



Exploring the foundations of ‘the architecture of innovation: how firms configure different types of complementarities in emerging ecosystems’

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ABSTRACT

In this interview article, we explore the research journey of Bernhard Lingens, Veronika Seeholzer, and Oliver Gassmann, whose work on ‘The architecture of innovation: how firms configure different types of complementarities in emerging ecosystems’ earned them the 2024 Industry and Innovation Best Paper Award. This study stands out for its significant contribution to understanding the complexities of ecosystem management, offering valuable insights into how firms strategically navigate complementarities to foster innovation. The interview delves into the motivations behind their research, revealing the driving questions that led them to explore this under-researched area. The authors discuss their findings, particularly how the initial configuration of complementarities can dictate the developmental trajectory of an ecosystem, making these early decisions crucial for long-term success. They also share the practical implications of their work, emphasising its relevance for today’s fast-paced business environment, where firms must adapt quickly to remain competitive. The authors candidly discuss the challenges they encountered during the research and writing process, including the difficulties of translating practitioner-focused insights into academic discourse. They reflect on the importance of generating actionable knowledge that can be directly applied to management practice, highlighting the path-dependent nature of ecosystem development and the vital role of initial strategic decisions. This interview not only underscores the distinctive aspects of their award-winning paper but also offers valuable guidance for young researchers aspiring to make a meaningful impact in the fields of management and innovation studies, ensuring their work remains relevant and practically applicable.

1. Introduction

What drives firms to innovate and thrive within emerging ecosystems? This question, though seemingly straightforward, is deeply complex and has garnered increasing attention from both scholars and industry leaders. At the heart of this inquiry lies the concept of complementarities – how different components within an ecosystem work

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together to enhance each other's value. As firms navigate the increasingly interconnected and dynamic environments of today's markets, understanding these interactions becomes essential for crafting successful strategies and ensuring long-term success.

Addressing such a multifaceted question is challenging. It requires not only a profound understanding of the theoretical foundations of ecosystems but also a keen awareness of how these principles manifest in the real world. This dual approach is precisely what Bernhard Lingens, Veronika Seeholzer, and Oliver Gassmann have adopted in their pioneering research. Their paper, titled 'The architecture of innovation: how firms configure different types of complementarities in emerging ecosystems,' distinguished with the 2024 Industry and Innovation Best Paper Award, stands out for its significant contributions to our understanding of emerging ecosystems.

The paper explores how firms make critical decisions about the types of complementarities they will leverage within their ecosystems. These decisions, far from being merely tactical, are found to be path-defining – they set the course for the ecosystem's development and determine the challenges and opportunities that firms will encounter for years to come. This insight is particularly relevant for practitioners and strategists who operate in fast-paced, competitive markets, where the ability to adapt and evolve is crucial for survival.

One of the most striking aspects of Lingens and his co-authors' research is their emphasis on the importance of initial choices in shaping the future trajectory of an ecosystem. Their findings suggest that the type of complementarity a firm chooses at the outset can create a path dependency that influences the ecosystem's stability, growth, and long-term success. For instance, ecosystems that begin with platform complementarities may be easier to set up initially, but they often require ongoing adjustments and expansions to remain viable. On the other hand, ecosystems founded on innovation complementarities may face significant challenges during the early stages, particularly in terms of time-to-market, but tend to be more stable and resilient in the long run.

In this interview article, Bernhard Lingens (on behalf of the team of authors) offers a deeper look into the motivations, challenges, and insights that shaped this award-winning research. Lingens shares his personal journey and the driving forces behind the study, highlighting the practical implications of their findings for both academia and industry. He also reflects on the process of integrating practitioner-focused insights into academic discourse, a task that often proves challenging but is essential for bridging the gap between theory and practice.

Moreover, this conversation provides valuable lessons for both emerging and established scholars. Lingens discusses the importance of pursuing research that addresses real-world problems rather than merely filling theoretical gaps. He emphasises that the motivation for research should stem from the needs of practitioners who face complex challenges in their daily work. By focusing on generating actionable insights, researchers can contribute to meaningful advancements in management and innovation studies.

As we explore the journey behind the Industry and Innovation 2022 Best Paper Award, we gain not only a better understanding of the architecture of innovation within ecosystems but also a clearer view of the future of strategic management in an increasingly complex world.

1.1. Can you briefly summarise your main findings? Was there anything particularly surprising?

Bernhard: Ecosystems are all about utilising contributions of partners to create value for customers. A single firm could not achieve that same value in isolation. This is why ecosystems are so relevant for practice, especially in today's fast-paced environment. From a theoretical perspective, the partners' contributions need to be complementary to each other, i.e. they need to mutually increase their respective value. Different configurations of complementarity lead to different characteristics of ecosystems with different implications.

Interestingly, whilst these complementarities per se are well described, there has never been much research on which type of complementarity is most beneficial given the external situation at hand. Our research tried to answer that very question. What we found is that, depending on which type of complementarity an ecosystem starts with, it will develop very differently. And this development will be path-dependent – the initial decision on the type of complementarity will set the path for the main challenges a firm will be dealing with for the years to come. This is why you need a proper understanding for it.

1.2. What motivated you to study complementarities in ecosystems?

Bernhard: It was the question just mentioned before – we know that ecosystems are all about complementarities and we know that they need to be managed differently depending on the type of complementarity at hand – but how? This question is highly relevant for practitioners building up ecosystems. It will determine the firm's ecosystem strategy for the years to come. Personally, my first driver is not a theoretical research gap. Instead, the core question I ask myself is: If practitioners are asking me a central question, am I able to provide a good and compelling answer? Is there anything from previous research and experiences I can use for this answer? If not, there is a need for research. And this was exactly the case with this paper.

1.3. What are the main implications of your study, and who would find them most relevant?

Bernhard: Any management research needs to be relevant for practitioners – they are the ones doing management. And I believe the paper does create some value for this target group: First, the paper explains how ecosystems emerge depending on the type of complementarity and what the main challenges are.

Second, in greater detail, it shows that the initial decision for the type of complementarity is very important for the future development of the ecosystem, given the path-

dependency it will lead to.

And third, it shows that platform ecosystems are relatively easy to set up initially, but they require lots of adjustments and extensions over time. Innovation ecosystems, on the other hand, are tough during time-to-market but way more stable on the long term. That's also quite an important finding for investors or top managers providing the funds for the ecosystem: They get a better understanding on the likely amount and distribution of their investments over time

1.4. What did you enjoy most about this research project?

Bernhard: To finally present compelling findings, based on own research, in executive classes and in consulting projects with firms. And to realise that these findings are of help for the people who are dealing with the subject in real life.

1.5. Would you share any challenges you faced during the research and writing process, and how you overcame them?

Bernhard: As mentioned before, this paper (as most of my other publications) was not driven by research gaps but gaps in what practitioners need to understand in order to reach a relevant goal in reality. Based on the qualitative cases studied, we quickly came up with findings that did answer the research question from a practical perspective. However, there was lots of content, quite broad and very difficult to explain. It took some time to structure and streamline this content to create a strong storyline for practice. But the most difficult part was to integrate these practitioner-motivated findings into the academic discussion. We got rejected by several journals, since reviewers believed the paper wasn't relevant. However, the simple fact that the content works well in practice and answers unanswered questions is the ultimate proof of its relevance – this was the motivation to keep going and get it published.

1.6. What are the most distinctive aspects of your paper? What questions remain unanswered, and where should future researchers focus?

Bernhard: We believe the paper opens-up a new stream of research on the use of complementarities in ecosystems. Our findings are compiled in a central framework. As always, this also creates the need for follow-up research to go deeper into the framework and study the different configurations and paths in greater detail. Management reality is very complex – there is competition, lack of funds, lack of resources, different technologies, different market developments, and so forth. Accordingly, there are also plenty of questions managers need answers for when dealing with these situations.

1.7. What advice do you have for young researchers?

Bernhard: The main motivation for research should not be a research gap – management reality doesn't care about what academics consider a research gap. Instead, I would advise young scholars to start with a proper understanding of the subject in real life. Understand what the most relevant questions are from the perspective of the people dealing with the subject on a daily basis. And then try to answer these questions based on literature and existing experiences. Whenever you are unable to do so, there is a need for research. This is probably the hard way of pursuing an academic career and, maybe, it won't lead into the best journals. But the motivation for spending your time on a subject shouldn't be to print something on a sheet of paper, but to develop relevant knowledge for people dealing with the matter in real life.

1.8. What does this award mean to you? Any recommendations for scholars aspiring for similar recognition?

Bernhard: It is nice to receive recognition. But awards should not be a motivation – it is all about doing what you are good at, and what you are interested in, and where you can create impact. If that leads to awards you can be happy. If not, you are still doing the right thing.

Disclosure statement

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Related Work by the Authors

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