Designing for success: investigating design as a driver for innovation

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SUMMARY

Companies have increasingly become interested in deciphering the DNA of design-oriented companies and applying design processes, principles and tools to various innovation contexts. Yet, the outcome-based discourse on design is highly fragmented and investigations across research streams have been widely neglected, although authors have already indicated that “a glance beyond the borders” may have the greatest potential in order to gain new insights on the topic. The present dissertation addresses this gap by taking a more holistic perspective throughout three different studies, thereby contributing to the established design management and the emerging design thinking literature as well as to innovation management in general.

In the first study, we systematically review outcome-based design studies across distinct literature streams. In doing so, we synthesize different design perspectives, responses and returns highlighted within the discourses. This results in a holistic framework that demonstrates how design impacts people, organizations and stock markets, the contexts in which these influences have been assessed and how the impact of design has been measured. These findings provide valuable insights for researchers and managers interested in assessing the impact of design. Moreover, the meta perspective opens new avenues for further research within and across research streams. The review uncovers, for instance, which design outcomes were under-researched within a certain research stream and might be addressed by future investigations. Furthermore, the synthesis suggests enriching the explanation of design success originating from the established, empirically-based design management literature with conceptual considerations of the emerging design thinking literature.

The second study conceptualizes design orientation as the degree to which a company adopts design thinking principles and applies design processes and tools throughout the innovation process. In turn, the antecedents and consequences of design orientation are examined. Our
empirical findings emphasize the importance of a positive top management attitude toward innovation, a profound implementation of an innovation strategy, an organizational involvement during the innovation process, and a formalized innovation process in order to enable design to transcend organizations. In turn, design-oriented companies benefit from an enhanced innovation effectiveness and efficiency as well as increased financial innovation returns. With respect to contingency effects, the results suggest that external collaboration deflects from a design orientation and that the impact of design orientation on innovation performance is stronger for companies that predominantly focus on radical rather than incremental as well as product rather than non-product innovation projects.

Finally, the third study explores the usefulness of the design thinking process in a fuzzy front end context. Based on a laboratory experiment with non-design students, we demonstrate that an application of observation, brainstorming and prototyping steps enhances teamwork and innovation output quality respectively. In particular, the empirical results show that the exploitation of external sources and the internal communication among group members improves, if novice teams apply the design thinking process. Moreover, the results show that internal communication drives group cohesion and this in turn leads to a better understanding of shared solutions among team members. Focusing on teams’ innovation outputs, we demonstrate that design thinking enhances its quality in terms of innovation outputs’ novelty, relevance and specificity.