

# CORRUPTION AND ECONOMIC DEVELOPMENT

# 2012

ERF 18th ANNUAL CONFERENCE  
March 25-27, 2012 | Cairo Marriott Hotel, Cairo, Egypt

## Labor Mobility between the Formal/Informal Divide in Turkey: Evidence from Individual Level Data

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# LABOR MOBILITY BETWEEN THE FORMAL/INFORMAL DIVIDE IN TURKEY: EVIDENCE FROM INDIVIDUAL LEVEL DATA

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## 1. Introduction

Informality has long been a salient phenomenon in developing country labor markets, thus been addressed in several theoretical and empirical research since the fifties. In the early literature, most analyses hinged on static and aggregate approaches. With the introduction of advanced panel data sets and techniques, more profound and thorough dynamic research was empowered. Mobility analysis, in particular, now became readily available and led a paradigm shift in the labor markets literature. It provided the means for investigating the implications of and motivations for workers transitions into and out of informal employment. Moreover, mobility analysis enabled examination of the determinants of duration and turnover rates in the informal sector, the extent to which and how specific individual and job characteristics influence worker flows; thereby illuminated the abstract informality incidence to a greater extent.

In this study, we implement the mobility analysis to Turkish labor markets with a specific emphasis on informality. Turkey, given its economic and demographic dynamics, provides rich evidence for a growing, heterogeneous and multifaceted informal labor market (World Bank, 2010; Aydin et al., 2010; Ozdemir et al., 2004; Kenar, 2009; Bulutay and Tasti, 2004; DPT, 2009). However, the existing evidence on labor informality in Turkey is mixed and scant. Data limitations and conceptual obscurity have hindered detailed analyses. Along these lines, we aim to contribute to the existing literature by providing a diagnosis of dynamic worker flows across distinct labor market states and identifying the effects of certain characteristics (i.e. age, gender, education, work experience, etc.) on variant labor mobility patterns. To the best of our knowledge, this study is the first such to undertake a labor mobility analysis in the context of formal/informal division in Turkey.

More specifically, we first develop and discuss a set of statistics based on annual worker transitions across distinct employment states utilizing Markov transition processes. As Bosch and Maloney (2007:3) demonstrate: “labor status mobility can be assumed as a process in which

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changes in the states occur randomly through time, and probabilities of moves between particular states are governed by Markov transition matrices”. Following Bosch and Maloney (2007), we will use the novel Turkish Income and Living Conditions Survey (SILC) panel data set to compute the transition probabilities of individuals moving across different labor market states. The panel feature allows us to trace same individuals in the working age population over four years between 2006 and 2009, thereby identify worker transitions between the labor market states. Notwithstanding, the transition analysis is mostly descriptive in nature, and falls short of explaining the dynamics underlying intersectoral transitions. To understand the nature of labor mobility patterns in more detail, we estimate multinomial logit models for six labor market states, using several individual, household and job characteristics as explanatory variables.

In line with recent literature, we define the labor market states to be formal salaried (FS), informal salaried (IS), informal self-employed (SE), formal self-employed (FSE), unemployed (U), and not active (N). This categorization facilitates investigating various possible transitions into and out of informal employment. Disentangling the formal/informal divide further into salaried/self-employed subgroups provides the means for assessing the extent to which and how informality prevails in different forms. Moreover, the inclusion of unemployed and inactive categories enables a more comprehensive labor market analysis, as informal employment displays substantial transitivity into/out of these inactivity states.

The remainder of the paper is organized as follows: Section 2.2 provides a brief literature review on the mobility in the formal/informal labor markets. Section 2.3 describes the data, definition of main variables and methodology used. The results will be presented in Section 2.4, Section 2.5 draws some conclusions and implications for policy.

## **2. Literature Review**

The static summary statistics of the allocation of workers obscure important aspects of the dynamism of worker flows among sectors. The introduction of reliable panel data gave rise to a new set of techniques in the informality literature. Starting with the pioneering work of Maloney (1999), several attempts have been made to model labor mobility by transition matrices constructed from transition probabilities of actual movements of the same workers across sectors. In this way, more profound analyses on labor market dynamics were made possible.

Maloney (1999), in his seminal work, examines mobility patterns between different sectors using Mexican panel data. He aims to test the traditional dualistic theory of formal and informal labor markets. He analyzes the worker transition patterns across six sectors of work including the formal salaried, informal salaried, self-employed, contract workers, out of labor force and unemployed. He first calculates the raw probability of moving from an initial sector to a terminal sector, and then standardizes it by the terminal sector size, separation rates from the initial sector and job openings in the terminal sector. He finds that the standardized mobility indices ( $V_{ij}$ , as he names) depict symmetrical flows across all sectors of work. and that labor mobility and turnover rates are high. To this extent, he argues that urban labor markets exhibit an integrated structure, as opposed to a dualistic one that implies low formal sector turnover rates, largely unidirectional flows from informal to formal sectors. Moreover, Maloney investigates the dynamics underlying worker transitions with a multinomial logit model. He uses experience, schooling and the initial real wage as covariates to influence the probabilities of moving from one sector to another. The results, as Maloney reports, also support an integrated labor market structure.

In a recent comprehensive study, Bosch and Maloney (2010) use panel data from Argentina, Brazil and Mexico in order to analyze and compare labor market dynamics. The continuous time Markov transition processes derived from an underlying discrete time counterpart are used to compute transition statistics across five labor market states, i.e. out of labor force, unemployed, informal salaried, formal salaried and self-employment. The raw intensities (Q-statistic) of transition, propensities (R-statistic) of transitions conditional on turnover rate, adjusted propensities (C-statistics) controlling for turnover and job vacancies, a general mobility index and the average duration in each sector are computed (Bosch and Maloney, 2010: 624). The intensities indicate that duration is highest in formal salaried and lowest in informal salaried. Furthermore, informal salaried to formal flows are far higher than the reverse flows. Moreover, the mobility between informal-salaried and self-employed are found to be quite higher than that of formal-salaried and self-employed. The authors find that propensities display transition patterns to be reversed in some cases, and a closer resemblance of an integrated market view. In the adjusted propensities, the patterns are further smoothed and pretty symmetrical across formal salaried-self employment and the formal-informal salaried flows, indicating a well-integrated labor market. Furthermore, disaggregating flows across age and across the business cycle, Bosch and Maloney (2010:631) conclude that “a substantial part of the informal sector, particularly the self-employed, corresponds to voluntary entry, although informal

salaried work appears to correspond more closely to the standard queuing view, especially for young workers”.

Gong et al. (2004) explore the mobility patterns in five urban cities of Mexico among the three labor market states of formal sector, informal sector and not working. Two separate five-wave panels over the period 1992 to 1995 are used in the study. The purpose is to determine the mobility patterns and how they are associated with individual characteristics and business cycles and whether the transitional evidence support a traditional view of informal work as the disadvantaged sector. Gong et al. (2000:10) first present quarterly transition matrices for flows between non-employment, informal-sector employment and formal-sector employment for both panels. They find the probabilities of not working-informal sector transitions and remaining in formal sector to be higher than that of not working-formal and informal, respectively. Then, a reduced form dynamic multinomial panel logit model with random effects is run to examine the effects of age, education, gender, ethnicity, region and previous labor market states. The results designate a positive relationship between education level and formal sector employment, a negative (positive) relationship between the income of other family members and informal sector employment (non-employment). A novel approach is used to calculate the simulated transition probabilities for different individual characteristics and market conditions. Overall, Gong et al. (2000) find evidence in favor of the traditional labor market view where informal sector is inferior, a temporary queuing device before transition into formal work, and entry and exit rates of formal employment are low.

With the same purpose of assessing whether labor mobility patterns are in line with a traditional labor market view and how they are affected by individual characteristics, Bernabè and Stampini (2009) employ quarterly 1998-1999 panel data for Georgia. Differing from the previous studies, they consider six labor market states (inactivity, unemployment, formal wage employment, informal wage employment, self-employment and farming). The study is also distinct, to our knowledge, in the fact that all individual transitions even if observed at least once are pooled regardless of the period in order to build the transitions matrix. In addition to calculating the standard transition probability indices, a new statistic for testing segmentation theory is introduced. The share of temporary mobility, defined as those workers who move to another state at any time but found in the original state at the final interview relative to workers who made at least one transition, is deemed to measure the desirability of each status (Bernabè and Stampini, 2009:9). Six multinomial regressions are run for each state of departure with an

aim to scrutinize the effects of several individual characteristics on the likelihood of each transition. The evidence overall imply that informal employment is involuntary and more volatile than formal employment. On the other hand, the self-employed are found to comprise both voluntary and subsistence activities. Age, gender, education and urban/rural variables are again confirmed to be significant in mobility patterns. Bernabè and Stampini (2009) also extended the existing labor mobility literature by accounting for different macroeconomic conditions and farming activities.

Pagés and Stampini (2009) contribute to the existing literature on labor market segmentation and mobility in several ways. They provide a comparative analysis of labor mobility patterns for six countries. The sample includes Argentina, Mexico and Venezuela, which have been addressed by several previous researches; and extends to Albania, Georgia and Ukraine which have been understudied. Instead of running dynamic multinomial logit regression, Pagés and Stampini (2009) estimate transition matrices separately for skilled and unskilled labor as measured by education level. The main contribution of the paper, however, is a new benchmark mobility index that complements the standard transition probabilities. The measure accounts for the size and job openings in initial and terminal states, thereby eliminates all mobility barriers, and renders all states to be equally preferred and equally likely to become the destination sector. They compare the standard transition matrix to a steady state matrix and to a benchmark transition matrix (Pagés and Stampini, 2009: 386). The evidence designates a high level of mobility between formal-salaried and informal-salaried, but a low level of mobility between self-employed and formal-salaried. The skill levels are found to be statistically insignificant in affecting mobility patterns.

Duryea et al. (2006) provides an empirical mobility analysis of nine countries of Albania, Georgia, Hungary, Poland, Russia, Ukraine, Argentina, Mexico, and Venezuela. Informality is mainly defined based on the social security definition, but tailored to contract status in countries where data is lacking. Conditional annual probabilities of moving from an initial sector  $i$  to another sector  $j$  are calculated to form transitional matrices for each of the six labor market states. The evidence indicates unemployment is more persistent in transition countries, formal sector jobs have a higher duration than informal sector jobs, transition into unemployment is higher from informal sector compared to the formal sector. Furthermore, the mobility within salaried employment categories (i.e. formal-salaried and informal-salaried) exceeds that of between salaried employment and self-employment.

Woltermann (2002) studies the search methods in Brazilian labor market using the Monthly Employment Surveys of 1999. The study, however, deviates from the literature by considering a segmented labor market (formal employment, informal employment, self-employed, inactive and searching) rather than a standard dualistic “working” or “searching” approach. He examines the impact of different job search methods, education, gender and household head position on labor market transitions through a multinomial logit model. By definition, searching (unemployment) is taken to be the reference category, and only transitions out of the searching status are considered. In this way, Woltermann (2002) tests whether the likelihood of moving to a new state versus remaining in searching status is affected by any of the explanatory variables.

Calderon-Madrid (2000) analyzes transitions from the second to the third quarter of 1993, 1995 and 1997 in Mexico. He identifies 6 possible sectors or job statuses as formal and informal sectors, unemployment, out of the labor force, self-employment, paid by commission or percentage, and unpaid jobs. He finds a) that the time spent in a job and the so-called four and six-year retention rates are short relative to OECD countries; b) that between 15% and 20% of wage earners in the formal sector move out to another job status in only one quarter, and that the figures for other job statuses (informal workers, self-employment, unpaid jobs, etc.) are much higher; and c) that the share of each job status within the total population did not significantly change, albeit a high level of individual movements among job statuses. This last feature implies that the spaces left by the flow of persons out of one job status and into another one are to a great extent filled by a flow of persons moving in the opposite direction. In order to explain further the dynamics behind the transitions, he estimates hazard functions. The analyses show that in informal employment and self-employment job statuses, persons with formal education spend less time compared to those without formal education. Through estimation of hazard functions, Calderon-Madrid finds that the median time spent by workers in the formal sector relative to the median time spent by those in the informal sector is approximately 3.5 times higher.

Maloney (1997), sketching patterns of mobility among sectors by considering panels for 1987-1991, posits that a high degree of mobility of workers characterized the labor market in Mexico. His analysis is based on a transition matrix that enabled him to compare a person’s job status at a certain point of time with the status that he or she had twelve months earlier. His analysis excluded women and persons with a level of education above high school.

Krstić and Sanfey (2007) examine the labor mobility in Bosnia and Herzegovina (BH), employing two waves of panel data from 2001 and 2004 Living Standard Measurement Study (LSMS). They consider a wider range of labor status; namely informal employees, informal self-employed, farmers on own farm and unpaid family workers make up the informal employment; formal wage employees and formal self-employed make up the formal employment; unemployed and inactive make up the remaining labor force. First by grouping informal and formal employment into one category, and using the “Shorrocks index”<sup>3</sup>, Krstić and Sanfey (2007) compare the overall mobility level relative to other transition countries and find mobility to be high in Bosnia-Herzegovina. Later on, Krstić and Sanfey (2007) further decompose labor flows into formal-informal employment; sectors and wage- and self-employment categories. The main findings are that a) informal workers who moved into formal employment remained in the same sector, b) almost all informal employees who became formal workers remained in the same employment type, c) agriculture though being the least mobile sector exhibited significant flows between farmers and unpaid family workers (Krstić and Sanfey, 2007:320). Next, a probit regression is run to scrutinize the dynamics of employment transitions. The explanatory variables (i.e. gender, age and age squared, marital status, completed level of education, resident status and health status, size of the household, other household members employment status, consumption quintiles and location, sector of economic activity and whether the worker remained in the same job) are used to explain the probability of moving from informal to formal employment. Education level, service sector, remaining in the same job, residential status variables are found to have significant explanatory power.

Lehmann and Pignatti (2007) investigate employment flows in Ukraine using a rich data set from 2003-2004 Ukrainian Longitudinal Monitoring Survey (ULMS). They estimate multinomial logit transitions both within and between formal and informal employment statuses. There are several explanatory variables such as gender, age, schooling, tenure, part-time, voluntary-involuntary, marital status, number of children and region. The results vary according to the type of transition. Next, Lehmann and Pignatti (2007) derive transition matrices for 4 and 6 labor market states following Maloney (1999). That is, they estimate the “P” -matrices of raw transition probabilities, “Q” -matrices of destination sector size standardized probabilities and

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<sup>3</sup> The Shorrocks index is proportional to the fraction of individuals who changed their labour market status within a given period. It is calculated as  $S = (n - \text{tr}(P))/(n - 1)$ , where  $n$  is the number of states and  $\text{tr}(P)$  is the trace of transition matrix  $P$ .  $S$  takes the values in the interval  $[0, n/n - 1]$ ;  $S = 0$  when nobody changed their status and  $S = n/n - 1$  when everybody changed their status (Krstić and Sanfey, 2007:318)

“V” -matrices of state occupancy duration adjusted “Q”-matrices. The main findings are that formal employment is the most desirable state, informal employment and unemployment are queuing stages for formal employment, and labor market is segmented.

The methodology of Maloney (1999) is applied to Argentinian case by Canavire-Bacarreza and Soria (2007) for the period 1998 to 2005. Multinomial logit regression models and conditional probability matrices for labor market transitions are estimated. The purpose is to test the effects of economic crises on the evolution of labor mobility. The evidence indicates that more educated people enter easier to formal labor markets, and during the crises when their probability of entering to formal labor market reduces; they tend to adjust their wages and push out of the market less educated people.

Bigsten et al. (2007) question the degree of segmentation and structural dynamics of the Ethiopian labor markets between 1994 and 2004. In this regard, they analyze the evolution of earning gaps, worker transitions and state dependence in sector choice over time. The main labor market statuses are unemployment, public/private sector employment, formal/informal sector employment and wage/self employment. In addition to computing the raw sample transition matrices, Bigsten et al. (2007) estimate dynamic binary sector choice models for four labor market states. However, the analysis is limited to binary techniques and dichotomies. That is, they track the degree of segmentation across different time pairings and estimate probit models for binary sector choices. The main results are that workers’ mobility has increased over time, state persistence has decreased and sensitivity to earning gaps in sector choice has augmented.

### **3. Data**

The data set used in this analysis is drawn from the 2006- 2009 “Income and Living Conditions Survey (SILC)”, which has been conducted by the Turkish Statistical Institute (TurkStat) since 2006. The novel, nationally representative, rich, panel nature of the survey makes it unique and invaluable for the aim and methodology of the study. It provides detailed information on the employment status, social security coverage, working hours, labor and other income, demographic characteristics, living conditions, job characteristics, and socioeconomic conditions of the subjects. The survey results have only recently been released in micro data sets, thus to our knowledge have not yet been used in any other studies.

SILC is designed as a rotating panel in which the sample households and corresponding individuals are traced annually for four consecutive years. Each year the survey is conducted for four subsamples. One subsample is removed and replaced by a new subsample in each year. The samples are selected and assigned survey weights so as to be representative of non-institutionalized Turkish resident population. A two-stage stratified sampling procedure is used in sample selection. The interviews are administered once every year. The sample size is designed considering possible non-response, thereby no replacement is undertaken.

The surveys results are published annually in both cross-section and panel data set formats. The analysis below focuses mainly on the years 2006, 2007, 2008 and 2009, since the micro data set for the following years are not yet released. The original cross-sectional samples consist of 30186 individuals for 2006; 30263 individuals for 2007; 31121 individuals for 2008 and 32539 individuals for 2009. For the specific aim and methodology of our study, the panel samples are modified in a way to comprise only the labor force between 15-64 years of age who are present in at least two consecutive years of the survey. That corresponds to 18343 individuals for 2006-2007; 11462 individuals for 2006-2008; 5422 individuals for 2006-2009. SILC can be obtained from the Turkish Statistical Institute ( TurkStat).

Subsuming a rich set of information on household expenditure, income and assets, employment and living conditions, SILC is invaluable for implementing a detailed labor mobility analysis for Turkey. First and foremost, the questionnaire allows us to distinguish between employed/non-employed, salaried/self-employed, formal/informal. Along these lines, we distinguish six different labor market states: formal salaried, informal salaried, formal self-employed, informal self-employed, unemployed and inactive. As regards to defining informality, the first internationally agreed operational definition was adopted in the 15<sup>th</sup> International Conference of Labor Statisticians (ICLS) in 1993. According to this definition, informal employment was defined as comprising “all jobs in informal sector enterprises, or all persons who, during a given reference period, were employed in at least one informal sector enterprise”, with informal sector enterprises meaning private unincorporated enterprises, i.e., enterprises that are “not constituted as separate legal entities independently of their owners, and for which no complete accounts are available that would permit a financial separation of the production activities of the enterprise from the other activities of its owner(s)” (Husmanns, 2005:3). Put differently, informality was ascribed to small-scale enterprises; enterprises operating without a legal status and/or employing unregistered workers; and family enterprises with unpaid family

workers and the self-employed (Aydin et al., 2010:3). The ILO definition was later extended to comprise self-employed in informal enterprises (i.e. workers, employer/owner of small firms, own-account workers, unpaid contributing family members); and wage employment in informal jobs (i.e. employees in informal enterprises, casual and domestics workers, industrial outworkers) (Chen, 2007:31). A third definition, in official ILO terms, considers an employment relationship as informal if it is not subject to labor legislation, social protection, taxes or employment benefits (Husmanns, 2005:7). The social security and contract status are by and large the two most common measurement criteria in applied research.

The definitions are adopted to be as consistent as possible to the existing theoretical and empirical literature. Employees working for a wage/salary are defined as formal-salaried if they are registered at the social security institution for their current job, and informal-salaried when they are not. Employers and own-account workers form the self-employed category, which is further divided into formal self-employed if registered at the Social Security Institution and informal self-employed if not. Unpaid family workers are also considered as informal self-employed as in Pages and Stampini (2009:389). Unemployed category comprises individuals who are not working, but actively searching for a job. Individuals are inactive if they are neither working nor searching for a job. In particular, students, retirees, seasonal workers, old or those unable to work, domestic workers are classified as inactive. By disaggregating the labor force into multiple subcategories, we are able to scrutinize the different patterns of labor mobility defined as worker transitions between distinct labor market states.

The frequencies and shares of each labor market category for 2006, 2007, 2008 and 2009 are given in Table 1a. The numbers are quite similar across four years, except for the notable rise in the share of formal-salaried category. As Table 1a illustrates, inactives make up the largest share of total sample, reaching almost 50 percent. Informal self-employment and formal-salaried stand at similar shares of approximately 18 and 16 percents of the total sample, respectively. The remaining sample is comprised of informal salaried at around 10 percent, unemployed at 5 percent and formal self-employed at only 3 percent.

A gender breakdown of distribution analysis is of significant importance in the Turkish labor market. Indeed, the incidence of inactive women still stands as a major virtue of the Turkish labor market, thence distorts most aggregate labor market figures. Along these lines, Table 1b and 1c break down the labor force into men and women, and recalculates the labor market distribution

accordingly. As expected the inactivity rate increases to 70% for women, and falls to 22% for men. That proves the magnitude of inactive women to be a fundamental driving force behind the labor market dynamics. Indeed, the sample proportions of all other labor market states are considerably lower for women compared to that of men. In regards to informality, the figures also reveal an evident fact that almost two thirds of those women who are employed are informal, while men exhibit a more or less equal distribution across informal and formal employment. Further decomposition displays the fact that men are mostly employed in salaried positions, and women in self-employment positions. It is also noteworthy to mention that women show almost no existence in formal self-employment whereas majority of women work as informal self-employed. This fact is a mere reflection of unpaid women family workers in agriculture.

In addition to employment, SILC contains information on the demographics of the individuals such as age, gender, education, marital status, occupation, family composition, work experience, health status, economic sector, and detailed information on living conditions. A number of these variables will be used as covariates in the multinomial logit analysis in the further parts of the study.

In order to provide a general picture, labor informality in Turkey is decomposed across time and by a number of key factors<sup>4</sup>. Table 2 details the sample distribution of informality by gender, age, education, marital status, occupation, sector, employment status, firm size, household type and location for 2006-2009. The decomposition analysis is conducted separately for total employment and non-agricultural employment. The aim is to detach the effects of agricultural sector being 90 percent informal, on the dynamics of labor informality. In the descriptive analysis, we follow TURKSTAT and define the informal employment as those who are employed but not registered to the compulsory Social Security Institution of Turkey (SSI). Accordingly, formal employment refers to those employed who are registered to SSI. Informal employment constitutes approximately over half of the total employment, displaying a decreasing trend through 2006 to 2008 and a slight increase for 2009 which is the year of global economic crisis. Whereas, the picture changes significantly if agricultural workers are excluded from the sample. Non-agricultural informality rates range around 35 percent, reaching its lowest level in 2008. Clearly, agricultural employment, though displaying a decreasing trend, still assumes a sizable weight in the dynamics of Turkish labor market.

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<sup>4</sup> For a more comprehensive decomposition, see Table 3 which details the composition of each of the six labor market states according to multiple variables.

A further breakdown of informality by demographic and socioeconomic factors reveals notable informality patterns. As Table 2 depicts, women are approximately 70 percent informal, where informality among male labor stands at around 45 percent. The figures for men and women exhibit a converging trend towards approximately 40 percent if agriculture is excluded. In terms of age, we see young and elder to be more informal; in both total and non-agricultural employment. Education appears to be perfectly negatively related to the rate of informality, descending from 90 percent for no education to 10 percent for university graduates. Single workers, as opposed to married, tend to be slightly more informal.

The occupational distribution of informality elucidates two notable patterns. It follows that professionals, technicians and clerks are to a large extent formal at around 80-90 percent, whereas skilled agricultural, elementary operations and service workers are mostly employed without being registered to the Social Security Institution (SSI). Needless to say, the figures of informality by occupation are more or less similar for both total and non-agricultural employment. Another central factor underlying the informality dynamics in the Turkish labor market is certainly the sector of economic activity. With regards to this, agriculture assumes the lead in terms of informal employment, reaching a level of almost 90 percent throughout the four year period. Construction sector also exhibits a considerable rate of informality. On the other hand, the sectors of mining, utilities, finance, public administration, education, and health remain mostly formal at around 80 to 90 percents. The informality rates by sector remain to be more or less similar across the four years, except for the construction sector exhibiting a 10 percent decline.

The employment status portrays an even more detectable informality pattern. Regular employees are the least informal at around 20 percent, whereas casual employees, own-account workers and unpaid family workers are typically informal. Employers do not exhibit a remarkable distribution in terms of informality, being only slightly more formal. Exclusion of agriculture from the sample does not alter the informality composition significantly, as opposed to what is expected. Casual employees and unpaid family workers, being employed mostly in agriculture, still remain to be highly informal. The decline in informality rates is confined to about ten percent for the own-account and unpaid family workers when the analysis is restricted to non-agricultural employment.

Firm size displays a perfectly negative relationship with informality, affirming the theory. Accordingly, employment in small firms is typically informal as opposed to that in larger firms being predominantly formal. Excluding agricultural employment, which prevails in smaller firms with ten or less workers, firm size criterion still persists to be negatively associated with informality. Informal employment appears to be more common among non-single households both with/without children. However, the figures somewhat reverses when agriculture is excluded from the sample, concealing a lucid pattern.

To sum up, the summary statistics presented above sets out the preliminary framework of the informality analysis in the Turkish labor market. The sample, as weighted by nationally representative survey weights, characterizes roughly the current aggregate labor market along all dimensions being considered.

## 4. Transition Analysis

### 4.1. Methodology

The use of micro panel data and multi-state stochastic models have led a paradigm shift in the empirical labor market literature. In particular, individual labor market transitions between different labor market states have now become traceable through Markov chain models<sup>5</sup>. As Fabrizi and Mussida (2009:4) summarize, Markov chain models enable estimating transition probabilities when subjects are observed only at discrete time points, and hence exact transition dates are not available.

A random process  $X_t$  defined over a discrete state space  $K = \{1, \dots, K - 1\}$  is called a first-order discrete Markov chain if

$$\Pr (X_t = k | X_{t-1}, \dots, X_1) = \Pr (X_t = k | X_{t-1})$$

If  $X_t$  is a Markov chain and  $j, k \in \{K\}$ , the conditional probability

$$p_{kj}(t, t + 1) = \Pr (X_{t+1} = j | X_t = k) \quad \text{for } \forall t \text{ and } j, k \in K$$

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<sup>5</sup> For detailed discussion on Markov chain models, see Gouriéroux, C. (1989, chapter 5) or the English version translated by Klassen, P. B. (2000, chapter 6).

is called the transition probability of moving from state  $k$  to  $j$  at time  $t$ . If the transition probabilities are independent of time, Markov chain is time-homogenous<sup>6</sup>, that is

$$p_{kj}(t, t + n) = \Pr (X_{t+n} = j | X_t = k) \quad \text{for } \forall t, n \text{ and } j, k \in K$$

Given a finite set of states  $K = \{1, \dots, K - 1\}$ , the transition probabilities can be represented in a discrete time transition probability matrix,

$$P = \begin{bmatrix} p_{00} & \cdots & p_{0K} \\ \vdots & \ddots & \vdots \\ p_{K0} & \cdots & p_{KK} \end{bmatrix}$$

The P matrix can be estimated by the maximum likelihood estimator for  $p_{kj} = \frac{N_{kj}}{N_k}$  where  $N_{kj}$  is the number of transitions from state  $k$  to  $j$  and  $N_k$  is the number of transitions out of state  $k$ .

For our specific purposes, we consider  $X_t$  to denote the labor market state of a given individual at time  $t$ . We define the state space  $K$  to comprise six labor market states; formal salaried (FS), informal salaried (IS), formal self-employed (FSE), informal self-employed (ISE), unemployed (U) and inactive (N). The definitions, as provided above, are adopted to be consistent with the ILO definitions and inclusive for a comprehensive analysis. Along these lines,  $p_{kj}$  refers to the probability of finding a worker in state  $j$  at the end of the period given that the worker was at state  $k$  at the beginning of the period<sup>7</sup>.

In the following analysis, we estimate the P-matrix of raw transition probabilities for 2006-2007, 2006-2008 and 2006-2009. That is, we construct three different P-matrices for one, two and three year transitions. In this way, we are able to compare transition tendencies across different time spans, and hence in a sense test for robustness of the results. Furthermore, given the gravity of the agriculture sector in Turkish labor market, the analysis is conducted separately for both total and non-agricultural employment.

## 4.2. Results

The first thing to notice in Tables 4a, 4b and 4c is that the transition probabilities display a significant level of congruence across the two, three and four year panels. Nevertheless, each case

<sup>6</sup> For further information, see <http://www.math.rutgers.edu/courses/338/coursenotes/chapter5.pdf>

<sup>7</sup> As Lehmann and Pignatti (2007) state, these estimates are close to the true transition probabilities in the absence of round-tripping.

will be discussed below for integrity purposes. Secondly, when agriculture is excluded from the sample, the picture somewhat alters but the changes are mostly limited to Informal self-employed and Inactive categories. Thirdly, the most discernible transition pattern can be observed along the main diagonal of the probability matrix. By definition,  $p_{jj}$  reflects the probability that an individual remains in a given state. The high levels of  $p_{jj}$  imply that majority of the subjects in each category do not move out of their initial labor market state, except for the unemployed.

From 2006 to 2007, we observe that approximately 90 percent of those who are initially formal-salaried remain in their state. This result is well consistent with the traditional approach which sees labor informality as a survivalist strategy when formal employment opportunities are limited (Yu, 2009:3)<sup>8</sup>. Once an individual becomes formal-salaried, he/she is unlikely to leave this state. The almost negligible transitions into other states are typically results of early retirement. When agriculture is excluded, the transition dynamics of the formal-salaried do not alter at all. This finding is a mere reflection of the agriculture being eminently an informal sector.

The informal-salaried, who constitute roughly 10 percent of total employment, demonstrate a higher level of mobility. About 13 percent of those who were employed as informal-salaried in 2006 becomes formal-salaried in 2007. Considering that the reverse transition probability from formal-salaried to informal salaried amounts to only 2.8 percent, this figure is quite noteworthy. This finding indicates that the flows between formal-salaried and informal-salaried are asymmetrical, hence conforms to the conventional one-way flows from informality to informality. Approximately 22 percent of informal-salaried move into non-employed state, either as unemployed or inactive. The transition from informal-salaried to informal self-employed is limited at 7 percent. Exclusion of agricultural employment from the sample appear to have only trivial effects on the transition probabilities of the informal self-employed. This result evinces that agricultural workers do not figure in informal-salaried state.

The formal self-employed category, which amounts to only 3.5 percent of the sample, does not reveal any significant mobility pattern. The most noticeable flow out of formal self-employed is that into informal self-employed. The underlying dynamics for such a transition tendency will be investigated in the next section. For the non-agricultural sample, formal self-employed display almost the same transition pattern, the only exception being a fall in the probability of transition into informal self-employed.

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<sup>8</sup> Fields,1975; Mazumdar, 1976; Bernabe, 2002; Perry et al., 2007

The informal self-employed constitute nearly one fifth of the sample labor market. The outflows are limited to 4 percent into informal-salaried, 4.5 percent into formal self-employed, and 13 percent into non-employment states. Transition to formal-salaried state is almost negligible. Altogether, these figures imply that informal self-employed are usually those disadvantaged who face barriers to mobility. As the labor market composition analysis demonstrates, agricultural employment mostly prevails as informal self-employment. Indeed, the sample weight of this state falls from nearly 18 percent to 4 percent when agricultural employment is left out. Needless to say, the most noticeable effects of excluding agriculture are observed on the transition dynamics of this state. In particular, the transition probabilities of flows into all other states double, except for that into inactive state. When agricultural workers, who constitute the majority are left out, informal self-employment emerges as a rather active state. Transition probabilities, albeit change in magnitude, do not alter the outflow pattern of the informal self-employed. The likelihood of transiting out are, in decreasing order, into inactive, formal self-employed, informal-salaried, unemployed and formal-salaried.

The unemployed are visibly the most mobile among all labor market groups. Nevertheless, they display a rather heterogeneous transition pattern. The remainders are limited to only 27.9 percent, whereas flows into formal-salaried prevail at 15.2 percent, informal employment at 32.4 percent and inactive at 23.8 percent. In other words, unemployed have the highest probabilities of transiting into above named states. These findings, overall, are a mere reflection of the heterogeneity of the unemployed category. The only noticeable inference to be drawn is that for unemployed, probability of transition to informal employment is twice of that to formal employment. It follows that formal employment opportunities are limited and have higher entry barriers. By definition unemployed state is irrelevant to exclusion/inclusion of agriculture; thus the transition probabilities are analogous.

Inactives constitute the largest segment of the sample. Outflows, being almost negligible, reflect the rigidity of the inactive transitions. Reluctance to move of inactives can be explained by a number factors, discouraged workers and women inactivity being the most common. Indeed, the incidence of inactive women still stands as a major virtue of the Turkish labor market, thence distorts most aggregate labor market figures. In fact, the inactivity rate stands at 70 percent for women, whereas for men it is only 22 percent. If agriculture sector is excluded, the sample weight of inactives increase by approximately 10 percents. However, the probabilities of transition into other states are almost identical with the former counterparts.

Considering the 2006-2008 panel in Table 4b, we can easily notice that the transition probabilities remain to be more or less the same. The only changes, albeit hardly noticed, are a rise in informal-salaried to formal-salaried transition probability from 12.9 percent to 14.7 percent; a fall in formal self-employed to informal self-employed transition probability from 12 percent to 8.3 percent, and a fall in informal-salaried to informal self-employed transition probability from 7 percent to 5.5 percent. If we further increase time span to comprise 2006-2009 transitions, as Table 4c illustrates the picture is still the same. Along these lines, it can be argued that increasing the time dimension of our panel does not alter the transition patterns in the Turkish labor market. In addition, no significant effect of the global economic crisis in 2008 on the labor market can be detected. The same conclusions apply when non-agricultural employment is considered.

## 5. Multinomial Logit Models

### 5.1. Methodology

In order to characterize mobility patterns in more detail, we utilize multinomial logit (MNL) specification to model the labor market transitions. Indeed, MNL model offers a statistically rigorous way to predict the probability of each possible transition as a function of individual characteristics<sup>9</sup>.

Formally, a simple MNL model specifies that:

$$\Pr (X_{i,t+n} = j | X_{i,t} = k) = \frac{\exp(Z_i' \beta_{j|k})}{\sum_{l=0}^K \exp(Z_i' \beta_{l|k})}$$

where  $Z_i$  are case-specific regressors for each individual  $i$ ;  $X_{i,t} \in \{0, 1, 2, \dots, K\}$  is the labor market state of individual  $i$  at time  $t$ . In order for such a MNL model to be identifiable, one outcome  $k \in K$  is specified as the base or reference group such that  $\beta_{k|k} = 0$ . Thereafter the parameter vector  $\beta$  is straightforward to estimate by maximum likelihood estimation (MLE)

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<sup>9</sup> There are a number of specifications for the MNL model. As Bernabe and Stampini (2008: 37) indicate, dynamic multinomial logit model -see Gong (2004)- is theoretically the most appropriate model which accounts for unobserved heterogeneity. However, the estimation of a dynamic MNL is empirically infeasible for our specific case due to data limitations and sensitivity.

method. For MNL models, however,  $\beta$  coefficients are seldom used for inference<sup>10</sup>. Instead, marginal effects of the independent variables are computed as<sup>11</sup>:

$$\frac{\partial \Pr (X_i = j)}{\partial z_m} = \Pr (X_i = j | Z) \cdot \left[ \beta_m^j - \sum_{l=0}^K \beta_m^l \Pr (X_i = l | Z) \right]$$

In this study, we modify the above MNL methodology to be compatible with our specific purposes and comparable to the existing studies on other countries. We estimate six simple multinomial logit regressions for each labor market state of departure, namely formal-salaried, informal-salaried, formal self-employed, informal self-employed, unemployed and inactive. For robustness check purposes, this analysis is repeated for all three samples (i.e. 2006-2007, 2006-2008 and 2006-2009 panels) as was done in the transition analysis section. To this end, dependent variable in each regression conveys a different interpretation. It is defined as a categorical variable which takes the value 0 if the individual maintains his/her labor market state from 2006 to 2007<sup>12</sup>. Whereas for each of the five possible outflows, values from 1 to 5 are assigned. Consider the subsample of individuals who were employed as formal-salaried in 2006. The dependent variable takes the value “0” if the individual remained as formal-salaried in 2007. If the individual changed state in 2007, the dependent variable assumes values from 1 to 5 for transitions into informal-salaried, formal self-employed, informal self-employed, unemployed and inactive states, respectively.

The explanatory variables include demographic characteristics of the individual in 2006 (gender, age, education level, marital status) and employment characteristics of the individual (occupation, sector of economic activity, firm size, work tenure, work tenure squared). A comprehensive table of variable definitions is provided in Appendix 1. Note that for the unemployed and inactive, employment characteristics cannot be used as explanatory variables, hence are kept out of the regressions.

The transition analysis has shown that our evidence does not change on a large scale if agricultural workers are excluded from the sample. The only notable differences in mobility patterns are observed for informal self-employed, as they are mostly employed in agriculture.

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<sup>10</sup> As Greene (2004:722) states, the parameters of the multinomial logit model do not have a direct intuitive interpretation in regards to their sign or magnitude. Their use for drawing statistical inference in empirical research is uncommon.

<sup>11</sup> The time subscript (t and n) is omitted for expositional convenience.

<sup>12</sup> For presentation brevity, the variable definitions are given for 2006-2007 panel only. Same definitions apply when 2007 is replaced with 2008 and 2009, for the 2006-2008 and 2006-2009 panels respectively.

Notwithstanding, we conduct the analysis for both total and non-agricultural samples considering robustness purposes.

Multinomial logit regressions are estimated by Maximum Likelihood Estimation (MLE). The marginal effects are computed at the means of the explanatory variables. The means and standard deviations of the explanatory variables are provided in Appendix Table A1. All empirical analyses are done with STATA version 10.

## **5.2. Results**

In this section, the results of the multinomial regressions will be discussed in regards to the determinants of labor market transitions, with a special emphasis on informal/formal divide. The presentation adopts the standard multinomial logit regression interpretation within the following framework: The marginal effects depict how the given explanatory variables influence the probability of leaving the initial state for a certain destination state relative to the probability of no outflow (Bukowski, 2005: 16)<sup>13</sup>.

### **5.2.1 Transitions from Formal-Salaried state**

Turning first to the 2006-2007 transitions out of formal-salaried, MNL results appear to provide significant insight into the observed outflows. In this case, coefficient estimates reflect the impact of covariates on the probability of leaving formal-salaried state relative to the probability of remaining. In this framework, we can conclude that formal-salaried women are significantly less likely than men to become informal-salaried. Furthermore, individuals aged 25-44 and/or 45-64, highschool and/or university graduates, services sector workers, medium and/or large size firms are associated with a significantly lower probability of moving to informal-salaried state<sup>14</sup>.

The probability of becoming formal self-employed is significantly lower for those formal-salaried who are female, aged 25-44, single, has no education and/or university degree. Moreover, workers in agriculture and/or construction sectors seem to be less likely to move into formal self-employed state, as do workers in medium and/or large size firms. As the household size increases, the likelihood of formal-salaried to formal self-employed transitions significantly falls.

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<sup>13</sup> We first review the 2006-2007 transitions, followed by those of 2006-2008, and lastly 2006-2009.

<sup>14</sup> Note that the interpretation should be considered as relative to reference individuals aged 15-24, primary school graduates, industry sector workers, and workers in small size firms.

Formal-salaried who have high school and/or university degree are significantly less likely to move to informal self-employment relative to primary school graduates. Women aged 45-64 have a lower probability of performing formal-salaried to informal self-employment transition, as do those employed in agriculture sector. Moreover, workers in firms of size 50 or more as compared to those in firms of size less than 10 are less likely to become informal self-employed.

Considering the transition out of formal-salaried to unemployed state, high school and/or university graduates are significantly less likely than primary school graduates to perform this outflow. The probability of becoming unemployed is lower for agriculture and/or services sector workers as compared to industry sector workers. Firm size variable also displays a significantly negative relationship with formal-salaried to unemployed transition, as expected.

In the context of formal-salaried to inactive transitions, being women increases the likelihood of outflows. Those formal-salaried individuals aged 25-44 are less, whereas those aged 45-64 are more likely to become inactive. Marital status variable significantly determines the probability of transition into inactive state. Confirming our priors, married individuals exhibit outflows to inactivity lower by 0.75 percentage point. Similarly, as the household size increases the probability of moving to inactivity falls. For education variable, the same conclusions apply. High school and/or university graduates are significantly less likely to become inactive than to remain formal-salaried, compared to primary school graduates. Experience, measured by total years of employment, displays a significantly negative relationship with outflows to inactivity. Furthermore, the outflows to inactivity are less likely for agriculture, services and large firms.

### **5.2.2. Transitions from Informal-Salaried state**

University graduates are significantly more likely than primary school graduates to move into formal-salaried state, as opposed to remain as informal-salaried. As experience increases, the likelihood of switching to formal-salaried state significantly falls. The multinomial logit coefficient estimates for economic sector demonstrate that workers in agriculture, services and construction sectors are all less likely to move into formal-salaried employment compared to industry sector workers. It comes by no surprise that all firm size dummies significantly influence the likelihood of outflow into formal-salaried state.

Informal-salaried women are significantly less likely than men to become formal self-employed. The likelihood of transition into formal self-employed state is significantly lower for both none education and university graduates. As experience increases, an individual is less likely to quit informal-salaried state to become formal self-employed. Informal-salaried workers in construction and services sectors display a lower probability of transition into formal self-employed state, compared to workers in industry.

Considering the outflows to informal self-employed state, female dummy is significantly negative at 5 percent. Probability of transition into informal self-employment is significantly lower for individuals working in the construction sector, compared to those in industry sector. Household size and experience variables are significantly negatively related to becoming informal self-employed.

As regards to probability of becoming unemployed, household size and experience variables appear significant. As household size increases, the likelihood of an informal-salaried individual to become unemployed decreases. The same conclusions can be drawn for the experience variable. Individuals who has no education are more likely to lose their informal-salaried job and become unemployed.

Women compared to men and individuals aged 45-64 compared to those 15-24 are significantly more likely to leave informal-salaried employment and become inactive. Whereas, as household size increases the probability of outflows into inactivity significantly falls. Secondary school graduates have a lower tendency to move into inactivity compared to primary school graduates. As experience increases, the likelihood of informal-salaried to inactive transitions significantly decreases. Lastly, informal-salaried workers in services sector are less apt to become inactive compared to workers in industry sector.

### **5.2.3. Transitions from Formal Self-Employed state**

The discussion on the transitions of formal self-employed will deliberately be kept brief, since the number of formal self-employed in the sample is only minimal. The most evident factor in transitions out of formal self-employed state appears to be gender. The female variable, albeit being significant for all outflows, should be considered with caution. Since the number of female formal-self employed is only minor, the marginal effect seems to be artificially high.

The probability of outflows into formal-salaried state is significantly lower for individuals with no education as compared to the primary school graduates. The female-age interaction dummy appears to be significant at 1 percent level, thereby indicating that formal self-employed female of age 45-64 are significantly less likely to become formal-salaried. Identical conclusions apply for outflows into informal-salaried state, the only exception being the significance of construction sector dummy.

Transition between the two self-employment states are explained by gender, marital status, university education and construction variables. Married and/or university graduate formal self-employed are significantly less likely to become informal self-employed compared to single and/or primary school graduates. An interesting result is the significantly positive coefficient of female-age 25-44 interaction dummy.

The probability of becoming unemployed is significantly lower for those formal self-employed who are female, aged 25-44, married, secondary school and/or university graduate and/or working in agriculture relative to those who are male, aged 15-24, primary school graduate, working in industry. Having children increases the likelihood of outflows into unemployment state.

#### **5.2.4. Transitions from Informal Self-Employment state**

Informal self-employed women are significantly less likely to become formal-salaried. The level of significance increases even more when women at the age of 45-64 are considered. The probability of outflows into formal-salaried state is significantly lower for agriculture and services sectors compared to industry sector. Same conclusions hold for transitions into informal-salaried state as well.

Turning to the informal self-employment to formal self-employment transitions, women are found to be significantly less likely to move into formal self-employment. The probability of such an outflow is significantly lower for individuals who has children compared to those who does not. Agriculture, construction and services sectors are all significantly negatively associated with formal self-employment transitions.

The probability of becoming unemployed is significantly lower for female, those aged between 45-64, working in agriculture and/or services sector as compared to male, aged 15-24 and working in industry.

The probability of quitting informal self-employment and moving to inactivity is significantly higher for females. Compared to the age group of 15-24, individuals aged 25-44 are significantly less and 45-64 are significantly more likely to become inactive. Experience, as expected, is negatively associated with moving out of employment.

### **5.2.5. Transitions from Unemployment**

Age appears to be one of the main determinants of moving out of unemployment. As age increases, the probability of moving into formal-salaried state decreases. High school and university graduate unemployed are significantly more likely to become formal-salaried compared to primary school graduates. Females aged 45-64 have a significantly lower probability of moving out of unemployed to formal-salaried state.

Age appears to be the only significant determinant explaining unemployed to informal-salaried transitions. As age increases probability of finding an informal-salaried employment significantly falls.

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#### **For the final manuscript:**

- **The discussion of results are to be completed.**
- **Tables 5a-5c are to be further discussed for policy implications.**
- **Conclusion section is to be completed.**
- **References are to be completed.**

**We are sorry for not being able to submit a final draft by the deadline. We would very much appreciate if you could consider our paper for peer review. Please accept our apologies for any inconvenience.**

**Table A1: List of Definitions**

<b>i. Definition of Labor Market States</b>			
Formal Salaried (FS)		Regular or casual employee who are wage employed AND registered to the Social Security Institution	
Informal Salaried (IS)		Regular or casual employee who are wage employed AND not registered to the Social Security Institution	
Formal Self-employed (FSE)		Self-employed or unpaid family worker AND registered to the Social Security Institution	
Informal Self-employed (ISE)		Self-employed or unpaid family worker AND not registered to the Social Security Institution	
Unemployed (U)		Those who do not work in the reference week BUT available for work AND actively searching	
Inactive (N)		Those who do not work in the reference week, not available for work AND not actively searching	
<b>ii. Definition of Multinomial Logit Model Explanatory Variables</b>			
Gender	"male"	Male	(Base category)
	"female"	Female	
Age	"age15to24"	Age 15-24	(Base category)
	"age25to44"	Age 25-44	
	"age45to64"	Age 45-64.	
Marital Status	"single"	not married	(Base category)
	"married"	married	
Education	"nosch"	Illiterates and individuals who are literate but did not graduate from a school	
	"primarysch"	Primary school graduate	(Base category)
	"secondariesch"	Secondary school graduate	
	"highsch"	High school or vocational school graduate	
	"universityup"	University or higher graduate	
Children	"nochild"	Does not have children	(Base category)
	"child"	Has children	
Economic Sector	"agriculture"	Agriculture	
	"industry"	Mining, manufacturing and utilities	(Base category)
	"construction"	Construction	
	"services"	Trade, hotels and restaurants, transportation, financial intermediation, business services, public administration, education, health, others.	
Firm Size	"fsize1to10"	Establishments with 1-10 employees	(Base category)
	"fsize11to49"	Establishments with 11-49 employees	
	"fsize50plus"	Establishments with 50 or more employees	
Household Size	"hsize"	Number of individuals in the household of the survey respondent excluding himself/herself.	
Work Experience	"exper"	Total number of years a survey respondent has worked for.	
Female-Age Interaction	"femX15to24"	Female AND aged 15-24	(Base category)
	"femX25to44"	Female AND aged 25-44	
	"femX45to64"	Female AND aged 45-64	
Female-Marital Interaction	"femXsing"	Female AND single	(Base category)
	"femXmar"	Female AND married	

**Table 1a: Turkish Labor Market, distribution of sample labor market states (Age group 15-64 only)**

	2006		2007		2008		2009	
	N	%	N	%	N	%	N	%
<b>Formal Salaried (FS)</b>	4,198	15.9	4,661	17.6	5,506	20.1	5,500	19.2
<b>Informal Salaried (IS)</b>	2,695	10.2	2,633	9.9	2,456	8.9	2,526	8.8
<b>Formal Self-Employed (FSE)</b>	805	3.1	944	3.6	1,089	3.9	981	3.4
<b>Informal Self-Employed (ISE)</b>	4,651	17.6	4,627	17.5	4,320	15.8	4,769	16.7
<b>Unemployed (U)</b>	1,433	5.4	1,268	4.8	1,477	5.4	1,917	6.8
<b>Inactive (N)</b>	12,567	47.7	12,342	46.6	12,533	45.8	12,886	45.1
<b>Total</b>	26,349	100	26,475	100	27,381	100	28,579	100

Source: Authors' own calculations based on SILC 2006-2009 .

Note: See Appendix Table A1 for category definitions.

**Table 1b: Turkish Labor Market, distribution of sample labor market states (Age group 15-64 and Men)**

	2006		2007		2008		2009	
	N	%	N	%	N	%	N	%
<b>Formal Salaried (FS)</b>	3,332	27.2	3,661	29.5	4,307	33.3	4,234	31.1
<b>Informal Salaried (IS)</b>	2,054	16.8	2,045	16.5	1,886	14.6	1,984	14.6
<b>Formal Self-Employed (FSE)</b>	748	6.1	835	6.7	994	7.7	896	6.6
<b>Informal Self-Employed (ISE)</b>	2,217	18.1	2,133	17.2	1,973	15.3	2,275	16.7
<b>Unemployed (U)</b>	1,093	8.9	991	8	1,080	8.4	1,358	9.9
<b>Inactive (N)</b>	2,789	22.8	2,728	22	2,689	20.8	2,890	21.2
<b>Total</b>	12,233	100	12,393	100	12,929	100	13,637	100

Source: Authors' own calculations based on SILC 2006-2009 .

Note: See Appendix Table A1 for category definitions.

**Table 1c: Turkish Labor Market, distribution of sample labor market state (Age group 15-64 and Women)**

	2006		2007		2008		2009	
	N	%	N	%	N	%	N	%
<b>Formal Salaried (FS)</b>	866	6.1	1,000	7.1	1,199	8.3	1,266	8.5
<b>Informal Salaried (IS)</b>	641	4.5	588	4.2	570	3.9	542	3.6
<b>Formal Self-Employed (FSE)</b>	57	0.4	109	0.8	95	0.7	85	0.6
<b>Informal Self-Employed (ISE)</b>	2,434	17.2	2,494	17.7	2,347	16.2	2,494	16.7
<b>Unemployed (U)</b>	340	2.4	277	1.9	397	2.8	559	3.7
<b>Inactive (N)</b>	9,778	69.3	9,614	68.3	9,844	68.1	9,996	66.9
<b>Total</b>	14,116	100	14,082	100	14,452	100	14,942	100

Source: Authors' own calculations based on SILC 2006-2009 .

Note: See Appendix Table A1 for category definitions.

Table 2: Composition of Informality in Total Sample and Non-Agricultural Sample (2006 and 2009 only)

	ALL SAMPLE				NON-AGRICULTURAL SAMPLE			
	2006		2009		2006		2009	
	Formal %	Informal %	Formal %	Informal %	Formal %	Informal %	Formal %	Informal %
<b>Gender</b>								
Male	49.6	50.4	55.5	44.6	59.7	40.3	65.6	34.4
Female	23.5	76.5	31.2	68.8	57.5	42.5	66.6	33.4
<b>Age</b>								
15-24	28.3	71.7	35.2	64.8	41.5	58.5	51.7	48.3
25-44	52.1	47.9	59.6	40.4	67.8	32.2	73.7	26.3
45-64	28.7	71.3	31.9	68.1	49.8	50.2	53.3	46.8
<b>Education</b>								
None	6.4	93.7	7.8	92.2	20.7	79.4	22.2	77.9
Primary	32.6	67.5	36.6	63.4	48.2	51.8	53.0	47.0
Secondary	40.3	59.7	43.1	56.9	51.7	48.3	56.1	43.9
High	66.6	33.5	71.6	28.4	72.5	27.5	77.5	22.5
University	85.2	14.8	91.3	8.7	86.2	13.8	92.7	7.3
<b>Marital</b>								
Married	43.3	56.8	49.2	50.8	62.9	37.1	67.6	32.4
Single	36.1	63.9	43.8	56.2	49.7	50.3	60.1	39.9
<b>Occupation</b>								
Legislators	62.2	37.8	68.3	31.8	62.3	37.7	68.3	31.7
Professionals	89.6	10.4	93.9	6.1	89.6	10.5	93.9	6.1
Technicians	81.3	18.7	86.9	13.1	81.4	18.6	86.9	13.2
Clerks	81.6	18.5	86.1	13.9	81.6	18.4	86.1	13.9
Service Work	49.4	50.6	55.0	45.0	49.4	50.6	55.0	45.0
Skilled Agric	9.7	90.3	10.6	89.4	64.9	35.1	56.0	44.0
Craftsmen	41.7	58.3	50.7	49.3	41.7	58.3	50.6	49.4
Plant Operat	62.0	38.0	68.2	31.8	62.1	37.9	68.4	31.7
Elementary C	37.2	62.8	40.1	59.9	48.3	51.7	52.4	47.6
<b>Sector</b>								
Agriculture	9.0	91.0	10.0	90.0				
Mining	81.1	18.9	67.6	32.4	81.1	18.9	67.6	32.4
Manufacturi	64.1	35.9	71.9	28.1	64.1	35.9	71.9	28.1
Utilities	96.9	3.1	96.3	3.7	96.9	3.1	96.3	3.7
Construction	26.2	73.8	39.0	61.0	26.2	73.8	39.0	61.0
Trade	50.5	49.6	60.1	39.9	50.5	49.6	60.1	39.9
Hotels& Rest.	46.7	53.3	49.5	50.5	46.7	53.3	49.5	50.5
Transportati	48.6	51.4	54.8	45.3	48.6	51.4	54.8	45.3
Finances	87.6	12.4	90.1	9.9	87.6	12.4	90.1	9.9
Business Serv	71.3	28.8	80.7	19.3	71.3	28.8	80.9	19.1
Public Adm	93.6	6.4	90.2	9.8	93.6	6.4	90.2	9.8
Education	92.1	7.9	94.2	5.9	92.1	7.9	94.2	5.9
Health	91.4	8.6	93.7	6.3	91.4	8.6	93.7	6.3
Others	33.4	66.6	35.8	64.2	33.4	66.6	35.8	64.2
<b>Employment Status</b>								
Regular empl	73.5	26.5	80.7	19.3	74.1	25.9	81.3	18.7
Casual empl	5.9	94.1	9.5	90.5	7.7	92.3	11.7	88.3
Employers	59.4	40.6	71.0	29.0	64.3	35.7	76.1	23.9
Own-account	24.2	75.8	28.8	71.2	37.8	62.2	39.6	60.4
Unpaid famil	4.3	95.7	4.2	95.8	16.0	84.0	17.3	82.7
<b>Firm Size</b>								
10 or less	22.9	77.1	27.9	72.1	37.2	62.8	44.3	55.7
11-49	68.9	31.1	76.2	23.8	73.0	27.0	80.0	20.0
50 or more	91.9	8.1	95.2	4.9	92.0	8.0	95.3	4.7
<b>Household Type</b>								
Single	56.9	43.1	65.4	34.6	69.6	30.4	76.4	23.6
No Children	39.3	60.7	48.5	51.5	58.2	41.8	68.4	31.6
With Childre	42.0	58.0	47.5	52.5	59.5	40.6	64.7	35.3
<b>Location</b>								
Rural	23.5	76.6	25.5	74.5	52.8	47.2	55.4	44.6
Urban	58.8	41.2	65.7	34.4	61.6	38.4	68.9	31.2

Source: Authors' own calculations based on SILC 2006-2009.

Note: <sup>1</sup> See Appendix Table A1 for category definitions.

<sup>2</sup> For presentational brevity, only 2006 and 2009 years are reported. Tables for 2007 and 2008 are almost identical, and available upon request.

Table 3: Summary Statistics of the Variables by Labor Market State (Age group 15-64)

	2006						2007						2008						2009					
	FS	IS	FSE	ISE	U	N	FS	IS	FSE	ISE	U	N	FS	IS	FSE	ISE	U	N	FS	IS	FSE	ISE	U	N
<b>Gender</b>																								
<b>Male</b>	27.2	16.8	6.1	18.1	8.9	22.8	29.5	16.5	6.7	17.2	8	22	33.3	14.6	7.7	15.3	8.4	20.8	31.1	14.6	6.6	16.7	10	21.2
<b>Female</b>	6.1	4.5	0.4	17.2	2.4	69.3	7.1	4.2	0.8	17.7	2	68.3	8.3	3.9	0.7	16.2	2.8	68.1	8.5	3.6	0.6	16.7	3.7	66.9
<b>Age</b>																								
<b>15-24</b>	9.0	12	0.6	12.4	9.1	56.9	11.3	11.4	1	12.0	8	56.3	13.5	10.1	0.9	11.0	8.8	55.8	11.5	10.5	0.5	11.9	10.3	55.2
<b>25-44</b>	25.2	11.4	4.3	17.1	5.4	36.7	27.6	10.7	4.6	17.1	4.6	35.4	30.7	9.6	5.2	14.7	5.3	34.6	30	9.3	4.8	15.2	6.8	33.9
<b>45-64</b>	8.2	6.9	3.5	23.3	2.2	55.9	8.4	7.5	4.3	23	2.2	54.6	9.5	7.1	4.9	21.7	2.6	54.2	9.4	6.7	3.8	23.1	3.6	53.4
<b>Marital</b>																								
<b>Married</b>	17.6	9.6	4.0	20.1	3.4	45.4	18.6	9.5	4.6	19.9	2.9	44.5	21.1	8.6	5.1	17.6	3.6	43.9	20.6	8.3	4.4	18.7	4.7	43.3
<b>Single</b>	12.4	11.6	1.0	12.4	9.8	52.7	15.5	10.8	1.3	12.3	8.8	51.3	17.6	9.8	1.1	11.3	9.8	50.3	15.9	10.1	1.1	11.8	11.7	49.5
<b>Children</b>																								
<b>With</b>	15.9	10.6	3.1	17	5.4	48	17.1	10.4	3.5	16.9	4.8	47.3	19.4	9.5	4.1	15.4	5.4	46.3	18.6	9.3	3.6	16.3	6.6	52
<b>No</b>	16	9	3	19.7	5.6	46.8	19.1	8.6	3.7	19.2	4.8	44.6	22.3	7.5	3.7	16.9	5.4	44.2	21.1	7.5	3.0	17.7	7	51
<b>Education</b>																								
<b>None</b>	1.4	7.1	0.7	25.2	3.5	62.1	1.5	6.9	1.3	25	2.9	62.4	2.0	7.7	1.2	24.0	3.2	62	1.8	7.3	0.9	24.8	3.5	61.8
<b>Primary</b>	11.6	12.6	4.4	22.3	4.2	44.8	12.7	12.3	5.0	22.6	3.7	43.6	14.8	11	6	20.4	4.3	43.5	13.1	10.6	5.2	22.3	5.5	43.4
<b>Secondary</b>	13.4	11.7	2.6	12.9	6.4	52.9	15.6	11.7	2.8	12.9	6	51.1	17.5	11	2.9	11.8	7.3	49.6	15.0	11.0	2.3	12.6	8.1	51
<b>High</b>	28.2	8.4	3.2	7.6	8.7	43.9	30.2	8.3	3.9	7.6	7.4	42.7	32.8	6.6	4	6.9	7.8	41.9	32.4	7.4	4.0	7.5	10.0	38.8
<b>University</b>	60.4	6	2.6	3.6	7.9	19.5	63.1	4.5	2.4	3.6	6.4	20	66.8	3	2.4	2.5	6.6	18.7	64.5	2.8	2.4	3.1	9.2	18
<b>Sector</b>																								
<b>Agriculture</b>	0.6	8.1	8.0	83.2	0	0	0.7	8.2	9.2	81.8	0	0	1.7	8.5	10.4	79.5	0	0	1.3	8.4	8.6	81.6	0.1	0.2
<b>Industry</b>	63	27.0	2.4	7.6	0	0	67.8	23.1	3.3	5.8	0	0	71.3	19.5	3.7	5.6	0	0	68.8	20.1	3.3	7.4	0.1	0.3
<b>Construction</b>	23.7	68.8	1.5	6.1	0	0	28.0	64.5	2	5.4	0	0	35.9	56	2.6	5.6	0	0	34.9	53	2.9	7.7	1.2	0.4
<b>Services</b>	53.5	25.0	7.7	13.8	0	0	55.5	23.1	8.3	13.1	0	0	59.3	19.3	9.2	12.3	0	0	58.2	20.1	7.9	13.3	0.1	0.3
<b>Location</b>																								
<b>Rural</b>	8.8	9.1	4.6	36.2	4.0	37.4	9.9	9.3	5.5	36.1	3.6	35.6	11.6	8.8	6.2	33.6	4.2	35.5	9.7	8.6	5.2	36.3	4.3	35.9
<b>Urban</b>	20.7	11	2	5.2	6.4	54.6	22.8	10.4	2.3	5	5.6	54	25.5	9.1	2.6	4.6	6.1	52.2	24.7	9.0	2.4	5.5	8.1	50.3
<b>Firm Size</b>																								
<b>10 or less</b>	10.6	24.0	9.7	55.7	0	0	12.4	22.3	11.1	54.3	0	0	15.7	20.9	12.8	50.6	0	0	14.5	20.9	11	53.2	0.2	0.2
<b>11-49</b>	69	29.7	0.1	1.2	0	0	69.7	29.4	0.2	0.8	0	0	76.1	23.2	0	0.7	0	0	75.9	22.5	0.1	1.1	0	0.5
<b>50 or more</b>	91.9	8	0	0.1	0	0	92.8	7.2	0	0	0	0	94.2	5.8	0	0	0	0	94.8	4.8	0	0	0.1	0.3
<b>Occupation</b>																								
<b>Legislators</b>	30.6	8.5	30	30.9	0	0	32.5	10.4	28.9	28.2	0	0	34.6	7.9	30.8	26.8	0	0	35.9	6.8	29.2	28	0	0.1
<b>Professionals</b>	87.8	7	2.7	2.6	0	0	89.4	5.8	2.5	2.3	0	0	92.2	3.4	2.8	1.6	0	0	91.2	3.8	2.6	2.0	0	0.3
<b>Technicians</b>	79.5	13.6	2.1	4.8	0	0	81.6	10.6	3.2	4.7	0	0	82.5	9.2	3.2	5.1	0	0	83.7	7.1	3.3	5.5	0.1	0.4
<b>Clerks</b>	81.4	16.2	0.2	2.2	0	0	83.3	13.1	1.6	2.1	0	0	88.1	9.6	0.7	1.6	0	0	84.7	12.3	0.9	1.6	0	0.6
<b>Service Workers</b>	46.7	37.1	3.1	13.2	0	0	47	35.2	4.3	13.6	0	0	51.9	29.6	6.3	12.2	0	0	49.9	34.4	4.4	10.9	0.1	0.3
<b>Skill. Agricultu.</b>	0.6	0.5	8.7	90.1	0	0	0.5	0.9	10	88.6	0	0	0.5	0.4	11.4	87.6	0	0	0.8	1.0	9.6	88.4	0.0	0.2
<b>Craftsmen</b>	35.3	46.9	5.2	12.7	0	0	40.4	43.1	6.0	10.5	0	0	47.7	35.1	6.6	10.7	0	0	43.3	34.8	6.3	14.8	0.5	0.3
<b>Plant Operators</b>	56	27.8	6	10.2	0	0	61.8	22.6	6.6	9	0	0	63.9	19.3	8.8	8.1	0	0	59.8	20.9	7.8	11.2	0.1	0.2
<b>Elementary Opr.</b>	36.4	53.4	0.7	9.5	0	0	40.5	51.6	0.9	7.1	0	0	41.6	49.8	1.1	7.5	0	0	38.9	42.6	1.0	16.5	0.6	0.4

Source: Authors' own calculations based on SILC 2006-2009.

Notes: <sup>1</sup>See Appendix Table A1 for variable definitions. <sup>2</sup>The numbers are given in percentages.

**Table 4a: Transition Probabilities (P<sub>ij</sub>) 2006-2007 (%)**

TOTAL SAMPLE							NON-AGRICULTURAL SAMPLE						
LMS 2006	LMS2007						LMS 2006	LMS2007					
	FS	IS	FSE	ISE	U	OLF		FS	IS	FSE	ISE	U	OLF
FS	89.3	2.8	0.4	0.9	2.7	4.1	FS	89.8	2.7	0.4	0.4	2.7	4.1
IS	12.9	57.7	0.8	7.0	9.4	12.2	IS	15.0	59.7	0.9	3.9	9.4	11.2
FSE	3.3	2.6	78.8	12.0	0.9	2.4	FSE	4.3	2.1	81.9	7.5	1.1	3.2
ISE	1.3	4.0	4.5	77.3	2.0	10.9	ISE	2.9	8.7	9.4	62.0	5.3	11.6
U	15.2	26.4	0.7	6.0	27.9	23.8	U	16.3	23.7	0.8	3.2	30.3	25.8
OLF	1.7	3.3	0.2	5.4	2.7	86.7	OLF	1.8	2.7	0.2	1.1	2.9	91.4
<b>P<sub>j</sub> (Total)</b>	17.5	10.0	3.5	18.2	4.6	46.3	<b>P<sub>j</sub> (Total)</b>	21.7	10.3	2.3	4.0	5.3	56.3

Source: Authors' own calculations based on SILC 2006-2007 (Panel observations only).

Notes: <sup>1</sup> P<sub>j</sub> is the relative size of a state at the end of a period.

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

**Table 4b: Transition Probabilities (P<sub>ij</sub>) 2006-2008 (%)**

TOTAL SAMPLE							NON-AGRICULTURAL SAMPLE						
LMS 2006	LMS2008						LMS 2006	LMS2008					
	FS	IS	FSE	ISE	U	OLF		FS	IS	FSE	ISE	U	OLF
FS	85.0	3.7	0.8	1.3	3.8	5.4	FS	78.7	4.5	0.7	2.6	6.5	7.1
IS	24.1	41.6	1.6	7.8	9.4	15.7	IS	20.5	38.0	1.8	12.4	11.3	15.9
FSE	8.2	1.2	73.0	12.5	0.9	4.3	FSE	6.4	3.2	60.5	20.4	1.9	7.6
ISE	3.0	5.7	6.9	65.9	1.8	16.8	ISE	2.7	6.2	6.3	64.6	1.8	18.5
U	21.4	23.0	1.9	9.2	23.3	21.2	U	17.3	16.5	3.5	10.0	27.3	25.4
OLF	2.8	3.8	0.3	7.0	3.0	83.1	OLF	3.6	3.5	0.2	7.7	3.2	81.7
<b>P<sub>j</sub> (Total)</b>	19.7	8.8	3.9	16.8	4.5	46.3	<b>P<sub>j</sub> (Total)</b>	18.8	8.4	3.5	17.5	5.6	46.3

Source: Authors' own calculations based on SILC 2006-2008 (Panel observations only).

Notes: <sup>1</sup> P<sub>j</sub> is the relative size of a state at the end of a period.

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

**Table 4c: Transition Probabilities (P<sub>ij</sub>) 2006-2009 (%)**

TOTAL SAMPLE							NON-AGRICULTURAL SAMPLE						
LMS 2006	LMS2009						LMS 2006	LMS2009					
	FS	IS	FSE	ISE	U	OLF		FS	IS	FSE	ISE	U	OLF
FS	78.7	4.5	0.7	2.6	6.5	7.1	FS	79.6	4.4	0.7	1.5	6.6	7.3
IS	20.5	38.0	1.8	12.4	11.3	15.9	IS	23.9	38.8	1.1	8.3	12.9	14.9
FSE	6.4	3.2	60.5	20.4	1.9	7.6	FSE	8.8	4.4	59.3	15.4	1.1	11.0
ISE	2.7	6.2	6.3	64.6	1.8	18.5	ISE	5.5	9.9	12.7	45.9	5.5	20.4
U	17.3	16.5	3.5	10.0	27.3	25.4	U	17.9	16.3	3.3	5.4	29.6	27.5
OLF	3.6	3.5	0.2	7.7	3.2	81.7	OLF	3.9	3.2	0.2	2.0	3.4	87.3
<b>P<sub>j</sub> (Total)</b>	18.8	8.4	3.5	17.5	5.6	46.3	<b>P<sub>j</sub> (Total)</b>	22.8	8.4	2.4	5.0	6.7	54.7

Source: Authors' own calculations based on SILC 2006-2009 (Panel observations only).

Notes: <sup>1</sup> P<sub>j</sub> is the relative size of a state at the end of a period.

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

**Table 4d: Transition Probabilities (P<sub>ij</sub>) 2006-2008 (Men only)**

TOTAL SAMPLE							NON-AGRICULTURAL SAMPLE						
LMS 2006	LMS2008						LMS 2006	LMS2008					
	FS	IS	FSE	ISE	U	OLF		FS	IS	FSE	ISE	U	OLF
FS	85.5	4.3	0.9	1.3	3.9	4.1	FS	86.0	4.1	0.9	0.9	4.0	4.2
IS	26.5	44.2	2.0	8.8	10.0	8.5	IS	28.3	44.7	1.7	5.6	10.4	9.3
FSE	8.4	1.0	74.8	11.6	1.0	3.2	FSE	8.9	1.2	78.0	6.6	1.2	4.2
ISE	5.9	9.2	12.5	62.4	2.7	7.2	ISE	8.6	11.0	13.5	51.4	6.2	9.3
U	21.3	26.4	2.5	10.3	25.7	13.8	U	22.6	25.6	2.5	6.5	27.9	14.9
OLF	5.7	8.3	1.2	7.4	6.9	70.6	OLF	5.9	8.5	0.7	3.3	7.3	74.3
<b>P<sub>j</sub> (Total)</b>	<b>34.4</b>	<b>14.4</b>	<b>8.0</b>	<b>16.4</b>	<b>7.0</b>	<b>19.8</b>	<b>P<sub>j</sub> (Total)</b>	<b>40.9</b>	<b>15.1</b>	<b>5.3</b>	<b>6.8</b>	<b>8.4</b>	<b>23.6</b>

Source: Authors' own calculations based on SILC 2006-2008 (Panel observations only).

Notes: <sup>1</sup> P<sub>j</sub> is the relative size of a state at the end of a period.

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

**Table 4e: Transition Probabilities (P<sub>ij</sub>) 2006-2008 (Women only)**

TOTAL SAMPLE							NON-AGRICULTURAL SAMPLE						
LMS 2006	LMS2008						LMS 2006	LMS2008					
	FS	IS	FSE	ISE	U	OLF		FS	IS	FSE	ISE	U	OLF
FS	83.2	1.7	0.0	1.1	3.3	10.7	FS	84.3	1.7	0.0	0.0	3.4	10.7
IS	15.8	32.8	0.0	4.4	7.5	39.5	IS	20.8	33.9	0.0	2.6	7.3	35.4
FSE	5.3	5.3	42.1	26.3	0.0	21.1	FSE	10.0	0.0	60.0	0.0	0.0	30.0
ISE	0.4	2.6	2.1	68.8	1.0	25.1	ISE	0.0	6.9	9.7	41.7	2.8	38.9
U	21.7	12.6	0.0	5.6	16.1	44.1	U	23.3	7.8	0.0	2.3	17.8	48.8
OLF	2.1	2.8	0.1	6.9	2.0	86.1	OLF	2.2	1.9	0.1	1.3	2.2	92.3
<b>P<sub>j</sub> (Total)</b>	<b>7.7</b>	<b>4.2</b>	<b>0.6</b>	<b>17.1</b>	<b>2.5</b>	<b>68.0</b>	<b>P<sub>j</sub> (Total)</b>	<b>9.7</b>	<b>3.4</b>	<b>0.4</b>	<b>1.9</b>	<b>2.9</b>	<b>81.7</b>

Source: Authors' own calculations based on SILC 2006-2008 (Panel observations only).

Notes: <sup>1</sup> P<sub>j</sub> is the relative size of a state at the end of a period.

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

<sup>3</sup> Fore presentational brevity only the tables for 2006-2008 are reported. Transition matrices for 2006-2007 and 2006-2009 panels are available upon request.

Table 5a: Multinomial Logit estimation results (2006 to 2007 Transitions)

	MNL 1: Transitions out of Formal-Salaried					MNL 2: Transitions out of Informal-Salaried					
	FS to IS	FS to FSE	FS to ISE	FS to U	FS to OLF	IS to FS	IS to FSE	IS to ISE	IS to U	IS to OLF	
<b>female</b>	-1.662*	-31.78***	-1.290	-0.152	0.703*	<b>female</b>	-0.330	-33.18***	-1.696*	-0.702	1.446***
	(-2.34)	(-30.21)	(-1.18)	(-0.35)	(2.15)		(-1.09)	(-68.52)	(-2.06)	(-1.72)	(4.82)
<b>age25to44</b>	-2.501***	-4.169**	-0.225	-0.545	-1.478***	<b>age25to44</b>	-0.0167	-0.192	0.310	0.293	-0.300
	(-4.95)	(-3.15)	(-0.47)	(-1.33)	(-3.64)		(-0.06)	(-0.20)	(0.94)	(0.90)	(-0.81)
<b>age45to64</b>	-1.389*	-3.013	0.437	0.601	1.415*	<b>age45to64</b>	-0.389	-2.006	0.275	0.887	1.497**
	(-2.28)	(-1.95)	(0.42)	(0.91)	(2.43)		(-0.75)	(-1.48)	(0.57)	(1.89)	(3.26)
<b>married</b>	-0.115	1.650*	-1.292	-0.686	-0.750*	<b>married</b>	0.0487	0.574	-0.600	-0.461	-0.550
	(-0.25)	(2.24)	(-1.52)	(-1.44)	(-2.05)		(0.18)	(0.57)	(-1.86)	(-1.36)	(-1.54)
<b>child</b>	0.381	0.317	-0.0506	0.0972	0.0195	<b>child</b>	-0.309	-0.437	-0.0900	-0.125	-0.183
	(1.21)	(0.42)	(-0.09)	(0.31)	(0.08)		(-1.59)	(-0.76)	(-0.36)	(-0.58)	(-0.94)
<b>hsize</b>	-0.120	-1.393**	-0.330	-0.165	-0.215**	<b>hsize</b>	-0.0403	-0.226	-0.274***	-0.182**	-0.181***
	(-1.34)	(-3.00)	(-1.73)	(-1.94)	(-2.81)		(-0.89)	(-1.05)	(-4.23)	(-2.84)	(-3.41)
<b>nosch</b>	0.567	-31.74***	1.372	-0.747	-0.591	<b>nosch</b>	-0.664	-33.02***	0.520	0.661**	0.165
	(1.02)	(-37.93)	(1.61)	(-0.72)	(-0.76)		(-1.91)	(-35.18)	(1.94)	(2.81)	(0.72)
<b>secondariesch</b>	-0.290	-0.936	-0.234	-0.592	0.000163	<b>secondariesch</b>	-0.165	-1.454	-0.554	-0.471	-0.934***
	(-0.96)	(-0.96)	(-0.51)	(-1.74)	(0.00)		(-0.80)	(-1.60)	(-1.80)	(-1.80)	(-3.30)
<b>highsch</b>	-1.397***	0.944	-1.639**	-0.790**	-0.695**	<b>highsch</b>	0.331	0.245	-0.463	-0.128	-0.517
	(-3.94)	(1.40)	(-2.96)	(-2.67)	(-2.72)		(1.58)	(0.40)	(-1.30)	(-0.47)	(-1.86)
<b>universityup</b>	-1.872***	-32.21***	-2.210*	-2.081***	-1.130***	<b>universityup</b>	0.717*	-32.78***	-0.343	-0.331	-0.604
	(-3.78)	(-50.91)	(-2.52)	(-4.36)	(-3.38)		(2.10)	(-75.50)	(-0.56)	(-0.64)	(-1.45)
<b>exper</b>	-0.0369	0.0937	-0.110	-0.0938	-0.131***	<b>exper</b>	-0.0967**	-0.239**	-0.0673*	-0.121***	-0.143***
	(-0.75)	(0.79)	(-1.48)	(-1.91)	(-3.32)		(-3.24)	(-2.87)	(-2.04)	(-3.57)	(-5.34)
<b>expersq</b>	0.00193	-0.00158	0.00164	0.00115	0.00333***	<b>expersq</b>	0.00152	0.00670**	0.00174*	0.00198*	0.00322***
	(1.74)	(-0.69)	(0.83)	(0.83)	(3.67)		(1.71)	(3.01)	(2.20)	(2.20)	(5.06)
<b>femX25to44</b>	3.882***	1.901*	0.523	0.122	0.302	<b>femX25to44</b>	0.234	-0.0992	0.00989	-0.00445	-0.0899
	(4.37)	(2.11)	(0.37)	(0.19)	(0.57)		(0.48)	(-0.09)	(0.01)	(-0.01)	(-0.18)
<b>femX45to64</b>	3.091*	1.149	-32.97***	-0.445	-1.236	<b>femX45to64</b>	-0.201	1.912	0.595	-0.585	-1.318*
	(2.55)	(0.97)	(-20.09)	(-0.35)	(-1.80)		(-0.23)	(1.39)	(0.65)	(-0.67)	(-2.31)
<b>femXmar</b>	-2.381**	-2.463*	0.547	0.264	1.291*	<b>femXmar</b>	-0.624	-0.700	1.164	-0.170	0.816
	(-2.60)	(-2.13)	(0.38)	(0.38)	(2.53)		(-1.28)	(-0.69)	(1.73)	(-0.27)	(1.79)
<b>agriculture</b>	0.550	-33.35***	-34.70***	-35.47***	-35.97***	<b>agriculture</b>	-1.705***	-1.702	0.384	0.168	-0.00923
	(0.64)	(-35.55)	(-66.98)	(-94.71)	(-52.03)		(-3.76)	(-1.69)	(1.32)	(0.61)	(-0.04)
<b>construction</b>	-0.0677	-33.11***	-0.143	0.215	-0.830	<b>construction</b>	-0.588*	-2.027**	-0.642*	0.0763	-0.517
	(-0.15)	(-35.28)	(-0.17)	(0.45)	(-1.29)		(-2.46)	(-2.67)	(-2.12)	(0.31)	(-1.71)
<b>services</b>	-0.612*	0.0731	-0.383	-0.572*	-0.497*	<b>services</b>	-0.403*	-1.258**	-0.339	-0.225	-0.497**
	(-2.36)	(0.09)	(-0.80)	(-2.21)	(-2.13)		(-2.29)	(-3.09)	(-1.50)	(-1.07)	(-2.58)
<b>fsize11to49</b>	-0.901**	-33.41***	-0.156	-0.288	-0.428	<b>fsize11to49</b>	0.677***	-0.599	-0.933**	0.501*	0.0600
	(-3.00)	(-86.53)	(-0.41)	(-1.01)	(-1.63)		(3.54)	(-0.83)	(-2.63)	(2.36)	(0.28)
<b>fsize50plus</b>	-1.148***	-3.479**	-1.625*	-0.899**	-0.601*	<b>fsize50plus</b>	1.093***	-0.377	-0.325	0.507	0.380
	(-4.23)	(-2.76)	(-2.57)	(-3.17)	(-2.39)		(4.08)	(-0.38)	(-0.66)	(1.45)	(1.15)

Table 5a: Multinomial Logit estimation results (2006 to 2007 Transitions) continued

MNL 3: Transitions out of Formal-Self Employed						MNL 4: Transitions out of Informal-Self Employed					
	FSE to FS	FSE to IS	FSE to ISE	FSE to U	FSE to OLF	ISE to FS	ISE to IS	ISE to FSE	ISE to U	ISE to OLF	
<b>female</b>	-41.89***	-42.40***	-21.27***	-36.30***	-38.01***	<b>female</b>	-2.016*	-1.331**	-1.123*	-1.255*	0.990***
	(-36.88)	(-45.05)	(-12.25)	(-10.52)	(-5.02)		(-2.34)	(-2.92)	(-2.11)	(-2.32)	(4.07)
<b>age25to44</b>	-0.0966	-1.191*	-0.800	-3.152***	-21.51***	<b>age25to44</b>	-0.109	-0.475	0.320	-0.873	-1.252**
	(-0.10)	(-2.00)	(-1.29)	(-4.69)	(-4.88)		(-0.20)	(-1.03)	(0.82)	(-1.57)	(-2.66)
<b>age45to64</b>	-0.647	-1.987	-0.465	2.237	3.586*	<b>age45to64</b>	-0.636	-0.560	-0.192	-2.760**	0.905*
	(-0.35)	(-1.42)	(-0.58)	(1.01)	(2.21)		(-0.73)	(-0.98)	(-0.37)	(-3.02)	(2.44)
<b>married</b>	-0.539	-0.838	-1.147*	-1.242*	-1.754	<b>married</b>	-0.822	0.395	0.355	-0.297	-0.148
	(-0.72)	(-1.35)	(-2.33)	(-2.02)	(-1.48)		(-1.43)	(0.93)	(1.02)	(-0.57)	(-0.49)
<b>child</b>	-0.648	0.130	0.380	2.139*	-0.0635	<b>child</b>	-0.373	-0.296	-0.738***	-0.0848	0.0295
	(-0.85)	(0.18)	(0.98)	(2.16)	(-0.11)		(-1.19)	(-1.15)	(-3.45)	(-0.27)	(0.20)
<b>hsize</b>	0.0565	-0.450	-0.150	-0.411	-0.164	<b>hsize</b>	-0.104	0.111	0.0180	-0.0994	-0.0393
	(0.37)	(-1.85)	(-1.20)	(-1.63)	(-0.62)		(-1.03)	(1.85)	(0.33)	(-1.24)	(-0.96)
<b>nosch</b>	-36.35***	-37.21***	-1.003	2.848**	-0.459	<b>nosch</b>	-0.774	0.0963	-0.101	0.471	0.232
	(-63.95)	(-76.31)	(-1.37)	(3.03)	(-0.32)		(-0.98)	(0.35)	(-0.43)	(1.39)	(1.64)
<b>secondariesch</b>	0.380	0.990	0.201	-35.63***	0.120	<b>secondariesch</b>	-0.0959	-0.221	-0.186	-0.283	-0.281
	(0.58)	(1.37)	(0.51)	(-49.83)	(0.10)		(-0.21)	(-0.81)	(-0.64)	(-0.86)	(-1.28)
<b>highsch</b>	0.229	-0.221	-0.213	1.207	0.622	<b>highsch</b>	0.399	-0.402	0.233	-0.395	0.0392
	(0.33)	(-0.28)	(-0.48)	(1.34)	(0.70)		(0.93)	(-1.16)	(0.84)	(-0.94)	(0.15)
<b>universityup</b>	-0.809	0.282	-39.12***	-38.68***	-38.92***	<b>universityup</b>	0.180	-1.869	-0.224	0.0551	0.258
	(-0.72)	(0.26)	(-89.12)	(-34.59)	(-43.34)		(0.22)	(-1.46)	(-0.38)	(0.07)	(0.51)
<b>exper</b>	-0.0900	-0.0410	-0.0109	0.147	-0.268*	<b>exper</b>	-0.000698	0.000781	-0.0150	0.0759	-0.106***
	(-0.67)	(-0.46)	(-0.18)	(0.90)	(-2.44)		(-0.01)	(0.02)	(-0.50)	(1.42)	(-5.39)
<b>expersq</b>	-0.000305	0.000952	0.000714	-0.00821*	0.00559*	<b>expersq</b>	-0.000936	-0.00108	0.000184	-0.00171	0.00179***
	(-0.06)	(0.33)	(0.58)	(-2.56)	(2.44)		(-0.70)	(-1.40)	(0.31)	(-1.45)	(4.74)
<b>femX25to44</b>	21.82	23.68	22.70***	2.399	40.90	<b>femX25to44</b>	-0.618	0.510	-0.724	0.159	1.303*
	(.)	(.)	(16.64)	(1.42)	(.)		(-0.80)	(0.81)	(-1.09)	(0.14)	(2.58)
<b>femX45to64</b>	-9.548***	-11.47***	23.79	1.983	20.48***	<b>femX45to64</b>	-30.58***	0.274	0.177	1.858	-0.275
	(-5.25)	(-7.00)	(.)	(0.82)	(3.29)		(-34.46)	(0.34)	(0.28)	(1.73)	(-0.73)
<b>femXmar</b>	18.76	20.03	-0.769	-1.310	20.31	<b>femXmar</b>	-0.0163	-0.545	-0.162	-1.513	-0.252
	(.)	(.)	(-0.60)	(-0.61)	(.)		(-0.02)	(-0.86)	(-0.27)	(-1.52)	(-0.71)
<b>agriculture</b>	-0.710	0.292	0.0611	-3.119***	-2.470**	<b>agriculture</b>	-1.767***	-2.231***	-2.177***	-2.243***	-1.623***
	(-1.10)	(0.35)	(0.15)	(-3.71)	(-2.83)		(-4.00)	(-7.09)	(-8.02)	(-6.02)	(-7.34)
<b>construction</b>	2.548	-37.47***	-36.89***	2.038	-36.71***	<b>construction</b>	-1.906	-0.611	-2.211**	-1.510	-0.807
	(1.87)	(-35.95)	(-48.57)	(1.42)	(-26.98)		(-1.74)	(-1.15)	(-2.80)	(-1.94)	(-1.06)
<b>services</b>	-1.144	-0.442	-0.551	-4.342*	-0.657	<b>services</b>	-1.224*	-1.525***	-1.528***	-1.197**	-1.216***
	(-1.66)	(-0.62)	(-1.29)	(-2.51)	(-0.99)		(-2.51)	(-4.39)	(-4.97)	(-3.21)	(-4.62)
						<b>fsize11to49</b>	-31.92***	2.114*	1.075	-32.33***	0.304
							(-39.01)	(2.48)	(1.35)	(-43.97)	(0.42)
						<b>fsize50plus</b>	29.22	27.14***	-8.462***	-7.615***	-8.843***
							(.)	(18.18)	(-10.41)	(-9.69)	(-5.63)

Table 5a: Multinomial Logit estimation results (2006 to 2007 Transitions) continued

	MNL 5: Transitions out of Unemployed					MNL 6: Transitions out of Inactive					
	U to FS	U to IS	U to FSE	U to ISE	U to OLF	OLF to FS	OLF to IS	OLF to FSE	OLF to ISE	OLF to U	
<b>female</b>	-0.04 (-0.07)	-0.04 (-0.07)	-32.79*** (-36.58)	-40.42*** (-57.29)	1.436** -2.61	<b>female</b>	-1.442** (-2.90)	-1.238*** (-3.37)	-43.02*** (-24.28)	-1.871*** (-4.49)	-1.529** (-2.98)
<b>age25to44</b>	-0.973* (-2.39)	-1.117** (-2.60)	0.57 -0.77	-0.24 (-0.44)	-1.421** (-3.23)	<b>age25to44</b>	-3.873** (-2.83)	-1.662* (-2.55)	-2.126* (-2.02)	-3.462*** (-4.04)	-0.63 (-0.89)
<b>age45to64</b>	-1.631* (-1.98)	-1.902** (-3.16)	-32.09*** (-26.95)	0.14 -0.16	0.16 -0.25	<b>age45to64</b>	-5.175*** (-3.86)	-2.499*** (-3.85)	-3.254* (-2.10)	-3.732*** (-5.24)	-2.356** (-3.21)
<b>married</b>	0.64 -1.56	0.53 -1.35	-0.15 (-0.08)	-0.71 (-1.28)	0.34 -0.84	<b>married</b>	3.038* -2.38	0.06 -0.11	2.929** -2.70	0.38 -0.60	-0.11 (-0.20)
<b>child</b>	-0.33 (-0.99)	0.35 -1.08	-0.37 (-0.27)	0.18 -0.40	0.19 -0.61	<b>child</b>	0.07 -0.16	0.43 -1.87	-1.808** (-2.78)	0.18 -0.91	-0.30 (-0.82)
<b>hsize</b>	0.03 -0.43	0.04 -0.62	-0.940* (-2.49)	-0.259* (-2.22)	-0.04 (-0.47)	<b>hsize</b>	-0.18 (-1.26)	-0.13 (-1.94)	-0.11 (-0.51)	-0.11 (-1.50)	-0.290* (-2.50)
<b>nosch</b>	-0.79 (-1.47)	0.06 -0.18	-32.99*** (-42.59)	-0.36 (-0.69)	0.13 -0.35	<b>nosch</b>	-1.65 (-1.60)	0.03 -0.12	0.40 -0.52	0.32 -1.51	0.38 -1.04
<b>secondarysch</b>	0.09 -0.26	-0.20 (-0.68)	-33.83*** (-47.16)	-1.08 (-1.70)	-0.33 (-0.88)	<b>secondarysch</b>	-0.87 (-1.81)	-0.815** (-2.80)	-0.27 (-0.27)	-0.730* (-2.07)	0.06 -0.17
<b>highsch</b>	0.700* -2.16	-0.19 (-0.55)	0.29 -0.29	-0.07 (-0.16)	0.50 -1.44	<b>highsch</b>	0.35 -0.93	-0.789** (-2.78)	-32.16*** (-63.32)	-0.962** (-3.11)	-0.11 (-0.31)
<b>universityup</b>	1.409** -3.01	-0.81 (-1.13)	1.08 -0.92	-0.03 (-0.04)	0.28 -0.51	<b>universityup</b>	0.65 -1.13	-0.33 (-0.84)	-32.51*** (-70.73)	-2.554* (-2.53)	0.01 -0.02
<b>exper</b>	0.05 -0.87	0.05 -1.12	-0.04 (-0.35)	0.02 -0.26	-0.103* (-2.38)	<b>exper</b>	-0.07 (-1.48)	0.02 -0.72	-0.21 (-1.57)	0.0806** -2.77	-0.01 (-0.22)
<b>expersq</b>	0.00 (-1.65)	0.00 (-0.69)	0.00 (-0.36)	0.00 (-0.14)	0.00269* -2.36	<b>expersq</b>	0.00 (-0.00)	0.00 (-0.61)	0.00 -1.42	-0.00122* (-2.07)	0.00 -0.38
<b>femX25to44</b>	0.29 -0.36	0.13 -0.15	-0.90 (-0.88)	19.61 (.)	0.80 -1.03	<b>femX25to44</b>	2.81 -1.95	1.05 -1.54	22.61 (.)	2.722** -3.07	0.78 -0.91
<b>femX45to64</b>	-35.63*** (-29.56)	1.17 -0.95	34.07*** -22.59	-17.13*** (-15.65)	-0.18 (-0.15)	<b>femX45to64</b>	3.585* -2.47	0.49 -0.76	-7.961*** (-4.84)	2.216** -3.00	0.20 -0.21
<b>femXmar</b>	-0.14 (-0.17)	0.00 -0.01	-0.47 (-0.30)	21.98 (.)	0.92 -1.28	<b>femXmar</b>	-3.859** (-2.80)	-1.302* (-2.18)	16.39 (.)	-0.81 (-1.15)	-0.98 (-1.42)

Source: Authors' own calculations based on SILC 2006-2007 (Panel observations only).

Notes: <sup>1</sup> For variable definitions, see Appendix Table A1

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

<sup>3</sup> The results are the marginal effects for the MNL model

<sup>4</sup> Dependent variable Base category: MNL 1: Remaining in FS, For MNL 2: Remaining in IS, For MNL 3: Remaining in FSE, For MNL 4: Remaining if IS, MNL 5: Remaining in U, MNL 6: Remaining in N

<sup>5</sup> Independent variable Base category: Male, Age 15-24, single, does not have a child, primary school graduate, industry sector, firm size 1-10

Legend: \* for p<.05, \*\* for p<.01, and \*\*\* for p<.001

Table 5b: Multinomial Logit estimation results (2006 to 2008 Transitions)

	MNL 1: Transitions out of Formal-Salaried					MNL 2: Transitions out of Informal-Salaried					
	FS to IS	FS to FSE	FS to ISE	FS to U	FS to OLF	IS to FS	IS to FSE	IS to ISE	IS to U	IS to OLF	
<b>female</b>	-1.264	-36.89***	-21.59***	-0.0403	0.562	<b>female</b>	-0.633	-40.79***	-22.52***	-0.380	0.969*
	(-1.73)	(-66.66)	(-22.60)	(-0.09)	(1.24)		(-1.66)	(-74.42)	(-16.61)	(-0.81)	(2.28)
<b>age25to44</b>	-1.669***	-1.797*	-0.899	-0.260	-1.518***	<b>age25to44</b>	0.0417	-1.373	0.707	-0.00180	-1.260*
	(-3.63)	(-2.08)	(-1.47)	(-0.56)	(-4.49)		(0.13)	(-1.37)	(1.46)	(-0.00)	(-2.33)
<b>age45to64</b>	-0.700	-0.650	1.617	1.194	1.156*	<b>age45to64</b>	-1.063*	-2.502	0.367	-0.250	0.908
	(-1.07)	(-0.56)	(1.81)	(1.70)	(2.00)		(-2.10)	(-1.91)	(0.57)	(-0.38)	(1.58)
<b>married</b>	-0.621	0.0845	-1.078	-0.676	-0.341	<b>married</b>	-0.213	0.410	-0.707	-0.969*	-0.875
	(-1.65)	(0.11)	(-1.17)	(-1.59)	(-0.89)		(-0.76)	(0.43)	(-1.53)	(-2.20)	(-1.80)
<b>child</b>	0.148	0.377	-0.198	-0.104	-0.294	<b>child</b>	-0.112	-0.210	0.0107	-0.179	-0.340
	(0.43)	(0.52)	(-0.35)	(-0.34)	(-1.17)		(-0.49)	(-0.40)	(0.03)	(-0.62)	(-1.38)
<b>hsize</b>	-0.0486	-0.572*	-0.293	0.0259	-0.141	<b>hsize</b>	0.0988	-0.265	-0.229*	-0.0778	-0.0566
	(-0.46)	(-2.14)	(-1.81)	(0.30)	(-1.41)		(1.75)	(-1.27)	(-2.19)	(-0.98)	(-0.78)
<b>nosch</b>	-0.801	-35.81***	-37.72***	-0.997	-38.83***	<b>nosch</b>	-1.232**	-41.14***	-0.101	-0.0291	-0.217
	(-1.12)	(-55.50)	(-47.67)	(-0.88)	(-98.96)		(-3.12)	(-56.41)	(-0.29)	(-0.09)	(-0.79)
<b>secondariesch</b>	-0.726*	-1.058	-0.414	-1.175**	-0.485	<b>secondariesch</b>	-0.193	-1.894	-0.884*	-0.238	-0.756*
	(-2.10)	(-1.32)	(-0.68)	(-2.75)	(-1.44)		(-0.85)	(-1.68)	(-2.11)	(-0.80)	(-2.21)
<b>highsch</b>	-1.187**	-0.559	-0.618	-0.813**	-0.972***	<b>highsch</b>	0.438	0.423	-0.755	-0.235	0.00369
	(-3.16)	(-0.92)	(-1.09)	(-2.91)	(-3.41)		(1.79)	(0.67)	(-1.57)	(-0.64)	(0.01)
<b>universityup</b>	-1.834***	-36.99***	-2.363*	-1.516***	-0.987**	<b>universityup</b>	0.982*	-40.30***	-41.58***	-0.249	-0.301
	(-3.38)	(-88.02)	(-2.10)	(-3.42)	(-3.24)		(2.52)	(-86.25)	(-110.23)	(-0.36)	(-0.57)
<b>exper</b>	-0.0413	0.125	-0.00856	-0.113*	-0.0665	<b>exper</b>	-0.0000801	-0.125	-0.0271	-0.0514	-0.0416
	(-0.78)	(1.29)	(-0.11)	(-2.25)	(-1.46)		(-0.00)	(-1.36)	(-0.60)	(-1.26)	(-1.25)
<b>expersq</b>	0.00248*	-0.00725	-0.00116	0.00149	0.00202	<b>expersq</b>	-0.000720	0.00473*	0.000863	0.00135	0.00139
	(1.98)	(-1.94)	(-0.63)	(0.98)	(1.84)		(-0.70)	(2.04)	(0.76)	(1.35)	(1.76)
<b>femX25to44</b>	1.852	0.857	22.32	-0.370	0.613	<b>femX25to44</b>	0.0332	0.812	20.39***	-0.479	0.579
	(1.69)	(1.15)	(.)	(-0.48)	(1.05)		(0.06)	(0.73)	(16.91)	(-0.57)	(0.83)
<b>femX45to64</b>	1.759	1.540	-15.99***	-36.74***	-0.485	<b>femX45to64</b>	0.908	1.241	20.00	-1.230	-0.825
	(1.36)	(1.09)	(-17.16)	(-42.62)	(-0.65)		(1.02)	(0.92)	(.)	(-1.00)	(-1.10)
<b>femXmar</b>	-1.529	-0.610	0.226	-1.208	0.805	<b>femXmar</b>	-0.516	-0.567	1.719	0.809	1.457*
	(-1.36)	(-0.73)	(0.18)	(-1.05)	(1.41)		(-0.93)	(-0.57)	(1.41)	(1.06)	(2.31)
<b>agriculture</b>	0.169	-36.63***	1.508	-37.50***	-0.391	<b>agriculture</b>	-0.811*	-0.434	0.0203	0.135	-0.0101
	(0.14)	(-46.36)	(1.22)	(-74.24)	(-0.25)		(-2.32)	(-0.46)	(0.06)	(0.32)	(-0.03)
<b>construction</b>	1.014*	-35.99***	0.651	0.563	-0.196	<b>construction</b>	-0.721**	-1.546	-1.118**	0.247	-0.846*
	(2.41)	(-54.30)	(0.86)	(1.21)	(-0.33)		(-2.66)	(-1.91)	(-3.01)	(0.76)	(-2.17)
<b>services</b>	-0.403	-0.277	-0.783	-0.734**	-0.555*	<b>services</b>	-0.105	-0.206	-0.308	0.0906	-0.303
	(-1.30)	(-0.49)	(-1.47)	(-3.04)	(-2.37)		(-0.48)	(-0.45)	(-1.04)	(0.31)	(-1.19)
<b>fsize11to49</b>	-0.837**	-1.407*	-1.341*	-0.402	-0.588*	<b>fsize11to49</b>	0.617**	-0.473	-0.212	-0.135	0.0901
	(-2.73)	(-2.22)	(-2.19)	(-1.27)	(-2.02)		(3.02)	(-0.59)	(-0.62)	(-0.45)	(0.34)
<b>fsize50plus</b>	-1.280***	-2.588***	-1.129*	-0.623*	-0.552*	<b>fsize50plus</b>	0.423	-0.432	-1.876	0.284	0.277
	(-3.89)	(-3.37)	(-2.06)	(-2.19)	(-2.16)		(1.34)	(-0.43)	(-1.84)	(0.65)	(0.71)

Table 5b: Multinomial Logit estimation results (2006 to 2008 Transitions) continued

MNL 3: Transitions out of Formal-Self Employed						MNL 4: Transitions out of Informal-Self Employed					
	FSE to FS	FSE to IS	FSE to ISE	FSE to U	FSE to OLF	ISE to FS	ISE to IS	ISE to FSE	ISE to U	ISE to OLF	
<b>female</b>	0.0102	27.16	3.407**	-11.65**	26.19***	<b>female</b>	-1.461	-0.784	-1.014	0.241	1.516***
	(0.01)	(.)	(2.76)	(-2.93)	(4.51)		(-1.84)	(-1.77)	(-1.83)	-0.37	-4.83
<b>age25to44</b>	-0.685	-3.614***	-0.497	-4.103**	-0.0297	<b>age25to44</b>	0.0147	-0.755	0.471	0.979	-1.18
	(-0.85)	(-3.71)	(-0.70)	(-2.89)	(-0.04)		-0.03	(-1.76)	-1.11	-1.21	(-1.58)
<b>age45to64</b>	-0.0946	-2.719	0.821	-3.170**	5.773*	<b>age45to64</b>	-0.999	-0.896	-0.254	0.578	1.415*
	(-0.09)	(-1.54)	(0.83)	(-3.14)	(2.30)		(-1.24)	(-1.57)	(-0.45)	-0.49	-2.54
<b>married</b>	-0.248	-2.097*	-0.351	0.589	-0.357	<b>married</b>	0.331	0.966*	0.192	-0.543	-0.66
	(-0.44)	(-2.20)	(-0.51)	(0.70)	(-0.41)		-0.64	-2.22	-0.51	(-0.79)	(-1.38)
<b>child</b>	0.460	-1.995*	-0.388	-0.151	-0.411	<b>child</b>	-0.477	-0.391	-0.524*	0.131	0.128
	(0.79)	(-1.98)	(-0.76)	(-0.11)	(-0.50)		(-1.48)	(-1.29)	(-2.16)	-0.26	-0.76
<b>hsize</b>	-0.235	-1.327***	-0.0668	-1.081	-0.0482	<b>hsize</b>	-0.0608	0.163**	0.0965	-0.074	0.0309
	(-1.41)	(-3.48)	(-0.47)	(-1.49)	(-0.23)		(-0.67)	-2.59	-1.66	(-0.65)	-0.68
<b>nosch</b>	-35.69***	-34.95***	0.204	2.892	0.982	<b>nosch</b>	-0.245	-0.101	-0.32	-0.484	-0.00912
	(-71.19)	(-27.75)	(0.27)	(1.47)	(0.88)		(-0.44)	(-0.33)	(-1.09)	(-0.76)	(-0.06)
<b>secondariesch</b>	0.0886	-36.23***	-0.253	1.136	0.826	<b>secondariesch</b>	0.308	-0.279	-0.44	0.376	-0.199
	(0.17)	(-38.23)	(-0.39)	(0.85)	(0.84)		-0.72	(-0.95)	(-1.28)	-0.83	(-0.74)
<b>highsch</b>	0.0414	-38.01***	-0.403	-34.40***	0.873	<b>highsch</b>	1.086**	-1.267**	0.169	-1.004	-0.527
	(0.06)	(-25.55)	(-0.54)	(-37.30)	(1.41)		-3.13	(-2.64)	-0.54	(-1.52)	(-1.41)
<b>universityup</b>	0.774	1.380	-0.432	-33.81***	-38.75***	<b>universityup</b>	0.974	-0.606	0.513	-31.93***	0.0243
	(0.98)	(1.30)	(-0.47)	(-26.78)	(-18.26)		-1.14	(-0.54)	-0.75	(-55.13)	-0.04
<b>exper</b>	-0.0569	0.758***	-0.0557	0.134	-0.441**	<b>exper</b>	-0.0172	-0.0215	0.013	-0.124*	-0.0718**
	(-0.63)	(4.03)	(-0.71)	(0.50)	(-2.81)		(-0.27)	(-0.52)	-0.35	(-2.21)	(-3.11)
<b>expersq</b>	-0.000334	-0.0194***	0.000798	-0.00111	0.00785**	<b>expersq</b>	-0.0000594	-0.000838	-0.000484	0.00198	0.00131**
	(-0.14)	(-3.36)	(0.52)	(-0.16)	(2.65)		(-0.04)	(-0.90)	(-0.66)	-1.55	-2.93
<b>femX25to44</b>	-28.78	-30.13***	-57.14	-49.65***	-40.39***	<b>femX25to44</b>	0.179	0.295	-0.515	-0.771	1.209
	(.)	(-13.03)	(.)	(-18.74)	(-5.72)		-0.16	-0.48	(-0.67)	(-0.68)	-1.58
<b>femX45to64</b>	-41.54***	-47.79***	-32.69***	-30.42***	-17.09	<b>femX45to64</b>	-28.74***	0.101	-0.235	0.457	-0.959
	(-6.06)	(-7.84)	(-4.72)	(-6.03)	(.)		(-25.81)	-0.11	(-0.28)	-0.39	(-1.74)
<b>femXmar</b>	28.35	10.79	54.41	30.44***	16.49**	<b>femXmar</b>	-2.345	-1.237	-0.578	-1.561	0.143
	(.)	(.)	(.)	(5.09)	(2.92)		(-1.86)	(-1.91)	(-0.85)	(-1.54)	-0.27
<b>agriculture</b>	0.224	-1.551	-0.0644	-2.481	-2.705*	<b>agriculture</b>	-1.850***	-1.548***	-1.915***	-2.545***	-1.863***
	(0.35)	(-1.76)	(-0.09)	(-1.95)	(-2.09)		(-3.51)	(-3.47)	(-5.55)	(-4.68)	(-6.62)
<b>construction</b>	0.903	-32.77***	-37.09***	-35.76***	-39.14***	<b>construction</b>	-33.61***	0.078	-0.758	-0.484	-1.316
	(0.80)	(-19.03)	(-34.55)	(-19.93)	(-25.79)		(-53.09)	-0.11	(-1.19)	(-0.50)	(-1.15)
<b>services</b>	-0.363	-0.952	-0.765	-0.980	-1.219	<b>services</b>	-1.261*	-0.975*	-1.583***	-1.054	-1.444***
	(-0.61)	(-1.12)	(-1.09)	(-1.44)	(-1.45)		(-2.27)	(-2.11)	(-4.00)	(-1.90)	(-4.21)
						<b>fsize11to49</b>	-30.98***	2.469**	-31.85***	-30.23***	0.369
							(-24.90)	-2.7	(-39.31)	(-34.03)	-0.32

**Table 5b: Multinomial Logit estimation results (2006 to 2008 Transitions) continued**

	MNL 5: Transitions out of Unemployed					MNL 6: Transitions out of Inactive					
	U to FS	U to IS	U to FSE	U to ISE	U to OLF	OLF to FS	OLF to IS	OLF to FSE	OLF to ISE	OLF to U	
<b>female</b>	23.72***	23.03***	-10.57***	-15.72	25.56***	<b>female</b>	-1.729**	-1.554***	-34.26***	-1.808***	-1.725**
	-28.45	-19.89	(-9.54)	(.)	-24.94		(-2.97)	(-3.34)	(-48.29)	(-3.77)	(-2.72)
<b>age25to44</b>	-0.821	-0.248	1.374	0.0436	-0.668	<b>age25to44</b>	-1.805	-1.997**	-0.833	-4.151***	-2.155
	(-1.48)	(-0.46)	-1.76	-0.05	(-1.07)		(-1.81)	(-2.59)	(-0.66)	(-3.79)	(-1.87)
<b>age45to64</b>	-36.75***	-1.191	0.866	-0.388	1.024	<b>age45to64</b>	-4.334***	-2.654***	-2.963	-4.630***	-3.783***
	(-40.16)	(-1.52)	-0.8	(-0.36)	-1.16		(-4.49)	(-3.45)	(-1.83)	(-4.93)	(-3.57)
<b>married</b>	0.39	0.228	0.553	-0.365	0.465	<b>married</b>	0.29	0.819	4.095**	2.080*	0.516
	-0.69	-0.45	-0.56	(-0.49)	-0.73		-0.27	-1.16	-2.65	-2.44	-0.59
<b>child</b>	-1.017*	-0.0756	-0.8	-0.0405	-0.702	<b>child</b>	0.125	0.614*	-0.86	0.255	0.369
	(-2.15)	(-0.16)	(-1.08)	(-0.07)	(-1.49)		-0.31	-2.25	(-0.79)	-1.07	-0.99
<b>hsize</b>	0.148	0.043	-0.298	-0.23	-0.0434	<b>hsize</b>	0.0538	-0.15	-0.355	-0.186*	-0.285
	-1.49	-0.47	(-1.23)	(-1.38)	(-0.41)		-0.41	(-1.58)	(-1.35)	(-2.26)	(-1.89)
<b>nosch</b>	-1.44	-0.247	0.11	-0.178	0.319	<b>nosch</b>	-0.94	0.22	-0.246	0.103	0.0362
	(-1.68)	(-0.55)	-0.11	(-0.34)	-0.66		(-1.30)	-0.8	(-0.24)	-0.41	-0.07
<b>secondarysch</b>	0.272	-0.353	0.168	-0.702	-0.174	<b>secondarysch</b>	-0.86	-0.0283	0.525	-0.0705	-0.208
	-0.58	(-0.79)	-0.23	(-1.04)	(-0.32)		(-1.41)	(-0.09)	-0.46	(-0.21)	(-0.39)
<b>highsch</b>	1.026*	-0.0639	0.159	-0.436	0.554	<b>highsch</b>	0.516	-0.713*	-33.20***	-0.678*	-0.11
	-2.48	(-0.15)	-0.2	(-0.73)	-1.16		-1.15	(-2.10)	(-25.41)	(-2.10)	(-0.24)
<b>universityup</b>	2.171**	0.061	0.409	0.656	1.284	<b>universityup</b>	1.305*	-0.0523	-33.19***	-1.565*	-0.807
	-2.59	-0.06	-0.34	-0.63	-1.33		-2.13	(-0.12)	(-34.33)	(-2.12)	(-0.76)
<b>exper</b>	0.0442	0.0334	-0.326**	-0.0226	-0.144*	<b>exper</b>	-0.0762	-0.00827	-0.353*	0.0546	0.117
	-0.54	-0.53	(-3.03)	(-0.30)	(-2.17)		(-1.17)	(-0.25)	(-2.47)	-1.58	-1.8
<b>expersq</b>	-0.00071	-0.000793	0.00684*	0.00191	0.00411*	<b>expersq</b>	0.00146	0.000204	0.00646*	-0.000754	-0.00368*
	(-0.25)	(-0.41)	-2.55	-0.92	-2.4		-0.86	-0.28	-2.49	(-0.96)	(-2.20)
<b>femX25to44</b>	-22.91	-23.41***	-23.74***	-4.491***	-23.48***	<b>femX25to44</b>	0.63	2.225**	1.126	3.724***	2.332
	(.)	(-20.74)	(-23.86)	(-6.31)	(-26.05)		-0.58	-2.63	-0.95	-3.31	-1.83
<b>femX45to64</b>	-1.679	-0.19	-2.309	-19.19***	-3.386*	<b>femX45to64</b>	1.888	1.4	2.711	3.748***	0.771
	(-1.05)	(.)	(-1.28)	(-12.42)	(-2.12)		-1.58	-1.63	-1.87	-3.9	-0.56
<b>femXmar</b>	0.0646	0.993	0.596	22.03***	0.787	<b>femXmar</b>	-1.154	-2.120**	-5.048***	-2.294*	-2.695*
	-0.06	-0.86	-0.51	-23.92	-0.71		(-1.00)	(-2.69)	(-3.49)	(-2.50)	(-2.48)

Source: Authors' own calculations based on SILC 2006-2008 (Panel observations only).

Notes: <sup>1</sup> For variable definitions, see Appendix Table A1

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

<sup>3</sup> The results are the marginal effects for the MNL model

<sup>4</sup> Dependent variable Base category: MNL 1: Remaining in FS, For MNL 2: Remaining in IS, For MNL 3: Remaining in FSE, For MNL 4: Remaining in IS, MNL 5: Remaining in U, MNL 6: Remaining in N

<sup>5</sup> Independent variable Base category: Male, Age 15-24, single, does not have a child, primary school graduate, industry sector, firm size 1-10

Legend: \* for p<.05, \*\* for p<.01, and \*\*\* for p<.001

Table 5c: Multinomial Logit estimation results (2006 to 2009 Transitions)

	MNL 1: Transitions out of Formal-Salaried					MNL 2: Transitions out of Informal-Salaried					
	FS to IS	FS to FSE	FS to ISE	FS to U	FS to OLF	IS to FS	IS to FSE	IS to ISE	IS to U	IS to OLF	
<b>female</b>	-38.73***	-38.79***	-23.01***	-0.820	1.069*	<b>female</b>	-0.553	-39.59***	0.473	0.537	2.197**
	(-50.98)	(-36.78)	(-21.16)	(-1.19)	(2.12)		(-0.92)	(-49.22)	(0.59)	(0.70)	(3.28)
<b>age25to44</b>	-1.825**	-3.128*	-0.948	-0.665	-1.274*	<b>age25to44</b>	-0.337	-3.254***	0.672	-0.0472	-0.705
	(-2.65)	(-2.16)	(-1.49)	(-1.51)	(-2.13)		(-0.67)	(-4.48)	(1.11)	(-0.07)	(-1.23)
<b>age45to64</b>	-0.815	-36.23***	1.119	-0.685	1.283	<b>age45to64</b>	-1.577	-25.13***	-0.112	1.083	0.0567
	(-0.81)	(-37.63)	(1.16)	(-0.96)	(1.43)		(-1.71)	(-20.50)	(-0.13)	(1.22)	(0.07)
<b>married</b>	-0.314	-1.089	-1.363*	-0.863	-1.596**	<b>married</b>	-0.455	1.500	-0.676	-0.954	-0.237
	(-0.42)	(-0.96)	(-2.29)	(-1.68)	(-2.61)		(-1.02)	(1.81)	(-1.19)	(-1.56)	(-0.42)
<b>child</b>	0.954	1.112	0.649	-0.383	-0.162	<b>child</b>	0.0926	-1.714**	0.262	-0.421	-0.541
	(1.72)	(0.91)	(1.14)	(-1.02)	(-0.46)		(0.24)	(-2.64)	(0.59)	(-1.07)	(-1.45)
<b>hsize</b>	-0.212	-0.871	-0.138	-0.0328	0.0226	<b>hsize</b>	0.0880	-0.259	0.0291	-0.0990	-0.0355
	(-1.50)	(-1.52)	(-0.88)	(-0.37)	(0.22)		(0.91)	(-0.79)	(0.27)	(-0.80)	(-0.33)
<b>nosch</b>	-42.23***	-36.59***	-0.691	-41.21***	-1.654	<b>nosch</b>	-2.925**	-42.81***	-0.537	-1.364*	-0.201
	(-33.79)	(-27.93)	(-0.82)	(-66.53)	(-1.51)		(-2.65)	(-45.33)	(-1.18)	(-2.18)	(-0.46)
<b>secondariesch</b>	-0.981*	-1.355	-1.655*	-0.00280	-1.054*	<b>secondariesch</b>	-0.0477	0.0553	-1.535**	-0.802	-0.832
	(-2.04)	(-1.01)	(-1.97)	(-0.01)	(-2.47)		(-0.13)	(0.06)	(-2.64)	(-1.62)	(-1.61)
<b>highsch</b>	-1.014*	-0.773	-0.987	-0.609	-1.867***	<b>highsch</b>	0.518	0.492	-2.648*	0.221	-0.659
	(-2.00)	(-0.96)	(-1.78)	(-1.69)	(-4.42)		(1.29)	(0.39)	(-2.56)	(0.50)	(-1.15)
<b>universityup</b>	-1.939*	-38.83***	-2.711*	-0.757	-1.169*	<b>universityup</b>	1.013	-40.81***	-1.108	-1.871	-0.401
	(-2.38)	(-63.48)	(-2.54)	(-1.68)	(-2.48)		(1.58)	(-27.13)	(-1.06)	(-1.66)	(-0.56)
<b>exper</b>	-0.0472	0.517	-0.0299	-0.0210	0.0382	<b>exper</b>	-0.0148	0.135	-0.0928	0.0664	-0.0532
	(-0.65)	(1.59)	(-0.37)	(-0.36)	(0.57)		(-0.26)	(1.02)	(-1.80)	(1.00)	(-1.12)
<b>expersq</b>	0.00249	-0.0222	-0.000821	0.00114	-0.000168	<b>expersq</b>	-0.000747	-0.00298	0.00294*	-0.00264	0.00255*
	(1.41)	(-1.48)	(-0.37)	(0.71)	(-0.11)		(-0.39)	(-0.71)	(2.30)	(-1.44)	(2.17)
<b>femX25to44</b>	18.92	18.97	22.50	-0.662	-0.973	<b>femX25to44</b>	0.220	-19.79***	-0.843	0.187	-0.268
	(.)	(.)	(.)	(-0.40)	(-1.08)		(0.24)	(-20.63)	(-0.83)	(0.15)	(-0.29)
<b>femX45to64</b>	-20.56***	14.85***	-16.39***	-40.24***	-2.536*	<b>femX45to64</b>	0.321	43.81	-0.784	-2.117	-1.080
	(-19.47)	(8.56)	(-10.60)	(-17.61)	(-2.10)		(0.20)	(.)	(-0.55)	(-1.33)	(-0.96)
<b>femXmar</b>	20.20	21.13	-37.96***	0.922	2.424*	<b>femXmar</b>	0.177	19.39	0.895	0.967	1.029
	(.)	(.)	(-33.42)	(0.53)	(2.57)		(0.19)	(.)	(0.95)	(0.92)	(1.17)
<b>agriculture</b>	-39.99***	-37.77***	1.449	1.535	-41.43***	<b>agriculture</b>	-2.026*	-0.180	-0.350	-1.473*	-0.385
	(-30.36)	(-27.70)	(1.18)	(1.06)	(-41.97)		(-2.48)	(-0.15)	(-0.72)	(-2.00)	(-0.77)
<b>construction</b>	1.572**	-36.57***	0.640	0.388	0.790	<b>construction</b>	0.0958	-0.305	-0.899	0.108	-0.997
	(2.61)	(-28.51)	(0.77)	(0.65)	(1.25)		(0.22)	(-0.33)	(-1.85)	(0.23)	(-1.88)
<b>services</b>	-0.193	-0.237	-0.0721	-0.535	-1.078**	<b>services</b>	0.173	-0.339	-0.132	-0.439	-0.429
	(-0.43)	(-0.34)	(-0.16)	(-1.73)	(-3.00)		(0.47)	(-0.51)	(-0.33)	(-1.01)	(-1.11)
<b>fsize11to49</b>	-0.718	-2.153	-0.0618	0.107	-0.925*	<b>fsize11to49</b>	0.791*	-0.993	-0.616	0.123	-0.626
	(-1.72)	(-1.71)	(-0.13)	(0.30)	(-2.19)		(2.55)	(-0.70)	(-1.58)	(0.30)	(-1.61)
<b>fsize50plus</b>	-1.687***	-39.23***	-1.181*	-0.431	-0.173	<b>fsize50plus</b>	1.150*	0.710	-43.24***	1.082	-0.658
	(-3.45)	(-82.50)	(-2.03)	(-1.11)	(-0.49)		(2.24)	(0.65)	(-95.05)	(1.96)	(-1.01)

Table 5c: Multinomial Logit estimation results (2006 to 2009 Transitions) continued

MNL 3: Transitions out of Formal-Self Employed						MNL 4: Transitions out of Informal-Self Employed					
	FSE to FS	FSE to IS	FSE to ISE	FSE to U	FSE to OLF	ISE to FS	ISE to IS	ISE to FSE	ISE to U	ISE to OLF	
<b>female</b>	-41.66***	-38.64***	-20.29***	26.04*	-3.302*	<b>female</b>	-1.770	0.189	-1.596	0.326	2.805***
	(-27.78)	(-18.46)	(-12.23)	(2.15)	(-2.49)		(-1.54)	(0.31)	(-1.40)	(0.32)	(5.21)
<b>age25to44</b>	-1.429	0.187	-1.496	-29.65	-0.439	<b>age25to44</b>	-1.251	-0.292	0.680	-0.469	-0.741
	(-0.83)	(0.15)	(-1.40)	(.)	(-0.34)		(-1.43)	(-0.52)	(1.01)	(-0.41)	(-0.70)
<b>age45to64</b>	-2.276	4.180	-0.373	-76.28***	1.571	<b>age45to64</b>	-3.212*	-0.0205	-0.432	-1.642	1.924*
	(-1.08)	(1.96)	(-0.26)	(-6.36)	(0.83)		(-2.18)	(-0.03)	(-0.47)	(-0.88)	(2.12)
<b>married</b>	-0.726	-0.403	-0.551	21.61	-1.778	<b>married</b>	0.254	1.885**	0.595	0.252	-0.0108
	(-0.55)	(-0.36)	(-0.71)	(.)	(-1.54)		(0.27)	(2.94)	(1.10)	(0.29)	(-0.01)
<b>child</b>	0.0562	-1.317	0.483	9.919	-0.426	<b>child</b>	0.0424	-0.757	-0.361	-0.333	0.134
	(0.05)	(-1.09)	(0.71)	(.)	(-0.53)		(0.08)	(-1.84)	(-0.91)	(-0.42)	(0.54)
<b>hsize</b>	-0.493	0.222	-0.136	-23.86***	0.225	<b>hsize</b>	-0.136	0.206*	0.0404	-0.191	0.000877
	(-1.42)	(0.50)	(-0.76)	(-6.75)	(1.12)		(-1.05)	(2.36)	(0.43)	(-0.79)	(0.01)
<b>nosch</b>	-37.94***	-34.60***	0.124	10.56*	1.145	<b>nosch</b>	-34.97***	0.233	-0.805	-0.428	0.131
	(-32.34)	(-22.75)	(0.12)	(2.01)	(0.99)		(-87.65)	(0.51)	(-1.38)	(-0.39)	(0.57)
<b>secondarysch</b>	0.0919	2.764**	0.517	-72.19***	1.097	<b>secondarysch</b>	0.570	-0.139	-0.942	-0.363	-1.218*
	(0.07)	(2.61)	(0.79)	(-28.70)	(1.27)		(0.92)	(-0.32)	(-1.50)	(-0.59)	(-2.44)
<b>highsch</b>	-1.251	2.024	0.186	3.972*	-39.64***	<b>highsch</b>	0.407	-0.934	-0.164	-1.088	0.00641
	(-1.20)	(1.42)	(0.24)	(2.26)	(-40.50)		(0.64)	(-1.48)	(-0.34)	(-0.97)	(0.02)
<b>universityup</b>	0.989	-39.30***	1.003	-27.89***	0.115	<b>universityup</b>	1.183	-36.03***	0.565	-35.27***	0.780
	(0.97)	(-19.95)	(1.00)	(-7.02)	(0.06)		(1.03)	(-63.30)	(0.55)	(-42.18)	(0.95)
<b>exper</b>	0.00863	0.0614	0.00195	-1.697	-0.00496	<b>exper</b>	0.0465	-0.0920	-0.0160	-0.0390	-0.0962**
	(0.05)	(0.32)	(0.02)	(-1.67)	(-0.03)		(0.50)	(-1.50)	(-0.25)	(-0.33)	(-2.72)
<b>expersq</b>	-0.000980	-0.00751	0.000754	0.0479	0.000439	<b>expersq</b>	-0.000431	0.0000382	-0.00000844	0.000358	0.00168*
	(-0.24)	(-1.48)	(0.44)	(1.55)	(0.13)		(-0.23)	(0.03)	(-0.01)	(0.13)	(2.43)
<b>femX45to64</b>	23.21***	26.18***	22.66***	41.41***	22.56	<b>femX25to44</b>	-32.33***	-0.504	-0.377	-35.34***	0.506
	(8.66)	(9.77)	(10.70)	(4.29)	(.)		(-22.93)	(-0.61)	(-0.23)	(-34.78)	(0.46)
<b>femXmar</b>	4.520	-1.629	21.65	-25.25	6.494	<b>femX45to64</b>	-28.90***	-35.71***	-0.187	1.118	-1.641
	(.)	(.)	(.)	(.)	(.)		(-16.42)	(-42.57)	(-0.10)	(0.74)	(-1.78)
<b>agriculture</b>	0.760	-3.545	-0.266	56.43	-3.624*	<b>femXmar</b>	-33.24***	-2.081*	-0.314	-1.790	-0.582
	(0.68)	(-1.85)	(-0.33)	(.)	(-2.07)		(-23.34)	(-2.57)	(-0.20)	(-1.51)	(-0.71)
<b>construction</b>	35.07***	-8.639***	-8.380***	126.0***	-8.288***	<b>agriculture</b>	-1.595	-1.765**	-1.882**	-1.728	-2.529***
	(16.84)	(-4.18)	(-8.03)	(46.66)	(-7.01)		(-1.53)	(-2.70)	(-2.81)	(-1.46)	(-5.28)
<b>services</b>	1.884	-3.496*	-0.338	12.27**	-1.311	<b>construction</b>	-36.51***	0.840	-0.232	2.043	-36.57***
	(1.63)	(-2.35)	(-0.42)	(3.20)	(-1.38)		(-28.75)	(0.75)	(-0.22)	(1.52)	(-47.69)
						<b>services</b>	-1.051	-1.363*	-1.459*	-0.121	-1.901***
							(-0.94)	(-1.98)	(-2.06)	(-0.12)	(-3.58)
						<b>fsize11to49</b>	-34.80***	2.534**	-35.72***	-33.96***	0.584
							(-24.66)	(2.70)	(-42.81)	(-30.70)	(0.53)

**Table 5c: Multinomial Logit estimation results (2006 to 2009 Transitions) continued**

	MNL 5: Transitions out of Unemployed					MNL 6: Transitions out of Inactive					
	U to FS	U to IS	U to FSE	U to ISE	U to OLF	OLF to FS	OLF to IS	OLF to FSE	OLF to ISE	OLF to U	
<b>female</b>	-1.961 (-1.48)	-38.26*** (-33.76)	-41.35*** (-27.06)	-21.45*** (-10.78)	1.270 (1.10)	<b>female</b>	-1.721* (-2.29)	-2.458* (-2.29)	-40.53*** (-36.73)	-2.350*** (-3.34)	-0.626 (-0.71)
<b>age25to44</b>	-1.472 (-1.51)	0.0728 (0.07)	0.206 (0.17)	-1.669 (-1.39)	0.145 (0.14)	<b>age25to44</b>	-1.366 (-0.92)	-0.707 (-0.59)	-58.86*** (-59.83)	-20.49*** (-37.60)	-20.68*** (-14.17)
<b>age45to64</b>	-39.05*** (-19.82)	0.268 (0.19)	-34.30*** (-16.69)	-0.877 (-0.59)	1.399 (0.97)	<b>age45to64</b>	-2.209* (-2.51)	-1.454 (-1.09)	-20.84 (.)	-21.85*** (-21.44)	-21.91*** (-14.64)
<b>married</b>	-0.984 (-1.04)	-0.972 (-1.15)	1.225 (1.06)	-0.492 (-0.41)	-1.524 (-1.45)	<b>married</b>	-1.347 (-1.17)	0.753 (0.61)	22.41*** (6.20)	18.89*** (18.55)	21.11*** (17.89)
<b>child</b>	-0.0446 (-0.06)	1.122 (1.49)	0.143 (0.15)	0.655 (0.90)	-0.0338 (-0.05)	<b>child</b>	0.773 (1.43)	0.848* (1.98)	0.189 (0.11)	0.127 (0.36)	0.919 (1.32)
<b>hsize</b>	0.0416 (0.30)	-0.157 (-1.00)	-0.267 (-0.87)	-0.138 (-0.88)	-0.176 (-0.95)	<b>hsize</b>	-0.194 (-0.96)	-0.191 (-1.27)	-0.291 (-0.55)	-0.129 (-1.04)	-1.086** (-3.14)
<b>nosch</b>	-0.709 (-0.58)	-0.0446 (-0.06)	-34.65*** (-29.03)	-1.364 (-1.02)	1.370 (1.68)	<b>nosch</b>	-39.57*** (-108.63)	-0.843 (-1.31)	-37.96*** (-42.35)	0.276 (0.74)	-0.810 (-0.74)
<b>secondarysch</b>	0.774 (0.98)	0.388 (0.51)	-0.121 (-0.11)	0.244 (0.29)	-1.005 (-1.15)	<b>secondarysch</b>	-0.283 (-0.44)	-0.319 (-0.51)	0.0739 (0.03)	0.487 (1.17)	0.222 (0.29)
<b>highsch</b>	1.058 (1.55)	0.522 (0.72)	1.441 (1.39)	-0.948 (-0.78)	1.477* (2.06)	<b>highsch</b>	0.765 (1.47)	0.247 (0.54)	-37.23*** (-24.40)	-0.522 (-1.09)	0.916 (1.43)
<b>universityup</b>	3.904* (2.44)	-35.27*** (-34.84)	3.017 (1.79)	0.670 (0.47)	1.342 (1.02)	<b>universityup</b>	0.781 (0.95)	-0.639 (-0.84)	-37.92*** (-28.01)	-1.842 (-1.78)	-0.114 (-0.10)
<b>exper</b>	0.186 (1.54)	0.0473 (0.40)	-0.346 (-1.67)	0.154 (1.36)	-0.138 (-1.47)	<b>exper</b>	0.0314 (0.33)	-0.122* (-2.15)	-0.329 (-1.55)	0.0765 (1.48)	0.0439 (0.31)
<b>expersq</b>	-0.00497 (-1.21)	-0.00309 (-0.91)	0.00633 (0.97)	-0.00469 (-1.63)	0.00491* (1.99)	<b>expersq</b>	-0.00275 (-0.80)	0.00261* (2.08)	0.00486 (1.56)	-0.00108 (-1.04)	-0.00310 (-0.74)
<b>femX25to44</b>	-0.447 (-0.31)	-0.582 (-0.43)	19.39 (.)	0.128 (0.06)	-1.206 (-0.82)	<b>femX25to44</b>	0.0703 (0.05)	0.799 (0.60)	59.13*** (39.49)	20.33 (.)	20.69*** (17.49)
<b>femX45to64</b>	34.96 (1.75)	36.16 (1.81)	53.35** (2.66)	-0.356 (-0.02)	34.19 (1.73)	<b>femX45to64</b>	0.294 (0.27)	0.152 (0.09)	21.89*** (13.57)	21.18*** (23.27)	21.16 (.)
<b>femXmar</b>	3.357* (2.37)	2.525* (2.18)	21.97 (.)	23.28 (.)	3.762* (2.56)	<b>femXmar</b>	0.938 (0.73)	-0.989 (-0.71)	-23.02*** (-6.76)	-19.08*** (-16.85)	-22.94*** (-20.84)

Source: Authors' own calculations based on SILC 2006-2009 (Panel observations only).

Notes: <sup>1</sup> For variable definitions, see Appendix Table A1

<sup>2</sup> FS: Formal-salaried IS: Informal-Salaried FSE: Formal Self-employed ISE: Informal Self-employed U: Unemployed N: Inactive

<sup>3</sup> The results are the marginal effects for the MNL model

<sup>4</sup> Dependent variable Base category: MNL 1: Remaining in FS, For MNL 2: Remaining in IS, For MNL 3: Remaining in FSE, For MNL 4: Remaining in ISE, For MNL 5: Remaining in U, MNL 6: Remaining in N

<sup>5</sup> Independent variable Base category: Male, Age 15-24, single, does not have a child, primary school graduate, industry sector, firm size 1-10

Legend: \* for p<.05, \*\* for p<.01, and \*\*\* for p<.001