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Firm responses to disruptive innovations

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Chapter 5: Discussion of dissertation

“We Are The Champions”

- *Queen*

I've paid my dues
Time after time
I've done my sentence
But committed no crime
And bad mistakes
I've made a few
I've had my share of sand kicked in my face
But I've come through

We are the champions, my friends,
And we'll keep on fighting 'til the end
We are the champions (2x)
No time for losers
'Cause we are the champions of the world

I've taken my bows
And my curtain calls
You brought me fame and fortune, and everything that goes with it
I thank you all
But it's been no bed of roses,
No pleasure cruise
I consider it a challenge before the whole human race,
And I ain't gonna lose

We are the champions, my friends,
And we'll keep on fighting 'til the end
We are the champions (2x)
No time for losers
'Cause we are the champions of the world

(..)

(END)

5. Discussion of the Dissertation

Coping with the challenges of disruptive innovations is essential to ensure the viability of firms in the long-term. While the challenges of coping with disruptiveness have inspired researchers to examine entrant-incumbent dynamics during disruption, numerous exemptions in research and in managerial practice indicate the need to explore firms' responses to disruptive innovations in more depth and breadth. In this dissertation, rather than focusing on how firms might be able to timely recognize and address disruptions (i.e. Christensen, 1997; Markides, 2006; Nagy et al., 2016; King & Baartagtokh, 2015), we focused on what firms can actually *do* when it recognizes, or is confronted with the inimical consequences of (the same) disruption.

The main aim of this dissertation was to open up the "black box" of firm responses to disruptive innovations in order to address the question how and why firms (come to) respond differently to the same disruptive innovations. To address this objective, three empirical studies have been conducted within the same disruptive research context: digitization of music in the Dutch music industry. Next, we will first discuss how the findings of the three studies contribute to the general research aim. Second, we will discuss the theoretical contributions made by each of the papers. Third, we discuss avenues for future research and the managerial and policy implications. We will conclude with a general conclusion.

5.1 Theoretical Contribution to the General Research Objective

Addressing firm responses to disruptive innovations in three different, empirical studies ironically indicate that when confronted with disruptive innovation, even the firms most affected by disruption are able to respond to the challenges of disruption: opportunity recognition during disruption plays a decisive factor in firms' adaptability during disruption (cf. Baron, 2006; March & Shapira, 1992; Shepherd, McMullen & Ocasio, 2016), that is

separate from factors discussed in extant disruption literature, such as prior knowledge and routines, information access, cognition, abilities and response (i.e. Ansari & Krop, 2012; Christensen, 1997; Eggers & Kaplan, 2009).

In Chapter 2 we indicated that a possible explanation for the different drivers of defensive and offensive responses centers around firms' opportunity recognition during disruptiveness: firms differ in their identification and pursuit of new business opportunities brought about by the disruption. In Chapter 3, we further indicated that firms who adopt a particular type of identity shift exploit opportunities that are systematically different from firms that adopt another mechanism of identity shift in response to disruption: firms perceive as an opportunity only those situations that are consistent with their shifted self-concepts as they strive for identity-relevant actions in response to the disruption. Finally, in Chapter 4 we indicated that as a disruption shakes up existing markets and affects established competitive dynamics (i.e. "old" industry players are challenged by disruptors and by new businesses with growth aspirations), firms might look to one another, including (former) competitors, to pursue opportunities that lie beyond the possibilities of the firm before the disruption.

Taken together, the studies of this dissertation thus indicate that prior research has largely neglected how disruption generates distributed opportunities, and these opportunities are not limited to disruptors (i.e. Ansari et al., 2015) or new entrants (i.e. Hang, Garnsey & Ruan, 2015) alone. Recognizing this key role of opportunity recognition during disruption foregrounds that there is not a single "best" response to disruption. Rather, opportunities can be identified and pursued when firms, be it incumbent, new entrant or disruptor, see (disruptive) advantages. This active search for, and selection of, opportunities by all explains why some firms, but not others, identify and act upon specific opportunities. As a result, the various different firm responses to disruptive innovations should not be treated as "anomalous cases". Instead, such exemptions indicate that firms act upon the different opportunities

presented when disrupted. The findings of this dissertation therefore show that even though disruption has far-reaching consequences for firms and industries, firms are able to purposefully pursue a certain, recognized opportunity by taking up agency in how they manage the challenges and/or conflicts created by disruption.

5.2 Theoretical Contributions of Empirical Studies

Aside from the contribution to the general research objective of this dissertation, the three empirical studies also make individual contributions to the study of firm responses to disruptive innovations. Next we will discuss the theoretical contributions each of these papers make.

5.2.1 Organizational drivers of firm responses

In Chapter 2 we linked prior research that examines the organizational drivers that can facilitate firms to adapt to disruption (i.e. *awareness*, *capability* and *motivation* to respond), to prior research that has identified the strategic organizational responses that firms can employ to react to disruption (i.e. *defensive* responses and *offensive* responses). We considered whether the type of response to disruptiveness might be contingent upon how organizational drivers interact.

The findings suggest that what leads firms to respond defensively to disruptions, as opposed to offensively, is not a divide between incumbents and new entrants: our empirical analysis shows that just as newly started firms can respond defensively to a disruption, so can incumbents respond offensively. More specifically, our findings demonstrate that neither of the two responses to disruption can be predicted by the firms' age or size. Furthermore, and contrary to what Christensen (1997) and others suggest, rather than being held back by path dependent constraints or prior experiences with technological change, which are assumed to

paralyze firms in their responsiveness to disruption, such prior constraints and experiences actually seem to urge firms to take *any* action, including offensive ones.

Interestingly, our analysis indicates that different drivers than those identified in the existing literature make firms respond defensively or offensively to disruption. Our results indicate that the decision to pursue a defensive response results from a complex interplay between three drivers: the awareness of the impact of the disruption, and the motivation and the capability to respond. While the separate, direct effects of each of these drivers actually makes firms less likely to respond defensively, when any two of these three drivers are *simultaneously* present firms are more likely to respond defensively. However, when all three of the drivers are highly present firms are, again, less likely to respond defensively. The decision to pursue an offensive response on the other hand does not result from a complex interplay between the three drivers. Rather, an *offensive* response to disruption is decoupled from the perceived impact and capability to respond and depends strongly on how motivated a firm is to respond.

This study thus extends prior research by examining a substantially larger sample of firms and their responses to the same disruption, and by looking beyond the difference between incumbents and entrants to study the various drivers of different organizational responses to disruptiveness. The results point to the need for a more complex account of firms' responses to disruptiveness: completely different considerations, or logics, seem to explain defensive as opposed to offensive responses. Research needs to account for the complex interplay between awareness, capability and motivation to be able to fully understand and explain how and why firms respond differently to disruptions.

5.2.2 Organizational identity

In Chapter 3 we went beyond considering the key drivers that lead firms to respond to disruption in a certain way, by providing one of the first multiple-case comparative views on the role of organizational identity in the process of organizational transformation. We posited that organizational identity plays a critical role in organizational responses to disruptions, especially when firms are confronted with disruptions that are identity-challenging. We therefore explored the concept of “identity shift”, or the extent to which a firm adapts its enduring, central and distinctive aspects of its organizational identity after an identity-challenging shock like a disruption, using multiple in-depth case studies among record companies and publishers in the Dutch music industry.

Our analysis has two important implications. First, our results indicate that how firms respond to the disruption is in large part determined by the way a firm interprets the effect of the disruption in relation to the enduring, central and distinctive aspects of a firm’s organizational identity. Comparing firms on these identity characteristics, we were able to identify three different, yet highly distinct types of identity shifts during disruptiveness and describing their features: a group of firms will stress the differences between their organizational identity and the disruption (*organizational identity affirmation*), another group of firms will acculturate their organizational identity to the disruption (*organizational identity acculturation*), and a final group of firms will establish similarities between their organizational identity and the disruption (*organizational identity accommodation*). Identifying these different types of organizational identity shift is important, because rather than assuming “unexpected” responses to disruptive innovations by either incumbents or new entrants to be anomalous cases (cf. Christensen, 2006), the types of organizational identity shift indicate vastly different mechanisms firms can employ to relate to the disruption. These mechanisms then enable firms to gain legitimacy and collective resonance for new, disruptive,

identity aspects (Garud & Karunakaran, 2017). As a result, disruption becomes a new boundary object of organizational identification that enables firms to pro-actively engage with disruptive innovations that challenge the enduring, central and distinctive aspect of a firm's identification. Second, our results also provide evidence of how these shifted identities are reflected in a firm's strategic decisions and actions during the disruption. More specifically, our analysis indicates how firms seek to behave and act in ways consistent with the way their organizational identity *shifts* during disruptions. Ultimately, we therefore find that these decisions enable a convergence on a set of different re-defined identities after the disruption.

This study thus extends prior research by examining actual processes of organizational transformation during disruption. Our emergent typology of identity shift takes into account the multifaceted and context-dependent nature of organizational identifications and makes initial steps to explain the vastly different responses and strategic actions made by firms during disruption that reach well beyond the incumbency-hypothesis that prevails within extant disruption research (cf. Christensen, 1997; 2003; Danneels, 2004). Our typology further indicates that when firms have to respond to identity-challenging disruptions that necessitate a shift in the organizational identity, the type of organizational identity shift can become generative and serve as a guidepost that directs the strategic decision making and actions of firms during the disruption. Research therefore needs to account for the important role organizational identity plays in processes of organizational change, especially when necessitated by disruptive innovations.

5.2.3 *Coopetition*

In Chapter 4 we extended our focus from considering individual firm responses to disruptive innovation by providing one of the first empirical accounts of how firms' responses to disruption can be placed within a larger ecology of firms that aims to respond collectively to

deal with the same disruptions. Drawing upon the coopetition literature, which explores the simultaneous engagement in both cooperation and competition among firms (Bengtsson & Kock, 2014; Brandenburger & Nalebuff, 1996; Gnyawali & Park, 2009), we address the balance between cooperation and competition among firms over time using a unique in-depth case study of 9 competitive firms collaborating over a period of one year to introduce a new platform in the Dutch music market. Our findings have two important implications.

First, our findings indicate that coopetition is a viable and strategic firm response to disruption. Coopetition enables firms to go beyond simply adapting to the disruption individually: coopetition among multiple firms helps to identify and pursue opportunities that lie beyond the reach of individual firms, especially as it helps these firms to overcome important path-dependent trajectories that handicap firms to respond to disruptive innovations. As a result, coopetition enables firms to, jointly, develop their own “disruptive capacity” by actually starting to exploit disruptive growth opportunities as a group. A cooperative firm response should therefore be considered alongside other firm responses to disruption.

Second, our findings indicate that coopetition with multiple coopetitors provides an extra dimension to competitive and cooperative moves within a coopetition. More specifically, our findings indicate that such a cooperative entity provides a new paradox of coopetition that goes beyond simply the simultaneous existence of these paradoxical (i.e. competitive and cooperative) moves: cooperative moves within a coopetition spur competitive moves, while competitive moves within a coopetition enhance cooperative moves among coopetitors. Tensions among multiple coopetitors therefore not only arise because of inherent organizational differences, but also from cross-coopetitors interactions caused by this paradox of coopetition.

This study thus extends prior research by examining how firms' responses to disruption can be placed in a larger ecology of interdependent firms. Our emergent model of cooperative responses to disruptive innovations takes into account the social construction of firms' responses to disruption via cross-coopetitor interactions. It makes initial steps to explore the value of cooperation as a strategic response to disruption, which reaches well beyond the organizational responses considered in extant research (i.e. Adner & Snow, 2010ab; Charitou & Markides, 2003; Macher & Richman, 2004). Research should take into account cooperative dynamics that influence firms' responses to disruption over time.

5.3 Future research directions

This dissertation has used different empirical methods to address firm responses to disruptive innovations. Although our findings clearly have important theoretical and practical implications for firms dealing with disruptiveness, we hope that the insights yielded by this work will inspire additional research into the relationship between disruption and firm responses. We identify four future research areas.

First, empirical findings are drawn from firms in one industry and country, which were confronted with the same disruptions in a relatively recent time frame. Although the industry (music industry) and the disruption (digitization of music) are considered exemplary in a number of different ways, industry, country and disruption contingencies can and should be expected (cf. Danneels, 2004; Charitou & Markides, 2003). While our focus on disruptions in a specific industry in a single country has added to the internal validity of the studies, future research should explore whether the findings of the studies can be more broadly generalized across countries, industries and (type of) disruptions in order to account for differences that are unique to the situation, industry or disruption faced. In addition, our sample consists mainly of independent record companies of small to medium size that survived the disruption.

We would therefore encourage further research on firm responses to disruptive innovations among both large companies *and* among firms that did not survive the disruption.

Second, although this dissertation has made important contributions to our understanding of how and why firms (come to) respond differently to disruptive innovations, we were not able to assess if, when, and under what circumstances certain firm responses are more successful (cf. Danneels, 2004). An important question for future research could therefore be whether certain types of responses are better than others and under what circumstances. This calls for a closer investigation of the mid to long-term financial performance of different types of responses. The collection of longitudinal data can also guide future research into exploring if, when and how firms' responses may evolve over time, perhaps as a result of disruption or industry changes or because the chosen response does not pay off in the long run. Such an approach could enable a more closer investigation of firm differences in organizational learning under disruption and identify the signals firms use to change their strategy (Argote & Spekter, 2011; Gavetti & Rivkin, 2007; Roy & Sarkar, 2016). It should however be noted that although our results indicate that firms do adapt their response over time in accordance to the development of the disruption, the results of our survey study (Chapter 2) and our case studies (Chapter 3) also indicate that only a limited number of firms significantly alter their response to the disruption over time.

Third, our investigation of firm responses to disruptive innovations should be considered within the limitations of a cross-sectional, exploratory research design (Lindell & Whitney, 2001; Miles & Huberman, 1994). It is important to acknowledge that firm responses to disruptiveness are a longitudinal process, influenced by social contexts and events that existed and/or happened before and/or during the confrontation with a disruption. In support of this notion, the data collected for this dissertation are limited in acknowledging preferences for certain types of responses that emerged earlier, or that emerged from the social network of

the firm. For instance, we have not been able to determine whether the network of the firms favored one type of response over another. Longitudinal research projects in real time would be useful in clarifying causal relationships and feedback loops. Social network analysis could determine the influence of the social network.

Fourth, the general finding of this dissertation support the notion that what leads firms to respond defensively, as opposed to offensively, to disruptions is not a divide between incumbents and new entrants. Rather, start-up firms can just as well respond defensively to a disruption, and, similarly, incumbents can respond offensively. As a possible explanation for this variation centers around firms' opportunity recognition during disruptiveness, it means that both new entrants and incumbents are able to develop their disruptive capacity. This then, calls for a closer examination of the determinants of disruptive capacity among both incumbents and new entrants. Therefore, future research could on the one hand address the role of established incumbents as a source of disruptive technological change (Eggers & Kaul, 2017) and provide a closer examination of how incumbents can develop their disruptive capacity. On the other hand, future research could address the disruptors path (Ansari et al., 2015), by studying the transitions of "simple" innovators to full-fledged business disruptors.

5.4 Managerial and policy implications

Firms across industries are increasingly confronted with extra-industry disruptions that disturb the traditional ways of doing business. Choosing and implementing meaningful responses to such disruptions has become an increasingly important task for managers. The results of this dissertation yield several implications for managers and help practitioners make more informed strategic decisions when faced with disruptions that necessitate firm responses and organizational transformations.

First, the results of Chapter 2 suggests that what leads firms to respond to disruptive innovations in a certain way is not a divide between incumbents and new entrants: prior commitments and other legacy considerations that incumbents face need not constrain managers' decision making, but can be, rather, stimuli for firms to engage in action. After all, Chapter 2 indicates that firms experiencing friction from prior commitments during disruption are more likely to take *any* action to resolve that friction between prior constraints and future demands. As a result, incumbents are not bound to respond defensively, nor are new firms bound to act offensively in response to disruptions. Instead, this chapter provides managers with important insights into when either defensive or offensive responses are typical responses to disruptive innovations for a firm such as theirs. Managers are then able to reflect on the question whether their response is beneficial to their firm, considering the circumstances they find themselves in. Managers are also able to steer their firm in the desired direction by altering specific drivers. Simultaneously, managers can improve their competitiveness by making informed predictions of the strategic actions of competitors in response to the disruption, considering the circumstances their competitor finds itself in. For policy makers aiming at realizing offensive responses during disruptiveness, our findings imply that policy instruments and incentive schemes can be implemented that aim to motivate firms to embrace disruptive innovations.

Second, the results of Chapter 3 indicate a close relationship between identity (i.e. who you are) and strategy (i.e. what you do). This provides implications for how managers can best accomplish organizational changes necessitated by disruptive change. Chapter 3 further indicates that there is no single resolution to resolve identity inconsistencies and ambiguity due to disruptions. The identification of the acculturated identity shift further foregrounds the importance of understanding disruption as a process over time (Christensen et al., 2015),

requiring firms to maintain a given level of organizational agility to manage the uncertainty of disruptiveness (Teece & Leih, 2016).

Third, the results of Chapter 4 indicate that when business as usual is challenged by disruptive innovations, firms are not alone in their struggle with disruption. Especially as disruptive innovations also affect existing competitive dynamics in an industry, firms should consider cooperation with other firms that are similarly affected by the disruption as a valuable strategic response to disruption. After all, cooperation resolves the action problem most firms experience during disruption: due to prior commitments, limited time and unfamiliarity with and uncertainty about the disruption firms experience difficulty to respond to disruption (cf. Charitou & Markides, 2003; Christensen, 1997; 2006; Assink, 2012), and cooperation enables firms to address opportunities that lie well beyond those of the individual firm. Cooperation thus enables firms to become active agents, even when disrupted.

5.5 Concluding thoughts

In a time of fast technological change, firms are increasingly confronted with (digital) innovations that challenge and disrupt their business as usual. Rather than assuming incumbents to be displaced by start-ups that introduce such disruptive innovations (cf. Christensen, 1997), it is important to understand how firms can address the challenges of disruptiveness. The application of different theoretical approaches to disruption innovation theory provides the opportunity to obtain new insights into firms and their responses to disruptions. The empirical explorations of this dissertation provide compelling explanations for how and why similar firms develop different organizational responses to disruptive innovations, while different firms develop similar organizational responses to such disruptions. The results of this dissertation offer interesting avenues for future research into the dynamics of firms' responses to disruptive innovations.