



The Schöller Chair in Technology and Innovation Management (Prof. Dr. Henkel) offers a Master's Thesis with the following topic:

Dynamics of open innovation – Openness and Patents of Young Software firms

Background

Selective revealing, characterized as the deliberate revealing of proprietary knowledge, which could have been kept secret or whose usage could have been prohibited, granting the recipient extensive rights regarding usage, replication and appropriability, has evolved to a central topic in management literature over the past decade. Various projects have shown that firms profit from disclosing some of their intellectual property (IP). In participating in open innovation, firms may, among other things, increase the efficiency and effectiveness of their R&D and marketing efforts by enticing other actors to join in co-creation of value or increasing their chances at standard setting. However, firm and market characteristics that affect innovation are supposed to change over time (e.g., firm size, customer needs, market growth and competition). Hence, one could argue that a firm's motives to engage in open innovation change as well. With our current research effort, we try to extend the general concept of open innovation by including the dynamics of opening and closing over time.

After having understood the development of openness over time and the motives for this changed level of openness for a sample of 13 software firms, their patenting behavior is yet to be analyzed.

Objectives

Objective of this study is to analyze the patent portfolio of 13 technology-based ventures within the industries of ERP, data and database management software which have shown a decreasing level of openness in the past. This includes the number of filed patents, type of patents and products which are patented.

Approach

- Research and review of current literature on openness, particularly selective revealing, and corresponding literature on patents, particularly patents in the software industry
- Compilation of a patent database for the 13 firms in focus based on data from the European, German, and U.S. patent office as well as the PATSTAT database.
- Analysis of a firm's patent behavior over time
- Evaluation of the patent behavior with respect to the findings from a previously conducted case study

Literature

Henkel, J.; Schöberl, S.; Alexy, O. (2014): The emergence of openness: How and why firms adopt selective revealing in open innovation. In *Research Policy* 43 (5), pp. 879–890.

Alexy, O.; George, G.; Salter, A. J. (2013): Cui Bono? The Selective Revealing of Knowledge and Its Implications for Innovative Activity. In *Academy of Management Review* 38 (2), pp. 270–291.

Hall, B. H.; Ziedonis, R. H. (2001): The patent paradox revisited: an empirical study of patenting in the U.S. semiconductor industry, 1979-1995. In *RAND Journal of Economics* 32 (1), pp. 101–128.

Contact

In case of interest or further questions please contact **Dominik Hepp** (dominik.hepp@tum.de). Your application should include **a CV and a current transcript of records**. For more information on our general requirements, the application procedure, and the style guidelines please go to <http://www.tim.wi.tum.de/index.php?id=210>. The thesis can be done either in English or German.