A Structural Equation Model for the Transition from University to Job.

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1. Abstract

The intent of this paper is to provide indications regarding the variables related to study programme and personal competencies, that mostly influence times and methods of entry into the work force on the part of graduates of the University of Foggia.

Using data gathered through 2.133 interviews carried out on a sample of graduates, we selected the most significant variables with respect to the dichotomous employed-not employed variable, by means of a *logit* model. Subsequently, the numerous qualitative and quantitative variables selected were quantified, applying an ALSOS method (Alternative Least Squares Optimal Scaling) named CATegorical Principal Component Analysis, better known with the acronym CATPCA. The latent variables that emerged from the analysis of the principal components were then used to build a LISREL model.

In the Path diagram, shown in Figure 1, the observed variables are represented by rectangles, while the erratic factors are closed in elliptical shapes. These geometrical figures are connected by arrows that indicate the existence of a relationship. The standardized regression weights shown in the figure illustrate the direction and intensity of the relations between latent variables and observed variables. Ignoring, for reasons of brevity, the relations with observed variables, we may note that the phenomenon of employability may be analysed through just 4 latent variables.

The variable *employment project* seems to impact *educational curriculum* with a standardized regression weight equal to 0.32. In turn, *educational curriculum*, together with *educational and professional course* have a considerable impact on *post-graduation activity*, with standardized regression weights equal to, respectively, 0.47 and 0.25.

The employability of the Foggia graduates seems to be greatly influenced by the activities undertaken after university graduation, by the educational curriculum and by pre-graduation work experiences.

The model obtained has a good adaptation. The ECVI index, equal to 0.21, is much closer to the minimum relative value of the saturated model (0.21) than it is to the independence one (1.21), which indicates that the discrepancy index is rather low, just as the *goodness of fit index* (GFI), equal to 0.97, is closer to the saturated model value (1.00) than it is to the independence model value (0.84).

The invariance of the estimated model was also verified with respect to the character gender.

After having rejected the invariance hypothesis of the correlation structure between estimated models, using the data for male graduates (41.7%) and female graduates (58.3%) separately, the invariance hypothesis of the *initial factorial weights* was verified. In this case, the discrepancy index C_{MIN}=5.6 with 3 d.o.f. (p=0.134), indicates that the invariance hypothesis of the structural model may be accepted.

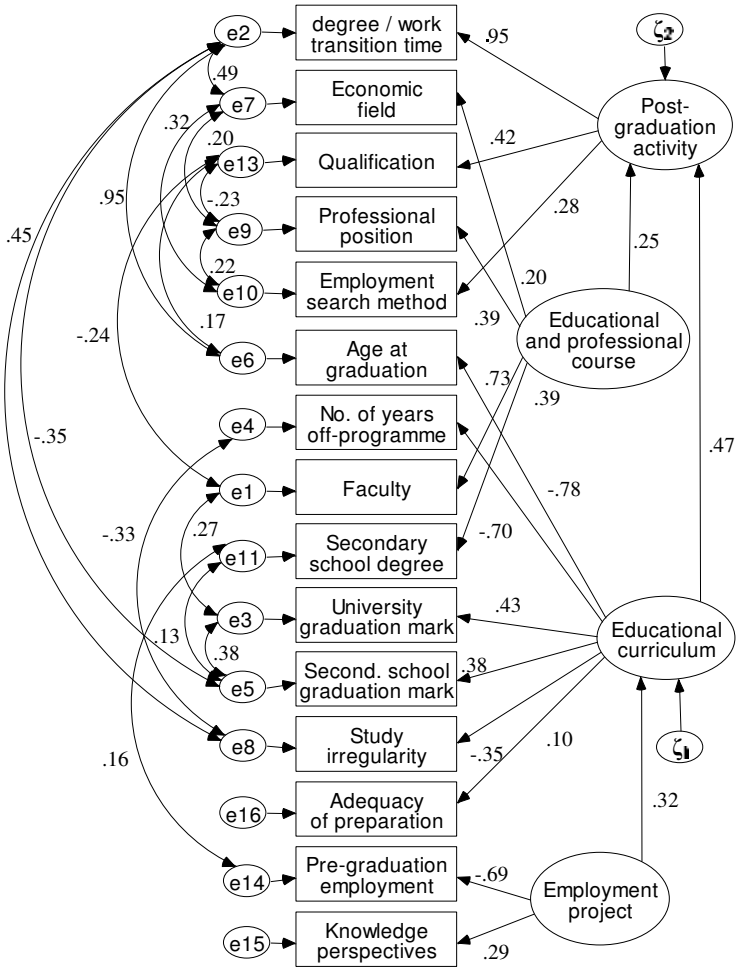

Figure 1. LISREL Model for the employability of the Foggia graduates.

Although the relations between latent and observed variables are slightly changed, the factorial structure we have identified may, therefore, be considered invariant.

Thus, we may conclude that the models estimated on the basis of the characteristics of graduates of the University of Foggia have allowed us to measure the external efficacy of university education, and to study, in non-monetary terms, the effects of the choices made by the subjects in terms of opportunities of entry into the work market.