

Exploring the (mis)match between universities strategies and the local economy. An Italian case study

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Abstract

High human capital formation and accumulation represent one of the main channels by which universities contribute to regional economic development and innovation performance (Abel and Deitz, 2012; Benneworth and Fitjar, 2019). The role of universities is particularly important for peripheral and small-sized regions that persistently suffer from outbound migration flows of highly qualified human capital (Huggins and Johnston, 2009; Evers, 2019). Over the past decade, the literature has investigated the determinants of students to migrate from their usual place of residence to attend a university and, after graduation, the flows for first job opportunities (Faggian and McCann, 2009; Drejer et al., 2022; Fini et al, 2022). Several determinants influence students' and graduates' choice such as the importance of local characteristics, especially concerning the job market (Faggian and McCann, 2009; Venhorst et al., 2011), and the type of education in terms of (i) the quality of the university (Ciriaci, 2014) and (ii) the student's academic subject background (Faggian et al., 2014). As a consequence, the contribution of universities to the local job market is very heterogeneous between institutions (Faggian and McCann, 2009). Kotavaara et al. (2018) find that small-sized and declining university regions experience low retention levels after graduation. Kitagawa et al. (2022), for the case of the UK, analyse the role of diversification of university subject mix on graduates' retention rates across urban and non-urban areas, highlighting the importance of local job-education mismatch.

The contribution of the paper is twofold. First, based on the stylised facts highlighted in the literature review, we develop a novel theoretical framework. We model the optimal strategy of universities in terms of educational profile, considering as a constraint of these strategies the economic opportunities of the geographical context. Hence, prospective students choose the university and the geographic area to maximise their expected

income. The theoretical model indicates that universities located in high-wage areas have an incentive to provide programmes in line with the local economy. The universities located in low-wage areas have less incentive to consider the local economy. Indeed, to avoid an outflow of students to wealthier areas, since the moment of enrolment, universities located in relatively disadvantaged areas are willing to offer study programmes that are more in line with the skills demand of more prosperous ones. The latter strategy aims to retain those students who, given the costs of studying in a different geographical area, decide to enrol in the same area of residence postponing migration choice after graduation.

Second, an empirical analysis focuses on the effect of university's strategies, proxied by the (mis)match between the university's programme portfolio and the local economy, on its degree of (i) students' attraction from other regions and (ii) graduates' retention locally. The study is conducted at the university level using the ALMALAUREA database. It collects the characteristics, performance, preferences and occupational choices of graduates who have obtained their degrees in a panel of Italian universities in the time span 2010-2021. The analysis also controls for other university internal factors (e.g. quality, size, fees) and external factors at NUTS3 level (e.g. income per capita, employment rate, population density). We expect that a high mismatch may be beneficial for attracting students but may lead to low retention among graduates in disadvantaged regions, while a low mismatch may be beneficial for retention, especially for more productive areas.

From a theoretical and empirical perspective, under certain conditions, this paper reveals the existence of a dichotomy between the optimal strategies of universities to increase students' attractiveness and to increase graduates' retention rates. Although policy-makers are keen for universities to contribute to the local economic development and innovation performance, universities are still mainly assessed and funded on the basis of their teaching and research activities, not giving adequate weight to their local impact. Indeed, the paper highlights the need to adjust universities' funding criteria to have more direct incentives to seek local impact.

Keywords: Students' attractiveness, Graduates' retention, Universities strategies, Local economy, Mismatch.

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