

# Chapter 11

## Who Controls Whom? Interaction Dynamics and Success of University–Industry Initiatives

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### ABSTRACT

*This chapter looks into the importance of having a clear identity of a boundary spanner in determining the role of the partners in a university-industry knowledge transfer programme. It highlights issues around the relationship between the business and the graduate as the boundary spanner, where the university's level of control differs between two programmes: Knowledge Transfer Partnership (KTP) and Knowledge Exchange and Enterprise Network (KEEN) programme. The four case studies illustrate interesting points since the university is the employer for the KTPs associate and the business is the employer for the KEEN associate, whilst successful KTP and KEEN projects rely on a full understanding of the role of the graduate within the business.*

### INTRODUCTION

Over the past two decades there has been a growing awareness of the role that higher education institutions play in the economy (Mansfield, 1991), especially in relation to its alliances with industry. The need for effective inter-institutional knowledge flows is of particular importance in university-industry relations, and also a challenge for each institution with a high degree of institutional differentiation (Rosli & Rossi, 2015).

At one hand, the university, with the mission of education and research, focuses more on science and learning but on the other hand, the industry with a mission of shareholder value, is more interested in solving a specific practical challenge which emphasize more on market and selling. This highlights the substantial differences between both types of institution. Nevertheless, it also create an interesting avenue for collaboration, because evidence shows that a well-functioning university-industry relationship have a positive

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effect on the economic and social performance (Mansfield, 1991; Salter, A. J., D'Este, P., Martin, B., Geuna, A., Scott, A., Pavitt, K., Patel, P., & Nightingale, P., 2000). Given these potential economic and societal benefits, it is not surprising that policy makers are motivated to support the university-industry interaction due to its potential beneficial effects especially to the students. More publicly funded programmes were initiated in order to support the engagement, either through subsidising collaborative research, the creation of university Knowledge Transfer Office (KTO) and other intermediary organisations, or ensuring some support for graduates training schemes. (Mowery & Sampat, 2005).

Focusing on the analysis of inter-institutional interactions within the Triple Helix model, we illustrate the case of two types of publicly funded Knowledge Transfer university-industry collaboration schemes implemented in the United Kingdom; Government funded Knowledge Transfer Partnerships (KTPs) and the European Regional Development Fund (ERDF) funded Knowledge Exchange and Enterprise Network (KEEN) Programme. Specifically, this chapter discusses the importance of recognizing the Associate role and their dynamic interactions within the partnership. We also highlight the key drivers of successful university-industry knowledge transfer in the context of the comparative case studies.

## UNIVERSITY-INDUSTRY KNOWLEDGE TRANSFER

Knowledge transfer is a complicated and complex process (Bekkers & Bodas Freitas, 2008; Hughes, T., Bence, D., Grisoni, L., O'Regan, N. & Wornham, D, 2011), where all the parties participating actively will learn from the interaction. There are various types of university-industry knowledge transfer mechanisms dependent on the characteristics of knowledge (Rosli & Rossi, 2015) and level of formalization (Gertner, D., Roberts, J., &

Charles, D., 2011) such as publication and patents from one end, and collaborative project and movement of people on the other (Schartinger, D., Rammara, C. Fischer, M.M, Frohlich, A., 2002). Much academic interest has focused on proprietary knowledge model of knowledge transfer, such as research commercialization or even patents, copyright, trademarks, design rights that can be sold or licensed, instead of the *interactive* model, where knowledge is transferred via direct interactions (Rosli & Rossi, 2015).

Interactive model of knowledge transfer is a non-linear transmission of information from the university to its external partners, which generate short and long term benefits for both parties. In fact, the Lambert report (2003, p.31) which provides a comprehensive review of UK university-industry collaboration identifies human interaction as one of the best forms of knowledge transfer. Nevertheless, the outcomes of the interaction depend on the quality of the interactions themselves, level of interaction involved, parties' prior knowledge base and absorptive capacity (Ternouth, P., Garner, C., Wood, L., & Forbes, P., 2012). Apart from that, capturing and identifying the type of knowledge transferred through the partnership matters as well. This is because, not all type knowledge is clearly and easily codified (Cohen, W. M., Nelson, R. R., & Walsh, J. P., 2002), and failure to identify this earlier on the project may jeopardise the outcome of the collaboration. Since universities transfer knowledge to external stakeholders in many ways, even in abstract terms, knowledge production and transfer can be acknowledged according to the nature and properties of knowledge considered (Wang & Peng, 2009). In this instance, due to the nature of the collaboration, the transmission of knowledge requires practice, active participation and complementary knowledge on the part of the person who is supposed to receive it.

Clearly, having a graduate who acts as the human bridge linking the academic and the industrial partners may enhance the interaction (Tiler & Gibbons, 1991). This boundary spanning

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