INCREASING EXPLORATION CAPABILITIES THROUGH EMPLOYEE ENTREPRENEUR INTERACTION

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ABSTRACT

The automotive industry is in a time of great environmental change. Due to new competitors and new technologies, the established OEMs are looking for ways to increase their exploration capability. One of the measures that are taken is the collaboration with start-ups.

Within this study 13 interviews were performed and analyzed to see the effects of these collaborations. The objective was to see what challenges the employees of the OEM were facing and how they were acting during these collaborations with a focus on if these behaviors were entrepreneurial.

Different challenges were found. Lack of organizational support, bureaucracy, hierarchy, and processes, the motivation of employees, as well as the experience at the company.

Employees showed entrepreneurial behavior in two different ways during the collaborations. By being an ambassador for the start-up within the corporation and by adapting ways of working from the start-ups.

Keywords: Ambidexterity, entrepreneurship, start-ups, collaborations, exploration

1. INTRODUCTION

Due to age, size (Sørensen and Stuart, 2000), traditionally grown mechanistic structures (Burns and Wholey, 1993), and a major focus on efficiency shown in strong cultures (Sørensen, 2002), corporations are usually set up to more exploitation than exploration (March, 1991). The fast pace of environmental change however asks for a more explorative behavior (Sidhu et al., 2004). Therefore, they are in need to take measures which allow for more exploration, as well as induce and support employees in their explorative action.

One measure currently taken in the company that is researched in this study is to collaborate with start-ups. Start-ups that at the one hand have interesting new technologies and at the other hand better explorative capabilities (Weiblen and Chesbrough, 2015). Start-ups are usually more prone to exploration from habit, being new companies, and from being small, many times with a searching way of working for customers, businesses and collaboration partners.

Corporations also look upon intangible learnings within these collaborations (Gassmann and Becker, 2006). One of these intangible goods that is believed in, within the case company, is that the corporate employees can learn entrepreneurial behavior, characterized through need for achievement, locus of control, risk-taking propensity, tolerance for ambiguity, innovativeness, self-confidence (Gürol and Atsan, 2006), but also a low need for support, low conformity (Moran, 1998), and a need for autonomy (van Gelderen and Jansen, 2006), from the start-ups.
To find out more about that and the mechanisms at play, this study will analyze 13 interviews and research two things. Firstly, it is not yet clear which challenges exist for corporate employees in these collaborations. Secondly, it is unknown how employees may adapt the entrepreneurial behavior.

2. Literature

2.1 Collaboration with start-ups

Collaborations with start-ups are sought after by corporations in order to tap into this speed, innovativeness and profit from the growth potential of start-ups (Weiblen and Chesbrough, 2015), i.e. to get a hold of their explorative capabilities. This is also why OEMs, like the case company, are currently working on developing different forms of interaction mechanisms that facilitate these collaborations. The goal of these collaborations is not exclusively tangible, e.g. products, but also focused on intangible things like learning about ways of working (Gassmann and Becker, 2006).

Whereas the potential value of these collaborations is portrayed in the literature, the challenges facing employees in the OEM when collaborating with the smaller, more agile, not as process-bound start-ups are under-researched.

2.2 Entrepreneurial characteristics and behavior

One focus in the entrepreneurship literature is on the individual entrepreneurial characteristics and behavior (Landström, 2010). Since the collaboration aims to stimulate employee’s entrepreneurial behavior, understanding what is characterizing such behaviors is crucial.

2.2.1 Entrepreneurial Orientation

Gürol and Atsan (2006), and several other scholars (e.g. Landström, 2010), examined what is referred to as entrepreneurial characteristics or behavior. Six key dimensions define this behavior: need for achievement, locus of control, risk-taking propensity, tolerance for ambiguity, innovativeness, and self-confidence.

The need for achievement describes the striving of individuals towards objectives within their social environment (Ward, 1994).

Rotter (1966) proposes that an internal locus of control makes an individual believe that their achievements are a consequence of their actions, in contrast to believing in fate or luck.

Risk-taking is an integral component to the creation of a new venture (Gürol and Atsan, 2006). Whereas non-entrepreneurs see a high risk, an entrepreneur perceives a much lower risk for the same situation (Palich and Bagby, 1995).

Entrepreneurship is mostly venturing through unstructured territory with a high degree of uncertainty or ambiguity. Entrepreneurs have been found to having a high tolerance for these kinds of situations (Chye Koh, 1996).

Innovativeness in the sense that it is used in entrepreneurship literature means to realize values from opportunities (Gürol and Atsan, 2006). Therefore, characteristics like
creativity, resourcefulness, farsightedness and inventiveness are often mentioned in the context of entrepreneurial innovativeness (Chye Koh, 1996).

Believing in themselves is a characteristic necessary for entrepreneurs while trying to achieve goals in risky or ambiguous endeavors. Entrepreneurs have therefore been found to have a higher self-confidence than non-entrepreneurs (Chye Koh, 1996).

2.2.2 **ENVIRONMENTAL SUPPORT**
Besides the characteristics and behaviors related to entrepreneurial orientation, research has found that entrepreneurs differ from non-entrepreneurs when it comes to their relation to their closest environment. Support, as defined by Gordon (1960), is receiving encouragement, being treated with consideration, kindness, and with understanding by others. A study found that entrepreneurs show a low need of support in contrast to that of non-entrepreneurs (Moran, 1998).

One key supportive factor for entrepreneurs is autonomy. A study by van Gelderen and Jansen (2006) found two ways why entrepreneurs are in need for autonomy. Firstly, striving for autonomy to gain decisional freedom. Secondly, to avoid strict rules and hierarchical managers, and to express their values and goals.

Another characteristic of entrepreneurs is that they tend not to accept surrounding systems and an inability to not be in line with them (McMullan and Kenworthy, 2014). Conformity would be the opposite, i.e. following regulations closely and executing only what is accepted and proper (Moran, 1998).

2.3 **LEARNING ENTREPRENEURIAL BEHAVIOR**
Drucker (1985) describes entrepreneurship as a behaviour, which is, in contrast to personal traits, something that can be learned (Palich and Bagby, 1995). Social learning theory teaches us that human behavior is not only caused by the environment but rather by a combination of the factors behavior, cognition and environment. These factors have all a reciprocal relation to each other, i.e. the environment can influence the behavior and vice versa (Bandura, 1971; Wood and Bandura, 1989). Consequently, entrepreneurial behavior can be learned, has influence on the surrounding environment and is influenced by it as well. Understanding what mechanisms are stimulating entrepreneurial behavior within corporations, is an under-researched, yet highly relevant topic to this study (Sakhdari, 2016).

Two questions are raised. Firstly, challenges between start-ups and corporations are mentioned in literature, however there is no clear statement on what these challenges are for the corporate employee and how those might affect the collaboration. The first research question is:

*RQ1. What are the challenges facing employees in established corporations when collaborating with start-ups?*

Secondly, since entrepreneurial behaviors are expected in start-ups and a learning of those is possible and learning might be triggered through the environment, the second research question is:
RQ2. How do corporate employees adapt entrepreneurial behavior during the collaboration and which behaviors are learned?

3. METHODOLOGY

The study that this paper is based upon is exploratory, which implies that a phenomenon is studied of which the nature is not yet fully understood. A qualitative approach was chosen now since the exploration capability model at the OEM is currently being applied and there are not yet enough employees working in it to enable a quantitative study.

An inductive approach was chosen for the collection of the qualitative data. This approach means that the researchers are collecting the data to assess which overarching topics are emerging as they go through the process of data generation and analyzing. This inductive approach is recommended for exploratory studies (Saunders et al., 2009).

The data collection was done through semi-structured interviews, which is also recommended for generating qualitative data in exploratory studies (Saunders et al., 2009). Semi-structured refers to a type of interviews that is performed with a guideline of questions but allows the interviewee to deviate if necessary or valuable to the research.

After an extensive literature review an interview guide was designed. The first part focused on questions towards the start-up collaboration, whereas the second part focused more on the individual, especially covering questions towards entrepreneurial behavior. This interview guide was continuously iterated during the interviews, as recommended by (Gioia et al., 2013), to address issues that come up during the interviews.

13 interviews are used for this study, ranging from 30 to 60 minutes. Three interviewers allowed for a high level of objectivity during the discussions. One of the researchers is working at the case company and is therefore more prone towards a bias. Therefore, it was decided that the other two would lead the interviews. This proved to be a good decision since the third researcher with more knowledge about the company could jump in during the interviews if there were any follow-up questions needed.

The recorded interviews were transcribed. These documents were then coded to find relevant topics. The tool used for the coding is RQDA (Huang, 2012), a package within the statistical computing software R (Team, 2000). The codes were used to search for evolving patterns and topics within the data. The results of this analysis are presented in the next chapter.

4. ANALYSIS AND RESULTS

The challenges identified in the analysis of the interviews has been structured into four different areas, which will be presented in the following.

4.1 CHALLENGES FOR EMPLOYEES IN START-UP COLLABORATIONS

4.1.1 ORGANIZATIONAL SUPPORT

The process of getting money to do a project was often described as lengthy and difficult, which led to the description of different creative work-arounds that were mostly necessary if the project to-be-funded was not within the direct scope of the employee’s job description.
Interviewees described a zero-failure culture within the corporation. This culture originated in production, where it makes sense to focus on having as little mistakes as possible. However, this culture spread through all parts of the company. The described zero-fail culture was often mentioned as a reason for not getting support for too risky initiatives.

“COMPANY at the heart is an engineering company. We want to make products which are 99.9% perfect. So, you can’t build a product which is 80% perfect.

Start-up collaborations were often described as being financially supported. However, there was no planned time during the daily work for tasks revolving around that collaboration. The start-up projects were therefore perceived by some as side-projects that make for extra work besides the daily work. Others, however, took that as a challenge and started to find ways that allowed them to spend more time with the start-ups.

4.1.2 HIERARCHY, BUREAUCRACY, AND PROCESSES

Structure and culture of the case-company are perceived by most interviewees as hierarchical, with specialized departments and functions that work in formalized processes. This is often described as being frustrating or problematic, as the following quote shows:

“A big thing here at COMPANY is that everyone is focused on his function and his short-description department code. This is one of the biggest things at COMPANY, to break out, to open this and say ‘okay, we are working together on the same thing, and the department code is not relevant’.”

This strict separation of tasks between departments and functions was described as a barrier for doing things outside of one’s own function. On the other hand, there are also potential barriers within departments, e.g. if the direct supervisor does not support ideas or ways of working of the employees.

Processes are also perceived as an obstacle, because they are not designed to handle exceptions well and therefore block tasks not related to the given function.

“Everything in this big company is based on a process. Even if you want to buy something there’s a big process behind... You can’t leave... You have to follow the process, and sometimes... It is important to leave the process.”

The size of a large corporation was also described as a challenge. This was specifically clear during start-up collaborations where this factor apparently sometime leads to inconsistent information.

“[…] Because our company is so big, you know, we can’t do anything for it, they’re, they’re being shot at all different parts of the company and if, of course, we haven’t talked with each other so there’s always conflict information coming to them, […]”

4.1.3 MOTIVATION OF EMPLOYEES

Most of the interviewees acknowledged some sort of plan towards their future working life. Career-wise there were two options. Some interviewees working towards a management career, which did not allow for a focus on the start-up project since that does
not promote the individual in that way in most departments yet. However, most of the interviewees did not look for a management career. They were mostly interested in staying as close as possible to the technology itself and stay in development to create something. This interviewee sums up the feelings about this quite well.

“[…] it’s away from the process. It’s further away. […] The further away from the technology the more boring it gets. I wanna be involved and I wanna actually do it differently than we do it today.”

This is in more detail since management is associated massively with high amounts of the above-mentioned bureaucracy, administrative work, and being stuck within the existing processes.

Another factor that came into play is according to one interview a lack of challenging and inspiring tasks within an environment that enables people to do those tasks.

“[…] Because they didn’t feel like they found something challenging, well not challenging is the wrong word, but like inspiring, in a way. […]”

However, in contrast to the statements above it was also mentioned that the high salary at a corporation influences the employees to ignore the dissatisfactory side of the tasks. There was also a balance mentioned that everyone strives for between personal goals, security, self-development, achievements and risks. It was proposed that there was mostly a bias towards reducing risk and adding safety and that big corporations supply exactly that. Therefore, employees are not motivated to take too many risks within projects.

4.1.4 EXPERIENCE AND TIME SPENT AT THE COMPANY
Experience or seniority was perceived in two ways. First, there was the negative notion of seniority towards the fact that sometimes people lacking that seniority felt that their opinions were ignored simply because of that reason. Another unfavorable point is that a long time at the company in some cases leads towards accepting the status quo without ever asking if it still makes sense.

Second, and on the positive side, experience was seen responsible for three things. Self-confidence, especially within the company through understanding the internal language and processes better. The personal network is mainly due to the time spent and therefore mentioned as one of the most important assets within a corporation. And as a third option others start to rely on one’s opinion and ways of working and it enables more freedom.

4.2 ENTREPRENEURIAL BEHAVIORS IN START-UP COLLABORATIONS
The following section shows examples of entrepreneurial behavior, especially within start-up collaborations and how this was affected by the conditions worked out above.

4.2.1 CONTACT PERSON ACTING AS AN AMBASSADOR
One interviewee brought up the term “ambassador”, a person which is needed for certain tasks during a start-up collaboration.

“Ah that’s an important thing… Having an ‘ambassador’ … I have not found like the right place, or the right role within that company yet. But here it is, in the end the startup to COMPANY at various points and people try to find the right spokesperson. […]”
What became obvious when going deeper into the topic of the ambassador role is that there is a need for that person to push the start-up within the company. By doing so the person is challenged with some or all the conditions from the corporation that are shown above for which a work-around needs to be found. This task causes different challenges that conflict with the corporation as it usually works and therefore different forms of behavior are fostered. Some of which are shown in the quote below.

“[…] they delivered within one week, which is really, really quickly! Complete with all analysis and everything. And so, I wanted to give them a feedback quickly! And officially, I have to go through the hierarchy, I have to wait, ‘this guy is on holiday away until then and then, and then the meeting…’. And realistically from us, we need about four weeks to give a feedback… Just don’t do that! You know? *laugh* Maybe take a little bit of a risk? Maybe, send a few emails perhaps a little provoking to many people who you shouldn’t have to. *laugh* You know? Try and do this kind of startup mentality within the big company, and often it works! […]”

The quoted interviewee takes a risk to find a work-around for the normal processes, which shows that these kinds of collaborations sometimes need a low conformity by the employee that is acting as an ambassador. There are other instances where start-up collaborations lead to this behavior. Other interviewees stated that they needed to find work-arounds during the start-up collaboration due to different things. First, since the corporation is built with the conditions stated above there is a real need for creative work-arounds which enable the “ambassador” to keep up with the speed and flexibility of the start-up. Another problem was the lack of funding for certain ideas. And, there the employees have started to get creative in finding money in different places to make a project happen anyway.

Therefore, on the one hand, it is the speed and pushiness of the start-up to create results as fast as possible. On the other hand, there are the conditions within the company that force employees to get creative once something does not fit into the predefined processes and structures.

To show the necessity of the resulting entrepreneurial behavior another start-up collaboration shall be shortly portrayed. This interviewee had the collaboration handed over to him and he did not see the need to be an ambassador for the start-up.

“We said, ‘okay we can look into it’, and throughout the project he just passed it over to me. […] It has been decided that we look into this startup further by doing evaluation so basically, I just provided a third part of this evaluation for data that I thought that is more important than the rest. So… Yeah it would have been better if only one person at COMPANY decided accompanied this corporation from the beginning to the end, maybe this would have helped. […]”

In comparison to an ambassador this employee acted as a gatekeeper. The interviewee understood the task as a pure task of evaluating the capabilities of the start-up with no further duties involved. Which also was done completely within established processes and very little entrepreneurial behavior was found.

4.2.2 OEM ADAPTING WAYS OF WORKING FROM A START-UP

Start-ups have influence on the daily work of those involved in collaborations. Two examples illustrate this.
One example shows how the leadership role is newly defined by the experiences of an employee in higher hierarchical position.

“I think, what I saw is that if you motivate people because they are connected to the product or to the idea they want to release, you see that they... They are motivated, they want to do more. They don’t want to leave their job after eight hours, so they stay there until they finalize what they have to do. So they are more flexible in how they deal with their work. It is not about the hours, it is about the current stage in their product development. And that was really interesting for myself, and I always try to lead also in a comparable way,”

Apart from leading, there were other ways of working that were adapted in a way that they make sense in a big corporation. This interviewee reported how a hackathon has influenced the employees of a certain department to use the same technique to create a first insight into a topic.

“And I know that has been used in two teams at least, by the way doing digital products, not physical products. Doing a hackathon within the team even before they even started conceptualizing, even if it’s just some cardboard of whatsoever, they were doing a five day... Locked themselves in a room, go through that process and then afterwards use what you get there as a prototype or blueprint of what you are going to do in a real automotive manner. So I think that has been reused, or that has been an outcome of these visits.”

These two examples give a first insight into how start-ups can influence a corporation’s way of working towards a more entrepreneurial approach.

5. DISCUSSION AND MANAGERIAL IMPLICATIONS

Organizational support was one clear challenge, especially in the sense of getting time to work on the intended collaborations, since they are mostly not an official project of the department. Time delimitations are hindering the innovativeness (Gürol and Atsan, 2006) of the employees and often shows the conformity (Moran, 1998) in which the employees are stuck if they don’t do a project that is backed by the hierarchy. However, most interviewees reacted on this barrier with entrepreneurial behavior. They autonomously decided upon the importance of the collaboration and found time to do it. By finding ways around such barrier they showed low conformity, and high creativity, a sign of innovativeness (Chye Koh, 1996).

Hierarchy, bureaucracy and processes were often mentioned as main challenges. Hierarchy can be a facilitator but also a barrier if it is not supportive of the start-up collaboration. Bureaucracy, as well as processes, is always a challenge within big corporations. To deal with the hierarchy issues a lower conformity was observed and a high autonomy and self-confidence in decision-making. These barriers however make it harder to pick up the speed that would be possible by start-ups since they are slowed down by the bureaucracy and processes. This is a classic case of how the structure (Burns and Wholey, 1993) of corporations and start-ups is fundamentally different.

If the employees are focused on their career within the path of the corporation, they show a high degree of conformity and no willingness to take risks (Gürol and Atsan, 2006).
They are usually not very motivated to support a start-up. Others that are mainly driven by interest to the topic are more involved to help the start-up, even if that means a risk for their internal reputation, in terms of non-conformity. Their main task is to see the technology and therein they show a high need for achievement (Ward, 1994).

Experience was seen in two ways. One, as an opportunity, since seniority mostly means that there is a well-functioning personal network and a great knowledge on the company’s processes or more importantly how to get around them. This was described to an extent where it was harder to realize highly creative projects without a certain degree of seniority. Senior people therefore seem to have easy possibilities to being innovative. If they make use of their assets they can be very helpful to the start-up collaboration.

The other side is that seniority was mentioned by some to be the reason that they no longer try to be innovative, since they are so used to their daily business and no longer willing to change, i.e. showing high conformity.

From a managerial perspective, the obstacles therefore have two effects. One would be that they can be barriers to learning entrepreneurial behavior for some individuals that are high in conformity. From that point of view the barriers should be eliminated.

The other, however, is that the data shows quite clearly that the challenges led to entrepreneurial behavior in the sense that employees needed to find ways to overcome these obstacles and did so by developing or using entrepreneurial behaviors. It is therefore important for the management to know the pre-dispositions in their team. Giving support in the sense of time and capacity, however, would always help to develop entrepreneurial behaviors.

Two behaviors were identified allowing employees of corporations to become more entrepreneurial and, due to the nature of the projects, enhance the explorative capability of the OEM. One is the acting as an ambassador for a start-up, which causes entrepreneurial behavior through challenging the employee to find ways around existing conditions in the company. The other behavior found is that employees start adapting ways of working.

Acting as an ambassador showed that employees with a high personal motivation and interest towards the start-up project were willing to accept the challenges of the company. This was in some cases triggered directly by some of the start-up characteristics, e.g. the higher speed, which brought up the topic that normal processes and ways through the hierarchy are too lengthy in such a situation (Weiblen and Chesbrough, 2015). The situations were met with a high amount of autonomy and a low need for support. Innovativeness was greatly shown especially through the creativity that was developed to pursue the collaborations. Self-confidence (Gürol and Atsan, 2006) was shown, because those who tried started pushing ideas. Conformity therefore sank, as they started to ignore old processes increasingly to keep up with the start-up and enable them to deliver their product.

The second behavior showed a much more direct effect of start-ups. Some interviewees were reporting of ways of working they directly took, or saw other departments applying after being in contact with start-ups. This effect is also considered innovative and with a low conformity since they challenge the status quo with something new to create a greater value for the company, especially in areas that are focused on exploration, since a lot of
interviewees also mentioned that they mainly interact with start-ups if they have a new technology that offers a major change for the company in the respective field.

6. **CONCLUSION, FUTURE RESEARCH AND LIMITATIONS**

The goal of this research was to identify challenges for corporate employees during start-up collaboration and to see how employees act entrepreneurial during or after the start-up collaborations.

Challenges were lack of organizational support, hierarchy, bureaucracy, and processes, motivation of employees, experience from time spent at the company.

Organizational support mainly causes challenges due to a lack of assigned time. Hierarchy can be either facilitating or acting as a barrier. Bureaucracy is troubling to start-ups because it is slowing the whole collaboration down. Processes are often challenging because corporate processes are usually designed for exploitation and efficiency and not to cope with the speed of the start-ups.

Motivation of employees is an issue, since start-up collaborations are not officially supported with working time, employees with a high conformity are currently not fond of start-up collaborations in contrast to employees with a low conformity.

The experience from time spent at the company challenges especially younger employees, since ones with more seniority usually have a better personal network and are therefore possible to facilitate the start-up collaboration with their knowledge about the corporation.

Overall, there was the finding that these challenges while being potential barriers were paradoxically fostering entrepreneurial behavior through the need of finding workarounds.

The second research question revealed two specific mechanisms. Entrepreneurial behavior was promoted through (1) acting as an ambassador for the start-up and therefore having to overcome the obstacles within the corporation and (2) by adapting ways of working out of the start-up.

Both mechanisms manifested themselves in the employee with creativity, self-confidence, and low conformity.

Summarizing, it can be said that start-up collaborations provide different possibilities for OEMs to improve the explorative capability via entrepreneurial employees.

Future research should look deeper into these mechanisms and if they are reproducible. Also, it would be interesting to see if entrepreneurial behavior would be present without the challenges shown or if they are necessary.

Limitations of this research were mainly the small amount of officially done start-up collaborations. Therefore, the researches could possibly have interviewed predominantly employees that were entrepreneurial before the start-up collaboration. Future projects, should be accompanied the whole time, interviewing the affected employees before and after the project.
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