Foreword

This book is a product of the 21st century. For a number of reasons it could hardly have been produced in or before the 1990s. First, the by now substantial interest in patents and IP management among economists and management scholars had not by and large taken root, at least not in Europe. Second, the business model of auctioning had not yet been applied to patents, despite the many centuries of history of both auctions and patents. Rapid developments in auction technology and patenting in the 1980s and 1990s paved the way for an encounter in the 2000s, however. Third, platforms for inter-university research collaboration in technology and innovation management hardly then existed in Europe.

Various entrepreneurial activities are behind the current situation. Industrial entrepreneurs have increasingly invested in and commercialized patents, business entrepreneurs have created patent auctions, academic entrepreneurs have created collaborative platforms and entrepreneurial researches have entered the IP field.

This study is the result of a joint research project between the Hamburg University of Technology (Germany) and Chalmers University of Technology (Sweden). Both participating institutes are founding members of the European Institute for Technology and Innovation Management (EITIM).

With this book Frank Tietze makes a substantial contribution to the research and literature on transactions of patents and technologies as well as the effects of intermediaries acting on the markets for technology and innovation (MfTI). His work clearly helps to better understanding auctions, their functioning and role in technology trade, innovation and exploitation through conceptual, empirical, theoretical and practical contributions.

This study comes at the right time since technology-based firms have in recent years widely realized the importance of exploring different strategies to appropriate the benefits from investing in technology development and innovation. Today firms increasingly innovate openly, sourcing and exploiting technologies outside the boundaries of their own firm. For this purpose they eagerly need to learn how to successfully market technologies and ideas on the markets. In this context the MfTI are becoming increasingly attractive alternatives.
This affects management skills and practices and the implicit learning needs to address the challenges to manage transactions, specifically when it comes to the acquisition and exploitation of technologies for the benefit of the firm.

But many practical hurdles still complicate efficient clearing on the MfTIs causing high management and transaction costs. These costs in turn offer opportunities for intermediaries to enter the MfTIs, offering innovative services and novel transaction models. In this realm among others, technology auctions have recently become popular. But are these suitable for all types of technology and patents? Probably not and firms need to (as always) decide on a good if not the best suitable model with a favorable transaction governance structure adapted to the specific characteristics of the technologies and patents to be auctioned. This again is likely very context dependent; but how to optimally decide?

Working together with experts Frank Tietze developed a set of variables for designing technology transaction models, based on transaction cost theory. Building on these insights he further developed and tested them with multiple case studies and analyzed over 390 patented technologies from six technology auctions using inferential statistical techniques. His results show that technology auctions appear suitable as a transaction model primarily for technologies with moderate market values. Such technologies are difficult to transact efficiently via “classical” bargaining negotiations commonly characterized by high search and transaction costs. On the other hand, the highly standardized transaction governance structure of technology auctions - particularly the perceptual, non-limited commission fees - imposes constraints on high value technologies. These can anyhow be transacted profitably via costly bargaining negotiations that also allow for a higher degree of flexibility in contract design. The governance structure of the investigated technology auctions should further not be considered preferable for transactions of highly complex technologies that need additional transfer of tacit knowledge complementing the ownership rights of the related intellectual property assets. Rather auctions can be seen as spot market exchanges of technologies that can simply be transacted without the need to structure and negotiate complex royalty schemes.

The results of this study are especially relevant to firms, universities, independent inventors and their support institutions through offering a much better understanding of technology transaction processes in general and auctions in particular. The results further support intermediaries and particularly auction firms to help optimize the design of transaction models. Furthermore, the results of this study support innovation and intellectual property policy makers when designing schemes to further develop the technology markets. This study’s contribution to the current debate must not
least be considered highly relevant because Frank Tietze has integrated the micro level perspective of innovating firms (reflected well by the expertise at the partner institute in Hamburg) with the market perspective (reflected through the industrial economics orientation of the Swedish partner institute).

As an entrepreneurial researcher Frank Tietze has produced this book with its underlying study as one of the first of its kind. As such he charters new territory, not crafting complete maps but rather finding fertile new areas and directions for further investigations, be they theoretical, statistical or managerial. It is with great pleasure that we can recommend this book to a broad range of readers. All in all, it is highly relevant to both academia and industry: Comprehensive, interdisciplinary, containing almost all elements to be expected, and as such very well structured and readable.

Hamburg/ Gothenburg
November 2011

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