# Chapter 12
# Technology Transfer Projects at the University-Industry Interface:
## A Case Study Analysis From the UK

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## ABSTRACT

*This chapter examines how technology transfer has operated in university-company projects in small to medium-sized enterprises (SMEs) via the UK Knowledge Transfer Partnership (KTP) scheme. A qualitative case study approach is used, focusing on three companies drawn from an initial review of 14 technology transfer projects. This provides the foundation for the development of a model of 12 key factors that underpinned successful outcomes in these projects. The 14 cases are then reviewed overall, in terms of their impact on either process change, service improvement, or product development. The analysis draws upon both the post-project assessments of the funding body and the developed model and concludes that using new technology to innovate in internal processes and services is likely to prove more successful than projects focusing on new product development. The model provides an analytical framework that will be of interest and value to academics and business practitioners looking to develop university-industry partnerships involving technology change and innovation.*

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## INTRODUCTION

Technology transfer has played an increasingly important role in UK government policy for re-invigorating and supporting British industry, and it is generally accepted that universities can play a key part in this endeavour, particularly for small to medium sized enterprises (SMEs). This chapter examines how the UK Government's Knowledge Transfer Partnership (KTP) scheme has been used as the mechanism for undertaking such technology transfer projects. The research focuses on three technology transfer case studies to establish the key factors that determined the success or failure of these projects, and to examine how new technologies were introduced to promote innovation in internal processes, in services to customers, and in new product development. The paper also looks at a wider range of KTP projects to assess the relative success of innovation in these three operational domains.

A lack of financial resources and basic technological capability can act as barriers to SMEs adopting new technologies, both for their in-house systems or in the incorporation of new technologies into their products or services provision (Guzzini & Iacobucci, 2017). Brychan (1999) underlined the importance of technology transfer networks for SMEs, particularly those where technology is transferred into an SME from an external source, and the term "open innovation" was first used by Chesbrough (2003) to denote the use of external resources as part of the research and development process for new technology. This gave impetus to the harnessing of external capabilities to achieve swifter and more effective results in the application of new technologies in industry. However, related research has often focused on larger companies, and "small and medium-sized enterprises are excluded from the mainstream discussion on open innovation" (Brunswicker & Vanhaverbeke, 2015, p.1241).

The focus of this paper is the operation of the KTP scheme to facilitate technology transfer in SMEs. In the following section, a brief overview of the KTP scheme is provided, followed by a review of relevant literature, models and concepts and positioning of two research questions. The research methodology is then outlined and the selection of the case studies is discussed. The next section presents the three in-depth case studies, providing the basis for the identification of key factors that underpin successful technology transfer projects in this context. These are discussed in the penultimate section, which addresses the research questions. Finally, the conclusion pulls together the key themes of the paper and discusses the contribution and potential of the model.