high or low income is not very common.

How do the entry and exit rates in Turkey compare with other countries? Andriopoulou and Tsakloglou (2011) find an average exit rate of 35.3 percent and

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[6]Some of these new entrants might in fact be re-entrants.

entry rate of 7 percent for 14 European countries[7] over a seven-year period using the European Community Household Panel. They estimate the highest exit rates for the Netherlands (46.2 percent) and Denmark (44.5 percent) and the lowest rates for Luxembourg (30.4 percent) and Portugal (29.7 percent). In Spain both exit and entry rates are high at 39.1 percent and 9.5 percent, implying high mobility. Ayllon (2008) finds slightly higher exit and lower entry rates for Spain at 41.6 and 8.2 percent, respectively. Cappellari and Jenkins (2004) estimate an average exit rate of 41.5 percent and entry rate of 5.8 percent over nine waves of the British Household Panel.[8] For Australia, the exit rate is found to be 44.7 percent and entry rate 6.6 percent in a four-year panel (Buddelmeyer and Verick, 2007).[9] The exit and entry rates we compute for Turkey fall within the range of estimates reported above. In other words, Turkey does not stand out as having exceptionally high exit or low entry rates. In fact, if we consider that our estimates are based on a shorter timeframe than most other studies, higher exit and lower entry rates than what we have found would be expected for Turkey. Time matters because the poor at t − 1 consists not only of individuals who have recently become poor but the long-term poor as well. In a long panel, the likelihood that the long-term poor are over-represented in the sample is higher, giving rise to lower exit rates. The likelihood of re-entry, on the other hand, is higher over a longer time frame. Hence, the first set of evidence indicates that mechanisms that prevent entry into poverty and encourage exits do not work as well in Turkey as they do in Europe and other developed countries discussed above. We return to this point later in the paper.

5. Poverty Persistence

The number of years that the poor spend in poverty is an important indicator of poverty persistence. The data indicate that for 43.8 percent of individuals who were poor for at least one year out of four, the duration of the longest spell in poverty is one year. The longest spell in poverty for another 22.1 percent is two years and for 10.9 percent it is three years. Individuals who were poor all four years constitute 23.1 and 7.9 percent, respectively, of the poor and total of poor and non-poor populations.[10] Hence, a sizeable proportion of individuals experience poverty for a rather long time.

Another way of looking at persistence is to combine the information on the duration of the longest spell in poverty with recurrence. Borrowing the termi-nology from Muffles *et al.* (2000), 31.4 percent of the poor can be considered "transient poor" in the sense that they have experienced poverty only once and

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[7]Countries included are Austria, Belgium, Germany, Denmark, France, Spain, Greece, Finland, Italy, Ireland, Luxembourg, the Netherlands, Portugal, and the U.K. Andriopoulou and Tsakloglou employ an unbalanced panel.

[8]Andriopoulou and Tsakloglou (2011) find an entry rate of 34.1 and exit rate of 8 percent for the U.K. Unlike Andriopoulou and Tsakloglou, Cappellari and Jenkins use a balanced panel and cover individuals aged 20–59.

[9]Buddelmeyer and Verick use 50 percent of the median income as the poverty line.

[10]When we use half the median income as the poverty line, the proportion of the population who are poor in all four waves drops only slightly to 6 percent. Using the lowest quintile to identify the poor does not change the proportion of the persistent poor.

TABLE 1

POVERTY SPELL EXIT AND RE-ENTRY PROBABILITIES BY LENGTH OF SPELL TO DATE

Spell Length	Exit Probability (S.E.)	Re-Entry Probability (S.E.)	Sample Size	
			At Risk of Exit	At Risk of Re-Entry
1	0.497 (0.015)	0.355 (0.013)	1384	1503
2	0.407 (0.027)	0.326 (0.022)	410	517

Notes: Balanced panel. The poverty line is 60 percent of median equivalized household income. Longitudinal weights are used.

Source: Survey of Income and Living Conditions 2006–2009.

for only one year in four years. However, an even higher proportion—34.1 percent of the poor—has been poor continuously for three or more years. Between these two categories we have the mid-term poor (14 percent) who have experienced poverty only once but for a period of two years,[11] and the recurrent poor (20.5 percent), those who have been poor for multiple times but never for longer than two years. Note also that the 23.8 percent poverty rate from cross-sectional data increases to 34.4 percent when the analysis is performed on longitudinal data. The latter figure shows the proportion of individuals experiencing poverty at least once over a four-year period. That the "prevalence rate" of poverty is higher than the cross-section rate indicates that it is not the same individuals who are poor year after year and that there is churning within the poor population. Andriopoulou and Tsakloglou (2011) report the prevalence rate of poverty to be almost twice as high as the headcount ratio in the 14 EU countries studied. Jenkins *et al*. (2001) find a similar difference in the U.K. That the gap is smaller in Turkey indicates that there is less of a churning in the poor population than in European countries.

5.1. *Poverty Spell Exit Probabilities*

In an alternative exercise, we compute exit probabilities non-parametrically by taking into account the spell length.[12] The exit probability after one year in poverty is 49.7 percent (Table 1). This rate declines to 40.7 percent for those who have experienced poverty for two years. That the exit probabilities decline with poverty duration is a stylized fact in the poverty literature and can in part be explained by the heterogeneity among the poor. Those possessing more favorable characteristics such as better education, longer job experience and the like, are the first ones to leave, leaving behind a growing proportion of individuals with adverse characteristics. Another potential explanation is that the poverty experience itself increases the risk of poverty. Poverty experience may lead to demoralization, loss of motivation, and depreciation of human capital (Biewen, 2009), as well as be a

[11]A multivariate analysis (results available upon request) shows that the mid-term poor have characteristics that differentiate them from the transient poor—as compared to the transient poor, their household heads are more likely to be less educated and hold informal jobs outside agriculture, but less likely to be employers.

[12]Note that left-censored observations are ignored in this exercise, and therefore the rates reported here are not comparable to raw probabilities reported earlier.

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drain on accumulated resources. The longer one stays in poverty the bigger the damage it leaves, hence exiting poverty becomes more difficult.

When compared to Bane and Ellwood (1986), whose estimates for exit rates in the first two years are 44.5 and 28.5 percent, the exit probabilities in Turkey are higher. However, they are close to the rates estimated for European countries. Jarvis and Jenkins (1997), for instance, estimate the exit rate for the U.K. at 54 percent after one year and 51 percent after two years in poverty. Jenkins *et al.* (2001)'s more recent estimates for the U.K. are 53.7 percent and 34.9 percent. Andriopoulou and Tsakloglou (2011) find the average annual exit rates for 14 European countries for the first two years to be 53.1 percent and 39 percent, respectively. In none of the 14 countries considered by Andriopoulou and Tsakloglou does the exit rate after a year in poverty fall below 44 percent.

In an attempt to find the average duration of poverty, we use the results in Table 1 and estimate the proportions of individuals who complete a poverty spell, assuming that they had just begun it. Accordingly, 49.7 percent of individuals exit poverty within a year and 71.6 percent within two years. For the rest—28.4 percent—poverty lasts for three years or more. To be able to calculate the average duration of poverty, we have to make an assumption about the exit rate beyond the second year. If we assume an exit rate of 30 percent, the average duration of poverty turns out to be 2.6 years.[13] Reducing the exit rate to 20 percent increases the mean duration to 3.1 years. Assuming a 10 percent exit rate, on the other hand, increases the mean duration to 4.7 years. These exercises confirm the earlier findings that poverty is not a short-lived phenomenon in Turkey.

5.2. *Poverty Spell Re-Entry Probabilities*

As argued by Stevens (1999), exit rates estimated based on single spells are likely to overestimate the true figures. To have an idea about the size of overestimation, we estimate re-entry rates non-parametrically by taking into account the duration of non-poverty spells. The results given in Table 1 (column 3) indicate that 35.5 percent of the poor (in the first or the second wave) re-enter poverty after remaining just one year out of it. The re-entry rate declines to 32.6 percent for the poor who spend two years out of poverty.

In comparison to other countries, the re-entry rates in Turkey are on the high side. Jarvis and Jenkins (1997) estimate re-entry rates in the U.K. to be 29 percent after one year and 11 percent after two years out of poverty. Similarly, Andriopoulou and Tsakloglou (2011) find the average of 14 EU countries to be 26.6 percent in the first year and 17.5 percent in the second year. The highest re-entry rates in the first year are estimated at 34.4 percent for Ireland and at 35.1 percent for Spain. For both of these countries, the second year rates drop substantially to 19.2 percent and 20.4 percent, respectively. Hence, the re-entry rate in Turkey is not only higher but the risk of re-entry does not drop as sharply with years spent out of poverty as it does in other European countries.

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[13]We use the formulation in Bane and Ellwood (1986, pp. 10–11) in estimating the mean spell duration.

TABLE 2

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 labor market earnings	43.5	43.5
Other members' labor market earnings	21.0	64.5
Social assistance income	7.8	72.3
Contributory transfers	3.0	75.3
Rental and property income (incl. imputed rent)	16.1	91.4
Other income decrease or increase in expenditures	3.5	94.9
Demographic event		
Needs rise (same household head)	0.2	95.1
Household head change	4.9	
All spell endings		100.0

Notes: Poverty line is 60 percent of median equivalized household income. Longitudinal weights are used.

Source: Survey of Income and Living Conditions 2006–2009.

6. ENTRY AND EXIT EVENTS

Next, we look at the trigger events behind the poverty dynamics. Following Bane and Ellwood, we classify these as income and demographic events. Income events include changes in household head's labor market earnings, other members' labor market earnings, rental and property income (inclusive of imputed rents), transfer income, and the like. Demographic events, on the other hand, cover changes in household composition as well as a change in headship. In the classification of events, a hierarchal system is used to generate mutually exclusive categories where we first check whether the headship of the household has changed. As Bane and Ellwood argue, a change in headship represents a significant change in family structure, and therefore we give it precedence over others. Hence, if the headship changes, we classify the event as a demographic event. If there is no change in the headship, we compare the change in income to change in needs. If the change in income is larger in magnitude as compared to the change in needs, we classify the event as an income event; otherwise, we classify it as a demographic event.[14] Table 2 shows that by far the most important event that causes an individual to enter into poverty is a fall in the earnings of the household head. In total, 43.5 percent of the spell beginnings are associated with this factor. Next comes other members' earnings with a 21 percent share, and rental and property income with a 16.1 percent share. A fall in social assistance income accounts for 7.8 percent of the transitions into poverty. In contrast to income events, demographic events are only responsible for 5.1 percent of the transitions into poverty.

The events that are instrumental in pushing individuals into poverty are also instrumental in pulling them out. In particular, increases in the head's earnings are

[14]As discussed earlier, income has a reference period of one year and is collected retrospectively. Demographic information, on the other hand, is collected at the time of the interview. To determine whether there have been any changes in the demographics of the household we compare the current year with the previous year. In doing so, our observation window drops from four to three years.

TABLE 3
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 labor market earnings	40.5	40.5
Other members' labor market earnings	20.8	61.3
Social assistance income	10.0	71.3
Contributory transfers	4.7	76.0
Rental and property income (incl. imputed rent)	15.1	91.1
Other income increase or decrease in expenditures	1.3	92.4
Demographic event		
Needs fall (same household head)	0.0	92.4
Household head change	7.6	
All spell endings		100.0

Notes: Poverty line is 60 percent of median equivalized household income. Longitudinal weights are used.
Source: Survey of Income and Living Conditions 2006–2009.

responsible for 40.5 percent of the exits (Table 3). Note that this figure, although quite substantial, is slightly lower than the figure noted for entries. One explanation for this can be the labor supply adjustment on the part of other household members. However, we find that increases in the earnings of other household members are responsible for about the same proportion of exits and entries (20.8 percent vs. 21 percent). The very low female labor market participation in Turkey (25 percent as compared to 70 percent for men in 2008 (TurkStat, 2009)) helps explain the dominant nature of the household head's (who is predominantly male) earnings in poverty dynamics. Social assistance and other transfer income (a big chunk of which is contributory, such as pensions and survivor's benefits) contribute more to exits than entries, but account for only a small proportion of exits (14.7 percent in total). This result is to do with the limited coverage as well as the modest nature of transfers in Turkey. Social assistance was received by 68 percent of the poor in 2008 and, on average, amounted to 54.3 percent of the poverty line. Rental and property incomes, including imputed rents, on the other hand, are responsible for 15.1 percent of the exits. Given that individuals who are income-poor are likely to own assets of lower value, the small role these income sources play in the upward mobility of the poor is not surprising.

Demographic events are responsible for a slightly larger proportion of exits than entries (7.6 percent vs. 5.1 percent). On closer examination, we find that for both exits and entries, a change in headship is often accompanied by a change in household composition. For instance, in the case of exits, in only 19.3 percent of the households does the household composition (measured in adult equivalents) remain the same. In 61.3 percent of the time, a headship change occurs along with a drop in needs. Although a variety of cases are observed, the most common occurrence is for some members to leave the household to join another household or to set up their own households.

In the case of entries into poverty, in 51.4 percent of the cases where a headship change is observed, needs fall. The most common reasons are for the household head to leave the household to join or set up another household and

TABLE 4

PROPORTION OF TRANSITIONS INTO AND OUT OF POVERTY BY TYPE OF CHANGE IN INCOME AND NEEDS

Transitions into Poverty				
Income Decreases and Needs Stay Same	Income Decreases and Needs Increase	Income and Needs Decrease	Other*	All
60.6	22.1	17.3	0.0	100.0
Transitions out of Poverty				
Income Increases and Needs Stay Same	Income Increases and Needs Decrease	Income and Needs Increase	Other*	All
60.7	13.9	25.2	0.2	100.0

Notes: Poverty line is 60 percent of median equivalized household income. Longitudinal weights are used. * Less than 20 observations.
Source: Survey of Income and Living Conditions 2006–2009.

his/her death. However, in a sizeable proportion of cases (33.6 percent), a change in headship occurs though needs remain the same. In other words, although the individual who used to be the head still resides in the household, some other member is given the headship status. This is likely to occur as a result of a change in the income status of household members.

To see how sensitive our results are to the hierarchical system used, we employ an alternative classification system where we look at transitions associated with any combination of events. The general conclusion that income events dominate demographic events in poverty exits and entries holds with this classification as well (Table 4). In particular, we find that 60.6 percent of transitions into poverty and 60.7 percent out of poverty occur due to changes in income without any change in needs. In the case of entries, we can add another 17.3 percent to income events since for this proportion of individuals, needs decrease at the same time that income decreases. In the case of exits, the corresponding addition is even higher at 25.2 percent.

That income events account for a distinctly higher proportion of exits and entries is a common finding in many countries (see, for instance, Bane and Ellwood (1986) and McKernan and Ratcliffe (2002) for the U.S.; Oxley *et al.* (2000) for six OECD countries; Canto (2003) for Spain; and Jarvis and Jenkins (1998) for the U.K.). What differentiates the Turkish experience from the other countries is the sheer size of the income events; they account for over 90 percent of exits and entries.

Demographic events account for a smaller share of both entries and exits in Turkey because major events that may increase the risk of poverty, such as divorce/separation or the moving out of the youth from the parental home to establish a separate household, happen at much lower frequencies due in part to cultural reasons. Indeed, the (crude) divorce rate is limited to 1.6 per thousand (TurkStat, 2012), while 96 percent of 20–30-year-old single men and women still lived with their parents in 2010. Even after marriage, the establishment of a separate household might be delayed. Koç (2007) estimates that, on average, married men leave parental home approximately two years after the initiation of marriage. Although married women leave the parental home earlier, they often do so to join their husband's family. Perhaps the most common demographic event

that happens at a higher frequency in Turkey than in most European countries is the arrival of a new baby. However, the fertility rate at 2.1 births per woman, which is just above the replacement level, suggests that for most households this is likely to be a planned event.

What these exercises have shown is that contrary to the general belief, non-contributory transfers, which include social assistance from public sources as well as private transfers, do not account for a large proportion of exits from poverty. Transfers from friends and family are perhaps important in surviving short-term crises but they are not likely to be high or persistent enough to push the poor out of poverty. Neither are they likely to prevent the household from falling back in. The most important mechanism that pushes the poor out of poverty is the household head's earnings and to a certain extent the earnings of other household members. Labor market outcomes, therefore, are the main determinants of the livelihoods of low income households.

7. Who Are the Persistent Poor?

In Table 5 we tabulate the characteristics of the persistent poor—those who were poor in all four waves—against those who were poor in wave 1 and that of the general population. Consistent with the trigger events, we find the persistent poor to possess characteristics that make them vulnerable in the labor market. They are younger and less educated. The education gap is especially striking: while 12.4 percent of the population is illiterate, the corresponding rate among the persistent poor is 39.8 percent. Non-employment and non-wage employment are more prevalent among the persistent poor as well; while 38.4 percent of the working age population (poor and non-poor) are gainfully employed, the corresponding rate among the persistent poor is 28 percent.[15] Although the majority of households in Turkey are one-earner households, where the male head is the main breadwinner, this is more often the case among the poor and the persistent poor. The proportion of households with two or more workers gets as low as 7.1 percent among the latter. Moreover, own-account work and unpaid family work are more pervasive among the persistent poor. As discussed earlier, the labor market in Turkey is dualistic with the informal sector playing a significant role. Indeed, we find that the overwhelming majority (93.1 percent) of the persistent poor who are employed work in the informal sector.[16] However, it is also important to note the high share of informal employment among the total of the poor as well.

The discussion above highlighted the lower earnings potential of the persistent poor. In terms of needs, they are at a disadvantaged position as well. While the average household size (measured in adult equivalents) for the general population and the poor is 2.7 and 3, respectively, for the persistent poor it is 3.3. In terms of family types, households with children are over represented among the persistent poor. As a result, 51.4 percent of the persistent poor are children younger than 15 years of age.

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[15]The labor force participation rate in Turkey is below 50 percent. The rate reported in the text and in Table 5 excludes unpaid family workers.

[16]As measured by social security registration.

TABLE 5

INDIVIDUAL CHARACTERISTICS BY POVERTY STATUS

	Poor in All Waves	Poor in Wave 1	All People in Wave 1
Person type			
Male adult	21.3	25.4	33.4
Female adult	27.3	32.4	36.6
Child	51.4	42.2	30.1
Age composition			
0–14	51.4	42.2	30.1
15–34	29.3	31.1	33.3
35–44	8.5	11.7	13.9
45–59	7.5	9.0	14.5
60+	3.3	6.0	8.2
Education (persons 15+)			
Illiterate	39.8	28.0	12.4
No diploma	16.6	11.9	7.2
Primary education	34.1	41.9	41.0
Secondary education	7.2	10.9	13.3
High school	2.3	7.1	18.1
Tertiary education or more	0.0	0.2	8.0
Gainfully employed (persons 15+ exc. unpaid family workers)	28.0	30.5	38.4
Employment status (persons 15+)			
Wage earner and casual worker	51.6	51.0	61.4
Employer	0.6	1.6	5.8
Own-account	28.3	25.6	18.7
Unpaid family worker	19.5	21.9	14.1
Informal employment (persons 15+)	93.1	84.1	51.1
Household economic status			
No gainfully employed persons	28.1	21.8	15.4
Household head is employed only	54.7	57.3	51.9
Two or more workers	7.1	10.5	22.2
One worker (not head)	10.1	10.4	10.5
Household type			
Household with children	94.7	86.9	71.0
Household without children	5.4	13.1	29.0
Average household size (adult eq.)	3.3	3.0	2.7

Notes: Poverty line is 60 percent of median equivalized household income. Longitudinal weights are used.
Source: Survey of Income and Living Conditions 2006–2009.

8. CONCLUSION

In this paper we investigated poverty dynamics in Turkey using a nationally representative panel data. In particular, we looked at entry and exit rates, exit rates conditional on time spent in poverty, re-entry rates, trigger events that push individuals into poverty and pull them out, and finally, the characteristics of the poor and the persistent poor. Due to lack of data and the belief that informal networks are efficient in getting people out of poverty, these issues remained unexplored in Turkey.

Our analyses have shown that almost a quarter of the poor or 8 percent of the population are persistently poor. The annual exit rate from poverty is 35 percent, and the entry rate is 8.6 percent. Although these rates fall within the range of estimates reported in the literature, one has to also account for the fact that our

estimates come from a shorter panel. Nonetheless, the estimated exit rates conditional on the time spent in poverty are also close to the European estimates. Under modest assumptions and ignoring multiple spells of poverty, we have estimated the mean poverty spell to be in the order of two-and-a-half years. However, we have also presented evidence that this is likely to be a conservative estimate since re-entry into poverty is on the high side. Our results have indicated an annual re-entry rate of 35.5 percent after just one year out of poverty. Hence, our results refute the claim that poverty is a short-lived phenomenon in Turkey.

Similar to the findings in the literature, the main events that push individuals out of poverty and pull them in are found to originate from the labor market. Given the modest amount of public transfers, we are not surprised to find that social assistance from private and public sources is responsible for a small proportion of exits and entries. Indeed, Turkey differs from European countries in the extent of social protection afforded to its citizens. In 2009, while social protection expenditures (inclusive of contributory as well as assistance programs) were 17.2 percent of GDP, the corresponding figure in EU-27 was 29.5 percent. Although due to the use of different methodologies in compiling these figures the two estimates are not exactly comparable, our examinations show that the gap is likely to be bigger than what the above figures suggest. Our findings also discredit the general belief that informal family networks are effective in pulling individuals out of poverty. Demographic events account for an even smaller proportion—less than 10 percent—of poverty dynamics.

The modest social assistance from public and private sources essentially means that a potentially important mechanism that can lift the poor out of poverty and prevent their re-entry has a limited role to play in Turkey. While in countries with more established and generous social protection systems, assistance kicks in shortly after the individual falls into poverty, the process is slower and the amount of disbursement more modest in Turkey. Despite the limited role of this mechanism, exit rates close to European averages indicate that some other mechanism is at play. The comparatively similar exit but higher re-entry rates can be reconciled by the large informal economy in Turkey. Our finding that the re-entry rate after two years out of poverty does not fall as much as it does in other countries can also be explained by the role the informal sector plays in poverty dynamics. The high turnover in informal sector jobs makes entry and exit easy, while low wages prevent exits from being permanent. That the risk of re-entry does not fall substantially with the time spent out of poverty also attests to the potential difficulties informal sector workers face in making a transition to the formal sector, where wages and job protection are higher.

The characteristics of the poor and the persistent poor show their vulnerability in the labor market: they are less educated and younger as compared to the general population; in their households fewer members work, and when they do, a larger proportion work on own-account or as unpaid family workers. These characteristics make them prime candidates for informal sector jobs.

That the majority of the persistent poor are children calls for an immediate action to reduce poverty. Policy should be concerned with raising exit and lowering entry rates. Given the size of the informal economy and its low productivity, this is a great challenge. The problem of informality is not simply an issue of

enforcement. Taymaz (2009) shows through a set of simulation exercises that stricter enforcement would lead a large number of informal firms to leave the market since they will not be able to achieve high enough increase in productivity while operating formally. He also predicts a change in the composition of the workforce that would be to the disadvantage of the less skilled and younger workers. Notwithstanding this challenge in the labor market, low outlays in terms of social protection indicate that there is room for improvement. Correctly targeted programs may help reduce the burden of poverty especially on children.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Table A.1: Raw Poverty Transition Matrix (%)
Table A.2: Distribution of Transitions by Size of Income Changes (%)
Figure A.1: Percent of individuals in poverty