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SPECIAL ISSUE ARTICLE

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# Growing with others: A longitudinal study of an evolving multi-sided disruptive platform

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Multi-sided platforms are becoming increasingly relevant in understanding industry changes. The literature has focused on the inception and growth of platforms, neglecting how entrants develop and grow disruptive platforms. To address this shortcoming, we study an entrant that was spun off from an established catalog retailer and is steering a multi-sided disruptive platform in the German fashion retail industry. We conduct a longitudinal study on how the entrant leverages the relationships with its multiple platform sides during 2014–2019 by analyzing secondary data using topic modeling and qualitative content analysis. We propose three levers: (1) "guarded inception," which is the collaboration with a knowledgeable partner unaffected by disruption to quickly overcome the chicken-and-egg problem; (2) "activating force multipliers," which is the strategic orchestration of complementors being contractually tied to the entrant and working to extend the entrant's value network. Enabled by these two levers, the entrant was (3) "building on others" to develop the platform along a disruptive path while circumventing internal limitations and external resistance. We contribute to the intersection of the literature strands on platform and disruptive innovation by showing how the entrant strategically leveraged its different platform sides over time to develop and grow a disruptive platform.

**KEYWORDS**
business model, disruptive innovation, platform, process, topic modeling

## 1 | INTRODUCTION

Scholars have recently proposed an "era of continual disruption" (Kumaraswamy, Garud, & Ansari, 2018) by referring to the rise of digital platforms (e.g., Spotify, Airbnb, Uber, and Alibaba) that speed disruptive changes in hitherto established industries (Christensen, McDonald, Altman, & Palmer, 2018; Downes & Nunes, 2014; Trabucchi, Talenti, & Buganza, 2019).

Indeed, the disruptive innovation literature has begun to increasingly research the role of digital technologies in enabling disruptive platforms (e.g., Cozzolino, Verona, & Rothaermel, 2018; Ozalp, Cennamo, & Gawer, 2018). Disruptive platforms combine the properties of disruptive innovations (i.e., cheaper, more convenient, underperforming on established performance attributes; see Govindarajan and Kopalle, 2006) with their platform characteristics. The latter are understood as market intermediaries that facilitate the interaction among multiple sides and, thus, reduce transaction costs and internalize externalities at zero marginal cost (Eisenmann, Parker, & Van Alstyne, 2009; Evans, 2009; Hagiu & Spulber, 2013). Additionally, by connecting customers with complementors, platform providers (i.e., the firm developing and growing the platform) can take advantage of network effects, that is, customers prefer platforms with a

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large number of complementors, while complementors value platforms with large customer bases (Katz & Shapiro, 1985; Van Alstyne, Parker, & Choudary, 2016). These network effects are linked to a winner-take-all dynamic (Schilling, 2002), which explains a platform's appeal to potential disruptors. Taken together, these characteristics allow for a speedy progression of platforms along a disruptive path (Trabucchi et al., 2019).

Yet, to take advantage of these platform characteristics, platform providers must first attract and increase the number of participants (i.e., complementors and customers) on multiple platform sides (Katz & Shapiro, 1985; Van Alstyne et al., 2016). Many firms fail in platform creation and development because of technology or business aspects (Gawer & Cusumano, 2008). In this regard, the literature on platforms proposes levers for platform development, which are strategic mechanisms a provider can use to influence the platform's evolution (Cusumano & Gawer, 2002).

While these levers generally offer insights into strategic mechanisms for platform development, they do not consider the specific circumstances and restrictions that arise in a disruptive context (Ansari, Garud, & Kumaraswamy, 2016; Christensen et al., 2018; Kumaraswamy et al., 2018). In fact, building a critical base of platform participants is especially challenging for disruptive entrants, as they lack the resources, legitimacy, and critical knowledge to attract externals during platform inception (Snihur, Thomas, & Burgelman, 2018). Further, the literature on disruption particularly emphasizes the externals' influence on the entrant's disruptive path (Ansari et al., 2016; Snihur et al., 2018). The entrant may be dependent on a collaboration with incumbent complementors, yet, incumbents may refrain from cooperating with new entrants who stand to disrupt their industry (Ansari et al., 2016). Thus, while platforms provide characteristics enabling speedy disruption (Trabucchi et al., 2019), creating these characteristics is difficult for new entrants (Gawer & Cusumano, 2008).

Consequently, researchers call for studies on disruptive platforms from an entrant's perspective (e.g., Kumaraswamy et al., 2018; Snihur et al., 2018; Trabucchi et al., 2019). Hence, we study in-depth how an entrant is able to evolve its platform along the disruptive path despite its internal limitations and external resistance. We thereby take the perspective of the entrant as a strategic actor performing disruption (Kumaraswamy et al., 2018) by leveraging multiple sides of the platform (Cusumano & Gawer, 2002; Perks, Kowalkowski, Witell, & Gustafsson, 2017; Trabucchi et al., 2019). Thus, we answer the following research question: *How does an entrant leverage the relationships with its multiple platform sides to evolve along the disruptive path?*

To answer this question, we conduct a longitudinal study of *About You* (AY), a German fashion-discovery platform that was spun-off from an established catalog retailer and disrupted brick-and-mortar fashion retailers, through orchestrating knowledge of external complementors to deliver inspiring and individualized content via its application software (app). We perform topic modeling combined with a qualitative content analysis of secondary data and show how AY leveraged relationships with its platform sides to drive the evolution of the platform during the period 2014–2019. In particular, we propose that AY used three levers: (1) "guarded inception," which is the early collaboration with a knowledgeable partner unaffected by disruption to circumvent the internal limitations and quickly overcome the chicken-and-egg problem; and (2) "activating force multipliers," which is the strategic orchestration of complementors being contractually tied to the entrant and working to extend the entrant's value network. Enabled by these two levers, the entrant was (3) "building on others" to develop the platform along a disruptive path while circumventing internal limitations and external resistance.

## 2 | THEORETICAL BACKGROUND

### 2.1 | Platform inception and growth

The literature defines platforms as intermediary systems enabling transactions between two or more sides (e.g., Gawer & Cusumano, 2008; Parker & Van Alstyne, 2018). These platforms deliver value via proprietary digital channels, create value through facilitating interactions in the communities, and capture a commission fee for matchmaking at the customer's or complementor's side (Trabucchi & Buganza, 2020; Van Alstyne et al., 2016).

Platforms can be two- or multi-sided, depending on the number of distinct platform sides (i.e., platform provider, complementors, and customers) (Eisenmann et al., 2009; Rochet & Tirole, 2003). This *n*-sidedness of platforms has been associated with direct and indirect network effects (e.g., Cennamo, 2018; Gawer & Cusumano, 2008). Indeed, participants perceive a higher value for platforms with a large base of same side participants for social interaction and knowledge spillovers (direct), and a higher motivation to join platforms with a larger base of other side participants to ensure a critical demand for or supply of products/services (indirect) (Katz & Shapiro, 1985). These network effects have further been associated with a winner-take-all paradigm, predicting that the platform with the largest installed base dominates the market (e.g., Cennamo & Santalo, 2013; Schilling, 2002).

To create and develop platforms, entrants must resolve technological problems (Cennamo & Santalo, 2013; Gawer & Cusumano, 2008) while onboarding a critical mass of customers and complementors connected via indirect network effects. This onboarding process has been associated with a chicken-and-egg problem on how to incentivize one complementor side to join the platform, while other complementors have not yet joined the platform (Caillaud & Jullien, 2003). Resolving this problem requires a balancing act between (1) opening versus closing the platform to third-party complementors (Eisenmann et al., 2009; Parker & Van Alstyne, 2018; West, 2003), and (2) framing the platform as distinct versus conforming to build legitimacy and gain external cooperation (e.g., Garud, Schildt, & Lant, 2014; Navis & Glynn, 2010; Zhao, Fisher, Lounsbury, & Miller, 2017). In this regard, Cusumano and Gawer (2002) propose four levers that organizations can use to sustain platform leadership: they differentiate between (1) the "company scope," which refers to the amount of activities performed in-house versus externally, (2) "technology design and intellectual property," which are the features included in the platform, (3) "external relationships with complementors," which refer to the process of encouraging

complementors to contribute to the platform, and (4) the "internal organization," which uses the organizational structure and processes to assure complementors they are working towards the benefit of the platform.

However, the balance that enabled the inception and development of the platform may be unsuitable for platform growth. Thus, ongoing debates revolve around platform evolution (Muzellec, Ronteau, & Lambkin, 2015; Parker, Van Alstyne, & Choudary, 2016; Teece, 2017; Trabucchi & Buganza, 2020). While these studies propose different evolutionary models, they consistently acknowledge an underlying shift of the *raison d'être* of the platform over time, making a dynamic change of the platform necessary (Gawer & Cusumano, 2008).

Hence, relating to the levers of "scope" and "product technology" (Cusumano & Gawer, 2002; Gawer & Cusumano, 2015), ongoing debates on platform evolution discuss the relative merits of open versus closed platforms (Eisenmann et al., 2009; Kende, 1998; Parker & Van Alstyne, 2018). Whereas some authors propose to open the platform early to encourage wide acceptance from complementors (Cennamo & Santalo, 2013; Parker & Van Alstyne, 2018) and to create momentum (West, 2003), others warn against surrendering control too early, as it is associated with the risks of second-mover attacks from powerful incumbents (Eisenmann et al., 2009) and the loss of control over the platform's development (Cennamo & Santalo, 2013). For instance, Cennamo (2018) found that in-house complements allow uncertainty to be overcome and facilitate knowledge spillovers to external complementors in the early stages. However, during the growth stage, restricting in-house complement development becomes necessary to avoid discouraging externals from high-quality complement development. Indeed, Schilling (2002) argues that closing a once-open platform reduces the complementor's incentive to provide additional complements and may induce a sense of lock-in. Gawer and Henderson (2007) conclude that an ongoing development of in-house complements during the growth phase can create coopetitive tensions with external complementors.

Moreover, how platform providers perform framing over time to develop and grow their platform is currently a topic of debate. In fact, Zhao et al. (2017) conclude from their review on optimal distinctiveness that there is an increasing literature dealing with the firm-level problem of realizing a distinctive strategic positioning while not breaching the norms (i.e., realizing conformity) in order to achieve optimal performance. Whereas the authors posit different patterns regarding the evolution from conformity to differentiation (and vice versa) over time, they conclude that legitimacy-building is a major concern to achieve performance. Indeed, legitimacy-building is decisive because entrants need to sufficiently demonstrate a similarity with viable market categories in order to be recognized and to gain the support of relevant stakeholders (i.e., complementors). In this regard, Navis and Glynn (2010) show that entrants initially claim a shared collective identity to manifest the meaning of their new market category and then later shift toward claiming distinctiveness to differentiate themselves from competitors. Further, Zhao et al. (2017) argue for the decisive role of relevant stakeholders as mediators that influence the relationship between an entrant's framing and resulting market performance. However, Garud et al. (2014) propose that entrants will likely revise their storytelling to achieve legitimacy and set fresh stakeholder expectations. Indeed, while the revision of such stories is contingent upon prior achievements, a failure to meet previously set expectations likely threatens the entrant's legitimacy in the future. As such, which story to tell whom and when requires careful consideration.

In conclusion, developing and growing a platform requires balancing optimal openness (Boudreau, 2010; Parker & Van Alstyne, 2018) and optimal distinctiveness (Zhao et al., 2017) over time.

## 2.2 | Disruptive innovation and platform business models

In recent times, scholars have increasingly connected the literature on platforms with insights from the literature on disruptive innovation to explain the emergence and growth of new entrants with new business models that challenge incumbents (e.g., Cozzolino et al., 2018; Kumaraswamy et al., 2018; Ozalp et al., 2018; Trabucchi et al., 2019). Corresponding studies build on disruptive innovation as a process that describes how an entrant with fewer resources effectively challenges established incumbents in the mainstream market (Christensen et al., 2018). The concept was initially understood as a technological problem and mostly studied from the incumbents' perspective (Christensen et al., 2018). Since 2006, researchers have begun to explore the role of business models (Christensen, 2006; Cozzolino et al., 2018; Markides, 2006; Trabucchi et al., 2019) and the entrant's role in maneuvering along the disruptive path (e.g., Ansari et al., 2016; Snihur et al., 2018).

Downes and Nunes (2014) found that platforms, based on fast maturing and openly available disruptive technologies, allowed resource-poor entrants to quickly develop disruptive innovations at relatively low costs. Building on the business model perspective, Trabucchi et al. (2019) characterized this type of disruptive innovation as a multi-sided platform delivering value to two or more sides, enabling a reduction of transaction costs, creating value by internalizing externalities, and capturing value based on a zero-marginal-cost structure.

The understanding of platform dynamics that give rise to disruption has been advanced further by Ozalp et al. (2018) and Cozzolino et al. (2018). Ozalp et al. (2018) argue that multi-sided platforms depart from the traditional contexts in which the disruptive innovation theory has developed. By considering the interdependencies in the complementor ecosystem to explain disruption, Ozalp et al. (2018) identified that complementors face challenges in supplying new generation platforms, potentially disaffecting toward easier to supply and technically less-advanced platforms. The authors thereby extend the disruptive innovation theory by proposing the disaffection of complementors as a cause of disruption in the context of platform-based ecosystems. Similarly, Cozzolino et al. (2018) highlighted the role of platforms in disrupting the Italian newspaper industry. They observed an emergence of entrants with disruptive business models creating value by orchestrating external knowledge and capturing value through controlling specialized platforms and customer data.

While current research on the reason platform business models enable disruption has greatly advanced our understanding of disruptive innovation as a business model problem, there is a lacuna in the understanding of how entrants develop and grow platform business models. In other words, research on platform evolution along the disruptive path is limited (Kumaraswamy et al., 2018; Trabucchi et al., 2019). Two notable exceptions are studies by Ansari et al. (2016) on TiVo's attempt in disrupting the US TV industry and Snihur et al. (2018) on Salesforce disrupting Siebel. These studies show that entrants dynamically change their framing strategies, moving from a disruptive to a sustaining framing strategy (Ansari et al., 2016), or from a distinctive to a leadership framing (Snihur et al., 2018) strategy, in order to deal with the challenges that arise along the disruptive path. As such, an entrant's creation and development of a disruptive platform necessitates a different framing strategy than what was proposed by Navis and Glynn (2010). This supports previous scholars who state that the development of disruptive innovations requires a different strategic approach compared with other types of innovations (Christensen et al., 2018). The different strategic approaches become relevant due to an entrant's lack of resources, legitimacy, and domain knowledge as well as coopetitive tensions that arise along the disruptive path (Ansari et al., 2016; Christensen et al., 2018; Snihur et al., 2018).

Additionally, while previous research on disruptive platforms has provided an understanding of framing strategies, the entrant's strategy in leveraging various platform sides to develop and grow a disruptive platform has not been explored (Kumaraswamy et al., 2018; Trabucchi et al., 2019). Consequently, building on Cusumano and Gawer's (2002) concept of "platform levers," we ask how an entrant leverages the relationships with its multiple platform sides to develop and grow its platform along a disruptive path. Answering this question may ultimately develop the current knowledge on how to perform disruptive innovation (Kumaraswamy et al., 2018).

## 3 | METHOD

### 3.1 | Research context and case reasoning

To answer our research question, we investigated *About You* (AY), a German fashion retail entrant offering a multi-sided platform. We collected secondary data from AY's different platform sides (i.e., platform provider: AY; complementors: brands, influencers, developers; customers) to understand how AY developed and grew the platform during 2014–2019.

AY is one of the fastest growing European e-commerce retailers and was spun off in 2014 as part of an internal project named *Collins*, from the established fashion catalog retailer *Otto*. While the idea for the entrant was conceptualized by the catalog retailer, the spin-off was granted strategic independence from the beginning, but relied on its parent for an exchange of knowledge, relationships, and resources. On July 19, 2018, AY achieved a market value of more than US$1 billion, becoming a unicorn company. Considering itself a fashion and technology company, AY aims to digitalize the shopping occasion, providing an inspiring and personalized shopping experience. By June 2019, AY's platform offered more than 1,200 fashion brands and had more than 4.5 million active customers per month, making it one of the largest online fashion retailers in Germany.

We argue that the selected case is a "revelatory case" of an entrant developing and growing a disruptive platform (Eisenhardt & Graebner, 2007, p. 27) for several reasons. First, previous studies emphasize the role of e-businesses in disrupting traditional brick-and-mortar stores (e.g., Amit & Zott, 2001; Christensen et al., 2018; Christensen & Raynor, 2003; Markides, 2006).

Second, the disruptive innovation criteria hold for our case (Govindarajan & Kopalle, 2006). Relative to established brick-and-mortar retailers, AY offers innovative performance attributes such as all-time and location-independent access to products via digital channels (BOF & McKinsey, 2020; Slywotzky, Christensen, Tedlow, & Carr, 2000; Zott, Amit, & Donlevy, 2000). Further, AY's platform offers a higher level of convenience, as the AY app combines the breadth of a department store with the depth of a specialist (Slywotzky et al., 2000). AY also benefits from a higher margin flexibility, which allows offerings at relatively lower prices (Slywotzky et al., 2000). Moreover, it initially underperformed in terms of established performance attributes because of a disadvantage in delivering products at the right time and in communicating the feel of the products, and face-to-face shopping advice by friends or styling consultants (Slywotzky et al., 2000; Zott et al., 2000). Despite this initial underperformance, AY is continuously excelling at getting the right products at the right place at the right price, which is typical for a disruptive innovation. Further, at its market launch in May 2014, AY targeted young, digitally savvy customers, and offered a small selection of products, thereby limiting the overall profit potential. However, over time, a growing number of brands, an increase in marketing activities, and a continuous improvement of the platform's underlying technology led to higher acceptance amongst a wider customer range (BOF & McKinsey, 2020; Slywotzky et al., 2000). Summarizing the disruptive innovation characteristics, AY's fast growth in turnover, customer base, and brands, combined with its unicorn status, makes it a case of a speedy evolution along the disruptive path (Downes & Nunes, 2014; Trabucchi et al., 2019).

Third, beyond the characteristics of disruptive innovation, AY's platform further comprises multiple distinct sides including complementors (i.e., brands, influencers, developers) and customers. This complex network structure qualifies it for studying how the entrant develops and grows a disruptive multi-sided platform.

Fourth, while AY is a spin-off of an established catalog retailer, the catalog retailer is relatively unaffected by AY's disruptive platform. Further, AY was granted strategic independence from the beginning, and despite enjoying the support of a strong partner in the form of a parent, AY entered the market of online retailing by itself. This is reflective of Christensen's (2006) understanding of a disruptive entrant, which includes any type of firms whose business model underperforms on the attributes valued by the mainstream customers and in relation to the leading incumbent's business model.

### 3.2 | Data collection

To investigate AY's leveraging of the disruptive multi-sided platform, we used a longitudinal research design and collected data from and about AY and its platform sides. Besides data from the platform provider AY, we collected data from four additional platform sides (i.e., complementors: brands, influencers, developers; customers), which we identified through analyzing company reports and press releases (Figure 1).

Following the previous research on disruptive innovation from an entrant's perspective (e.g., Ansari et al., 2016; Snihur et al., 2018) and the research on the evolution of platforms over time (Hein, Schreieck, Wiesche, Böhm, & Krcmar, 2019), we systematically collected archival data in the form of professionally generated content (PGC) (i.e., AY's press releases, TechBlog articles, newspaper articles via LexisNexis). This archival content captures strategic decisions, actions, and opinions of the involved platform sides contemporaneously (Table 1).

Additionally, we programmatically collected user-generated Twitter content (UGC) by using the Twitter application-programming interface (API) to capture the development of topics of (1) the platform provider: AY, (2) the complementors: developers and influencers, and (3) the customers (Table 1). Further, we harvested (re-)actions (i.e., posts, comments, likes) to include the platform participants' intentions, habits, and opinions. In total, we collected 306 documents

**FIGURE 1** Platform & platform sides of AY case [Colour figure can be viewed at wileyonlinelibrary.com]

**TABLE 1** Sources of secondary data

| Classification | Source | Time frame | Search query, found location | Sum of documents | Word count | About You | Customers | Developers | Influencers | Brands |
|---|---|---|---|---|---|---|---|---|---|---|
| Professionally generated content (PGC) | AY press releases | 17.06.2013–15.07.2019 | corporate.aboutyou.de/de/newsroom/press-releases | 53 | 28,593 | x | x | x | x | x |
| | AY Tech Blog | 04.08.2014–01.07.2019 | medium.com/about-developer-blog | 95 | 78,213 | x | | x | | |
| | Lexis Nexis | 01.01.2014–01.07.2019 | "About You", Germany | 158 | 90,938 | x | x | x | x | x |
| | | | **Total** | **306** | **197,744** | | | | | |
| User-generated content (UGC) | Twitter | 01.05.2012–31.05.2019 | @ABOUTYOUDE OR from: ABOUTYOUDE | 10,067 | 150,030 | x | x | x | x | x |
| | | | @Aboutyou_tech OR from: Aboutyou_tech OR @codetalkshh OR from:codetalkshh OR #aboutyoucloud | 7,224 | 118,384 | x | | x | | |
| | | | @Youandidol_de OR from: Youandidol_de OR #AboutyouAwards OR #AboutyouAward | 5,297 | 74,110 | x | | | x | x |
| | | | (@ABOUTYOUDE OR from: ABOUTYOUDE) ((@TarekMueller OR from: TarekMueller OR #tarekmueller) ("about you" OR aboutyou OR otto)) | 533 | 8,233 | x | | | | |
| | | | Total (incl. duplicates) | 23,121 | 350,757 | | | | | |
| | | | **Total** (excl. duplicates) | **14,274** | **223,233** | | | | | |

(197,744 words) of professionally generated content and 14,274 unique Twitter entries (223,233 words) (Table 1).

Thus, we used retrospective and real-time data from diverse archival sources (Eisenhardt & Graebner, 2007). Archival data are appropriate to investigate our research question, as the large quantity of professionally generated content and Twitter entries provide insights about the evolution of the multi-sided disruptive platform. As a result of collecting secondary, archival data, our data are relatively free of recall bias (Barr, Stimpert, & Huff, 1992). Ultimately, we follow Snihur et al. (2018) and argue that an *a priori* selection of respondents and years-long observation of disruptive developments are difficult to achieve.

### 3.3 | Data preparation

Figure 2 shows the data preparation stage, necessary to remove noise and allow the data processing in our subsequent topic modeling analysis.

Two researchers manually cleaned the articles retrieved via LexisNexis according to their relatedness to the topic and the availability of statements regarding strategic choices, actions, and opinions. Then, we built two groups of documents based on whether the content was user-generated (i.e., published by individual representatives of the investigated platform sides) or not. This step allowed us to analyze the documents separately, as we assumed that they differ significantly in quality and content coverage. We performed language filtration in Python by analyzing the text but not using the available metadata, as we noticed a mismatch between the content and its metadata for a significant number of tweets. Furthermore, we added a data aggregation step to cope with the issue that topic modeling techniques do not work well for short tweets (Zhao et al., 2011). In fact, researchers have proposed several methods for aggregating tweets, among others, an aggregation by author (Hong & Davison, 2010), by time (Mehrotra, Sanner, Buntine, & Xie, 2013), and by conversation (Alvarez-Melis & Saveski, 2016). We recognized that aggregating by author or time would combine tweets with different topics. However, tweets of the same thread tended to be topically homogeneous and hence, combining tweets by conversation helped in yielding longer documents without reducing their thematic coherence. We performed steps 6–13 in Figure 2 to reduce the overall vocabulary and improve the data analysis. Hence, we aimed to not mislead the analysis by including different forms of the same word or very low/high-frequency words, which typically do not carry any special meaning.

### 3.4 | Data analysis

We used a two-step approach to analyze the two text corpora as shown in Figure 3. First, we performed topic modeling to reveal latent semantic structures within the corpora. Second, we conducted

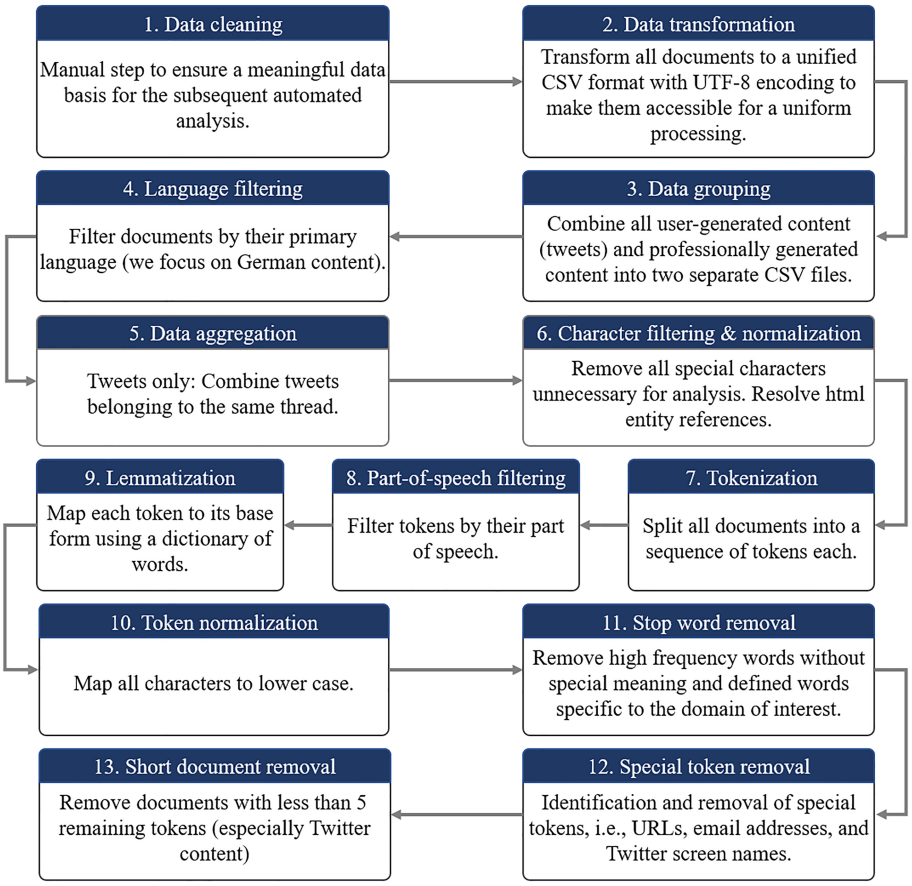


**FIGURE 2** Data preparation process [Colour figure can be viewed at wileyonlinelibrary.com]

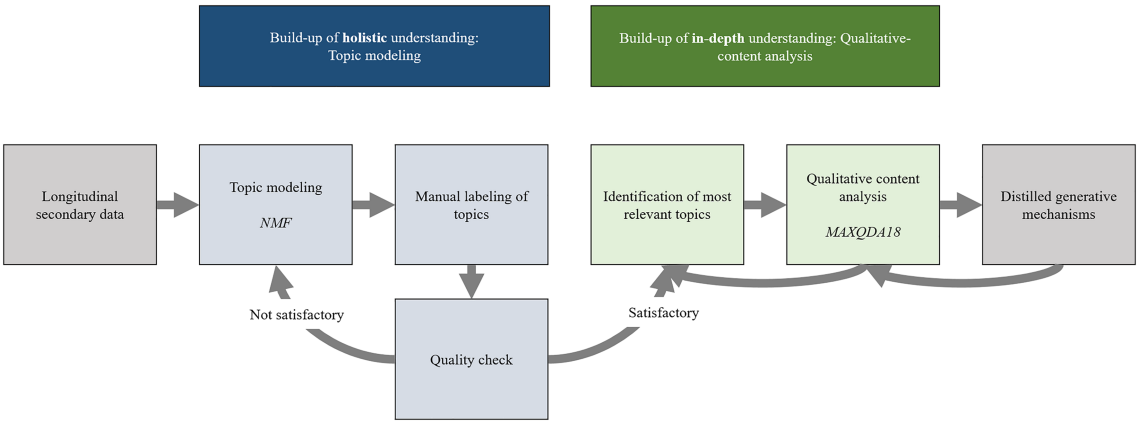


**FIGURE 3** Analysis procedure [Colour figure can be viewed at wileyonlinelibrary.com]

qualitative content analysis of the documents, guided by the result of the identified topics.

### 3.4.1 | Topic modeling

Methodologically, we applied topic modeling as a preceding step to analyze our secondary data. Hence, we follow Schmiedel, Müller, and vom Brocke (2019), who recently proposed topic modeling as a complementary method to qualitative research, so that the drawbacks of qualitative content analysis (resource-intensive, data asphyxiation) can be mitigated. Topic modeling is a text mining technique to discover latent semantic structures in a corpus characterizing each document not by its terms but by the underlying concepts (topics), which are in turn characterized by the corpus terms. This technique allows for discovering topics in texts without having to predefine categorizations and assign documents to them beforehand (Quinn, Monroe, Colaresi, Crespin, & Radev, 2010). Little human intervention is needed so that the results are less affected by researcher subjectivity bias (Debortoli, Müller, Junglas, & vom Brocke, 2016). Thus, this technique helps to identify relevant topics and their related documents and allows for the observation of the evolution of topics through identifying the frequency of related documents over time. Because little knowledge is needed at the beginning of the analysis, topic modeling further enables a gentle entry into new case studies, while profound knowledge is built in iteratively while moving between refining the topic modeling regarding various questions of investigation and the subsequent qualitative content analysis.

Several methods for topic modeling have been proposed, including latent Dirichlet allocation (LDA) (Blei, Ng, & Jordan, 2003) and non-negative matrix factorization (NMF) (Lee & Seung, 1999). None of these methods are consistently superior over the other, as the quality of the resulting topics depends on the coherence measure and the corpus being analyzed, among others (O'Callaghan, Greene, Carthy, & Cunningham, 2015). While several coherence measures have been proposed, the gold standard is still human topic coherence evaluation (Röder, Both, & Hinneburg, 2015).

Thus, we applied LDA and NMF to the two text corpora and manually examined the resulting topics regarding interpretability and topic coherence. As a result, we chose NMF over LDA, as the identified topics were both easier to interpret and more coherent compared to the topics identified by LDA. This can be illustrated by comparing the top 10 words of two corresponding topics identified by NMF and LDA on the same German corpus (described as "professionally generated content" above) for the same number of topics:

- NMF: app, feed, youidol, warenkorb, feeds, outfit, empfehlung, news, nutzer, apps (English: app, feed, youidol, shopping basket, feeds, outfit, recommendation, news, user, apps)
- LDA: passwort, benutzer, datum, idol, feed, app, möglichkeit, abfrage, tabelle, user (English: password, user, date, idol, feed, app, opportunity, query, table, user)

Common to all topic modeling methods is the necessity to provide the number of topics in advance. We performed a k-means cluster analysis on each corpus for a range of 5–50 clusters and calculated the silhouette score for each cluster in order to identify candidates for the number of topics for each corpus. We performed topic modeling for each candidate, rated the resulting topics independently regarding interpretability and coherence, and discussed our assessments until we reached consensus. Finally, we chose the highest-rated candidate.

Labeling the resulting topics is another manual task in the topic modeling process. Hence, for each topic, we analyzed the top ten terms with their relative importance (the weights) to derive a label that captures the semantics of the top terms. We improved the quality of our labeling by including the top five documents per topic that provided further information in the labeling process. The quality of the labeling further improved through the domain knowledge of the researchers. In fact, from September 2017 onwards, we increased our domain knowledge by accessing additional material (e.g., openly accessible recorded interviews, informal interviews with industry

representatives and technology experts, and reviewing white literature) and by iteratively moving between reading the documents and labeling the topics. In effect, a complex timeline, showing the topics over time (Figure 4), has been derived.

### 3.4.2 | Qualitative content analysis

Subsequently, we conducted a qualitative content analysis of the retrieved topics and accompanying documents. This allowed an investigation into the generative mechanisms underlying the entrants' leveraging of the different platform sides along the disruptive path (Miles, Huberman, & Saldaña, 2014). Three independent researchers performed the content analysisusing the qualitative data analysis software MAXQDA18. We used diverging coding for discussions to enhance the reliability of the analysis (Gioia, Corley, & Hamilton, 2013). Additionally, we performed member checks in three informal discussions with AY managers who are knowledgeable about AY's past strategic and platform development decisions, to ensure the trustworthiness of our data (Langley, 2007).

Following grounded theory-based research (Gioia et al., 2013), we began by in-vivo coding, eventually comparing codes for similarities and differences to arrive at first-order concepts. Through further abstraction, we conceptualized second-order themes, which we confronted with theoretical explanations to distill aggregate dimensions (Gioia et al., 2013). We iteratively cycled between the topic modeling results, the data, themes, concepts, dimensions, and the related literature to check whether we had identified new concepts. This iterative analysis procedure culminated in a data structure (see abbreviated version, Figure 5).

Simultaneous to the coding, we developed a thick narrative of the case to understand the creation, development, and growth of AY's platform. We focused our inquiry on relevant strategic actions performed by the platform sides involved and surfaced how AY was leveraging the platform sides to achieve disruption. We visualized this narrative in a process model and defined temporal brackets based on our identified dimensions, in order to structure the narrative and aid in our sensemaking (Langley, 1999).

## 4 | FINDINGS

Our data suggest that AY developed its platform in three phases bridged by two transition stages. While the interactions with the multiple sides were similar within each stage, they differed between the stages. Overall, the interaction between the platform and its multiple sides changed throughout the phases, enabling the platform to move from the inception, to the growth toward market disruption (see Figure 6). (1) The first phase was characterized by the inception of the open-commerce model. During this phase, AY was orchestrating external knowledge and was closely affiliating with its parent company. This phase was followed by the identification of value beyond the current market category. (2) In a second phase, which overlapped with the first phase, AY was growing into a fashion-discovery platform, exploiting knowledge, differentiating from the parent and other dominant competitors, and aiming to build legitimacy for a new market category. Based on the identification of value beyond the current platform, the second phase overlapped with the third. (3) Indeed, in a third phase, AY was growing into AY Cloud. Thereby, AY was exploiting the platform's underlying IT architecture, while benefitting from its previously established distinctiveness and the parent's existing network of potential customers.

We present our findings and related background information on how AY leverages the multiple platform sides.

### 4.1 | 2014–2017: Inception of open-commerce model—Orchestrating external knowledge and close affiliation to parent company

In 2014, AY started as an open commerce platform as part of Otto's project named *Collins*, claiming to "*make shopping for the young*

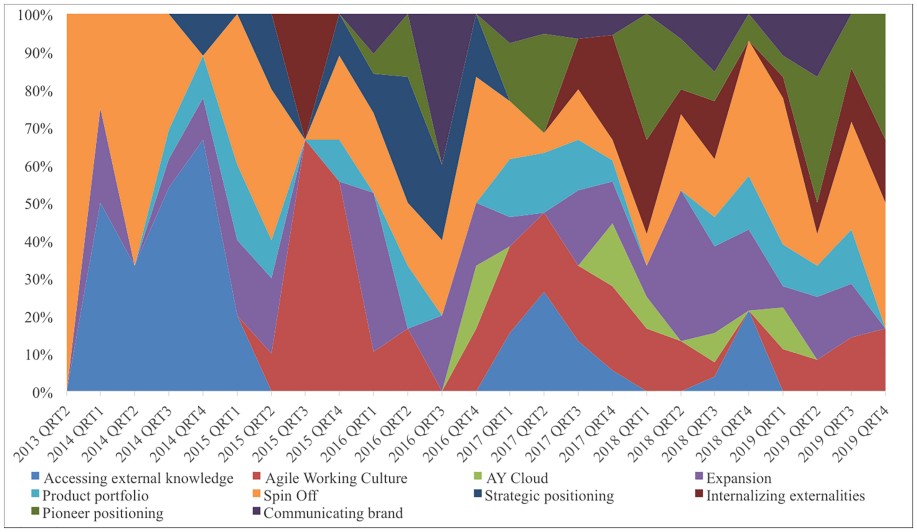


**FIGURE 4** Topics over time [Colour figure can be viewed at wileyonlinelibrary.com]

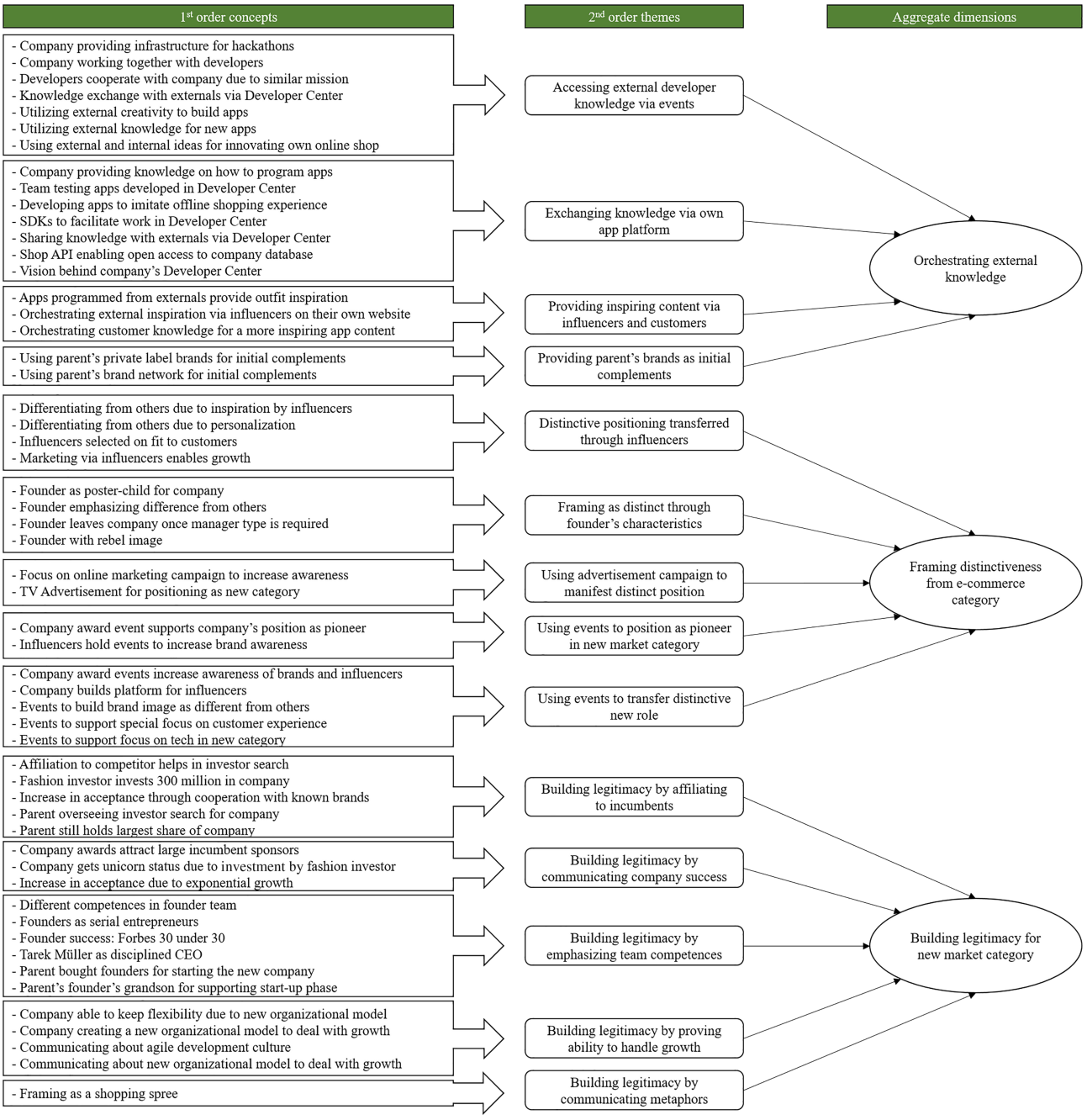


**FIGURE 5** Data structure (in parts) [Colour figure can be viewed at wileyonlinelibrary.com]

*generation as individual and inspiring as their digital world has long been*" (PGC 187).

Value was created by orchestrating external complementor knowledge (i.e., developers, brands, influencers) to develop apps, provide products, show inspiring outfits, and create content. For the initial complement provision and to showcase the idea of its online fashion platform, AY offered Collins' and Otto's private label and third-party brands. Furthermore, influencers (i.e., social media stars and TV celebrities) provided outfit inspirations that were purchasable via AY's online shop. The value was delivered through AY's online shop comprising a variety of the complementors' apps. AY captured the value from customer sales by earning a commission for enabling the transaction, while the remaining revenue was captured by the brands. Influencers and developers earned a commission through the sales generated by their outfit inspirations and apps, respectively.

A cornerstone of the open-commerce model was the Developer Center, AY's app platform. This platform provided an open working space accessible via an API with software development kits (SDKs) that developers and brands could use to program apps. To enable the speedy adoption by external developers, AY's developers shared their knowledge on how to program apps using AY's SDKs and referred to the open shop API via blog articles and partly deposited GitHub

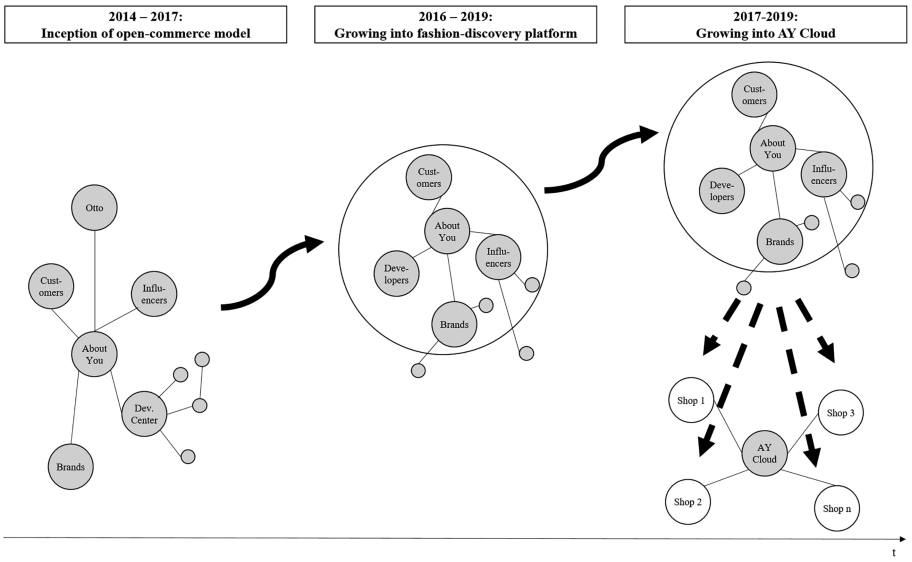


**FIGURE 6** AY's platform development and growth

projects. AY further propelled the build-up of its online fashion platform by organizing hackathons open to internal and external developers. At these hackathons, developers were rewarded for the best app ideas, which were then integrated into AY's online shop. To establish its position as a tech company, AY aimed to create close relationships with developers via its own Code.talks Conference, offering a place for developers to meet and discuss the latest IT trends.

Another cornerstone of the open-commerce model was the idea to offer a personalized shopping experience by re-envisioning a personal stylist. To this end, AY opened its platform for influencers via the You&Idol website, integrating the social media feed of influencers and providing customers with outfit suggestions from these influencers. The You&Idol website shared its backend with AY's online shop, thereby enabling a seamless purchase of influencers' outfits. To create more individualized content, third-party apps enabled customers to develop a personal feed that filtered only the most relevant information (i.e., brands, influencers, and apps) based on the customers' preferences.

The reason for the early opening of the platform to app developers and influencers was based on the recognition that AY's internal capabilities would not suffice to shape the new generation of e-commerce. Benjamin Otto, AY's CEO, stated in September 2014:

> *With Collins, we have set out to create a completely new e-commerce business model. We offer people with creative shopping ideas - including content suppliers, developers, brand owners, and retailers - a platform to shape new and inspirational forms of fashion and online commerce for the digital generation.* (PGC 213)

However, the open-commerce model was a new category in the e-commerce market, in which AY and its customers, complementors, investors, and other market actors lacked knowledge. Thus, AY needed to build trust for market acceptance. For complementors (brands, influencers) and customers, this was achieved by stressing the close affiliation with Otto. The well-known retail incumbent provided the entrant with a safe haven. Otto provided AY with the necessary early access to Otto's large network of brands and other suppliers. Hence, during this initial phase, AY predominately listed brands from Otto's network on its digital platform. This initial access to brands and products paved the way to attract boutique brands beyond the Otto network. Furthermore, AY benefitted from its close affiliation with its parent company, as Otto supported the entrant with financial resources needed to develop and grow its digital platform.

To develop brand awareness among its customers, AY launched a TV advertisement campaign in 2015 that was co-sponsored by Otto and co-developed by customers via "creative community," another app in AY's online shop. As a result, brand recognition increased among the target group (33% among 20–40-year-olds in Germany in 2015) and AY achieved a high growth in revenue (double-digit million amount in 2014). Additionally, new KPIs that were specific to AY's open-commerce model (i.e., customer engagement, average time spent on the online shop, and revisits to the site) stressed AY's position as more of an online inspiration shopping platform than an e-commerce provider. The CMO, Tarek Müller, explained AY's success in September 2014:

> *With special apps that are integrated on the site, the creators achieve a highly individualized and personalized approach to the target groups. Regarding our apps, 41 percent more viewers become buyers, the shopping baskets are 16 percent higher, and the length of stay is more than twice as long [as expected]. These are figures that others dream of.* (PGC 184)

For investors and other market actors, AY created acceptance for its new model by winning several awards (*start-up of the year* [2014], *customer-innovation award* [2014], *best pure player* [2015], *best of show*

*award* [2015)]. One newspaper article in June 2015 summarizes the increased acceptance for AY in the market:

> *Since its launch in 2014, Collins has taken the fashion world a long way towards the future: the award-winning company has democratized e-commerce with an open technology and business platform for retailers, brands, and creative minds such as app developers.* (PGC 189)

## 4.2 | Mid-2016: Identifying value beyond current market category

Following the inception of its open-commerce model, AY identified a change in customer behavior from desktop to mobile usage. In 2016, more than 65% of AY's online traffic came from AY's smartphone app. Further, the entrant observed similar developments in the social media and entertainment industry, where platforms like Instagram and Spotify showed that digital discovery takes place on mobile devices. As AY's management aimed for a three-digit million revenue in 2017, AY needed to gain market share and realize more transactions via its platform. Thus, the entrant decided to focus on inspiring and personal content on mobile devices, and to position itself as an independent fashion-discovery company. This change was underlined by AY, which was no longer affiliating itself with project *Collins*. In contrast to the previous phase, the entrant began to focus on establishing its own brand through attracting brands from beyond the Otto network and communicating autonomously without "piggybacking" on Otto's established and strong market position. Hence, AY began to enforce a growing independence from its parent company.

However, the development of the open-commerce model in fashion discovery was not easy, as the category was unknown and still had to be developed. This signified a shift towards enabling a seamless integration of user-generated content across all mobile devices to become a community for fashion discovery. This means that the customer took a more prominent role and that developer knowledge became less relevant.

As the CTO stated in June 2016:

> *With the development of our open-commerce model, we are creating numerous incentives for our users to use [our platform] on a regular basis. User-generated content means lasting inspiration, which we consistently personalize within our fashion platform. This enables us to occupy a gap in a market with enormous potential.* (PGC 210)

## 4.3 | 2016–2019: Growing into fashion-discovery platform—Creating a new market category through distinctiveness framing and legitimacy building

Following its strategic shift, AY's CEO stated at a conference in 2017: "*We want to digitalize the Saturday shopping stroll*" (PGC 100). Thus, value delivery focused on inspiring, personalized content and the creation of a mobile shopping experience for the customer. In fact, this not only enabled a digitalization of the Saturday stroll but also made digital strolling possible at any time. The value creation of the platform changed as customers now increasingly created their own content, providing outfit ideas, pictures, and favorite product lists, and could follow each other on AY's app. From mid-2017 onwards, the interaction with influencers and developers altered significantly, with AY closing its Developer Center and hiring external developers and influencers. Furthermore, AY's value-capturing mechanisms remained commission-based, but the entrant started to buy-in top-running products from brands while remaining open for niche brands and products.

Compared with the previous phase, a cornerstone of AY's new model now involved the close cooperation with influencers. In fact, AY positioned itself as an influencer platform and a social media pioneer. This position was strengthened through AY events—for example, the AY Awards that acknowledged the most popular influencers, which was broadcasted on TV and social media platforms (Instagram, YouTube, Twitter, and Facebook). In 2017, the AY Awards reached almost three million interactions on social media, while the 2018 AY Awards reached up to 490 million interactions on social media and 340,000 on TV. These events were used to further increase the influencers' visibility and to manifest their pioneering role in the new category of fashion discovery. As Tarek Müller mentioned in 2017:

> *The successful interaction of the ABOUT YOU brand with major German influencers is an important component of our corporate DNA. With the ABOUT YOU Awards we consistently continue our way to support individual styles and personalities, both online and offline.* (PGC 256)

In 2017, AY internalized the You&Idol website. In 2018, the entrant began to recruit its own influencers for outfit shootings, events, and campaigns via social media. Further, AY began to cooperate with well-known influencers (e.g., Lena Gercke) to develop its own capsules (fashion items designed by influencers). Thus, AY further developed their stock of own brands and benefitted from the influencer's positive image, while the influencer benefitted from AY's branding, design, and marketing expertise. Simultaneously, AY migrated the content from its Developer Center to the AY TechBlog, AY's own online blog covering IT-relevant topics. The entrant also began to increasingly recruit its own developers, effectively internalizing the formerly external knowledge, closing its once open-commerce model. Despite this internalization of external developers, an AY employee revealed in a blog entry that "*thanks to methods of agile software development, we can live our plans—even at a certain size, to be able to quickly try out new ideas—in everyday working life*" (PGC 24).AY yet again positioned itself as a pioneer in the new market category of fashion discovery. As such, the entrant had to build trust and awareness for its new model. AY began to emphasize the competences within its founding team and its ability to handle growth, proven via its successes in the previous years. Furthermore, the entrant stressed its similarity with

another successful e-commerce company, Zalando, and began its cooperation for capsule collections with well-known fashion brands and influencers (e.g., Nike, Stephanie Giesinger, and Disney). In 2018, the entrant also began to search for a new investor to support its expansion to other European countries and the development of its IT infrastructure. In a newspaper article, Otto revealed: "

> *About You should continue to grow with a strategic partner. This could be a retail company or an investor with financial market experience; [this] partner should help with the international expansion*" (PGC 172).

Hence, the investor search was supervised by AY's parent company, Otto. In July 2018, Otto and AY officially announced an investment of €300 million from Heartland A/S, the owner of well-known fashion brands and retail chains (e.g., Vero Moda). The new investment increased AY's market evaluation to US$1 billion, making the entrant a unicorn. Ultimately, this manifested AY's position in the new market category.

### 4.4 | End 2017: Identifying value beyond current platform

In 2017, another shift in AY's strategic positioning became visible. While this did not change AY's core business, the entrant began to develop a second platform model. In its newly founded TechBlog, AY strongly positioned itself as a tech company; it focused on knowledge sharing and agile working methods. Moreover, the entrant began to increasingly advertise developer recruitment on Twitter and its TechBlog. These activities culminated in the growth of AY's internal IT department to 130 developers by the end of 2017.

Further, the communication about agile project management and culture made AY's inner workings transparent. Externals could now read about issues arising between developers and product owners, and about best-practice stories on using agile methods. By the end of 2017, topics in developer communication shifted from app development, user experience, and user interface toward artificial intelligence and data security. Over time, AY began to increasingly communicate the value of the platform's underlying IT infrastructure. In November 2017, AY's CTO explained:

> *The feedback on our platform in recent years has been extremely positive and we have often been asked whether it could be licensed.* (PGC 162)

### 4.5 | 2017–2019: Growing into AY Cloud—Exploiting knowledge and multiplying current platform model

Hence, responding to these external requests, AY launched its self-developed AY Cloud named Backbone in November 2017. "*The company is thus opening up another business field: e-commerce technology as a service*" (PGC 147). This development marks the beginning of a third distinct phase in AY's evolution: the exploitation of its IT knowledge.

Value is delivered by Backbone via AY's API-based e-commerce infrastructure, enabling B2B customers to develop their own e-commerce solutions. Value is created offering AY's reliable, highly flexible, and adaptive IT architecture. The system is based on Amazon Web Services (AWS). To enable an easy adoption of its Cloud, AY exploits its IT knowledge through providing user manuals, developer guides, and the REST API AY academy via its own Resource Center. Value is captured through a license paid by AY's B2B customers. Additionally, AY uses its B2B customer data to continuously optimize Backbone. Further critical knowledge is acquired for specialized IT features that were not yet part of the AY fashion discovery model.

While AY had detached itself from its parent company Otto in the development of the fashion discovery platform, the third phase showed a revival and a closer affiliation between AY and Otto. In fact, AY Cloud recruited its first customers from Otto's network and emphasized this as "*a great success for the young cloud provider that the first customer can be brought on board after only three months in the new business field*" (PGC 299).

Overall, AY positioned its new Cloud business model again as a new-to-the-industry e-commerce software solution compared to a legacy on-premise e-commerce infrastructure. AY Cloud "*is the first in the European market to design online commerce according to the logic of an API-first approach*" (PGC 262). To emphasize this distinctiveness claim, AY stressed its internal innovativeness, flexibility, and speed. The entrant explained that the learnings generated via the development of AY's fashion platform would be used directly to improve the AY Cloud itself. AY's CTO, Sebastian Betz, stressed this by claiming:

> *About You Cloud means a win-win situation: We are constantly improving our solution because every step forward also contributes to our company's success. The customers of About You Cloud profit from these improvements, just as we profit from every impulse from outside.* (PGC 262)

## 5 | DISCUSSION AND CONTRIBUTION

We started this paper by asking how an entrant strategically leverages relationships with its multiple platform sides to develop and grow toward disruption. Our findings on AY's platform evolution generated several insights, based on which we derive interactional patterns.

Our findings suggest that AY developed and grew its platform along three phases with underlying dynamics driving the platform's evolution. In the first phase, the entrant benefitted from a strong yet unaffected established partner (i.e., parent organization), which provided the critical resources and complementor relationships during the inception phase of its marketplace platform and in the third phase, again, for its technology platform. In a second phase, the entrant strategically activated one platform side as a force multiplier, which was

attracting additional customers, connecting the different complementors, and emphasizing the entrant's distinctiveness. Across all phases, the entrant leveraged external knowledge and resources from complementors to develop and grow its platform. Synthesizing these dynamics into interactional patterns, we propose the role of "guarded inception," "activating force multipliers," and "building on others" to explain how an entrant can develop and grow a disruptive multi-sided platform by strategically leveraging its different sides. We thus propose that the entrant is essentially growing with others toward disruption. We propose a process model, which integrates these three interactional patterns. Figure 7 highlights the key process elements related to the entrant growing with others. The model presents how leveraging of relationships with multiple platform sides propels the development and growth of the disruptive platform.

In what follows, we discuss the identified interactional patterns in chronological order.

## 5.1 | Guarded inception: Leveraging relationship with unaffected partner to overcome the chicken-and-egg problem

While a platform's business model has repeatedly been stressed as a vehicle for disruption (e.g., Cozzolino et al., 2018; Downes & Nunes, 2014; Trabucchi et al., 2019), the entrant faces several challenges. These challenges largely relate to the third lever proposed by Cusumano and Gawer (2002) and Gawer and Cusumano (2015) for platform leadership, which refers to the relationship between platform providers and complementors. Specifically, these challenges include the chicken-and-egg problem (Caillaud & Jullien, 2003), incentivizing complementors and customers to engage with the platform (Ozalp et al., 2018), and either securing engagement from an existing value network, which the entrant stands to disrupt (Ansari et al., 2016), or building a new value network, which requires a significant resource investment (Christensen et al., 2018). In this regard, the platform literature proposes to build in-house complements during the inception phase to provide initial value to interested participants in order to circumvent the chicken-and-egg problem, and also incentivize complementors to join (Cennamo, 2018; Hagiu & Spulber, 2013; Schilling, 2002). However, this strategy presupposes that entrants developing disruptive platforms have the necessary means to provide such in-house complements. This stands in contrast to arguments about the entrant's resource scarcity and the lack of industry knowledge (Ansari et al., 2016; Christensen et al., 2018; Snihur et al., 2018).

Our case shows how an entrant could develop a platform and overcome the chicken-and-egg problem through close relationships with strong, yet unaffected partners. In our case, the entrant was created as a spin-off from an established catalog retailer. Hence, the "guarded inception" was initially predominately realized through the close relationship between the entrant and the parent, whereas the entrant leveraged its parent's network of relevant complementors, industry knowledge, and resources to offer its own complements. Furthermore, the entrant attracted unaffected venture capitalists, who provided not only financial resources but also guidance related to business model development and relevant network contacts. The close affiliation with unaffected, yet strong partners (i.e. parent, venture capitalists) allowed the entrant to benefit from the "guarded inception" and make use of external resources, relationships, and the legitimacy to quickly overcome the chicken-and-egg problem.

Yet, the entrant's parent company could only provide access to relevant complementors that were part of the parent's domain (i.e., customers and brands). Hence, the domain of the unaffected

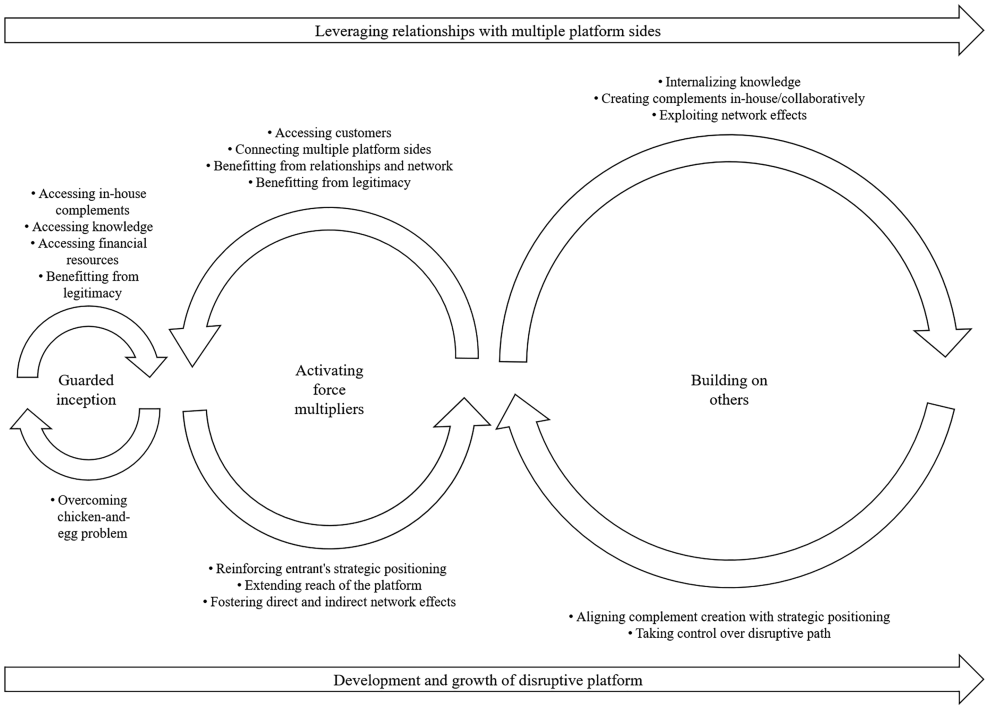


**FIGURE 7** Process model

partner influences the benefits a "guarded inception" can provide to the entrant. Consequently, the close affiliation to its parent allowed the entrant to circumvent one chicken-and-egg problem but could not provide support for all platform sides (i.e., lack of IT capabilities).

Elaborating on the specificities of the entrant–parent relationship in this regard, we refer to the literature on disruptive innovation, which argues for the creation of spin-offs as one strategy to respond to disruptive threats. Indeed, creating a spin-off allows incumbents to successfully circumvent resource and routine rigidities while benefitting from the spin-off's new values (Christensen et al., 2018; Gilbert, 2005). To extend this understanding, we show that the spin-off also benefitted by leveraging the incumbent's resources and relationships to quickly develop and grow the platform. Yet, in our case, the entrant's e-commerce platform did not disrupt but sustained the parent's business model (catalog retailing), which allowed for the "guarded inception" of the entrant's platform. As such, the "guarded inception" requires a strong partner unaffected by disruption.

In conclusion, the close relationships between an entrant and strong partners unaffected by disruption allowed for quick platform growth in its early stages (Cusumano & Gawer, 2002). In fact, the entrant benefitted from this interactional pattern twice: during the inception phase of the entrant's first marketplace platform and its technology platform. Once the chicken-and-egg problem was resolved and the entrant was gaining legitimacy, the entrant positioned itself as a stand-alone entity and began to openly communicate its intention to establish a new market category (Navis & Glynn, 2010). As such, we propose "guarded inception" as a relevant interactional pattern to leverage the relationships with powerful and disruption-unaffected partners during the early phases.

## 5.2 | Activating force multipliers: Leveraging relationships with side-spanning platform participants

To steer a multi-sided platform from inception to growth, entrants are required to dynamically leverage the different platform sides (Gawer & Cusumano, 2008; Trabucchi et al., 2019). The previous platform literature stresses the relevance of relationships with externals, emphasizing the need to "influence partners' decisions affecting how well everything works together" (Cusumano & Gawer, 2002, p. 56). However, the sides of the platform have varying incentives to create value, which is why they are not necessarily developing in the same direction. While previous research emphasizes specific framing strategies to provide direction and legitimacy, disruptive entrants may lack this legitimacy and may face the problem of needing to adopt known categories to succeed (Ansari et al., 2016; Garud et al., 2014; Navis & Glynn, 2010). In this regard, Snihur et al. (2018) show how Salesforce disrupted Siebel by benefitting from external actors working as "force multipliers" that supported the entrant's disruptive path by reacting positively to the disruptor's strong rhetoric. This is in line with Zhao et al. (2017), who argue for the role of force multipliers being the mediator between a firm's framing and the corresponding performance effects.

We build on this understanding and show how the entrant was strategically "activating force multipliers," spanning all platform sides and strategically propelling the platform's evolution. Indeed, our findings show that the entrant employed social media influencers as force multipliers, thereby leveraging active platform participants for conventional advertising during the inception phase. In fact, well-known celebrities were responsible for communicating the entrant's messages to their audiences via their own channels. Thereby, the entrant took advantage of the influencer's media reach and identity attributes, benefitted from spillover effects regarding its own brand attributes, and manifested its position as an inspirational fashion platform. As these force multipliers were already accepted by the entrant's target audience (i.e., young fashion-savvy people), the entrant could speedily build legitimacy in the target market by making the unfamiliar appear more familiar, thereby reducing uncertainty for first-time customers (Garud et al., 2014; Navis & Glynn, 2010).

Thus, our research confirms Cusumano and Gawer (2002), arguing for the strategic lever of actively managing relationships with externals when developing a platform. Moreover, we extend Snihur et al.'s (2018) notion of force multipliers, being originally conceptualized as external stakeholders who react to and multiply an entrant's disruptive framing within the ecosystem. Indeed, our data suggest that the entrant actively leveraged force multipliers (i.e., through contractual agreements) to purposefully attract customers and other complementors to the platform, connect them, and enforce the entrant's strategic positioning. Hence, the entrant strategically leveraged these externals to its advantage to start a virtuous threefold cycle, thereby creating positive network effects (Katz & Shapiro, 1985): force multipliers attracted more customers, which, in turn, attracted brands to offer or (co-)create further complements. Moreover, as the value of the platform grows through the increase in participant numbers, developers were likewise attracted to join the platform to develop app complements.

Consequently, we extend Gawer and Cusumano (2008), who argue for either the installed base or third-party complements as a necessary condition for platform growth. In light of our data from a disruptive platform, we propose force multipliers as a third group, which fosters positive network effects and superior value creation, ultimately spurring the development and growth of the entrant's disruptive platform. Thus, we propose that a disruptive platform evolved through strategically "activating force multipliers," spanning across platform sides to accelerate platform development from the niche to mainstream markets.

## 5.3 | Building on others: Leveraging relationships with external complementors to overcome lack of capabilities

While research in disruptive contexts has contributed to an understanding of the characteristics of disruptive platforms (Downes & Nunes, 2014; Trabucchi et al., 2019) and entrant's framing strategies (Ansari et al., 2016; Snihur et al., 2018), we still find gaps in the

research on how the entrant leverages its complementors over time. In fact, current scholarly debates discuss open versus closed platforms and their temporal evolution (Eisenmann et al., 2009; Gawer & Cusumano, 2015; Kende, 1998; Parker & Van Alstyne, 2018), while neglecting the specificities of disruptive dynamics. Hence, we contribute to this discussion by focusing on an entrant, who is steering a multi-sided platform.

To this end, we extend Cennamo and Santalo (2013) to a disruptive context and confirm Ozalp et al. (2018), when showing that the entrant initially designed an open platform, providing a supportive environment to engage external complementors (i.e., developers and brands). In fact, as the parent could not support the entrant with relevant IT capabilities or relationships, the entrant leveraged its founders' relationships with IT developers, incentivized engagement by opening the platform for apps' market competition, and provided relevant development knowledge and first in-house complements. Thereby, the entrant increased the viability of the platform, making a collaboration with externals attractive due to its direct network effects (Katz & Shapiro, 1985) and reduced uncertainty for potential complementors (Cennamo, 2018; Hagiu & Spulber, 2013).

Furthermore, we extend the arguments from Parker and Van Alstyne (2018) about the role of "orchestrators of external knowledge" to the specific dynamics of disruptive innovations, when presenting how the entrant was able to quickly grow its platform along the disruptive trajectory. Consequently, we suggest that the entrant was "building on others."

Our data show that the entrant was initially strongly dependent on external knowledge, as its internal and its parent's capabilities were insufficient to develop its own complements. Hence, whereas the entrant leveraged the relationships with external complementors during the inception and early growth phase, over time, an increasing share of relevant knowledge was internalized. In fact, having reached a critical mass of customers, the entrant eventually closed its platform to third-party influencers and brands, limiting their options through granting exclusivity rights (Cennamo & Santalo, 2013). Thus, the entrant actively refrained from the further exploration of potential third-party complements, neglecting potential network effects. From then on, the entrant built on the incorporated complements and internalized knowledge, creating new complements in-house or in exclusive collaborations with customers, brands, and influencers.

Hence, by referring to Katz and Shapiro (1985), we propose an abstract pattern concerning complement creation and the exploitation of network effects in a disruptive context: initially, the entrant faced a scarcity of resources and knowledge in its target domain. By opening its platform and accessing capabilities of external complementors, the entrant overcame this scarcity. However, once the entrant realized that a sufficient level of capabilities, complements, and customers had been reached, these platform sides were closed to ensure strategic alignment to remain on the disruptive path.

Thus, we extend current discussions about in-house and external complement creation in the context of disruptive platforms. In fact, while previous research emphasizes that an opening for third-party complements enhances the value of a platform by increasing the quality level of complements in the growth stage and benefitting from positive network effects (Cennamo, 2018; Hagiu & Spulber, 2013), we propose a reverse development over time. Based on our empirical findings, we suggest that a disruptive platform initially draws on capabilities from external complementors and later uses the strategic alignment of in-house complement creation to take control over the disruptive path.

## 6 | CONCLUSION, IMPLICATIONS, AND LIMITATIONS

We studied the development and growth of a multi-sided disruptive platform to reveal interactional patterns of how an entrant leverages relationships with its platform sides to evolve towards disruption. Our findings suggest that the entrant is strategically maneuvering the platform's development and growth by taking advantage of three levers: (1) "guarded inception," which is the affiliation with a knowledgeable partner unaffected by disruption to circumvent the internal limitations and quickly overcome the chicken-and-egg problem; and (2) "activating force multipliers," which is the strategic orchestration of complementors being contractually tied to the entrant and working to extend the entrant's value network. Enabled by these two levers, the entrant was (3) "building on others" to develop the platform along a disruptive path while circumventing internal limitations and external resistance. Synthesizing these points, we show evidence of how an entrant is growing with others to evolve its multi-sided disruptive platform along a disruptive path. From a theoretical perspective, this paper contributes to the literature in three ways.

First, the concept of "guarded inception" provides an explanation of how entrants can benefit from a strong affiliation with a partner unaffected by disruption. Being spun-off from its parent, the studied entrant could build upon its parent's relevant domain knowledge and complementor relationships. Thus, the entrant benefitted from the parent's assets and could quickly overcome the chicken-and-egg problem (Caillaud & Jullien, 2003). Hence, we contribute to literature on platforms by showing how first complements and access to customers were quickly enabled by the "guarded inception." Further, we extend the debates on disruptive innovation about the disruptor's dilemma (Ansari et al., 2016). In fact, the "guarded inception" with a partner unaffected by disruption equips entrants with the necessary resources and relationships to develop and grow a multi-sided platform along a disruptive path. As we developed the concept of "guarded inception" from a case in which the entrant–parent relationship was of sustaining nature, it would be interesting to see whether and how the "guarded inception" would take place in more competitive entrant–parent relationships. Additionally, the "type" of entrant might make a difference as to the evolution of the platform over time. For instance, if the entrant is already an established incumbent from another industry (e.g., Google) that enters into a new market, the entrant may not experience the liability of smallness/newness that is associated with being an entrant (e.g., Ansari et al., 2016). Likewise, an entrant, in the form of a start-up, may be able to perform a similar platform evolution

as witnessed in our case. By, for instance, partnering with well-endowed venture capital partners from the beginning, the entrant could similarly benefit from a "guarded inception." Further research could thus explore how the entrant's characteristics and previous experiences may shape the development and growth of disruptive platforms over time, and how the role of the entrant's business model influences its partner to elaborate on the relativity inherent in the concept of "guarded inception."

Second, we contribute by showing how a disruptive entrant was "activating force multipliers." Through employing influencers and using their strong connection to potential customers and complementors, the entrant extended its network and strategically positioned its platform. Hence, we extend Snihur et al.'s (2018) concept of "force multipliers" by arguing that the entrant actively employed and steered side-spanning "force multipliers." This strategic steering enabled the entrant to gain legitimacy and acceptance among customers and complementors and thereby increased the reach of the multi-sided platform. Consequently, the proposed concept of "activating force multipliers" adds to arguments within the literature on the merits of encouraging complementors to contribute to platform growth (Gawer & Cusumano, 2008). Future research could explore the relevance, characteristics, and strategic considerations of "activating force multipliers" to account for the decisive role of this lever in propelling disruptive platform evolution.

Third, we contribute by presenting how an entrant orchestrated a network of complementors and customers, thereby "building on others" to overcome own knowledge and resource scarcity, ultimately taking advantage of direct and indirect network effects. Thus, we confirm the concept of opening platforms to grow the platform, which has been discussed in previous platform research (Gawer & Cusumano, 2008; Parker & Van Alstyne, 2018). Nevertheless, because of the disruptive context, we observed a reverse dynamic compared with the extant literature that proposes to initially keep the platform closed and later open it to allow for high-quality third-party complements (Cennamo, 2018; Hagiu & Spulber, 2013): The entrant first opened the platform to attract complementors, and then closed the platform when sufficient knowledge and complements were built up to keep control over the disruptive path. In this regard, further research could explore how open versus closed platforms shape the dynamics underlying the entrant's disruptive path.

In addition to our theoretical contributions, we further propose the role of topic modeling as an insightful first step to tackle the complexity inherent to studies investigating the development and growth of multi-sided platforms. We used topic modeling as a preceding step to an in-depth qualitative content analysis, as it allows for a gentle entry into the case, gives first insights into the case complexity, and surfaces relevant dynamics. Yet, while topic modeling has been proposed as a valuable addition to qualitative content analysis (Schmiedel, Müller, & vom Brocke, 2019), the quality of the results depends on the characteristics of the documents in question, that is, the number of documents, their respective length, and linguistic quality (Debortoli et al., 2016). For instance, tweets are typically short, use informal language, and often consist of misspelled words (Mehrotra et al., 2013). To mitigate this limitation, we applied proper preprocessing steps—for example, combining tweets belonging to the same thread to yield longer documents (Alvarez-Melis & Saveski, 2016). In addition, topic modeling provided us with a first view on the landscape of relevant dynamics that shaped the entrant's platform model. Yet, we used only the top topic with the highest weight for each document for further investigations. We did this simplification, as 80% of the documents in the given corpus exhibited a dominant topic with a weight of more than three times larger than each of the remaining topics. Yet, more than just one topic per document may need to be considered. Further research could explore the interdependency between the number of topics and the corpora to provide guidance for topic modeling as a precedent step in qualitative content analysis.

From our study, we also distill relevant practical implications for entrepreneurs creating a disruptive platform or following a disruptive path, as we show possible strategic mechanisms to overcome the internal limitations of newly founded ventures as well as external resistances because of the disruptive nature of the offering. In fact, through "building on others" who are unaffected by disruption, entrants are able to maneuver along the disruptive path. Additionally, strategically "activating force multipliers" can propel the entrant forward on its trajectory. Furthermore, our study may inform managers within established firms on how a "guarded inception" can quickly develop and grow a disruptive platform. As such, managers can use a parent–spin-off relationship to exchange resources and relationships to overcome a critical first challenge in platform development.

While we only study one case of an entrant with a disruptive platform in the retail-fashion industry in Germany, we aimed to provide detailed descriptions and thick narratives to enable readers to assess the appropriateness for their own context (Miles et al., 2014). In addition, by translating the described dynamics into more abstract themes, we aim to allow for a transferability to more general cases (Langley, 1999). By combining our findings with previous studies that identified similar processual patterns, we suggest a transferability across contexts (Ansari et al., 2016; Snihur et al., 2018; Trabucchi et al., 2019; Trabucchi & Buganza, 2020). In fact, the interdependencies between the identified generative mechanisms in our study and in previous studies may generate relevant insights that can develop the theory of disruption.

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