

# Transition from University to the Job Market. A Time Analysis of the University of Cagliari Graduates

Mariano Porcu, Nicola Tedesco<sup>1</sup>

*Department of Social and Economics Research, University of Cagliari, Italy*

**Summary.** To investigate the transition from University to work, and indirectly assess the effectiveness of university education, time analysis can play a key role. The period that elapses between graduation and finding work is usually influenced by various factors. In this work, an analysis of such determinants is performed by means of non-parametric and parametric survival models.

**Keywords:** Transition to work; Time intervals; Graduates; Kaplan-Meier model; Weibull model.

## 1. Transition times between graduation and employment

The transition from university to the job market is a basic aspect to be considered when assessing the efficacy of the higher education system in Italy (Giambalvo, 1996; Ortu *et al.*, 2000). Any analysis of the outcomes of the university system has to evaluate the success of graduates in finding a job in a short time.

The occupation of graduates must be evaluated both in relation to the employment rate and job qualification, and to time needed to reach a given target. The length of a transition period may be influenced by several factors. By analysing these factors, we can understand how the missions of state-run universities to educate its citizens and to satisfy the demands of the labour society are accomplished.

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Moreover, considering the “3+2” reform of the Italian university system, this aspect is an essential instrument to correct and improve the process of university education. Therefore, in this work, we will study transition times with semi-parametric and parametric techniques on a sample of graduates of University of Cagliari, in order to evaluate the importance of some covariates.

After the presentation of some general traits of the graduates of the University of Cagliari (Section 2), we will analyse their transition times (Section 3) and draw some general conclusions from the obtained results (Section 4).

## 2. The University of Cagliari graduates

Our data comes from a survey on graduates of the University of Cagliari, undertaken in autumn 2003. Our research, realized with a CATI system, involved 4,363 graduates (aged 37 years or less at graduation) who had their degree in years 1999 and 2000.

We selected a sample size of 1,112 (one out of four population units). For each subject, the professional status at the interview was noted: i.e. whether employed, unemployed (before employed), seeking for first employment, enrolled in a masters or PhD course, not interested in finding an occupation. Moreover, those in employment were asked whether they had started in their current job before or after completing their degree.

According to these variables, we selected a sub-sample of 906 graduates who were employed when interviewed and had begun their present job after the graduation. We concentrated our analysis on the employment status during a given period. Each of the 906 graduates was observed for a period ranging from 35 to 56 months (TIME) and their unemployment (transition) times were evaluated retrospectively. If a subject was not working at the end of survey period, his/her exposure time was truncated.

The criterion variable TIME is computed as difference between the student's first employment time and that of graduation. If, during the observational period, the subject had obtained a master/PhD/specialization title, the time span (both truncated and complete) was recalculated subtracting the frequency period because we hypothesised that during post-graduate education subjects did not look for jobs.

For an explanatory analysis of transition times, we considered the covariates: sex (SEX), type of degree (TY\_DEG), degree final mark (MARK), delay in finishing university studies (obtained by subtracting the statutory time for university studies from the time taken) (LAG), completion of master, or Ph.D., or other specialisation courses (POST).

Concerning the variable MARK (the interval is 66-110), we decided to create two levels ( $\leq 105$  and  $\geq 106$ ) in line with its distribution (Fig. 1). The variable LAG was categorised in three levels: “ $\leq 1$  year”, “2-3 years”, “ $\geq 4$  years”.