

# A Structural Model of the Employment Pathways of the University of Foggia Graduates<sup>1</sup>

Corrado Crocetta\*, Francesco d'Ovidio\*\*

\* *Department of Economic, Mathematic and Statistic Sciences, University of Foggia, Italy*

\*\* *Department of Statistic Sciences, University of Bari, Italy*

**Summary.** The purpose of this study is to investigate the strategies used by graduates of the University of Foggia to enter the labour market. Using both quantitative and qualitative variables, quantified by means of optimal scaling, a structural equation model has been created to analyse the relations between latent variables tied to university education, and graduates' expectations and methods of job searching. Furthermore, we study if the correlation structure between these latent variables is constant observing separately female and male graduates.

**Keywords:** Graduates; Labour market; University of Foggia; Factor analysis; Structural equation models; Optimal Scaling; CATPCA; LISREL.

## 1. Introduction

In the following, we intend to analyse the strategies used by graduates to enter the labour market. Because of difficulties in the availability of the data, our analysis considers only the labour offer side.

Our objective is to construct an econometric model capable of detecting the variables that influence the placement of graduates and to study the relations between these variables and the *labour situation* (employed/unemployed) of graduates.

A great deal of the information collected with surveys can be considered *proxy* of latent variables which are particularly useful for describing a fact not

---

<sup>1</sup> In this joint work, C. Crocetta was responsible for the final editing of Sections 1, 2, 4, 6 and 7, whereas F. d'Ovidio was responsible for Sections 3 and 5. The authors wish to thank anonymous referees for their precious suggestions.

directly measurable, like the behaviour of graduates looking for employment (Crocetta & d'Ovidio, 2004).

If we have to analyse both quantitative and qualitative variables together, we can apply the Optimal Scaling procedure known as CATPCA (CATEGorical Principal Component Analysis). Such a procedure may be used to quantify, in the factorial space, the observed variables (De Leeuw, 1984; Meulman & Heiser, 1999).

For this, we performed a series of analysis to verify:

1. which latent variables are to be considered,
2. the relations that exist between them,
3. whether it is possible to construct a model for explaining the variability of employment rates of graduates,
4. whether there are other variables, not considered in the model, which can explain the employment,
5. whether, by considering separately female and male graduates, the structure of the correlation between the latent variables changes significantly.

## 2. A survey on graduates of the University of Foggia

The data for this analysis came from the archives of the Student office of the University of Foggia and was integrated with telephone interviews of a sample of graduates<sup>2</sup>. The questionnaire is divided into four parts, which are dedicated to graduates who are already working, those who are looking for employment, and those with a work experience in progress, and, finally, to the satisfaction regarding the services and the preparation achieved.

We have found that, as the time upon graduation passes, the number of fixed term contract grows (Table 1). This situation regards all those who graduated in Agriculture, 92.5% of graduates in Economics and 83.3% of graduates in Law. However, by considering the graduates in the period 1997-1999, doctors in Medicine have the highest rate of stable position (83.3%), followed by their colleagues in Economics (75.6%) and Law (74.7%), while just 67.7% of graduates in Agriculture during the same period have a stable job.

The attainment of a stable job is not so difficult even for those who graduated less than three years before (59.3% of them are in this condition). In this case, too, graduates in Medicine (70.0%) have a small advantage over those in Economics (61.2%), in Agriculture (58.8%) and in Law (56.1%).

---

<sup>2</sup> The first objective was to contact all the 2,924 graduates of the Athenaeum of Foggia starting from when it was set up (1994). Up to seven attempts were made to contact them at different times, before they were considered unreachable. A number of 2,133 interviews was performed, which is the 72.3% of the eligible population.