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Contents

Information on Contributions

Shared Mental Models as the Framework for Team Role Development: A Grounded Model of Dynamics in Student New Venture Teams

Submitted by Jakob Lengfeld, Tasja Zalewski, and Liam Shugar as a group assignment in the Seminar on Entrepreneurship and SME Management III - Current Issues in Entrepreneurship Research (Lecturer: Dr. Aki Harima, M.Sc in Business Studies, University of Bremen) in Winter Semester 2022/2023

Encouraging or Discouraging? Exploring the Balance between Intrinsic and Extrinsic Motivation in Entrepreneurial Education

Submitted by Susanne Karamanc, Nawdeep Kaur, Lara Rösler, and Thies Schomaker as a group assignment in the Seminar on Entrepreneurship and SME Management III - Current Issues in Entrepreneurship Research (Lecturer: Dr. Aki Harima, M.Sc in Business Studies, University of Bremen) in Winter Semester 2021/2022

Identifying Obstacles in Building Corporate Accelerators: A Systematic Literature Review

Submitted by Wassilios Asardis as a bachelor thesis submitted to the Faculty of Business Studies and Economics of the University of Bremen. Supervised by Prof. Dr. Jörg Freiling and Dr. Aki Harima, submitted on 28 April 2023.

The Entrepreneurial Identity of the Second-Generation Migrants during the Covid-19 Pandemic

Submitted by Anorth Ramalingam as a master thesis submitted to the Faculty of Business Studies and Economics of the University of Bremen. Supervised by Prof. Dr. Jörg Freiling and Dr. Aki Harima, submitted on 10 December 2021.

Shared Mental Models as the Framework for Team Role Development: A Grounded Model of Dynamics in Student New Venture Teams

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Abstract

This study delves into the intricate relationship between student team roles, dynamics, and performance in the context of entrepreneurship education. New venture teams are a central element in entrepreneurial education, and understanding the interplay between team roles and dynamics is critical. Conducted at the University of Bremen, Germany, this multiple case study addresses two primary questions: (1) How do student team roles develop during new venture courses, and how do they impact team dynamics? (2) What influence do dynamic transitions in role assumptions exert on the outcomes of student teams in new venture courses? The insights gained from multiple cases of student new venture teams are synthesized into a dynamic, grounded model, visually representing the interplay between team role construction, dynamics, and performance. This study contributes empirical insights into the nuanced development of team roles in entrepreneurship education, offering a deeper understanding of their influence on team dynamics and overall performance.

Keywords: Entrepreneurship Education, Shared Mental Models, Roles, Student Entrepreneurship, Team Formation

1 Introduction

Entrepreneurship education is a global phenomenon that contributes to economic growth and value creation by facilitating prospective students to create new ventures by preparing them with essential skills and knowledge (Kaufmann, 2009; Hytti et al., 2010). As new venture teams founded the majority of startups, they have become increasingly popular in entrepreneurship education. Teams in entrepreneurship education are used to simulate entrepreneurial practice and enable a profound experience of what being part of a founding team might feel like (Giacomin et al., 2016; Gibb, 2011). This shows the importance of a well-functioning collaboration between students in new venture courses to nurture the entrepreneurial interest of students. The way how teamwork takes place is crucial for thriving student collaboration, learning, and skill development (Warhuus et al., 2021; Forehand et al., 2016). Research has also shown that the success and direction of new ventures is determined by the way in which entrepreneurial team members cooperate (Agarwal et al., 2016; Chowdhury & Endres, 2005; Dufays & Huybrechts, 2016; Thiess et al., 2016). So far, the literature mainly discusses influential factors on team performance, which may be team development (Peralta et al., 2018; Bonebright, 2010; Miller, 2003) or team roles or certain role behavior (Chen & Agrawal, 2018; Forehand et al., 2016; Driskell et al., 2017). However, these factors have been identified separately from each other. As roles and development are both based upon behavior, researchers loosely identified a relation between these concepts, but the underlying antecedents and mechanisms of how they influence each other in their development and evolvement remain unclear (Davies, 2009; Forehand et al., 2016; Hall & Buzwell, 2012).

We take this as an opportunity to saturate the demand for more empirical work and to better understand the dynamics in entrepreneurship student team behavior (Chen & Agrawal, 2018). Therefore, this research aims to understand the development of student team dynamics through team role evolution and how both enable team functioning and influence team performance. Additionally, we want to identify and explain mechanics that lead to the development and maturation of team roles as we propose an interdepending relation between role- and team dynamics development. To fulfill these aims and gain deeper, more holistic insights into the functioning of student new venture teams, we developed the following research questions:

- How are student team roles developed during new venture courses, and how do they influence

team dynamics?

- How do dynamic transitions of role assumptions influence the new venture course outcome of student teams?

To give an answer to these research questions, this study rests upon a multiple case study analysis based on a student entrepreneurship course at the University of Bremen in Germany. The data was collected through semi-structured interviews with an intensive interviewing style and theoretical sampling method with student course participants. The findings gathered in this study were evaluated through the theory of shared mental models (SMMs), which enabled us to formulate the mechanics of role development and draw a connection to team dynamics and performance. They were then assembled in a dynamic, grounded model that pro-vides a visualization of the interplay of team role construction, team dynamics, and the effect on team performance.

2 Conceptual Backgrounds

2.1 Entrepreneurship Education

Entrepreneurship education (EE) research comprises many issues regarding what to teach, who to teach, and how to teach it (Turner & Gianiodis, 2018). So far, a universally applicable definition of EE is missing in academic literature. However, there is a shared basic understanding that EE is about encouraging skill- and knowledge development to promote enterprising behavior and stimulate new venture creation (Freiling & Harima, 2019b; Freiling & Harima, 2019c; Maritz & Brown, 2013; Henry & Lewis, 2018).

The foundation for most EE-research is a framework developed by Jamieson (1984) which differentiates three categories of entrepreneurship education: train-ing/teaching (1) about, (2) for, and (3) in an enterprise. Depending on the category, the specific content, the aim of teaching, and the target-audience vary. One example is that when teaching enterprise and entrepreneurship, the aim is to prepare future entrepreneurs for founding new ventures and self-employment. In this category, specific contents would be the identification and exploitation of business opportunities as well as general knowledge on how to set up a business (Freiling & Harima, 2019d). Building upon this

framework, scholars have debated over different outcomes of EE (Pit-taway & Cope, 2007; Matlay, 2008), the course- and audience-specific objectives (Heinonen & Poikkijoki, 2006; Boocock & Warren, 2009), and many other sub-fields within pedagogy, course design and target audience (Mwasalwiba, 2010). However, more current research criticizes the range of various contexts and the lack of generalizability of these previous studies (Thomassen et al., 2020; Henry & Lewis, 2018). In their context-based framework, Thomassen et al. (2020) highlight context as an important theme in EE research as it determines the influence of EE on the student's attitude towards entrepreneurship, entrepreneurial learning, -action, -intent, and -motivation. Based on an extensive literature analysis, they specified three contextual levels – macro, meso, and micro-level – to cluster similar contextual elements such as temporal, spatial, and sociological aspects. Whereas the macro-level is defined as the geographic setting and the meso-level contains elements regarding regional and institutional effects, the micro-level focuses on individual actors and interactions, meaning pedagogy and didactics, students, educators, content, and networks. Context elements interact and impact each other, implying a dynamic connection between elements like social net-works, student's learning behavior, motivation, individual competences, and educator's knowledge and skills. This interplay influences the degree of EE's impact on students. Additionally, the interplay and interdependency of context elements suggest a dynamic nature of EE on the micro-level, therefore setting the foundation for our research on student team dynamics and roles.

2.2 Student New Venture Teams

Within the research field of entrepreneurship education, scholars have recently shown a growing interest in examining entrepreneurial student teams since they are used as a learning method in experiential-based entrepreneurship courses. (Chen & Agrawal, 2018; Neumeyer & Santos, 2020). Due to the novelty of the topic of student new venture teams, a consistent definition is still missing. In general, they aim to simulate the entrepreneurial experience of founding a new venture and teach students entrepreneurial skills and behavior. Thus, they imitate actual new venture teams (Giacomin et al., 2016; Harima, Gießemann, Göttsch & Schlichting, 2021).

Research on student new venture teams or student teams in EE is scarce, and very little is known about them. Scholars researching in that specific field frequently use well-advanced research on pedagogics and teams and apply existing concepts to entrepreneurship- and student teams. For example, Warhuus et al. (2021) examined the influence of the team formation mode on subsequent teamwork in an entrepreneurship course. They identified that randomly assigned teams struggle more in a new venture founding course than self-assigned teams as they focus less on the team's well-being, resulting in project success being the only measure of well-being. This imbalance causes restricted team reflexivity and, therefore, less effectiveness. Neumeyer & Santos (2020) also focused on team formation in EE but were concerned with the impact of gender composition. They found that teams composed of more women than men performed and communicated better than teams composed of men or fewer women than men. Another study dealing with student new venture teams analyzed team behavior and leadership during the team development stages that were established by Tuckman & Jensen in 1977. Their results suggest that a leader within an entrepreneurial student team positively impacts team cohesion, leading to knowledge sharing and a better-perceived team performance (Chen & Agrawal, 2018).

Within the literature on teams – in an organizational as well as educational context – there is an ongoing debate on the influencing factors of team performance (Harms, 2015). Scholars have linked (entrepreneurial) team performance to many concepts, such as team composition (Neumeyer & Santos, 2020; Karlsson & Nowell, 2020), team roles (Driskell et al., 2017; Thirasak, 2020; Harima, Kroczak, & Repnik, 2021), team development (Peralta et al., 2018; Kuipers & Stoker, 2009; Tuckman & Jensen, 1977). So far, these influencing factors have only been examined statically and separately as team development theories neglect interpersonal relations and how team roles develop (Peralta et al., 2018). Some research, however, suggests an interdependency between team development and team roles. In their study, in which they developed a reliable measurement of team development, Peralta et al. (2018) concluded that considering a team's developmental stages is not enough to fully understand team performance as interpersonal dimensions need to be considered. Additionally, established definitions describe team roles as "patterns of behavior" (Driskell et al., 2017, p. 486) and team development as "the overall set of group processes reflecting a team's actions and behavior" (Kuipers & Stoker, 2009, p. 408). This implies that team roles as behavioral patterns are part of the processes that make up team development. This is consistent with observations of several educational researchers who studied behavioral role phenomena like free-riding and identified an impact on team development and performance (Davies, 2009; Forehand et al., 2016; Hall & Buzwell, 2012).

The study by Chen & Agrawal (2018) on team behavior and leadership during the team development stages and their influence on team performance is precious to this discussion because its findings show a connection between a team role (leadership), team behavior, and team performance. Our study builds upon their research and contributes to the discussion on team performance by theorizing the emergence and development of team roles in an interdepending process with team development and how this dynamic process influences team performance. As we treat team roles, behaviors, and development as the dynamic entities they are (Peralta et al., 2018), We also enhance the outdated static models by developing a unique, grounded model of the interplay and development of roles and their influence on team development and performance.

The definition of team performance, however, varies heavily depending on the underlying context of a study (Chen & Agrawal, 2018). Whereas some studies measure the quality of outcome (Knipfer et al., 2018), others focus on the perceived performance of team members (Chen & Agrawal, 2018). A study conducted by Harms (2015) examined team learning within a bachelor entrepreneurship course. He measured team performances based on the teacher's assessment. It consisted of five team deliverables for the teacher to reflect on the team's project process. As our case studies took place in a similar course and grading setting, we adapted this understanding of team performance.

2.3 Shared Mental Models
The concept of shared mental models was initially introduced by Cannon-Bowers et al. (1993) to

understand implicit team coordination and explain differing team performances. SMMs are defined as the "team members' shared, organized understanding and mental representation of knowledge about key elements of the team's relevant environment" (Mohammed et al., 2010, p. 879). These fundamental elements can refer to the team members' relations, characteristics, and working mechanisms as well as task goals, procedures, and performance expectations (Uitdewilligen et al., 2021; Xiang et al., 2016; Cannon-Bowers et al., 1993). Having a shared understanding of these key elements enables the team members to anticipate and predict the behaviors, needs, and actions of one another. Based on that knowledge, they can adapt their own actions and behaviors to these tasks and team demands (Mohammed et al., 2010; Uitdewilligen et al., 2018). Oversimplified, one can say that having shared mental models means that the team members are "on the same page."

As the construct of SMMs was initially developed to explain differences in team performances, an extant body of literature regarding the effects of SMMs evolved over the past 20-25 years. In general, the results of many studies suggest that SMMs positively influence team performance (Mathieu et al., 2000; Xiang et al., 2016; Jo, 2012; Xiang et al., 2013), which led to an overall academic agreement concerning this relationship. Additionally, researchers found that this relationship is mediated by team interaction processes such as coordination, cooperation, collaboration, and communication as they reduce the amount of conflict and misunderstandings and decrease uncertainty within a team (Uitdewilligen et al., 2021; van Rensburg et al., 2022, Mathieu et al., 2000; Zhou & Wang, 2010). This mediating effect means that team members interact better and more effectively with each other if they have SMMs, which results in increased team performance. More current studies go into detail on either the effects of SMMs or SMMs in general. For example, Uitdewilligen and colleagues (2021) argue that the more com-plex a team's SMM is, the richer the team's knowledge is. These teams tend to perform better as dynamic environments require the ability to process lots of information quickly and adapt accordingly. On the other side, Santos and colleagues (2015b) examined the influence of SMMs on creativity. Creativity is also essential in modern work settings, as teams and organizations

have to be innovative to keep up with quickly changing markets and demands. The researchers tested the relationship by collecting data from over 150 teams in a management simulation and found that SMMs influence creativity by reducing team conflict. As teams with strong SMMs would engage less in conflict and have similar working mechanisms, creativity among the team members is fostered.

All these studies have in common that SMMs are used to explain behaviors that lead to better team processes or performance. They argue that the development of SMMs within a team changes the team members' behavior as they adapt to the team and the task situation. This adaption leads to what is conceptualized as team processes: Teams with SMM – adapted behaviors – coordinate, cooperate, and communicate better and, therefore, show higher levels of team performance. On an individual level, mental models are furthermore defined as the foundation for all a person's behavioral mechanisms. Altogether, it can be concluded that there is a connection between SMMs and behavior as mental models – shared or not – shape an individual's behavior. This relation is why SMMs are a suitable construct for our research. We propose an interplay of SMMs, roles, and team development because team roles are defined as behavioral patterns, and according to SMM literature, changing mental models result in changing behaviors. Moreover, the concept of SMMs connects internal team processes that can be linked to team development with team performance, thus clipping together almost all the relevant concepts for our model.

What is missing in current SMM literature, however, is research on the develop-mental processes of SMMs within a team (Mohammed et al., 2010). We know that SMMs develop through a team's progress and are constantly refined (Uitdewilligen et al., 2018). Moreover, Van den Bossch et al. (2010) tried to capture the process by conceptualizing the development of SMM as a dynamic process of the continuous co-construction of meaning within a team where under-standings, perspectives, and opinions (individual mental models) are common and constantly constructed, denied, and re-constructed until the team reaches a similar construction of meaning (mental model). These construction processes happen mostly unconsciously and sometimes even implicitly. The

co-construction process can be considered the more complex and complicated variant of adapting to the team and task demands. Apart from that, we know very little about the emergence and evolution of SMMs, as researchers seem to have neglected this topic. Therefore, a deductive approach for our research was out of the question.

3 Methodology

3.1 Research Design

Our setting is a university entrepreneurship education course at the University of Bremen in which students form student new venture teams to simulate founding a startup company. This course is available to the students who chose entrepreneurship as one of the two essential focuses of the business economics master's degree and as one of six mandatory elective modules. As the study unfolds, it is important to note that the three researchers of this paper also participated in this course. This leaves them with unique knowledge about the course and plays an integral role in our research de-sign and how data was selected in the process.

The research design follows the methodology of Gioia et al. (2012), which is a "systematic inductive approach to concept development" (p.16) of grounded theory and thus enables high-quality qualitative research. During this methodology, we construct a data structure based on semi-structured interviews to identify patterns systematically. The analysis process of multiple-level categories is visualized and aims to capture theoretical insights of the researched phenomenon from a me-ta perspective. The Gioia methodology aims to create a dynamic inductive model grounded in data that shows dynamic relationships between concepts and how data relates to theory. Thus, the inductive approach is completed, and a newly generated grounded theory is resulting. As teamwork is mandatory for the course, we applied the Gioia methodology to a multiple-case study approach in which we researched three participating teams. While the literature has difficulties in describing what a case study is (Søilen & Huber, 2006), a possible definition might be "an intensive study about a person, a group of people or a unit, which is aimed to generalize over several units" (Gustaffson, 2017, p.2). The inaugurated benefits of a multiple case study are the ability to compare differences and similarities of the researched cases

(Baxter & Jack, 2008; Stake, 1995) and analyze gathered data within the observed scenarios or across scenarios (Yin, 2003). We used this method to compare the differences and similarities between the three teams we picked through theoretical sampling and analyze their course progress.

3.2 Data Selection and Collection

The research design influenced our data selection, a multiple case study based on the course. We selected potential interviewees for our interview guide utilizing the method of theoretical sampling by purposely selecting cases that we regarded as typical or extreme for maximal variation and to develop our emerging theory. Furthermore, we aimed for cases in which our research subject was observable at various levels and was easily accessible. This selection was enabled by the fact that they were former course participants. Also, we decided to include experts (e.g., course educators) to validate the gathered student data externally. The educators in this course also conducted mandatory team coaching, which enabled deep insights into team dynamics and allowed us to observe behavior we could not identify. Therefore, our data selection requirements were: Being a participant of the course in the winter semester 2021/22, as they had first-hand experience with the subject or being an educator of the course. We also selected at least two participants from each student team to observe differing perspectives within the team. We included outliers in team performance regarding specific team roles (e.g., free-riders, leaders, etc.) and observed team dynamics (e.g., conflicts, pivots, etc.).

To collect our selected data, we turned to semi-structured interviews for our study. This type of interview contains a list of questions that can be asked in a flexible order, and its wording can be changed to be contextually appropriate to reflect the perspective of the experienced phenomenon by the interviewees. We utilized an intensive interviewing style, guiding the participants gently through the interview by relying on a one-sided conversation to fully understand the participant's perspectives on the research topic. This allowed us to gain detailed insights on first-hand experiences and follow-up on unanticipated areas of inquiry, implicit views, and accounts of action. These experiences were later combined with our own experiences and data. To gain external validation,

we conducted six student interviews (two from each team) and one expert interview (course educator).

3.3 Data Analysis

The initial codes from MAXQDA were extracted to MS Excel, where we reduced them into more compact categories. These categories adhered to the informant's terms and experiences of the researched phenomenon. Recoding the initial codes into informant-centric first-order categories helped reduce the sheer number of categories during the initial data analysis. Continuing with the coding procedure, we used an approach similar to the axial coding method used by Strauss & Corbin (1998). We sought similarities and differences among the first-order categories to cluster them into themes using the digital whiteboard plat-form MIRO for descriptive mind mapping. By progressing into this stage of code analysis, we enter a purely theoretical realm as we look at emerging themes in our data, suggesting possible concepts, tentative relationships, and explanations regarding the phenomenon. Therefore, we conducted a literature review to match the emerging categories from our data analysis with the theories and concepts we found within the literature, making it an abductive process. This approach reduces the number of available categories and abstracts the initial codes into theory-centric second-order themes. During this stage, a total of 8 second-order themes were identified. Overall, the data analysis, especially the organization of data from 1st to 2nd order categories, is the step that gives the research more structure and more qualitative rigor (Gioia et al., 2012).

After achieving theoretical saturation by gathering a workable set of themes and concepts, we reached the final stage of our data analysis. We aggregated our second-order themes into overarching theoretical dimensions of a higher ontological level using the second-order themes as sub-categories by using MIRO once again to gain a better overview of our data structure. During this process, we changed the theoretical lens derived from our literature research three times as we discussed how these dimensions answered our research questions. We concluded by using the theoretical lens of SMM and identified a total of four overarching theoretical themes.

4 Findings

4.1 Case Description

The course can be chosen as a compulsory module focusing on start-up management or as an elective module at the University of Bremen. In this course, students have to independently form and register among themselves in five to six teams based on a profile of inhibited hard skills, soft skills, and possible ideas (Freiling & Harima, 2019a). During the course, students have lectures and workshops where they are taught the design thinking method to apply to their projects. Additionally, this process is complemented by individual team coaching sessions. All teams go through four bi-weekly sprints, which have to be presented to the course at the end of the sprint. Here, the team's progress is documented, and feedback is obtained from other teams and educators. The sprints aim to go through the respective stages of the design thinking process and derive a market niche based on an iterative approach of identifying a particular pain to people. The module is concluded by a final pitch, which is held in front of the chair, the course participants, and other external interested parties. The sprints and the final pitch count as exams. The course aims to create a startup by developing a business idea based on the design thinking method. Course participants learn how to derive a gain through an existing pain form everyday life. Also, start-up skills (organization, opportunity recognition, idea development, presentation skills, teamwork, adaptation to circumstances, etc.) are to be built up, and students are to be prepared for possible start-up situations. Developing a business plan is irrelevant here as it could hinder creativity. As explained in the methodology, we were also course participants and, therefore, had a unique perspective and insight on the participating teams. The researched teams were handpicked based on theoretical sampling as they showed exciting observations, which will be explained further in this section.

The first team we included in this study is our own course team, which consists of six students, where four are male and two are of female gender. The team stands out as the previous leading role was split into two leading roles as the course progressed, which was not observed in any other team. Also, a free rider was not only identified by the team but also by the educator. The idea process was unclear, as each member had an individual idea

they wanted to contribute. The development of the idea took place over a more extended period and led to the fact that some team members could not originally identify with it. The team was particularly limited by the lack of hard skills and, therefore, had to settle for a limited selection. The split leading role allocation and the existence of a free rider gives reason to look deeper into how this role allocation may have impacted the course progression and the overall team's well-being and performance.

The second team we included in this study consists of six students, five male and one female. The team was suitable for investigation because it had a clear-cut leader with high levels of ambition and responsibility for the team. Still, the team contradictorily contained two free riders. During the course, this student team was considered one of the best. The team's idea development process was fairly linear, as two members wanted to address a topic from their previous sports economics major. In addition, other ideas were discarded because, similar to other teams, they could not be implemented by the team due to a lack of hard skills. The contradictory nature of the role allocation led us to study this team as we hope for interesting team dynamics and differing perceptions between the leading and free-riding roles.

The third team consists of five students, three male and two female. The team was suitable for study because they had a leadership change and were the only team to perform a pivot during the course (complete change of direction in the project). The team's idea development process is described as quick and effective. As the course progressed and feedback was received within the coaching sessions and sprints, more problems with the idea crystallized. This ultimately led to the team performing a 180-degree turnaround with their idea. The change of leadership and the conducted pivot could provide us with great insights into how these processes were handled within the team and altered or enhanced the team development and team performance.

4.2 Data Structure

In the following, the findings organized within the data structure will be present-ed by describing the categories that were identified during the interpretation of the empirical data. All informants made subjective experiences that were to a certain degree, comparable to each other, whereas the overall team collaboration differed from team to team. This was especially the case when it came to open communication about roles an individual fulfilled in a team. Our findings are ar-ranged in four sections, organized around the core elements of our emerging framework. From a broader perspective, it shows the construction and development of team roles within the student new venture teams during the semester. Data Structure can be found in Figures 1 and 2.

4.2.1 Emergence of Initial Team Responsibility

The aggregated dimension emergence of initial team responsibility resulted from statements of informants about their own motivation to participate in the course and observations of other team members' behavior and attitudes. We identified two types of classifications of the main reason why a student chose to participate in the new venture course. The first classification includes students motivated to participate, originating from a practical-professional interest in project management, founding, and problem-solving. These students often had a personal interest in venture funding and were seeking practical experience in a safe environment. Another facet of the first classification is a course motivation related to the academic-theoretical interest in entrepreneurship and startups. Often based on prior experience in entrepreneurship education, for example, in a bachelor program.

> *"I had, and I still have, my own interests as well. I don't know, but I am someone who couldn't work for someone else my whole life. I don't know. And also back in EM1, I told my team [...], if we had a great idea now, why shouldn't we implement it later?" [I05-C5]*

These two characteristics were applied to the second-order code intrinsic motivation for initial course participation. The attitude of these students

towards the course can be rated as an individualistic approach to venture founding with a motivation that was not dependent on others participating in the course.

> *"And there, I threw parties in clubs with a buddy and earned relatively good money. It*
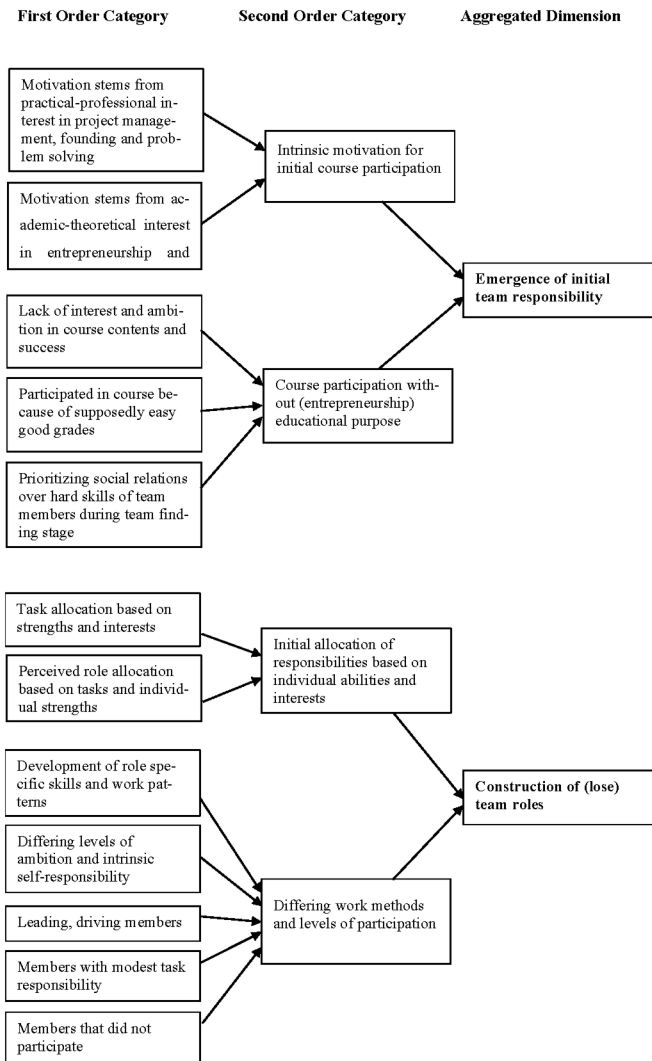
Figure 1: Data Structure (1/2)

kind of awakened this entrepreneurial spirit in me because I thought, okay, I want to experience more in that direction; I want to learn more about it." [I06-C2]

The second classification of course participants refers to students who chose the new venture course almost apart from the educational content. Some informants described a lack of interest and ambition in course contents and success when discussing some of their team members' work ethic. The priorities differed among individual team members, which became strongly visible regarding the time invested in the project and its tasks.

"And in the end, it was actually just negative because I was simply annoyed, having so much to do with all the tasks that other people hadn't done." [I03-C57]

Another indicator of differing priorities is the absence of intentions to find a new venture after the course. Often, the better chance of getting good grades than in other classes was the driving factor. This addresses students focusing on their overall grade instead of the subject itself. The last aspect in this matter describes the behavior of prioritizing social relations over the hard skills of team members during the finding stage. This was especially the case when teams (partially) existed before or when students looked out for their friends regarding course selection.

"So, at the very beginning, I didn't really intend to choose the focus on Entrepreneurship Management because, before that, I hadn't had any experience or interaction with the entrepreneurship field, and I never really had any plans to start something myself." [I02-C1]

"And then I thought, 'Well, this is a good opportunity to join these groups in the modules with people I've already gotten to know a bit. So, I don't have to find completely new people in another module and have no idea what it's like to work with them or if we get along.'"[I02-C4]

We concluded these first-order categories to the second-order course participation without (entrepreneurship) educational purpose, which can be seen as the counterpart to the other second-order category underlying this dimension.

These two classifications depicted in the second-order categories implicate a different approach to entrepreneurial action with the project team. We see students with varying backgrounds in terms of course selection working in a team, which is a common thing, but at this point, we also suppose a different feeling of initial responsibility for the new venture project and, in the next step, the degree of initial team responsibility. This means we observe a correlation between the motivation to participate in the course and the initiated feeling of responsibility for the project team. This concludes the first aggregated dimension of the data structure emergence of initial team responsibility.

4.2.2 Construction of (Lose) Team Roles

The initial allocation of tasks within the teams was mainly determined by identifying team members' strengths and their choice to take over certain tasks to assure the best possible completion. For example, in the case of a team member with a lot

of experience in creating appealing presentation slides, it would not be efficient to let anybody else work on that. One informant even stated that team members with certain skills are mandatory for successful cooperation.

"But for some, I believe it's just not the case that they see themselves in a specific role from the beginning or have a bit of knowledge, so they can say, 'I'm good at this, and I would go through with it and do it for this module.'"[I01-C89]

The initial task allocation process of the teams is summed up as task allocation based on strengths and interests. This procedure is strongly related to the perceived role allocation, as shown in the following. One way of role allocation was described as team roles being received based on personal interest, which implies a more proactive behavior of students.

"I was overall satisfied with the role, and I sort of chose the role myself because I didn't necessarily want to delegate design and such. So, I voluntarily took that on, I would say." [I02-C55]

The other way roles were allocated was described as a somewhat unconscious procedure regarding task distribution. Informants delineated it as role allocation over time, strongly dependent on arising tasks. These two types of role allocations form the first-order code perceived role allocation based on tasks and individual strengths. All in all, we see a strong connection between the tasks initially undertaken and the feeling of responsibility toward the overall project. We conclude this in the second order category, the initial allocation of responsibilities based on individual abilities and interests.

An essential factor in the construction of team roles is how individuals encounter the team project on a personal level, which addresses statements by the informants regarding the work ethic and attitude of themselves or their teammates. First, a topic often mentioned concerns the differing levels of ambition and intrinsic self-responsibility. Informants described different levels or lack of work quality as a source of frustration; this could be based on the mentioned unclear individual course objectives and work ethics. The interviews point out three types of fellow students: leading and

driving members, members with modest task responsibility, and members who did not participate, which was the worst-case scenario for the remaining team members.

"Yeah. So, these were people for whom you couldn't assign a task, or who didn't see themselves in that role either." [I03-C52]

Students also developed role-specific skills during the semester, especially when the role fulfilment depended on the situation. For example, there was no initial desire to lead the team, and the required skills had to develop over time. That is summed up in the first-order category development of role-specific skills and work patterns. Previous remarks are composed by the second order category differing work methods and levels of participation. Combined with individual abilities and interests leading to the initial allocation of responsibilities, we conclude the aggregated dimension of construction of (lose) team roles. Based on our informants' statements, we assume that the role construction process within student new venture teams is based on responsibility allocation, level of participation, and working methods.

4.2.3 Solidification of Perceived Team Roles

As the time of collaboration extended, the teams developed a specific workflow to function successfully and fulfill the expectations of the course. Students became more familiar with their colleagues and individual roles, most important in leading the team. The project management role, often taken voluntarily, grew into a responsibility for numerous tasks and a perceived project responsibility. Tasks of leading members involved design, communication, and project management, as one informant explained. The awareness of this team role and the perceived acceptance by the team enabled an improved collaboration process regarding task distribution and motivation. Still, in some teams, the perceived unilateral assumption of responsibility led to negative emotions and frustration.

"I postponed many things from my free time for university appointments and then felt it was very unjustified that she prioritized her free time, and I consistently put my free time behind for university." [I04-C72]

Other vital roles that emerged next to the team lead

were members that focused on research and development of the product or the mediator role as an essential part of teamwork in terms of conflict prevention, as one informant said. All in all, we
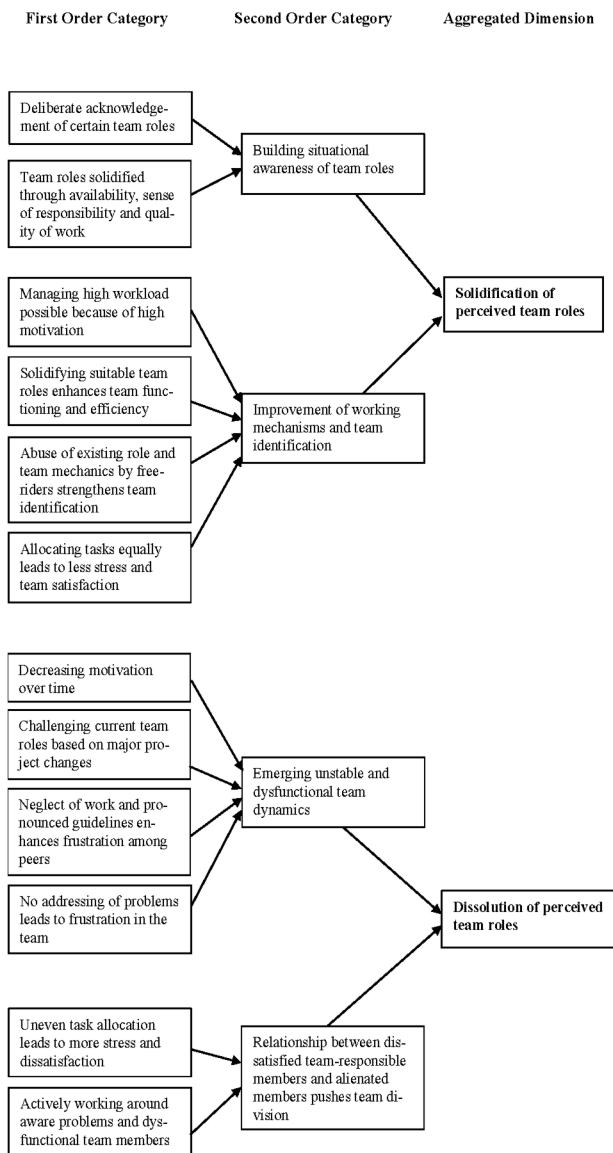

Figure 1: Data Structure (2/2)

observed a deliberate acknowledgment of specific team roles.

On the one hand, informants reported from students that stood out regarding a certain responsibility for the project's success, but what also came up was the opposite type of team member, particularly in the sense of availability to diminish workload for the rest of the team. Often mentioned were students who were motivated regarding the project's success but lazy regarding task fulfillment. This was particularly apparent in finishing tasks always on the last call and a distinct reliance on the functioning of others. Team members who tended to act like free riders released a lot of conflict

potential. High unreliability often leads to more stress and less motivation for the remaining team members. Their behavior influenced the team negatively. At later stages, it was more expensive to integrate them than to just take care of the work on your own, as an informant reported.

"I somehow felt with the other two people that you couldn't really talk about the whole topic anymore because they just had no idea where we were at. So, if I give them tasks that are somewhat larger than 'Create a team slide,' I end up with more work. [...] In other words, explaining to them what they should do becomes more work than if I just do it myself." [I03-C57]

Concluding the last abstract, we detect that team roles solidified through availability, sense of responsibility, and quality of work. From this point, the teams knew in what direction the dynamics of the team might develop and had a feeling of how characters in the team might influence the collaboration. We outline this in the second-order category, building situational awareness of team roles.

The other second-order category in this dimension is improved working mechanisms and team identification. With this category, we classified the enhanced collaboration resulting from more familiarity among team members. One informant, for instance, stressed that developed roles and positions lead to better coordination and orientation within the team. Another told us that allocated roles enhanced the team's efficiency and functioning and that working around a non-participating member brought the rest of the team closer together. We conclude these insights as solidifying suitable team roles enhances team functioning and efficiency.

"And I think that, after that initial crisis or the formation of positions, we all actually got into a pretty good working mode together. And then, we pulled together quite well." [I04-C61]

A topic that was mentioned many times was how to deal with stress. Informants expressed that during phases of higher strain, the team's success factor was a shared high motivation, which is taken up in managing a high workload possible because of high motivation. Another aspect was a clear project orientation for stress relief or establishing a good

workflow with shared responsibilities to avoid an unfair workload distribution. One team stood out by developing a co-leading role, where two students supported each other with shared overall project responsibilities.

"Maybe I've also learned more over time that you can just do it as a pair, that you can trust each other. [...] Yeah, I don't need to stress myself out because I know it works really well in the co-lead role." [I04-C123]

All teams had to cope with, especially students who took over responsibilities from the beginning of the project, the attitude of "taking everything for granted" by some team members. That means that voluntarily taking task responsibility at the beginning of the collaboration was often impossible to transfer to other team members at later stages, as one affected informant said.

"And yeah, it wasn't even up for debate whether someone else would support me or not. The others just assumed from the beginning that I would take over again." [I02-C56]

At the same time, it was observable that teams that experienced team members pulling themselves entirely out of responsibilities were brought even closer together. We conclude these aspects in abuse of existing roles and team mechanics by free riders strengthen team identification. The upcoming awareness of others and their own behavior, in combination with successfully implemented working mechanisms, clarified the understanding of what kind of collaboration patterns were necessary to succeed in the course. We subsume this in the third aggregated dimension, the solidification of perceived team roles.

4.2.4 Dissolution of Perceived Team Roles

The following abstract regarding the fourth aggregated dimension is based upon statements addressing difficulties and other developments within the teams that brought problems in the collaboration. Furthermore, it needs to be mentioned that roles were also dissolved in some cases when a team member started to work in a different position to support the project since a former role was not required anymore. A big subject was the decreasing motivation over time. In the beginning, the team motivation was high but

decreased over time since some team members lowered their efforts at some point during the semester, as informants reported. This resulted from negative feedback from lecturers, the change of the project idea, or even high individual standards that led to laziness.

"So, we didn't work less on the project because of that, but there just wasn't that intrinsic motivation anymore. Instead, the motivation was only there to put in a lot of work to get a good grade, not really because we believed in the idea." [I02-C30]

All in all, the different levels of motivation led to conflicts. One informant described situations with team members who didn't participate in discussions or were absent. The intentional absence led to massive frustration because, in the end, the work still had to be done by other team members. It was mentioned that the overall team grading just felt unfair in certain situations. To capture these instances, we build the category of neglect of work and pronounced guidelines that enhance peer frustration.

"So, each of us is somehow working on the side, and that's clear. But some people just never find a time for a meeting that works for them or always pull out. For example, if I had to work, it was like 'we won't have the meeting during that time.' And other people would say, 'Yes, we'll have the meeting, but I can't attend because I have to work.'"[I03-C61]

An important factor regarding the solution to upcoming conflicts could have been speaking up about grievances in the collaboration. Informants generally said that a lack of communication led to conflicts or that no mutual goals were communicated. Also, the behavior of the free riders was often not directly addressed and was almost tolerated. We conclude that not addressing problems leads to frustration in the team. We ascertain that problems were not sufficiently communicatively ad-dressed to avoid personal conflicts.

"And sometimes you have it like, 'Hey, this can't be happening now. We all have so much to do, and everyone has to contribute so that we can make it.' So, there was definitely that, but I would say, in

abundance, there was more of this 'you swallow it somehow and just try to continue on your own.' And yeah, so that there isn't too much conflict in the end." [I03-C76]

Informants reported that roles changed over time to adjust the team to current project circumstances. We capture that development in challenging current team roles based on significant project changes. All in all, it was observable that no team was able to escape trouble in the collaboration. In the second-order category of emerging unstable and dysfunctional team dynamics, we subsume that. When looking at emerging conflicts, it was visible that an unbalanced task allocation was a major issue and weakened the whole team. The higher workload for some led to more stress and personal frustration.

"And in the end, it was actually just negative because I was simply annoyed. I had so much to do with all the tasks that other people hadn't done. I was stressed by it, and it caused me too much work." [I03-C57]

We hold that down in the category of uneven task allocation, which leads to more stress and dissatisfaction. Over time, patterns emerged to deal with that inequality. Informants reported that even though the whole team was aware of the unbalanced workload, it seemed impossible to interact with silent members. In a way, that behavior was accepted, and the remaining team members actively worked around that dysfunctionality.

"I think, in the end, we just accepted that she wasn't really a proper part of the group and didn't want to be, keeping herself detached. Even in the final presentation, she was mostly absent. And it was just... eventually, we accepted that she wasn't a part of the group." [I04-C126]

"Like I said, 'X' didn't really engage or participate in discussions anymore. There wasn't even a space to discuss things with her because she didn't offer any space; she completely stayed out of it. She basically ghosted us." [I04-C126]

As mentioned earlier, in other teams, it was a similar situation with the same students being responsible for the overall progress. We observed how these teams were actively working around aware problems and dysfunctional team members. All in all, we conclude these statements in the second-order category. The relationship between dissatisfied team responsible members and alienated members pushes team division to assess the emerging split of teams. Overall, the last developed second-order categories discussed the issue of instability and experienced team division. To build the fourth aggregated dimension, we assume that a dissolution of perceived team roles might be adequate within these teams.

5 Discussion

5.1 Dynamic Model of Role- and Shared Mental Model Development

In the previous section, we described four phases of role construction and how they are initially shaped through individual skills, differing work methods, and levels of participation and how they are solidified or dissolved because of established situational awareness or dysfunctional team dynamics. This chapter introduces and explains our resulting grounded model (Figure 3) and deals with the theoretical underpinnings of SMMs and how developing them as a team leads to the construction, solidification, and dissolution of team roles. We further argue that this process determines the team's interpersonal and task-related mechanisms, resulting in either functional team dynamics and improved performance or dysfunctional team dynamics. It is necessary to mention in advance that even though some descriptions and explanations appear linear, processual, and static, we are proposing a dynamic process of simultaneously happening mechanisms.

5.1.1 Emergence of Initial Team Responsibility and Construction of (Lose) Team Roles

In educational research, learning and participation motivation is determined by intrinsic or extrinsic factors, whereas intrinsic factors are considered to

be more effective. It depends on the goals students set for themselves, how much they value achieving
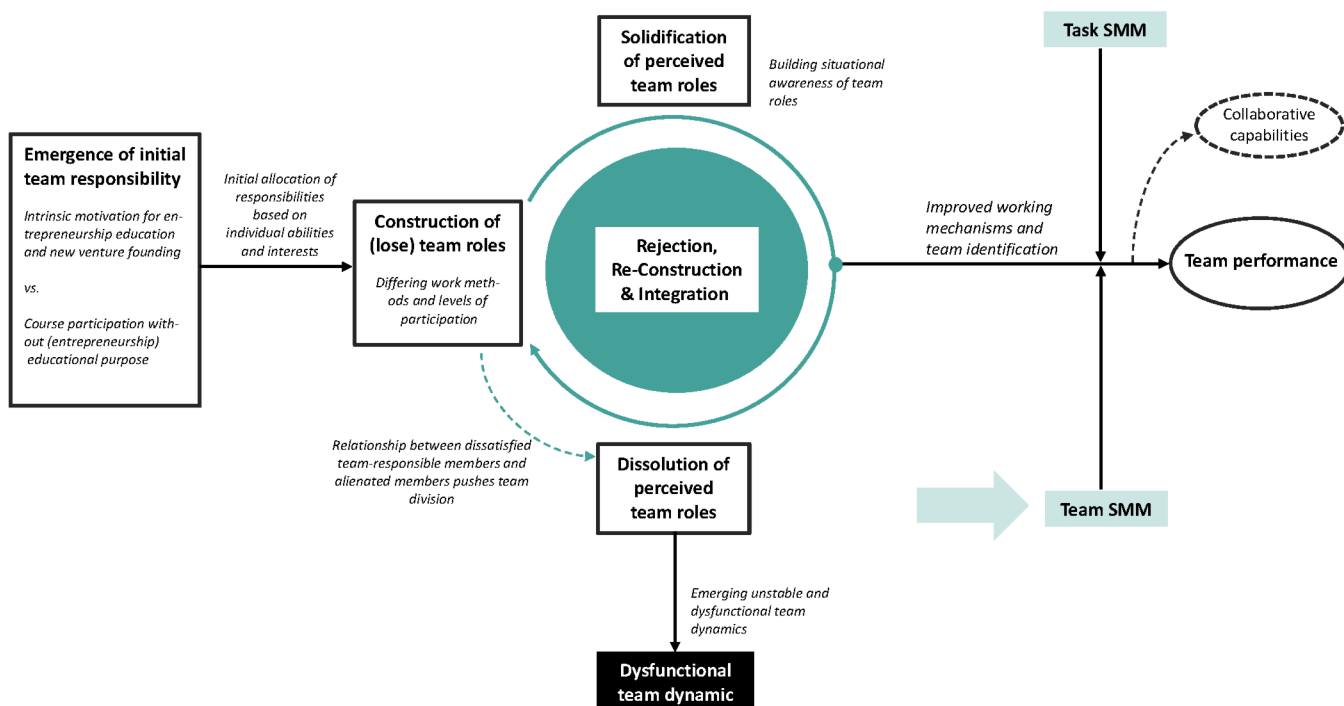
Figure 3: Grounded Model of Development of Shared Mental Models

these goals, and how they perceive the benefits of reaching their goals (Hytti et al., 2010). In other words, one's ambitions determine their motivation. In the findings, we presented that student either participated in the course based on a genuine, intrinsic interest in EE and founding a new venture or based on motives without any EE purpose. The kind of motivation and drivenness of a student determines if they will take upon initial responsibility in the team. Ambitious students, for example, set great goals for themselves and care a lot about achieving them, which results in them initially taking responsibility as they cannot risk staying behind their goals. On the other hand, students who lack intrinsic motivation are less ambitious, thus tending to lean back at first because their standards and goals do not align with those of more intrinsically motivated students.

Based upon the initial emergence of team responsibility, tasks are temporarily allocated among the team members. As they are still beginning their team development, the team members simultaneously learn about each other's behaviors, perspectives, and opinions (Uitdewilligen et al., 2018; Santos et al., 2015a). This is the first step towards developing SMMs as a team. It is further necessary for team members to acquire interpersonal knowledge at the beginning of teamwork because it enables them to situate

themselves in the team (Uitdewilligen et al., 2018). We argue that this process of positioning oneself in the team is where roles are initially constructed: The differing goals, work methods, and levels of participation of the team members result in certain individual behavioral patterns, for example, taking upon responsibility or avoiding work. These individually characteristic behavior patterns can be summarized as role behavior (Driskell et al., 2017). The team is, therefore, constructing team roles during the early stages of developing SMMs.

5.1.2 Construction, Solidification, and Dissolution of Team Roles

In general, SMM progressively evolves and improves as a team is confronted with broader knowledge and information over time, which they have to process (Uitdewelligen et al., 2018). This new information may regard new task demands, a certain task quality, or member-specific characteristics and behavior. Most team development theories agree that, especially at the beginning of the course or project, a team is still learning and figuring out its internal dynamics, relations, and task activities (Miller, 2003). They seek coherence and solidify roles (Peralta et al., 2018; Tekleab et al., 2009). According to a conceptual model developed and tested by Van den Bossch and colleagues (2010), coherence – or mutual meaning – is the foundation for SMMs. It is

developed through construction, rejection, reconstruction, and integration, which describe cognitive and behavioral mechanisms that occur when team members interact and communicate. For example, an individual statement or action is processed as the team contrasts it with their own mindset, evaluating it and building an opinion about it, which leads to a new, co-constructed meaning. This new, initial, co-constructed understanding may be rejected due to misinterpretation or personal or emotional rejection, which induces a re-construction based upon deeper, more critical discussions (Tjosvold, 2008). During this process, personal expectations, perspectives, demands, and standards are consolidated into the mutual, team- and task-related awareness, which resembles having SMMs.

Our grounded model proposes that the process of role construction, solidification, and dissolution as well as the process of constructing mental model coherence, happen simultaneously and dependently. As the team gets used to each other's working mechanisms, characteristics, and expectations of team functioning, they form new and mutual working mechanisms by continuously refining their mental models. At the same time, roles are constructed based on individual skills and knowledge as team members appear to do what they can do best first. If the roles contribute positively to the team's and the project's wellbeing, the team mutually agrees on the existence of the role and integrates it into their SMMs. In other words, the team is getting used to individual roles and develops coherence around a team role, its value, and its suitability. Suitable and thus mutually accept-ed roles are solidified. When the context of demands, expectations, or perspectives changes, a role can be dissolved and transformed again because the new cognitive scope needs to be processed. The construction, solidifying, and dissolving cycle starts again until the team has reached a common ground regarding their internal working mechanisms, roles, and task activities.

5.1.3 Construction of (Lose) Team Roles and Dissolution of Perceived Team Roles

Our findings showed that not every team is going through this cycle of finding coherence, building team roles, and developing SMMs. That is because the team members' work methods and levels of participation may differ so much that tasks,

responsibilities, and workload are unevenly allocated. In literature, two extremes of role behavior are identified: leadership and free-riding. Leaders take on most responsibility as they guide, coordinate, and facilitate tasks, whereas free-riders are characterized by their lack of individual effort (Chen & Agrawal, 2018; Forehand et al., 2016). Also, free-riding behavior causes more workload for the rest of the team since other team members have to compensate for it by doing more, revising and redoing work, and taking on more responsibility (Jassawalla et al., 2009).

Consequently, we argue that when these two extreme role behaviors excessively occur during initial role construction, the gap that needs to be over-come to find coherence is too large. The uneven workload allocation causes stress and dissatisfaction among the team, pushing the team's division. They cannot develop a mutual cause due to their interactions and discussions failing, thus not entering the cycle of mutual role construction. The team roles cannot be solidified since they disagree on them and do not serve team functioning. Instead, findings showed that team roles are dissolved as team members are ignored or banished. Thus, we argue that these members are excluded from further SMM development, causing the initial team's division. We used a dotted arrow here since we are discussing an exceptional case that could be further examined in subsequent research.

5.1.4 Dissolution of Perceived Team Roles and Dysfunctional Team Dynamics

When a role does not suit the team's progress and working mechanisms anymore because demands may have changed, it needs to be dissolved and re-constructed again. According to our findings, it might be the case that a team member fights the dissolution and change of their role. In the context of developing coherence, this person rejects the transformation demanded by the team's current SMMs (De Dreu & Weingart, 2003). It is possible that this person and the team cannot find a new, shared understanding and coherence regarding this issue as the person is not willing to adapt. If the team member decides to push their own agenda, relying on their role even though it does not fit the team's understanding of their role, the team's mental model is imbalanced. Every team member no longer shares the understanding of the team's

internal dynamics and roles. As several studies have shown that SMMs are significantly related to effective teamwork and functioning team dynamics (Xiang et al., 2016; Zhou & Wang, 2010; Jo, 2012), we conclude that teams that cannot reach a common sense on their roles and teamwork will suffer from dysfunctional team dynamics. Our findings suggest that the communication and interaction within such teams suffered from stubbornness, ignoring, and avoiding. However, dysfunction-al team dynamics do not mean the team quits or fails the project. It means the team's internal processes are impaired as SMMs are nonexistent.

5.1.5 Solidification of Perceived Team Roles and Team Performance

Established theories on team development conclude that to work as an effective team, it is necessary to go through a role and team transformation process that forces them to adapt and find cohesion (Bonebright, 2010). According to our results, this is achieved when team members have built consistent situational awareness of the roles and their interdependencies. This is when the team roles are retained and stabilized. As a result, team members are beginning to act according to role demands such as availability, responsibility, and quality of work. In this case, we argue that coherence and SMMs exist because external role demands and members' behavior are harmonized. This corresponds with SMM theory because, at this point, the team members have a mutual under-standing of each other's roles and the environment they are acting, which enables them to estimate each other's expectations and match their behavior accordingly (Uitdewilligen et al., 2018).

Many studies concerning the effects of SMMs conclude that SMMs impact team interaction processes such as coordination, communication, and collaboration by lowering the number of misunderstandings and conflicts (Uitdewilligen et al., 2021; Xiang et al., 2016). Also, as a team has gone through the cycle of role construction, sorting out role behaviors and mutual understandings (SMMs), they pass phases that researchers consider necessary to work together effectively (Peralta et al., 2018; Bonebright, 2010). That is because they resolve task activities and inter-personal relations (Miller, 2003).

Our model complements these conclusions as we

found that solidifying and retaining team roles improves the working mechanisms and identification within a team. A team commonly finds a suitable way of working together. It is aware of internal processes and their role in them, which results in less stress, enhanced team functioning, and higher satisfaction within the team. According to Santos and colleagues (2015b), teams with SMM feel more satisfied because they can use information and knowledge efficiently to work towards a common goal.

Most researchers distinguish between task-related shared mental models (task SMMs) and team-related mental models (team SMMs). Task SMMs describe the understanding of the team's work, such as specific strategies and procedures, perceptions of the task progress, and knowledge of the contents of a task. Team SMMs, on the other hand, relate to knowledge regarding other team members individually. This means their strengths, skills, weaknesses, and the entire team structure, including team roles, role interdependencies, and communication and coordination patterns (Mathieu et al., 2000, Xiang et al., 2016). Looking specifically into these kinds of SMMs, we argue that team SMMs improve working mechanisms and team identification as the quality of interactions increases through solidified roles and a mutual understanding of interpersonal team dynamics. They reduce conflict and improve decision-making quality and coordination (van Rensburg et al., 2022). Therefore, teams with settled roles, responsibilities, and interdependencies are more coordinated and more cohesive because they are on the same page regarding their working mechanisms. Similarly, we claim that task SMMs positively influence working mechanisms because the team collectively operates along shared strategies, procedures, and goals. Having the same idea and understanding of a task avoids misunderstandings (Xiang et al., 2016; van Rensburg et al., 2022).

The overall outcome of our model and the cycle of role construction is team performance. As mentioned in the conceptual background, we define team performance as the grade given to the team for their course progress. Many studies have proven a positive relationship between task- and team SMMs as well as SMMs in general and team performance (Jo, 2012; Zhou & Wang, 2010; Xiang et al., 2016). As we argue that team roles are

constructed through creating mutual meaning and building SMMs, we conclude that having solidified team roles also increases team performance. Another reason is that SMMs and solidified team roles share the same impacts on the team's working mechanisms, which are also supposed to improve team performance (Uitdewilligen et al., 2021; Zhou & Wang, 2010). On an individual level, we conceptualized the development of collaborative capabilities as an outcome. According to Blomqvist & Levy (2006), they consist of "information processing, communication, knowledge transfer, and control" (p. 34). These skills are also essential to developing SMM because mutual meaning is constructed and re-constructed through communication and information processing (Van den Bossch et al., 2010). Moreover, collaborative capabilities are built through continuous sharing interactions (Lopez-Hernandez et al., 2018). This process resembles the co-construction process of SMMs and our theorized role construction process because it is also based upon continuous interaction. Summed up, individual team members develop collaborative capabilities during construction roles and developing SMMs as they constantly interact, communicate, and share and process new knowledge.

5.2 Theoretical Contributions

Completing the findings and discussion, we look further into how this research translates into theoretical and research-related contributions. This section showcases how we contribute to the ongoing discussion of developing team roles and teams in general and how they are connected to team performance in an entrepreneurial education context by circling back to our research gaps and questions.

We identified that current literature shows linkages between team performance and team development or certain team roles. Yet these influencing factors have only been identified separately from one another. Multiple established team development concepts (Tuckman & Jensen, 1977; McGrath, 1991; Gersick, 1989) are characterized by being static models and neglect team roles and their possible impact on teamwork (Peralta et al., 2018). We contribute to this discussion with our grounded model, which maps the cycle of individual team role development in student new venture team development. The role construction process is

modeled as a three-step cycle, which includes the phases of constructing, solidifying, and dissolving and explains how roles are shaped during the course and how the construction of individual team roles supports the development of teams. Therefore, our model offers a holistic and dynamic perspective on the interplay of team roles and -development and links the mechanics between the different role-constructing stages, possible extreme cases, and their impact on team performance.

Our study's second research contribution is the identification of SMMs as an enabling mechanic for individual team role development. Shared mental models represent a shared understanding between team members regarding the overall objective and goal of the team, the allocation of certain tasks, and the knowledge and perception of existing team roles. Mental models are linked to key elements of human behavior, needs, and actions, so they heavily influence individual motives, goals, and perceptions. For that reason, it is important to highlight their impact on social dynamics. We argue that the underlying mechanic of shared mental models is a necessity for the core development and sustainability of individual roles and a functioning team as a whole. Therefore, mental models serve as a precursor for the development of teams and explain how team roles are constructed, solidified, and dissolved.

As we touched on our dynamic, grounded model and the importance of shared mental models regarding the development of roles and teams, we moved to our third contribution, which addresses the effects of team dynamics and roles on overall team outcomes. This paper contributes to this discussion by showing that the successful development of team roles in the context of an agreed shared mental model increases overall team performance. Furthermore, we visualize that the disagreement with the shared mental model and, therefore, the dissimilar understanding of tasks and team identification leads to dysfunctional dynamics or a negative impact on the student new venture team. We add to the discussion by conceptualizing shared mental models as an explanation for how influencing fac-tors like team development, -roles, and -dynamics impact the overall performance of a (student new venture-) team, which has yet not been addressed in the current literature. In addition, we build upon the works of Chen & Agrawal (2018), and Peralta et al. (2018) as the influence of

leadership and team cohesion on team performance, -development, and -effectiveness can be linked to shared mental models.

6. Conclusion

6.1 Summary

To summarize our study briefly, we researched the relevance of shared mental models regarding their impact on role and team development and how they influenced team performance of student new venture teams in an entrepreneurship educational setting. During our research, we constructed a dynamic model through the iterative approach based on the methodology provided by Gioia et al. (2012). This model was constructed by transforming a thoroughly derived data structure into a dynamic model that utilizes the theory of shared mental models to visualize how team roles are constructed, solidified and /or dis-solved and their impact on team development and performance. With this study and model, we provide both a dynamic and a holistic perspective on the researched subject based on current team development concepts. The study helps capture the interplay between the development of team roles, ob-servable dynamics in a changing team setting during an entrepreneurship educational course, and the effect of role construction and team development on overall team performance. We conclude this paper with shared mental models be-ing a key mechanic and precursor for enabling the construction of certain roles and team development and, therefore, impacting team performance.

6.2 Practical Implications

After briefly reviewing and summarizing our study about team and role development within the setting of an entrepreneurship educational student new venture team course, we conclude this paper with possible implications for stakeholders. In this case, we identified students, especially student teams and educators, like professors, coaches, and instructors, as the most essential recipients of our findings. So, how does this study translate into practice?

Starting with our first stakeholder group, we will examine how to approach this subject regarding student teams, especially in an entrepreneurship educational context. Firstly, we conclude with the importance and relevance of communication and interaction between each other. Our findings show

just how essential a shared understanding of individual goals, motivation, work attitudes, and soft or hard skills are and can be for progressing the course and impacting the well-being of students. Furthermore, these highly individual nuances should be transparently clarified at the beginning of the course and before team cohesion to avoid being at cross-purposes and prevent stress and personal conflict. This topic has been ad-dressed in this course before, yet to the degree that it did not prevent the consequences, as seen with the interviewees. Another student-team-level implication involves the transparent discussion of asserted roles within a student's new venture teams. This measure is out of reach for educators and may also clash with the course's primary objective, which is competence development and self-organization. Still, we see this point as highly relevant, and promoting this action may help the team and, thus, the overall reception and progress of the course. Students should share and give realistic estimations of their strengths, weaknesses, and soft and hard skills to fill certain gaps within the team. In addition, a more skill- or strength-orientated role allocation within the team may support more re-served individuals and overall team well-being as very responsible yet dominant team members are obliged to allocate tasks more healthily.

Progressing to the second stakeholder group, we look at possible practical implications for educators. Literature shows us that the purpose of entrepreneurship educational courses is to pursue one of many differing objectives, like to mediate essential skills, competences, and methods to utilize entrepreneurial behavior. As their nature implies that they are being designed to suit this objective, we assume the educators are policymakers and possess the power to change specific settings. Therefore, we need to take measures to build awareness to work effectively in a team. This would mean providing input sessions on team roles, teamwork, and helpful tools (e.g., project management-, mind mapping-, design-, and cloud tools) parallel to the theory and team coaching sessions, which could help newly shaped teams overcome social barriers and prevent team members of silently quit-ting as they are introduced to possible ways to integrate themselves. The second implication regarding educators is proposing to link the first student team implication with this one. Our own experiences and the

interviews show a risk for students to be "stuck" with certain individuals that negatively impact the course experience and grade as the course of study enables the researched course to be selected as a mandatory and elective module. Therefore, some teams include students with low motivation and responsibility and even free-riding students without a possible solution regarding the increased workload and a disadvantage for the highly motivated students. We recommend an increased promotion of communication and interaction by educators as they help to overcome difficulties and internal conflicts more efficiently as educators are capable of acting as mediators. Of course, it can be argued that this may again clash with the objective of the course and also goes against the task area of an educator. Still, as researchers and students of this course, we imply that this measure at the beginning of the course may prevent negative experiences and academic impacts (e.g., major conflicts, bad grades, and high stress levels).

6.3 Limitations and Outlook

We see this study and paper limited by the scope of considered data, the context of this study in a university education setting, and the methodology.

Firstly, our analysis relies on a data sample that includes data from one country, one university, one year of graduates, one specific course, and three participating teams in this course. As the considered data sample is tiny and highly specific, the overall scope of data limits our study. Additionally, it is essential to mention that the interview format utilized for semi-structured interviews also limits the data. Even though this inter-view form excels in offering the interviewee a safe space to open up and talk freely about the experience, they are prone to highly subjective perceptions that other team members do not testify. Furthermore, we argue that the setting in which we observed the phenomena does not reflect reality. As mentioned before, the course of study requires two mandatory majors. Yet only one is actually considered the primary study focus. Therefore, we can assume that participants of the researched course can include individuals with highly fluctuating levels of motivation regarding the completion of the course and a broad selection of differing motives for even participating. We argue that these motivation levels and differing motives cannot be compared to those who enlist and engage

in pure entrepreneurial activities and institutions like business accelerators or startups.

As mentioned in the previous paragraph, we view the semi-structured interview format as applicable but flawed. Therefore, we recommend that future research be done with multiple qualitative research methods like observations, group discussions and individual interviews with a different format over a longitudinal period to ensure a broader spectrum of available data. A second possible direction to advance research is to include and examine student teams that transitioned to a startup with their student venture. This alternative may show interesting observations compared to our motivation, motives & team dynamics data. Lastly, we argue that a quantitative study is highly interesting to measure the impact of shared mental models during team projects, including putting our dynamic, grounded model to test. In addition, we argue that applying our results onto actual new venture teams would be an interesting alternative to observe if the study can help enhance their team performance and offer them an impulse to reflect on roles and teamwork.

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Encouraging or Discouraging? Exploring the Balance between Intrinsic and Extrinsic Motivation in Entrepreneurial Education

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Abstract

While previous research has extensively explored quantitative aspects of entrepreneurship education, there is a notable gap in empirical support for the notion that entrepreneurial education significantly increases students' entrepreneurial motivation. In response to this gap, this study employs a grounded theory approach to comprehensively investigate the factors influencing students' entrepreneurial motivation both before and during entrepreneurship education programs. The research specifically addresses the nuanced balance between intrinsic and extrinsic motivation, an aspect that has been insufficiently examined in previous studies. This comprehensive exploration aims to contribute to the ongoing discourse on entrepreneurship education by offering a nuanced understanding of the factors shaping students' entrepreneurial motivation, ultimately guiding educational institutions in optimizing their programs to foster a culture of innovation and entrepreneurship.

1 Introduction

In modern times, promoting entrepreneurial culture is sometimes seen as a solution for complex problems such as low productivity, economic stagnation, or high unemployment rates (Farhangmehr et al., 2016). Thus, the priority is to discover new opportunities in today's dynamic, complex, and uncertain environment and also educate competent individuals to manage such projects. Therefore, entrepreneurial education is finding even more significance as time passes, and education systems worldwide have introduced a range of programs to support entrepreneurship in university education (Greene & Saridakis, 2008). Therefore, educational institutions play an essential role in increasing the competence of their students and motivating them toward entrepreneurial activity (Farhangmehr et al., 2016). According to a study investigating the development of the startup culture at German universities, 3840 students, accounting for the majority, were involved in start-up projects in Germany in 2018. As a powerhouse of ideas, universities play a central role in creating a lively innovation process (Gründungsradar, 2018). This has attracted research interest to evaluate entrepreneurship education's (EE) impact on students.

Previous research has focused a lot on quantitative approaches examining either the drivers of students' entrepreneurial motivation (EM) or EE's general effects and outcomes (Farhangmehr et al., 2016; Hägg & Gabrielsson, 2020). However, much of the research in the past years does not provide explicit empirical support for the view that EE increases the EM of students (Varamäki et al., 2015). Motivation has already been proven to be an essential factor in the educational life of entrepreneurship students (Osterbeek et al., 2010; Farhangmehr et al., 2016; Hytti et al., 2010). Of particular interest are the influential factors relating to motivation, such as intrinsic and extrinsic motivation, of which researchers have not given adequate importance (Buzdar et al., 2017).

To overcome these limitations, the main objectives of this paper are to (1) examine what factors determine students' entrepreneurial motivation before and during entrepreneurship education programs and (2) explore how the balance between intrinsic and extrinsic motivation influences the development of entrepreneurial motivation over the course period. To do so, we want to make use of

the grounded theory approach. Appropriate application of this method will allow us to understand a phenomenon that cannot be explained with existing theories and paradigms (Hussein et al., 2014). Furthermore, as given by its description, we will enter the field of research without narrowing down the research questions, which is commonly done in other research designs (Charmaz & Smith, 2003). This leads us to the following research question: What factors influence the development of the balance between students' intrinsic and extrinsic entrepreneurial motivation throughout the entrepreneurial education program?

The following part of this paper briefly explains concepts and current academic discourses relevant to our study. The third part outlines the chosen research methodologies and describes the data selection, collection, and analysis procedure. To provide additional information, the fourth chapter summarizes the case. The fifth part is primarily concerned with presenting the derived conceptual framework, the data structure, and the identified categories described with a set of research propositions. Followed by the findings, the sixth section discusses the overall findings by mapping out the study's research contributions and practical implications. Lastly, the paper addresses research limitations as an opportunity to make suggestions for future research.

2 Conceptual Backgrounds

2.1 Entrepreneurial Motivation in the Context of Entrepreneurial Education

Since the first entrepreneurship course was held in 1947, its relevance in practice and science has increased considerably (Katz, 2003). Throughout the development of entrepreneurship education over the past decades, EE has become an established research field and has gained more and more importance (Katz, 2003; Kuratko, 2005). After a scientific discussion about whether entrepreneurship can be taught, most researchers agreed that entrepreneurship skills could be taught and are not fixed individual characteristics (Kuratko, 2005; Oosterbeek et al., 2010). Based on this assumption, EE plays an essential role in developing students' entrepreneurial skills and spirit, thereby discovering business opportunities and establishing businesses (Sui et al., 2017;

Freiling & Harima, 2019a). EE intends to motivate students to choose entrepreneurship as a career option and start their own business by cultivating the skills necessary (Hasan et al., 2017). Due to a lack of a consistent definition, EE can have different meanings depending on where studies have been conducted (Hägg & Gabrielsson, 2020). Based on a Delphi analysis, Neck and Corbett (2018) developed a definition of EE, defining it as "developing the mindset, skillset, and practice necessary for starting new ventures" (p.10). The research field of EE is very fragmented. Within a systematic literature review on EE, Hägg, and Garielsson (2020) identified the effects and outcomes of EE as one significant discussion in EE research.

Entrepreneurial motivation is people's motivation to make entrepreneurial decisions (Shane et al., 2003). In psychological studies, motivation is considered the initiation, direction, intensity, duration of behaviors, and desire and willingness to do something (Brown, 2007). The concept of EM plays an essential role in understanding entrepreneurial behaviors and pursuing entrepreneurial opportunities (Carsrud & Brännback, 2011). Researchers assume that human motivation influences decisions and that peoples' variance in motivation will influence who pursues entrepreneurial opportunities and how people undertake the entrepreneurial process (Shane et al., 2003). The literature highlights the importance of understanding the factors that motivate people to act entrepreneurially to better understand the entrepreneurial process and its influencing factors (Naffziger et al., 1994; Støren, 2014).

Consequently, if EE is intended to increase students' entrepreneurial activity, it should motivate them to act entrepreneurially and pursue entrepreneurial opportunities (Farhangmehr et al., 2016). Therefore, numerous studies have focused on the outcomes and effects of EE (Hägg & Gabrielsson, 2020). However, previous studies have produced contradictory empirical results regarding the effects of EE on students' EM. On the one hand, some studies have found an increase in students' EM after attending entrepreneurship courses (Hsu et al., 2014; Solesvik, 2013). On the other hand, other studies have failed to prove a significant effect of EE on EM (Sui et al., 2017; Farhangmehr et al., 2016). Some studies even found negative effects of EE on students' EM due

to an EE developed realistic perspective of themselves and what it takes to be an entrepreneur (Oosterbeck et al., 2010).

During the scientific discussion on the contradictory results, researchers emphasize the complexity of the phenomena and the importance of external factors and contextual differences (Farhangmehr et al., 2016; Hutagalung et al., 2017; Solesvik, 2013). Consequently, several studies have examined various influencing factors on the relationship between EE and students' EM, such as students' background (Sui et al., 2017), attitudes, subjective norms, perceived behavior control (Solesvik, 2013), and family environment (Hutagalung et al., 2017). However, there is still a lack of possible explanations for the contradictory results regarding the effects of EE on students' EM. Despite this lack, there is surprisingly less qualitative research on the phenomena as most studies applied quantitative research methods.

2.2 Students' Intrinsic and Extrinsic Motivation in Entrepreneurship Education Courses

The classification of intrinsic and extrinsic motivation is a well-established concept in motivational research. For a long time, researchers from different fields have emphasized the essential role intrinsic and extrinsic motivation play in many social and economic interactions (Bénabou & Tirole, 2003). Intrinsic motivation is the motivation to do something for its own sake and the pure pleasure of the task (Hennessey et al., 2015).

On the one hand, this can involve the motivation for a task. A feeling of satisfaction arises through the engagement with the task itself and the challenge it implies. On the other hand, a person can have intrinsic motivation for collaboration and community, including interest and enjoyment with the contributors, without receiving any reward (Hennessey et al., 2015). Extrinsic motivation is an external reward that follows a particular behavior, such as power, status, social acceptance, or monetary rewards (Carsrud & Brännback, 2011; Freiling & Harima, 2019b). However, due to the complexity of the construct, researchers have indicated that more research is needed to understand the structure of intrinsic and extrinsic motivation in more detail (Hennessey et al., 2015). Moreover, intrinsic and extrinsic motivations are

not mutually exclusive, as both can motivate a person to take action (Carsrud & Brännback, 2011). Researchers emphasize the dynamic relationships and the interplay between extrinsic and intrinsic motivation (Hennessey et al., 2015). For instance, extrinsic and intrinsic motivators can cooperate or compete depending on certain factors. Moreover, extrinsic motivation can undermine intrinsic motivation under certain circumstances (Bénebou & Tirole, 2003). Furthermore, an explicit distinction is not always possible. Some goal- or constraint-oriented motivators can become so internalized over time that they no longer feel as if they come from outside the person but become part of a person's identity and sense of self. Moreover, intrinsic and extrinsic motivational states can vary depending on the social environment (Hennessey et al., 2015).

Researchers in the field of EM also use the concept of intrinsic and extrinsic motivation to examine EM in more detail. EM can be intrinsic, extrinsic, or both, as an entrepreneur may be internally motivated by the entrepreneurial task and externally motivated to achieve wealth and status (Carsrud & Brännback, 2011). To gain a more complex perspective on what types of motivation promote optimal learning and performance in EE, examining and understanding the relationships between students' intrinsic and extrinsic motivation and their effects is crucial (Lemos & Veríssimo, 2014). However, there is only a limited number of studies investigating students' intrinsic and extrinsic motivation in the context of EE. For instance, in a quantitative study, Hytti et al. (2015) examined how a person's motivation for studying entrepreneurship and working in teams affects later levels of performance related to business idea development and found that intrinsic motivation has a negative effect.

In contrast, extrinsic motivation has a positive effect on learning outcomes. However, team-seeking positively affects the relationship between intrinsic motivation and outcomes. Nevertheless, due to the importance of intrinsic and extrinsic motivation, research must examine its interplay and its effects on students' entrepreneurial motivation in EE. In particular, qualitative research is necessary to investigate the phenomena' dynamics.

Overall, the current literature has produced contradictory results on the effects of EE on

students' EM (Farhangmehr et al., 2016; Hsu et al., 2014; Oosterbeck et al., 2010; Solesvik, 2013; Sui et al., 2017). Moreover, even though researchers highlighted the importance of understanding the underlying dimensionality of both students' intrinsic and extrinsic motivation (Lemos & Veríssimo, 2014), the existing research is limited. Furthermore, the current literature on the relation between EE and students' EM is limited to quantitative studies examining the phenomena' dynamics.

3 Methodology

3.1 Research Design

When dealing with qualitative research, the focus is on constructing theories from emerging data. In this context, social constructivism, also associated with interpretivism, represents the central paradigm and is also referred to as the philosophical foundation of qualitative research. Constructivism is a research paradigm that denies the existence of objective reality (Mills et al., 2006). Individuals create their knowledge based on interactions with their environment, including with others (Dr. Md. Mahmood Alam, 2016). Honebein (1996) claims that constructivism is a philosophical paradigm based on the experiences of people and the reflection of those experiences. This approach leads to constructing an understanding and knowledge of the world (Honebein, 1996). This approach emphasizes the meaningful nature of people's character and participation in social and cultural life. It assumes that people's knowledge of reality is a social construction by human actors (Chowdhury, 2014).

Social constructivism is also significant in grounded theory, another crucial methodology relevant to this study. Traditional grounded theory asks researchers to enter the field of inquiry with as few predetermined thoughts as possible. Recording events and detecting happenings are required to be unfiltered and not linked to prior existing hypotheses and biases (Mills et al., 2006). Therefore, the grounded theory methodology is a widely used mode of qualitative research when generating theories (Strauss & Corbin, 1997). It is characterized by the iterative process and interrelatedness of planning, data collection, data analysis, and theory development. The method of continuously gathering data is called theoretical

sampling. It is continued until a contribution of new data does not lead to substantial theory development, known as theoretical saturation (Kaiser and Presmeg, 2019). Grounded theory methods consist of systematic yet flexible guidelines for collecting and analyzing qualitative data to construct theories (Charmaz, 2014). These methods include different coding procedures based on constant comparison (Kaiser & Presmeg, 2019). It fosters the development of conceptual analyses and uses a systematic inductive, comparative, and interactive approach (Charmaz, 2008). This grounded theory methodology was especially appropriate for the present research since little is known about the interplay between intrinsic and extrinsic motivation in the entrepreneurial education context.

3.2 Data Selection

To generate data for the present qualitative research, a selection of interview partners was required. Hence, criteria were identified to find appropriate interviewees. As the main emphasis of the Business Administration Master's program at the University of Bremen, Entrepreneurship and SME Management is one suitable entrepreneurial education program. Students who attended three or more courses offered by Entrepreneurship and SME Management were reached via the university's internal platform designated for course registration purposes, among other things, and the online social network LinkedIn. These students offered first-hand experience and in-depth detailed information to contribute to the research topic since they had long-term participation in the courses. To gain information on different views, choosing students who decided to found after the courses and those who did not was significant. In order to broaden the perspectives, employees of the Chair for SMEs, startups, and entrepreneurship (LEMEX) at the university were selected as well. After the selection, the suitable interview partners were interviewed. The statements and information generated through the interviews were then compared to the existing literature, which was managed using Zotero as a literature management tool.

3.3 Data Collection

Before conducting interviews, the creation of an interview guide was significant. Open questions

were prepared in advance to obtain the necessary information. When needed, follow-up questions were posed as well. The data collection was then accomplished through semi-structured interviews via Zoom-Meetings from November 2021 to January 2022, representing the primary data. As mentioned before, students who attended three or more courses at the University of Bremen were interviewed. The number of conducted interviews was 15 in total, of which three students started businesses after the course, and two were employees at LEMEX at the university. Furthermore, the interviews had a duration of approximately 40 to 70 minutes. The permission to record the interviews was obtained using a consent form to be signed by each interviewee. The interviews were transcribed, and initial coding was conducted using MAXQDA. Afterward, focused coding was applied. In addition, the underpinning literature and additional lecture material served as the secondary data in the present research.

3.4 Data Analysis

After the transcription, the data generated from the interviews was evaluated after the data structure, according to Gioia et al. (2012). Based on the steps of the Gioia method, the coded data was transformed into a data structure. In the first step, all the codes that emerged from the initial coding of the interviews were collected. The data could be broken into parts or properties to crystalize significant points through the initial coding process. At first sight, it is usual that the number of categories seems overwhelming. In the 1st-order analysis, the researchers attempt to adhere faithfully to informant terms, leading to a high number of categories. Afterward, focused coding was conducted to create the 1st-order categories. During this process, concentration was put on the most useful initial codes with the most logical sense, which helped categorize the data. Thereby, similarities and differences in the categories were seeking to reduce the categories to a more manageable number. The categories were labeled and described in the next step, which required simultaneous multiple-level thinking, i.e., at the informant terms and codes, the 2nd-order theoretical level of themes, and the dimensions or formulation of further questions (Gioia et al., 2012). This process is also termed theoretical sampling (Glaser & Strauss, 1967). The second step was the combination of 1st-order categories

with 2nd-order themes. In this 2nd-order analysis, the researchers were in the theoretical realm. Here, the focus was on finding out which concepts might describe and explain the observed phenomena to form themes, especially to pay attention to nascent concepts or existing concepts that leap out because of their relevance to a new domain. The so-called theoretical saturation was reached when a workable set of themes and concepts was in hand. The final step of the analysis was investigating the possibility of distilling the 2nd-order themes into overarching aggregate dimensions. The complete set of 1st-order terms and 2nd-order themes and aggregate dimensions form the basis for building a data structure that visualizes the data and provides a graphic representation of the progress from raw data to terms and themes in conducting the analyses. This is crucial to demonstrating rigor in qualitative research (Gioia et al., 2012). Furthermore, the data structure was used to construct a framework.

Throughout the entire research, literature had a significant role. Literature needed to be analyzed thoroughly to identify an area of entrepreneurial education that had not been explored or researched sufficiently yet. By searching through several databases, attention was paid to surprising and nascent fields of study. In further investigation, literature was used when creating the data structure and the grounded model after conducting interviews. All observations, including the examined 2nd-order themes and aggregated dimensions and the linkages between observations, were continuously mirrored in the literature to serve evidence. Moreover, the statements and findings were validated and compared to the existing literature. It is noticeable that literature iteratively served as a source of evidence from the beginning of the research until the writing of the present paper.

3.5 Validity and Reliability

Interviews were selected as a suitable method to ensure validity and reliability, increase transparency, and enhance the assessment and evaluation of this research. Through the interviews, consistent results could be adequately gained to provide findings relevant to the research topic. All interviews were conducted under the same conditions, and the questions were asked using the same interview guide. Moreover, the interviewees were protected by signing a consent form to keep

all statements confidential. The selection of different interview partners enabled access to a wide range of perspectives to contribute to the research question. In addition, the findings were constantly compared with the literature to ensure their truthfulness. Furthermore, the detailed information of the present research results indicates replicability and a scientific underpinning.

4 Case Description

The authors of this study draw on data collected in the winter semester 2021/2022 from students, graduates, and teachers from the Entrepreneurship and SME Management course. This course takes place at the University of Bremen in Germany. This study aims to determine to what extent the participants' motivation to start a business as a result of entrepreneurial education and to show what role intrinsic and extrinsic motivation plays in this context.

This study was carried out as a project module at the University of Bremen as part of the Master's program in Business Administration. The project module aims to prepare for the master's thesis at the university. Building on the other modules, the participants learn to research independently and write a high-quality scientific article. A methodology adapted to the research type is used. The students can freely choose the topic of the project module within different research fields within entrepreneurship. The research question is: What drives or hinders the intrinsic and extrinsic motivation of entrepreneur students? Furthermore, how does the interplay of intrinsic and extrinsic motivational factors influence the development of the entrepreneurial motivation of students over the course of the entrepreneurial education program? In the following weeks, an introduction to the essentials for writing a scientific study took place during a series of workshops. These workshops covered research methods, data analysis methods, test interviews, observations in the field, and formulating and explaining research propositions. Through several ongoing presentations, several feedback loops could be conducted within the module, and the teachers were informed about the current status.

Interviews were conducted with students, graduates, and teachers who were in direct contact with the course.

5 Findings

5.1 Conceptual Framework

This section presents a synthetization of the interrelated components identified during the research. To understand the results, the conceptual framework illustrates how the critical components of the model come together to explain the phenomena of entrepreneurial motivation. As mentioned, the study was divided into three periods (the EM before, during, and after the course) to emphasize the change in motivation over time.

The interviews uncovered many exciting aspects. As assumed, students enter the course carrying a pre-course, initial EM, encouraging participants to choose the class. This includes the different proportions of intrinsic as well as extrinsic motivation sources. Participants often associate the course with an adventurous and pleasurable experience because they enjoy learning and working independently. Then, several interviewees seemed to have subjective values and particular character traits that led to their interest and, eventually, the selection of the study focus. Such features include curiosity and profound aspects like the desire to achieve self-realization by becoming independent through new venture creation. These are the two factors that embody intrinsic motivation. On the other hand, extrinsic motivation sources primarily consist of expected rewards by external entities to acquire good grades, for example. Collectively, these two components serve as the basis of EM throughout time.

Depending on the pre-course motivation, students then experience profound changes set out by perceived extrinsic drivers and barriers to EM during the course period (Freiling & Harima, 2019b; Freiling & Harima, 2019c). Therefore, the second stage is called the "EM change context", as seen in the model. In the interviews, it quickly became evident that students' EM is driven by several reasons, which can be divided into four categories. The first one deals with the sense of belonging through external support and appreciation. The majority of students described how external recognition in terms of the help of the chair left a positive feeling, resulting in an enhancement of the EM. Interviewees also expressed an eagerness to drive change, which was developed throughout the course. Students felt the
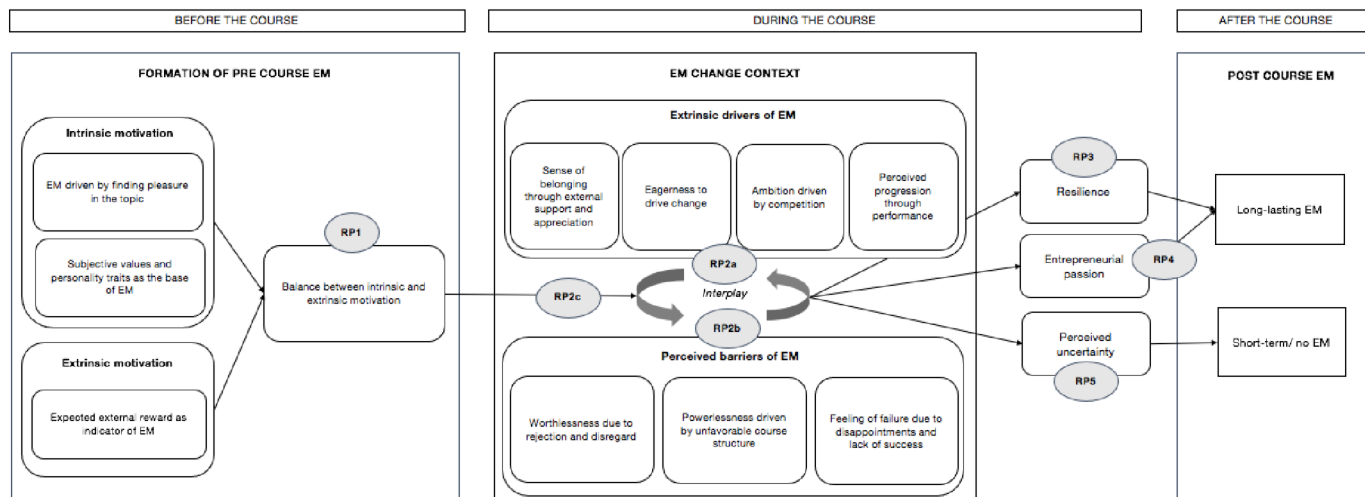
Figure 1: Visual representation of the conceptual framework

need to have a potentially positive impact on society, increasing their willingness to take action. Not only that but also the competition among the students fostered motivation because comparing the work with the progress of other groups increased the incentive to proceed. Similarly, students' progression and success experiences also boosted ambition toward new venture creation. Students also identified that being enrolled in such venture-creation activities meant barriers to entrepreneurial motivation. Several themes emerged that caused the loss of motivation, mainly due to negative feedback and little support received from lecturers and fellow students. The entrepreneurial motivation was highly dependent on either praise or criticism and the quality of feedback. Sometimes, the feedback was claimed to be contradictory, vague, or even counterproductive. Sometimes, the unfavorable course structure acted as a hurdle to entrepreneurial motivation, which was repeatedly attributed to practical versus theoretical modules, the latter having less applicability when starting a business. The course structure's high time and work pressure gave realistic insights and led to discouragement and antipathy regarding new venture creation. Another reason for an adverse change in entrepreneurial motivation disclosed by interviewees is the feeling of failure due to disappointments and lack of success. Not meeting its own expectations or not correctly implementing the idea raised self-doubts and eventually dropped the motivation. Students experienced several factors mentioned above and even addressed an overlapping effect, classified as the "interplay" between drivers and barriers to EM.

The balance between the initial sources of motivation and the interplay between drivers and barriers shape specific outcomes of EM after the course, the first one being the emergence of resilience, the development of entrepreneurial passion, and lastly, the perceived uncertainty felt by the students. These outcomes imply a stable and long-lasting EM or a somewhat fragile EM. Figure 1 presents the conceptual framework.

5.2 Data Structure

The following section describes the data structure that merged after the transcription and coding procedure. Figure 2 presents the data structure.

After sampling the 1st-order categories and forming the 2nd-order themes, it was noticeable that students had intrinsic or extrinsic entrepreneurial motivation before attending the Entrepreneurship and SME Management courses. Moreover, these motivations occur in different intensities and, thus, determine their initial entrepreneurial motivation. These antecedent factors could be classified as sources of entrepreneurial motivation. When constructing the 2nd-order themes, it became clear that multiple external factors occurring over time affect the further development of entrepreneurial motivation. Here, students' EM vary depending on how intense their initial motivation before the course was. The dimension crystallizing out of these factors was described as extrinsic drivers of entrepreneurial motivation. Furthermore, the third and last aggregated dimension results from the students' perceived barriers during the course of time.
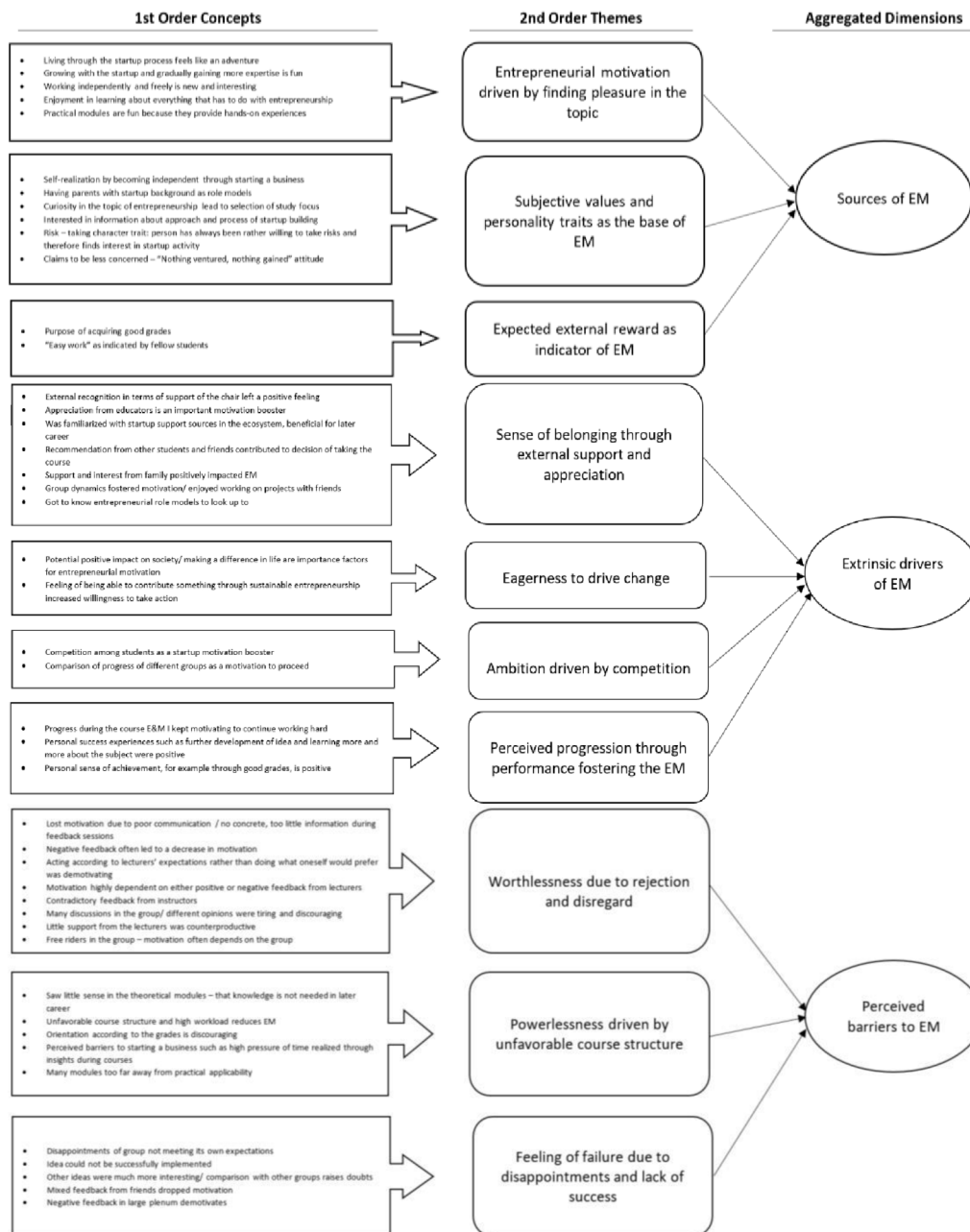
1st Order Concepts — **2nd Order Themes** — **Aggregated Dimensions**

- Living through the startup process feels like an adventure
- Growing with the startup and gradually gaining more expertise is fun
- Working independently and freely is new and interesting
- Enjoyment in learning about everything that has to do with entrepreneurship
- Practical modules are fun because they provide hands-on experiences

→ Entrepreneurial motivation driven by finding pleasure in the topic

- Self-realization by becoming independent through starting a business
- Having parents with startup background as role models
- Curiosity in the topic of entrepreneurship lead to selection of study focus
- Interested in information about approach and process of startup building
- Risk-taking character trait: person has always been rather willing to take risks and therefore finds interest in startup activity
- Claims to be less concerned – "Nothing ventured, nothing gained" attitude

→ Subjective values and personality traits as the base of EM

→ Sources of EM

- Purpose of acquiring good grades
- "Easy work" as indicated by fellow students

→ Expected external reward as indicator of EM

- External recognition in terms of support of the chair left a positive feeling
- Appreciation from educators is an important motivation booster
- Was familiarized with startup support sources in the ecosystem, beneficial for later career
- Recommendation from other students and friends contributed to decision of taking the course
- Support and interest from family positively impacted EM
- Group dynamics fostered motivation/ enjoyed working on projects with friends
- Got to know entrepreneurial role models to look up to

→ Sense of belonging through external support and appreciation

- Potential positive impact on society/ making a difference in life are importance factors for entrepreneurial motivation
- Feeling of being able to contribute something through sustainable entrepreneurship increased willingness to take action

→ Eagerness to drive change

→ Extrinsic drivers of EM

- Competition among students as a startup motivation booster
- Comparison of progress of different groups as a motivation to proceed

→ Ambition driven by competition

- Progress during the course E&M I kept motivating to continue working hard
- Personal success experiences such as further development of idea and learning more and more about the subject were positive
- Personal sense of achievement, for example through good grades, is positive

→ Perceived progression through performance fostering the EM

- Lost motivation due to poor communication / no concrete, too little information during feedback sessions
- Negative feedback often led to a decrease in motivation
- Acting according to lecturers' expectations rather than doing what oneself would prefer was demotivating
- Motivation highly dependent on either positive or negative feedback from lecturers
- Contradictory feedback from instructors
- Many discussions in the group/ different opinions were tiring and discouraging
- Little support from the lecturers was counterproductive
- Free riders in the group – motivation often depends on the group

→ Worthlessness due to rejection and disregard

- Saw little sense in the theoretical modules – that knowledge is not needed in later career
- Unfavorable course structure and high workload reduces EM
- Orientation according to the grades is discouraging
- Perceived barriers to starting a business such as high pressure of time realized through insights during courses
- Many modules too far away from practical applicability

→ Powerlessness driven by unfavorable course structure

→ Perceived barriers to EM

- Disappointments of group not meeting its own expectations
- Idea could not be successfully implemented
- Other ideas were much more interesting/ comparison with other groups raises doubts
- Mixed feedback from friends dropped motivation
- Negative feedback in large plenum demotivates

→ Feeling of failure due to disappointments and lack of success

Figure 2: Data Structure

Students state that encountering several barriers influences their entrepreneurial motivation and determines the outcome of the intensity of their final EM after the course.

The description above implies that the aggregated dimensions were assigned to the course of time and represent the process of the development and influencing factors of students´ entrepreneurial motivation in Entrepreneurship and SME Management courses. A detailed explanation of each factor and dimension will be given in the next section of this paper.

5.3 Research Propositions

5.3.1 Balance between Intrinsic and Extrinsic Motivation Sources

During the interviews, students shared their motivation sources, each of which unveiled a unique balance between intrinsic and extrinsic motivation, creating individualism among participants of EE courses. This peculiarity was undoubtedly reflected by each of the course participants, having their own values and suitable or unsuitable character traits for entrepreneurship activity:

"I have had a risk- challenge-taking personality ever since I can think. My desire to be independent and to run a business enhance my low fear of failure, I guess." (Anonymous 5)

"I did not really have [an entrepreneurial] background for me to say that I had a specific idea and wanted to start [a business]. [I chose this study focus because] I found it very interesting, and I could imagine helping out in new venture creation programs at some point but not really starting a business myself. I am not the kind of person who has a solution to a particular problem to sell it on the market. I am not like that." (Anonymous 2)

Aside from their individual characteristics, some students revealed a personal entrepreneurial background, contributing to the uniqueness of each course participant:

"My background got me in touch with the topic and since I was a child I liked solving certain problems and taking challenges. I think the benefits of my parents' entrepreneurial activities, such as independence and focusing on an idea, made me think the same way they did." (Anonymous 5)

As observed in the interviews, this initial blend of motivation factors plays a central role in the development of the entrepreneurial motivation of students and has only been indicated partially by researchers, claiming that both entrepreneurial intention and motivation are shaped by personal and environmental factors (Bagheri, 2015; Hou et al., 2019; Malebana, 2014). Entrepreneurial motivation is determined by entrepreneurs' perceptions of their environment and their own abilities, personal characteristics, the personal environment, the appropriate business environment, the specific business idea, and the entrepreneur's goals (Malebana, 2014). Carsrud and Brännback (2011) underline this statement by saying that motivators can be intrinsic, extrinsic, or both. However, less evidence has been found on the importance of intrinsic and extrinsic motivation balance and proportion.

After evaluation and to contribute to the field of study, the following research proposition has been derived:

RP1: The balance between intrinsic and extrinsic motivational factors is determined by each student's individuality, demonstrating the uniqueness of the pre-course entrepreneurial motivation.

5.3.2 Extrinsic Drivers and Perceived Barriers of Students| EM and Its Interplay

Clear structures emerge within the framework of positive external influences on students' entrepreneurial motivation during the course. Overall, four significant drivers that positively influence the students' EM during the course could be identified. These external drivers include the sense of belonging through external support and appreciation, the eagerness to drive change, and the ambition driven by competition and progression through performance.

The first positive pattern identified as having an extrinsic influence on EM was the so-called "sense of belonging through external support and appreciation". This is evidenced from various sources. Dustin, for example, reports:

"One factor that spurred me on the most and also definitely contributed to my interest in founding was positive feedback from the chair, which also gave me a feeling of being able to exist in the start-up scene and also belong to it yourself." (Dustin)

Numerous other students support this statement. Other interviewees felt they could always turn to the teachers and receive positive feedback and recognition for their efforts. This has strengthened many of them in their motivation to found a company. The literature also supports this. For example, it has been found that positive feedback can increase performance and boost motivation among students (Shambare, 2013). Stamboulis and Barlas (2014) support this statement with observations in the field of EE showing that positive feedback correlates with performance improvements.

Another external factor we could assign to this cluster is the support of the family and the interest

from the social and family environment. Felix stated:

"Since I already have self-employed family members who have founded businesses, my motivation was even higher because my family was behind my studies and welcomed my own start-up plans. The interest in the topics of my studies was also always there, and if my family hadn't been so supportive, I would have had less motivation to start up on my own." (Felix)

The role of friends and group dynamics can also be an extrinsic driver in the EM context. This can be seen, for example, in Celine's statement:

"A lot of my friends think my study content is cool and are interested in it. The positive feedback somehow ensures that I myself am more interested and motivated in the topics. I also needed to feel comfortable in the group because we did a lot of group work. I liked that we had a good group dynamic, and it was fun to work together with the people. In the process, we motivated each other to be better." (Celine)

This indicates the relevance of extrinsic drivers in terms of a sense of belonging through external support and appreciation. Rembiasz (2017) and Hutagalung et al. (2017) found a positive influence of the family environment on EM in general. Farmer et al. (2011) determined the positive effects of the recommendation of friends and their effects on decision motivation and were also able to establish a positive relationship. Our established influence of group dynamics on motivation and willingness to perform was also observed in the general university context by Shirokova et al. (2017). Another cluster that has positively impacted students' EM is called "eagerness to drive change". This refers to extrinsic drivers such as social recognition through one's own possible contribution to shaping society. These students typically want to do something beneficial for society, which they would not be able to do in this way without having their own business. These drivers can be found in Felix's case:

"I was extremely motivated by the idea of theoretically being able to make a big difference in society. Within the course, we

developed a startup that deals with sustainability. As an entrepreneur, you can really change a lot if you dedicate yourself to the right topics. That feeling has been the most motivating." (Felix)

The literature supports this statement. For example, Timmons and Spinelli (2009) investigated the reasons for starting a business and found that the possibility to change society positively plays a relevant role. In addition, the number of sustainable start-ups that benefit the earth and society has risen significantly in recent years, and universities are a perfect place to transfer these innovations into society (Frank & Schröder, 2018).

We found a third extrinsic cluster related to ambition driven by student competition. Many students, such as Celine, enjoyed competing their ideas with those of the other groups and motivating each other to be better.

"For me, the competition was always very motivating and pushed our group to do better and better, so my EM definitely increased as well." (Celine)

The self-confidence of entrepreneurship students like Celine increases through competition and direct comparison (Engle et al., 2010). Overall, competition is also a good driver in the free economy and an essential factor in motivating the founder to improve his performance (Rembiasz, 2017). In the university context, group dynamics have been studied by Pittaway and Cope (2007), among others. They were able to emphasize in their study that group work significantly impacts the effectiveness of learning and that negative group dynamics also harm motivation.

The fourth extrinsic cluster with positive effects on EM relates to perceived progression through performance. Thus, visible progress in studies, positive perception of success, good grades, and the feeling of understanding more and more about the world of entrepreneurship positively affect EM for many students interviewed.

"The fact that one could always see a certain progress and dive deeper and deeper into the subject matter, and also good grades, gave me a feeling of security, made me more

courageous and also motivated me to set up my own business later on." (Lukas)

Thus, motivation and euphoria can arise from performance progress and success and generally increase the likelihood that the person in question will start a business (Cardon et al., 2009; Rembiasz, 2017). The progress, newly developed skills, and increased independence can lead to a passion for the subject, positively impacting the EM (Jones & Englisch, 2004; Shah et al., 2020).

From this argumentation, follows:

RP2a: During the course, entrepreneurship students experience an increase in motivation through extrinsic drivers such as the sense of belonging through external support and appreciation, the eagerness to drive change, the ambition driven by competition, and progression through performance.

In contrast to the factors described above that increase EM there are also perceived barriers that have a contrary effect on EM. During the course, entrepreneurship students experience a decrease in motivation through perceived barriers such as worthlessness due to rejection and disregard, powerlessness driven by an unfavorable course structure, and the feeling of failure due to disappointments and lack of success.

A barrier that reduces EM for some students is the feeling of worthlessness due to rejection and disregard. In this case, the interviewees feel rejected, excluded, or even left alone. A reason for these feelings can be negative group dynamics. For example, Lukas describes that he had the feeling that his ideas were not taken seriously. Another factor that reinforces the feeling of worthlessness and thus negatively impacts the EM is negative feedback from outside. As Celine indicated in her interview, this can refer to negative feedback from family and friends. Nevertheless, it can also result in negative or incomprehensible feedback to the students. Lukas, among others, mentioned the same problem.

The literature supports these observations. For example, many students feel a sense of worthlessness in the course of their studies (Foo, 2011), which can be caused and reinforced by

negative feedback from outside (Kirkwood, 2009). In addition, negative attitudes from friends or family toward a career as an entrepreneur create additional doubt and reinforce the feeling of being left alone (Liu et al., 2020; Smith & Beasly, 2011). Researchers found that constant negative feedback in pursuing challenging goals can cause entrepreneurs to abandon their original goals (Brockhaus, 1980; Cardon et al., 2009).

The second barrier perceived by the course participants can be described as "powerlessness driven by unfavorable course structure". Here, the interviewed course participants often felt powerless or lost control and dependence. For example, Lukas describes:

"During the course, group work was a big problem for me. I didn't have a single group where there were no problems. Besides, everyone always got the same grade, although some did much more than others. There were always free riders, and the groups were simply too big. That demotivated me. The course structure alone was not well solved." (Lukas)

Celine, among others, saw another problem in connection with the unfavorable course structure. She believes that some modules are too far from reality, that one would not need the knowledge later as a founder in business, and that the workload was too high compared to other modules. The literature underlines these observations, stating that familiarity and a similar level of performance are important success factors in the composition of a start-up team (Ruef et al., 2003). Unfamiliar group members can slow down group dynamics and motivation (Arpiainen & Tynjälä, 2017; Reeves et al., 2019). Poor course structures can reduce students' motivation (Nawaser et al., 2011). Negative group dynamics also negatively impact students' output (Forsyth, 2019; Gifford et al., 1979).

The third perceived barrier to EM relates to feelings of failure through disappointment and lack of success. This is accompanied by feeling like a failure, weak, incapable, or useless, and thus inhibited in motivation. Reasons given for this are, for example, that the group failed to meet its expectations by not being able to implement ideas successfully or to structure them. Negative

feedback in the form of subjectively perceived bad grades is also a reason for the feeling of failure. In particular, Celine mentioned that negative feedback in a large group is particularly demotivating. Comparing oneself with other groups can also lead to a subjectively worse performance, which reduces EM (Cohen & Bailey, 1997).

Researchers are dealing with this issue and suggest that fear of failure plays a vital role in entrepreneurship and can significantly increase perceived uncertainty (Sandhu et al., 2011; McKelvie et al., 2011; Milliken, 1987). Furthermore, the feeling of failure also affects self-confidence (Liu et al., 2020; Baumeister & Tice, 1985), and low self-confidence reduces the willingness to take risks, which is a central factor for startups (Sandhu et al., 2011). Since starting a business is associated with exceptionally high risks (McMullen & Shepherd, 2006), a higher willingness to take risks would be necessary for EM (Iakovleva et al., 2014; Matos & Hall, 2020; Su et al., 2020). Therefore, we state the following research proposition:

RP2b: During the course, entrepreneurship students experience a decrease in motivation through perceived barriers such as worthlessness due to rejection and disregard, powerlessness driven by an unfavorable course structure, and the feeling of failure due to disappointments and lack of success.

Another important aspect that came to our attention during the interviews was the interplay between the initial pre-course motivation and the drivers and barriers during the course. The impact of the two EM change context factors depends on the composition of the pre-course motivation. Those drivers and barriers also influence each other. Therefore, effects may vary from student to student. In other words, a course participant who initially indicated high intrinsic motivation later portrayed a far more positive interpretation of the course program than someone who initially approached the study focus with a rather unstable motivation. Interestingly, this was also visible in some statements made by the students:

"Well, of course, [...] [new venture creation] is fun because I think the guys are great and we get along great with each other. [...] And

I am someone who can get really stuck into such things and want to push them forward. It is just so much fun to work on something that belongs to me and generate a job for myself. [...] We were able to take another module in the second semester where we could create something ourselves, and that lit a fire in me again. It made me want to get involved in a field I did not know at all. The challenges motivated me." (Anonymous 5)

Despite that, we also noticed cases in which the interplay between drivers and barriers affected the students' original motives, meaning a change in the character traits of the person who had entered the course. Thus, there is somewhat of an occasionally occurring interdependence between the initial motivation and the motivation built throughout the course that seems to influence each other. For clarification purposes, the following quote gives an example of how components of motivation drivers led to a change in the overall attitude and mindset toward entrepreneurial activities.

"Positive feedback has led me to be more courageous and to dare to come up with ideas that I would not have thought of before. Overall, the course was more fun, and because we supported each other in the group, I was less afraid of the tasks than of the course." (Dustin)

Felix describes another example of the interdependencies of the drivers of EM, the perceived barriers of EM, and the initial intrinsic motivation. He had a low intrinsic motivation before the course, but positive extrinsic influences such as feedback and good grades have increased his EM. He even states that he has become more risk-averse due to the environment and that his character traits are now more similar to those of an entrepreneur than before the course. This example shows how the environment can influence a person's values (Rahmawati et al., 2012). Hennessey et al. (2015) have expressed similar notions in their work, claiming that feedback received from engagement in a task and feedback from relevant others can either enhance or inhibit self-confidence. For example, extrinsic and intrinsic motivators may interact or compete depending on certain factors. In addition, extrinsic motivation can undermine intrinsic motivation in certain circumstances (Bénabou & Tirole, 2003).

However, this rather complex finding is another aspect that has not been advocated enough in the current state of research, which we want to give importance to by drawing on the following research propositions.

RP2c: Depending on the balance between intrinsic and extrinsic EM before the course, the perceived drivers and perceived barriers of EM have different effects. This is also due to interactions between these aspects.

5.3.3 Resilience

In our interviews, we observed three different patterns regarding the interplay of our participants' initial entrepreneurial motivation, extrinsic driver, and perceived barriers influencing the development of their' EM. The following three research propositions were formed based on this and by contrasting it with the literature. In the first pattern, the interplay of students' initial motivation, perceived barriers, and extrinsic drivers during the course emerges in resilience and, finally, a long-lasting post-course entrepreneurial motivation.

Our observations showed that students with initially predominantly intrinsic motivation develop resilience, which is evidenced by the fact that they overcome the perceived barriers they face during the course. As a result, barriers can still lead to disappointments and decreased motivation. However, only temporarily, due to the resilience, do the students perceive the barriers, and the barriers' negative effects are mitigated. This becomes especially evident in Celine's interview, where she explains how she experienced a decrease in motivation due to the high workload and the related stress and time pressure:

"That is why my motivation went down a bit, but then went up again. Because of course you have ups and downs when you develop a business idea like that, and sometimes you also have setbacks. But at some point, things start to look up again once you've been able to sort everything out. [...] In fact, at the very end of the course, my group and I also considered starting this business." (Celine)

Elif tells us about similar developments in her interview, experiencing a temporary decrease of motivation from time to time, which, however, she overcomes finally:

"As a group, we were sometimes very surprised by the criticism, I would say, we couldn't always understand it, because it seemed contradictory. To be honest, that was demotivating at times." (Elif)

The quotes well illustrate the dynamics in the development of students' EM due to the perceived barriers. However, it also indicates that students develop resilience mainly caused by their initial intrinsic EM, which helps them overcome barriers and short-term declines in motivation. The literature confirms these observations. For example, researchers found that individuals with strong enthusiasm for an activity are more likely to continue to pursue and participate in the activity (Su et al., 2020). Moreover, when facing barriers and problems that stand in the way of their goals, these people will focus their attention and motivation on solutions and try to find solutions to overcome the barriers (Cardon et al., 2009).

Second, our interviews revealed that students draw additional motivation from experiencing extrinsic drivers during the course, which strengthens their resilience. This interplay becomes in particular evident in Elif's interview:

"So I was very lucky with my group. At the beginning of course, it was demotivating for all of us because of the criticism or these confusing things or expectations. [...] But the fact that we got along so well in the group, even on a private level, really showed how important that is. We also motivated each other to continue after something like that." (Elif)

Other students also emphasize the influence of extrinsic drivers over the course:

"I also particularly liked that I felt that all ideas were valued and taken seriously by the lecturers. So I felt that everyone was supported, every team and individually through personal coaching and so on." (Celine)

"The knowledge gained through the process of creating and implementing the idea and

following the further development and progress of the idea was a special driving factor of my motivation." (Anonymous 4)

The quotes reveal a second aspect in the interplay, the extrinsic drivers, and indicate that students' initial intrinsic motivation cooperates with extrinsic drivers arising during the course. Despite positive group dynamics, lecturers' support, and the perceived progression of the project, our participants report further extrinsic drivers reinforcing their motivation, such as the competition between different groups and the positive feedback received from friends and family. The cooperation of intrinsic and extrinsic motivational factors aligns with the literature (Hennessey et al., 2015). Furthermore, researchers describe the development of resilience as a dynamic process that is enabled by an interplay of intrapersonal factors such as personal traits, motivation and values, and beliefs, interpersonal factors such as relationships and team, but also contextual factors such as resources availability or culture (Lee & Wang, 2017). Moreover, the extent of resilience is determined by both internal characteristics and external factors (Hedner et al., 2011). Therefore, an interplay of initial intrinsic dominated motivation and experienced extrinsic drivers enables resilience and helps students overcome faced barriers during the entrepreneurship course. In turn, we suggest the following research proposition:

RP3: The dominance of intrinsic motivation in the balance of initial EM and its interplay with the experienced extrinsic drivers during the course creates resilience, which makes students less vulnerable to the perceived barriers they face during the EE course.

5.3.4 Entrepreneurial Passion

The second observed pattern describes students with initial low entrepreneurial motivation developing an intrinsic entrepreneurial motivation over the course, caused by finding their entrepreneurial passion through the experience of extrinsic drivers.

Our interviews revealed that, in particular, the first course, in which students work in groups on their startup ideas, attracts many students. We have observed that students develop a passion for their

projects when they experience numerous extrinsic drivers in this short period. For instance, Isabel reports an increase in her entrepreneurial motivation, although she has initially chosen the major only as a complementation to her core major:

"When we were given the task of choosing an idea, I was suddenly very motivated [...] I found the task relatively exciting because they told us to develop or choose an idea that doesn't really exist yet, i.e. to create something innovative. [...] And then I suddenly had so many ideas and talked to other people about them and wanted to realize all of them." (Isabel)

LEMEX staff member Anonymous 1 also notices this transformation in many students with initially low motivation:

"This often changes in the first semester when people somehow feel like dealing with it more and also through the combination of E&M 1 practical but also what topics are there within the proseminar, so what else does the foundation include and which facets are there? That people think, oh, that is not so uninteresting."(Anonymous 1)

Both quotations underline the experience of extrinsic drivers having a significant impact on students' entrepreneurial motivation, leading to the fact that students identify themselves with their start-up project and develop an entrepreneurial passion. In the literature, entrepreneurial passion is considered a consciously accessible, intense positive feeling and results from engagement in activities with identity-forming meaning and importance to the entrepreneur (Cardon et al., 2009).

Furthermore, our observations reveal that over the entire duration of the course, the initially extrinsic drivers transform into intrinsic motivation, which leads to the students being sustainably motivated to continue their entrepreneurial activities and to overcome faced barriers:

"At the beginning, I would never have thought that we would get this far in such a short time. But I think that was also due to the fact that we had an idea that I was personally very, very interested in and I was

very interested in pursuing it, and then we also had the support of the lecturers." (Felix)

"One lecturer just didn't believe in our idea from the beginning on, that definitely demotivated us, but we as a group were convinced of it, and our coach also always encouraged us and said that this is a cool idea, this is an idea that is fun and he really motivated us to stay with it[...] I would say that this outweighed" (Isabel)

The quotes emphasize the development of sustainable intrinsic entrepreneurial motivation, helping the participants pursue and overcome perceived barriers. The transformation from initial extrinsic drivers to intrinsic motivation is in line with the literature. Over time, goal- or constraints-oriented motivators can become so internalized that they no longer feel as if they come from outside of the person; instead, they become part of a person's identity (Hennessey et al., 2015). Due to the experience of extrinsic drivers, students with initial low EM discover their entrepreneurial passion and develop a personal interest in the task. Simultaneously, the initial extrinsic drivers transform over time into intrinsic motivation. Therefore, we propose the following research proposition:

> **RP4:** By experiencing extrinsic drivers at the beginning of the course, students can discover their entrepreneurial passion and develop intrinsic motivation over the course, which helps them overcome the perceived barriers they face during the course.

5.3.5 Perceived Uncertainty

The last research proposition is derived from the third identified pattern, the uncertainty perceived by the students during the course period. Depending on the dominance of extrinsic motivation at the beginning of the course, the vulnerability to perceived barriers varies. It could be identified that extrinsic motivation can be affected by the expected external reward, which leads to a change in the entrepreneurial motivation of students. One of the interviewees stated:

"Sometimes it seemed like some coaches did not really like or appreciate the idea so that

I felt uncomfortable and demotivated."(Anonymous 4)

One of the LEMEX staff members explains the development of this pattern by stating the following:

"There are students - and this happens quite frequently - who enter the course [...] and realize how much work is behind such a foundation, what things can go wrong, that self-employment is not that easy, and how many bureaucratic hurdles stand behind it, even in Germany. Then they decide for themselves: My idea is quite cool, but I don't feel like putting up with all that and would rather be an employee." (Anonymous 3)

The evidence illustrates that students become more vulnerable to perceived barriers when extrinsic motivation dominates at the beginning of the courses. Therefore, the perceived uncertainty increases and predominates the extrinsic drivers of entrepreneurial motivation. An interviewee pointed out:

"When, in the end, we realized that our idea was not realizable in practice and was actually only developed for the course, it was demotivating."(Anonymous 7)

Thus, the predominant perceived uncertainty negatively influences the student's desire to start a business and leads to short-term or no entrepreneurial motivation.

The literature also emphasizes the observation above. Researchers state that constant negative feedback in pursuing challenging goals may cause entrepreneurs to discard their original goals (Cardon et al., 2009). Fear of failure diminishes the willingness to pursue and participate in an activity, while individuals with solid enthusiasm for an activity are more likely to continue (Su et al., 2020). Moreover, students' motivation and satisfaction can be negatively affected when realizing they cannot achieve the desired outcome (Hytti et al., 2010). In addition, Stipek (1993) claims that rewards significantly impact human behavior. Extrinsic and intrinsic rewards differ in their duration. While extrinsic rewards are often of relatively short duration, intrinsic rewards have a more lasting effect.

Based on the observations, the final research proposition is:

RP 5: The dominance of extrinsic motivation at the beginning of the course results in students being vulnerable to the perceived barriers and leads to perceived uncertainty that predominates the extrinsic drivers of EM and negatively affects students' EM.

6 Discussions and Conclusion

This study examines which factors influence students' entrepreneurial motivation during entrepreneurial education. The research question could be answered, and the existing addressed research gaps in this area could be filled. A theoretical framework based on numerous interviews was designed to close the research gaps. Based on this model, seven research propositions were developed that refer to the factors influencing intrinsic and extrinsic EM during EE.

6.1 Research Contributions

Our study makes several theoretical contributions. First, our research expands the understanding of which factors influence students' EM in the context of EE and how we distinguish between direct influences of intrinsic and extrinsic motivation and consider their dependencies. This has not been examined before in research.

Second, this study applied a qualitative research approach to gain a deeper understanding of students' EM in entrepreneurship courses and the dynamics of the phenomena. So far, there has been surprisingly less research on this issue applying qualitative research methods. Moreover, our studies' inductive approach reveals new relationships between EE, students' EM, and other contextual factors such as drivers and barriers. Based on this, a new and intuitive framework was developed that illustrates the complex phenomena and the interplay of factors influencing EM. Currently, no comparable framework exists that deals with the topic of EM in the field of EE in this depth. Therefore, our model helps researchers better understand the dynamics and differences in students' responses to EE and its implications on their EM. Furthermore, it highlights students'

complex and dynamic development and creation of EM over the entrepreneurship course while interacting with barriers and drivers.

Third, despite the emphasized importance of understanding the dimensions of students' intrinsic and extrinsic motivation in EE (Lemos & Veríssimo, 2014), there was a lack of studies examining students' intrinsic and extrinsic EM in the context of EE. Our research responds to this gap by examining students' intrinsic and extrinsic EM in entrepreneurship courses, thus gaining a deeper understanding of differences in students' EM. Therefore, our study contributes to the literature on EE by emphasizing the importance of understanding students' composition of initial EM and its interplay with contextual factors.

Fourth, numerous studies have examined the effect of EE on students' EM (Hägg & Gabrielsson, 2020). However, previous studies have produced contradictory and poorly explained results regarding the effects of EE on students' EM (Farhangmehr et al., 2016; Hsu et al., 2014; Oosterbeck et al., 2010; Solesvik, 2013; Sui et al., 2017). By identifying the initial and individual balance of students' intrinsic and extrinsic EM as a crucial factor in determining how students react to drivers and barriers and explaining how students' EM develops during the entrepreneurship course, our research explains the contradictory effects of EE on students' EM.

Finally, our study contributes to the scientific conversation about intrinsic and extrinsic motivation by understanding the interplay between intrinsic and extrinsic motivation as well as extrinsic drivers and barriers. Moreover, the findings highlight the importance of the initial balance of students' intrinsic and extrinsic motivation.

6.2 Practical Implications

In addition to numerous theoretical contributions, our study offers several practical implications. First, our findings make several practical contributions to universities, entrepreneurship educators, and program organizers. The results provide a better understanding of the drivers increasing students' EM and the perceived barriers decreasing students' EM during the course. Moreover, our study implies that it is essential for

these stakeholders not to take it for granted that EE increases students' EM. Instead, they need to be aware of differences in students' intrinsic and extrinsic balance as it determines how students react to drivers and perceived barriers and how their EM develops during the course. By understanding this interplay, entrepreneurship educators can specifically address the influencing factors, counteract the factors that students perceive as barriers, and enhance drivers to affect students' EM positively.

Furthermore, our findings help to understand the individualities in students' reactions to faced drivers and barriers during EE. This can help educators target students more effectively during the EE course to enhance their EM. For instance, our results revealed that educators can act as a driver for increasing students' EM and even help students decrease or overcome perceived barriers. Second, the study offers practical implications for students taking entrepreneurship courses. Our study suggests that students should deal with the influencing factors before attending entrepreneurship courses and take time to evaluate their balance of intrinsic and extrinsic entrepreneurial motivation. This will provide them an initial indication of how passionate and persistent they may be about the courses and starting a business.

6.3 Limitations

Our study has several limitations. First, the number of conducted interviews is limited to a number of 15. Furthermore, we conducted our study with students attending an EE course at the University of Bremen in Germany. Therefore, our findings are highly geographically focused and context-specific and offer limited comparability. Since the interviews only took place over two months, the study was also limited in time. Moreover, the length of the interviews was also limited. More extended interviews could provide more in-depth information, for instance, on intrinsic motivation and its associated values. It should also be noted that the interviewees' experiences date back to different periods of time. In addition, the interview partners have different levels of experience in EE. For instance, some have only completed a few modules, others just completed the courses, and others completed the module a long time ago. Furthermore, selection bias could not be eliminated

from this study as the study pays little attention to students' personal backgrounds and attitudes. Furthermore, our interviewees only include business students. Therefore, the findings could differ among students from other study programs, for instance, students with a technical background. Finally, our study is limited to the fact that it only focuses on the development of students' EM during the course and thus excludes the further development of the students' entrepreneurial actions after the entrepreneurship course.

6.4 Outlook

In order to overcome the limitations of this study, several opportunities for future research arise. Future researchers should conduct several studies in different regions with similar programs to further empirically validate the findings and make the results more generalizable. Moreover, we suggest that future researchers conduct further studies that also consider contextual differences to examine the role of contextual factors affecting students' entrepreneurial motivation in entrepreneurial education. Furthermore, future research should conduct more interviews and consider students' backgrounds and attitudes. These insights will help to better understand the origin of students' initial EM and their response to drivers and barriers. Hence, the developed framework could be further explored by examining the origin of the initial intrinsic motivation and how values and character traits essential to EM were developed in advance. Finally, future research could expand our study by exploring students' entrepreneurial activities after finishing the EE course in order to better understand how students' intrinsic and extrinsic motivation is related to later entrepreneurial actions. Therefore, a longitudinal case study could reveal new insights.

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Identifying Obstacles in Building Corporate Accelerators: A Systematic Literature Review

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Abstract

The proliferation of corporate accelerators to drive innovation has garnered attention from scholars and practitioners. This study delves into the distinctive challenges corporate accelerators face compared to traditional accelerators. While prior research has highlighted obstacles related to organizational context, resource supply, and aims, a fragmented understanding remains of how corporate accelerators can address these issues effectively. This paper's primary aim is to identify and synthesize knowledge about the hurdles encountered by corporate accelerators and the competences essential for overcoming them. Through a systematic literature review, the study explores the interplay between exploration and exploitation competences throughout the corporate accelerator lifecycle. It addresses key research questions concerning challenges in facilitating corporate accelerators and the competencies necessary to surmount these obstacles. The findings contribute to the theoretical understanding of corporate accelerators and organizational ambidexterity, emphasizing the need to balance exploration and exploitation for innovation. The study offers actionable insights for organizations managing accelerator programs, highlights the role of organizational ambidexterity, and serves as a valuable resource for future research in this evolving field.

Keywords: Corporate Accelerators, Competences, Ambidexterity, Systematic Literature Review

1 Introduction

1.1 Practical Relevance

The rise of corporate accelerators has gained significant attention from both researchers and practitioners as an innovative way for corporations to foster innovation and stay competitive (Ford et al., 2010; Kanbach, 2016; Heinemann, 2010). While corporate accelerators offer similar assistance to traditional accelerators, they differ in their primary objectives and target participants (Harima, 2020). Corporate accelerators motivate and assist their employees in creating new enterprises that could evolve into new business divisions or spin-offs. In contrast, traditional accelerators aim to foster independent startups across a more diverse range of industries (Ford et al., 2010; Cohen, 2013). Nevertheless, to achieve their objectives, corporate accelerators must overcome various obstacles, such as finding the optimal design of the parental organization's structure and uniqueness, sourcing the right startups, and effective configurations between the role of context, resource supply, and aims of the corporate accelerator (Hornberger et al., 2022). Previous studies have shown that corporate

accelerators face challenges related to their context, resource supply, and aims and the need for a unique and effective organizational structure. These challenges are particularly relevant for corporate employees, who are accustomed to the routine and may have difficulty engaging with startups (Hornberger et al., 2022). However, existing knowledge about the barriers faced by corporate accelerators is relatively fragmented, making it difficult to gain an overview of what has been learned and to identify future research directions. In addition, previous research has mainly focused on identifying these difficulties without exploring how business accelerators can address them. In essence, there is a lack of knowledge about the capabilities required by corporate accelerators to address the issues identified in the literature. Therefore, understanding the obstacles that corporate accelerators face and the capabilities they need to overcome them is essential for these programs' success.

1.2 Research Aim and Questions

This thesis aims to identify and synthesize knowledge about the obstacles that corporate accelerators encounter, and the relevant

competences needed to overcome these obstacles. By focusing the paper on corporate accelerators, this study aims to show the importance of balancing explorational and exploitational challenges and competences to ensure organizational ambididextry (Müller et al., 2019). The thesis will address the following research question:

How do corporate accelerators effectively balance and coordinate exploration and exploitation competences throughout their lifecycle to overcome challenges?

We will address the following sub-questions to answer our research question:

- What are the challenges in facilitating corporate accelerators?

- Which competences do corporate accelerators need to overcome these obstacles?

By addressing these research questions, this study conducts a systematic literature review to enhance the understanding of challenges faced by corporate accelerators throughout their lifecycle, identify essential exploration and exploitation competences for overcoming these challenges, and establish a framework emphasizing the importance of balancing and coordinating these competences for fostering innovation and value creation. This paper seeks to contribute to the theoretical fields of corporate accelerator and organizational ambidexterity literature. It aims to offer a more robust understanding of the relationship between competences and corporate accelerator success.

Overall, the paper provides actionable insights for organizations managing accelerator programs and highlights the role of organizational ambidexterity. Additionally, it serves as a valuable resource for future research, helping determine the relevance of further exploration in this field.

The study concludes that by addressing these research questions, future studies can contribute to a deeper understanding of the complexities of managing corporate accelerator programs and provide valuable insights for corporations and practitioners in startup environments and formal network organizations. In addition to advancing the theoretical understanding of corporate accelerators, this study provides guidance for corporations seeking to design and implement successful accelerator programs. Managers of formal networks could benefit from these findings when developing their programs and activities to make them more attractive to entrepreneurs. In contrast, entrepreneurs could use this study to decide whether to join a formal network or evaluate different networks.

2 Conceptual Background

2.1 Corporate Accelerator

While corporate accelerators provide nearly all the assistance that traditional accelerators offer, they differ in their primary objectives and target participants. Corporate accelerators encourage and support their employees to build new businesses that may become new business units or spin-offs (Ford et al., 2010). For example, the SAP Accelerator program specifically supports the development of startups in the technology sector that can align with SAP's strategic interests (Gutmann et al., 2019). In recent years, accelerator programs have received increasing interest from corporations (Kanbach & Stubner, 2016). Corporate accelerators are defined as fixed-term, cohort-based programs that usually consist of seed capital, mentorship, connections, sales, and other support mechanisms (Cohen, 2013; Freiling & Harima, a). The program usually finishes with a pitch event or "demo day" where the startups pitch the corporate sponsor, stakeholders, clients, and investors for further investment or partnership (Heinemann, 2015; Freiling & Harima, b).

Prior studies have revealed corporations' several motivations to facilitate corporate accelerators. One motivation is innovation: The cooperation between startups and corporations triggers innovation, which leads to new products or disrupts business models (Kohler, 2016). Another motivation is the corporation's brand development, infusing the startup culture into the corporation or extending the customer relationship through the startups (Gutmann et al., 2019). Therefore, corporate accelerators play a vital role in helping corporations grow sustainably and stay competitive.

To reach those objectives, however, corporate accelerators must overcome some obstacles in facilitating corporate accelerators. Previous studies have indicated that corporate accelerators encounter obstacles related to the effective configurations between the role of context, resource supply, and aims of the corporate accelerator (Kanbach & Stubner, 2016; Nesner et al., 2020). Additionally, the literature identified finding the optimal design of the parental organizations' structure and uniqueness as an obstacle (Hornberger et al., 2022). Corporate employees used to work in their routine and are not exposed to much change, so engaging and reaching out to startups is difficult. The other difficulty is sourcing the right startups due to the difference between large firms and startups, which leads to a lot of conflict potential (Hornberger et al., 2022).

According to scholars, it is crucial to distinguish between two kinds of corporate accelerators. The first type, financial corporate accelerators, aims to speed up the emergence of new ventures. In contrast, the second type, strategic corporate accelerators, focuses primarily on accelerating the strategic alignment between startups and established companies (Hornberger et al., 2022). Both financial and non-financial metrics are deemed to be important outcomes in a strategic corporate accelerator (Hornberger et al., 2022). There is a common tendency to confound outcomes with outputs due to output-based metrics that display an increased focus on economic and rather hard than soft outcomes, which may contradict the strategic intent of strategic corporate accelerators (Hornberger et al., 2022). As a result, a lack of research suggests appropriate approaches to measuring success in the context of business accelerators. (Hornberger et al., 2022).

Although researchers have addressed several types of obstacles, the findings on challenges in the corporate accelerator literature are fragmented. A large number of studies on this subject focused primarily on different types of corporate accelerator models (Dempwolf et al., 2015; Moschner et al., 2019), the benefits of corporate accelerators from a corporate and startup perspective (Gutmann et al., 2019) or the motives behind the corporate engagement with startups in launching a corporate accelerator (Urbaniec & Żur, 2021). Therefore, the current literature calls for

synthesizing knowledge about obstacles that corporate accelerators encounter.

Existing research on corporate accelerators has explored their role, impact, and key success factors in promoting innovation and growth within parent companies (Co-hen, 2013; Crişan et al., 2021). Moreover, limited knowledge exists about the challenges and barriers faced by business accelerators in running their programs and the skills and capabilities required to address these issues (Hornberger et al., 2022).

This lack of understanding limits our ability to manage corporate accelerator programs effectively. To address this research gap, this study aims to investigate the challenges and obstacles associated with running these programs and identify the necessary skills and abilities to overcome them. The research questions derived from this aim will be presented in the introduction, offering a clear and focused direction for the study's goals and scope.

Previous findings have encouraged further research in several areas. Firstly, the structure and variety of the parental organization and its environment are important in finding the optimal design (Hornberger et al., 2022). Secondly, exploring the effects of seed accelerators on regional ecosystem evolution and entrepreneurial activity (Hochberg, 2016). Thirdly, evaluating the outcomes of public/private partnership programs aimed at supporting innovative startups (Clarysse & Bruneel, 2007). Additionally, most of the research focuses on the corporation's perspective, not the startup's. Besides, previous studies tended to reveal obstacles without elaborating on how firms can overcome these obstacles. Therefore, the present research calls for a holistic view of obstacles that firms could face in facilitating corporate accelerators and relevant competences that allow them to overcome these obstacles (Hornberger et al., 2022).

2.2 Organizational Ambidexterity

Organizational ambidexterity refers to an organization's ability to simultaneously pursue and balance the exploitation of existing capabilities and the exploration of new opportunities (Raisch & Birkinshaw, 2008). This balance is critical for organizations to sustain their competitive advantage over the long term by adapting to

changing market environments and technological advances (Birkinshaw & Gibson, 2004).

Companies that effectively manage ambidexterity can create new business opportunities while leveraging their current capabilities. This capability is essential for companies to succeed in dynamic and uncertain environments where the ability to adapt to change is essential (Iii et al., 2009).

The context of organizational ambidexterity is conversely appropriate for corporate accelerators because these programs are designed to foster innovation and growth within established organizations (Birkinshaw & Gibson, 2004). To remain competitive in today's fast-paced business environment, organizations must be able to both explore new business opportunities and exploit existing ones (Gibson & Birkinshaw, 2004). Corporate accelerators provide a structured approach to innovation by bringing together internal and external stakeholders to identify and develop new ideas, products, and services (Cohen & Hochberg, 2014).

At the same time, companies must maintain their core business operations and leverage their existing resources and capabilities to remain profitable and meet current customer needs. Organizational ambidexterity provides a framework for balancing these competing demands by allowing companies to simultaneously explore new opportunities while leveraging their existing strengths (Birkinshaw & Gibson, 2004).

By incorporating organizational ambidexterity into their accelerator programs, companies can foster a culture of innovation that is closely aligned with their overarching strategic goals (Raisch & Birkinshaw, 2008). This enables them to identify and seize new growth opportunities and improve their existing business operations (Volberda et al., 2013; Freiling & Harima, 2019c). This leads to a more agile and adaptive approach to decision-making and resource allocation, enabling organizations to respond more effectively to emerging trends and market shifts (Jansen et al., 2005).

Embracing organizational ambidexterity within corporate accelerator programs also facilitates a deeper understanding of the dynamic interplay between exploitation and exploitation, which is essential for maintaining a balanced and sustainable innovation pipeline (Gibson & Birkinshaw, 2004). This balance allows companies to leverage the startup mentality of rapid experimentation, learning, and adaptability while leveraging the resources, expertise, and established networks of their parent organizations (Müller et al., 2019).

Organizational ambidexterity is an appropriate framework for defining the challenges and competences required to facilitate a corporate accelerator, as it involves balancing the need to leverage existing capabilities and resources with the need to explore and develop new ones, which is a key aspect of corporate innovation and entrepreneurship (Müller et al., 2019). Corporate accelerators aim to create new business opportunities through rapid experimentation and collaboration with external startups while leveraging the existing resources and capabilities of the parent company (Müller et al., 2019). This requires managing and integrating different innovation activities and processes involved in exploration and exploitation (Müller et al., 2019).

3 Methodology

3.1 Research Design

To address the research questions, this study adopted the systematic literature review (SLR) approach, which facilitates a comprehensive and transparent examination of the existing literature on corporate accelerators, their challenges, and competences (Booth, 2016). The SLR is a methodologically consistent and replicable technique that synthesizes empirical evidence from multiple sources and provides an in-depth understanding of a particular phenomenon (Kitchenham & Charters, 2007). Applying the SLR approach is well suited for this study, as it allows for a thorough understanding of the barriers and challenges faced by corporate accelerators and the skills and competences required to overcome them.

3.2 Data Selection and Collection

The scope of literature considered for this study is defined by inclusion and exclusion criteria. Inclusion criteria include English-language articles published in high-impact journals and conference papers published by established organizations after

2003. Exclusion criteria include a geographic focus on a particular region or country. These criteria ensured that the selected articles were of high quality, directly relevant to the research question, and provided insights into current practices and challenges in business accelerators. By establishing explicit inclusion and exclusion criteria, the risk of bias in the review process is minimized, and the validity of the findings is enhanced (Tranfield et al., 2003).

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework guides the research process in this SLR, which consists of four stages (Figure 1).

The first step was identification. The Google Scholar and Semantic Scholar databases are used to search for relevant literature using a combination of keywords such as "corporate accelerator", "startup collaboration", "corporate entrepreneurship", "organizational learning", "corporate venturing", "startup engagement", "new venture", and "open innovation". The search strategy is iteratively refined to ensure the comprehensive inclusion of relevant literature. A total of 65 papers were initially identified, excluding those without available PDF files. Reasons for not having a PDF file available were a paywall, a required university VPN login, or technical errors. Mendeley was utilized during the initial literature search and organization stage, allowing for the efficient management of references and extracting relevant articles.

In the second phase, the screening process began with the review of titles, abstracts, and full texts to identify the most relevant articles for analysis. Two researchers conduct The screening process independently, and any discrepancies are resolved through discussion or consultation with a third researcher. In the first iteration, the number of papers was reduced to 50 based on titles, and in the second iteration, after reviewing abstracts and conclusions, 45 papers remained.

The third phase, the evidence-based assessment, was conducted by extracting key findings on barriers and capabilities related to business accelerators from the selected studies. A standardized data extraction form was used to ensure consistency and reliability in the data collection process. The full papers were read, and 40 were selected for analysis.

Finally, the selected studies were synthesized and analyzed to answer the research questions, and the implications of the findings for theory and practice in the con-text of corporate accelerators were discussed. Of the 40 selected papers, 32 were used in the final study.

Overall, the combined use of Mendeley, Microsoft Excel, and Microsoft Word served as highly effective technical tools for maintaining an overview of the literature and managing the analysis process in this systematic review. These tools facilitate a consistent and efficient research process that allows for extracting relevant information and synthesizing valuable findings to address the research question. By streamlining the organization, management, and analysis of the literature, Mendeley, Microsoft Excel, and Microsoft Word enabled a comprehensive exploration of the research topic.
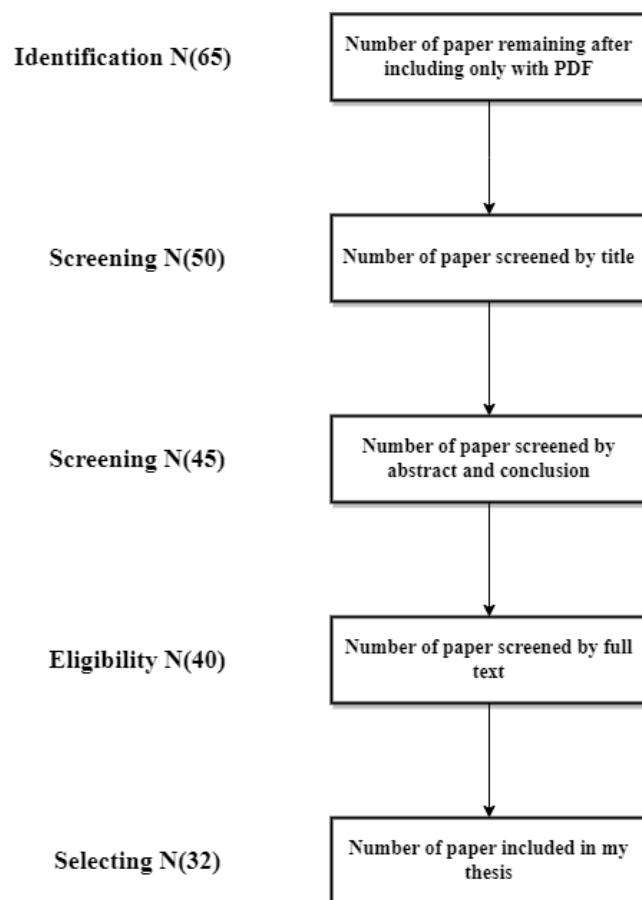

Figure 1: PRISMA Diagram

3.3 Data Analysis

Applying organizational ambidexterity as a theoretical and analytical lens in the data analysis involves examining the challenges and competences needed to facilitate corporate accelerators from the perspective of balancing exploration and exploitation. Exploration refers to the search for new opportunities, risk-taking, and experimentation, while exploitation involves refining and improving existing processes, efficiency, and control (Gibson & Birkinshaw, 2004). The process model developed in the study addresses the challenges corporate accelerators face at each stage, considering how they balance exploration and exploitation activities.

To develop this process model, an iterative analysis was conducted. Firstly, the papers were analyzed for challenges and competences related to corporate accelerators, and the most promising ones were collected in a Microsoft Word sheet. Similar challenges and competences were combined, and second-order challenges and competences were formulated to create a more structured overview. In the next step, these challenges and competences were categorized into exploration and exploitation, following the principles of organizational ambidexterity (Birkinshaw & Gibson, 2004). Microsoft Word was employed for this data extraction and analysis phase, with a Microsoft Word table created to summarize and categorize the findings from the selected papers.

Subsequently, first-order challenges representing the lifecycle of a corporate accelerator were formulated. Lastly, the corporate accelerator lifecycle challenges framework was combined with the explorational and exploitation competences to highlight the organizational ambidexterity aspect. This integrated framework captures the various stages and challenges corporate accelerators face and emphasizes the importance of balancing exploration and exploitation competences throughout the program (Heinemann, 2015; Hornberger et al., 2022). The resulting framework serves as a valuable tool for understanding and navigating the complexities of managing corporate accelerator programs, offering practical insights for practitioners and policymakers alike.

In the data analysis, we inductively derive five main challenges faced by corporate accelerator
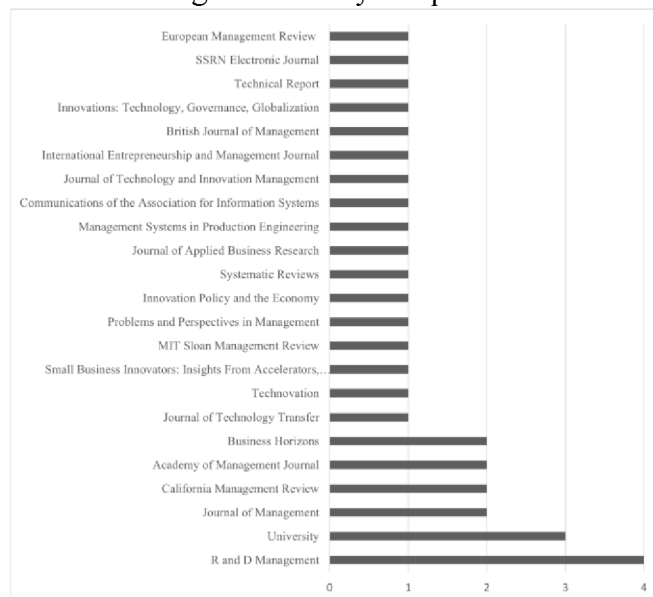

Figure 2: Number of papers published by journals

programs: (1) program design challenges, (2) selection challenges, (3) integration challenges, (4) corporate-startup challenges, and (5) evaluation challenges. These challenges encompass various aspects of corporate accelerator programs, from designing and selecting startups to integrating and evaluating the program's success. Detailed explanations of each category will be provided in the results section, discussing how they relate to exploration and exploitation processes in the context of corporate accelerators.

4 Findings

In our study, we conducted a systematic literature review to identify and analyse the existing research on corporate accelerators. Our aim was to gain insights into the current state of research, identify research gaps and directions for future re-search, and provide a comprehensive understanding of the topic.

Our final set of literature consisted of 28 papers, with the majority of journals pub-lished by R&D Management, followed by the Journal of Management, California Management Review, and Academy of Management Journal. By selecting papers from 2003 to 2022, we aim to provide a comprehensive and up-to-date under-standing of the research on corporate accelerators.

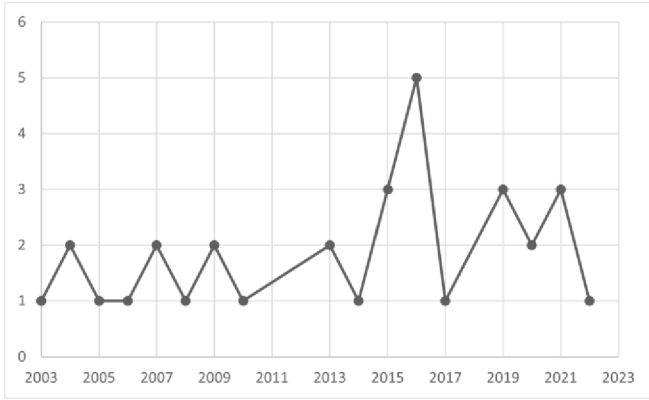We used bibliometric analysis to identify the most cited papers, authors, and jour-nals in the field.

Figure 3: Number of papers published by year

Figure 2 shows the distribution of journals in our final set, with R&D Management having the highest number of papers, followed by the Journal of Management, California Management Review, and Academy of Management Journal.

We also analyzed the year of publication of the selected papers, as shown in Figure 3. The figure shows that most papers were published in 2016, with five papers, followed by three in 2015, 2019, and 2021. This reflects the growing interest in corporate accelerators and the increasing number of studies conducted in recent years.

Finally, we analysed the types of publications included in our final set of litera-ture, as shown in Figure 4. The figure reveals that most of the papers appeared in academic journals, with just five papers being published in conference proceedings and only one paper as a technical report. This reflects the fact that academic jour-nals are the primary outlet for research on corporate accelerators.
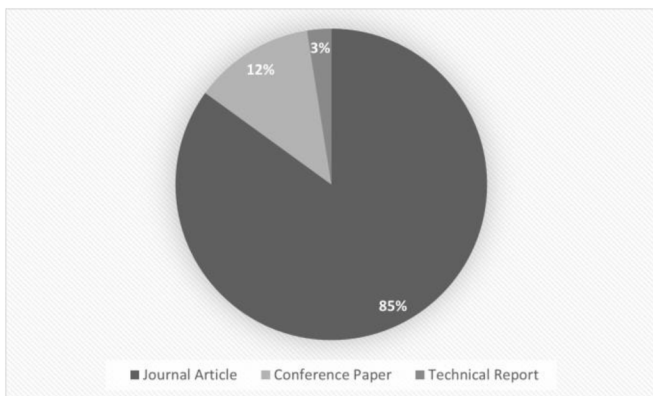
Figure 4: Percentage of journal types

Overall, our systematic literature review provides a comprehensive understanding of the existing research on corporate accelerators, their objectives,

obstacles, and their impact on innovation and competitiveness. The bibliometric analysis sheds light on the most cited papers, authors, and journals in the field, while the publication year and type analysis provide insights into the trends and directions of research.

5 Results

5.1 Challenges

5.1.1 Program Design Challenges
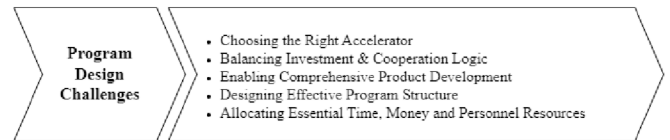
Program design challenges in corporate accelerators are critical issues that require careful consideration due to their impact on these programs' overall effectiveness and success. Several second-order challenges contribute to these overarching concerns, which we will discuss in detail in this section.

One of the most critical challenges is accelerator selection, which involves choosing the right type of accelerator that aligns with the company's goals and objectives for successful outcomes (Kohler, 2016; Moschner et al., 2019). Companies should evaluate their strategic goals and match them with the appropriate accelerator model to maximize value creation. According to (Nesner et al., 2020), companies can work with a corporate accelerator, an independent accelerator, an independent corporate accelerator, or a university accelerator, depending on their time, resources, and goals.

Another challenge is finding the right balance between investment and collaboration within a program, as it can be difficult to effectively balance the investment and collaboration logic (Gutmann et al., 2019; Kanbach & Stubner, 2016). Companies must find the right balance between financial support and cooperation to foster innovation and growth among startups. Designing a program that achieves holistic acceleration is also critical, as it aims to accelerate startups' product and strategic business development (Heinemann, 2015; Ur-baniec & Żur, 2021). This requires a comprehensive approach that considers product

development and the broader strategic context of the startups involved.

Program design is another second-order challenge that companies need to address by choosing the suitable duration, content, and format of the program to ensure the success of both the startup and the company (Clarysse & Bruneel, 2007; Demp-wolf et al., 2015). A well-designed program that meets the needs of both parties is critical to maximizing the benefits of the accelerator (Dempwolf et al., 2015). Finally, resource allocation is a significant challenge in corporate accelerators, as ensuring the availability of necessary internal resources such as time, capital, and personnel is critical (Gibson & Birkinshaw, 2004; Jansen et al., 2005). Efficient resource allocation is critical to successfully implementing and managing accelerator programs, including finding the optimal balance between allocating resources to the accelerator and maintaining core business activities (Raisch & Birkinshaw, 2008).

5.1.2 Selection Challenges

The process of selecting startups for corporate accelerators presents numerous challenges that can impact the success of both the startups and the parent company. This section discusses key selection challenges, including identifying the right startups, establishing clear selection criteria, ensuring product complementarity, balancing diversity and compatibility, and avoiding conflicts of interest and favoritism.

Identifying the right startups is crucial for corporate accelerators, as they need to align with the parent company's strategic goals and create value (Wei-blen & Chesbrough, 2015). Startups should potentially contribute to the company's existing portfolio and drive innovation in the target area (Urbaniec & Żur, 2021). Moreover, this can be challenging due to the large number of applicants and the difficulty in predicting their future performance (Cohen, 2013).

Creating explicit criteria and a transparent procedure is vital for choosing the appropriate

startups (Clarysse & Bruneel, 2007). An adequately structured selection method can ensure that the chosen startups align with the company's strategic objectives and generate value (Del Sarto et al., 2020). Nevertheless, devising such a method can be difficult, particularly when confronted with numerous applicants and evaluating their potential with only limited information available (Becker & Gassmann, 2006).

Product complementarity refers to the extent to which a startup's product or ser-vice complements the firm's existing portfolio in the target area (Ford et al., 2010). Ensuring product complementarity is crucial because it allows corporations to leverage startup innovations and enhance their offerings (Gibson & Birkinshaw, 2004). However, determining product complementarity can be challenging due to the dynamic nature of startups and established firms (Korpysa, 2021).

Another crucial challenge is balancing diversity and compatibility when selecting startups (Müller et al., 2019). While diversity among startups can lead to more incredible innovation and learning opportunities, compatibility is essential for smooth integration with the parent company (Jansen et al., 2005). Striking the right balance between diversity and compatibility can be challenging, as it requires consideration of multiple factors such as technological expertise, market focus, and organizational culture (Moschner et al., 2019).

Finally, conflict avoidance is a critical aspect of the selection process. Corporations must avoid conflicts of interest and favoritism when selecting startups (Drover et al., 2017). Conflicts of interest can arise when firms are involved in multiple projects or have competing interests, leading to biased decision-making (Lichtenthaler, 2009). Conversely, favoritism can lead to the selection of less qualified startups due to personal connections or preferences (Dempwolf et al., 2015). Avoiding these issues is essential to maintaining the credibility and fairness of the selection process (Nesner et al., 2020).

5.1.3 Integration Challenges

Corporate accelerators play a critical role in fostering innovation by working with startups and integrating them into existing business models. Consequently, the integration process is often fraught with challenges. This section focuses on the integration challenges in corporate accelerators, drawing on the available literature to discuss three second-order challenges: product integration, real-world implementation, and startup integration.
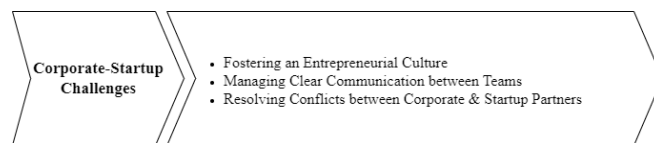
One of the key challenges in corporate accelerators is integrating the startup's product with the company's existing software and ecosystem (Weiblen & Chesbrough, 2015). This includes ensuring that the startup's products meet the corporation's high standards for reliability and security (Gutmann et al., 2019). In addition, it may require aligning the startup's technology with the corporation's strategic goals and innovation priorities (Moschner et al., 2019). According to Becker & Gassmann, 2006, a successful product integration process can create significant leverage through the knowledge transfer of ideas between the startup and the parent company.

Another challenge corporate accelerators face is managing a program that provides actual implementation to the startups, leading to tangible benefits during the program (Cohen, 2013). This may include providing access to resources, mentorship, networking opportunities, and facilitating collaboration between the startup and the parent company (Crișan et al., 2021). Real implementation is critical for startups to gain market traction and validate their business models, and it has been found to be a key determinant of startup survival (Del Sarto et al., 2020). However, ensuring true implementation requires a careful balance between providing support and avoiding micromanagement that can stifle startup autonomy and creativity (Kanbach & Stubner, 2016).

Integrating startups into parent company operations is complex because startups often have different cultures, work styles, and expectations (Hornberger et al., 2022). For example, startups tend to have more flexible and informal work environments that value adaptability and experimentation, while established companies often prioritize structure, hierarchy, and risk management (Urbaniec & Żur, 2021). This difference in work styles and cultures can create challenges when trying to integrate

startups into the larger organization, as both parties need to find common ground and adapt to each other's values and expectations (Urbaniec & Żur, 2021).

5.1.4 Corporate-Startup Challenges

Corporate startup challenges play a significant role in the successful integration and collaboration of startups and established corporations within corporate accelerators. These challenges can be categorized into several second-order challenges, each discussed in detail below with relevant sources and examples.

One of the challenges in corporate-startup collaborations is infusing the entrepreneurial mindset and culture of startups into the corporation to reduce bureaucratic inflexibility (Weiblen & Chesbrough, 2015). For example, corporations may struggle to adapt to the fast-paced decision-making processes standard to startups, leading to missed opportunities and slower innovation (Urbaniec & Żur, 2021). By incorporating an entrepreneurial mindset, companies can embrace a more agile and innovative approach to problem-solving and decision-making. Cultural differences between the parent company and startups can lead to communication challenges and misunderstandings (Drover et al., 2017). For example, a startup may prefer informal communication channels, while the corporate partner may require a more structured approach. This can lead to miscommunication and hinder collaboration (Gutmann et al., 2019). Managing expectations and ensuring clear communication between corporate and startup teams is essential for successful collaboration.

Another challenge is managing conflicts of interest between the corporate partner and startups (Becker & Gassmann, 2006). For example, a startup may prioritize rapid growth and market penetration, while the corporation may focus on maintaining its existing market position and protecting its intellectual property (Ford et al., 2010). In such cases, both parties must find a balance between

their strategic goals to ensure a successful partnership.

5.1.5. Evaluation Challenges

Addressing evaluation challenges is critical to understanding corporate accelerators' impact on the corporation and participating startups. Evaluation challenges revolve around identifying key performance indicators (KPIs) and comprehensively assessing the program's success in achieving its intended outcomes. This section provides an overview of key evaluation challenges in corporate accelerators, including KPI identification and program evaluation, and provides examples and resources to support the discussion.

Identifying appropriate KPIs that capture the benefits of the corporate accelerator program can be challenging. It is essential to select KPIs that accurately represent the desired outcomes and impact of the program on participating startups and the corporation (Crişan et al., 2021). For example, a corporation may focus on KPIs related to the number of startups that successfully scale their business, while a startup may prioritize KPIs related to market penetration (Weiblen & Chesbrough, 2015).

Evaluating the success of a corporate accelerator program is complex because success can be defined in many ways, including financial returns, strategic partner-ships, and product development (Drover et al., 2017). Measuring the success and impact of the program on both the corporation and startups requires a comprehensive evaluation framework that considers the diverse goals and expectations of all stakeholders involved (Moschner et al., 2019).
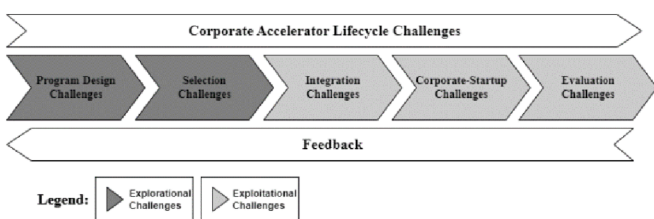

Figure 5: Corporate Accelerator Lifecycle Challenges

For example, a corporate accelerator might consider the extent to which it has facilitated strategic partnerships between the corporation and startups. In contrast, a startup might evaluate the program based on how much it has helped them develop and bring their product to market (Clarysse & Bruneel, 2007).

5.1.5 Corporate Accelerator Lifecycle Challenges

The Corporate Accelerator Lifecycle Challenges Framework addresses critical issues at each stage of the corporate accelerator lifecycle. Organizations can develop more effective and successful programs by systematically addressing these challenges.

Initially, Program Design Challenges involve selecting the appropriate accelerator type, balancing investment and collaboration, providing holistic acceleration, designing effective programs, and allocating resources. These aspects ensure alignment with the company's goals and maximize value creation.
Subsequently, Selection Challenges emphasize identifying suitable startups, establishing clear selection criteria, ensuring product complementarity, balancing diversity and compatibility, and avoiding conflicts of interest and favoritism. Addressing these challenges enables companies to select startups that align with their strategic goals.

Following this, Integration Challenges address product integration, real-world implementation, and startup integration. Overcoming these challenges facilitates the seamless incorporation of startups into the parent company, promoting growth and development.

Next, Corporate-Startup Challenges involve infusing the entrepreneurial mindset, managing cultural differences, and resolving conflicts of interest. Addressing these challenges enables corporations and startups to collaborate effectively, fostering innovation and value creation.

Afterward, Evaluation Challenges focus on identifying appropriate KPIs and comprehensively assessing program success. By addressing these challenges, companies can measure their accelerator programs' impact and make necessary adjustments to enhance outcomes.

Lastly, feedback plays a crucial role in the corporate accelerator lifecycle, enabling organizations to learn from their experiences, iteratively improve their programs, and maintain ambidexterity. Addressing challenges related to obtaining unbiased feedback, processing and analyzing feedback, and implementing changes based on feedback allows organizations to adapt their corporate accelerator programs and maintain relevance in a dynamic business environment.

5.2 Competences

5.2.1 Explorational Competences

Explorational competences enable corporate accelerators to identify, select, and support startups with high potential for innovation by discovering new opportunities, building new relationships, and developing new competences. Key exploration competences encompass environmental scanning, opportunity identification, and network building.
Environmental scanning involves monitoring the external environment for emerging trends and technologies that could significantly impact the parent company's industry (Cohen, 2013). By staying informed about market developments, corporate accelerators can better position themselves and the startups they support to respond to changing industry dynamics and evolving customer needs (Hornberger et al., 2022).

Opportunity identification is essential for recognizing promising startups that align with the parent company's strategic goals and have the potential to create value through collaboration (Kanbach & Stubner, 2016). Corporate accelerators should clearly understand the parent company's strategic objectives and actively search for startups that possess the skills, technologies, or business models that can contribute to achieving these goals (Moschner et al., 2019).

Network building is crucial for establishing and maintaining relationships with key stakeholders, such as investors, mentors, and industry experts, who can support the startups' growth and innovation (Kohler, 2016). By building strong networks, corporate accelerators can connect startups with the resources, expertise, and guidance they need to develop and scale their businesses. Furthermore, these networks can facilitate

knowledge exchange and collaboration between startups and the parent company, enabling both parties to learn from each other and adapt to new market conditions (Moschner et al., 2019).

5.2.2 Exploitation Competences
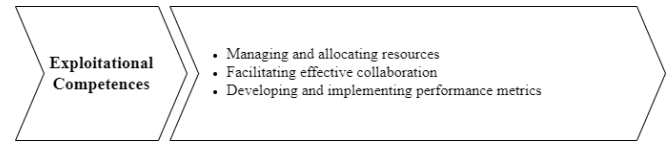
Exploitation competences involve optimizing and leveraging existing resources and relationships to achieve success in the corporate accelerator program. They focus on efficiently using resources, retaining startups, and transferring knowledge from startups to the parent organization. These competences include resource allocations, collaboration management, and performance measurement.

Resource allocation is essential for managing and allocating resources, such as funding, technology, and expertise, to meet the startups' needs and strategic objectives (Crișan et al., 2021; Gutmann et al., 2019; Kanbach & Stubner, 2016). By efficiently allocating resources, corporate accelerators can support startups, allowing them to focus on growth and innovation (Crișan et al., 2021; Gutmann et al., 2019; Kanbach & Stubner, 2016).

Collaboration management involves facilitating practical cooperation between startups and the parent company while balancing cooperation and competition (Kohler, 2016). Establishing a productive collaboration allows both parties to benefit from each other's strengths, fostering knowledge transfer and creating synergies that can drive innovation and growth (Weiblen & Chesbrough, 2015).

Performance measurement is crucial for developing and implementing appropriate performance metrics that capture the value created by the accelerator program and enable continuous improvement (Kohler, 2016). By monitoring and evaluating the performance of both the program and the participating startups, corporate accelerators can identify areas for improvement, assess the effectiveness of their interventions, and

make data-driven decisions to enhance the overall success of the program (Kohler, 2016).

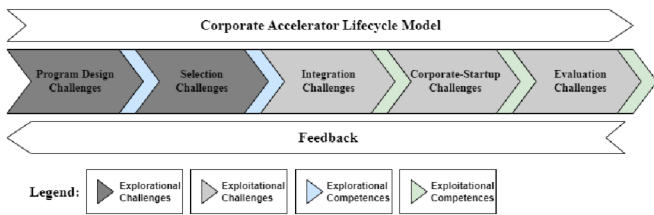## 5.2.3 Corporate Accelerator Lifecycle Model

Figure 6: Corporate Accelerator Lifecycle Model

The proposed framework presents a corporate accelerator lifecycle model, which combines all stages of the corporate accelerator lifecycle challenges, incorporating integrated feedback as well as exploration and exploitation competences. In this comprehensive framework, exploration competences, such as environmental scanning, opportunity identification, and network building, are crucial during the initial stages of the accelerator process, particularly in the program design and selection phases. They enable corporate accelerators to identify, select, and support startups with high innovation potential.

Conversely, exploitation competences, including resource allocation, collaboration management, and performance measurement, become more relevant in the later stages of the accelerator process, such as integration, corporate-startup collaboration, evaluation, and feedback. These competences help corporate accelerators leverage the resources and knowledge available within the parent company to support the growth and development of the startups.

The final step of the corporate accelerator lifecycle is feedback. Feedback is crucial, enabling organizations to learn from their experiences and iteratively improve their programs. Feedback can be collected from various sources, including startups, mentors, investors, and other stakeholders involved in the accelerator program.

In this context, organizational ambidexterity refers to a corporate accelerator's ability to pursue both exploration and exploitation activities simultaneously, ensuring a balance between discovering novel opportunities and refining existing capabilities. It is essential to balance exploration and exploitation competences throughout the corporate accelerator lifecycle. By fostering the ability to both explore new opportunities and exploit existing resources, ambidexterity enables corporate accelerators to address challenges effectively and create a sustainable innovation pipeline.

According to Birkinshaw & Gibson, 2004 building understanding at all company levels is crucial for successfully implementing ambidexterity. Ensuring that employees across the organization comprehend the importance of ambidexterity and the top management's initiatives will empower them to make informed decisions about where to focus their efforts, ultimately contributing to the organization's ambidexterity.

In conclusion, the proposed diagram illustrates the importance of integrating exploration and exploitation competences in addressing corporate accelerator lifecycle challenges and highlights the role of organizational ambidexterity in balancing and coordinating these competences to drive innovation and value creation.

5.2.4 Recommendations

The findings of this systematic literature review highlight the importance of balancing and coordinating exploration and exploitation competences in corporate accelerators to overcome the identified challenges and drive innovation and value creation. When designing or refining a corporate accelerator program, organizations should first consider the need to achieve an optimal balance between these competences to foster successful collaborations and outcomes.

Striking the right balance between exploration and exploitation is crucial for corporate accelerators. Drawing from the literature on organizational ambidexterity, potential risks may arise if corporate accelerators only concentrate on either exploitation or exploitation. For instance, an overemphasis on exploration can lead to a cycle of unrewarding exploration and potentially self-destructive behavior, reducing the speed of improving existing skills and processes and hurting the firm's ability to compete (Majken et al., 2016). While an excessive focus on exploitation may harm a firm's ability to compete in the long term as it can lead to complacency, potentially self-destructive behavior,

and reduced ability to switch to exploitation (Majken et al., 2016).

Organizations should carefully assess their specific contexts to address this challenge and determine the optimal combination of exploration and exploitation activities required to achieve their innovation objectives. By doing so, they can design more effective corporate accelerator programs that enhance innovation capabilities and create value for all stakeholders.

Recommendations for future research based on the identified research trends and gaps include:

1. Exploring the relationship between corporate culture and the success of corporate accelerators. This can help determine how a company's culture influences the ability to integrate startups and foster innovation, providing insights for organizations looking to improve their accelerator programs.

2. Assessing the long-term impact of corporate accelerator programs on the parent company's innovation capabilities and financial performance. This can help organizations understand the return on investment for these programs and inform decisions on resource allocation and strategic focus.

3. Investigate the balancing acts or risks associated with concentrating on either exploration or exploitation competences in the context of corporate accelerators. This will enable a more comprehensive understanding of corporate accelerators' capabilities and provide actionable insights for organizations seeking to design and manage effective and sustainable accelerator programs.

Based on the results and recommendations, the following research questions could serve as inspiration for future studies:

1. How can corporate accelerators effectively leverage their networks to support startups while managing the potential risks and challenges related to favoritism and conflicts of interest?

2. How do industry-specific factors (e.g., regulatory environment, market dynamics) influence the balance between exploration and exploitation activities in corporate accelerators, and how can they adapt to different industry contexts?

By focusing on these research questions, future studies can contribute to a more holistic understanding of corporate accelerators' capabilities and provide valuable guidance for organizations seeking to design and manage effective and sustainable accelerator programs.

6 Conclusion

6.1 Limitations

The emergence of corporate accelerators as a key component of innovation ecosystems has attracted considerable interest from academics and practitioners alike. In this study, we conducted a comprehensive review of the literature and data on corporate accelerators to better understand the challenges they face and the competences they need to overcome them. Our results confirm that the study of corporate accelerators is still in its initial stages and is often a byproduct of research in related fields, such as entrepreneurship and innovation, where research is more prevalent (Dempwolf et al., 2015). While we have identified key trends, gaps, and research questions for future studies to improve our understanding of these programs, it is important to note the limitations of this review.

In particular, the literature search was conducted using a limited number of databases and search terms like "corporate accelerators", which may have resulted in relevant studies being missed. In addition, the review focused primarily on journal articles and conference papers that are published in English, which may have excluded valuable evidence from other sources, such as book chapters and practitioner reports in other languages. Finally,

the review only covers the literature published between 2003 and 2022, which limits the scope of more recent publications that could provide valuable insights into the topic.

6.2 Research Contributions

Despite its limitations, this systematic literature review provides valuable insights into the current state of research on corporate accelerator programs. It offers a comprehensive overview of key concepts, including exploration and exploitation competences, organizational ambidexterity, and the lifecycle model of corporate accelerators. Additionally, it identifies gaps in the literature, such as the role of corporate culture and leadership, variations in accelerator models, and the long-term impact of corporate accelerators on innovation performance. These gaps highlight the need for further research in these areas, essential for enhancing our understanding of corporate accelerators and their management.

One of the significant contributions of this review is the presentation of a new framework that outlines the corporate accelerator lifecycle, demonstrating the different stages and challenges that a corporate accelerator may face while facilitating its program. This framework shows how exploration and exploitation competences can help overcome these challenges, providing practical benefits for corporations considering starting a corporate accelerator unit. Furthermore, it serves as a guideline for existing corporate accelerators to proactively avoid obstacles and improve their overall effectiveness with the proposed competences.

To address the identified gaps, future research can explore the role of external partners, such as universities or other accelerators, in supporting the success of corporate accelerator programs. There is a need for further research into how these partnerships can be used to maximize the impact of these programs. In addition, more research is needed to understand the impact of business accelerator programs in specific geographical or industry contexts. More needs to be done to better understand how these programs work and how they affect outcomes in different regions and industries.

By addressing these research questions, future studies can contribute to a deeper understanding of

the complexities of managing corporate accelerator programs, providing valuable insights for corporations. This review advances the theoretical understanding of corporate accelerators and offers guidance for corporations seeking to design and implement successful accelerator programs.

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The Entrepreneurial Identity of the Second-Generation Migrants during the Covid-19 Pandemic

Anorth Ramalingam

Abstract

This thesis explores how the Covid-19 pandemic influences the entrepreneurial identity of the second-generation ethnic entrepreneurs in a family business. The findings revealed three essential aspects that must be understood to examine the impact of pandemics on ethnic entrepreneurship: (1) entrepreneurial identity of the second-generation ethnic entrepreneurs, (2) relationship with the ethnic community, and (3) family dynamics. The results show that despite the external shock that caused the financial and psychological damage, the second-generation ethnic entrepreneurs are motivated to face the responsibility, and they have developed through the learning process. It also strengthens the relationship with the ethnic community and develops a collective identity. Because of the external shock, the father has transformed from a role model to a mission partner for their son. The second-generation ethnic entrepreneur's entrepreneurial identity has evolved from an occasional helper to an integral decision-maker who is motivated to achieve greater outcomes. Through the life stories of three Tamil entrepreneurs in second-generation family businesses in Germany, this study reveals the complex ways in which entrepreneurial identity, ethnic identity, and second generation come together. Therefore, this research highlights the importance of considering the second-generation Tamil entrepreneurs in family business as an identity marker for ethnic minority entrepreneurs during times of pandemic.

Keywords: Ethnic Entrepreneurship, Covid-19, Entrepreneurial Identity, Second-Generation Ethnic Entrepreneurs, Ethnic Family Business

1 Introduction

1.1 Practical Relevance

Covid-19 has affected the world economy and severely damaged specific sectors, such as trading, gastronomy, and tourism (Fernandes, 2020; Legese Feyisa, 2020; EPRS, 2020; IMF, 2020). Gastronomy has been particularly impacted by customer losses and regulatory insecurity arising from the Covid-19 crisis (Harms et al., 2021). Ethnic minorities are, among others, particularly vulnerable to the negative impact of the pandemic since they are often engaged in entrepreneurial activities in these sectors.

Ethnic entrepreneurs are characterized by their distinctive access to resources, for example, while they have limited access to the mainstream market, but they have ethnic capital (Dana et al., 2020; Wang & Maani, 2014). They rely on family resources and their network (Bagwell, 2008). Families are an important source of social capital (Sanders & Nee, 1996), enabling entrepreneurial initiatives that are either supported by family resources or take place exclusively within the family circle. Families are privileged environments in which to develop human capital by teaching young people how to initiate and manage an entrepreneurial venture, either through direct knowledge transfer or by providing role models (EPRS et al., 2014). Moreover, they often engage in traditional businesses with a lower level of digitalization, which makes them more vulnerable to the pandemic.

Recently, the nature of ethnic businesses in Germany changed due to the growth of the second generation. Second-generation migrants are regarded as different from the first generation: They rely on different networks and grow up under different circumstances than their parents did. They have better access to host-country resources because their embeddedness differs from the first generation. When second-generation migrants reach adulthood, they often take more responsibility in the family business. Belonging to an ethnic network provides them access to start-up

financial capital, information, and knowledge and business opportunities, and it provides support in the form of culture and tradition (Wang & Maani, 2014). Furthermore, the identity transformation of the second-generation migrants helps to understand ethnic family businesses better. The first-generation migrants tend to be self-employed due to a lack of vocational alternatives in the host-country market (Steier, 2001; Selcuk & Suwala, 2020; Smith, 2014) with the intention to hand over their businesses to their children.

However, second-generation migrants tend to have significantly more vocational alternatives than the first-generation do, and, therefore, they may not consider continuing in their parents' business most attractive. Therefore, the second-generation migrants may not have significant entrepreneurial motivation from the beginning, unlike their parents. Rather, one can understand the entrepreneurial identity of the second generation as a process of identifying their emotional relationship to ethnic businesses that their parents have built and developed. The underlying assumption of this study is that the pandemic drives the second generation to become more involved in family business than before, which evokes an entrepreneurial identity transformation.

Second-generation ethnic entrepreneurs can play an essential role in ethnic business – either as family members or future business owners – to overcome the pandemic by mobilizing their resources. However, limited attention focuses on how the second-generation ethnic entrepreneurs develop their entrepreneurial identity and define their emotional connections to their family business. An entrepreneurial identity is related to the founder of a business, who operates in the markets and takes entrepreneurial actions to run the business (Lindström, 2016). It evolves over time and affects entrepreneurial capabilities and activities. It is considered critical for developing entrepreneurial competence.

Throughout the process of identity development, entrepreneurs face the challenge of determining how their entrepreneurial identity fits into their existing identities and roles (Fauchart & Gruber, 2011; Patten, 2016). The literature argues that identity is especially relevant in entrepreneurship (Navis & Glynn, 2011), but research so far has not fully examined how an entrepreneurial identity evolves (Donnellon et al., 2014; Fauchart & Gruber, 2011). This thesis addresses this research gap by demonstrating how the entrepreneurial identity of the second-generation ethnic entrepreneurs changed substantially during the Covid-19 pandemic. Considering the existing state of research regarding the entrepreneurial identity of the second-generation ethnic entrepreneurs during the pandemic in their family businesses as well as regarding the practical relevance, I formulate the underlying research question as follows:

How does the Covid-19 pandemic influence the entrepreneurial identity of the second-generation ethnic entrepreneurs in the family business?

Second-generation migrants are differently embedded in their mainstream communities than their parents are. Thus, they have a different emotional connection to their ethnic community and family business than the first generation. The research question examines the extent to which an external factor can influence the entrepreneurial identity of the second-generation migrant entrepreneur, the relationship of these young entrepreneurs to their ethnic community, and the distribution of roles in the family and the family business.

1.2 Research Aims

This thesis aims to understand how second-generation migrants' entrepreneurial identity in the context of ethnic family business changes over time and how the Covid-19 pandemic has influenced it. As the pandemic is a critical event, the findings could capture the dynamic process of developing an entrepreneurial identity of second-generation migrants. It also aims to understand the extent to which the first and second-generation ethnic entrepreneurs work together to determine solutions to the problems in the family business and whether there are signs of a generational change. On the other hand, the relationship of the second generation with the ethnic community is examined to see how it has changed over time and which role it played for the young entrepreneurs during the pandemic. Finally, I developed a conceptual model to explain the particularities of second-generation ethnic entrepreneurs and their family businesses during the Covid-19 pandemic.

2 Conceptual Background

2.1 Ethnic Entrepreneurship

2.1.1 Ethnic Entrepreneurship in Times of Covid-19

Ethnic entrepreneurship is defined as "a set of connections and regular patterns of interaction among people sharing common national background or migration experiences" (Waldinger et al., 1990, p. 3). Thus, ethnic entrepreneurs are a category of entrepreneurs who share common national backgrounds, origins, culture, and migratory experience. This term refers to the entrepreneurial activities of people with a migration background who originally offered products and services primarily to their own migration target group. Most are small and medium-sized enterprises whose employees predominantly share the same ethnic background (Honig, 2020).

Entrepreneurship provides a way for immigrants to survive in their new home country. Studies (Borjas, 1986; Fairlie & Lofstrom, 2013; Light & Sanchez, 1987) show that immigrants are more likely to be self-employed than natives are due to language, skills, and institutional barriers that prevent them from accessing paid jobs in the host country. To start and sustain a private business, many immigrants use ethnic capital. Ethnic capital is an immigrant network that includes markets, resources, and information shared by the group, based on the group's country of origin, average skill level, language proficiency, social network, geographic concentration, common beliefs, and other resources in a particular ethnic group (Malki et al., 2020).

Ethnic entrepreneurship has significant relevance to the economy of host countries. For instance, the entrepreneurial activities of migrants have a considerable impact on Germany's economy. Trade, hospitality, government and private services, and manufacturing sectors are particularly noteworthy. The number of people employed in migrant businesses grew by 50% between 2005 and 2018, from about 1 million people to about 1.5 million. The macroeconomic employment effect, which includes jobs created as well as employers and sole entrepreneurs with a migration history, grew from 1.55 million to 2.27 million people (Bertelsmann Stiftung, 2020).

In contrast to the rest of the society, some special motives play an important role when ethnic entrepreneurs start a business. Starting a business is sometimes the only alternative to unemployment (the so-called "push approach": migrants are pushed into self-employment). The income from self-employment may be lower at the beginning than from employment, but it is still higher than the income from unemployment. In general, the prospect of higher income through self-employment is the main motive for starting a business (Malki et al., 2020).

Other motives for establishing a business include cultural factors such as a strong desire to work, a willingness to take risks, solidarity, loyalty, and social value schemes, for example, the feeling of having "made it" (the so-called "pull approach": migrants want to become self-employed). The latter is sometimes also represented in the form of status symbols, such as a prestigious car (Honig, 2020). Apart from entrepreneurial motivation, one factor that characterizes ethnic entrepreneurs is the significant role of family members in their business. Support from family and friends in the ethnic community, both in financing the venture and in labour, is evident among ethnic entrepreneurs (Djabi-Saïdani & Pérugien, 2020; Phuong & Harima, 2019).

While a global pandemic has been a looming risk for decades, Covid-19 has come as a shock to society, health systems, economies, and governments worldwide. Unlike other crises that have a definite duration, Covid-19 has much uncertainty associated with it (World Health Organization, 2020). This disruption to society has caused many problems in different geographic locations. The gastronomy industry is one of the sectors particularly affected by the loss of customers and the regulatory uncertainty of the Covid-19 crisis. When established ways of conducting business become almost impossible, business model innovation (BMI) is a possible response to this high level of uncertainty. Effectuation and causation are decision logics that can lead to BMI and help a company navigate through uncertainty (Harms et al., 2021). Examples of BMI as a gastronomy response to Covid-19 include increasing purchase delivery, additional

sanitation concepts, localization, and menu reduction to increase flexibility (Gursoy & Chi, 2020).

Ethnic entrepreneurs need different action plans in place to cope with consequences caused by the pandemic, depending on their sector and industry. If the entrepreneurs are active in online shopping, food delivery, video gaming, or video conferencing sectors, where business is currently reaching a higher level, it is an entirely different initial situation than if they are running a business in the hotel, restaurant, retail, entertainment, or sports industries (Ratten, 2020). The entrepreneurs in these sectors lost 50 to 80% of their sales and a large portion of their market value. For example, the e-scooter start-up "Lime" lost about 80% of its value. The company's 2019 fundraising (310 million dollar) established its valuation at 2.4 billion dollars. Nevertheless, in May 2020, a proposed investment from Uber valued the company at just 510 million dollars (Handelsblatt, 2020).

By entrepreneurs rethinking their own businesses, they can access new lines of business, which can make their work more flexible and profitable in the short- and long-term, for example, by introducing a delivery service in the gastronomy sector. Further business acceleration, business efficiency, and resilience provide opportunities for improvements in processes and practices to obtain cost savings, introduce new products, or venture in new markets and review their existing products and services or, indeed, their entire business model (Wolter et al., 2021). The above studies indicate that, besides the consequences due to the Covid-19 pandemic, there are some opportunities for entrepreneurs. For ethnic entrepreneurs the support provided by governments is crucial, as they depend on government aid. They were forced to close their businesses and, accordingly, need high reserves to be able to cover the costs. Since ethnic entrepreneurs are all in the same situation, family and the ethnic network are the first places that ethnic entrepreneurs turn to for advice when dealing with an external shock (Stankovska et al., 2020).

Given the importance of family firms in modern economies, as well as the ever-increasing instability of these economies, it is important to understand how these firms respond to economic crises. Regardless of the form of the family or successive families, individuals are embedded in a family social network that influences their entrepreneurial behaviour. Indeed, according to the social-embeddedness approach, an individual's behaviour does not depend on calculations and opportunism (i.e., formal contractual norms), as they are embedded in social structures consisting of networks of interpersonal relationships and social ties based on trust and closeness (Uzzi, 1997). Building on this approach, Aldrich and Cliff (2003) argue that, from the family-embeddedness perspective, actors and businesses differ in the extent to which they are embedded in particular relationships and ties.

An individual's level of embeddedness in the family can vary according to cultural or social factors and to different levels of family connectedness and cohesion (Wiklund et al., 2013), as well as the consequences of the legal system. Therefore, the individual's behaviour is influenced by the family to which they belong, depending on the strength and structure of relationships between family members. Individuals will experience a sense of belonging and social solidarity with each other when family groups are cohesive (Moody & White, 2003), which will influence their behaviour. However, limited literature has addressed the generational succession from the first- to the second-generation ethnic entrepreneurs and the associated entrepreneurial identity transformation process in family businesses. The challenges faced by second-generation entrepreneurs in ethnic family businesses are revealed by the consequences of the Covid-19 pandemic. While these challenges have been a core issue in family businesses even before the pandemic, they have received limited attention in the literature. Instead, the literature focuses on the generational development of family businesses, the clash between generational expectations, and the emotional consequences of the Covid-19 pandemic to family business owners (De Massis & Rondi, 2020; Gashi & Ramadani, 2013; Bower, 2007).

2.1.2 Second-Generation Ethnic Entrepreneurship

Second-generation immigrants were born in and reside in a country that at least one of their parents previously entered as a migrant (Ramakrishnan, 2004; Dang & Harima, 2020). Two main research approaches are applied in this case. The first

focuses on the differences between two generations in terms of motivation (e.g., Masurel & Nijkamp, 2004; Soydas & Aleti, 2015) and the choice of sector (e.g., Baycan et al., 2012; Rusinovic, 2008). These studies consistently show that first-generation ethnic entrepreneurs are motivated by financial reasons, while second-generation ethnic entrepreneurs are attracted by opportunity, status, and ambition. A shift among second-generation ethnic entrepreneurs to new sectors is also common, such as finance, insurance, real estate, and business-related services. The second approach examines intergenerational transmission across two or more generations. Individuals born into families of small business owners tend to follow in their parents' footsteps, both in non-immigrant families (Falck et al., 2010) and immigrant families (Andersson & Hammarstedt, 2010). To better understand the issues of motivation and choice among second-generation ethnic entrepreneurs, their entrepreneurial identities must be examined in relation to other social categories, which has been inadequately explored in previous research.

Second-generation ethnic entrepreneurs have distinctive characteristics that are not identified in first-generation immigrants. These characteristics are divided into the following four categories: (1) human capital, (2) social capital, (3) entrepreneurial motivation, and (4) their role in ethnic business. First, second-generation immigrants develop their human capital mostly in the country of residence. Second-generation immigrants are often better educated than their parents and, thus, have either avoided starting a business or have moved into higher-value or high-tech industries (Hussain et al., 2010; Yip, 2013). For example, while the second generation may have different access to the host country's primary labour market or formal education, the founding generation often relies on informal institutions (Ram & Jones, 2017; Hussain et al., 2010). Especially for family businesses with a migrant background, there may be significant differences in embeddedness between generations in the succession (compared to usual successions of families within their countries of origin).

Second, social capital is a key factor for immigrants to stay and settle in the receiving societies. Not every entrepreneur can be or automatically is a transnational entrepreneur: they need "transnational capital" (Vanhonacker et al., 2006).

This is a combination of economic capital (money to invest or regularly travel to or do business in the country of origin), cultural capital (bilingualism, knowledge of foreign markets, international management experience), and social capital (such as contacts, relatives, or family in the country of origin who can be trusted or with whom business can be done). Compared to the first generation, second-generation ethnic entrepreneurs are embedded in mainstream markets, and most are partially involved in formal networks. Multiple embeddedness refers to alternating networks of relationships that are nested between different members within an ethnic family business. These alternating networks of relationships lead to coexisting (and often conflicting) networks of the founding and the successor generations, especially in families of ethnic entrepreneurs. In the original assumption, multiple embeddedness accentuates the consequences that globalization has on international political institutions or multinational corporations.

Third, entrepreneurial motivation activates the entrepreneur to exert greater effort towards the entrepreneurial goals (Litz, 2011). Motives for ethnic entrepreneurship are related to "push" and "pull" factors that influence the choice between self-employment and dependent employment (Masurel et al., 2002). Push factors, such as job loss or fear of unemployment, are important factors for many immigrants to become self-employed (Panayiotopoulos, 2008). Discrimination, lack of education, and unemployment due to acculturation factors may be more prevalent among first-generation entrepreneurs than second-generation entrepreneurs. Second-generation ethnic entrepreneurs place more emphasis on intrinsic motivators, where entry into self-employment is voluntary, rather than push factors, where entry may be perceived as a last resort (Chavan & Agarwal, 2000). Indeed, the first generation appears to be more driven by push factors, while the second generation is more likely to choose self-employment voluntarily (Tolciu, 2011).

Fourth, the role of the second generation in ethnic business is important for understanding the family dynamics in ethnic business. France, Germany, and the United Kingdom have, perhaps unconsciously, become countries with large immigrant populations, albeit with different ethnic compositions. Today, the descendants of these

immigrants live and work in their parents' destination countries (Ahmad, 2020). It is interesting to note that some ethnic groups are more inclined to use family support than others. For example, Asian-American entrepreneurs use family resources more than white Americans (Bates, 1997), Hispanics (Young & Sontz, 1988), or African Americans do (Dyer et al., 2014), which suggests that the relationship between social and family capital may differ across communities. Accordingly, the role of the second generation in the ethnic family business differs. The concept of familiarity (Pearson et al., 2008) may extend beyond the strict family group and create favourable conditions for accessing entrepreneurial resources at the community level, fulfilling the role of an extended family circle.

2.2 Entrepreneurial Identity

2.2.1 Construction of Entrepreneurial Identity

Entrepreneurial identity refers to the set of meanings a person has, including attitudes and beliefs, attributes, and subjective evaluations of behaviour that define them in an entrepreneurial role. The construct of entrepreneurial identity encompasses how a person defines their entrepreneurial role and whether they identify with that role (Hoang & Gimeno, 2010). Individuals may have numerous identities that they enact contingent upon the setting. Here, a particular identity may be more salient than another, depending on operant social norms. According to Warren (2004), entrepreneurial identity is a negotiated identity within specific communities of practice. Indeed, entrepreneurial identity is constructed and reconstructed by working through stories within changing communities of practice. Identity construction is, thus, a reciprocal process of being recognized and acknowledged by others within a milieu, such that stories must be told and retold as circumstances change.

The identity problems of second-generation ethnic minorities have been widely documented in migration research. Personal experiences of ethnicity often occur in the context of the immigrant family, as the family is the first place where ethnicity is observed and practiced (Juan et al., 2016). However, the second generation rarely experiences a sense of belonging to the same immigrant group as their parents (Louie, 2006), nor do they feel they are completely part of the host society (Liu, 2015; Portes et al., 2011). This negotiation process between two cultures is a process of identity construction. Nowadays, as the second generation enters the local labour market, the focus should be expanded to occupational identity.

Self-reflection, communication, and interaction with other entrepreneurs are the main drivers of identity development (Werthes et al., 2018). This ongoing "working on identity" refers to the fact that identity work involves mutually constituted processes through which people strive to form a relatively coherent and distinctive notion of their self-identity and struggle to come to terms with how others see them, which refers to the various social identities they present in different milieus (Watson, 2008) or, today, on digital media platforms. However, when engaging socially, especially with established social groups, individuals who seek to adopt the identity of an entrepreneur often face challenges in how this new identity fits with existing identities and roles (Williams Middleton & Donnellon, 2014). Identity is not a fixed core, as the theory allows for the idea that identity is influenced by the events of the entrepreneurial process, including social interaction. This is also supported by Sarasvathy's (2001) emphasis that identity is not a common construct that is similar across entrepreneurs. There are different types of successful entrepreneurs, which are influenced by complex contingencies of the markets, people, strategic alliances, firms, and societies in which the individual is interwoven.

Finally, when individuals begin to function as entrepreneurs, they come to think about who they are or are not as entrepreneurs. This breaks with the notion of identity as a given default that guides individuals' actions in the entrepreneurial process. Instead, identity is constantly changing throughout the process, because of entrepreneurial action. Recognizing learning as a social process helps to understand how entrepreneurs develop their identity through intersubjective or relational narratives that provide an emotional refuge that enables them to be effective entrepreneurs to realize and create an entrepreneurial sense of self (Down, 2008).

2.2.2 Entrepreneurial Identity: Ethnicity, Generation, and Entrepreneurship

Due to the transition to a service and experience economy, occupational identities are more likely to be associated with the social categories of race, ethnicity, gender, and age than with traditional workplace structures (Slay & Smith, 2011). From daily routines to business activities, an entrepreneur cannot be assumed to disconnect from the social categories that matter to them. The study of entrepreneurial identity alone cannot provide a nuanced description of the identity construction processes of these entrepreneurs.

In mainstream entrepreneurship studies, research on generation and entrepreneurial identity has focused on the children of family businesses. For example, Harrison and Leitch (2019) bridge leadership development and identity work by showing how second-generation family members build a leadership identity in family businesses. However, this research does not address ethnic and generational issues in detail. Previous research in the field of ethnic minority entrepreneurship examines ethnicity and entrepreneurship but does not fully disclose how second-generation ethnic entrepreneurs experience the categories of generation, ethnicity, and entrepreneurship simultaneously. This suggests that although much of the literature on ethnic minority entrepreneurship, in this case first generation, is well developed, understanding the new, second generation has not been adequately explored.

Recent research examples show that ethnicity and generation have important implications for entrepreneurial identity. For example, Koning and Verver (2013) examine the meaning of "ethnic" among second- and third-generation entrepreneurs of Chinese origin in Thailand. Their study highlights that their business practices have little to do with the so-called "Chinese way of doing business", which is seen as an expression of changing ethnic identity constructions. The second example, from Barrett and Vershinina's (2017) research, shows that ethnic and entrepreneurial identity have different meanings for individuals. In fact, not all ethnic entrepreneurs base their entrepreneurial activities on their ethnic identity. They found that although respondents identified themselves as Polish entrepreneurs, being Polish was not a significant element associated with entrepreneurship. In their article, Barrett and Vershinina (2017) do not emphasize second generation, although three of the five respondents

were born in the United Kingdom and the other two migrated to the United Kingdom as children. Generation does matter in the construction of multiple identities for ethnic entrepreneurs. However, generational differences have been overlooked in the literature on ethnic entrepreneurship, especially since the multiple social identities (mainly ethnicity, generation, and entrepreneurship) are still limited.

2.3 Developing Analytical Dimensions

The literature review demonstrates that three essential aspects are relevant for examining the impact of pandemics on ethnic entrepreneurship: (1) perceived role of the second-generation ethnic entrepreneurs in the family business, (2) relationship with the ethnic community, and (3) family dynamics.

First, the perceived role of the second-generation ethnic entrepreneurs in family businesses can significantly influence their identity construction. The identity issues of second-generation ethnic minorities have been widely documented in the field of migration research. However, limited research has examined the change or evolution of entrepreneurs' role perceptions due to the influence of externalities. The Covid-19 pandemic is an external effect and has had a significant impact on entrepreneurs' own perceptions of their own business. To better understand the impact of external effects on one's own perception as well as the associated entrepreneurial identity and the interrelationships, it is helpful to conduct further research in this area in order to be able to better assess future external effects regarding entrepreneurship.

Second, the relationships with the ethnic communities between the first- and second-generation ethnic entrepreneurs vary widely. From the social embeddedness perspective of ethnic entrepreneurs, the type of business an immigrant starts and their role in the immigrant inclusion process is determined not only by the resources an entrepreneur can mobilize, but also by the time- and place-specific opportunity structure (Kloosterman & Rath, 2006). Although external shocks such as the Covid-19 pandemic can drastically change the ethnic connection of the second-generation migrants with their ethnic communities, the literature has inadequately

explored the relationship of second-generation ethnic entrepreneurs to the home and ethnic community in extreme situations, as with externalities. This has led to increased engagement and the establishment of contact with the ethnic community, which can influence the identity transformation processes of the second-generation ethnic entrepreneurs.

Third, family dynamics are assumed to affect the identity construction processes of the second-generation migrants. While extensive research addresses ethnic entrepreneurs (Waldinger et al, 1990; Leicht & Werner, 2013; Ma et al, 2013; Ram et al, 2017) and some attempts to examine the generational effects of migrant entrepreneurs (Perricone et al., 2001; Rusinovic, 2006; Schulte, 2008; Basco et al., 2019) have been published, a research gap still exists in linking family and ethnic entrepreneurship research in general and ethnic family entrepreneurship across generations in particular (Zubair & Brzozowski, 2018).

Nevertheless, generational change occurs rapidly or develops slowly over time. These developments can be accelerated by external influences such as the pandemic. Throughout the process, a family dynamic changes over time and is constantly subject to external influences. External factors can influence the change in family dynamics. The sense of responsibility and the entrepreneurial identity of the other family members can be changed or increased, and the interdisciplinary relationships within the family can be improved or exacerbated. Therefore, it is important to study these influences on family dynamics in family business. Multiple approaches attempt to explain, describe, and understand the phenomenon of transgenerational ethnic (family) entrepreneurship. This study uses a model that addresses and combines the perceived role in the family business of the second-generation ethnic entrepreneurs, access to the ethnic community, and the family dynamics in the family business during the Covid-19 pandemic.

3 Methodology

3.1 Research Design

study applies exploratory qualitative research with a theory building approach. The theory development is described as a nested coding process in the grounded theory approach, whereby the coding work leads to the development of central categories, which characterize the research object. Instead of evaluating the validity of assumptions in literature or deducing theories, this is an exploratory study of the entrepreneurial identity construction of second-generation Tamil entrepreneurs. Therefore, it is beneficial to choose empirical data collection in this topic area to create my own concepts and models that can serve as a foundation for future research in understanding identity construction under the influence of externalities. Due to the limited knowledge of identity construction relating to entrepreneurship among second-generation ethnic entrepreneurs and their environment, this study selected a qualitative approach to empirically explore how entrepreneurial identity, as well as role allocation in family businesses, can be influenced by external effects (Flick, 2007).

This study is the first to examine the process of identity construction of these entrepreneurs during the Covid-19 pandemic. Instead of testing hypotheses or making gross generalizations, it explores how these entrepreneurs construct their entrepreneurial identities. In-depth interviews can generate data that provide authentic insight into people's experiences (Crouch & McKenzie, 2006). Thus, a deeper understanding can be gained of how entrepreneurial identities are constructed through the lens of entrepreneurs' lived experiences. Therefore, multiple case studies are used, which allows a more in-depth understanding of the cases as a unit by comparing the similarities and differences of the individual cases (Yin, 2009). I acknowledge that observed reality is context-specific, socially constructed, and emerges through the perceptions of the investigators. It is important to note that the goal of this study is not to generalize research findings, but to analyse selected cases.

3.2 Data Selection and Collection

The data selection used in this study is limited to Tamil second-generation entrepreneurs in Germany. This study selected the Tamil community because the author comes from this community and has a broad network. The research setting of this study is Tamil family businesses in Germany. This study considers only Tamil first- and second-generation ethnic entrepreneurs in the gastronomy industry who migrated with their families from Sri Lanka. The civil strife in Sri

Lanka from 1983 to 2009 caused many Tamil people to seek refuge from political persecution in Germany (Azmat & Zutshi, 2012). From a scientific angle, it is relevant to gain access to ethnic entrepreneurs to analyse their needs more closely during the Covid-19 pandemic. Ethnic entrepreneurs can also adopt a mediator role so that companies from the majority society can better reach ethnic minorities.

It is important to note that the selection is limited to entrepreneurs in the hospitality industry, which is one of the most affected sectors by the economic issues of the pandemic. With respect to the establishment of the restaurants, case A was established early (2010), case B two years ago (2019), and case C during the pandemic (2020), which allows for the better elaboration of similarities and differences. The selection of interview partners is limited to these groups, since the aim of this work is to determine the extent to which external effects influence the entrepreneurial identity of second-generation ethnic entrepreneurs in family businesses.

The decisive factor in the selection of cases was that the businesses were run by their own family and founded by the first ethnic generation. The search for interview partners was structured so that I first spoke with the second-generation ethnic entrepreneurs from the family businesses. It was important for the selection that the young entrepreneurs had undergone personal development during the pandemic and had made significant contributions to the success of the family business. Through these initial interviews, other potential interview candidates were identified. From the initial meetings with the young entrepreneurs from the selected family businesses, connections to their family members and employees emerged.

The interview guide was created through several previous interviews as well as the use of the literature on ethnic entrepreneurship and entrepreneurial identity. The interview guide covered various topics such as personal information, family business, role distribution, family dynamics, self-identification, relationship with the ethnic community, Covid-19 pandemic, future, and an analysis of the drawings. The interviews conducted with the second-generation ethnic entrepreneurs provided this study with an initial understanding of the role distributions in

Cases	Interviewee	Gender	COO	Business started in	Mode	Interview Language	Duration (Min.)
Case A	First Generation Entrepreneur A	Female	Sri Lanka	2010	F2F	Tamil	21
	Entrepreneur A	Male	Sri Lanka		F2F	German	35
	Employee A	Male	Sri Lanka		F2F	German	20
Case B	First Generation Entrepreneur B	Male	Sri Lanka	2019	F2F	Tamil	33
	Entrepreneur B	Male	Sri Lanka		F2F	German	37
	Employee B	Male	Sri Lanka		F2F	German	20
Case C	First Generation Entrepreneur C	Male	Sri Lanka	2020	F2F	Tamil	35
	Entrepreneur C	Male	Sri Lanka		F2F	German	40
	Employee C	Male	Sri Lanka		F2F	Tamil	22
Additional Empirical Data	**Case A:** 1.Field observations …in the restaurant: -Large red-coloured, hall shaped restaurant with Hindu god's symbols on the walls -Low frequented restaurant with only German guests, who are regulars -The guests, who came to eat in the Indian restaurant, were served kindly by the second-generation ethnic entrepreneurs -The first generation works in the kitchen and has no direct contact with guests due to the language barrier -Numerous delivery orders -The relationship between the parents and the daughters is trustful and the relationship with their son was not close at the beginning, but during the pandemic the father-son relationship has improved a lot. … in the delivery cars: -Constant communication between the second-generation ethnic entrepreneurs and the drivers about the delivery coordination -Mother and daughter deliver together 2.Website: Website of the company 3.Social Media Instagram Facebook	**Case B:** 1.Field observations …in the restaurant: -Small, vintage style restaurant with a simple interior -Many German guests, who pick up food and are regulars (they support their locals) -The guests are served by the first and the second-generation ethnic entrepreneurs -The second generation gets along well with the guests making some jokes, but the first generation is aware of their language barrier and the resulting uncertainty -Father works in the kitchen with one employee and son and other employees deliver the food -At the beginning of the pandemic, the father is in charge, but after the introduction of the delivery business, the son has taken more responsibility in the business -The relationship between father and son was initially strained and became more intimate over time … in the delivery cars: -Constant communication between the second-generation ethnic entrepreneurs and the drivers about the delivery coordination 2.Website: Website of the company 3.Social Media Instagram	**Case C:** 1.Field observations …in the restaurant: -Small, vintage style restaurant with a simple interior -German, Tamil and Turk guests, who pick up the Italian and Turkish food -The guests are served by the first and the second-generation ethnic entrepreneurs -The second-generation ethnic entrepreneur gets along well with the guests, some of them being his friends -The first-generation entrepreneur has language barriers and does not talk much with the guests but would like to if he can -Father and son work in the kitchen in rotation and communicate about organizational tasks during shift handovers -Both parties share joint responsibility, and their relationship has bonded both of them through the pandemic 2.Website: Website of the company 3.Social Media Instagram Facebook				

Table 1: Overview of Empirical Data

family businesses, their personal goals, the needs of people who have grown up in two parallel cultures, and the challenges they faced during the Covid-19 pandemic.

In addition, before the interviews with the second-generation ethnic entrepreneurs started, they were asked to draw their daily routine, entrepreneurial identity, and their role in their family business before the pandemic, during the lockdown, and toward the end of the pandemic. Drawings offer a powerful means to understand entrepreneurial identities because of their "meta-indexical quality", that is, their ability to be a negotiating or boundary space for explicit and not-yet-explicit knowledge (Henderson, 2007). As such, drawings relax any singular logic of meaning and allow creative thinking to work through imprecise structures and tentative decisions (Clarke & Holt, 2017).

The result is a meaningful form without being definitive, allowing for vagueness, incompleteness, spontaneity, chaos, and order. In this respect, they are similar to ventures. Like drawings, entrepreneurship is "transitory, ephemeral, fleeting, complex, and often intangible"; both are malleable and flexible, drawn, and redrawn (Dodd & Anderson, 2007, p. 348). By successfully balancing precision and vagueness, drawings allow entrepreneurs to symbolize the complexity of entrepreneurial life, which gives researchers insight into the multi-layered nature of the entrepreneurial experience.

The later interviews with the first-generation ethnic entrepreneurs helped to better understand parents' expectations of the second generation, the influence of culture and background, and the role of family in their family businesses. The interviews with the first-generation ethnic entrepreneurs and the employee from case C were conducted in Tamil, which circumvented the language barrier and allowed for a familiar and open interview. The interviews with store employees offered insight into a different perspective of the ethnic community and facilitated the assessment of the personal development of the entrepreneurial identity of the second-generation ethnic entrepreneurs. To have a distinct background knowledge during the interviews, the literature on ethnic entrepreneurship, ethnic family businesses, entrepreneurial identity, its construction, and the Covid-19 pandemic were used.

Primary data formed the basis of data collection. This includes data that I collected through formal interviews and informal conversations. The author conducted nine interviews. These nine interviewees included three first- as well as second-generation ethnic entrepreneurs and three employees of the three cases (case A, B and C). Further data (i.e., secondary data) was collected from the websites and social media platforms of the family businesses. The author was involved in case B as a former employee, which provided this study with additional empirical insights. Through these interviews and the previous conversations with the second-generation ethnic entrepreneurs, interview guidelines could be drafted that were used as a guide. After the interviews were conducted, recorded, and translated, they were transcribed.

This study examines multiple case studies with Tamil ethnic entrepreneurs in the gastronomy sector. This thesis aims to theorize how the identity of the second-generation migrants gradually changed due to Covid-19. Table 1 provides an overview of the data collection. This table is divided into three cases and the secondary data that supplemented the cases. Case A, B and C resulted in interviews with the first- and second-generation ethnic entrepreneurs and an employee of the restaurant.
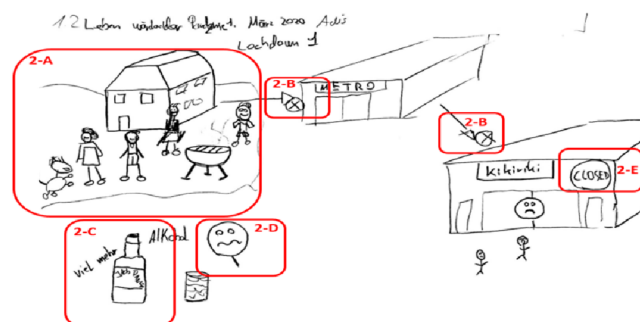
3.3 Data Analysis

Figure 1: Life of the Second-Generation Ethnic Entrepreneur C during the First Lockdown

The data analysis for this study consists of three steps. The first step involves coding the interviews. The interviews were recorded and transcribed. Interviews conducted in Tamil were transcribed and translated into German. MAXQDA software version 20.4.1 was used for initial coding (Charmaz, 2006), which was conducted line-by-

line or paragraph-by-paragraph. A total of 432 initial codes were made during this process.

The drawings of the second-generation ethnic entrepreneurs illustrate their construction of entrepreneurial identity and offer unique insights into how entrepreneurs make sense of their entrepreneurship. To analyse the drawings more specifically, they were divided into smaller sections and marked with red boxes.

Since the second-generation ethnic Entrepreneur C cannot work, he drinks alcohol daily. His alcohol consumption gradually increases and plays a more significant role in his life, which is attributed in Figure 4 to the size of the alcohol bottle drawn in 2-C. The sad face next to the bottle in 2-D reflects the desperation and helplessness of the ethnic entrepreneur because of the Covid-19 pandemic. The mood of the ethnic entrepreneur changes drastically. He started drinking large amounts of alcohol as the lockdown lengthened and developed an alcohol addiction. He regarded alcohol as a solution to his stress, despair, and worry.

Chapter 2.3 consists of three pre-defined dimensions: (1) the perceived role of the second-generation ethnic entrepreneurs in the family business, (2) relationship with the ethnic community, and (3) family dynamics. These were used to analyse and interpret the drawings and to categorize the empirical results in a mind map. Thus, the next step was to develop a mind map of the main conclusions drawn from the interviews. Mind-mapping software are helpful to put information on a sheet and creatively and innovatively develop ideas. A mind map is ideal to develop an overview of initial codes and group them into categories. Therefore, the Mindmeister software was used to create an overview of the empirical results. Similar aspects sorted the focus codes.

In this way, the characteristics of entrepreneurial identity were identified as well as the factors that influenced the role of the second-generation ethnic entrepreneurs in the family business. Additional literature was consulted to determine the dimensions. In total, seven aggregated dimensions were identified, which are based on the pre-defined three dimensions from Chapter 2.3: Motivation, responsibility allocation in family business, role of Tamil community in family business, father's

perspective on family business, identification of second-generation ethnic entrepreneurs, consequences of Covid-19, and the dimension called "others". Throughout this process, the data structure was adjusted several times based on new findings.

For the final step, a data overview was created. In the overview, the similarities among the second-generation ethnic entrepreneurs of the three cases were grouped into six categories: father's expectation, responsibilities of family business, relationship with the ethnic community, responsibility, motivation, and identity as an entrepreneur. These six categories were placed in relation to three other categories to gain a deeper understanding of the mindsets and the situations in which the young entrepreneurs find themselves. These three categories are named as something "besides", feeling responsible, and becoming an entrepreneurial identity.

4 Findings

4.1 Case Descriptions

Case A is an Indian cuisine restaurant run as a family business. It is in Bremen and was founded in 2010 by the first-generation ethnic Entrepreneur A to become financially independent. He runs the family business with his wife and their three children. The business is in the name of their son (Entrepreneur A). Entrepreneur A is 23 years old and knows that his father wants him to make a success of their restaurant. He has developed within the family business, but after starting a full-time job at a German manufacturing company, he does not want to work in the family business. Before the Covid-19 pandemic started, the first-generation ethnic Entrepreneur A was responsible for the family business. He, his wife, and his daughters worked every day together in their restaurant. Entrepreneur A had the role of a "Joker" and, consequently, helped in the business only when necessary. However, the pandemic has caused a substantial financial loss for the family business, which has left them in debt. Entrepreneur A had to become involved with the family business and his financial limits were stretched.

During the pandemic, father and son share the responsibility of the family business, because

Entrepreneur A implemented the new business strategy of the delivery business. Father and son work together every day and have developed a strong bond, which was not the case before. Entrepreneur A's perspective on the family business changed. He views the pandemic as an opportunity. His parents work in the kitchen and his children deliver the food. According to the ethnic community, Entrepreneur A was partly embedded in the ethnic community because his parents raised him according to Tamil traditions. He has more Tamil friends than friends from other ethnic groups. During the pandemic, the ethnic community supported his family business by lending them money and working for them, which strengthened the ethnic identity of Entrepreneur A.

Case B is similar to case A: an Indian cuisine restaurant run as a family business. It is in Bremen and was founded in 2019 by the first-generation ethnic Entrepreneur B to become financially independent. He runs the business with his wife and their three children. It is also in the name of their son (Entrepreneur B). Before opening this restaurant, they managed several restaurants with different food styles. Entrepreneur B is 26 years old and has worked with his father since childhood. His father wants him to assume responsibility of the family business in the future. According to the father, his son has no choice but to take over the business because of his low academic scholarship at a special-needs school.

Before the pandemic started, the father of Entrepreneur B was responsible for the family business. He and his wife cooked, and their daughter did the service. Entrepreneur B had no significant role in the family business. Instead, he did deliveries for a pizza restaurant. He had a weak bond with his father, because he followed his own mind and did not obey him. Moreover, Entrepreneur B did not have a close relationship with the Tamil community because his parents had had negative experiences. Nevertheless, when the pandemic began, Entrepreneur B implemented the delivery business and hired Tamil co-workers. Their ethnicity binds them together and facilitates communication with Entrepreneur B's father (no language barriers). Father and son started working together and developed a strong relationship. They are jointly leading the family business and Entrepreneur B became a mature, independent, and strong person.

Case C is an Italian cuisine restaurant run as a family business. It is in Bremen and was founded during the Covid-19 pandemic (2020). The first-generation ethnic Entrepreneur C always wanted to start his own business. He worked for more than 20 years in the gastronomy industry. Entrepreneur C dropped out of school and started working in gastronomy. During the pandemic, they finally had the opportunity to start their own business. The business is in the name of the son (Entrepreneur C).
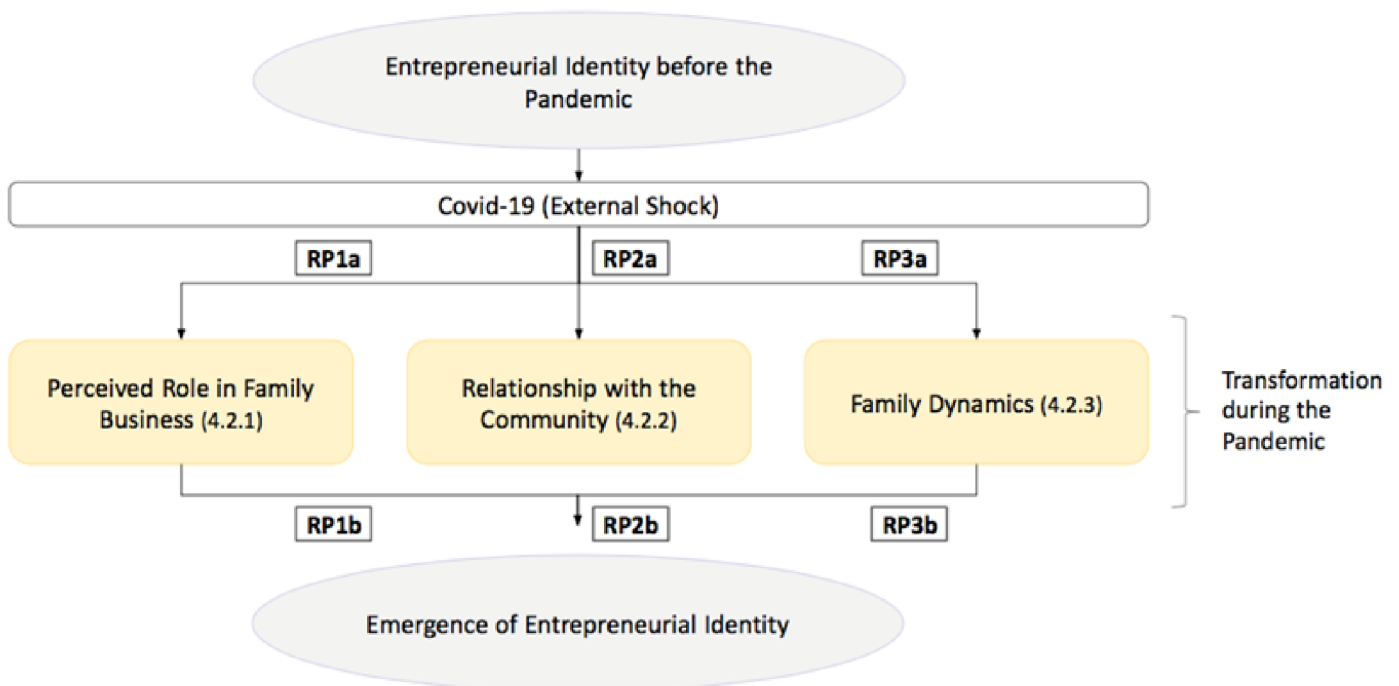

Figure 2: Conceptual Model

He and his son (25) believed in themselves and started to live their dreams. Entrepreneur C and his father share the responsibility of the business and hired Tamil co-workers. Although he and his father do not work always together at the same time in their restaurant (shift work), they must communicate with each other often, which was not the case before they opened their restaurant.

His father is teaching him as much as he can, and their relationship continues to improve.
Entrepreneur C has always had a strong relationship with the Tamil community. Most of his friends are Tamils. His parents raised him in a Tamil way. During the pandemic, Tamil friends helped him in his family business and their relationship strengthened. Because of their family business, they are connected to more Tamil people and have their support. Entrepreneur C sees himself as Tamil and has enough support from the Tamil community. His personality allowed him to grow in and profit from the pandemic. His success during the pandemic motivated him to reach higher goals with the family business. He wants his family to be proud of him even though he dropped out of school to pursue his dream.

4.2 Results

Based on the case studies and the related analysis of the empirical data gathered about the entrepreneurial identity of the second-generation ethnic entrepreneurs during the Covid-19 pandemic in family businesses, this section discusses the development of an entrepreneurial identity during an unpredicted external shock. Moreover, this study examines the influencing factors that affect entrepreneurial identity. Based on these discussions, a set of research propositions was compiled (6) in this chapter. The following conceptual model (Figure 2) illustrates the findings.

As shown in the conceptual model, this study identified three components of an entrepreneurial identity that are influenced by the Covid-19 pandemic: (1) perceived role in family business, (2) relationship with the community, and (3) family dynamics. Research propositions 1a, 2a, and 3a discuss how the entrepreneurial identity, in which the second-generation ethnic entrepreneurs played the role of a "joker" in the family business, evolved because of the pandemic. These three components

are the result of an emergence of the entrepreneurial identity of the second-generation ethnic entrepreneurs. Research propositions 1b, 2b, and 2c address the identified emergence of an entrepreneurial identity developed through the impact of the pandemic on the three components.

4.2.1 Perceived Role in Family Business

4.2.1.1 Facing Responsibility

The first category addresses the second-generation ethnic entrepreneurs who, because of the Covid-19 pandemic, face the responsibility of their family businesses. Their roles in the family business before the pandemic and afterwards have turned 180 degrees. They assumed more control of the business. Moreover, they realized that the family business was in a crisis and that they needed to save their families from bankruptcy. Because of their low level of education and their parents' disappointment, the pandemic offers them the opportunity to prove to their families what they are capable of achieving. During the pandemic, they view the family business as a future career opportunity and they can implement new business strategies, such as the delivery business, which allow their family businesses to survive the financial consequences of the pandemic. This is illustrated as the second-generation ethnic migrant's "perceived role in the family business" in 4.2.1 in the conceptual model.

This study identified three factors that influenced the entrepreneurial identity of the second-generation ethnic entrepreneurs during the pandemic: (1) the financial and (2) mental consequences of the Covid-19 pandemic and (3) the changing perspective of the second-generation ethnic entrepreneurs regarding the family business. First, the Covid-19 pandemic has caused major financial damage to the second-generation ethnic entrepreneurs' family businesses. The business is in the second-generation ethnic entrepreneurs' names, which is why they are personally struggling with financial losses and debts. According to Entrepreneur A,

> "During Corona, we got into debt and a restaurant has running costs. I put my salary from my job into the family business. It still was not enough;

therefore, I had to take out a loan with the bank." (Entrepreneur A)

Entrepreneur A had to extend his personal limits because of the pandemic. The family depends on his salary and the bank loan. In addition, because of their financial hardship, the family borrowed money from the ethnic community. They were close to subsistence level. It was an unfamiliar situation for him. The aim of the families of the second-generation ethnic entrepreneurs is that the young generation continue the family business. Their parents decided to make their sons aware of the important role they will play in the business in the future. Naming the restaurant after their sons' names at an early stage would make it easier for them to identify themselves with the family business. It also offers financial advantages to the young entrepreneurs. The second-generation ethnic entrepreneurs are aware of this, and Entrepreneur C elaborates:

"The business is in my name. As a young entrepreneur, you have many advantages. My parents and I wanted it that way. I get enough support from the state and identify with my business more" (Entrepreneur C)

Second, the debt that Entrepreneur C had to take on for his family business had not only caused financial stress but also mental stress. Thus, his responsibility for the family business grew and led his increased alcohol consumption, creating an addiction during the pandemic. Alcohol consumption increased for all three entrepreneurs. Entrepreneur B, for example, emphasized:

"I started drinking more alcohol to escape from the stress. There were existential and insolvency fears regarding the family business. My alcohol consumption was very strong that you could call it an addiction. I was desperate and frustrated" (Entrepreneur B).

Entrepreneur B talks about his emotions and feelings during the pandemic. He was overwhelmed by stress, which placed him under great pressure. All three second-generation ethnic entrepreneurs were looking for an escape route. The importance of alcohol in their lives is shown in the size of the drawn alcohol bottle in the second drawing of Entrepreneur C. It illustrates that

alcohol consumption has a greater role in Entrepreneur C's life during the pandemic and his emotional state is clarified with the drawn sad face. The entrepreneurs believed that their families were waiting for them to propose a solution for their businesses in this crisis. Not fulfilling this expectation would be inexcusable for the second-generation ethnic entrepreneurs.

Third, despite the heavy burden of the family business, the interviewed entrepreneurs view the business as an opportunity to prove to the family what they are capable of as young entrepreneurs. By working every day in their family businesses, they construct their own views, identify themselves with their businesses, and develop into key decision-makers. They do not have high school degrees and assuming control of the business would make them financially independent in the future. Entrepreneur C described this process:

"I didn't do anything else after school. The family business is my chance to prove to myself what I am able to achieve and be financially independent one day" (Entrepreneur C).

Entrepreneur C is aware of his lack of career opportunities because of his high school diploma. He was never able to realize the high expectations of his parents at school. He skipped school and received bad grades, which led to many disputes. He started working in restaurants at the age of 16, which his parents did not approve of. Entrepreneur C wanted to start earning money at a young age. He describes himself as an *"ambitious and hardworking person"* (Entrepreneur C). However, he was never able to show this ambition and diligence to his parents until they opened the family business during the pandemic. The will and the motivation to make his parents proud one day drives Entrepreneur C to keep the family business going.

Furthermore, working every day in the family business and taking responsibility leads to the second-generation ethnic entrepreneurs identifying more with the family businesses. Every small success in their businesses is appreciated because they feel part of the whole development of their restaurants. Entrepreneur B said:

"I appreciate the business more and have a closer relationship to the business because I'm working every day here" (Entrepreneur B).

Entrepreneur B values the family business more because he was at the centre of the business's development and played a decisive role in it. The bond with the business is completely different from what it was before the pandemic. In the past, the responsibility for the family business was left to the father, but now he is the person in charge and his role in the business is perceived differently. Entrepreneur B is aware of his duties for the delivery business and now has a familiar and close bond with the family business. The second-generation ethnic entrepreneurs have become key decision-makers and have a firm place in the family business. The first-generation ethnic entrepreneurs are proud of their sons' development during the pandemic and appreciate their work. They fulfil their responsibilities, and Entrepreneur C describes his personal development as follows:

> Before the pandemic started, I would describe my role in the family business as a "libero". I was just everywhere. After the pandemic, I have found my fixed place (Entrepreneur C).

"Libero" in soccer refers to a defensive player, who has no direct opponent and serves as a safeguard for the team. The role of the libero in the team mirrors the role of the second-generation ethnic entrepreneurs in their family businesses. Libero translates to "free man" in Italian (Escher, 2017). They are free and are only needed when there is a necessity. The second-generation ethnic entrepreneurs were flexible employees and were only occasionally in the restaurants. Since the pandemic, each young entrepreneur has grown from a libero to the linchpin of the family business. In addition to their regular position in their businesses, they have also gained a permanent place in the family. Before the pandemic, Entrepreneur C felt that his family did not need him. This has changed because of his responsibilities, such as hiring employees, introducing marketing (Social Media advertisements), and starting new business strategies during the pandemic (Freiling & Harima, 2019a). He now feels valued.

The literature supports the observations in this case study regarding the role change and assumption of responsibility of the second-generation ethnic entrepreneurs during the pandemic in their family businesses. Covid-19 and its aftermath have placed significant strain on the physical and emotional well-being of family members in family businesses, brought tensions to the surface, evoked negative emotions such as grief, frustration, stress, anxiety, and fear and led to vacillation between positive and negative emotions. It has undermined the clarity of thought of key decision-makers in the family business (De Massis & Rondi, 2020). Roles in the business change, because of the emergency. The young generation is simultaneously under pressure and challenged.

Before the first-generation ethnic entrepreneurs started their own businesses, they worked in factories, grocery stores, and gas stations to secure a future for their children. The second-generation wants to escape the constraints of the labour market and pursue meaningful self-employment. The new generation is accustomed to a certain level of prosperity, having seen their parents work hard to ensure security and status while foregoing personal gratification. Although they recognize these efforts, young men and women want more rewarding paths to success. Fulfilment and meaning, in addition to financial security, have become their top priorities (Fernandez-Kelly & Konczal, 2005).

Moreover, literature in family business emphasizes that succession planning should start at the outset of the family business and children should be trained and involved at an early stage so that first- and second-generation entrepreneurs are better prepared when the transfer of ownership and management needs to occur (Gashi & Ramadani, 2013). The second generation is more likely to identify with the business and cultivate a sense of responsibility at a young age. The responsibility is systematically transferred from the first generation to the second generation, because the owners are continuously thinking about the transfer of authority, ownership, and management to the next generation, which is a key process in a family business. According to Setuza (2017), succession is often regarded as a serious challenge for family businesses, because only 30% transfer the business to the second-generation members and only 10–15% transfer to the third-generation members. In

addition, the relationship between children and their parents is more relaxed in a work environment where everyone is happy and supportive of each other (Ejupi-Ibrahimi et al., 2020).

However, there is a conflict between the generations' expectations regarding who will assume control of the business. The second-generation ethnic entrepreneurs are sometimes frustrated because educational training has taken up too much time that they cannot use. For example, in this study, Entrepreneur A is finally able to work after three years of hard work and educational training at a German manufacturing company. The young entrepreneurs are sucked into the family business that could ruin their future. Some are forced to take over the business before they have been entrusted with the responsibility, like Entrepreneur A. Others have dreamed of it since childhood, like Entrepreneur B and C. As a result, there is a conflict between family members about the division of roles and taking responsibility in the family business (Dias & Davila, 2018).

In contrast to the empirical results, the second-generation ethnic entrepreneurs tried to be involved in the family business, but without success. On the one hand, the parents of the second generation do not trust them to continue running the business successfully, and, thus, do not involve them in the business. On the other hand, communication problems between the first and second-generation ethnic entrepreneurs limit the potential for a successful collaboration. They have different approaches to running the business due to their different outlooks, which is difficult to combine in practice. According to Peters (2002), for the first generation, ethnicity is primarily a source of social cohesion for the ethnic group, while the second generation view ethnicity as a resource that can either be suppressed or utilized, depending on the situation. The second generation also have the advantage of using two cultural milieus for information, finance, labour, and consumers (Tao et al., 2020; Freiling & Harima, 2019b).

This suggests that the second generation feels capable of taking over the family business and has the necessary resources to manage it. However, they have never been able to stand up to their parents, who have overseen every aspect since the business was founded. Even though the business is in the second generation's name, the family business never felt like their own and they never had the opportunity to prove themselves as entrepreneurs. The Covid-19 pandemic has offered them their first opportunity to demonstrate their leadership qualities, even though the pressure is significant. Therefore, I propose:

> **Research Proposition 1a:** Even though the external shock has caused financial and psychological damage to the second-generation ethnic entrepreneurs, they are motivated to face the responsibility and take a leading role in their family business, because they perceive their role in their business as an opportunity for their entrepreneurial career.

4.2.1.2 Learning Processs

The second category of the perceived role in the family business addresses the development of the entrepreneurial identity, which has awakened new aspects of the second-generation ethnic entrepreneurs through the pandemic. Their entrepreneurial identity is characterized by experience, diligence, motivation, and a sense of responsibility. They are motivated to take the family business in their hands, and they are willing to learn and expand the business. This builds on research proposition 1a and reflects the second-generation ethnic entrepreneurs assuming responsibility for the family business. This study shows how significantly the pandemic has affected the entrepreneurial identity and the consequences for the entrepreneurs' family businesses. In addition, the increasing responsibility of the second-generation ethnic entrepreneurs has also changed the distribution of roles in the businesses. The fathers and sons have an equal voice in their family businesses. Entrepreneur B shares his thoughts about these practices:

> *"I want to take over the business and have sole-responsibility. I would like to retain Lieferando and my employees"* *(Entrepreneur B).*

This demonstrates that Entrepreneur A is satisfied with his duties and has challenged himself to ensure the business's success. This self-confidence developed because of the pandemic. The second-generation ethnic entrepreneurs owe a dept of gratitude to their employees, who address

challenges with conviction, support the entrepreneurs with technical assistance, and provide mental strength. With his employees, he is convinced he can run the business successfully, and his satisfaction is shown in Drawing 3 of Entrepreneur B. The faces of his employees, his father, and his own face in the lower right corner are all marked with a smiley and illustrate everybody's satisfaction. During the pandemic, a solid team has been established, and the members can rely on each other.

The second-generation ethnic entrepreneurs have learned a great deal, such as how to adapt the business to the pandemic period and how to avoid unnecessary financial expenses. In addition, the business must be maintained daily and a rhythm is needed in working life, which requires diligence and determination. The first-generation ethnic entrepreneurs have noticed the self-confidence of their sons during the pandemic, and they are sure that the family business will be safe. The sons have a different network and knowledge than their parents, which they can use to their advantage. Accordingly, the first-generation Entrepreneur B mentions:

> *"My son can approach me with any concerns and trust me. I would like my son to take over the family business. As long as I can still work, I will support him in the business"* (First-Generation Entrepreneur B).

The sons appreciate the support of their parents. However, the second-generation ethnic entrepreneurs want to be independent. They are ready to assume control of the family business and believe it is time to do so. Their parents have made their contribution to the business, and motivated employees can take their place. Entrepreneur C emphasizes this ambition:

> *"In the future, I would manage the family business without my parents, because they are old. Without them, I'm independent"* (Entrepreneur C).

Entrepreneur C's desire for independence is clear. The second-generation ethnic entrepreneurs also want to "expand the family business" (Entrepreneur C). They are aware that the business has potential. Entrepreneur C believes in himself

and expanding the business will make him financially secure and allow him to pursue his childhood dreams. Thus, he needs more room to manoeuver in the family business. The dream of becoming self-employed and being responsible for several businesses seems to be within his grasp. The experience gained by the second-generation ethnic entrepreneurs during the pandemic in the family business has made them what they are today: hardworking, sincere, motivated, experienced, and responsible human beings.

This thesis demonstrates that the entrance of the second-generation ethnic entrepreneurs during the pandemic to the family businesses has contributed to the growth and expansion of the family enterprise into numerous diversified new ventures. Nevertheless, not all interviewed second-generation ethnic entrepreneurs want to expand their business and deal with the business like Entrepreneurs B and C. For instance, for Entrepreneur A, it has been a difficult time during the pandemic, as he was initially overwhelmed by the tasks ahead. He would rather just be involved in the family business part-time and give the responsibility to his employees. He feels that life should be about more than just the family business. He shared the following:

> *"You need a lot of diligence. As a young person, I can do that, but when I have my own family, it will be difficult. If the business runs properly, I can hire staff. Without a pandemic, I would like to keep the business. Then part-time, but never full-time. I imagined that in the near future I would buy the restaurant and would like to sublet it"* (Entrepreneur A).

Entrepreneur A has learned through the pandemic about the financial dangers that may face the family business. If external shocks occur in the future, the business will face many challenges. He would rather secure himself financially by renting out the restaurant than fighting against the external shock. He regards it as too risky and, at a certain age, he needs the right support. He had to live with existential fears during the pandemic and he does not want to do that to himself and the following generations in the future. He still wants to be partly self-employed but would prefer other business lines that provide a suitable work-life balance for him.

The literature supports the observations in this case study regarding the second-generation ethnic entrepreneurs' motivation to take charge of the family business and their entrepreneurial identity development. Elements such as risk, ambition, growth, and control are included to encourage each entrepreneur in their personal development and to more quickly determine when the entrepreneur needs to respond to an external shock (Donnellon et al., 2014; Freiling & harima, 2019c). Moreover, the family is an institutional vehicle for trust, collective action, and a sense of community. Therefore, it fosters entrepreneurial learning, which is essential in business creation and development (Aldrich & Waldinger, 1990).

Parents play an important role in the development of young entrepreneurs, as they offer their inexperienced children the support and trust they need at the beginning.

Baycan-Levent et al. (2009) found that the second generation who came from entrepreneurial families were more motivated to become entrepreneurs. Individuals may be influenced by their family, depending on the strength and structure of the relationships between family members. When family groups are cohesive, people feel connected to each other and have a sense of social solidarity, which affects their behaviour (Randerson, 2015). While the parents worked hard on their family business entrepreneurial identity of their sons developed. The family members became closer during the pandemic and they realized whom they can rely on during crises.

This thesis demonstrates that the identity of the second-generation ethnic entrepreneurs has changed, and they are ready to assume responsibility for the business. Sveningsson and Alvesson (2003) emphasize that identity is central to meaning, motivation, decision-making, and other activities that are crucial to entrepreneurial action. Individuals who become entrepreneurs see themselves as ethical subjects (Poldner et al., 2018), often motivated by their passions and inspired by their context (Bhansing et al., 2018). Moreover, the entry of the second-generation ethnic entrepreneurs to the family business has contributed to the growth and expansion of the family enterprise into diversified new ventures, for example, a delivery business.

The second-generation ethnic entrepreneurs in this study are purpose-driven, and they want to impact the society through sustainable products and services. They have a strong belief in their own values and responsibility combined with the motivation and energy to build their own business. Together, these themes concentrate on responsibility, sustainability, a positive impact on society, and focus (Horst et al., 2020). Nevertheless, the empirical data shows that even people with the same nationality or from the same ethnic group have differences that affect how they identify and pursue opportunities. Not all the entrepreneurs surveyed want to take over the family business full time like Entrepreneur A. Their fear of external shocks is too great, even if the pandemic has been successfully overcome. Therefore, not all the entrepreneurs look back on the tough period in the same way; some prefer to pursue different options for themselves in the future. They all learned something during the pandemic that influenced their perceptions and their careers.

Building on Research Proposition 1a, that the pandemic was perceived more as an opportunity and less as a threat to the development of entrepreneurial identity, they were able to grow and prove themselves in the family business. Thus:

> **Research Proposition 1b:** The second-generation ethnic entrepreneur's motivation to take charge of the family business, through the learning process during the Covid-19 pandemic, led to an entrepreneurial identity characterized by experience, diligence, reality-consciousness, motivation and a sense of responsibility.

4.2.2 Relationship with the Community

4.2.2.1 Community Cohesion

The second category concerns the ethnic community's support during the pandemic of the second-generation ethnic entrepreneurs' family businesses. This is illustrated as the second-generation ethnic migrant's "relationship with the community" in 4.2.2 in the conceptual model. Because of the pandemic, the relationship between the Tamil community and the second-generation

ethnic entrepreneurs has become stronger, new friendships have developed, and existing friendships have strengthened. The external shock has shown the entrepreneurs that they can rely on the ethnic community, which has strengthened community cohesion. The ethnic community has a substantial influence on the family businesses, and the second-generation ethnic entrepreneurs have come to view them from a different perspective.

Before the pandemic started, only the first-generation ethnic entrepreneurs were embedded in the Tamil community. They had built a large network within it and maintained connections. The second-generation ethnic entrepreneurs were not as embedded as their parents were, and they were not involved in their relationships. During the pandemic, an unexpectedly strong bond developed between the ethnic community and the second-generation ethnic entrepreneurs, which has formed the foundation of a long-lasting and trusting relationship.

This study identified two factors that influenced the relationship of the Tamil community and the second-generation ethnic entrepreneurs during the pandemic: providing financial support and offering human resources. First, the Tamil community provided financial support to the second-generation ethnic entrepreneurs when they requested it. They were aware of the seriousness of the situation and responded quickly. The second-generation ethnic entrepreneurs are grateful for that, and they emphasize the following:

"Tamils lent us money and were willing to help. However, we paid interest. But that's how we saved ourselves" (Entrepreneur A).

They borrowed money to continue the family business. According to the entrepreneurs in this study, the German state did not provide enough support, and the bank loans were only partly helpful. Thus, they had to borrow money privately. Only the Tamil network, which the first generation had built up over years, helped the family business avoid insolvency. They did not hesitate to ask them for money, since they belong to the same ethnic group. Even though they had to pay interest on the borrowed money, it was better than not being able to borrow.

Secondly, the Tamil community provided human resources. Because of the pandemic, the second-generation ethnic entrepreneurs hired Tamil co-workers, who were all well known to the family. Employee A describes his perspective of the family business:

"The Tamil community plays a significant role in the business. We helped each other in terms of work and passed on our expertise. Our networks were combined. This built up a basis of trust among us" (Employee A).

Knowledge was shared in the group, which demonstrates how the Tamil community holds together. The sense of responsibility is palpable. Each individual shared their networks, for which the entrepreneurs are grateful. A basis of trust has developed, and the entrepreneur is considering allocating more responsibility to their employees. However, the employees also noticed that the entrepreneurs experienced mental difficulties because of the pandemic. Even though it is not their personal concern, they have encouraged the young entrepreneurs to continue working towards their goals. They are optimistic that they can make it together. This motivation is evident in Employee A's statement:

"We all had mental pressure, especially him (Entrepreneur A). I encouraged him. He discovered another business strategy and adapted to the situation. I want him to get out of the debt spiral!" (Employee A).

Employee A supported Entrepreneur A, and they discussed the entrepreneur's mental stress. He wants to prove to his family that he can cope with this challenge. However, he is his own greatest obstacle. He wants to achieve greater personal growth and prove to himself what is possible when he is fully committed to the family business. He is aware that by overcoming the pandemic, his role in the family business would change – and so would his life.

The importance of his employees' support in addressing the mental pressure can be seen in Figure 3. The drawing illustrates how Entrepreneur B works with his father and his employees in the restaurant. His employees are depicted as closer to him than his family members at home. The arrow between them symbolizes his closer connection to his employees than to his family members regarding the family business. In his first drawing, only his family is drawn in the restaurant, and Entrepreneur B is working in another restaurant.
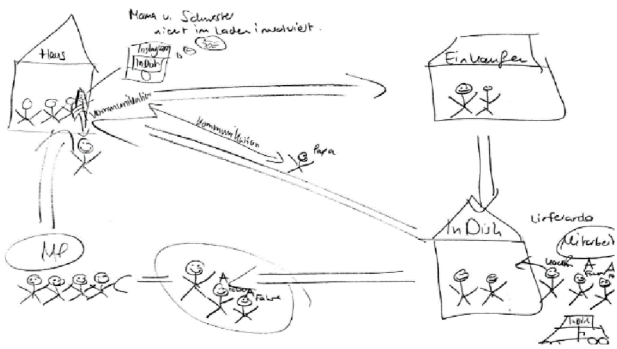

Figure 3: Life of the Second-Generation Ethnic Entrepreneur B during the Second Lockdown

However, the employees' facial expressions in Figure 3 indicate contentment and security. Moreover, the drawn individuals are all the same size. This symbolizes that all employees are equally important to Entrepreneur C and the family business. They spend time together after work and triggers other thoughts for Entrepreneur C. They form a clique called "MP", which stands for "Morattu Passanga", or "Rogue Boys". The employees support him mentally, they spend much time together, and they prevent him from feeling lonely. Entrepreneur C points out:

"Even in the difficult phases, I was well supported by all the Tamils, my friends. They had my back" (Entrepreneur C).

He refers to his employees as "friends", which indicates that this is more than an employee-boss relationship. The friendship that has developed makes the employees feel they are a part of the family business. Because of this relationship, it is easier for them to identify with the business.

Tamil culture is characterized by gratitude, loyalty, and helpfulness. It is far more important who stood by someone in bad times than in good times. The gratitude will last a lifetime and maintain the friendships. Employee C lists the peculiarities and

characteristics of Tamil culture, reporting on the role of ethnicity in his decision to help:

"We helped immediately when asked. I do not know if Germans would do that. There would have been a language barrier with Germans. There was a connection to ethnicity. I started working for little money and I wouldn't have put up with that for a German friend" (Employee C).

The Tamil community regards itself as a unit, and its ethnic background has played a significant role in business development and employment. The same ethnicity conveys a sense of belonging. They trust each other and do not always expect to have their personal concerns addressed immediately. Employees prioritize business during the pandemic. In addition, language barriers prevent the building of trusting relationships with other individuals from a different migration background. First-generation ethnic Entrepreneur B describes his experience in this regard:

"I prefer sharing my profit with Tamils rather than with strangers. The atmosphere is more familiar and friendly. I only understand Tamil. Sometimes we borrow Tamil drivers from their restaurant (Case A) when we have an emergency" (First-Generation Entrepreneur B).

First-generation ethnic Entrepreneur B prefers to share his success with Tamils. Because of the language barrier and the resulting mistrust, which are the main reasons for this attitude, he refers to non-Tamils as strangers. This highlights the distance between the first-generation ethnic entrepreneurs and the native community, which may occur because of negative past experiences and because they are embedded in a single community. The first-generation ethnic entrepreneurs "struggle with a lot of disagreement and differentiation" (First-Generation Entrepreneur A) with the native society, which leaves the feeling excluded. Therefore, they approve of their children being involved with Tamils and building strong friendships.

The literature indicates an increased sense of belonging among immigrants with shared ethnic or cultural backgrounds, creating collective, group-specific resources to initiate, expand, and develop

entrepreneurial activities while fostering the formation of ethno-cultural communities (Ersoez, 2012). The ethnic resource model assumes that intergroup solidarity facilitates access to employment through informal networks, and it is based on solidarity, trust, and strong ties within ethnic networks (Klinthäll & Urban, 2014). From the individual's perspective, social capital refers to the entrepreneur's personal network of mutual trust relationships that can be leveraged to access resources such as the information, funding, or skills needed to successfully identify and exploit entrepreneurial opportunities (Nahapiet, 2009). The empirical data emphasises that the language connection is a key factor in the entrepreneurs trusting their employees. Similarly, Rusinovic (2008) found that first-generation immigrants are often embedded in ethnic markets and depend on informal and transnational networks in running their businesses.

Denied other means, immigrant group members seek support within the group and develop strong bonds of mutual solidarity and trust (Iyer, 2003). This trust mechanism builds social capital through which various resources circulate in the community (Nadin, 2007). This process is demonstrated in this study through the sharing of delivery drivers, expertise, and giving responsibilities to employees from the Tamil community. Although the parent generation may have weak networks in the general labour market, they can offer their children employment opportunities in their own businesses or network resources within the ethnic community. Ethnic capital and ethnic entrepreneurship offer potential advantages and opportunities for members of ethnic minority communities and, thus, for second-generation immigrants entering the labour market (Chand & Misra, 2009). The literature points out that family identity and reputation develop gradually from various sources, which include repeat transactions, family member involvement in community activities, and traditional and intergenerational family involvement in the business and community. Moreover, parents' social networks influence the type of identity that children develop. Regardless of social class, parents who were involved in their cultural institutions appeared to provide their children with a strong sense of ethnic identity. Parents whose social networks extended beyond neighbourhood boundaries are more able to provide guidance and social contacts for their

children, which was conspicuous in the empirical data. These identities are fluid and change over time and in different social contexts (Madsen et al., 2008).

In this case study, individuals who described themselves as Tamils when they were young identified more strongly as Tamils when they entered a key role in the family business and found a large immigrant community with which they could cooperate. Placing their children in Tamil schools and participating in cultural or religious ceremonies would have given the second-generation ethnic entrepreneurs a strong Tamil identity earlier in their childhood, as discussed in the mentioned literature above. Therefore, the next research proposition is as follows:

> **Research Proposition 2a:** Through the external shock, the ethnic community provides human resources and financial support to the second-generation ethnic entrepreneur's family business, which strengthens the relationship with the ethnic community and creates friendships that promote community cohesion.

4.2.2.2 Developing a Collective Identity

The second category of relationship with the community addresses the support of the ethnic community and the sense of belonging to a group. Hence, a collective identity among the co-workers and the second-generation ethnic entrepreneurs has developed, characterized by the sense of belonging to a team, which is based on ethnicity and respect for each other's work. By having individuals from the Tamil community working in the family business instead of the ethnic entrepreneurs' own family members, an alliance and team spirit has developed between the employees and the ethnic entrepreneurs. The employees identify with the family business, take responsibility, and influence business decisions. They benefit the family business with their networks in the Tamil community, their knowledge, experience, and sense of responsibility.

The family, thus, is supported and can devote themselves to other duties. They can develop a work-life balance that did not exist before the Covid-19 pandemic. Before and shortly after the beginning of the pandemic, they worked every day

without breaks. Employee involvements offers relief to the business and the mental pressure of the second-generation ethnic entrepreneurs. Employee B explains the role of the employees in business decisions:

"We have all grown into a strong team. They have become like a second family to me. Additionally, his (Entrepreneur B) mother and sisters were not present in the restaurant; instead, we (the team) were his contact people for everything. We decided together" (Employee B).

The team spirit and cohesion is palpable in Employee B's statement. The employees and the entrepreneurs are in the same age group and, thus, grew up in the same generation. They have all experienced similar difficulties that come from growing up in two different societies. On the one hand, they are embedded in the Tamil culture through their parents, and, on the other hand, they are embedded in the native culture through their interaction with the native society. They carry the same inner conflict throughout their lives, which makes it easier for them to become a cohesive group.

Referring his team as his "second family" is reflected the drawings of Entrepreneur A. In his three drawings, his employees, who were his friends before the pandemic (MP), were drawn before he drew his family business. He preferred spending time with them rather than being involved in the family business. Now they are his employees, and a new and closer bond has developed between them. The entrepreneurs trust their employees and are grateful that they support them with full dedication and ambition. Entrepreneur C emphasizes:
"
Everyone is aware of their responsibilities and takes the exceptional situation seriously. As an entrepreneur, you should consider yourself lucky to have such dedicated people around you. Everyone contributes to the business and does their job well" (Entrepreneur C).

The entrepreneur appreciates that his Tamil friends have his full support as employees. Without them, the family business would probably not have survived the pandemic. The appreciation, attitude, and respect shown by all is reflected in the positive development of the family business. The younger generation, as a team, is acquiring more responsibility from the first-generation ethnic entrepreneurs. A process of generational change is slowly developing in the family business. A collective identity for the family business is created in the team. Even though the employees contributed significantly to the family business, they stand behind the entrepreneurs and remain grounded. Thus, they avoid conflict situations in the team and believe that the second-generation ethnic entrepreneurs have a promising future. In support of this point, Employee C stated the following:

"We influenced decisions. It is important that he (Entrepreneur C) involves his employees when making business decisions. He is very young, and his hard work will be rewarded" (Employee C).

Employee C has noticed Entrepreneur C's development. He is confident that the entrepreneur succeeds in his entrepreneurial career. The employees have a great reputation. The second-generation ethnic entrepreneurs are satisfied with the role distribution in the family business. The mutual trust and the collective identity form the foundation of a long-term and promising business, where the second-generation ethnic entrepreneurs are in harmony with their personal and collective identity.

The literature supports the observations in this case study regarding the relationship between the ethnic community and the second-generation ethnic entrepreneurs. In all three cases, the concept of "familiarity" (Pearson et al., 2008) extends beyond the family group and creates favourable conditions for accessing entrepreneurial resources. Ultimately, entrepreneurial identity is constructed through peer engagement and influence (Falck et al., 2010; Obschonka et al., 2012). Entrepreneurs negotiate with critical others to gain legitimacy (Clarke, 2011; Essers & Benschop, 2007; Wry et al., 2011) as part of a socialization process and initiation into a collective identity. The empirical data support this behaviour that the employees represent the second family of the second-generation ethnic entrepreneurs and they identify themselves as a collective with the family business.

Developing an entrepreneurial identity involves internal self-reflection, as well as social engagement through conversations and actions (Radu Lefebvre & Redien-Collot, 2013; Rigg & O'Dwyer, 2012; Watson, 2009). However, when interacting socially, especially with established social groups, individuals who seek to adopt the identity of an entrepreneur often face challenges in how this new identity fits with existing identities and roles (Williams Middleton, 2013; Olila, 2012). In contrast to the empirical data, this would only have been the case for the second-generation ethnic entrepreneurs before the pandemic. They did not play a role in the business at that time. The pandemic has altered landscape, and they have felt responsible for advocating the family business. The new collective identity did not lead to any challenges in terms of roles in the business, as the team brought about a new role distribution in the family business.

Moreover, researchers examined scientists' intentions to commercialize their research knowledge and explored the role of social identity in the development of entrepreneurial intentions. Obschonka et al. (2012) found that scientists with low group identification did not base their entrepreneurial intentions as much on social norms and attitudes as on their own initiative and control beliefs. In turn, for scientists with high group identification, entrepreneurial intentions were mainly a function of social norms. In contrast to the empirical data, the second-generation ethnic entrepreneurs, as family individuals, do not rely on their own initiative or on control beliefs, but on trust and collective action.

The second-generation ethnic entrepreneurs are less dependent on transnational networks and activities than the first generation are as these are less likely to be their main business activity. Therefore, second-generation transnational engagement may have become a strategic choice, while it is more of a necessity for the first generation (Rusinovic, 2006). This thesis indicates that the second-generation ethnic entrepreneurs did not only need the help of the Tamil community for strategic reasons, but also as a necessity to avoid language barriers or trust fears of the first-generation ethnic entrepreneurs. The development of a collective identity is a product of the community cohesion described in Research Proposition 2a. Because several people simultaneously form the foundation of the family business and identify with it, second-generation ethnic entrepreneurs receive the support they need during the pandemic. Since these people are the closest friends of the second-generation ethnic entrepreneurs, they can be relied upon. As a result, internal conflicts are avoided, and an efficient team can be formed. Thus:

> **Research Proposition 2b:** Through the support of the ethnic community and the sense of belonging to a group, a collective identity develops among the employees and the second-generation ethnic entrepreneurs, giving the entrepreneur the motivation and the required support to run the family business with self-confidence.

4.2.3 Family Dynamics

4.2.3.1 Mission Partners

The distribution of tasks within the family has changed because of the external shock. The third category addresses with the changing roles of family members in the family business, which is referred to "family dynamics" in 4.2.3 in the conceptual model. Previously, the fathers of the second-generation ethnic entrepreneurs were solely responsible for the family business, but now father and son share the responsibility. As discussed in the previous chapters, the second-generation migrants' perceived role in the family business (4.2.1) and relationship with the ethnic community (4.2.2) significantly affect family dynamics. The young entrepreneurs became better acquainted with family members and themselves during the pandemic.

On the other hand, the fathers see their sons in a different perspective. In their eyes, they have grown from children into adults with a sense of responsibility and strength of will. The second-generation ethnic entrepreneurs finally receive the recognition and trust they have wanted from their fathers for so long. Both parties collaborate as mission partners towards one goal: saving the family business from the financial consequences of the Covid-19 pandemic. A strong relationship between them would facilitate their work as partners. Both parties did not have a strong

relationship before the pandemic. Entrepreneur B reports:

"The relationship between my father and I was worse, because I drank alcohol and did not listen to him. Now that I am working with him every day, the relationship with my family is better" (Entrepreneur B).

Alcohol consumption is regarded as a negative habit in the Tamil community and is not tolerated by the first Tamil generation. The issue led to many disputes in the family and placed the second-generation ethnic entrepreneurs in a negative light. In the eyes of their fathers, alcohol consumption reflects *"irresponsibility and a lack of motivation in life"* (First-Generation Entrepreneur B). Thus, the fathers of the entrepreneurs did not trust their sons to run the business successfully.

However, the pandemic brought about a new allocation of roles in the family businesses. The fathers, who had sole responsibility, now share it with their sons. The second generation implemented the delivery business and saved the family business. They have **"the responsibility for this part of the family business"** (First-Generation Entrepreneur A). The young entrepreneurs' efforts also led to a better relationship between father and son. Nevertheless, there were still some disagreements between these two parties, as Entrepreneur A points out:

"There were often disputes, because I had to put my salary on the table. The bond between my parents and I deteriorated a bit. We had often argued. The connection has now improved. My dad and I are working partners" (Entrepreneur A).

The daily cooperation between the two parties led to an improved relationship between them, and he now calls his father "partner". Before the pandemic, they rarely saw each other, making it difficult to build a bond. Now the father trusts his son to take responsibility, which was not the case before due to his reckless behaviour and alcohol consumption. Conflicts also arose between the two parties during the pandemic. If two people share responsibility for a business, disagreements can occur. The disputes between the two generations were noticed by their employees. Employee C describes his experience in this regard:

"There were minor disputes between father and son due to a lack of communication. I was caught between two fronts. Fortunately, no major disputes have arisen so far" (Employee C).

Everyone can become irritated during stressful times. Both felt pressure and wanted to work perfectly, although one is conservative and the other one makes decisions spontaneously. The fact that the sons do not place themselves under pressure to convince their fathers, instead doing everything they can to maintain the family business and working together with their fathers, reflects the turning point in their personality development. The tense relationship between the two could be eased as they pursue the same goal. The second-generation ethnic entrepreneurs gain experience and grow beyond themselves. First-Generation Entrepreneur C emphasizes:

"The business is in my son's name, but I do most of the work. He is still in the learning process. I am teaching him, but we make business decisions together" (First-Generation Entrepreneur C).

In the Tamil culture, it is common for the eldest son in the family to take over the father's responsibilities when he is no longer able to do so due to his health or age. This is taught to the sons from childhood. Therefore, they see their fathers as role models and feel obliged to live up to their expectations. The fathers are aware that their sons are in a learning process, and they cannot do everything in the business on their own from the beginning. They still retain their leadership role in the family businesses, which is illustrated in Entrepreneur A's Drawing 2. During the early days of the lockdown, the gastronomy sector in Germany had to close. In Entrepreneur A's drawing, his father is still in the restaurant and reflects on how to continue with the business, even though it was not clear at that time that the lockdown would last for several weeks. He is aware of the consequences of the pandemic early on and the sad face symbolizes his mood.

However, the recklessness and inexperience of Entrepreneur A is evident in the drawing that shows him spending time with his Tamil friends. His drawing illustrates that the father is more closely

connected to the family business than he is. Nonetheless, he is now far enough along in his entrepreneurial development in the eyes of the father to make joint decisions with him about the business. Before the pandemic, he only functioned as a translator due to his parents' language barrier. Now he plays a decisive role in business decisions.

The improved relationship with his father also influences the young entrepreneurs' relationship with his siblings. He and his siblings are the second generation of the family business and help as much as they can during the pandemic. The strained relationship before the pandemic has now improved significantly. Communicating with each other daily and sharing the same experiences makes them identify with each other more easily. Entrepreneur C talks about his experience:

> *"My sister and I had to communicate more, because she takes care of social media and helps me. The relationship with her has improved" (Entrepreneur C).*

Because the second-generation ethnic entrepreneurs did not play a significant role in the family business before the pandemic, he had rarely seen his siblings, who worked in the business every day. They communicated less frequently and did not have a strong relationship. The parents had a significant impact on the siblings' relationship, as they did not trust their son as much and they regarded him as a negative role model for his younger siblings, which placed him in a bad light. During the pandemic, the siblings came to know each other better and realized that, ultimately, they can rely on each other, which laid the foundation of a trusting, familiar, and long-term relationship with each other.

From the results, second-generation members were found to be genuinely comfortable with their family business, have close relationship with their parents, are inspired and motivated by the success of the business, and are willing to work hard to improve the functioning of their businesses by bringing innovation to the product and service assortment, improving management approaches, and identifying new markets and opportunities (Ejupi-Ibrahimi et al., 2020). Rigg and O'Dwyer (2012) suggest that the entrepreneurial aspect of human identity is emergent and relational, and it is developed through dialogue with family, customers, employees, and competitors.

Individuals learn most when they operate at the edge of familiarity. The boundary of familiarity can be extended through social interaction with mentoring networks (Hofstede, 1980). In the empirical data, the young entrepreneurs are mentored by their fathers, who teach their sons everything they know so that one day, they can hand over the family business without hesitation. Family members pooled resources through a strong relationship of trust characterized by a traditional collectivist cultural norm and family orientation. This was maintained for both generations. The business case for embracing the ideas of the next generation is that their complementary skills and perspectives are exactly what the family business often needs as it struggles to update itself to continue creating value for the business (Poza, 2020).

However, in entrepreneurial families, children face the double jeopardy of having to respect their father twice – once as their father and as an entrepreneur (Catano, 2001), which also proved to be a challenge for the young entrepreneurs in the three cases in this study. To claim entrepreneurial status themselves, children must build their own self-esteem. They can prove this by earning a relevant university degree, starting their own business, or climbing the career ladder before claiming leadership status in the family business (Litz, 2011). The empirical data shows that the second-generation ethnic entrepreneurs do not have a high academic degree, nor did they start their own business. As a result, they have low self-esteem and are overshadowed by their fathers. In exchange, they successfully contribute to the family business during the pandemic and, together with their fathers, assume a leadership role that is highly regarded by first-generation ethnic entrepreneurs. Appropriately, research has demonstrated that self-reflection, communication and interaction with other entrepreneurs are key drivers of identity development (Werthes et al., 2018). The idea that social interaction is essential for at least some kinds of learning dates to Vygotsky (1934), who observed that individuals can perform well above their age when they have the opportunity to interact with an older, experienced individual, even if the initial situation was different. The relationship of the second generation with the family has

improved, especially the relationship with the father has changed so much that two individuals with divergent views have bonded to become mission partners. Social interaction helps to push this boundary more effectively than the individual doing it alone. Thus:

> **Research Proposition 3a:** The relationship between the second-generation ethnic entrepreneur and his father changes through the external shock in that the father has gone from being the role model to the mission partner of the second-generation ethnic entrepreneur, and both share the responsibility for the family business.

4.2.3.2 The Integral Decisdion-Maker

The second category of family dynamics addresses the personal development of the second-generation ethnic entrepreneurs during the Covid-19 pandemic, who develop from occasional helpers to integral decision-makers. The young entrepreneurs gain more responsibility and learn more about how to manage business and themselves. The pandemic has left a deep emotional mark on them. By seeing the pandemic as an opportunity rather than a threat, their personalities have also changed. They have become mature, resilient, and determined human beings. They radiate it with their self-confidence.

This part can be divided into two sections: (1) the personal development of the second-generation ethnic entrepreneurs and (2) the consequences of this development for them. First, the young entrepreneurs were not trusted to run the business because of their irresponsibility and naivety. Before the pandemic, they did not share a strong bond with their fathers, who are the linchpins of the family business, as discussed in Research Proposition 3a (Chapter 4.2.3.1). This affected their role in the family. Their family spends their time together every day in the family business while the second-generation ethnic entrepreneurs are left out and marginalized. The sense of belonging is not present in the family business or in the family, as Entrepreneur A reports:

"My sisters run the restaurant and work daily. I helped out when it was necessary, like a "jumper". I worked somewhere else.

Now, I must help in the family business. I am committed to that" (Entrepreneur A).

A "jumper" is someone who periodically or irregularly substitutes for others on a short-term basis during staffing shortages (Braennback & Carsrud, 2011). Therefore, he is only needed in the short term and has no significance in the family business in the long term. In the long term, the parents rely on their daughters, with whom they have built a strong relationship. They regard their daughters as more responsible and reliable than Entrepreneur A. During the pandemic, the situation changed, and Entrepreneur A plays a key role in the family business. When he realized that his family was overburdened with the consequences of the pandemic, he implemented the idea of the delivery business, thus earning recognition and respect from his parents through this successful implementation. The second-generation ethnic entrepreneurs have experienced significant personal growth through this experience. Entrepreneur B adds:

"Without the family business, I would have been more dependent. I have become mature and stronger and want to take over the family business" (Entrepreneur B).

His goal from the beginning was to become financially independent with the family business. He did not expect that his role would change in such a short period. After all, uncertainty about their own future before the pandemic drove the second-generation ethnic entrepreneurs to despair. This disorientation is also illustrated in Drawings 2 and 3 of Entrepreneur A by the many arrows pointing in different directions. In his third drawing, in other words, at the end of the pandemic, there are fewer arrows – and they are more purposeful. He has found his permanent place in the family and in the business and acquired more structure in his life. Employee A observed the change and reflects on it:

"He (Entrepreneur A) has become more responsible and confident. He has come out of himself. When I have any questions, I ask him, because I have a closer relationship to him than to his father" (Employee A).

Employee A, who has known Entrepreneur A since childhood and now works with him in the family business, has noted his rapid and strong

development. He is his contact partner in any questions and behaves professionally in the family business. He trusts him to have a great career as an entrepreneur and is happy to witness the decisive turning point in his friend's personality development.

Second, the second-generation ethnic entrepreneurs are aware of their personal changes. They look back positively on the pandemic. Even though they had to work hard for the family business, the effort and stress were worth it. There were days when they could only think about the family business. Entrepreneur A reflects on this topic:

> *"When I look back, I'm just glad to be out of there. The pandemic had a positive effect on us. It was the biggest challenge in my life so far! I learned so much and got mentally stronger"* (Entrepreneur A).

On the one hand, Entrepreneur A is relieved that everything is going as he had imagined, but he also has great respect for sudden external effects. He is aware that you cannot always be prepared for everything. However, the young entrepreneurs have learned that they must act according to the situation and use their resources wisely. They should not be afraid to take responsibility. The second-generation ethnic entrepreneurs serve are role models for many entrepreneurs and are grateful to all who helped shape their personalities during this difficult time. In addition, they see their family in a different perspective. They no longer feel useless and marginalized. Regarding the family dynamics, Entrepreneur C emphasizes:

> *"We as a family have grown together and can trust each other. I have overcome such a crisis at this young stage. You can get through anything. That's what it showed, at least for me"* (Entrepreneur C).

Not only the personality of Entrepreneur C, but also his relationship with his family has changed. A familiar and respectful relationship has developed, which motivates the entrepreneurs to make the family business more successful. Hard work, courage, and the confidence to make it were the keys to success. Finally, the second-generation ethnic entrepreneurs are aware that they can make more of themselves, and overcoming the pandemic

was their first step in their young entrepreneurial career.

The literature offers supporting arguments for the personal development of second-generation ethnic entrepreneurs observed in this case study during the external shock. Entrepreneurial thinking could never be claimed before the onset of the pandemic because the family did not think it was necessary. Entrepreneurial thinking helps organizations develop a strategy to create something unique and gain a competitive advantage in the marketplace (Lumpkin & Dess, 1996). The most cited components of entrepreneurial thinking in the literature are proactivity, autonomy, self-confidence, risk-taking, innovativeness, and competitive aggressiveness (Asenge et al., 2018; Krueger, 2015). The feeling of not belonging to the family business prevented the young entrepreneurs from developing as entrepreneurs.

Finally, the conflicts between the universal need to belong and the need to be different are essential when addressing entrepreneurial identity (Stepherd & Haynie, 2009). The conflict can be controlled by applying various management strategies. When left unchecked, conflict threatens entrepreneurial identity, which was not the case in the empirical data. The entrepreneurial identity of second-generation ethnic entrepreneurs is consistent with the values of the family business and the values of their fathers, who have since become mission partners (RP 3a). Running the business with their fathers during the crisis has awakened new leadership skills in the second-generation ethnic entrepreneurs that they were not aware of, and they have become integral decision-makers.

The second-generation entrepreneurs have evolved into solution-oriented entrepreneurs characterized by innovativeness, proactivity, and the willingness to take risks. Moreover, the first generation considers the second generation to be risk-takers, technologically well-informed, professional, and open to change and new ideas (Woldesenbet et al., 2011). Second-generation entrepreneurs focus on strategic execution of short-term activities to achieve long-term goals. The construction of the identity of a solution-oriented entrepreneur is primarily based on strategic and organizational themes that emphasize goal orientation, joint strategic discussions, clear tasks and timelines, and collaboration with the network to procure

capabilities (Horst et al., 2020). The empirical data show how the characteristics of a solution-oriented entrepreneur developed among the second-generation ethnic entrepreneurs during the pandemic and the role that self-perception, the ethnic community, and the family, especially the father as mission partner, played in this process. Thus:

> **Research Proposition 3b**: The entrepreneurial identity from the second-generation ethnic entrepreneur develops from an occasional helper to an integral decision-maker, whose identity changes to a mature, resistant and solution-oriented personality, who personally grows and profits from the Covid-19 pandemic in the family business.

5 Discussion

5.1 Impact of Pandemics on Perceived Role Transformations of the Second-Generation Ethnic Entrepreneurs

There are still research gaps regarding the entrepreneurial identity of the second-generation ethnic entrepreneurs during external shocks. Pioneering academic research (e.g., Baycan et al., 2012; McPherson, 2007; Rusinovic, 2008; Soydas & Aleti, 2015) on second-generation entrepreneurs among ethnic minorities focused on generational differences in terms of motivation and industry choice, and on intergenerational transmission. However, to broaden the understanding of second-generation entrepreneurs who grew up in immigrant families, this study approaches Tamil entrepreneurs in Germany from an identity perspective.

Organizational studies of identity show how entrepreneurs experience cultural and social values and how they use these values as resources for their own identity construction processes as entrepreneurs (Bredvold & Skålén, 2016). An examination of the "socially achieved and culturally constructed identities of entrepreneurs" can also contribute to an understanding of ethnic minority entrepreneurship (Essers & Benschop, 2007, p. 49). Studying the entrepreneurial identity of second-generation Tamil entrepreneurs in Germany – particularly how their family of origin and their ethnic community influence their entrepreneurial identity – is important, because these entrepreneurs grew up in German society, but come from Tamil immigrant families that differ significantly from the host society in social and cultural terms. Therefore, their entrepreneurial identity construction may be different from their ethnic first-generation identity.

Finally, the findings provide new insights for the literature on identity work by showing how their identities were affected during the pandemic and by social influences – a unique context that has received less attention. Organizational research has shown that the construction of self-identity emanates from the actors, while also recognizing that entrepreneurs' decisions are both enabled and constrained by social structures (Beech, 2011). Social structures affect how actors solve the identity puzzle and attempt to move away from a "current self" and toward a highly desirable "emergent identity" – an idealized self (Thornborrow & Brown, 2009).

This study adds to the literature on identity work by illustrating how young entrepreneurs who are structurally tied to the family business and first generation can develop their own entrepreneurial identity. In this process, their own perceived role during the pandemic laid the foundation for the development of an entrepreneurial identity. The key point is that they do not change their identity, but through the mechanism of adaptation to structural constraints, externalities, and the society, they reshape themselves and emerge. The empirical results of this study suggest that identity development under the influence of external effects is included, as they can change centuries-old traditional businesses as well as entire economic sectors of a country. This could lead researchers to determine which interactions and resources are necessary to resist a crisis without problems in the long run.

5.2 The Role of Ethnic Communities in Entrepreneurial Identity Transformations during the Pandemic

Most ethnic entrepreneurs make extensive use of their social networks, as these are a key source of social capital. The influence of an ethnic network is often significant and extends further than is usually assumed. The decision to emigrate or stay, the choice of destination, and the adjustment

process at the destination are influenced by the ethnic kinship and friendship networks in which people participate (Light & Gold, 2000). When opportunities are limited, a strong social structure can enable, or at least facilitate, job search, hiring, recruitment, training, and, more importantly, organize the flow of information between newcomers and residents (Waldinger, 1994). The community surrounding an ethnic entrepreneur can provide several critical resources for the establishment and growth of the business, such as cheap and loyal labour and capital. However, even the strongest community support can only enhance (but not guarantee) the viability of the business when faced with the rigors of the marketplace (Jones & Ram, 1998).

Ethnic networks can reduce the economic risks associated with starting a new business, making the decision to become self-employed more attractive from a risk diversification perspective. It is often an ethnic community's social support network and cultural background that provide the necessary impetus to start a business. However, when a successful entrepreneur seeks to grow and break out of the ethnic market to meet community needs, these same factors can be a serious constraint (Masurel et al., 2002). Generally, business survival and growth are explained by the entrepreneur's ability to acquire skills through learning-by-doing and to innovate. Research findings suggest that some individual cultural characteristics may hinder growth. The ability to delegate responsibility to non-family employees is just one example, which is also clear in this study. The role of non-family members is evident in the support from the ethnic community in the family business. This study shows that the community provides the support for a young entrepreneur in his early days to prove himself as an entrepreneur in the market and to exploit his skills.

The literature has not examined the relationship of second-generation ethnic entrepreneurs to the homeland and ethnic community in extreme situations, such as the Covid-19 pandemic. Instead, the literature has largely focused on the multi-ethnic community, concepts, and measures of ethnic community (Fennema, 2004; McLean & Campbell, 2003). This results in a gap in research regarding the impact of this interaction on their personal identity and the perspective from which the second generation views the ethnic community.

It is not necessary to have a strong relationship between the entrepreneur and the ethnic community from the beginning to help each other in times like the Covid-19 pandemic. The same ethnicity and network are there when challenges arise. The cohesiveness of the community has always been there but has been brought to light by the external shock.

This study contributes to the research by demonstrating that a relationship of trust can develop within the ethnic community in a short period and that, over time, outsiders should be given the opportunity to take responsibility in their own family business and help the business grow. Among other things, this can lead to a collective identity, whereby the family business is supported by various pillars and does not have to face the challenges of difficult times alone. Finally, this study provides a rare insight into the historical and cultural development of individuals in Tamil society, who are pursuing their dream of becoming self-sufficient and financially independent in their country of residence. Therefore, continuing their family business is vital, even if they face unpredictable external effects. The fact that the analysis used similar practices in several cases underlines the importance of these findings.

5.3 Impact of Pandemics on Family Dynamics Transformations in Entrepreneurial Identity Constructions

This study identified an improved interpersonal relationship between father and son. Fathers transformed from being role models to becoming mission partners during the pandemic. A trusting and friendship-like relationship was established between fathers and sons. This allows the young entrepreneurs to be open-minded, courageous, and independent, in addition to having a collegial relationship that provides entrepreneurial support. The first generation is almost ready to hand over the responsibility of the business to the second generation because of their personal development and commitment during the pandemic. Since the second-generation ethnic entrepreneurs stopped feeling pressured to impress the father and started to see themselves as a source of ideas and as an instigator in the best possible way, the cooperation between them has improved. They became mission partners.

This study shows how broader structural and competitive forces can influence the choice between available strategies passed down through multiple generations in family businesses to reconcile continuity and change. Thus, this study begins to explain the differences in how the past and present are managed, which have often been noted but rarely considered in previous studies. The literature on family businesses highlights the values of the founding family as a distinctive element of family businesses that promotes their long-term success (e.g., Aronoff & Ward, 2011). Scholars regard past values and traditions as a resource available to family firms to foster innovation (De Massis et al., 2016; Erdogan et al., 2019) and entrepreneurship (Jaskiewicz et al., 2015). However, attachment to past values can also lead to inertia and undermine the ability of family firms to change and adapt over time (e.g., Jaskiewicz et al., 2016; Rondi et al., 2018). This thesis shows how second-generation entrepreneurs of family businesses can leverage the inspiring legacy of founding values while most efficiently inserting non-family outsiders, and, at the same time, avoid becoming trapped in an inertial trajectory. In doing so, it contributes two insights to this growing body of research.

First, it foregrounds strategic identity explanations as a means of transmitting past values in family businesses and maintaining their relevance across generations. Moreover, it theorizes how entrepreneurs can reconcile the opportunities these values provide with the need to adapt to changing conditions through, for example, ethnic community support. Future research can enrich macro-level explanations of the strategic behaviour and performance of family businesses when externalities occur.

Second, this study offers a nuanced understanding of the tensions between the past (pre-pandemic) and present (during the pandemic) that are associated with maintaining the foundational values of family firms and which become relevant over time. Previous studies addressing this issue have been sparse and have either emphasized the possibility of mobilizing the past as a strategic resource by transferring values from one generation to the next (De Massis et al., 2008) or replacing old values that no longer appropriate or legitimate with new ones (Parada et al., 2010). These studies did not experience a pandemic in their past, so the impact of such an external effect on family business and entrepreneurial identity could not be explored. Compared to these studies, my findings suggest a more nuanced view: the successful transmission of past values from generations requires a skilful balance between selective remembering and forgetting. By creating a conceptual model (Figure 2), and adding it to the unique relational dynamics between the second-generation ethnic entrepreneurs and the family and ethnic community, this study provided a conceptual base for further research.

6 Conclusion

6.1 Summary

This thesis explores how the Covid-19 pandemic influences the entrepreneurial identity of the second-generation ethnic entrepreneurs in a family business. The findings revealed three essential aspects that must be understood to examine the impact of pandemics on ethnic entrepreneurship: (1) entrepreneurial identity of the second-generation ethnic entrepreneurs, (2) relationship with the ethnic community, and (3) family dynamics, which have been subdivided in the conceptual model in Figure 2. The results show that despite the external shock that caused the financial and psychological damage, the second-generation ethnic entrepreneurs are motivated to face the responsibility, and they have developed through the learning process. It also strengthens the relationship with the ethnic community and develops a collective identity. Because of the external shock, the father has transformed from a role model to a mission partner for their son. The second-generation ethnic entrepreneur's entrepreneurial identity has evolved from an occasional helper to an integral decision-maker who is motivated to achieve greater outcomes. Through the life stories of three Tamil entrepreneurs in second-generation family businesses in Germany, this study reveals the complex ways in which entrepreneurial identity, ethnic identity, and second generation come together. Therefore, this research highlights the importance of considering the second-generation Tamil entrepreneurs in family business as an identity marker for ethnic minority entrepreneurs during times of pandemic.

6.2 Practical Implications

Exploring the identity of the second-generation ethnic entrepreneurs can offer new insights into not only the field of ethnic entrepreneurship studies but also to the broader understanding of labour market integration during externalities and the career development of immigrant children. First, this article is well timed, as ethnic entrepreneurs faced numerous challenges during the Covid-19 pandemic and had to adapt their family businesses to the situation during this unpredictable time. The challenges of the second generation, especially, gives young entrepreneurs in their early stages courage to face responsibilities. In this study, the second-generation ethnic entrepreneurs that were interviewed rejected their parents' business strategies, which may indicate that the second-generation ethnic entrepreneurs have outgrown their parents' situation. This highlights the different approach in first- and second-generation entrepreneurship.

Second, from an entrepreneurial identity perspective, how they see themselves as entrepreneurs may play a role in the future, including entrepreneurial choices and behaviours. Ultimately, these decisions will affect the German economy. In particular, the ability to use one's ethnic and cultural background to secure business and employment opportunities can be seen as evidence of so-called 21st century skills such as creativity, self-reflection, and self-direction (Bijman, 2017).

Third, by integrating the young entrepreneurs more into the ethnic community, the second-generation ethnic entrepreneurs know how to use the ethnic resources and form key networks. Similarly, the relationship with the family plays a significant role in building a healthy and trustworthy foundation in the family business. Finally, focusing on ethnicity as a determining variable for entrepreneurship is dangerous in some respects, as this category risks placing too much emphasis on the family's origin or immigrant background and too little on the new identities shaped by the second and later generations.

6.3 Limitations

A major limitation of this study is a selection bias in the empirical data. In this study, interviews were only conducted with entrepreneurs whose businesses had failed during the pandemic because

of the second-generation assuming responsibility. Therefore, the negative effects of the Covid-19 pandemic could not be studied fully, and the results may be overly positive. In addition, interviews were conducted only with male entrepreneurs from Sri Lanka in Germany. It is possible that the results would be different if interviews had been conducted with entrepreneurs from a different country and a different gender. Moreover, the relationship dynamics between employees and entrepreneurs over time could not be captured, because the employees in all three cases in this study were hired during the pandemic.

Another limitation is that an interviewer bias is observed in this study. Since the author belongs to the Tamil community and the interviewees are personally acquainted with her, different results might have emerged if someone unknown had conducted the interviews. This can be linked to social-desirability bias. For example, when the researcher asked whether there were any conflicts within the family, it is unattractive to admit that from a social perspective. Even that were the case, the interviews might not want to disclose that. Would the results have been different if it had been an anonymous survey?

6.4 Research Perspectives

The findings call for future research to examine how identity developments or other strategically relevant aspects are used in other cultural and socio-historical contexts. To further decipher the impact of externalities, future studies can examine how subsequent generations in family businesses react in extreme situations and what differences emerge from the second generation. Comparing the different generations can shed light on how and why these strategic practices have gradually changed in family businesses. It can also explore whether subsequent generations are as embedded in two cultures as the second generation is, and, if not, how that would affect their identity. Therefore, this thesis can be used to compare the second generation of entrepreneurs and build on the research results.

Moreover, further research could recruit participants from non-entrepreneurial families and compare second-generation ethnic entrepreneurs from entrepreneurial families to those from non-entrepreneurial families. Researchers should also

focus on the negative experiences that young entrepreneurs had with their family businesses during the pandemic. Entrepreneurs from countries other than Sri Lanka and female second-generation ethnic entrepreneurs, who do not have male siblings, should be included in future studies. A study on different national and cultural contexts regarding cultural, linguistic, and educational barriers in family businesses could also be interesting. Finally, other factors influencing entrepreneurial identity besides external effects could be investigated. For example, researchers could find out more about the needs of the second-generation ethnic entrepreneurs and how the first-generation ethnic entrepreneurs can better respond to them.

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