

# Chapter 7

## Knowledge and Technology Transfer Support Potential of Intermediate Organizations: Theory, Empirical Evidence, and Practice Cases

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### ABSTRACT

*This chapter aims at analyzing and optimizing the requirements of the internal environment regarding university-business cooperation (UBC). It focuses on university Technology Transfer Offices (TTOs), intermediate organizations embedded within the university environment. They support knowledge and technology transfer (KTT) activities, particularly the commercialization of research-based products. TTOs are supposed to accelerate and facilitate KTT from science into business practice. Although literature on university research commercialization highlights the relevance of transfer support by TTOs, empirical studies and KTT practice show that TTO services are used rather sparsely. Based on theoretical considerations and results of recent empirical studies on KTT, this chapter discusses two practice cases to derive indicators for a better exploitation of unused KTT support potential of TTOs. The results show that personal engagement aimed at a marketing service provider philosophy emerges as the key factor for fostering and intensifying cooperation between researchers and TTOs.*

### INTRODUCTION

Terms such as “the commercialization of higher education” (Bok, 2003), “academic capitalism” (Slaughter & Rhoades, 2009), “academic entrepreneurship” (O’Shea, Allen, O’Gorman, & Roche, 2004) and “entrepreneurial university” (Etzkowitz, 2008) have been playing an important role in discussions,

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literature and academic practice within recent years. Fiercer competition among academic institutions, particularly regarding student recruitment and the procurement of financial means, has been leading to motives and actions that are increasingly market-oriented (van der Sijde & Schutte, 2000; Bok, 2003; Lambert, 2003; Ylijoki, 2003). As an overall consequence, traditional university knowledge and technology transfer (KTT) activities are carried out increasingly more like a business in a market-oriented context. In this transfer environment, university technology transfer offices (TTOs) have been established to serve as intermediate organizations that initiate and promote university-business cooperation (UBC). Given the characteristic circumstances of the academic world and the complexity of research-based products aimed at practice transfer and commercialization, a challenging environment for both parties emerges. In particular, communication and the exchange of information and knowledge between academia and business practice can become an issue. In this respect, the relations between these actors are similar to those on business-to-business markets yet feature elements of other marketing disciplines. The academic entrepreneurship approach is in line with the market as well as the marketing focus of UBC. Considering the existence of unused KTT potential (Jones-Evans, Klofsten, Andersson, & Pandya, 1999; Lambert, 2003; Reddy, 2011), a marketing and commercialization view regarding KTT bears considerable chances for better exploitation of unused KTT potential.

To provide further implications on how to intensify KTT from academia to industry, this chapter analyzes, discusses and further develops the definition of the role of university TTOs in an academic entrepreneurship environment. The focus is directed at the KTT-related interactions between TTOs and researchers from an internal marketing perspective. In this context, the chapter covers, discusses and combines theory, empirical results and TTO practice cases. The objective is to derive indicators for a better exploitation of unused KTT support potential on behalf of TTOs, hereby indirectly contributing to an intensification of KTT relations between universities and external practice partners.

Considering the key role of universities in shaping innovative processes in national innovation systems (Fransman, 2008; Rampersad, Plewa, & Troshani, 2012; van der Sijde, David, Frederik, & Redondo Carretero, 2014) as well as the high relevance of UBC for further growth and the development of networks of innovation (Murray, 2002), the practical relevance of the issues covered in this chapter becomes obvious. In sum, the contribution of this chapter lies in promoting KTT from an internal marketing perspective, hereby emphasizing the role of university TTOs as service providers actively supporting KTT processes for the purpose of a better exploitation of inter-organizational UBC KTT potential. Thus, the chapter directly contributes to both university KTT theory and practice as it focuses on concrete measures deriving how to strategically shape the internal environment for a more successful commercialization of research-based products.

The structure of this chapter is as follows: it begins with a detailed, theoretical background which discusses the basics of UBC and KTT, the market view on KTT and the role and tasks of TTOs and further transfer intermediaries. These basics are followed by the presentation and discussion of empirical evidence on the role and relevance of transfer intermediaries. Based on the implications of these findings, the chapter then moves to a case study on modern TTO practice, hereby providing insights into potential for optimizing cooperation between researchers and TTOs. After the case summary and discussion, the development of a conceptual framework, future research directions and a conclusion will finalize this chapter.

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