



Exploring Factors Affecting Student University Choices in Campania Region

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Abstract. The aim of the contribution is to investigate the main factors related to students' decision-making process in terms of enrolling at university after high school, of moving to a university far from their own province of residence, and of attending a STEM-oriented degree program. Indeed, many factors can affect students' educational choices in this transition, such as the socio-economic background, the family context, the kind of high school, but also the opinions of friends, classmates and teachers with whom they daily interact. First findings are discussed by adopting logistic regression models on survey data gathered on high school students' samples in Campania region.

Keywords: Tertiary education · information support · social interactions · Logistic regression models

1 Introduction

Many factors can affect the decision-making process of students during the transition from high school to university, such as the socio-economic background, the family context, and the type of high school. During this process opinions of the significant others, like friends, classmates and teachers with whom they daily interact, may cover an important role. A large body of researchers has, indeed, focused on peer effects in education [7, 10, 11, 17], highlighting how social interactions at primary and secondary levels of school affect student outcomes, aspirations and expectations among adolescents, and secondary school-related choices. Within the university context, peer effects resulting from interactions between students are mainly investigated to explore their effect on academic performance [16]. To the best of our knowledge, studies on university choices have

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paid little attention to the peer influence on the high school-university transition [8, 15].

In this contribution, the aim is to investigate the main factors related to students' choices in terms of three possible outcomes: *i*) enrolling (or not) at university after high school; given the university enrolment *ii*) moving (or not) far from the own province of residence [13], and *iii*) attending a STEM-oriented (or not) degree program [4, 9]. Within this scenario, we examine how individuals' pathways in tertiary education depend on their socio-demographic background, the family context, the school environment, and social interactions among peers. Starting from these dimensions, it is important to understand the factors that play a relevant role in the development of educational pathways. This issue is strongly related to the capability of the education system to not reproduce social inequalities.

How and which contextual factors may affect individual choices are investigated using data collected through ad hoc surveys. Data integration procedures have been adopted to obtain a dataset consisting of about 4000 students who participated in three surveys devoted to high school students in Campania region. Logistic regression models are then applied to assess the effect of peers versus other contextual variables on outcomes defined above.

The contribution is organized as follows. Section 2 briefly describes the theoretical background, while Sect. 3 discusses the first findings of models applied to the final dataset. Some suggestions for further developments are also discussed.

2 Theoretical Background

Many scholars reported that educational aspirations are influenced by various factors related to both the context of origin and the social context. The seminal Wisconsin Model of status attainment highlights how important is the effect of peers and teachers (besides the family) in the development of particular aspirations for an individual [14].

Young people are extremely sensitive to the behaviour of individuals belonging to the same social class. In addition, they are influenced by social and gender norms, when supported by the largest number of individuals within the same context. Thus social viewpoint, also conveyed and reinforced by media and social media, might overwhelm the individual opinions [11]. Family plays a relevant role in an individual's life until adolescence; from adolescence onwards, peers gain greater relevance, becoming an important reference point [10]. This yields the so-called peer effect that occurs when social interactions influence individuals' behaviour [6].

The "Coleman Report" [3] represents one of the first studies that highlights the importance of peer effects within educational contexts. Peer interaction occurs through two processes: peer selection and peer socialization. Given a set of selected peer recognized as friends, through the socialization the individual absorbs ways of being, habits, and attitudes typical of the his friends [10]. All these social relations interact with the decision-making process in the transition from high school to university.

3 First Findings and Concluding Remarks

Contextual factors relevant to explaining student choices from high school to university are here investigated by primary data gathered through three ad hoc surveys administered to high school students in Campania region. The datasets consist of 3138, 644 and 230 observations, respectively. Due to the difficulties in engaging school managers, and hence students, in participating to the surveys, the samples turn to be unbalanced, especially for the variables *type of institute* and *province of residence*. For this reason, a merging procedure is adopted to reconstruct a unique dataset taking only the common variables useful for the analysis. The merging process ended up in a final dataset consisting of 4012 observations and 36 variables, yielding a wider, more consistent and balanced sample.

To explore the main factors affecting student decision-making process in higher education, different logistic regression student models [1] are specified considering as dependent variables: *i*) the probability to enrol at the university (*Enrol*); *ii*) the probability to move in a university outside the Campania region (*Mover*); and *iii*) the probability to attend a STEM-oriented degree program (*STEM*).

The variables *gender*, *province of residence*, *type of institute* and *parents' education level* are included to take into account the socio-demographic and educational background. In addition, the models include the different information channels that can affect student choices, such as social media, traditional media and browsing websites as well as friends, family, and acquaintances interactions. We use these variables to evaluate the influence of significant others on the decision-making process, in terms of informational support.

The main findings are discussed below by reporting only the significant variables of the three models, separately. In the first model for the probability of enrolling in university (Fig. 1), the information sources of students (friends, family, and acquaintances together with browsing websites, traditional and social media) are all significant with a positive effect on the probability to enrol at university. Concerning the *type of institute*, as known, students who attended a vocational institute have the lowest propensity to enrol at university. On the other hand, students who have attended a scientific and classic lyceum have the highest propensity to enrol at university. Moreover, analysing the *parents' education level*, the mother's education is significant in which those whose mothers had low educational level are less likely to enrol at university. Regarding the *gender*, the probability of enrolling at university is higher for females or other gender.

The results for the probability to be a mover (Fig. 2) show that there is a positive effect of non-personal information sources like social media and websites; on the other hand, social interactions with family, friends, and acquaintances have a negative effect. Furthermore, students living more than 60 min away from the nearest university are more likely to be movers, as shown in [12]. Among the provinces of residence, Naples has the lowest probability to move. This result could be related to the wide educational offer at tertiary level in Naples (with

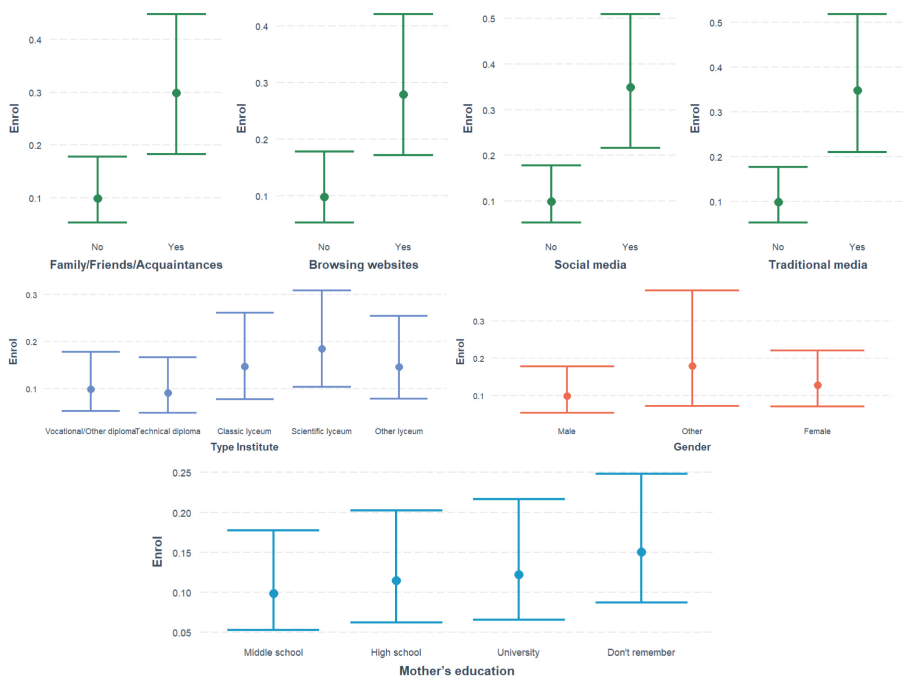


Fig. 1. Probability *Enrol* model for contextual factors and informational channels

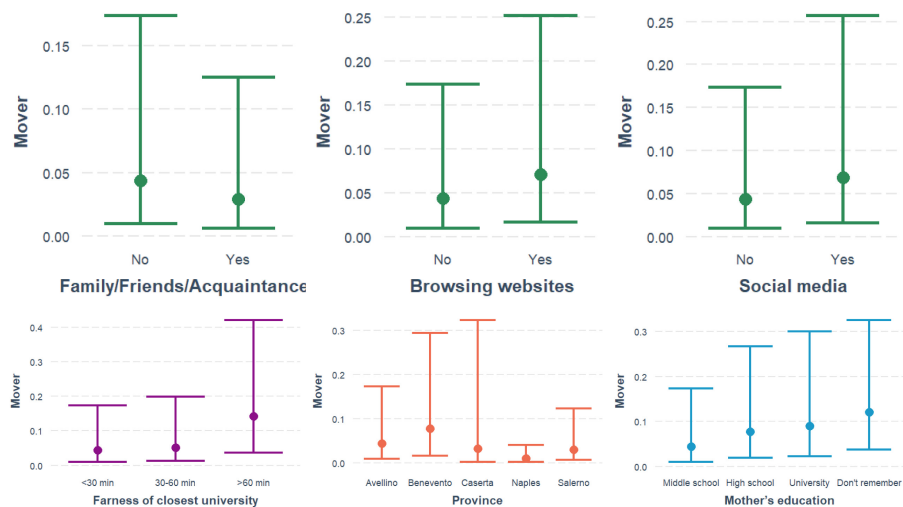


Fig. 2. Probability *Mover* model for contextual factors and informational channels

four Universities located in the metropolitan area) in contrast to Benevento province which suffers the outflow of students [13].

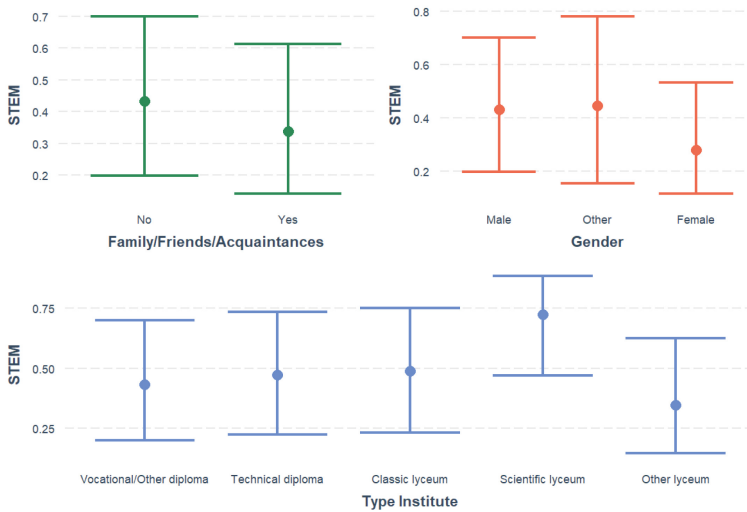


Fig. 3. Probability *STEM* model for contextual factors and informational channels

Finally, in the last model for the probability to enroll in a STEM degree (Fig. 3), it emerges that the information passing through family, friends, and acquaintances interactions have a negative impact on attending a STEM-oriented degree program. It seems that this kind of informational support is necessary for a student selecting not STEM degree to contrast the information widely promoted by media that graduated in STEM are more effective in finding a job. Also in those case, focusing on the *type of institute*, it can be seen that students who attended a vocational diploma are less likely to enrol in a STEM-oriented degree program with respect to those who attended a scientific lyceum. Females, for the well-known gender-bias, have the lowest propensity to enrol in STEM programs.

Our findings regarding the main factors affecting students' university choices are substantially in line with related literature. In addition, the first results in terms of social interactions have shown how informational support, circulating through family, friends and acquaintances, has a positive effect on the probability to enrol at the university, while it has a negative effect on the decision to move in another region and to attend a STEM-oriented degree program. Further investigations should be devoted to measure social influence mechanisms and peer effects using a network analysis perspective [2, 5], as well as more complex models could be use to capture possible interactions involved in the phenomenon under analysis.

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