"Labour Market Flows in Argentina an Application of Censored Quantile Regression for Duration Data"
Luis Beccaria

Abstract

This document analyses the characteristics of labour mobility in Argentina from 1991 to 2006 by studying transitions from occupations in urban areas of Argentina. In particular, the paper investigates the influence of tenure and personal and occupational attributes, as well as macro variables –in particular, the effect of business cycle–, on the employment and unemployment duration. The analysis is based on censored quantile regression for duration data. This paper is the first attempt to use this econometric technique for employment dynamic in Argentina. The main aim is to identify those groups of workers with the larger occupational turnover in Argentina, and to analyse the factors associated to labour instability.

Argentina constitutes an interesting case to be analysed because during the nineties it reached high growth rates and a more stable macroeconomic environment; but also witnessed significant rises in unemployment, labour precariousness, inequality and poverty. Moreover, notwithstanding the stabilisation of the economy and the reduction of inflation, labour and income instability grew during the decade. In particular, open unemployment reached unprecedented high levels while the incidence of precarious employment also grew. Both phenomena usually led to higher occupational instability, as short-term jobs are typical among those non-registered. Occupational turnover would also have been stimulated by modifications introduced to labour regulations as the new types of fixed-term -lower cost- contracts and the trial period.

Labour market conditions improved after the change in the monetary regime in 2003 as employment grew at a fast rate and informality fell, albeit slowly. It would be of a main interest to compare this period mobility characteristic to those of the nineties. In particular, comparisons will be made regarding the size of the exit and entry rates and their patterns – i.e. the origin / destination of the flows and their incidence among different type of workers–. Precisely, the quantile regression makes it possible to analyze how an eventual reduction in the degree of mobility (as it seems to have happened) had different impact over the conditional distribution of tenure.

Labour instability is not only relevant for a better appraisal of the labour market but also for assessing households' well-being dynamics. Well-being may be negatively affected if rising unemployment is accompanied by higher occupational involuntary turnover as they intensify income fluctuations and, consequently, led to more instability of households' income. Such a situation is particularly difficult among low-income and/or low-asset families, which experience high vulnerability to social risks. It is possible, however, that transitions to employment from out of the labour force reduce incomes' fluctuations. Moreover, frequent changes of jobs (implying, or not, unemployment episodes) may also conspire against individuals' social integration and usually leads to losing social security coverage.

Data used in this paper come from the regular household survey –Permanent Household Survey (EPH for the Spanish acronym)– carried out by the National Statistical Institute

(INDEC), that covers 31 urban centres. EPH is neither a longitudinal survey nor it includes retrospective questions; however it is possible to obtain flow data from it given its rotating panel sample: a selected household is interviewed in four successive opportunities or waves. Consequently, comparing the situation of an individual in a given wave, with that of the same person in the following one, it is possible to evaluate if he/she had experienced some change in diverse variables, included the occupational ones.

Specifically, data set includes the occupational situation of a same person in waves "t" and "t+1": i.e. he/she remained in same job, became employed, move to another job, became unemployed or left the labour force. Additionally to using the panel structure of the sample, this paper also uses retrospective information in order to apply duration models. Those employed at the moment of the interview are asked about how long she/he has been at her/his present job, information from which we can build the variable "tenure" –one of the most important variables in labor duration models–. From this information only the incomplete duration of the episode can be drawn. However, the fact of being able to observe the individuals in four successive waves allows knowing which of these episodes come to an end during the period of observation. In these cases an approximation of the complete duration can be known. In the episodes which are still in progress at the time of the fourth interview, their duration is right censored because the only fact that we know is that the complete duration is as a minimum (i.e. longer than) the elapsed tenure in the last observation. A similar procedure can be considered for those unemployed at the moment of the interview.

Each person may also be characterised by personal and job attributes. In order to have enough observations, and given the aim of the paper, transitions for the whole period were pooled. Even if data from such surveys face some limitations for measuring labour transitions, they provide reasonable good evidences on the characteristics of occupational mobility. Notwithstanding that, an analysis of the data main limitations data will be discussed as well as some suggestion for improvement for surveys as the Argentinean one will be discussed.

As mentioned, the econometric estimations are based on censored quantile regression for duration data.1 Censored quantile regression takes into account the right censoring in duration variable. Also, in contrast to traditional duration models (Cox Model, for example), quantile regression not impose a proportional effect of the covariates on the hazard along the duration, allowing different effects depending of the quantile of the conditional employment duration distribution. Therefore, quantile regression methods are more flexible than the usual ones because they can account for different effect at different point of the distribution. Previous estimations of hazard rates for Argentina –following the procedure suggested by Fitzenberger and Wilke (2005)– showed that the proportional assumption –which is common in labour duration models– does not hold for much of the usual co - variables.