

APPLICATION TO HEAD A CAS RESEARCH GROUP  
"PLATFORMS AS ORGANIZATIONAL FORMS"

Prof. Dr. Tobias Kretschmer

Fak. 04 (BWL), Institute for Strategy, Technology and Organization

**1. Basic Details**

**1.1. Applicant**

Professor Dr. Tobias Kretschmer

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Munich, 31.3. 2019



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Prof. Dr. Tobias Kretschmer

## 1.2. Applicant's Research Profile

### 1.2.1. General information

Name: Kretschmer, Tobias, Prof. Dr., born 10.11.1971 in Erlangen, male

Address: Institute for Strategy, Technology and Organization

Munich School of Management

Kaulbachstr. 45/II

LMU Munich, 80539 Munich, Germany

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E-mail: [t.kretschmer@lmu.de](mailto:t.kretschmer@lmu.de)

Position: Full professor (W3)

Children: Two children born 2009 and 2014

No times of parental leave

### 1.2.2. Academic education

1996-2001      PhD in Economics, London Business School, Advisors: Prof. Luis Cabral  
and Prof. Paul Geroski

1992-1996      Lic.oec. (equiv. Diplom) in Management, University of St. Gallen

### 1.2.3. Academic and Professional Career

since 2016      Dean, Munich School of Management, LMU Munich

since 2006      Full Professor (W3) of Strategy, Technology and Organization, LMU Munich

since 2016      Research Fellow, Industrial Organization, CEPR, London

2010-2014      Head of Center (Bereichsleiter), Industrial Economics and New Technologies  
ifo Institute, Munich/Germany

2001-2006      Lecturer in Strategy and Economics (awarded tenure in 2006), Managerial  
Economics and Strategy Group, London School of Economics, London/UK

2000-2001      TMR Research Fellow, Economics and Political Sciences Group, INSEAD,  
Fontainebleau/France

#### **1.2.4. Fellowships, grants, awards, and distinctions**

- DFG research grant: “Merger Integration Processes” (2013-2015, €230.000)
- Anglo-German Foundation research programme: Explaining Productivity and Growth in Europe, America and Asia (2006-2009, €1.000.000).
- Academy of Management Conference, Chicago, Speaker, Professional Development Workshop on “Digital transformation: Do received management “theories” and conceptual frameworks hold true?” (2018)
- Academy of Management Conference, Atlanta, Panelist, Symposium on “Strategy at the Interface: Multi-sided Platforms” (2017)
- ICTNET Final Conference, OECD Paris. Keynote Speech: ICT, Employment and Growth – A Silver Bullet? (2012)
- Florence School of Regulation Academic Conference. Keynote Speech: ICT and Innovation: A Complex Relationship (2012).
- DRUID Society Best Paper Award Product Line Extension in Hypercompetitive Environments – Evidence from the US Video Game Industry (with Thorsten Grohsjean) (2009).
- Journal of Industrial Economics Best Paper Award: Splintering and Inertia in Network Industries (2008)
- EARIE Young Economists Essay Competition: Competition, Inertia, and Network Effects (2001)
- RES Young Economists’ Award: Competition, Inertia, and Network Effects (2001)

#### **1.2.5. Professional activities**

##### *Editorships:*

- Associate Editor, Strategic Management Journal (since 2014)
- Associate Editor, Journal of Organization Design (since 2014)
- Coeditor, Information Economics and Policy (2011-2014)
- Associate Editor, International Journal of Industrial Organization (since 2009)
- Associate Editor, European Management Review (2011-2014)
- Editorial Board Member, Strategic Management Journal (2013-2014)
- Editorial Board Member, Journal of Organization Design (2012-2014)

*Scientific boards and councils (elected or nominated, outside LMU Munich)*

- Chairperson, Associate Program Chair, Knowledge & Innovation Interest Group, Strategy Management Society (2019-2021)
- Board of Directors, Organization Design Community (since 2018)
- ERC Junior Grants Selection Committee, SP2 (2018)
- Member of the Executive Committee of the European Association for Research in Industrial Organization (EARIE) (since 2015)
- Member of the advisory board and selection committee, Innovation and Technology Analyses (Innovations- und Technikanalysen), Bundesministerium für Bildung und Forschung (2014-2018)
- Member of the scientific advisory board, Deutsche Zentralbibliothek für Wirtschaftswissenschaften, Hamburg (2011-2018)

*Other activities*

- Co-director, Organizations Research Group – ORG (since 2014)
- Chair, Local Organizing Committee, EARIE 2015 Munich
- Special Issue Editor (with Aija Leiponen, Melissa Schilling, Gurneeta Vasudeva Singh), Strategic Management Journal, “Strategies for Platform Ecosystems” (since 2018)
- Special Issue Editor (with Pai-Ling Yin), International Journal of Industrial Organization, “The Economics of ICT” (2012-2013)
- Coordinator, PhD and Master of Business Research Program, Munich School of Management, LMU Munich (since 2010)
- Co-Organizer, “Munich Summer Institute”, since 2016
- Organizer, “ICT Conference Munich”, 2010, 2012, 2013
- Local organizer, annual meeting of the “Industrieökonomischer Ausschuss”, Verein für Socialpolitik in Munich (2012)

### 1.3. Publications in refereed journals (selection of ten since 2014)

1. Experience, Consumers, and Fit: Disentangling Performance Implications of Pre-Entry Technological and Market Experience in 2G Mobile Telephony (with JP Eggers and Michal Grajek). Conditionally Accepted, *Organization Science*.
2. Follow the Crowd or Follow the Trailblazer? The Differential Role of Firm Experience in Product Entry Decisions in the US Video Game Industry (with Hakan Özalp). Forthcoming, *Journal of Management Studies*.
3. Organization Design and Firm Heterogeneity: Towards an Integrated Research Agenda for Strategy (with Florian Englmaier, Nicolai Foss and Thorbjörn Knudsen). *Advances in Strategic Management*, 40 (2018), 229-252.
4. Platform Architecture and Quality Tradeoffs of Multihoming Complements (with Carmelo Cennamo and Hakan Özalp). *Information Systems Research*, 29/2 (2018), 461-478.
5. Piracy and Box Office Movie Revenues: Evidence from Megaupload (with Christian Peukert and Jörg Claussen). *International Journal of Industrial Organization*. 52 (2017), 188-215.
6. Competition with Aftermarket Power when Consumers are Heterogeneous (with Dainis Zegners). *Journal of Economics and Management Strategy*. 26/2 (2017), 96-122.
7. Generational Transitions in Platform Markets – The Role of Backward Compatibility (with Jörg Claussen). *Strategy Science*. 2/1 (2016), 90-104.
8. Vertical Scope, Turbulence and the Benefits of Commitment and Flexibility (with Jörg Claussen and Nils Stieglitz). *Management Science*. 61/4 (2015), 915-929.
9. When less can be more – Setting technology levels in complementary goods markets (with Jörg Claussen and Christian Essling). *Research Policy*. 44/2 (2015), 328-339.
10. Trust over Time in Exchange Relationships: Meta-Analysis and Theory (with Bart Vanneste and Phanish Puranam). *Strategic Management Journal*. 12/35 (2014), 1891-1902.

#### 1.4. Potential International Guest Scholars to be invited to CAS.

Notes:

- Starred (\*) indicates current coauthors
- Number indicates subproject (see Figure 2) closest to scholar's expertise
- If no subproject number is given, scholar will be invited to give feedback on all subprojects and to take part in the CAS Research Group.

(\*) Michail Batikas (moving to Rennes Business School) (2.3)

Victor Bennett (Duke)

Phil Bromiley (UC Irvine) (2.3)

(\*) Carmelo Cennamo (moving to Copenhagen Business School) (2.2)

(\*) JP Eggers (New York University)

(\*) Johanna Glauber (moving to IE – Instituto de Empresa) (2.1)

John Joseph (UC Irvine) (1)

Andrei Hagiu (Boston University) (3)

Aija Leiponen (Cornell) (1, 3)

Milan Miric (University of Southern California) (1)

(\*) Hakan Özalp (University of Amsterdam)

(\*) Phanish Puranam (INSEAD) (3)

(\*) Joe Raffiee (University of Southern California – USC) (2.1)

Marlo Raveendran (UC Riverside) (1)

(\*) Arati Srinivasan (Providence College) (3)

Gurneeta Vasudeva Singh (U Minnesota) (2.4)

Pai-Ling Yin (University of Southern California – USC) (2.4)

(\*) Dainis Zegners (Rotterdam School of Management) (2.2)

Feng Zhu (Harvard Business School) (3)

## 2. Summary/Abstract

Platform markets are becoming increasingly important in our economy. A platform connects two sides, e.g. a buyer and a seller of a good or service. Notably, the sides usually make decisions independent from the platform owner, yet they share a common goal, the viability of the so-called platform ecosystem including platform, complements and buyers.

As organizations are defined as multi-agent entities with identifiable boundaries working towards a common goal, thinking of platforms in the common dimensions of firm (e.g. the platform owner) or market (e.g. the complementors making independent decisions to join the platform) may not capture the character of platforms adequately. We therefore propose to consider platforms as a set of solutions to four fundamental problems of organization: task division, task allocation, incentive provision and information provision in this CAS Research Group to bring together research on platform markets and organization design.

The CAS Research Group will proceed in three stages: We first identify the common features of platforms as seen through the lense of organization design. In the second phase, we study specific features of platform organization design in particular empirical settings to learn how these features address the fundamental problems of organizing. Finally, we synthesize the results to assess whether platforms constitute a distinct organizational form or if they are ultimately similar to existing organizational forms

*Plattformmärkte werden ökonomisch zunehmend bedeutsam. Eine Plattform verbindet mehrere Seiten, z.B. Käufer und Anbieter. Vielen Plattformen ist gemein, dass die Marktseiten unabhängige ökonomische Entscheidungen treffen, jedoch als gemeinsames Ziel den Erfolg des Ökosystems von Plattform, Komplementärgütern und Käufern verfolgen.*

*Die Definition von Organisationen als identifizierbare Einheit, in denen mehrere Akteure ein gemeinsames Ziel verfolgen legt nahe, dass Plattformen sich nicht in die klassischen Dimensionen von Unternehmen (z.B. der Plattformeigner) und Markt (z.B. Anbieter, die Komplemente produzieren) einordnen lassen. Wir schlagen vor, Plattformen als Bündel von Lösungen für vier fundamentale Organisationsprobleme – Aufgabendefinition, -verteilung, Anreizsetzung und Informationsbereitstellung – zu betrachten. Die CAS Research Group soll demnach Forschung zu Plattformen und zum Organisationsdesign verknüpfen.*

*Die CAS Research Group ist in drei Phasen organisiert. Zunächst werden gemeinsame Elemente von Plattformen aus Sicht des Organisationsdesigns identifiziert. Dann werden anhand empirischer Studien spezifische Designelemente in einzelnen Plattformmärkten untersucht, um zu sehen, wie durch sie fundamentale Organisationsprobleme gelöst werden. Abschließend wird die Frage beantwortet, ob Plattformen eine eigenständige Organisationsform sind oder viele Merkmale anderer Organisationsformen teilen.*

### 3 Research Plan

#### 3.1 Current state of the art

**Platform Markets.** Platform markets are becoming increasingly relevant in our economy. Seven out of the ten most valuable companies by market value in 2018, Apple, Amazon, Alphabet, Microsoft, Facebook, Alibaba and Tencent are owners of one or more prominent platforms (Forbes, 2019). In such markets, a mediator, the platform, connects two sides of agents, usually buyers and sellers of complementary goods (see Figure 1).

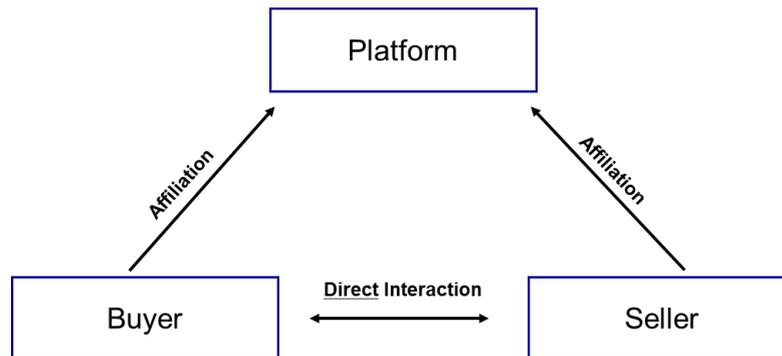


Figure 1: Stylized representation of a platform market

A key characteristic of platform markets is that buyers and sellers are typically independent from the platform owner, i.e. the platform owner does not provide the entire system of platform and complements. Instead, there is an ecosystem of independent complementors, and the platform owner cannot directly affect their decision to enter or which complements to provide. Examples of platforms include credit cards, which facilitate interaction between customers and merchants, or video game consoles, which allow players to play video games, but also social and professional networks, digital payment systems or streaming services.

Platform markets are characterized by network effects (Cennamo and Santalo, 2013; McIntyre and Srinivasan, 2017; Belleflamme and Peitz, 2019), particularly indirect ones (Zhu and Iansiti, 2012; Katz and Shapiro, 1986). The more complementors, the more utility a consumer derives from the platform, and the more consumers, the more complements a third-party producer can sell. Network effects often lead to Winner-Take-All (WTA) outcomes (Cabral and Kretschmer, 2007, Eisenmann, 2006), where one standard dominates most or all of the market. However, WTA outcomes are not ubiquitous in platform markets (Schilling, 2002; Lee et al., 2006, Kretschmer, 2004, 2008). In some markets like video game consoles or smartphone operating systems multiple competing platforms hold significant market shares. Indirect network effects lead to the so-called chicken-and-egg problem of platforms (Caillaud and Jullien, 2003; Gawer and Cusumano, 2002): Consumers only derive value from the platform when there are complements, and complementors only can only sell their goods

when there are consumers on the platform. Both sides will only join the platform when they expect sufficient numbers of the other group to join so the benefits outweigh the costs.

**Managing Complement(or)s.** Much of the recent literature on platform markets focuses on the relationship between platform owners and the companies providing complements (Boudreau and Hagiu, 2009; Hagiu, 2009; McIntyre and Subramaniam, 2009; Rietveld et al., 2019; Wareham et al., 2014; Kretschmer and Claussen, 2016). Complementors benefit the platform via increased utility for users, so that platform owners may subsidize them, whether financially or through other assistance (Eisenmann et al., 2006). Claussen et al. (2013) study “soft subsidies” to complementors, i.e. rewards given to successful complementors in the form of added functionality, and find in the context of Facebook apps that rewarding engaging complements increases quality and improves the rate at which higher quality attracts more users. Rietveld et al. (2019) find that platform owners may want to selectively promote certain complements not necessarily based on performance alone. Instead, they may promote complements in niches that have received little attention before.

Anderson et al. (2013) find that platform owners face a trade-off between investing in technological performance, thus increasing the utility a customer derives from the platform, and limiting technological performance to make it easier for third-party producers to introduce complements. Cennamo et al. (2018) find that when complementors multi-home, the quality of their complements decreases, particularly when they multi-home to a more complex platform. Similarly, Claussen et al. (2015a) find that complementors may limit how technologically advanced their products are to enable more complements to function with the platform. This creates a “sweet spot” of technological quality (not too high to avoid shutting out complementors, high enough to deliver satisfactory performance). Another way of incentivizing third-party complementors is to help third-party firms overcome knowledge boundaries to make it easier to contribute to the platform (Foerderer et al., 2019). Finally, a platform owner can also produce complements to ensure an installed base of complements.

**Platforms as Organizations.** Prior work has studied how platforms work as a marketplace compared to conventional markets in which many sellers meet many buyers, or firms in which inputs are combined and sold on to buyers. Most research considers the platform owner as key decisionmaker (e.g. Rochet and Tirole, 2003) who sets prices on both sides of the market. Here, the “organization” is the platform owner deciding on the interactions with independent actors on both sides of the market. Another stream of work focuses on the complementors’ decisions to supply complements for the platform (e.g. Miric et al., forthcoming; Boudreau, 2012). This perspective studies decisions of independent decisionmakers in a platform ecosystem. Viewing an organization as a “(1) multiagent system with (2) identifiable boundaries and (3) system-level goals (purpose) toward which (4) the constituent agent’s efforts are expected to make a contribution” (Puranam et al., 2014: 163), however, suggests that focusing on the platform owner (the firm) alone is too narrow, while treating the interaction between platform owner, complementors and consumers as a market is not

appropriate either. Ultimately, platform owner and complementors share a common goal they all contribute to, and a platform's boundaries can be considered to include all actors contributing to platform success. Afuah et al. (2019) posit that platforms are a distinct organizational form, although their focus is not on defining the key differences to other organizational forms. We aim to fill this gap by viewing platforms as an organization with a common purpose and agents contributing to it.

### **3.2. Planned Research**

The CAS Research Group (RG) will approach the phenomenon of platforms from an organization design perspective in three phases: **First**, platforms will be defined as a "form of organizing" (Puranam et al., 2014) with specific solutions to the four basic problems of organizing. This will establish some features of platforms as an organizational form (Afuah et al., 2019). **Second**, we will study the role of specific features of platform markets in concrete industries. The **third** phase is to delineate platforms from other forms of organizing pursuing similar goals. This will help us assess if platforms constitute a separate organizational form or if they are sufficiently similar to other types of organizations.

#### ***Phase 1: Organizational features of platforms (10/2020 – 12/2020)***

Puranam et al. (2014) define a form of organizing as a "specific set of solutions to the four universal problem that any organization must address in order to exist" (p. 166). Thus, any form of organizing will be a bundle of the specific solutions to the four problems of *task division*, *task allocation*, *provision of rewards* and *provision of information* (ibid.: 165). The first phase will review the existing literature on platforms from this specific perspective and interpret specific organizational design choices, especially regarding the interaction between platform owner and complementors, as a solution to one (or more) problems of organizing. This review will be complemented by interviews with platform decisionmakers and secondary research on real-life platforms. This will establish the commonalities of most platform designs in terms of their ways of solving organizational problems.

#### ***Phase 2: Empirical studies on specific organizational features (11/2020 – 07/2021)***

The second phase consists of four studies on ways of solving an organizational problem in a specific setting. While organization design features often address multiple problems, we select the industries and features for their ability to address one problem in particular.

*Task division.* In online labor markets, i.e. platforms that allow for a matching between freelancers and firms for specific, one-off jobs ("gigs"), firms can outsource tasks previously located within the firm. Online labor markets thus have the potential to affect the *task division* between the firm and outside contractors. In this study, we will ask how repeated outsourcing decisions will affect the firm's propensity to outsource additional tasks. Using transaction-level data from the largest online labor market, Upwork, we trace outsourcing patterns over time. We ask especially if the tasks that get outsourced further are closely related to prior outsourcing decisions (suggesting learning at the level of the task-group level), or if also more

distant tasks get outsourced, which may imply that firms learn about the process of outsourcing to an online labor market more generally. Potential collaborators for this project include Joe Raffiee (USC) and Johanna Glauber (IE).

*Task Allocation.* On platforms, a fundamental question is how to ensure sufficient complement availability for a platform. That is, how do platform owner and complementors divide the task of providing complements between them? We will study a particular feature of platform markets in the context of the video games industry: the provision of first-party complements. Here, platform owners provide complements, which in turn affects the incentives of complementors to provide their own (Zhu, 2018; Zhu and Liu, 2018). Thus, we ask for which market niches first-party complements will be developed and what effect the introduction has on the subsequent development of third-party complements. We will use a 15-year panel dataset from NPD Market Research on first- and third-party complements, their launch dates and their sales history over their lifecycle. This lets us study in detail the way in which tasks that could potentially be completed by multiple actors on a platform will be allocated through “soft” rules and incentives (complementors freely choose the market niches for which they develop games). Dainis Zegners (Rotterdam School of Management) and Carmelo Cennamo (Copenhagen Business School) will be invited to join this project.

*Provision of Rewards.* On online platforms, rating systems play a key role in the distribution of rewards for complementors. Importantly, in online markets there are often few other cues for the quality of a seller and therefore the provision of rewards via sales. We study the Darknet in which this tendency is further amplified: Anonymous sellers sell illicit goods (e.g. drugs) and therefore cannot advertise or provide samples to prospective customers. Hence, the main cue for buyers (and therefore the main strategic variable to manipulate next to price for sellers) is the reputation a seller has accumulated via past sales. In this study, we will focus on how ratings, especially negative ones, will shape the responses by sellers, e.g. by lowering prices or adjusting their portfolio, and thus change the ability of sellers to reap rewards from being on the platform. Michail Batikas (Rennes Business School) and Phil Bromiley (UC Irvine) will collaborate with the PI on this project.

*Provision of Information.* Many platforms are knowledge-intensive and rely strongly on the complementarities between the platform and its complements. There are several ways of leveraging these complementarities, e.g. detailed documentation or modular interfaces. An additional mechanism used to transfer knowledge from platform to periphery is the “planned fluctuation” of workers knowledgeable about the platform technology to the periphery, i.e. independent complementors. We will use data from LinkedIn, a global professional network, to trace employees moving from “central divisions” (i.e. the platform itself) in platform companies to complementors within the firm (e.g. a Microsoft employee moving from the Operating Systems division to the Office Software division) or to independent complementors (e.g. a Microsoft OS developer moving to Symantec, a software developer). We will assess the implications for the performance of the platform: A complement by a firm employing a

former platform owner employee may perform better than others, which ultimately benefits the platform owner through the complementarities bestowed on the platform. This project will highlight a particular solution to the problem of providing independent (but complementary) actors with information. Pai-Ling Yin (USC) and Gurneeta Vasudeva Singh (U Minnesota) will collaborate on this project.

The outlined studies build on existing work and datasets and allow a closer look at platform-specific solutions to problems of organization. The precise empirical implementation and econometric specification will be developed jointly with the collaborating scholars before and during their visits. The combined findings will form the basis for a more general model of platforms as distinct organizational form in Phase 3.

**Phase 3: Platforms as a distinct organizational form? (04/2021 – 09/2021)**

The final phase of the CAS RG will synthesize results from the empirical studies and the preliminary findings from the first phase of the project. We want to establish whether platforms constitute a distinct organizational form like, e.g. a firm network, or if it is a combination of conventional ways of solving organizational problems.

We will invite a number of prominent scholars from different perspectives to give their input to this question. Phanish Puranam (INSEAD) will join as an eminent scholar of organization design, Andrei Hagiu (Boston University) will be invited to give insights from an economic modelling perspective, as will Aija Leiponen (Cornell), who has in-depth empirical expertise on high-technology industries, including several platforms. Arati Srinivasan (Providence) will join as an expert on platform strategy, and Carmelo Cennamo (Copenhagen Business School) and Feng Zhu (Harvard Business School) will offer insights on the interplay between platform and complementors, one of the key features of platforms.

Figure 2 summarizes the planned research and offers an indicative timeline for the project.

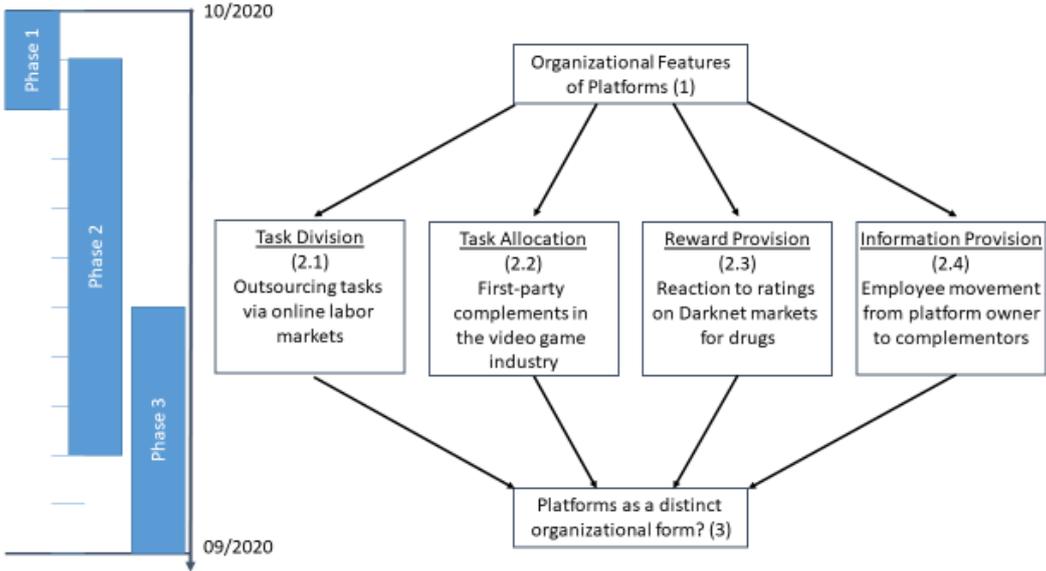


Figure 2: Project phases, components and timeline

### 3.3. PI's prior research, project goals and risk assessment

The PI's expertise spans research on platform markets and organization design and includes large-scale empirics, formal models and simulation models. Moreover, the PI is guest editing a Special Issue in SMJ on Platforms ([www.strategicmanagement.net/smj/overview/special-issues/past-special-issues](http://www.strategicmanagement.net/smj/overview/special-issues/past-special-issues)) and is on the Board of Directors of the Organization Design Community ([www.orgdesigncomm.com/Board-of-Directors](http://www.orgdesigncomm.com/Board-of-Directors)).

The PI's work on **platform markets** studies the platform owner's management of the supply of complements. Kretschmer and Claussen (2016) analyze the use of backward compatibility and its dual effect on the supply of third-party complements and the demand for the platform itself. Estimating supply of complements and demand for the platform empirically the authors find that while backward compatibility alleviates the "chicken and egg" problem and strengthens platform demand, it also creates competition for third-party complementors and thus weakens supply, crowding out third-party producers. Claussen et al. (2013) study the effect of rewarding complements that engage users. Rewarding such complements increases quality and the speed at which they are updated. Finally, Zegners and Kretschmer (2017) show how platform owners can segment the market by bundling platform and complements. All these papers study platform owners' management of complements.

Özalp and Kretschmer (forthcoming) study the effect of "trailblazers", products that are highly successful in a niche, on the entry decisions of competitors. More experienced firms are better capable of recognizing such trailblazers and can become close followers in the niche, while less experienced firms tend to "follow the crowd" and use their competitors' entry as a signal for a profitable market. Kretschmer et al. (2012) study the effect of an increase in competition intensity on the adoption of complementary innovations. Using government regulation as an external shock that increases the competition in a market the study finds that increased competition pushes firms to adapt complementary innovations and that they tend to focus on one such innovation. Both studies look at specifics of complementary goods and lay foundations for the current project.

Other studies by the PI focus on complementors' strategies: Cennamo et al. (2018) examine the trade-off of third-party complementors between providing a high-quality complement and multi-homing, i.e. making their complement compatible with multiple platforms. While multi-homing makes a complement available to a larger audience, it also comes at a cost of quality, a trade-off that becomes stronger when the platform's technological complexity is high. Similarly, Claussen et al. (2015a) find that complementors choosing their technological quality face a trade-off between the increased value users derive and the number of consumers who can use their complements since they need a compatible platform. Increased technological quality restricts the potential audience, leading to an inverse u-shaped relationship between technological quality and performance.

The PI's work on **organization design** studies different levels of aggregation or abstraction: Specific organizational practices and the (broader) organizational level.

In Bloom et al. (2011), the authors measure the effect of (voluntary) work-life balance practices on firm productivity and perceived work-life balance and find that while there is a strong association between family-friendly workplace practices and work-life balance, there is no clear effect on productivity. Kretschmer and Puranam (2008) develop a formal model to show that incentives can help firms realize across-unit complementarities, although the authors find evidence of a threshold value below which complementarities are best ignored. Vanneste et al. (2014) conduct a meta-analysis of the link between partnerships and trust and find a moderate link between the two, suggesting that even long-standing partnerships are unlikely to persist purely on mutual trust. Claussen et al. (2015b) study the implications of vertical (dis)integration for the tradeoff between flexibility and commitment. They find that in turbulent environments, vertical integration initially becomes more attractive due to commitment benefits, but is eventually dominated for very turbulent environments by the flexibility of markets. Finally, Englmaier et al. (2018) posit that organizational choices are highly interdependent and must be considered jointly when designing an organization.

The PI is in a unique position of having worked both on problems of organization design, with recent work focusing especially on more complex phenomena, and platform markets, both from the platform owner's and the complementor's perspective. Bringing those together through a CAS RG offers significant potential.

Specifically, the CAS RG has three main goals: **First**, to establish LMU as a center for world-class research on the organization design of platforms. The PI has a wide-ranging network of scholars in both domains (platforms and organization design) and is well-positioned to establish LMU as such a hub. A significant share of scholars to be invited are already coauthors, while additional scholars chosen for their contributions in one of the domains and their methodological expertise will be invited to join the project and the network. This will benefit junior academics at the Institute for Strategy, Technology and Organization (ISTO) and the Faculty of Management more broadly, who will have the opportunity to interact and work with a wide set of high-profile scholars. **Second**, the CAS RG will produce high-quality research on the topics outlined in Section 3.2. Phase 1 (the organizational features of platforms) will lay the groundwork for the subsequent steps. Phase 2 (four empirical studies on specific organizational features of platforms) is considered low risk because data access has been secured for all of the planned studies, and contact to coauthors has been established. Finally, Phase 3 is higher-risk as it will pull together insights from Phases 1 and 2 to develop a model of platforms as a separate organizational form. The outcome will depend on the extent to which the earlier results are generalizable and sufficiently separate from existing organizational forms. The **third** goal of the CAS RG is to enable the PI to develop a proposal for an ERC Advanced Grant or a DFG Reinhart Koselleck Project. While these programs are highly competitive, the PI would maximize the chances of success through the installment of a CAS RG.

### 3. Research Expenses

Amount	Timeframe	Purpose
10.000€	05/2021	Workshop on Platforms as Organizational Form
5.000€	10/2020 – 09/2021	Student Assistant
6.000€	10/2020 – 09/2021	Seminar Speakers (3 per Semester)
2.000€	08/2021	Organization of a Panel at Academy of Management Annual Conference 2021
2.000€	10/2020	Organization of a Symposium at the Strategic Management Society Annual Conference 2020

### 4. Requested Teaching Reduction

I am applying for a full (9SWS) reduction of my teaching duties. After my three years as the Dean of the Munich School of Management (2016-2019, one year to complete my predecessor's term, two years regular term) and a year (2019-2020) of finishing ongoing projects, a period of uninterrupted, focused research activity is necessary to initiate a large-scale project with international participation.

## 5. Bibliography (starred (\*) publications by the PI)

- (\*) Afuah, A., Gawer, A.; McIntyre, D., Kretschmer, T., Srinivasan, A. (2019). Multi-sided platforms as new organizational forms: A dynamic perspective on strategy, scope and business models. Working Paper, LMU Munich.
- Anderson, E., Parker, G., & Tan, B. (2013). Platform performance investment in the presence of network externalities. *Information Systems Research*, **25**(1), 152-172.
- Belleflamme, P., & Peitz, M. (2019). Managing competition on a two-sided platform. *Journal of Economics & Management Strategy*, **28**(1), 5-22.
- (\*) Bloom, N., Kretschmer, T., & Van Reenen, J. (2011). Are Family-Friendly Workplace Practices a Valuable Firm Resource? *Strategic Management Journal* **32**(4), 343–367.
- Boudreau, K. (2012) Let a Thousand Flowers Bloom? An Early Look at Large Numbers of Software “Apps” Developers and Patterns of Innovation. *Organization Science*, **23**, 1409-1427.
- Boudreau, K., & Hagiu, A. (2009). Platform rules: Multi-sided platforms as regulators. *Platforms, markets and innovation*, **1**, 163-191.
- (\*) Cabral, L., & Kretschmer, T. (2007). Standards battles and public policy. *Standards and Public Policy*, 329-344.
- Caillaud, B., & Jullien, B. (2003). Chicken & egg: Competition among intermediation service providers. *RAND Journal of Economics*, **34**(2), 309-328.
- (\*) Cennamo, C., Özalp, H., & Kretschmer, T. (2018). Platform Architecture and Quality Trade-offs of Multihoming Complements. *Information Systems Research*, **29**(2), 461-478.
- Cennamo, C., & Santalo, J. (2013). Platform competition: Strategic trade-offs in platform markets. *Strategic Management Journal*, **34**(11), 1331-1350.
- (\*) Claussen, J., Essling, C., & Kretschmer, T. (2015a). When less can be more—Setting technology levels in complementary goods markets. *Research Policy*, **44**(2), 328-339.
- (\*) Claussen, J., Kretschmer, T., & Mayrhofer, P. (2013). The effects of rewarding user engagement: the case of facebook apps. *Information Systems Research*, **24**(1), 186-200.
- (\*) Claussen, J., Kretschmer, T., & Stieglitz, N. (2015b). Vertical scope, turbulence, and the benefits of commitment and flexibility. *Management Science*, **61**(4), 915-929.
- Eisenmann, T. (2006). Internet companies' growth strategies: determinants of investment intensity and long-term performance. *Strategic Management Journal*, **27**(12), 1183-1204.
- Eisenmann, T., Parker, G., & Van Alstyne, M. (2006). Strategies for two-sided markets. *Harvard Business Review*, **84**(10), 92.
- (\*) Englmaier, F.; Foss, N.; Knudsen, K., & Kretschmer, T. (2018). Organization Design and Firm Heterogeneity: Towards an Integrated Research Agenda for Strategy. *Advances in Strategic Management*, **40**, 229-252.
- Foerderer, J., Kude, T., Schuetz, S., & Heinzl, A. (2019). Knowledge boundaries in enterprise software platform development: Antecedents and consequences for platform governance. *Information Systems Journal*, **29**(1), 119-144.
- Forbes. (2019). [online] Available at: <https://www.forbes.com/global2000/> [25/2/19].
- Hagiu, A. (2009). Two-sided platforms: product variety and pricing structures. *Journal of Economics & Management Strategy*, **18**(4), 1011-1043.

- Katz, M., & Shapiro, C. (1986). Technology adoption in the presence of network externalities. *Journal of Political Economy*, **94**(4), 822-841.
- (\*) Kretschmer, T. (2004). Upgrading and Niche Usage of PC Operating Systems. *International Journal of Industrial Organization*, **22**(8-9), 1155-1182.
- (\*) Kretschmer, T. (2008). Splintering and Inertia in Network Industries. *Journal of Industrial Economics*, **56**(4), 685-706.
- (\*) Kretschmer, T., & Claussen, J. (2016). Generational transitions in platform markets—The role of backward compatibility. *Strategy Science*, **1**(2), 90-104.
- (\*) Kretschmer, T., Miravete, E., & Pernías, J. (2012). Competitive pressure and the adoption of complementary innovations. *American Economic Review*, **102**(4), 1540-70.
- (\*) Kretschmer, T., & Puranam, P. (2008). Integration Through Incentives Within Differentiated Organizations. *Organization Science* **19**(6), 860-875.
- Lee, E., Lee, J., & Lee, J. (2006). Reconsideration of the winner-take-all hypothesis: Complex networks and local bias. *Management Science*, **52**(12), 1838-1848.
- McIntyre, D., & Srinivasan, A. (2017). Networks, platforms, and strategy: Emerging views and next steps. *Strategic Management Journal*, **38**(1), 141-160.
- McIntyre, D., & Subramaniam, M. (2009). Strategy in network industries: A review and research agenda. *Journal of Management*, **35**(6), 1494-1517.
- Miric, M., Boudreau, K., Jeppesen, L. (forthcoming). Protecting their Digital Assets: The use of formal & informal appropriability strategies by App developers. *Research Policy*, <https://doi.org/10.1016/j.respol.2019.01.012>.
- (\*) Özalp, H., & Kretschmer, T. (forthcoming). Follow the crowd or follow the trailblazer? The differential role of firm experience in product entry decisions in the US video game industry. *Journal of Management Studies*, <https://onlinelibrary.wiley.com/doi/abs/10.1111/joms.12389>.
- Rietveld, J., Schilling, M., & Bellavitis, C. (2019). Platform strategy: Managing ecosystem value through selective promotion of complements. Forthcoming, *Organization Science*.
- Rochet, J., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, **1**(4), 990-1029.
- Schilling, M. (2002). Technology success and failure in winner-take-all markets: The impact of learning orientation, timing, and network externalities. *Academy of Management Journal*, **45**(2), 387-398.
- (\*) Vanneste, B., Puranam, P., & Kretschmer, T. (2014). Trust over Time in Exchange Relationships: Meta-Analysis and Theory. *Strategic Management Journal*, **35**(12), 1891-1902.
- Wareham, J., Fox, P., & Cano Giner, J. (2014). Technology ecosystem governance. *Organization Science*, **25**(4), 1195-1215.
- Zhu, F. (2018). Friends or foes? Examining platform owners' entry into complementors' spaces. *Journal of Economics & Management Strategy*, **28**(1), 23-28.
- Zhu, F., & Iansiti, M. (2012). Entry into platform-based markets. *Strategic Management Journal*, **33**(1), 88-106.
- Zhu, F., & Liu, Q. (2018). Competing with complementors: An empirical look at Amazon.com. *Strategic Management Journal*, **39**(10), 2618-264