

The Impact of Research and Development Cooperation Partner Diversity, Knowledge Source Diversity and Knowledge Source Network Embeddedness on Radical Innovation: Direct Relationships and Interaction with Non-Price Competition

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Abstract : In this paper, we test whether different types of research and development (R&D) alliances positively impact the radical innovation performance of firms. We differentiate between the R&D alliances without external R&D orders and embeddedness in knowledge source network. We test the differences between the domestically diversified R&D alliances and R&D alliances diversified abroad. Moreover, we test how non-price competition influences the impact of domestically diversified R&D alliances, and R&D alliance diversified abroad on radical innovation performance. Our empirical analysis is based on the comprehensive Swiss innovation panel, which allowed us to study 3520 firms between the years between 1996 and 2011 in 3 years intervals. We analyzed the data with a linear estimation with Swamy-Aurora transformation using plm package in R software. Our results show as hypothesized a positive impact of R&D alliances diversity abroad as well as domestically on radical innovation performance. The effect of non-price interaction is in contrast to our hypothesis, not significant. This suggests that diversity of R&D alliances is highly advantageous independent of non-price competition.

Keywords : R&D alliances, partner diversity, knowledge source diversity, non-price competition, absorptive capacity

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