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Organizational Hubris in Entrepreneurial ICT Settings

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Abstract. The objective of this paper is to determine symptoms of organizational hubris in entrepreneurial ICT settings and to examine whether the environmental conditions of the ICT sector particularly trigger these symptoms. For this purpose, a theoretical framework is developed to transfer existing findings related to organizational hubris in large and established organizations to entrepreneurial ICT settings. The empirical analysis is based on an in-depth case study of an ICT Start-Up where five distinct symptoms of organizational hubris are determined. Moreover, the complex knowledge base required to exploit business ideas as well as crucial technological choices prior to market entry are identified as triggers of the ICT sector for the occurrence of organizational hubris. In addition to existing findings in literature, functional effects of organizational hubris such as general triggers to launch a business and sufficient self-confidence to attract key partners are determined.

Keywords: Organizational hubris, entrepreneurial ICT settings, ICT Start-Ups, communication technologies

1 Introduction

Since the mid-1990s, countless information and communication technology applications were developed that determine the way how people communicate, work and access information. The dynamics of the information and communication technology (ICT) sector offer a multitude of business opportunities to launch new ventures based on product and market innovations [1, 2]. Therefore, Start-Ups in the ICT sector are considered as important engines for economies in terms of high innovation capacities, productivity increases and growth accelerations [3]. However, ICT sectors are dynamic environments where information about technological changes and new developments need to be processed and evaluated on a highly frequent basis [4]. These dynamics provide uncertain as well as risk-intensive conditions and are often perceived as stressful and exhausting by founding teams [5].

Cognitive processes of founding teams that are confronted with the previously described conditions as well as their impact on venture performance (i.e. cognitive determinants) are recently investigated in entrepreneurship literature (e.g. [6–10]). It is found that dynamic and uncertain environments do not only favor effectuation logics but also the occurrence of cognitive biases carried by founding teams (e.g. [6, 7, 10,

11]). A cognitive bias is defined as a set of assumptions that are based on reality conditions but that have a bias in favor of an individual or a collective [12]. Therefore, decisions influenced by cognitive biases depart from analytical normative standards (“departure[s] from standards” [13]) [6, 7, 9, 14] and help founders to reduce the complexity of comprehensive decision making processes [6].

Especially the relevance of hubris as one cognitive bias and its overall dysfunctional effects on company performance and existence are addressed in recent research (e.g. [6–8, 15, 16]). Hubris is characterized by excessive pride, exaggerated self-confidence and positive self-evaluations as well as abnormal behavior that differs significantly from the average [15, 17]. The research interest is triggered by several research gaps and the finding that hubris cannot only be identified on the individual level of founders but also on the organizational level of a whole cooperation (e.g. CargoLifter AG) [16]. Although, a growing number of authors discuss the relevance of organizational hubris in entrepreneurial settings on a theoretical basis (e.g. [15, 18, 19]), no empirical research was performed on this subject in an entrepreneurial context yet.

The objective of this paper is to determine symptoms of organizational hubris in entrepreneurial ICT settings and to examine whether the conditions of the ICT sector promote these symptoms. The ICT sector was chosen as we assume that it favors the occurrence of organizational hubris. This is because of its typically high dynamics as well as the fact that the number of collectively shared ventures in the ICT industry is considerably higher compared to other industries [20]. Identifying symptoms and determining the role of the ICT sector as a trigger of organizational hubris supports the exploration of the deficient state of research in this field. For this purpose, an in-depth case study of an ICT company is conducted and empirically examined.

The present paper is structured as follows. In chapter 2, a theoretical framework is developed in order to transfer existing findings in relation to organizational hubris to the context of entrepreneurial ICT settings. The methodology applied for the empirical investigation is summarized in chapter 3. Following this, the analysis (chapter 4) and the findings (chapter 5) are presented.

2 Theoretical Framework

The subject of hubris has attracted interest in various research disciplines (i.e. entrepreneurship, organizational studies and psychology). According to the findings in the area of entrepreneurship and organizational studies, two types of hubris can be differentiated. While individual hubris emphasizes the effects shown by individual founders and company executives, hubris on an organizational level describes the degree to which all members of an organization collectively overestimate its organizational competences [16].

According to the classification of Edmondson and McManus (2007) [22], the state of research on individual hubris in both disciplines can be classified as “intermediate” as a result that there is still no precise theoretical foundation and measurement of hubris but various approaches are applied (cf. [23]). Based on existing findings in

relation to individual hubris, a growing number of authors discuss the relevance of organizational hubris in entrepreneurial settings on a theoretical basis. They assume that hubris cannot only be identified on the individual level of founders but also within newly founded ventures as a whole (i.e. organizational level) [11, 15, 18]. However, no empirical research could be found in an entrepreneurial context on organizational hubris yet.

So far, research related to organizational hubris proved its existence merely within large and established organizations (e.g. CargoLifter AG). For example, Hermanns (2012) [16] performed an extensive investigation on CargoLifter ex-post to venture failure. These examinations provide a substantial evidence basis for further research and are used to address the previously outlined research gap. For the purpose of this paper, the empirical insights by Hermanns (2012) [16] related to organizational hubris in large and established companies are transferred to and examined in an entrepreneurial ICT context.

2.1 Organizational Hubris in Entrepreneurial ICT Settings

In order to determine symptoms of organizational hubris in entrepreneurial ICT settings and to interpret them properly, an understanding of their antecedents, triggers and effects is required. To gain this understanding, three challenges need to be addressed: (1) the lack of a precise theoretical foundation of individual and organizational hubris [9, 14, 23]. Different concepts and theories are used in entrepreneurship and organizational literature to explain the occurrence and existence of hubris (e.g. organizational identity, organizational beliefs, organizational self-perception, behavioral decision theory, upper echelons theory etc.). Thus, regarding the purpose of this paper, it is difficult to understand the core evolution processes of organizational hubris and to interpret its symptoms properly. Moreover, (2) as a result of the limited amount of research conducted in relation to organizational hubris, there is no consensus yet about which antecedents and triggers lead to its symptoms and which effects can be expected. Both of these challenges complicate the (3) transfer of evidence from organizational hubris (for large and established organizations) to entrepreneurial ICT settings on a theoretical basis. In order to address these challenges, a theoretical framework for the empirical analysis is developed (cf. Figure 1).

For this purpose, we combine the concept of (1) organizational identity with insight from (2) behavioral decision theory for the following reasons. This paper utilizes key findings by Hermanns (2012) [15, 16], who uses the concept of (1) organizational identity to explain the occurrence of organizational hubris. Organizational identity describes the collective self-perceptions and assessments that are held by the members of an organization (e.g. related to organizational attributes and characteristics). Moreover, it provides guidance and control for judgment and decision-making processes [24]. Similar to individuals, also organizations tend to maintain positive self-perceptions and assessments (= organizational identity). This can be achieved through an adjustment of self-perceived capabilities that diverge positively from reality (“departure from standards” [13]) (e.g. [16, 19]). These departures lead to cognitive biases

that have either functional or dysfunctional effects depending on the degree of departure.

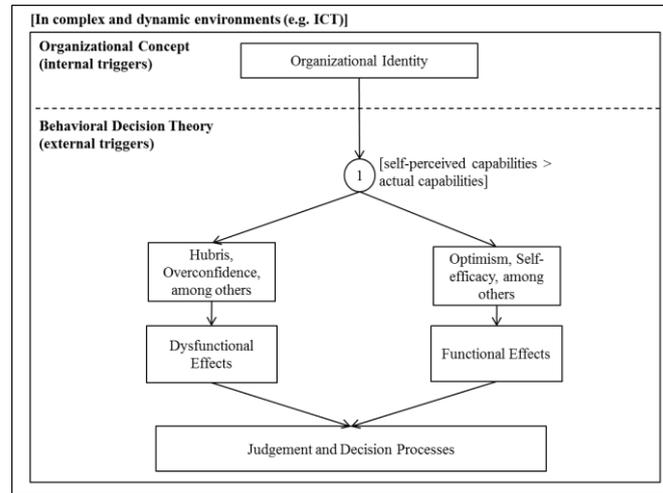


Fig. 1. Theoretical framework (author's illustration).

In line with Foster & Sarasvathy (2005) [6], we find that the concept of organizational identity neglects external and contextual factors. These were proven to have considerable impacts on the occurrence and development of cognitive biases carried by founding teams (e.g. [6, 7, 11, 14]). In order to determine the triggers for differences in actual and self-perceived capabilities and an adaptation of the organizational identity in entrepreneurial ICT settings, also external factors need to be taken into consideration. Therefore, insights from (2) behavioral decision theory are used. It provides evidence that external factors such as complex and dynamic environments have an impact on the occurrence of cognitive biases. For example, founders in the ICT sector have to deal with uncertain and risk-intensive conditions as well as volatile and frequent information about technological changes and new developments [4]. These dynamics often lead to stressful and exhausting conditions [5] and favor an effectuation approach [10]. Cognitive biases reduce the complexity of comprehensive decision making processes and help founders to deal with the conditions provided by dynamic environments (e.g. [6, 7, 19, 25]). Insights from behavioral decision theory state that cognitive biases have an impact on cognitive judgment and decision-making processes.

Optimism [11, 25] and self-efficacy [11] are two cognitive biases that are frequently observed. Decisions influenced by these two biases are considered to be “departure[s] from standards¹” [13] which have functional effects that are – among others – general job satisfaction and positive outcomes for work attitudes [26].

¹ Self-perceived capabilities > actual capabilities.

Cognitive biases where dysfunctional effects are expected are overconfidence and hubris². According to behavioral decision theory, overconfident and hubristic decision-makers (individuals) overestimate their own problem solving capabilities [26] as well as the likelihood of their venture's success [27]. Furthermore, they misallocate existing resources during the process of business development [7]. For the purpose of this study, dysfunctional effects of organizational hubris are of particular relevance. Hermanns (2012) [16] summarizes the identified dysfunctional effects in five main categories (i.e. symptoms of organizational hubris) that are presented in the following (section 2.2).

2.2 Symptoms of Organizational Hubris

Five distinct symptoms are proven to be indicators for organizational hubris in large and established organizations. The first symptom (1) is the collective overestimation of organizational capacities through an overvalued belief in own organizational competencies. Associated with these collective overestimations, (2) grandiose strategic initiatives and radical behavioral tendencies contrary to existing conventions of entrepreneurship as well as (3) shared feelings of invulnerability and immortality occur. Moreover, a neglect of (4) internal as well as external criticism and (5) strategic persistency appear together over time as a corollary of organizational hubris [16]. Based on the previously presented framework (section 2.1), we assume that internal and external triggers of entrepreneurial ICT settings favor the occurrence of organizational hubris.

3 Methodology

Current methodology applied in organizational and entrepreneurship studies to examine hubris, overconfidence and other cognitive biases follows almost exclusively quantitative approaches (e.g. [16, 17, 21]). It is argued that these approaches lack explanatory power as a result that such socially embedded phenomena cannot be examined comprehensively without interacting with involved individuals and their surroundings [15]. For the purpose of this paper, it is necessary to examine processes during the phase of venture creation in order to determine the development of organizational hubris and its symptoms. The qualitative research design applied aims to overcome methodological gaps and examines various symptoms of organizational hubris in entrepreneurial ICT settings. Moreover, the deficient state of theoretical foundation related to organizational hubris requires an exploration of the concept that is achieved through the examination of an in-depth case study.

² In relation to behavioral decision theory and the impact of dynamic and complex environments on cognitive biases and decision-making processes, no functional effects of hubris and overconfidence are empirically proven yet.

3.1 Research Design

The entrepreneurial personal story exploration is considered to be an appropriate research strategy to examine the individual interpretation of certain events and behaviors as well as to examine observed developments longitudinally. For this reason, qualitative research designs are gaining considerable acceptance in research communities dealing with SMEs and entrepreneurship [28]. The decision for an in-depth case study as an appropriate research design is determined by the claim to treat complex social and personal constructs like hubris as a “real-life phenomenon” [16, 29]. This approach favors the collection of data in natural settings and not to rely on artificially derived data like responses to questionnaires [29]. For this purpose as well as the explorative and longitudinal character of the research design, case studies are recommended methodologies. Moreover, all of the required determinants for case study research provided by Yin (2012) [29] are fulfilled: an explanatory research question is addressed and a phenomenon within its “real-world” context is investigated. As a result that decision behaviors of founding teams as well as its causes and effects are examined, a case study of explanatory character is chosen [29].

3.2 Case Selection

After careful consideration, the case study of an ICT company that was founded at the end of the 1990s was chosen. The company went through several changes and developed itself from a B2C mobile retailing and auctioning to a B2B mobile marketing company that still exists today. The case study is considered to be appropriate because the company was founded during a highly dynamic phase - the heyday of the so-called ‘New Economy’. Moreover, all of the initial founders abandoned the company during the last decade and have a sufficient distance to evaluate their actions during the process of venture creation and growth from a different angle. Another reason for the selection of this case is the fact that the company still exists today and a reflective examination regarding the functional and dysfunctional effects of organizational hubris in entrepreneurial settings can be conducted. Nevertheless, the founders of the company asked for an anonymous investigation of their case as a result that the notion of organizational hubris still has mostly negative connotations and possible consequences for personal developments have to be avoided. That is why the company is called MR/MM (Mobile Retailing/Mobile Marketing) for the purpose of this study.

3.3 Collection of Data

Primary and secondary data is used to examine the case MR/MM with regard to organizational hubris. The data collection process involved several steps. Firstly, online available press releases and newspapers articles provided an impression and broader picture of the company and its development. Moreover, there are already written case studies and scientific book chapters dealing with this particular company that demonstrate the companies’ approach to strategic choices, project management as well as marketing and sales activities. The information and first indicators were summarized

and used to develop an interview guideline. Secondly, primary data was collected through a semi-structured telephone interview with one of the company's founders to complement the secondary data and to augment the understanding of important key activities. Focusing on the phase of venture creation and growth, detailed questions were asked regarding internal and external triggers such as dynamics and attitudes, planning processes, shared feelings etc. in order to determine whether symptoms of organizational hubris can be identified. The whole interview took 90 minutes and was recorded as well as transcribed. Thirdly, the founder provided access to further secondary data such as investor pitches, product presentations, business plans and written notes. These documents provided much more detailed insights into the objectives, planning processes and company dynamics.

3.4 Data Analysis

The analysis of the collected primary and secondary data involved several steps and followed an interpretative-iterative approach according to Gioia (2013) [30]. Firstly, the large amount of secondary data was organized and analyzed by coding indicators of abnormal and hubristic behavior, its triggers and effects as well as ICT sector specific factors influencing the occurrence of organizational hubris. For this purpose, broader coding categories that were derived from the theoretical framework (open coding) (cf. section 2.1) were used. Additionally, also the subsequent interview transcript was coded following the same logic. This first-order data analysis resulted in 83 first-order categories that were stored in Atlas.ti as in-vivo codes [30]. Secondly, the comparison of similarities and differences between the coded texts elements led to a further specification and aggregation of codes (axial coding) [31]. Through this process, 32 first-order concepts were derived. Thirdly, a second-order analysis was conducted with the aim to understand underlying concepts and characteristics that can be found in existing literature. Cumulatively, 23 second-order themes were derived that encapsulate all of the first-order concepts in a more theoretically informed language [30]. Lastly, the second-order themes were aggregated into 15 dimensions that present the conceptual link between first-order concepts, second-order themes and the conceptual framework.

4 Analysis

The founders of the MR/MM finished their studies of economics and business with high distinction at famous universities in Germany and abroad. Moreover, all of them had approximately two years of working experience within top management consultancy companies at the time of venture creation. Several of the symptoms examined by Hermanns (2012) [16] for large and established organizations can be identified in the case study of MR/MM. This indicates the existence of organizational hubris.

4.1 Symptoms of Organizational Hubris

The first indicator for organizational hubris is the founders' motivation to start their own venture. Their motivation was based on the idea "[...] to get rich as soon as possible, no matter how." The founders were friends and wanted to found the venture together without reflecting the skills and working styles of the entire group critically. More than 70 business ideas were collected and compared against each other. The choice to launch a B2C mobile retailing and auctioning company (in the ICT sector) was influenced by a previous success story of the serial entrepreneurs Oliver, Alexander and Marc Samwer "... who sold their company alando.de for 43 million Dollars". The entire founding team of MR/MM was convinced that their capabilities through their studies and working experience were at least comparable if not higher to the capabilities of the Samwer brothers. Their credo was "together we are strong", although none of the founders worked in the area of ICT before. These attitudes indicate shared feelings of invulnerability during the processes of venture creation (symptom 3). These feelings led to various challenges that are described in the following.

A collective overestimation of organizational competencies (symptom 1) in the case of MR/MM is determined through a comparison between complementary self-perceived and actual required knowledge assets to launch a business in the ICT sector. A lack in required knowledge and overestimation of competencies was a result of the limited working experiences and the composition of the founding team. For example, the entire team did not anticipate logistical and operational challenges resulting from reshipments of products until they occurred because "[...] to be honest, we never thought about this issue as we had nobody with knowledge in this field." This knowledge gap led to substantial challenges as a result that more than 30%³ of the bought products were reshipped directly to the office space of the founding team. Furthermore, the founding team had not considered dunning and collection processes that became relevant as a considerable share of their customers (20-40%) did not pay ordered products and services. Additionally, before launching the business, the founding team did not consider to seek expert advice of people working in the retail industry. They were entirely convinced of being capable to launch this business and they neglected external feedback (symptom 4).

Thirdly, every founder was capable of certain knowledge assets and there was no effective coordination of these assets. The gap between self-perceived and actual IT capabilities was addressed during an early phase from an external source by one of their VCs, who presupposed the employment of a CTO before investing into the company. In this case, external critics were not neglected (symptom 4) and the CTO was hired shortly before officially launching the business. However, the CTO was not able to correct the self-perception of actual IT capabilities. Concerns of the CTO about the required time to launch the platform and related web applications were neglected by the founding team: "Ah come on, it is just a few lines of code." At the end, the initial version of the platform was subject to various design errors. This underlines the existence of organizational hubris as the symptom of neglecting internal critics (symptom 4) can be identified.

³ More than 700.000 users were registered on the platform at that time.

Another indicator for organizational hubris was the business model of MR/MM in general. Mobile retailing and auctioning through mobile phones was an innovative idea, which was challenged by the insufficient development of mobile phones at that time. There was nearly no initial demand for a mobile phone auctioning application but the founding team was deeply convinced that their idea will succeed and did not adjust their business model. The launch of a business model without appropriate technology available on the market indicates strategic persistency (symptom 5) during the first two years of venture creation. Moreover, an official market research institute was commissioned for 10.000 euros to validate the business model but the results were already predefined based on the composition of the study. These manipulated results attracted crucial suppliers and the founding team was able to offer high value products. The manipulation of market research indicates nonconformist organizational behavior (symptom 2).

In order to stimulate the demand for their mobile auctioning platform, the founding team invested heavily in guerilla marketing campaigns. These campaigns were provocative as well as spectacular. The founding team anticipated legal consequences realistically and had to pay considerable amounts of money several times in order to escape legal consequences resulting from interlocutory injunctions and violation of personal rights. These marketing campaigns indicate grandiose initiatives and non-conformist organizational behavior (symptom 2).

In order to finance all the previously mentioned expenses, various financing rounds with equity investors were necessary. The first two financing rounds were finished during the heyday of the New Economy. The money received, strengthened the founding team in the perception to have a successful business idea. The third financing round was influenced by their investors who told the founding team "You need to be bullish". Thereupon, the founding team presented the company at an international investor conference and demanded a considerable higher amount of money. They did not consider the changing market conditions as well as the approaching downturn of the stock exchange. This behavior indicates the neglect of general market conditions as well as strategic persistency (symptom 5).

This experiences and the feedback on the investor conference were the turning point of the company. Although, more than 700 000 users were registered on the platform, the business model needed to be adjusted substantially. Two years after venture creation, the company needed restructuring in order to survive and became a B2B mobile marketing company. All members of the founding team abandoned the company but it still exists today.

4.2 Discussions

The identification of symptoms involves determining triggers and effects of organizational hubris. The previous conducted analysis allows to extent the explanatory approaches of the presented theoretical framework (cf. Figure 2). Moreover, the role of entrepreneurial ICT settings as a trigger of organizational hubris was empirically confirmed for the case of MR/MM and can be extended by insights from literature.

Extension of the Theoretical Framework. Various internal and external factors have been identified that triggered the occurrence of organizational hubris in the case of MR/MM. In line with Hermanns (2012) [16] and the derived theoretical framework, it was found that the organizational identity served as an internal trigger for organizational hubris. Internal factors that directly influenced the organizational identity and the departure between self-perceived and actual capabilities were the motivation to get rich as soon as possible, the deeply held belief that the business idea is successful as well as the spirit of the founding team (“together we are strong”). These core triggers were indirectly influenced by limited working experiences and lacks of knowledge in certain areas that hindered the internal evaluation of self-perceived in relation to actual capabilities. Thus, for the case of MR/MM it can be distinguished between internal factors that directly influenced the occurrence of organizational hubris as well as internal factors that indirectly hindered its identification (e.g. limited working experiences, lacks of knowledge).

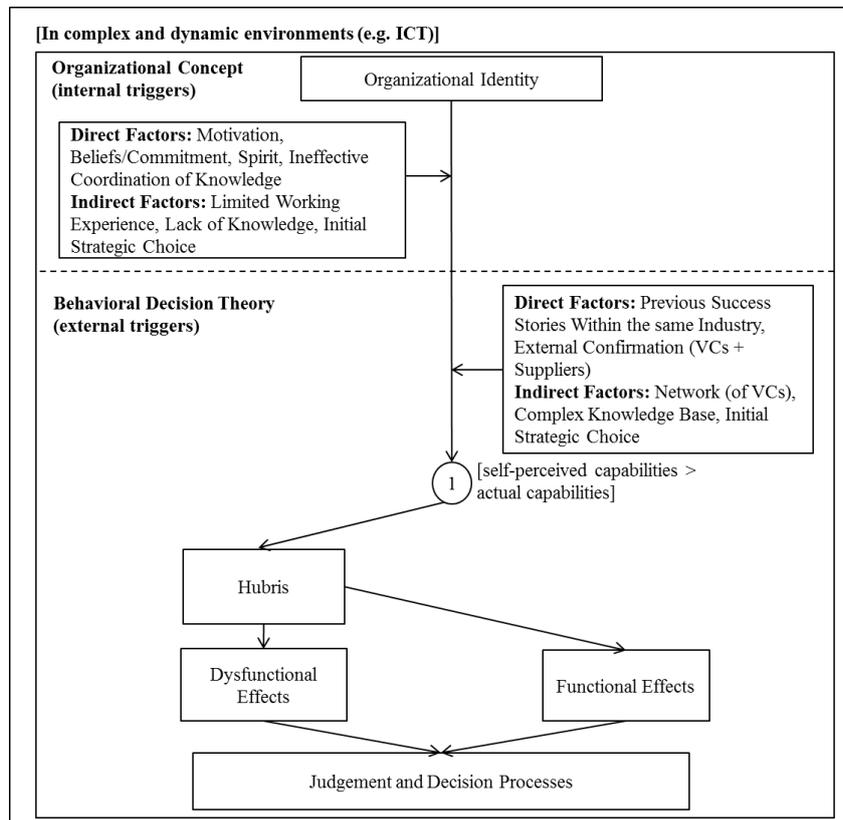


Fig. 2. Extension of the theoretical framework (author's illustration).

Moreover, several external triggers have been identified that influenced behavioral decision processes of the founding team. These were previous success stories of com-

panies operating in the same industry (alando.de) as well as external confirmation through VCs and crucial suppliers who became key partners. These findings extend the empirical evidence by Forbes (2005) [18] who shows that external equity is a trigger of individual hubris. Furthermore, also the external network of VCs influenced the actions of the founding team. In the initial phase of venture founding, one of the VC applied pressure on the founding team by making the employment of a CTO to an investment condition. Thus, the VC was indirectly able to influence the organizational hubris of the founding team. Later on, the VCs recommended demanding a disproportional amount of money during the third round of financing. It remains unclear whether the VC themselves were subject to the organizational hubris of MR/MM in the later stage of venture founding.

The adjustment of the organizational identity through internal and external factors and the occurrence of organizational hubris had functional as well as dysfunctional effects for MR/MM. Functional effects were the trigger to launch a business at all, sufficient self-confidence to attract partners as well VCs and to realize guerilla marketing campaigns with highly uncertain outcomes. Similar evidence is provided in relation to functional effects of individual hubris (e.g. [6, 7, 19]). Moreover, all of the dysfunctional effects determined by Hermanns (2012) [16] have been found in the entrepreneurial case of MR/MM. However, the findings by Hermanns (2012) [16] can be extended as a result that not merely dysfunctional but also functional effects in relation to organizational hubris can be observed.

The Role of (Entrepreneurial) ICT Settings. The assumed role of entrepreneurial ICT settings as a trigger of organizational hubris was empirically confirmed for the case of MR/MM and can be extended by insights from literature.

The exploration and exploitation of new business opportunities in the field of ICT requires diverse human capital and complementary knowledge assets that are a fundamental basis for every decision [20, 32]. These are extensive technological knowledge of various technological fields in order to understand recent developments and future technological trends as well as marketing and managerial knowledge etc. [20, 33]. These knowledge assets are usually divided among the participating individuals and need to be coordinated efficiently [33]. The case study of MR/MM provides further evidence that the required complex knowledge base in ICT settings indirectly and its ineffective coordination directly triggered the occurrence of organizational hubris.

Moreover, considerable investments in terms of resources in order to develop core technologies in the ICT sector are made already prior to market entry [34, 35]. Evidence is provided that initial strategic choices of the founding teams are likely to determine path dependencies of the companies as well as to limit their flexibility and strategic choices in the long-run [34–36]. The case of MR/MM shows that the initial strategic choice to launch a mobile auction platform was made because of external conditions (external trigger) and was never questioned internally (internal trigger) because it was perceived to be successful. Thus, the initial strategic choice triggered indirectly the occurrence of organizational hubris over time.

External partnerships in strategic alliances enable especially newly founded ICT companies to overcome strategic persistency and to receive external feedback and advice in terms of technological developments, business opportunities and current market trends. Moreover, various knowledge assets such as technological as well as managerial knowledge are shared [37]. Thus, strategic alliances are of particular importance for newly founded ventures in the ICT sector. Start-Ups that do not engage themselves in strategic alliances due to organizational hubris have only limited external possibilities to reduce the complexity of the environment and to receive feedback of how to deal with its dynamics. However, it is not possible to clearly identify strategic partnerships as a specific trigger of organizational hubris in the ICT sector for the case of MR/MM. The founding team established several partnerships but neglected at the same time expert advice.

5 Conclusion

This study determines symptoms of organizational hubris in entrepreneurial ICT settings and examines whether the environmental conditions of the ICT sector favor its existence. For this purpose, a theoretical framework is developed that contains internal and external triggers of organizational hubris as well as expected symptoms and effects. The theoretical framework is tested empirically conducting an in-depth case study of a B2C mobile retailing and auctioning company in the ICT sector.

5.1 Findings and Managerial Implications

First empirical findings are provided in literature that hubris cannot only be identified on the individual level (individual hubris) of CEOs and company executives (e.g. [6–8, 21]) but also on the organizational level (organizational hubris) of a whole cooperation [16]. The conducted case study extends the finding by Hermanns (2012) [16] who provided first empirical insights about organizational hubris in large and established organizations. First of all, empirical evidence is found that organizational hubris also occurs in entrepreneurial ICT settings. These findings support theoretical discussions in entrepreneurship literature that hubris might not only occur on an individual level of founders but also within newly founded ventures as a whole (i.e. organizational level) [15, 18, 19]. Secondly, previously identified symptoms of organizational hubris in large and established organizations can also be determined in entrepreneurial ICT settings. These are: (1) collective overestimation of organizational competences, (2) grandiose initiatives and non-conformist organizational behavior, (3) shared feelings of invulnerability and immortality, (4) neglect of internal and external criticism, (5) strategic persistency [16]. Thus, first empirical evidence is provided that the findings of Hermanns (2012) [16] can also be transferred to entrepreneurial settings. Thirdly, the conducted case study extends findings related to effects of organizational hubris. While Hermanns (2012) [15, 16] merely finds dysfunctional effects, functional effects were identified in this study. The identified functional effects are general triggers to launch a new business, sufficient self-confidence to attract

key partners (e.g. suppliers, investors) and the realizations of guerilla marketing campaigns with uncertain outcomes. These findings support the evidence provided by Forbes (2005) [18] in relation to individual hubris, who determined also functional effects such as motivation, problem solving and information processing capabilities.

Moreover, several factors are determined which trigger the occurrence of organizational hubris that involves a departure between self-perceived and actual capabilities [15, 16, 19]. Identified internal factors are the internal motivation of the founding team to achieve a certain goal, a deeply held commitment that the own business idea is successful as well as an overall collective spirit of the founding team. Moreover, the internal evaluation and containment of this departure is indirectly hindered through limited working experiences and lacks of crucial knowledge assets. External factors are previous success stories within the same industry as well as external confirmation by key partners and investors. The later finding extends previous evidence that external equity is a trigger for individual hubris [18].

Evidence is provided in this study that the environmental conditions of the ICT sector in particular favor the occurrence of organizational hubris. The triggers determined are the complex knowledge base required to exploit business opportunities as well as crucial technological choices already prior to market entry.

Managerial implications for founding teams are the application of (reflexive) routines that steadily compare self-perceived and actual capabilities. An external view on and evaluation of internal processes supports founding teams in dynamic environments to avoid cognitive biases with dysfunctional effects. Moreover, implications for Start-Up consultants are that they should have high awareness of distinct internal and external triggers as well as symptoms of organizational hubris. Hubristic decision processes and behaviors can be determined through a comparison with industry specific standards. Especially in highly complex and dynamic environments, Start-Up consultants should regularly compare self-perceived as well as actual capabilities of founding teams and involve external experts if necessary.

5.2 Limitations and Future Research

The research conducted is subject to some limitations that need to be addressed in future research. Firstly, the generalizability of the presented findings should be determined by further in-depth case studies in entrepreneurial ICT settings. An analysis of multiple cases might result in the detection of further and in this case study unconsidered symptoms of organizational hubris. Moreover, an investigation of comparative case studies in various industries provides evidence whether the findings of this study are specific to entrepreneurial ventures in the ICT sector or whether these can be applied to other entrepreneurial settings. Secondly, the interview conducted might be subject to a retrospective bias as a result that the examined Start-Up company was already launched in the end of the 1990s. In order to limit the effects of such a bias and to support the triangulation of data, further interviews with the other members of the founding team should be conducted without mentioning the actual objective (examining hubris) of the case study. Additionally, these interviews would further enhance the organizational perspective on hubris. Thirdly, further research should exam-

ine the shift from functional to dysfunctional effects of organizational hubris in order to determine whether procedural developments can be observed.

Innovation managers and Start-Up consultants should determine symptoms of organizational hubris at an early stage in order to limit its dysfunctional effects. Therefore, future research should investigate whether symptoms of organizational hubris can already be determined during the process of venture creation instead of ex-post to venture failure.

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