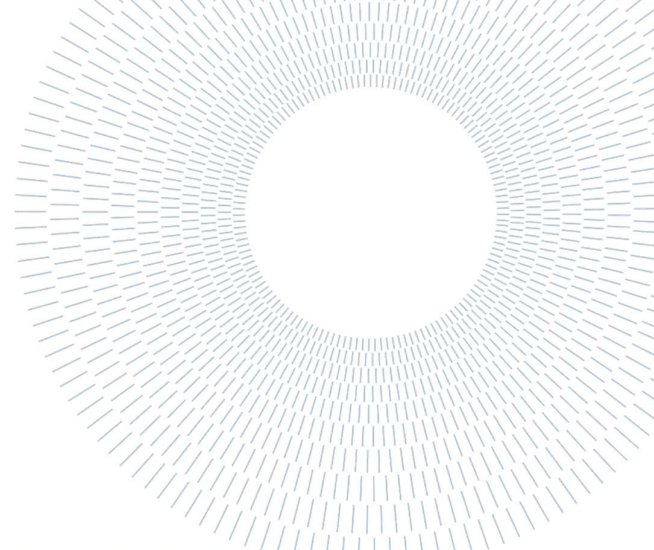




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EXECUTIVE SUMMARY OF THE THESIS

Born-as-a-Platform Innovation Strategies: Insights in the Platform Thinking Realm

TESI MAGISTRALE IN MANAGEMENT ENGINEERING – INGEGNERIA GESTIONALE

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1. Introduction

Over the last few decades, the relevance of platforms in the business environment has increased exponentially. We are entered in the so called “**Golden Age**” of digital innovation ([Fichman et al., 2014](#)), resulted in the widespread use of digital technology, allowing firms to develop new products, services, and businesses capable of challenging the established paradigms in a reduced amount of time. Platforms have changed the way we search for information, buy articles, enjoy news and media, travel and move around, shifting the focus of competition leading to more personalized and user-centered experiences. We live in the era of the “**Platform Revolution**”, where digital platforms pervade our lives, making them easier and more convenient ([Choudary et al., 2016](#)). They represent a disruptive threat to entire industries and have given rise to extensive management studies. In short, we can all benefit from the incredible success stories of well-known platforms in order to create a mindset oriented towards innovation: Platform Thinking.

Platform Thinking is the capacity to embed platform-based processes to unlock digital business transformations ([Trabucchi and Buganza, 2023a](#)). It enables companies to overcome the conflicts inherent in managing variety while simultaneously improving speed, cost, differentiation, and quality.

Although research has concentrated on the growth and transformation of linear value chain firms to platforms, one crucial element has gone unnoticed: Born-as-a-Platform enterprises. This paper investigates the growth and evolution of Born-as-Platform companies, with an emphasis on their development, strategies, and impact on innovation.

2. Literature Review

Platforms have become a significant aspect of Business Model Innovation, with scholars attempting to define and classify them into Product, Industry-Wide, Transactional, Orthogonal, Network, and Hybrid Platforms.

Product Platform is a set of components that creates a basic structure common to many items. Leveraging this type of platform, a firm, either

working by itself or with suppliers, can build a family of related products or sets of new features by deploying these components ([Gawer and Cusumano, 2014](#)).

Industry-Wide Platforms are defined as products, services, or technologies that act as a foundation upon which third-party innovators, organized as an innovative business ecosystem, can develop their own complementary products, technologies, or services ([Gawer and Cusumano, 2014](#)).

Transactional two-sided Platforms are grounded in the original concept of the two-sided market ([Rocket and Tirole, 2003](#)) and needs three conditions to be qualified as such ([Evans, 2003](#)):

1. The existence of two (or more) groups of customers (sides),
2. Linked through bidirectional cross-side network externalities,
3. With a platform provider able to internalize (at least partially) the externalities.

In an **Orthogonal two-sided Platform**, instead, there is no longer any transaction between the sides, and there are no cross-side network externalities. Two conditions are required to be considered an Orthogonal Platform ([Trabucchi and Buganza, 2023a](#)):

1. At least two sides,
2. Unidirectional network externalities.

A **Network Platform** is a model that is based on the concept of network effects; hence its properties recall those of a network good.

Finally, **Hybrid Platforms** are multi-faceted systems that mix characteristics from several categories, including transactional and orthogonal mechanisms, to provide more complex solutions.

The rise of digital platforms has disrupted various industries ([Downes & Nunes, 2014](#); [Parker et al., 2016](#)), with some of the world's largest and fastest-growing companies being based on them ([Anderson, 2021](#)). This phenomenon has led to a shift from traditional linear value chain firms, which followed resource-driven processes, to platform firms, which act as intermediaries connecting end-users and suppliers. In Platform Business Models, value generation is based on interactions within digital actors, making the resource-based perspective irrelevant. This shift

has led to the introduction of a new mindset and toolkit for applying Platform Thinking as an innovation mechanism, as the traditional resource-based perspective no longer holds relevance for this specific Business Model.

As previously stated, Platform Thinking is a strategy that focuses on putting platform-based mechanisms at the core of digital business transformation. Trabucchi and Buganza ([2020, 2023a](#)) have created a **2x2 matrix** to map the evolutive steps of a platform over time. Platforms can create and capture value in two strategies: **transactional strategy**, which sells a matchmaking service and leverages cross-side externalities, and **orthogonal strategy**, which leverages the service offered to the first side to create value for the orthogonal one. These strategies can act with different customer sets, such as **exploitation** or **extension**.

Based on the two dimensions (strategy and customer), the created 2x2 matrix contains **four different scenarios**: Transactional Exploitation, Transactional Extension, Orthogonal Exploitation, and Orthogonal Extension, each of them with distinct characteristics.

Moreover, numerous researchers in the latest years have explored the interplay between Business Model Innovation, imitation, and industry dynamics in their respective articles ([Zhao et al., 2020](#); [Sanasi et al., 2021](#); [Casadesus Masanell and Zhu, 2013](#))

Lastly, the Platform Thinking Research Team headed by its Scientific Directors Daniel Trabucchi and Tommaso Buganza ([2023b](#)) have come up with interesting results. The Team found that Platform Thinking is pervasive in today's business landscape, although, the term "platform" is often confused with "Digital Service. Additionally, the emphasise that once a company has mastered Platform Thinking, it can replicate this success multiple times.

This study aims to analyse, from the S&P 500 stock market index, the evolutionary strategies of fifteen **Born-as-a-Platform** companies, focusing on their Business Models and innovation dynamics. The research is unique and aims to answer two research questions:

RQ1: "What are the Platform Thinking strategies emerging from Born-as-a-Platform organization that foster innovation?"

RQ2: "Are Born-as-a-Platform companies evolving their Business Model through imitation among firms in the same industry?"

3. Research Methodology

The multiple case study technique is employed in this paper, which is a research strategy used in a variety of sectors such as social sciences, psychology, business, and education. It entails doing in-depth analyses of several examples in order to get a better knowledge of a specific phenomenon, issue, or research question. The collected data are then analysed using qualitative content analysis, and observations are made regarding the frequency of these data within individual cases and overall.

The pool of companies on which the research is conducted were selected from a complementary project, specifically the creation of a database. The database, created by the Platform Thinking Research Team for the Digital Innovation Observatories of the School of Management at Politecnico of Milan and led by its Scientific Directors Daniel Trabucchi and Tommaso Buganza, aims to investigate how S&P 500 listed firms use the platform model as a foundation for evolutionary stages through the Platform Thinking.

Following the creation of the database, a **longitudinal study** of the Born-as-a-Platform enterprises is performed to monitor and track what types of strategies these companies used to evolve their Business Model. The companies are listed in ascending order based on their position within the S&P 500 index and their analysis is subdivided into two main sections: "**About the Company**" and "**Evolution History**." The first section "About the Company" delves into the company's identity, history, leadership, mission, competitive environment, and financial structure. It provides an in-depth analysis of the company's fundamental information and strategic orientation, enabling readers to better understand its evolution. The "Evolution History" section, instead, gives a historical examination of the company's evolution route from its inception to the most recent year available, clarifying the sorts of platforms and techniques employed at each stage to achieve growth and goals. A board is created to map these evolutionary steps and provide a more

comprehensive analysis. It is organised into three main parts: an **upper strip** with fundamental corporate generalities such as the company's name, primary industry, and most current logo, a **table** explaining the firm's evolutionary phases through Platform Thinking, and a **matrix** mapping and classifying these steps. The table and matrix must be used complementarily for proper analysis and interpretation.

Finally, a **cross-case analysis** is carried out to seek for evidence of a relationship between the evolutionary strategies adopted by different firms in the same industry. This analysis is broken down into two paragraphs: **Global Perspective Analysis** and **Industry Perspective Analysis**. The Global Perspective Analysis provides an overall picture of database patterns, its order of magnitude and its features, whereas the Industry Perspective Analysis focuses on the link between industry type and the characteristics of a company's evolution history. Starting from the investigation, results are extrapolated from the database using special arrangements and multiple pivot tables.

4. Results

The Results chapter begins with a **longitudinal analysis** of all fifteen Born-as-a-Platform organisations, looking into their characteristics and their evolutionary steps, Platform Strategy, Idle Asset, Platform Innovation Tactic, Evolution Strategy, Type of Integration, and Relatedness across time. As stated earlier in the Research Methodology, in order to have a frictionless lecture and comprehension, the board and the company description should be consulted in parallel.

Following that, a **cross-case study** is performed to find patterns of similarity across organisations operating in the same industry. The Global Perspective Analysis is performed primarily to provide an overview of the general patterns in order to have a point of reference for future analysis and extrapolate preliminary findings. Through the use of pivot tables, the companies in the database were analysed according to their industry. Clear links were revealed between **Industry** type and **Platform Strategy**, **Platform Innovation Tactic**, and **Relatedness**, while different results were found regarding the relationship with **Evolution Strategy**. This section will logically report only those firms that can be

clustered based on their industry: E-commerce, Financial Markets and Financial Services, and Travel Technology.

Finally, the motivations for this imitation strategy among companies belonging to the same industry were analysed in more detail on a case-by-case basis.

5. Discussion

This research delves into the emergence of Platform Thinking strategies within Born-as-a-Platform organizations, investigating their impact on fostering innovation. The research extends the **analytical framework** proposed by Trabucchi and Buganza (2020; 2023a), adding practical relevance to it. Contrary to the misconception between Digital Services and “platforms” (Trabucchi e Buganza, 2023b), we underscore the formers’ pivotal role in Born-as-a-Platform companies’ fostering innovation. The research revisits a concept of **recurrence** and **replication** of successful Platform Thinking Strategies, emphasising similarities between linear value chain and Born-as-a-Platform companies. Furthermore, the study investigates the relationship between Born-as-a-Platform companies and the role of **imitation** in evolving their Business Models within the same industry. The research contributes significantly to the existing body of work on Business Model Innovation, imitation, and industry dynamics (Hacklin et al., 2018; von Delft et al., 2018; Cennamo and Santaló, 2013). Born-as-a-Platform companies operating within the **same industry** tend to implement a main **imitation strategy** and a subsequent smaller innovation one with differentiation aims. Specifically, the study highlights clear correlations between **Industry** and **Platform Strategy**, **Platform Innovation Tactic**, and **Relatedness**.

Our research shows a **strong pattern of replication** regarding Platform Strategies implemented by Born-as-a-Platform company seeking continuous innovation and repetitive success. The key to this repeated success is embedded in the features, architecture, and Business Model typical of digital platforms. The study highlights the pivotal role of **platform architecture** and the presence of multiple sides, all seen as customers by the provider (Evans, 2003), allowing for successful replication across various sides within the same platform. The

identification and utilization of **Idle Assets** (Trabucchi et al., 2021b), through specific **digital tools**, and leveraging **past relationship, knowledge** and **best-practices** (Dell’Era et al., 2021) streamline the implementation of new evolutionary steps, avoiding **challenges** like the chicken-and-egg paradox (Caillaud and Julien, 2003). The study emphasizes the misconception of eroding existing user bases with continuous transformation, clarifying how each new side, through co-creation mechanisms, brings its unique **value proposition** without diminishing existing ones (Muzellec et al., 2015). Moreover, the digital Business Model’s near-**zero marginal costs** (Rifkin, 2014) incentivize ongoing innovation and strategy replication. Grouping of companies further amplifies these benefits, enabling **replication strategies** across multiple platforms within the same entity, leveraging a wealth of resources and relationships without constraints.

The Platform Business Model, thanks to its attributes, is able to be an enabler of all kinds of **Business Innovation**, intended as the creation of substantial new value for both customers and the firm. By mapping innovation dimensions (Sawhney et al., 2007):

What (product offering), **Who** (customer base), **How** (innovation process), **Where** (market presence), and **Why** (meaning) (Dell’Era et al., 2017), the text illustrates how Platform Thinking simplifies innovation drivers. Platform innovation’s “What” dimension focuses on creating new matchmaking services solving **market frictions** (Evans and Schmalensee, 2016). Platforms, address customer needs, leveraging **co-creation** and **technology** to identify market gaps and offer value without limitations. The “Who” dimension in platform innovation involves the customers (Exploitation vs Extension) (Trabucchi and Buganza, 2023a). With Extension, you can bring a new **value proposition** to the platform, create and capture new **value**, introduce new **revenue stream** to make the Business Model sustainable, and so on. The third dimension, “How,” focuses on **systemic innovation processes** within Platform Thinking. Trabucchi and Buganza (2023a) detail a structured four-step innovation process using **specific supporting tools**. Innovating along this dimension, a platform can redesign its processes for **greater efficiency**, **higher quality**, or **faster cycle time**, leveraging its internal or an adjacent value chain. The “Where”

dimension in platform innovation refers to market presence. Digital platforms possess a **global reach** due to **technological advancements** ([Stallkamp and Schotter, 2018](#)). Platform Thinking enhances the "Why" of innovation. Digital platforms give companies the possibility to leverage on their basic architecture to foster innovation in **multiple, coexisting directions** ([Gawer and Cusumano, 2014](#)). At the same time given the co-creational nature of the service experience ([Ramaswamy and Ozcan, 2018](#)), users may take part to the innovation of the service itself ([Oliveira and von Hippel, 2011](#)).

The Platform Business Model enables a shift from rigid to flexible product development leveraging **agile innovation** approaches enabled by digital technologies ([Downes and Nunes, 2014](#)). It facilitates Business Model Innovation, Validation, Scaling, and Pivots. In the first phase it allows Innovation through **Copypat** ([Sanasi et al., 2022](#)), **modularity** ([Dai, 2023](#)), and **zero marginal cost**. The platform's **digital nature** empowers companies in phases of validation, providing **accurate customer insights**, and enabling **cost-efficient MVPs** ([Sanasi et al., 2023](#)). It facilitates scaling due to **network effects** ([Eisenmann et al., 2006](#)) and **critical mass** ([David et al., 2020](#)), allowing rapid market acceptance. Digital platforms excel in "**validated learning**" ([Shepherd and Gruber, 2021](#)) by collecting great amount of any kind of **data**, aiding decision-making, and providing **adaptable architecture** for successful pivots.

Finally, the outlined traits that make a multi-sided platform an enabler of replication strategy, innovation, and entrepreneurial experimentation incorporate a key concept of Platform Thinking by transforming these into a new variant of the so-called **Product Platform** ([Meyer and Lehnerd, 1997](#)). Both types of platforms enable companies to introduce variations efficiently, achieve economies of scale, and reduce **marginal costs** ([Rifkin, 2014](#)) through component reuse and standardization. They promote **interoperability**, **scalability**, and **agile experimentation** ([Sanasi et al., 2022](#); [Sanasi, 2023](#)), allowing companies to maintain a cohesive value proposition while growing exponentially and even forming groups of companies, enhancing their nature and leveraging the **product family** concept.

The study not only contributes to the academic discourse, but also offers tangible strategies and insights to guide professionals in their quest for

lasting success in an ever-changing business landscape. With the work, both **Born-as-a-Platform** and **linear value chain companies'** managers can benefit from an in-depth understanding of Platform Strategy, Platform Innovation Tactics and additional methods that help them make informed decisions about strengthening stakeholder relationships and expanding their Business Model. In fact, they may learn about the **best practices** of many market-leading platform companies looking at examples of innovative steps in all their **evolutionary lifecycle**. As already mentioned, it has been emphasised the importance of a **replication strategy**. Replication often leads to renewed success, allowing companies to build on previous achievements and adapt to changing market conditions. Furthermore, managers wishing to improve their platform's market position should use a double strategy. An **imitation** one might be used to align with the leading platforms in their industry, and a subsequent **innovative** one could be implemented to differentiate the platform and acquire a competitive advantage. Finally, the section provides a **roadmap** for managers and entrepreneurs navigating the complex world of platforms and Business Model Innovation.

6. Conclusion and Future Developments

The work expressed in this document does not come without limitations. These limitations are due to several factors such as the way the companies are selected, certain characteristics of these holdings, the methodology used to gather information, and the highly focused scope of analysis.

The primary constraint lies in the selection of companies, sourced from a **complementary study** rather than chosen for specific research objectives. While suitable for case studies, the **limited number of companies** poses challenges when extrapolating insights and correlations. Additionally, companies were clustered by industry, but some exclusions occurred when certain companies were the sole players in their markets.

The **nature** of companies within the S&P 500 list as groups rather than individual firms introduces complexities. Group dynamics, economic-financial decisions, and market opportunities can influence growth strategy choices.

Another limitation concerns the **focus on growth** and enlargement, excluding divestments, sales, and spinoffs in alignment with the innovation-based logic of the study. This choice may overlook valuable insights related to downsizing strategies. Moreover, obtaining information on companies' **data usage** through search engine research proves challenging, introducing a potential bias between transactional and orthogonal logic in evolutionary choices.

Finally, the cross-case analysis, essential for visualization and macro-level insights, relies on Excel pivot tables rather than robust **statistical tools**. This may limit the depth of statistical analysis and correlation assessment.

The limitations of the work may serve as a starting point for future research. Exploring **divestments, buy-outs, and spinoffs**, and incorporating **interviews** for orthogonal analysis could enhance the study's strategic perspective. Additionally, expanding the dataset to include companies beyond the S&P 500, considering **different lists and markets**, would enrich the analysis. The most promising future research involves an extended cross-case analysis with an **enlarged dataset** and **statistical tools** to quantify correlations between evolutionary strategies and industry affiliations, potentially unveiling differences across markets.

In conclusion, while acknowledging these limitations, the thesis encourages future research to build upon these insights and address the identified constraints, providing a foundation for a more comprehensive understanding of Born-as-a-Platform companies and their evolutionary strategies.

7. Bibliography

- 1) Anderson, P. (2021). 15 fastest-growing software companies. *Yahoo Finance*.
- 2) Caillaud, B., & Jullien, B. (2003). Chicken & Egg: Competition among intermediation service providers. *The RAND Journal of Economics*, 309–328.
- 3) Casadesus-Masanell, R., Zhu, F., 2013. Business model innovation and competitive imitation: the case of sponsor-based business models. *Strateg. Manag. J.* 34 (4), 464–482.
- 4) Cennamo, C., Santaló, J., (2013). Platform competition: strategic trade-offs in platform markets. *Strateg. Manag. J.* 34 (11), 1331–1350.
- 5) Choudary, S. P., Van Alstyne, M. W., & Parker, G. G. (2016). Platform Revolution: How networked markets are transforming the economy--and how to make them work for you.
- 6) Dai, Q. (2023). Understanding how platform modularity enhances network effects. *Electronic Markets*, 33(1).
- 7) David, R., Aubert, B. A., Bernard, J., & Luczak-Roesch, M., (2020). Critical Mass in Inter-Organizational Platforms. *AMCIS 2020 Proceedings*. 21.
- 8) Dell'Era, C., Altuna, N., Magistretti, S., & Verganti, R. (2017). Discovering quiescent meanings in technologies: exploring the design management practices that support the development of Technology Epiphanies. *Technology Analysis & Strategic Management*, 29(2), 149–166.
- 9) Dell'Era C, Trabucchi D, Magistretti S (2021) Exploiting incumbents' potentialities: from linear value chains to multisided platforms. *Creativity and Innovation Management*, 30(1): 31–46.
- 10) Downes, L., & Nunes, P. (2014). Big bang disruption: Strategy in the age of devastating innovation. *New York: Penguin*.
- 11) Eisenmann, T. R., Ries, E., & Dillard, S. (2012). Hypothesis-driven entrepreneurship: The lean startup. *Harvard Business School Entrepreneurial Management Case*, 812–095.
- 12) Evans, D.S. (2003). Some empirical aspects of multi-sided platform industries. *Review of Network Economics*, Vol. 2 No. 3.
- 13) Evans, D. S., & Schmalensee, R. (2016). Matchmakers: The New Economics of Multisided Platforms. *Harvard Business Review Press*.
- 14) Fichman, R. G., Santos, B. L. D., & Zheng, Z. (2014). Digital innovation as a fundamental and powerful concept in the information systems curriculum. *Management Information Systems Quarterly*, 38(2), 329–343.
- 15) Gawer, A., & Cusumano, M. A. (2014). Industry Platforms and Ecosystem Innovation. *Journal of Product Innovation Management*, 31(3), 417–433.

- 16) Hacklin, F., Björkdahl, J., Wallin, M.W., (2018). Strategies for business model innovation: how firms reel in migrating value. *Long. Range Plan.* 51 (1), 82–110.
- 17) Libert, B., Beck, M., & Wind, J. (2016). The network imperative: How to survive and grow in the age of digital business models. *Harvard Business Review Press*.
- 18) Meyer, M. H., & Lehnerd, A. P. (1997). The power of product platforms: building value and cost leadership. *Free Press eBooks*.
- 19) Muzellec, L., Ronteau, S., & Lambkin, M. (2015). Two-sided internet platforms: A business model lifecycle perspective. *Industrial Marketing Management*, 45, 139–150.
- 20) Oliveira, P., & Von Hippel, E. A. (2011). Users as service innovators: The case of banking services. *Research Policy*, 40(6), 806–818.
- 21) Parker, G., & Van Alstyne, M. W. (2016). Two-Sided Network Effects: A Theory of Information Product design. *Management Science*, 51(10), 1494–1504.
- 22) Ramaswamy, V., & Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, 84, 196–205.
- 23) Rifkin, J. (2014). The zero marginal cost society: the Internet of things, the collaborative commons, and the eclipse of capitalism. *Choice Reviews Online*, 52(03), 52–1529.
- 24) Rochet, J. C., & Tirole, J. (2003). Platform competition in Two-Sided markets., 1(4), 990–1029.
- 25) Sanasi, S. (2023). Entrepreneurial experimentation in business model dynamics: Current understanding and future opportunities. *International Entrepreneurship and Management Journal*, 19(2), 805–836.
- 26) Sanasi, S., Ghezzi, A., & Cavallo, A. (2023). What happens after market validation? Experimentation for scaling in technology-based startups. *Technological Forecasting and Social Change*, 196, 122839.
- 27) Sanasi, S., Manotti, J., & Ghezzi, A. (2022). Achieving Agility in High-Reputation Firms: Agile experimentation revisited. *IEEE Transactions on Engineering Management*, 69(6), 3529–3545.
- 28) Sanasi, S., Trabucchi, D., Pellizzoni, E., & Buganza, T. (2021). The evolution of meanings: an empirical analysis of the social media industry. *European Journal of Innovation Management*, 25(6), 97–121.
- 29) Sawhney, M., Wolcott, R. C., & Arroniz, I. (2007). The 12 different ways for companies to innovate. *IEEE Engineering Management Review*, 35(1), 45.
- 30) Shepherd, D. A., & Gruber, M. (2021). The lean Startup Framework: Closing the Academic–Practitioner divide. *Entrepreneurship Theory and Practice*, 45(5), 967–998.
- 31) Stallkamp, M., & Schotter, A. (2018). Platforms without borders? The international strategies of digital platform firms. *Global Strategy Journal*, 11(1), 58–80.
- 32) Trabucchi, D., & Buganza, T. (2020). Fostering digital platform innovation: From two to multisided platforms. *Creativity and Innovation Management*, 29(2), 345–358
- 33) Trabucchi, D., & Buganza, T. (2023a). Platform thinking: Read the Past. Write the Future.
- 34) Trabucchi, D., & Buganza, T. (2023b). PLATFORMS RENAISSANCE. How S&P 500 companies are innovating through Platform Thinking. *Digital Innovation Observatories of the School of Management*.
- 35) Trabucchi, D., Sanasi, S., Ghezzi, A., & Buganza, T. (2021b). Idle Asset Hunters—The Secret of Multi-sided platforms. *Research-technology Management*, 64(1), 33–42.
- 36) von Delft, S., Kortmann, S., Gelhard, C., Pisani, N., forthcoming, 2018. Leveraging global sources of knowledge for business model innovation. *Long. Range Plan.*
- 37) Zhao, Y., Von Delft, S., Morgan-Thomas, A., & Buck, T. (2020b). The evolution of platform business models: Exploring competitive battles in the world of platforms. *Long Range Planning*, 53(4), 101892.