Summary
University-Industry Linkages: Benefitting from Experience

Introduction
Against the background of the changing role of the university in the scientific system and the increasing importance for business and universities to overcome and face the competitive environment university-industry linkages (hereafter UILs) are gaining growing attention. Existing research on UILs is very vast and draws from different literature streams such as relationship marketing, relationship evolution, network theory, (strategic) management literature and organization management. The dissertation takes this into consideration and thus incorporates insights from adjacent literature. While the topic of UILs is researched extensively certain gaps remain. Research on institutionalizing UIL activities at universities is yet incomplete and provides room for additional insights. Determining specific individual UIL behavior was studied on numerous occasions, however always incorporating multiple individual characteristics. The dissertation seeks to only focus on one aspect to explain and further investigate UIL behavior – experience. Thus, the topic of experience is reoccurring in the dissertation and more specifically its effect on the individual, interpersonal and organizational level. Experience in this context is measured in the amount/number of UIL activities undertaken and relates to all types of activities such as collaboration in R&D, commercialization of R&D results, lifelong learning, governance, curriculum development and staff/student mobility.

Research Aim
The overall research aim of the dissertation is:

To gain insight in order to understand individual, interpersonal and organizational components for institutionalizing UILs in universities under consideration of experience

The research aim is achieved by adhering to the following research objectives and by answering respective research questions:

1. Reviewing relevant literature
   1.1. What kind of effect does prior experience have on an organizational (institution) and individual (academic researcher) level?
2. Analyzing the development of UILs and their success factors
   2.1. What are success factors in university-industry linkages in different stages of university-industry linkages?
   2.2. Do interrelationships of success factors across different stages in university-industry linkages exist?
3. Analyzing personal characteristics of individuals engaged in UILs
   3.1. What is the impact of an individuals’ prior experience in UILs on their behavior in UILs?
4. Analyzing the implementation of organizational structures to the individual level to foster individual UIL activities
   4.1. How does the organizational level connect with the individual level in supporting and fostering UILs?
Method
In order to answer the research questions the dissertation engages in different research strategies. Both interpretive and positivistic research philosophies and thus inductive and deductive research approaches are employed.

Several data sources are utilized. Chapter 1 employs secondary research and is based on an extensive literature review. The data for chapter 2-4 is gathered from a study (Commercialisation Success – Do Drivers Change over Time) conducted in 2011, funded from the DAAD, among the Science-to-Business Marketing Research Centre associated with the Münster University of Applied Sciences (Germany) and The University of Adelaide (Australia). The gathering of data occurs in a qualitative (in-depth interviews) and quantitative (survey) manner. Whereas chapter 2 and 4 make use of the German/Dutch and Australian in-depth interviews with academics and industry representatives chapter 3 based its findings on survey results gathered from Australian researchers. The data source for chapter 5 is also of qualitative nature. Here, a case study - Münster University of Applied Sciences (MUAS) – is conducted, where various publications on MUAS, internal documents as well as in-depth interviews are analyzed.

Conclusion
The findings of the primary research findings (chapter 2-5) demonstrate that experience plays a key component on the individual, interpersonal and organizational level to institutionalize university-industry linkages at universities.

On the individual level, experience gained through having conducted UIL activities, proves beneficial in adapting individual behavior in respect to three aspects - strategy, mindset and operationalization of strategies. With the intention of institutionalizing UILs at universities this insight is valuable as it provides direction on individual behavior. An interesting fact to consider is that academics and industry representatives alike alter their behavior, except for the operationalization of strategies. This was only observed in the behavior of academics. Experience does not only influence individual UIL behavior but is also a key determinant for explaining interpersonal activities.

As persons are the key to driving relationships, such as UILs, their interrelationship with each other is of crucial importance. The dissertation identifies five stages of UILs but also reoccurring success factors for three of the stages – namely trust, understanding, communication, individuals and outcome. While these factors are reoccurring their extents differ according to stage. Therefore, individuals involved in any UIL stage need to acknowledge and consider the factors to benefit from the relationship and to make the linkage with the partner long lasting. It was further concluded that these five success factors are interlinked with and influence, mitigate and enforce each other. Thus, when engaging in UIL activities one has to be aware of the interrelationship of the success factors and the influence it has on the entire linkage. When considering experience in the context of interpersonal relationships it was identified that with advancing experience levels individuals engaged in the linkage are better able to understand the success factors and their interrelationship. Due to this they can lead and direct UILs in a beneficial way to create mutual value over time.

Experience on the organizational level proves to be beneficial to advance UILs activities at an institution and also to facilitate individual UILs. This is however, only the case if both levels are closely interconnected with each other, as demonstrated by chapter 5. Here, Münster University of Applied Sciences serves as a case study to outline how both levels can be aligned with each other through supporting mechanisms relating to the policy formulation and development, the execution of policies, incentives and communication. Various instruments operationalize each specific
supporting mechanism. Experience in this context plays a key factor as it is not only the experience gained on the organizational level, which contributes to the advancement of UILs activities but it is also the experience stored within each individual academic. Here, the alignment of both levels to benefit and enhance UILs is essential. Constant exchange, open dialogue and monitoring UIL activities proofs beneficial. One important aspect to note is that experience can be developed. Therefore, constant exchange of knowledge and experience among key individuals needs to be ensured. This may be in form of seminars or workshops. Also it is advisable to let novices work with experienced individuals to learn from them.

While the dissertation advances the understanding in UIL literature and related literature streams future research directs can be given. An investigation looking at the relationship of individual experience and the type of UIL activity undertaken is of interest. Further, it is advisable to study international case studies demonstrating how the organizational and individual levels are connected with each other to benefit and advance UIL activities at an institution. As the data sources for all chapters were of retrospective nature it is of value to monitor long-term UIL and thereby determine and further profile individual behavior.