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University–industry cooperation: Researchers' motivations and interaction channels



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ABSTRACT

The objective of this study is to examine the interface between researchers' motivations and interaction channels concerning university–industry cooperation. For this purpose, we conducted a case study in a medium-sized higher education institution in Portugal. Interviews with university management and documentary analysis served for data-collection. We found that the traditional service and bi-directional channels play an important role in interaction with industry. Use of these channels depends on researchers' motivations and disciplinary affiliation. Moreover, we make an argument for the relevance of intermediators in the interaction. Several implications are presented.

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Introduction

Cooperation between universities and industry is becoming increasingly important, because this can create reciprocal benefits for all parties involved and for society in general (Muscio, 2010). Interaction can take a variety of forms, including both direct and indirect mechanisms (Guenther and Wagner, 2008), recently being labelled as 'academic engagement' (Perkmann et al., 2013). From the 1980s, university–industry (U–I) cooperation has intensified and therefore received growing attention from researchers, policy-makers and practitioners (Etzkowitz, 1998). Government initiatives and

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changes in the institutional framework have facilitated cooperation (van Looy et al., 2003; Guenther and Wagner, 2008).

However, there is still a gap between the knowledge produced by university researchers and what is used in practice (Siegel et al., 2003). Indeed, a great amount of knowledge created in academia does not come to be applied and consequently create value (Sedlacek, 2013). Given this situation, the literature has progressively dealt with the phenomenon of U–I cooperation (Barbolla and Corredera, 2009; Gulbrandsen et al., 2011), taking different perspectives which vary significantly according to the mechanisms/interaction channels and the units of analysis considered. Since people are considered as the universal drivers to ensure successful U–I cooperation (Plewa et al., 2013), most research has focused on the individuals acting in the field.

In this connection, a great number of investigations concentrated on the academic side of U–I cooperation, and attention was mostly paid to the individual researchers (e.g. Landry et al., 2007, 2010; van Rijnsoever et al., 2008; Ponomariov, 2008; Boardman and Ponomariov, 2009; Giuliani et al., 2010; Franco et al., 2014). Although research efforts have addressed many facets of academics' characteristics and behaviour, the interface between the motivations of academic researchers and interaction channels used by them remains underexplored. Among the exceptions, Arza (2010) proposed a conceptual framework including researchers' motivations and channels of interaction, and D'Este and Perkmann (2011) and De Fuentes and Dutrénit (2012) examined these aspects by adopting a quantitative approach.

Nevertheless, as U–I cooperation is a highly controversial topic (Siegel et al., 2004) and researchers' motivations are likely to play a crucial role in the type of U–I cooperation adopted, we believe that only a qualitative approach will allow an in-depth view of the relationship between researchers' motivations and interaction channels. Instead of surveying the individual actors themselves, who were usually targeted, our study seeks to understand U–I cooperation from the perspective of university management and executive board, because we believe this expert group possesses structural knowledge (Jonassen, 2000), providing a view of the issue from the top. For this purpose, we undertake an explorative case study in a higher education institution, scrutinising simultaneously important facets concerning U–I cooperation from the university management side.

By taking this perspective, our study contributes to the discussion on what influences U–I cooperation. Deeper knowledge of academics' general motivations and the underlying reasons for engaging with industry is relevant to shape the organisational and institutional conditions, in order to improve knowledge and technology transfer between the academic and business world. Our research also complements previous research by shedding light on the perceptions and opinions of university management regarding U–I cooperation. Overall, the potential insights gained from such an approach are relevant for both theoretical debate and practical configuration in terms of policies and measures for enhancing U–I cooperation.

The remainder of the paper is structured as follows. The next section presents an overview of U–I cooperation, in terms of researchers' motivations and interaction channels. Section *Methods* describes the research methods, i.e. the case study approach adopted in this study. In *Results and discussion* section, we present and discuss the outcomes of analysing a medium-sized academic institution in Portugal. Finally, section presents conclusions, implications, limitations and lines for future research.

Literature review

In this section, we provide a literature review on the dimensions of U–I cooperation, the subject of our analysis. In doing so, we firstly refer to the motivations of academic researchers. Afterwards, we elucidate and categorise U–I interaction channels. These categories will frame the presentation of our results presented in *Results and discussion* section.

Researchers' motivations

The motivations of researchers to engage in U–I cooperation are quite heterogeneous. Faced with shortages in public funding, interaction with industry can be instigated by the need to find complementary resources to finance academic staff as well as equipment, laboratories, material and

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