

**Beyond Self-Interest: Investigating Antecedents, Challenges, and  
Opportunities of Prosociality and the Pursuit of Collective  
Interests in Entrepreneurship**

Dissertation

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von

Yasmine Yahyaoui

aus

Gütersloh

Dekan:	Prof. Dr. André Meyer
Erstberichterstatter:	Prof. Dr. Rodrigo Isidor
Zweitberichterstatter:	Prof. Dr. Eva A. Jakob
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## Table of Contents

<b>DANKSAGUNG .....</b>	<b>I</b>
<b>TABLE OF CONTENTS .....</b>	<b>II</b>
<b>LIST OF TABLES .....</b>	<b>V</b>
<b>LIST OF FIGURES .....</b>	<b>VI</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>VII</b>
<b>ABSTRACT .....</b>	<b>VIII</b>
<b>1 CHAPTER I: COLLECTIVE INTERESTS AND ENTREPRENEURSHIP ...1</b>	
1.1 Conceptual background .....	1
1.2 Research Gaps and Research Questions .....	3
1.3 Methodological Approaches and Data .....	7
1.4 Dissertation structure and overview .....	9
<b>2 CHAPTER II: FROM PAIN TO PURPOSE – INVESTIGATING THE</b>	
<b>RELATIONSHIP BETWEEN POSTTRAUMATIC GROWTH AND SOCIAL</b>	
<b>ENTREPRENEURIAL INTENTIONS.....</b>	<b>12</b>
2.1 Introduction .....	13
2.2 Theoretical Foundations .....	16
2.2.1 Understanding Social Entrepreneurial Intentions .....	16
2.2.2 Traumatic Life Events and the Concept of Posttraumatic Growth .....	17
2.2.3 Connecting Traumatic Life Events and Social Entrepreneurial Intentions .....	20
2.2.4 How Posttraumatic Growth Impacts Social Entrepreneurial Intentions .....	21
2.3 Method.....	26
2.3.1 Data Collection Procedure.....	26
2.3.2 Sample .....	27
2.3.3 Measures.....	27
2.3.4 Data Analysis Procedure .....	29
2.4 Results .....	30
2.4.1 Descriptive Statistics .....	30
2.4.2 Reliability of Measures .....	32
2.4.3 Mediation Analysis .....	32
2.5 Discussion.....	35
2.5.1 Implications for Social Entrepreneurial Intentions .....	36
2.5.2 Implications for General Entrepreneurship Research .....	37
2.5.3 Practical Implications .....	38
2.5.4 Limitations .....	39
<b>3 CHAPTER III: TOWARDS AN UNDERSTANDING OF HYBRIDITY IN</b>	
<b>SOCIAL ENTREPRENEURIAL TEAMS – WHICH VALUES ARE NEEDED</b>	
<b>WITHIN SOCIAL ENTREPRENEURIAL TEAMS TO ACHIEVE POSITIVE</b>	
<b>VENTURE OUTCOMES? .....</b>	<b>42</b>
3.1 Introduction .....	43
3.2 Theory and Hypotheses .....	46
3.2.1 Opposing Values in Social versus Commercial Entrepreneurial Teams.....	47

3.2.2	Opposing Values in Commercial Entrepreneurial Teams .....	48
3.2.3	Opposing Values in Social Entrepreneurial Teams.....	50
3.3	Method.....	51
3.3.1	Data Collection and Sample .....	52
3.3.2	Measures.....	53
3.4	Analytical Procedure and Results .....	57
3.4.1	Analytical Procedure and Results of the Three-way Interaction.....	58
3.4.2	Results of Polynomial Regression with Surface Response .....	59
3.5	Discussion.....	64
3.5.1	Implications for Social Entrepreneurship Literature .....	64
3.5.2	Implications for Research on Entrepreneurial Teams .....	66
3.5.3	Implications for the Theory of Paradox .....	67
3.5.4	Implications for Practice .....	68
3.5.5	Limitations and Directions for Future Research .....	69
3.5.6	Conclusion.....	70
<b>4</b>	<b>CHAPTER IV: ENTREPRENEURIAL TEAM COPING WITH ENVIRONMENTAL UNCERTAINTY: AN EXPLORATORY MIXED METHODS STUDY .....</b>	<b>72</b>
4.1	Introduction .....	73
4.2	Theoretical Background .....	77
4.2.1	The Importance of Coping in the Context of Environmental Uncertainty..	77
4.2.2	Understanding How Entrepreneurial Teams Manage Uncertainty .....	79
4.3	Methodology.....	81
4.3.1	Exploratory Mixed Methods Design .....	81
4.3.2	Sample .....	82
4.3.3	The Context: The Role of the COVID-19 Pandemic .....	83
4.3.4	Quantitative Measures and Analytical Procedure .....	85
4.3.5	Qualitative Interviews and Analytical Procedure.....	88
4.3.6	Convergent Analysis .....	90
4.4	Findings .....	92
4.4.1	Entrepreneurial Teams under Environmental Uncertainty.....	92
4.4.2	Different Entrepreneurial Team Coping Trajectories .....	96
4.5	Discussion.....	111
4.5.1	Implications for Coping in Entrepreneurial Teams.....	112
4.5.2	Implications for Team Emotions and Well-being .....	115
4.5.3	Implications for Action under Environmental Uncertainty.....	118
4.5.4	Implications for Practice .....	120
4.5.5	Limitations .....	121
4.5.6	Conclusion.....	122
<b>5</b>	<b>CHAPTER V: THE EQUIVOCAL IMAGE OF YOUNG SOCIAL ENTERPRISES – HOW SELF- VS. OTHER-ORIENTED VALUES INFLUENCE EXTERNAL PERCEPTIONS .....</b>	<b>123</b>
5.1	Introduction .....	124
5.2	Theory and Hypotheses .....	127
5.2.1	Young Social Enterprises and Their Struggle for Legitimacy .....	127
5.2.2	Human Value Theory .....	130
5.2.3	The Role of Values for the Perception of the Enterprise Image .....	132
5.3	Method.....	135

## Table of Contents

---

5.3.1	Participants .....	136
5.3.2	Procedure.....	137
5.3.3	Measures.....	138
5.3.4	Pretest .....	139
5.3.5	Checks of Implementation Quality .....	140
5.3.6	Analytical Procedure .....	140
5.4	Results .....	141
5.5	Discussion.....	146
5.5.1	Theoretical Implications.....	147
5.5.2	Practical Implications .....	149
5.5.3	Limitations and Future Research.....	150
<b>6</b>	<b>CHAPTER VI: CONCLUSION .....</b>	<b>153</b>
6.1	Findings of four Studies on Collective Interests in Entrepreneurship.....	153
6.2	Theoretical Implications .....	155
6.3	Practical Implications .....	158
<b>7</b>	<b>REFERENCES .....</b>	<b>160</b>
<b>8</b>	<b>APPENDIX .....</b>	<b>199</b>
8.1	Appendix Chapter II .....	199
8.1.1	Examples of Social Ventures Based on Traumatic Life Events.....	199
8.1.2	Life-events Checklist (adapted from Gray et al., 2004).....	200
8.2	Appendix Chapter III.....	201
8.2.1	Adapted Business Model Canvas Template.....	201
8.2.2	Evaluation guidelines for judges .....	202
8.3	Appendix Chapter IV.....	203
8.3.1	Overview of Measures .....	203
8.3.2	Qualitative Data Analysis Procedure .....	204
8.3.3	Qualitative Data Analysis Details on Second-order Themes .....	205
8.3.3 (continued)	Qualitative data analysis details on second-order themes.....	206
8.3.4	Linear Trends of Dependent Variables Across Time.....	207
8.4	Appendix Chapter V .....	209
8.4.1	Vignette Texts .....	209
<b>9</b>	<b>EIDESSTATTLICHE ERKLÄRUNG .....</b>	<b>212</b>

## List of Tables

<b>Table 1.</b>	Overview of data sets and methodological approaches.....	8
<b>Table 2.</b>	Status of publication and contributors to the chapters of the dissertation....	10
<b>Table 3.</b>	Means, Standard Deviations, and Correlations of the Study Variables.....	30
<b>Table 4.</b>	The Influence of Traumatic Life Events and Posttraumatic Growth on Social Entrepreneurial Intentions.....	33
<b>Table 5.</b>	The Relationship between Traumatic Life Events and Posttraumatic Growth.....	34
<b>Table 6.</b>	Results of Sobel Tests for Mediation.....	34
<b>Table 7.</b>	Means, standard deviations, and correlations of model variables.....	56
<b>Table 8.</b>	Results of 3-way interaction analysis.....	57
<b>Table 9.</b>	Frequencies of self-enhancement over, under, and in-agreement with self-transcendence levels needed for polynomial regression.....	59
<b>Table 10.</b>	Results of polynomial regression analysis with surface response.....	60
<b>Table 11.</b>	Means, Standard Deviations, and Correlations Among Study Variables....	92
<b>Table 12.</b>	Baseline Time Trend Models.....	92
<b>Table 13.</b>	Perceived performance impairment as the dependent variable.....	94
<b>Table 14.</b>	Team burnout as the dependent variable.....	95
<b>Table 15.</b>	Performance, Well-being, and Temporal Elements of the Optimistic Growth and Damage Mitigation Coping Trajectory.....	111
<b>Table 16.</b>	Facets of Dominant Entrepreneurial Team Coping Trajectories.....	112
<b>Table 17.</b>	Means, Standard Deviations, and Correlations of Model Variables.....	141
<b>Table 18.</b>	Results of The Moderated Regression Analysis.....	142
<b>Table 19.</b>	Results of The Simple Slope Analysis.....	144

## List of Figures

<b>Figure 1.</b>	Four perspectives on the role of collective interest in entrepreneurship.....	3
<b>Figure 2.</b>	Research model.....	24
<b>Figure 3.</b>	Surface plot of the composition of values and its effect on business model quality within social and commercial entrepreneurial teams.....	62
<b>Figure 4.</b>	The COVID-19 Pandemic in Germany & data collection time frames.....	83
<b>Figure 5.</b>	Convergent analysis of quantitative & qualitative data.....	90
<b>Figure 6.</b>	The development of the team burnout and performance impairment over time.....	93
<b>Figure 7.</b>	Converging quantitative and qualitative results to entrepreneurial team coping trajectories.....	97
<b>Figure 8.</b>	The optimistic growth coping trajectory.....	101
<b>Figure 9.</b>	Relationships between self-regulatory predictors and the time trend in perceived performance impairment.....	103
<b>Figure 10.</b>	Relationships between self-regulatory predictors and the time trend in team burnout.....	104
<b>Figure 11.</b>	The damage mitigation coping trajectory.....	109
<b>Figure 12.</b>	Theoretical Circular Structure of Human Values.....	131
<b>Figure 13.</b>	The Research Model Based on Human Value Theory.....	134
<b>Figure 14.</b>	Interaction Effect Between the Type of Enterprise and Self-Transcendence Values.....	143
<b>Figure 15.</b>	Interaction Effect Between the Type of Enterprise and Self-Enhancement Values.....	145

## List of Abbreviations

AOM	Academy of Management
BCERC	Babson College Entrepreneurship Research Conference
cf.	Confer
df	Degrees of Freedom
Dr.	Doctor
e.g.	Exempli gratia (for example)
Et al.	et alii (and others)
FGF	Förderkreis Gründungs-Forschung (Vereinigung für Entrepreneurship, Innovation und Mittelstand im deutschsprachigen Raum)
GAMMs	Generalized Additive Mixed Models
ICC	Inter-Coder-Correlation
i.e.	Id est (that is)
IEI	Institute for Entrepreneurship & Innovation
M	Mean
n.a.	Not applicable
SD	Standard deviation
SE	Standard error
SEM	Structural Equation Modeling
SVS	Schwartz Value Survey
PTG	Posttraumatic growth
Prof.	Professor
PVQ	Portrait Value Questionnaire
UBT	University of Bayreuth
UPB	Paderborn University
vs	versus

## **Abstract**

Entrepreneurship research and public debates have emphasized the need to promote societal well-being through entrepreneurial action, thus emphasizing the significance of focusing on collective interests. In this vein, this dissertation aims to unravel the challenges and opportunities associated with pursuing collective interests in entrepreneurship. To further shed light on the role of collective interests in entrepreneurship, the dissertation examines individual-level antecedents, team-level challenges, and organizational dynamics related to the pursuit of collective interests. Using varying research approaches, the dissertation sheds light on why entrepreneurs choose to pursue collective interests, explores the challenges of balancing self-interest and collective interest within entrepreneurial teams, and explores how external perceptions of entrepreneurial ventures are influenced by the pursuit of collective interests. By shedding light on these aspects, this dissertation contributes to research on entrepreneurship, social entrepreneurship, and general management.

# 1 Chapter I: Collective Interests and Entrepreneurship

## 1.1 Conceptual background

Traditional views on entrepreneurship suggest that entrepreneurs are motivated to start their ventures out of self-interests such as the desire for independence, financial reward, and personal fulfillment (Austin et al., 2006; e.g., Bacq et al., 2013; Hirschi & Fischer, 2013; Vedula et al., 2022). However, in recent years, social, environmental, and economic challenges have severely affected society (e.g., the COVID-19 pandemic, natural disasters, poverty, economic recession, or global warming) (Vedula et al., 2022). In response to these societal challenges, collective interests have gained increasing attention in research and public debates (Saebi et al., 2019; Vedula et al., 2022). In this regard, pursuing collective interests encompasses actions, behaviors, and decisions that aim at contributing to the welfare of others (van de Ven et al., 2007). Notably, entrepreneurship research emphasizes the need to promote societal well-being through entrepreneurial action (e.g., Bacq & Lumpkin, 2021; Mittermaier et al., 2023; Shepherd et al., 2023) and thus stresses the need to focus on collective interests in entrepreneurship. In addition to research and public debates, society itself is increasingly committing to societal well-being, whereby self-awareness and empathy towards others play a crucial role (Lyons & Kuron, 2014; Shepherd et al., 2023; Vedula et al., 2022).

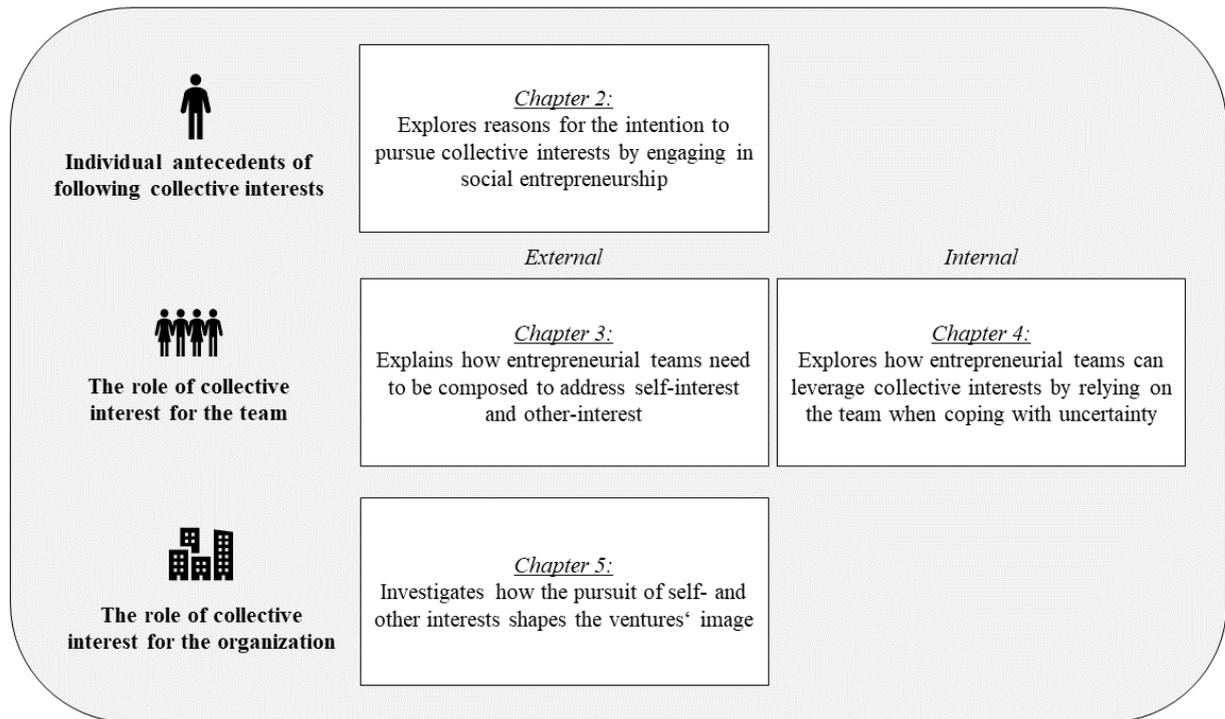
The pursuit of collective interests can be manifested as either pursuing the interest of society at large or pursuing the interest of specific groups with whom we have a close connection or in whom we have a special interest (van de Ven et al., 2007). As for society at large, an increasing number of entrepreneurs recognizes the importance of balancing financial success with social and environmental impact (Abootorabi et al., 2023; Shepherd et al., 2019; Vedula et al., 2022). Thereby, social entrepreneurs set collective interests as an overarching venture goal and address societal challenges by implementing market-based methods (Miller et al., 2012; Saebi et al., 2019). In terms of the entrepreneurs' immediate environment,

entrepreneurs can further pursue collective interests by trying to meet the needs of those people close to them, such as the members of the entrepreneurial team. As society shifts its focus to collective interests, traditional views and explorations of entrepreneurship based on the pursuit of self-interests may no longer hold. Overcoming self-interest and embracing collective interests has the power to benefit entrepreneurs in creating successful ventures that keep pace with societal demands (Abootorabi et al., 2023; Stevens et al., 2015; Vedula et al., 2022). However, balancing collective interests and self-interest can also be a challenge for entrepreneurs, since both types of interests can imply conflicting demands (Costanzo et al., 2014; Smith & Besharov, 2019).

This dissertation aims to unravel the challenges and opportunities that come along with the pursuit of collective interests in entrepreneurship. To this end, I<sup>1</sup> examine the reasons why entrepreneurs decide to pursue collective interests, the challenges of balancing self-interest and collective interest in a team, how entrepreneurial teams can benefit from focusing on the interests of each other, and how external perceptions of entrepreneurial ventures are affected by the pursuit of collective interests. The dissertation investigates three perspectives to provide a holistic picture of the role of collective interests: individual-level antecedents, team-level challenges (i.e., the role of collective interests as a venture goal and the role of an internal focus on collective interests), and organizational challenges (see Figure 1).

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<sup>1</sup> “I” is used consistently in this dissertation. However, the essays presented in Chapter III, IV, and V were co-authored. Co-authors and contributions of the author of this dissertation are described in Chapter 1.4.



**Figure 1.** Four perspectives on the role of collective interest in entrepreneurship.

## 1.2 Research Gaps and Research Questions

Each chapter of this dissertation considers a different perspective on collective interests to provide a holistic picture and an in-depth understanding of its role in entrepreneurship. The study presented in *Chapter II* investigates the relationship between traumatic life events and social entrepreneurial intentions by drawing upon the concept of posttraumatic growth. Previous research in social entrepreneurship provided extensive knowledge on factors that shape social entrepreneurial intentions (e.g., Bacq et al., 2016; Hockerts, 2017; Mair & Noboa, 2006). Specifically, research shows that prior experiences, a connection with a disadvantaged population, and prior involvement in social organizations shape social entrepreneurial intentions (Asarkaya & Keles Taysir, 2019; Hockerts, 2017). Practice further shows that social entrepreneurs often found their ventures based on personal traumatic life events. After their experience, the entrepreneurs demonstrate a higher sense of purpose and personal growth, which is in line with psychology research that considers posttraumatic growth as a positive change in personality after the occurrence of trauma (Calhoun & Tedeschi, 2014).

While research in social entrepreneurship vaguely points towards a relationship between traumatic events and social entrepreneurship (e.g., Lambrechts et al., 2020; Yitshaki & Kropp, 2016), knowledge regarding the link between personal traumatic life events and social entrepreneurial intentions is still limited. Nonetheless, investigating the link between trauma and social entrepreneurial intentions is important since a traumatic life event can not only impact individuals' goals and values but also has the power to shape the entrepreneurial journey in the long-run. Thus, in the second chapter of my dissertation, I ask: *How do traumatic life events affect social entrepreneurial intentions, and what are the explanatory determinants for this relationship?* By analyzing the relationship between traumatic life events, posttraumatic growth, and social entrepreneurial intentions, I aim to contribute to knowledge on social entrepreneurial intentions (e.g., Hockerts, 2017; Mair & Noboa, 2006), and social entrepreneurship research in general (e.g., Bacq & Alt, 2018; Kibler et al., 2019).

*Chapter III* sheds light on the challenge of balancing collective interests and self-interests in entrepreneurship. In this regard, I investigate social entrepreneurial teams and which values they need to possess to successfully balance the ventures' economic and social missions. Existing social entrepreneurship research highlights the challenges that come along when social entrepreneurs aim at hybrid goals (i.e., economic and social goals) since both goals may induce conflicting demands (Costanzo et al., 2014; Grimes et al., 2019; Saebi et al., 2019; Stevens et al., 2015). Additionally, while knowledge on traditional entrepreneurial teams is proliferating, there is a lack of understanding of the extent to which knowledge from traditional entrepreneurship can be applied in social entrepreneurship (Saebi et al., 2019). Thus, while social entrepreneurship thus far has been investigated at different levels, the role of the composition of social entrepreneurial teams in achieving the ventures' hybrid objectives remains limited (Ben-Hafaïedh & Dufays, 2021; Chandler et al., 2022; Saebi et al., 2019; Uzuegbunam, Pathak, et al., 2021).

However, investigating social entrepreneurial teams is important since the majority of ventures are founded by a team instead of a solo entrepreneur (Klotz et al., 2014; Lazar et al., 2020). Thus, to fill this research gap, the third chapter of this dissertation draws on human value theory (Schwartz, 2012) and the theory of paradox (Smith & Lewis, 2011) to answer the following research question: *How do social entrepreneurial teams need to be composed to achieve dual objectives?* By analyzing the role of contradicting values (i.e., self-enhancement and self-transcendence values) in social entrepreneurial teams compared to the role of these values in commercial entrepreneurial teams, this study contributes to research on social entrepreneurship (Saebi et al., 2019; Vedula et al., 2022), research on entrepreneurial teams (Jin et al., 2017; e.g., Preller et al., 2020) and the theory of paradox (Smith & Lewis, 2011).

In *Chapter IV*, I shed light on the role of internal collective interests of entrepreneurial teams by exploring entrepreneurial team coping with a sudden increase of environmental uncertainty. Coping in entrepreneurial teams can positively impact the well-being and performance of the entrepreneurial team. Previous research expanded the knowledge on entrepreneurial coping on an individual level by suggesting a differentiation between problem-focused and emotion-focused coping (Ahmed et al., 2022). However, the interplay between emotional and operational activities has not yet been sufficiently dealt with. Thus, essential components and dynamics of coping remain relatively unknown. Further, while existing research on coping points to the importance of social interactions when coping with uncertainty (e.g., Breugst & Shepherd, 2017; Ivanova et al., 2022; Sirén et al., 2020), the context in which these interactions primarily occur (i.e., the entrepreneurial team context) is underexplored. However, this context is particularly relevant since interactions in the team can both positively and negatively impact well-being and performance. Thus, further research on how entrepreneurial teams may leverage the team context and focus on collective interests in the team to offset uncertainty is needed.

To fill this research gap, the study in the fourth chapter of this dissertation answers the following research question: *how do entrepreneurial teams cope with a sudden increase in environmental uncertainty?* By introducing two coping trajectories (i.e., optimistic growth coping and damage mitigation coping), this study contributes to research on coping in entrepreneurship (e.g., Ahmed et al., 2022; Engel et al., 2021; Hmieleski & Cole, 2022; Uy et al., 2013), entrepreneurship research on team emotions and well-being (e.g., Ivanova et al., 2022; Sirén et al., 2020) and research on entrepreneurial action under environmental uncertainty (e.g., Anwar et al., 2021; Hmieleski & Cole, 2022; Townsend et al., 2018).

*Chapter V* further sheds light on the role of collective compared to self-interest from an organizational point of view. In this regard, I investigate how external stakeholders perceive the image of ventures following dual objectives (i.e., social enterprises) compared to their commercially-oriented counterparts. Social enterprises cannot easily be categorized into being oriented towards economic goals (i.e., profit-orientation) or social goals (i.e., enhancing societal well-being) and thus struggle with how external stakeholders perceive the enterprise (Austin et al., 2006; Grieco, 2018). While the image is particularly important for social enterprises at a young age because it influences potential customers, investors, and future employees, our understanding of factors that influence the image is still limited.

To shed light on factors that determine the image of young social ventures, *Chapter V* of this dissertation answers the following question: *Which characteristics determine how external individuals evaluate the image of young social enterprises?* The study draws on human value theory (Schwartz, 2003, 2012) to answer this research question and to disentangle the role of human values in the perception of social enterprises. This study contributes to research on young social enterprises by providing an understanding of the role of human values in shaping social enterprises' image. Furthermore, the study contributes to research differentiating between social and commercial entrepreneurship (e.g., Austin et al., 2006; Beugré, 2014; Shaw & Carter,

2007) by demonstrating that both types of enterprises differ in such that the perception of external stakeholders differs depending on the portrayed mission and the stakeholders' values.

### **1.3 Methodological Approaches and Data**

I conducted different methodological approaches to answer the research questions and based the analyses on separate datasets. For an overview of the methodological approaches and data sets, see Table 1.

For the first study (*Chapter II*), I conducted a survey study to assess the role of traumatic life events and posttraumatic growth for social entrepreneurial intentions. After approving the planned study by the ethics committee of the university, data was collected via an online questionnaire. The final dataset consisted of 151 participants from Germany. The sample includes professionals as well as students. To analyze the data, I conducted mediation analysis based on the procedure suggested by Baron and Kenny (1986) and further conducted Sobel tests to confirm mediation effects.

In the second study (*Chapter III*), I conducted a survey study based on two separately conducted surveys to assess the role of human values in entrepreneurial teams for the business model quality of the ventures. In this regard, I conducted one survey with social and commercial entrepreneurial teams and one survey with experts in the field of entrepreneurship (e.g., startup coaches). The final dataset consists of 261 entrepreneurs nested in 97 entrepreneurial teams. To assess the relationship between self-transcendence values, self-enhancement values, and business model quality, I conducted a three-way interaction analysis and polynomial regression analyses with surface response.

In the third study (*Chapter IV*), I conducted a longitudinal study consisting of qualitative interviews and a survey in parallel over 12 weeks to explore how entrepreneurial coping unfolds in the face of environmental uncertainty throughout the COVID-19 pandemic. The final survey data consists of 671 team-time-observations of 35 entrepreneurial teams. The final interview

data encompasses 88 interviews with a total duration of 44.2 hours with 25 of the same teams. To explore how entrepreneurial team coping unfolds, I employed a mixed-methods design and analyzed quantitative and qualitative data convergently. In this vein, I conducted analysis of time trends and generalized additive mixed models (i.e., GAMMs, McKeown & Sneddon, 2014; Wood, 2017) for the quantitative analysis. For the qualitative analysis, I implemented inductive coding (Gioia et al., 2013) and temporal bracketing (Langley, 1999).

Lastly, in the fourth study (*Chapter V*), I conducted a survey based on an experimental research design (i.e., vignette study) to assess how external stakeholders perceive the image of social compared to commercial enterprises. The final dataset consisted of 969 university students entering the job market. To assess the relationship between human values and enterprise image, I conducted a regression and simple slope analysis.

	<b>Chapter II</b>	<b>Chapter III</b>	<b>Chapter IV</b>	<b>Chapter V</b>
<b>Design</b>	Survey Design	Survey Design (2 surveys with different targets)	Longitudinal parallel convergent mixed methods design	Experimental Vignette Study and Survey
<b>Data</b>	151 participants resembling greater public	267 entrepreneurs nested in 97 complete entrepreneurial teams	12 waves of surveys (N= 671 observations nested in 84 team members and 35 teams)  Four waves of interviews (N=88 interviews with 25 of the teams)	969 participating students close to career decisions
<b>Analytical procedure</b>	Mediation analysis	3-way interaction and polynomial regression with surface response	Growth curve models, inductive qualitative analysis, and convergent data analysis	Regression analysis and simple slope analysis

**Table 1.** Overview of data sets and methodological approaches.

## **1.4 Dissertation structure and overview**

This dissertation is a cumulative dissertation that presents a holistic picture of the role of collective interest in entrepreneurship based on various studies. The studies of the dissertation that comprise the main body of the dissertation are presented in Table 2. All studies were developed as independent publication projects. Thus, they include differing co-authors and are in different stages of the publication process. In the following, I present my contribution to each study: Study 1 was conducted as a single-author project. Therefore, I was in charge of the conceptualization, study design, the data collection, analysis, and the writing, reviewing and editing of the manuscript. The primary data for the study were collected by a master's student and me. The conceptual design for Study 2 was jointly developed by one of my co-authors and me. I was further responsible for the writing, reviewing and editing of the original draft of the manuscript, and for data collection, and data analysis. In Study 3, I was in charge of the conceptualization, the writing, reviewing and editing of the original draft of the manuscript, data collection, and the qualitative analysis of the interviews. The quantitative analysis was conducted by myself and one of my co-authors. In Study 4, the concept for the study and data collection were conducted by me and one of my co-authors. Further, I was in charge of writing, reviewing and editing the original draft of the manuscript as well as data analysis and merging of quantitative results. Study 4 is published in "Nonprofit Management and Leadership". I was in charge of managing the review process and communicating with the journal's editor.

## Chapter I: Collective Interests and Entrepreneurship

Study	Status & Reference (if applicable)	Personal Contribution	Authors
<b>Study 1</b> From Pain to Purpose – Investigating the Relationship between Posttraumatic Growth and Social Entrepreneurial Intentions (Chapter II)	<ul style="list-style-type: none"> <li>• Presented at the FGF spring meeting of the working groups Social- and Sustainable- Entrepreneurship (22.-24.02.2023).</li> <li>• Preparing for submission to 2024 Babson College Entrepreneurship Research Conference.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conceptualization</li> <li>▪ Study design</li> <li>▪ Data collection</li> <li>▪ Data Analysis</li> <li>▪ Writing, reviewing and editing of the manuscript</li> </ul>	Yasmine Yahyaoui (single-authored)
<b>Study 2</b> Towards an understanding of hybridity in social entrepreneurial teams (Chapter III)	<ul style="list-style-type: none"> <li>• Presented at the 17th Annual Social Entrepreneurship Conference 2020, Online.</li> <li>• Presented at 2021 IV Entrepreneurship Paper Development Seminar, Seville, Spain.</li> <li>• Presented at 2021 Babson College Entrepreneurship Research Conference.</li> <li>• Presented at the Annual Meeting of the Academy of Management 2022, Seattle.</li> <li>• Presented at 25th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2022, Dresden.</li> <li>• In preparation for journal submission.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conceptualization</li> <li>▪ Study design</li> <li>▪ Data collection</li> <li>▪ Data Analysis</li> <li>▪ Writing, reviewing and editing of the manuscript</li> </ul>	Yasmine Yahyaoui Eva A. Jakob Rodrigo Isidor
<b>Study 3</b> Entrepreneurial Team Coping with Environmental Uncertainty: An explorative study (Chapter IV)	<ul style="list-style-type: none"> <li>• Presented at 2021 Babson College Entrepreneurship Research Conference</li> <li>• Presented at 25th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2022, Dresden.</li> <li>• Presented at the Annual Meeting of the Academy of Management 2022, Seattle.</li> <li>• Awarded with “best entrepreneurship research newcomer award”. G-Forum 2022.</li> <li>• Earlier version published in the Frontiers of Entrepreneurship Research (BCERC; 2021)</li> <li>• Currently, the manuscript is submitted to a journal. Status: Under review.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conceptualization</li> <li>▪ Study design</li> <li>▪ Data collection</li> <li>▪ Data Analysis</li> <li>▪ Writing, reviewing and editing of the manuscript</li> </ul>	Yasmine Yahyaoui Steffen Farny Eva A. Jakob Holger Steinmetz
<b>Study 4</b> The equivocal image of young social enterprises—How self-versus other-oriented values influence external perceptions (Chapter V)	<ul style="list-style-type: none"> <li>• Presented at II Entrepreneurship Paper Development Seminar, 2019, Seville.</li> <li>• Presented at 23th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), 2019, Vienna.</li> <li>• Presented at the Annual Meeting of the Academy of Management 2019, Boston.</li> <li>• Published in Nonprofit Management and Leadership</li> <li>• Citation: Yahyaoui, Y., Jakob, E. A., Steinmetz, H., Wehner, M. C., Isidor, R., &amp; Kabst, R. (2023). The equivocal image of young social enterprises—How self-versus other-oriented values influence external perceptions. <i>Nonprofit Management and Leadership</i>, 33(4), 755-781.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conceptualization</li> <li>▪ Study design</li> <li>▪ Data collection</li> <li>▪ Data Analysis</li> <li>▪ Writing, reviewing and editing of the manuscript</li> <li>▪ Managing review process and communication with the journal’s editor</li> </ul>	Yasmine Yahyaoui Eva A. Jakob Holger Steinmetz Marius Wehner Rodrigo Isidor Rüdiger Kabst

**Table 2.** Status of publication and contributors to the chapters of the dissertation.

The dissertation is structured as follows: Firstly, the study on the role of traumatic life events and posttraumatic growth for social entrepreneurial intentions is presented (*Chapter II*). Next, the study on the role of human values for social compared to commercial entrepreneurial teams is presented (*Chapter III*). The third study (*Chapter IV*) explores how entrepreneurial team coping unfolds to tackle performance impairment and team burnout in the face of environmental uncertainty. The study presented next (*Chapter V*), captures the role of human values in shaping young social enterprises' image. Lastly, I conclude the dissertation by summarizing the dissertation's findings and discussing the overall implications of this dissertation for research and practice.

## **2 Chapter II: From Pain to Purpose – Investigating the Relationship between Posttraumatic Growth and Social Entrepreneurial Intentions**

### **Abstract**

Social entrepreneurship scholars have provided extensive contributions by investigating the antecedents of social entrepreneurial intentions. Specifically, previous research emphasizes the important role of prior experiences in the development of social entrepreneurial intentions (e.g., feeling connected to a disadvantaged population or working within a social organization). Notably, the proximity of social entrepreneurs to the people they aim to help may have the power to shape the social entrepreneurial journey in the long-run. However, knowledge of how personal traumatic life events impact social entrepreneurial intentions is limited. In this study, I draw on the concept of posttraumatic growth and empirically examine how social entrepreneurial intentions are bound to traumatic life events. To investigate the relationship between traumatic life events and social entrepreneurial intentions, I surveyed a sample of 151 participants. In a mediation analysis, I show that traumatic life events boost social entrepreneurial intentions due to the experience of posttraumatic growth. With this study, I contribute to research on social entrepreneurship by further shedding light on its triggers. Furthermore, I contribute to entrepreneurship research in general by introducing the concept of posttraumatic growth as an important determinant of entrepreneurial actions.

**Keywords:** Traumatic Life Events, Posttraumatic Growth, Social Entrepreneurial Intention, Social Entrepreneurship

## 2.1 Introduction

The need for social entrepreneurs who aim to tackle societal challenges by implementing market-based methods is increasing (Saebi et al., 2019; Vedula et al., 2022). Crises and severe social problems marked society in recent years (Kruse et al., 2021; Vedula et al., 2022). The Ukrainian war, the hardships caused by the COVID-19 pandemic, and the increasing duration of wildfires due to climate change are just a few examples of challenges that society currently faces. However, entrepreneurs are increasingly incorporating social motives into their ventures amid and because of societal challenges (Hill et al., 2022; Kruse et al., 2021). Consistent with the notion that social motives become more critical in situations of human suffering, research suggests that hardship and traumatic life events align with more visible compassion and prosocial motivation in society, as well as with the increased creation of new ventures (e.g., Bacq & Lumpkin, 2021; Shepherd & Williams, 2014; Williams & Shepherd, 2016a).

In this regard, research on social entrepreneurial intentions is particularly interesting since it explains why some people found ventures focusing on social motives while others do not (Kruse et al., 2021). Social entrepreneurship research defines social entrepreneurial intentions as the “intent to pursue a social mission by starting a business or launching a social venture” (Bacq & Alt, 2018, p. 2). According to the literature, a strongly developed moral attitude and sociomoral motivation drive social entrepreneurial intentions (Hockerts, 2017). Additionally, high self-efficacy, a sense of risk-taking, and the recognition of opportunities for innovation when facing problems characterize social entrepreneurial intentions (Bacq & Alt, 2018; Kruse et al., 2021; Peredo & McLean, 2006). Social entrepreneurship scholars further underline that prosocial motivation and internalized norms and values drive social entrepreneurial intentions (Bacq & Alt, 2018; Saebi et al., 2019; Vedula et al., 2022). Lastly, social entrepreneurship research shows that former experiences (e.g., working within social organizations or sharing a similar background with a disadvantaged population) play a crucial role in social

entrepreneurial intentions (Hockerts, 2017; Zahra et al., 2008). While this research vaguely points towards a relationship between social entrepreneurial intentions and personal experiences related to human suffering, we still lack an understanding and particularly an empirical investigation of the determinants of social entrepreneurial intentions in the context of personal traumatic life events. Yet, this relationship is highly important because experiencing a traumatic life event influences people's goals and values (Tedeschi & Calhoun, 1996) and ultimately has the power to shape the entrepreneurial journey of the social entrepreneur in the long run.

In this study, I draw on the psychology literature discussing traumatic life events, and in particular on the concept of posttraumatic growth, to address this research gap. From the psychology literature, we know that traumatic life events negatively affect the individual's mental state, but overcoming the experienced struggles can also lead to posttraumatic growth (PTG; Tedeschi & Calhoun, 1996; Vogel & Bolino, 2020). PTG describes the positive psychological or personal changes experienced in the aftermath of traumatic events (Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006). Based on the concept of posttraumatic growth, I propose that highly challenging life events have the power to foster social entrepreneurial intentions. Notably, the literature suggests that individuals who experience PTG are prone to recognizing new possibilities, more likely to relate to others, and have an increased belief in their strength (Tedeschi & Calhoun, 1996, 2004) – characteristics that are closely related to the properties attributed to social entrepreneurs (e.g., Bacq & Alt, 2018; Lambrechts et al., 2020; Morris et al., 2020; Yitshaki & Kropp, 2016). Thus, these characteristics should boost social entrepreneurial intentions. Accordingly, my study investigates whether traumatic life events and PTG foster social entrepreneurial intentions.

To investigate this relationship, I surveyed 151 individuals, consisting of students and professionals from Germany. Within my empirical investigations, I followed Baron and Kenny

(1986) and conducted mediation analyses to investigate how traumatic life events affect social entrepreneurial intentions via posttraumatic growth. I show that the relationship between traumatic life events and social entrepreneurial intentions is fully mediated by the domains of posttraumatic growth: recognizing new possibilities, relating to others, spiritual change, and increased personal strength (Tedeschi & Calhoun, 1996, 2004). However, the results show that the effect of the appreciation of life as a further domain of posttraumatic growth is only marginally significant, which suggests partial mediation.

My study contributes to research along two lines. First, I contribute to the understanding of social entrepreneurial intentions by shedding light on the role of traumatic life events as one of its triggers. The findings of extant studies underlined the importance of former experiences for social entrepreneurs (e.g., Hockerts, 2017; Lambrechts et al., 2020; Zahra et al., 2009). My study extends these findings by incorporating personal traumatic events and investigating how social entrepreneurial intentions are bound to a person's former trauma. While most research thus far takes an outward perspective by examining social entrepreneurial intentions in relation to the individuals' larger environment (Hockerts, 2017; Yiu et al., 2014; Zahra et al., 2008), I enhance current findings by looking into personal suffering as a basis for social entrepreneurial intentions. Thus, I make a theoretical contribution to research aiming at disentangling the "social" in social entrepreneurship. Notably, I add by questioning the antecedents of the prosociality of social entrepreneurs instead of regarding it as a given trait. Second, I contribute to entrepreneurship research in general by introducing the concept of posttraumatic growth. While I acknowledge the crucial contributions of studies investigating the role of traumatic life events for entrepreneurship (e.g., Cheng et al., 2021), I highlight the importance of further examining why these events may result in positive outcomes (i.e., posttraumatic growth). Posttraumatic growth particularly complements entrepreneurship research investigating entrepreneurial actions in the context of entrepreneurs' well-being and a disaster context.

## **2.2 Theoretical Foundations**

### **2.2.1 Understanding Social Entrepreneurial Intentions**

Social entrepreneurial intentions indicate the motivations and the subsequent behavior of social entrepreneurs (Bacq & Alt, 2018; Baierl et al., 2014). Social entrepreneurship scholars argue that different measures have to be taken into account when investigating social entrepreneurial intentions than those examined when looking at entrepreneurial intentions in a “traditional” sense (Bacq & Alt, 2018; Hockerts, 2017; Mair & Noboa, 2006). Traditional models of entrepreneurial intentions are typically based on the theory of planned behavior and do not account for the social motives of individuals or societal demands (Hockerts, 2017; Mair & Noboa, 2006). Social entrepreneurial behavior, however, is described as “the identification of opportunities to create social impact through the generation of market and nonmarket disequilibria” (Hockerts, 2017). Hence, social motives play a crucial role in social entrepreneurial intentions and ultimately may need a differing theoretical lens when being investigated.

Based on the theory of planned behavior, Mair and Noboa (2006) developed a model of social entrepreneurial intentions. The authors claim that social entrepreneurship can be considered a process whereby social entrepreneurs engage in social entrepreneurial behavior and produce tangible outcomes (i.e., the social venture and its products/services). Social, moral, and educational backgrounds play a crucial role in forming social entrepreneurial intentions (Mair & Noboa, 2006). In particular, the authors suggest that social entrepreneurial intentions arise as a result of empathy, moral judgment, self-efficacy, and social support. Hockerts (2017) adds to this research by suggesting that prior experiences within social organizations further enhance social entrepreneurial intentions. Adding to these findings, Zahra et al. (2008) demonstrate that social entrepreneurial endeavors also arise when people try to help a disadvantaged group with whom they are closely connected and share a similar background.

When taking current findings from social entrepreneurship research into account, it is evident that social entrepreneurial intentions are not only related to characteristics that are close to those deemed important for entrepreneurs (e.g., self-efficacy) but also to those that evolve closely around a deeper meaning, empathy, and compassion (e.g., Kruse et al., 2021; Saebi et al., 2019; Sastre-Castillo et al., 2015).

### **2.2.2 Traumatic Life Events and the Concept of Posttraumatic Growth**

Traumatic life events have recently become an important topic in the field of entrepreneurship (e.g., Mittermaier et al., 2023; Shepherd & Williams, 2014; Williams & Shepherd, 2016a). These events can be personal, such as the experience of violence, the death of a loved one, or major health issues, but they can also be externally determined, such as job loss, natural disasters, a refugee crisis, or being impacted by an economic recession (Gray et al., 2004; Shepherd & Williams, 2018; Vogel & Bolino, 2020; Weathers et al., 2018). Thereby a traumatic life event challenges an individual and his/her assumptions of the world severely while also creating the opportunity to rebuild one's own identity, value systems, and any cognitive frameworks that were built in the past (Jayawickreme & Blackie, 2014).

Entrepreneurship research suggests that traumatic life events, such as disasters, positively impact entrepreneurial actions. Thereby the traumatic event influences individuals' motivations, skills, and perceptions of their social environment (e.g., Stephan et al., 2023; Williams & Shepherd, 2016a). Specifically, entrepreneurship scholars emphasize that this experience increases the motivation to pursue new opportunities and take risks (McMullen & Kier, 2016; Salvato et al., 2020; Shepherd & Williams, 2018). Studies further suggest that traumatic life events help in building resilience and being flexible in adapting to changes within the environment (Ramli et al., 2023; Williams & Shepherd, 2016b). Additionally, these events can bring people who jointly suffer from the traumatic experience closer together and increase the likelihood of helping each other (Shepherd & Williams, 2014). While entrepreneurship

research on the influential role of traumatic life events has proliferated, the reasons for the relationship between trauma and positive change in individuals remain underexplored. However, further investigating this relationship is important because it can create a more holistic understanding of entrepreneurial intentions and relevant contextual factors.

Research in psychology underlines that traumatic life events can have severe negative consequences ranging from emotional distress to the development of posttraumatic stress disorder (PTSD) for individuals who experience trauma (Tedeschi & Calhoun, 2004). However, psychology literature further points to the concept of posttraumatic growth, which explains an individual's positive development in the aftermath of a trauma. In this regard, posttraumatic growth is defined as “the experience of positive change that occurs as a result of the struggle with highly challenging life crises” (Tedeschi & Calhoun, 2004, p. 1). When experiencing a traumatic life event, individuals engage in cognitive processing, whereby they continuously reevaluate their current knowledge and held beliefs. This constant rumination and the aligned emotional labor can result in gaining new perspectives, enhancement of coping skills, and being more open to change (Tedeschi & Calhoun, 2004). Additionally, individuals often rely on people with whom they have a close relationship in the face of trauma. In this respect, individuals are more likely to be willing to accept help and understand that the social exchange helps in dealing with the traumatic event, which in turn further promotes the emergence of posttraumatic growth (Tedeschi & Calhoun, 1996, 2004). In their work, Tedeschi and Calhoun (1996, 2004) explain that the development of posttraumatic growth manifests into five major domains: increased personal strength; relating to others; recognizing new possibilities; appreciation of life, and spiritual change (Tedeschi & Calhoun, 1996, 2004).

*Increased personal strength* captures the fact that individuals develop a more profound understanding of what they are capable of since they were able to survive the experienced traumatic event. Accordingly, they develop increased confidence and resilience. *Relating to*

*others* is concerned with the need to rely on personal relationships when experiencing trauma. Specifically, individuals experience more empathy and compassion along with the willingness to offer help to others who suffer from similar traumas (Tedeschi & Calhoun, 1996, 2004). *Recognizing new possibilities* is aligned with the fact that individuals shift their perspective in the aftermath of trauma and reevaluate their goals. In this regard, they are more willing to embrace change in their lives and be more open to seizing new opportunities. *Appreciation of life* is reflected by an increased sense of gratitude for life and a change in personal priorities, such as enjoying life more frequently. This domain captures the fact that individuals develop a deeper awareness of their vulnerability and the need to appreciate existence more continuously (Tedeschi & Calhoun, 1996). *Spiritual change* captures a more spiritual orientation in terms of increased faith and being more religious but also with more actively thinking about existential questions, such as the meaning of life.

While the concept of posttraumatic growth is thus far greatly acknowledged in the field of psychology (Calhoun & Tedeschi, 2014; Tedeschi & Calhoun, 2004), its implementation in entrepreneurship or general management research is still limited. However, in a recent study, Vogel and Bolino (2020) acknowledge posttraumatic growth as a possible pathway after experiencing abusive behavior from supervisors in the workplace. Specifically, they propose continuous engagement in thoughts about the past abusive behavior to recover and intentionally change feelings and thoughts related to the traumatic experience. Thereby employees can develop posttraumatic growth since they overcome the traumatic event. In this regard, they emphasize the need for cognitive processing and continuous engagement with the past traumatic event. This might be particularly happening in social entrepreneurship, where founders oftentimes try to address a social issue related to the traumatic event within their venture (Lambrechts et al., 2020).

### 2.2.3 Connecting Traumatic Life Events and Social Entrepreneurial Intentions

Research in social entrepreneurship states that traumatic life events can influence the values, decisions, and life paths of people tremendously and particularly have the power to increase the likelihood of engaging in social entrepreneurship (Lambrechts et al., 2020). For instance, from practice, we know that a large number of social entrepreneurs state that they started their ventures because of their own traumatic experiences and, in particular, that their goal is to solve a problem related to traumatic events that happened to them in the past (see Appendix 8.1.1 for exemplary social ventures). For example, the social venture [KnoNap](#) was founded based on the traumatic event of the founder Danya Sherman, who was a victim of a drug-infused drink and sexual assault in college. KnoNap offers a portable device (i.e., a napkin) that can detect drugs that are often placed in alcoholic drinks. With her venture, the founder aims to educate and combat drug-related sexual assault and crime.

While the foundation of social ventures based on traumatic life events is increasingly observable in practice, research on this topic is still scarce. However, Lambrechts et al. (2020) qualitatively investigate the role of traumatic life events as a trigger for social entrepreneurship. The authors reveal that traumatic life events function as a catalyst for the chosen career path of the founder (i.e., deciding to become a social entrepreneur). Furthermore, they find that not only personal traumatic life events trigger social entrepreneurial intentions but also traumatic life events that happened to someone in a close relationship. In their literature review, Yitshaki and Kropp (2016) add to this notion by suggesting that critical life events further have the power to increase empathy, which in turn, impacts social entrepreneurial intentions. Based on these findings from social entrepreneurship research, I argue that people who suffer from a traumatic life event will more likely be interested in founding a social venture. In line with this assumption, I suggest the following hypothesis:

**Hypothesis 1.** A traumatic life event is positively related to social entrepreneurial intentions.

## **2.2.4 How Posttraumatic Growth Impacts Social Entrepreneurial Intentions**

As aforementioned, posttraumatic growth describes that a traumatic life event can result in an opportunity for further personal development (Tedeschi & Calhoun, 2004). Thus, individuals can overcome a traumatic life event with improved psychological functioning in certain areas, such as an increased sense of empathy and a stronger belief in their strength (Zoellner & Maercker, 2006). I suggest that the five domains of posttraumatic growth (i.e., increased personal strength; relating to others; recognizing new possibilities; increase in appreciation of life, and spiritual change) are particularly fruitful in explaining the relationship between traumatic life events and social entrepreneurial intentions since they are closely aligned to capabilities and characteristics attributed to social entrepreneurs (e.g., high in self-efficacy, high sense of empathy, being compassionate, and being prone to opportunity recognition).

### **2.2.4.1 The Role of Personal Strength**

The concept of posttraumatic growth suggests that people who experience a traumatic life event can develop an increased confidence in their strength (Tedeschi & Calhoun, 2004). I suggest that this confidence in personal strength is closely related to the knowledge we have about the role of self-efficacy in (social) entrepreneurial intentions (e.g., Hockerts, 2017; Mair & Noboa, 2006). Thereby self-efficacy is defined as the extent to which an individual believes in his/her ability to be successful when carrying out a planned behavior (Hockerts, 2017). Research emphasizes that self-efficacy positively affects (social) entrepreneurial intentions (Wilson et al., 2007; Zhao et al., 2005). Furthermore, it can be decisive when investigating whether the social entrepreneurial intention transforms into actual social entrepreneurial behavior (Mair & Noboa, 2006).

Hockerts's (2017) model on social entrepreneurial intentions further introduces social entrepreneurial self-efficacy. He suggests that in the context of social entrepreneurship, the belief in being able to solve a societal issue is particularly relevant. I suggest that this notion is

in line with how the concept of posttraumatic growth describes the increase in personal strength. In this regard, Tedeschi and Calhoun (2004) suggest that increased personal strength evolves after a traumatic event since individuals' beliefs in their capability to handle arising issues connected to that specific event are challenged. After successfully handling a traumatic life event, individuals develop an understanding of inner resources and coping strategies that they previously were not aware of. I suggest that individuals are encouraged to believe that they can successfully overcome hurdles and successfully address a social issue that may have affected them in the past by engaging in social entrepreneurship. Consequently, I posit the following hypothesis:

**Hypothesis 2.** Personal strength mediates the relationship between traumatic life events and social entrepreneurial intentions.

#### **2.2.4.2 The Role of Relating to Others**

The concept of posttraumatic growth suggests that people who experience a traumatic life event are more likely to relate to others. After experiencing a traumatic life event, compassion, particularly for those who face the same traumatic experiences, is increased (Tedeschi & Calhoun, 2004). I suggest that the domain of relating to others is particularly relevant for social entrepreneurial intentions since it is closely aligned with empathy. In line with this notion, research in social entrepreneurship underlines that social entrepreneurial intentions closely evolve around a high sense of empathy (Bacq & Alt, 2018; Hockerts, 2017). Empathy shapes the response of a person to the experiences of another person and is seen as a crucial characteristic of social entrepreneurs, as they are more likely to act beneficial for others (Bacq & Alt, 2018). Empathy is defined as the capacity of a person to envision and understand the emotions experienced by someone else and oftentimes leads to more compassionate responses toward these emotions (Hockerts, 2017).

Notably, social entrepreneurs often share the same background as the group of people they are trying to help and, thereby, are particularly empathic toward them (Zahra et al., 2008). This thought concurs with the understanding of relating to others in the concept of posttraumatic growth (Tedeschi & Calhoun, 2004). Particularly, people who experienced a traumatic life event themselves relate more to others and are more prone to understanding the feelings someone is going through, who suffers from the same experience. Based on the concept of posttraumatic growth and the current understanding of the relationship between empathy and social entrepreneurial intentions, I propose the following hypothesis:

**Hypothesis 3.** Relating to others mediates the relationship between the traumatic life event and social entrepreneurial intention.

#### **2.2.4.3 The Role of Recognizing New Possibilities**

When experiencing posttraumatic growth, individuals experience a shift in their mindset, which enables them to recognize new possibilities. Specifically, Tedeschi and Calhoun (2004) suggest that posttraumatic growth can result in identifying new directions in life and oftentimes result in career shifts that are aligned to their own experience of trauma. Social entrepreneurship scholars emphasize that opportunity recognition in social entrepreneurship is oftentimes based on life events (past and current), which increase prosocial behavior (Yitshaki & Kropp, 2016). Furthermore, social entrepreneurs are particularly aware of unmet societal needs and recognize opportunities when experiencing suffering within their environment (Zahra et al., 2009). In this regard, opportunity recognition in social entrepreneurship is mostly derived from social issues which symbolize the ventures' purpose (Saebi et al., 2019).

I suggest that individuals who have experienced posttraumatic growth are particularly inclined to transform their new perspectives and the recognition of new possibilities into social entrepreneurial actions. Thereby they shift their careers on the one hand and fill their work to help others who suffered from the same experiences. Thus, connecting the domain of

recognizing new possibilities within posttraumatic growth and knowledge on social entrepreneurial opportunity recognition, I suggest the following hypothesis:

**Hypothesis 4:** Recognizing new possibilities mediates the relationship between the traumatic life event and social entrepreneurial intentions.

#### **2.2.4.4 The Role of Appreciation of Life**

In the face of trauma, individuals increasingly appreciate life and tend to put effort into helping others (Shepherd & Williams, 2014; Tedeschi & Calhoun, 2004). When experiencing posttraumatic growth, people develop a stronger sense of purpose, which can be important for maintaining a positive outlook and staying committed to combating societal issues. Specifically, after experiencing a traumatic life event, people reevaluate their priorities and values in life, whereby their aspirations are oftentimes focused more on the well-being of others (Tedeschi & Calhoun, 2004). In this regard, small gestures and acts of kindness that were previously regarded as less important are now more meaningful (Tedeschi & Calhoun, 2004).

When looking into the role of values in social entrepreneurship, scholars emphasize that values oriented toward others are particularly important in forming social entrepreneurial intentions (Kruse et al., 2019). Since individuals who experience posttraumatic growth are more inclined to shift their values towards purpose and also the benefit of others, I suggest that they are inclined to translate their reordered priorities into social entrepreneurial endeavors. Thus, I suggest the following hypothesis:

**Hypothesis 5:** Appreciation of life mediates the relationship between the traumatic life event and social entrepreneurial intentions.

#### **2.2.4.5 The Role of Spiritual Change**

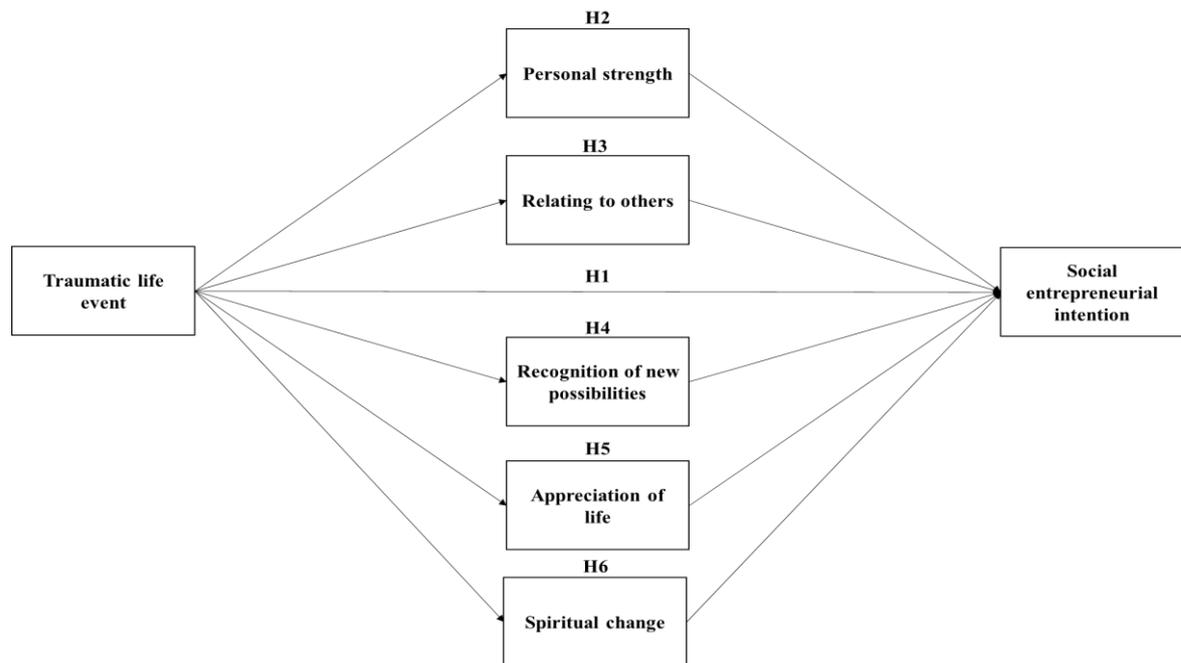
Posttraumatic growth further fosters spiritual change in a religious and moral sense (Tedeschi & Calhoun, 2004). In this regard, people experience a change in their moral principles whereby they question their self-identity, which leads to a stronger connection

between their actions and core moral principles (Tedeschi & Calhoun, 1996). Furthermore, examples such as the armed conflict in Vietnam and the World Trade Center tragedy demonstrate that traumatic events promote social change in terms of moral direction. These traumatic events oftentimes motivate individuals to start and lead communities that actively work on changing the causes of the traumatic events to ensure that they do not recur (Tedeschi & Calhoun, 2004).

Research emphasizes the importance of morality and the role of ethics in social entrepreneurship (Bacq et al., 2016). Specifically, social entrepreneurs are characterized as having a strong moral compass and being motivated by social responsibility. Furthermore, social entrepreneurs constantly struggle with ethical considerations since they continuously try to balance economic goals and social objectives (Saebi et al., 2019; Stevens et al., 2015). Since ethical considerations and morality are crucial to social entrepreneurs, I suggest the following hypothesis for the role of spirituality in social entrepreneurial intentions:

**Hypothesis 6:** Spiritual change mediates the relationship between the traumatic life event and social entrepreneurial intentions.

Based on the knowledge of posttraumatic growth and the characteristics of social entrepreneurs, I thus suggest that the five domains of posttraumatic growth explain the relationship between traumatic life events and social entrepreneurial intentions. In this regard, Figure 2 demonstrates the overall research model.



**Figure 2.** Research model.

## 2.3 Method

### 2.3.1 Data Collection Procedure

To test my hypotheses, I collected data via an online questionnaire between April 2022 and May 2022. Before starting the data collection process, the questionnaire and a description of the planned study were sent to the ethics committee of the author’s university for review for any ethical concerns. This review was critical since dealing with traumatic life events can trigger past emotions and ultimately impair the participants’ well-being. To ensure that participants were aware of the emotional triggers due to the survey, I included a trigger warning message and further information on support organizations in case the participants needed it.

After the ethics committee approved the study, the questionnaire was pretested by conducting cognitive probing interviews (Willis, 2004, 2015). In particular, the think-aloud technique was implemented with seven participating students who were close to making major career decisions to test for comprehension and misunderstandings. The duration of the pretests was between seven and 48 minutes. When any problems occurred, the questionnaire was

iteratively adjusted to make it more understandable. After adapting the questionnaire, the data collection process was started. To attract participants to the study, they were approached via social media (i.e., LinkedIn and Instagram), e-mail distribution lists of the university of the author, and professional networks (i.e., the Social Entrepreneurship Network Germany). Lastly, people from my personal network were contacted directly, and participants were further asked to distribute the survey to people within their networks. Reminder messages were sent out after one and two weeks to ensure a high number of participants.

### **2.3.2 Sample**

Within this study, I aimed for participants resembling the greater public. Since social entrepreneurial intention has to be investigated before the venturing process is started, I excluded social entrepreneurs from the study (Zapkau et al., 2015). This approach helps to avoid selection bias, hindsight bias, and memory decay (Zapkau et al., 2015). It was further important to choose participants close to making major career decisions (i.e., university students or school students about to graduate), which might result in becoming social entrepreneurs (Bacq & Alt, 2018; Hockerts, 2017). I also included professionals in my sample because research suggests posttraumatic growth relates to career shifts (Vogel & Bolino, 2020). The final sample consists of 151 participants from Germany (n = 32 university students, 106 professionals, and 13 others). Participants were, on average, 33.61 years old (SD =10.58), and 56,29% were females. 46,47% of the participants stated to have had prior experiences with traumatic life events.

### **2.3.3 Measures**

*Traumatic life events* were measured using the life-events checklist (see Appendix 8.1.2 Gray et al., 2004). In particular, I used the checklist to assess whether the participants experienced any traumatic life events throughout their life. The checklist consists of 16 events that are commonly characterized as being traumatic in psychology research. Researchers even suggest that these events can cause posttraumatic stress disorders (Gray et al., 2004; Weathers

et al., 2018). Examples of these events are experiencing a national disaster, a fire/explosion, a motor vehicle accident, physical assault, or a life-threatening injury/illness. For each event, the participants had to state on a 5-point nominal scale in which sense they experienced it (1= “*happened to me,*” 2 = “*witnessed it,*” 3= “*learned about it,*” 4= “*not sure,*” and 5= “*does not apply*”). Since a lower value for traumatic life events was in line with a stronger experience of the event, I reverse-coded the variable in my analysis.

*The domains of posttraumatic growth* were measured by implementing the posttraumatic growth inventory (Tedeschi & Calhoun, 1996). Specifically, I measured personal strength, relating to others, recognition of new possibilities, appreciation of life, and spiritual change. For each item, the participants had to indicate to which degree they experienced the mentioned change as a result of their traumatic life event. According to the suggestions for the posttraumatic growth inventory (Tedeschi & Calhoun, 1996), I measured the items on a 6-point Likert scale (0= “*I did not experience this change as a result of my crisis,*” 1 = “*I experienced this change to a very small degree as a result of my crisis,*” 2= “*I experienced this change to a small degree as a result of my crisis,*” 3= “*I experienced this change to a moderate degree as a result of my crisis,*” 4= “*I experienced this change to a great degree as a result of my crisis,*” and 5= “*I experienced this change to a very great degree as a result of my crisis*”).

*Social entrepreneurial intentions.* I measured social entrepreneurial intentions by implementing the scale developed by Hockerts (2017). Specifically, I asked the participants to what extent they agreed to the following questions: “I expect to be involved in launching an organization aiming at solving social problems,” “I have an idea for a social venture that I plan to act upon,” and “I plan to start a social venture.” For each item, the participants stated to which degree they agreed with the mentioned statement on a 5-point Likert scale (1= “*strongly disagree,*” 2 = “*disagree,*” 3= “*neutral,*” 4= “*agree,*” and 5= “*strongly agree*”).

*Control variables.* To control for alternative explanations in the relationship between traumatic life events, posttraumatic growth, and social entrepreneurial intentions, I included several control variables in my model. Since previous studies in entrepreneurship found a relationship between age and the pursuit of social motives, I included the participants' age as a control variable (Chandler et al., 2022). Furthermore, I included gender since research shows that women tend to be more likely to pursue social entrepreneurial careers and, further, are more likely to follow prosocial values (Borg, 2019; Chandler et al., 2022).

### **2.3.4 Data Analysis Procedure**

To investigate my research model, I analyzed whether the effect of traumatic life events on social entrepreneurial intentions is mediated by the five domains of posttraumatic growth (i.e., personal strength; relating to others; recognizing new possibilities; increase in appreciation of life, and spiritual change). After calculating descriptive statistics for the data, I assessed the reliability of the implemented scales by calculating McDonald's Omega as a more appropriate measurement for reliability compared to traditional measures, such as Cronbach's alpha (Cho & Kim, 2015; Deng & Chan, 2017).

In the next step, I conducted mediation analyses to analyze my model. In this vein, I followed the procedure as recommended by Baron and Kenny (1986), which is a commonly implemented approach for small sample sizes in entrepreneurship research (e.g., Cardon & Kirk, 2015). In this regard, regression analysis is more appropriate than structural equation modeling for the data because it helps in avoiding problems of model fit when investigating small samples (Cardon & Kirk, 2015; Kline, 2023). Baron and Kenney (1986) suggest a four-step approach to assess mediation effects. First, the relationship between dependent and independent variables has to be assessed by conducting regression analysis. Second, the relationship between the mediator and the independent variable is assessed with regression analysis. Third, a regression analysis is conducted to investigate the relationship between the

mediator and dependent variable while controlling for the independent variable. Fourth, the effect of the independent variable on the dependent variable has to be reduced when the mediator is included in the equation. If all conditions are met, mediation can be expected.

Following this procedure, I tested the model for mediation by conducting hierarchical regression analysis using the open-source software R (R Development Core Team, 2016). I first conducted regression analysis with the control variables only. In the next step, I included traumatic life events in the model. I then tested Hypothesis 2 to 6 by including each domain of posttraumatic growth separately (i.e., five further models in total). Then, I investigated the changes in the effect size when including all variables. Lastly, I conducted Sobel tests to confirm the mediations (for a similar procedure, see Cardon & Kirk, 2015).

## **2.4 Results**

### **2.4.1 Descriptive Statistics**

Table 3 presents the means, standard deviations, and correlations of the variables included in the study. As illustrated, the correlations do not exceed the threshold of .70. Thus, my analysis is not at risk for multicollinearity (Anderson et al., 2019). The results indicate that traumatic life events positively correlated with personal strength ( $r = 0.28, p < 0.01$ ), relating to others ( $r = 0.32, p < 0.01$ ), recognition of new possibilities ( $r = 0.31, p < 0.01$ ), appreciation of life ( $r = 0.22, p < 0.01$ ), spiritual change ( $r = 0.26, p < 0.01$ ), and social entrepreneurial intentions ( $r = 0.18, p < 0.05$ ). The significance of these correlations is in line with previous research that demonstrates that traumatic life events can lead to the experience of posttraumatic growth. The results further reveal that respondents' gender correlated positively with personal strength ( $r = 0.28, p < 0.01$ ), relating to others ( $r = 0.25, p < 0.01$ ), and appreciation of life ( $r = 0.2, p < 0.01$ ). The correlation between gender and relating to others underlines findings from previous research suggesting that female entrepreneurs are more likely to possess communal beliefs and are more empathic (Chandler et al., 2022; Jakob et al., 2019).

**Table 3.** Means, Standard Deviations, and Correlations of the Study Variables.

Variable	M	SD	1	2	3	4	5	6	7	8
1. Traumatic life event	2.54	0.77								
2. Personal strength	3.07	0.99	0.28**							
3. Relating to others	2.94	1.00	0.32**	0.63**						
4. Recognition of new possibilities	2.68	1.03	0.31**	0.65**	0.58**					
5. Appreciation of life	3.16	0.95	0.22**	0.67**	0.58**	0.65**				
6. Spiritual change	1.90	1.02	0.26**	0.43**	0.47**	0.43**	0.36**			
7. Social intentions	2.21	1.03	0.18*	0.24**	0.30**	0.38**	0.18*	0.34**		
8. Age	33.61	10.80	0.01	0.06	0.02	0.13	0.17*	0.10	-0.04	
9. Gender	0.57	0.50	0.13	0.28**	0.25**	0.12	0.22**	0.15	0.07	0.07

Note.  $N = 151$  participants. Gender is dummy coded (female = 1, male = 0).

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .

## 2.4.2 Reliability of Measures

McDonald's omega for the measure of personal strength was 0.82 (Cronbach's  $\alpha = 0.75$ ), which is considered good. The results for relating to others indicate a reliability of 0.88 (Cronbach's  $\alpha = 0.84$ ) which is also considered good. As for recognizing new possibilities, McDonald's Omega value was 0.91 (Cronbach's  $\alpha = 0.88$ ), which is considered excellent. For the appreciation of life, the reliability value was 0.78 (Cronbach's  $\alpha = 0.79$ ), and for spiritual change, 0.71 (Cronbach's  $\alpha = 0.69$ ). The measured McDonald's omega reliability for social entrepreneurial intentions was 0.84 (Cronbach's  $\alpha = 0.85$ ), and for the experience of traumatic life events, 0.80 (Cronbach's  $\alpha = 0.76$ ). Thus, all values of McDonald's Omega for the scales range from 0.71 to 0.91, indicating high internal consistency (Gadermann et al., 2012).

## 2.4.3 Mediation Analysis

I followed Baron and Kenny (1986) to assess the mediation effects of each domain of posttraumatic growth on social entrepreneurial intentions. The first step suggests to expect a significant relationship between the independent variable and the dependent variable. Thus, the first step of my analysis tests the relationship between the experience of a traumatic life event and social entrepreneurial intentions (H1), revealing a significant positive relationship ( $\beta = 0.23, p \leq 0.05$ ). Thus, Hypothesis 1 is supported. The results of this regression are presented in Model 2 in Table 4. The second step involves the investigation of the relationship between the independent variable (i.e., traumatic life events) and the mediators (i.e., the five domains of posttraumatic growth). My analysis reveals that the experience of a traumatic life event is significantly and positively related to all domains of posttraumatic growth. The results of these regressions are reported in Table 5. In the third step, Baron and Kenny suggest expecting the mediator (i.e., the five domains of posttraumatic growth) to be related to the dependent variable (i.e., social entrepreneurial intentions) while controlling for the independent variable (i.e.,

traumatic life events). The hierarchical regression reveals that all five domains of posttraumatic growth are significantly and positively related to social entrepreneurial intentions while controlling for traumatic life events. However, as for appreciation of life, I only find a marginally significant effect (see Models 3 to 7 in Table 4).

The last step of the procedure suggests expecting the effect of traumatic life events on social entrepreneurial intentions to decrease when the mediator is included in the model. This is the case for personal strength (H2); relating to others (H3); recognition of new possibilities (H4), and spiritual change (H6). Specifically, the coefficient for traumatic life events turns insignificant when entering either one of the mediators. Thus, my analysis suggests full mediation for these four domains of posttraumatic growth. This is further supported by the Sobel tests (see Table 5). Thus, Hypotheses 2-4 and 6 can be supported.

Hypothesis 5 suggests that appreciation of life mediates the relationship between traumatic life events and social entrepreneurial intentions. However, as for appreciation of life, the condition that the significance of traumatic life events changes can not be met. Specifically, the coefficient for traumatic life events remains significant ( $p \leq 0.05$ ; see Table 4). The Sobel test further reveals only a marginally significant effect (see Table 6). These results suggest partial mediation instead of full mediation. Thus, Hypothesis 5 can not be supported.

**Table 4.** *The Influence of Traumatic Life Events and Posttraumatic Growth on Social Entrepreneurial Intentions.*

DV: social entrepreneurial intention	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Age	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Gender	0.12	0.08	-0.01	-0.01	0.03	0.05	0.02	0.02
Traumatic life event		0.23*	0.20	0.17	0.12	0.24*	0.16	0.07
Personal strength			0.22*					-0.04
Relating to others				0.24**				0.02
Recognition of new possibilities					0.38***			0.41***
Appreciation of life						0.16 <sup>†</sup>		-0.15
Spiritual change							0.32***	0.23**
Adj. R <sup>2</sup>	-0.01	0.02	0.06	0.07	0.16	0.04	0.12	0.20
R <sup>2</sup>	0.01	0.04	0.09	0.09	0.18	0.06	0.15	0.25
F	0.58	1.85	3.26**	3.46***	7.76***	2.37	6.077***	5.48***

*Note.*  $N = 151$  participants. Gender is dummy coded (female = 1, male = 0). Regression results (standardized coefficients).

<sup>†</sup>  $p \leq .10$ ; \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .

**Table 5.** *The Relationship between Traumatic Life Events and Posttraumatic Growth.*

	Personal strength	Relating to others	Recognition new possibilities	Appreciation of life	Spiritual change
Age	0.01	0.01	0.01	0.02 *	0.01
Gender	0.53 ***	0.46 **	0.21	0.40 **	0.27
Traumatic life event	0.35 **	0.45 ***	0.41 ***	0.28 *	0.36 **
Adj. R <sup>2</sup>	0.12	0.14	0.09	0.10	0.07
R <sup>2</sup>	0.14	0.16	0.11	0.12	0.09
F	7.76 ***	8.77 ***	5.96 **	6.45*	4.42 †

*Note.* Gender is dummy coded (female = 1, male = 0). Regression results (standardized coefficients). †  $p \leq .10$ ; \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ .

**Table 6.** *Results of Sobel Tests for Mediation.*

	Personal strength	Relating to others	Recognition of new possibilities	Appreciation of life	Spiritual change
Sobel test statistic	2.17	2.41	3.04	1.56	2.51
Standard error	1.07	1.19	1.52	0.72	1.25
p-value	$p \leq .05$	$p \leq .05$	$p \leq .01$	$p \leq .10$	$p \leq .05$

*Note.*  $N = 151$  participants. Gender is dummy coded (female = 1, male = 0).

## 2.5 Discussion

This study investigates the relationship between traumatic life events and social entrepreneurial intentions. Specifically, it shows that traumatic life events not only relate to social entrepreneurial intentions but that posttraumatic growth mediates this relationship. Thus, the study suggests that the experience of a traumatic life event induces traits that are related to those needed as a social entrepreneur. Further, it shows that the personal experience of a traumatic life event induces the urge to help others who experience the same trauma.

### **2.5.1 Implications for Social Entrepreneurial Intentions**

This study contributes to the literature on social entrepreneurial intentions by providing a new perspective on possible antecedents. Specifically, I reveal that posttraumatic growth mediates the relationship between traumatic life events and social entrepreneurial intentions. These results emphasize how personal suffering and traumatic experiences are related to following social entrepreneurial endeavors. While previous research points to a relationship between traumatic events and social entrepreneurial intentions (e.g., Lambrechts et al., 2020), this relationship has not yet been quantitatively investigated. Additionally, the underlying causes for the relationship between traumatic events and social entrepreneurial intentions have not yet been sufficiently investigated. This investigation is, however, needed since understanding why people decide to become social entrepreneurs helps in fostering social entrepreneurship and also helps in shedding light on the social entrepreneurial venturing process. Thus, adding further explanatory variables (i.e., posttraumatic growth) and a quantitative investigation of this relationship to current research allows scholars to obtain a holistic picture of social entrepreneurial intentions and to better understand correlating factors.

My study complements research in the field of social entrepreneurial intentions by suggesting further explanatory factors to the existing model of Mair & Noboa (2006) and Hockerts (2017). Research thus far shows that traits such as empathy and moral obligation foster social entrepreneurial intentions (Hockerts, 2017; Mair & Noboa, 2006). However, these traits are often treated as given traits, and research thus far lacks to investigate how these traits are developed in the first place. While some scholars suggest the antecedents, such as empathy, of social entrepreneurial intentions to be aligned with previous experiences in social organizations or experiences in having a similar background to a disadvantaged group oneself (Hockerts, 2017; Zahra et al., 2009, 2008), insights into the underlying mechanisms that connect (traumatic) experiences to social entrepreneurial intentions are still missing. In this regard, I

introduce posttraumatic growth as an important yet neglected facet explaining social entrepreneurial behavior. My investigation reveals that traumatic life events have the power to induce positive psychological change and trigger traits that are beneficial for social entrepreneurship. By building on posttraumatic growth, I suggest that prosociality is not a static characteristic that entrepreneurs or future entrepreneurs either have or have not. Instead, I show that experiencing a similar situation in one's own life relates to social entrepreneurial intentions. Ultimately, the personal experience of traumatic life events may lead to a deeper understanding of human suffering and a stronger sense of empathy because the individual knows what those affected are going through (Lambrechts et al., 2020).

Exploring the antecedents of social entrepreneurial intentions is particularly relevant because the challenges accompanying the entrepreneurial process might have to be treated differently depending on the reason for founding a venture (Baierl et al., 2014). I suggest future research to build on my insights and further investigate the role of traumatic life events and posttraumatic growth in the social entrepreneurial journey. Notably, traumatic life events and posttraumatic growth can affect social entrepreneurs in their venturing process in the long run. Research shows that social entrepreneurs are more likely to experience a decrease in well-being since they are more prone to identifying themselves with the people they are aiming to help and hence can experience a decrease in well-being when help cannot be provided (Kibler et al., 2019). Future research could investigate whether social entrepreneurs who found their ventures based on a personal traumatic life event are more affected by the emotional ups and downs in the entrepreneurial journey than those who found the venture without any personal relation to the social issue that is being addressed.

### **2.5.2 Implications for General Entrepreneurship Research**

This study further contributes to entrepreneurship research in general by introducing the concept of posttraumatic growth. Entrepreneurship research in a disaster context, for example,

demonstrates that critical events foster opportunity recognition and compassionate behavior (McMullen & Kier, 2016; Salvato et al., 2020; Shepherd & Williams, 2014). While these studies emphasize the double-sided role of traumatic experiences –influencing entrepreneurial activities either positively or negatively– they lack in shedding light on factors determining linking traumatic experiences to positive outcomes. In my study, I emphasize the importance of investigating why traumatic experiences or disasters may result in positive outcomes. This is important since the traits induced by traumatic life events can be particularly beneficial for entrepreneurs. Research stresses that entrepreneurs have to be resilient and have to be able to adapt quickly to an ever-changing environment. After experiencing a traumatic life event, entrepreneurs can develop similar characteristics (Tedeschi & Calhoun, 2004).

I encourage future research to build upon my findings and further investigate which context helps in turning traumatic events into positive outcomes. This is particularly relevant since traumatic events do not always lead to the experience of posttraumatic growth. The experience of traumatic life events can also lead to severe mental suffering, such as posttraumatic stress disorder (Tedeschi & Calhoun, 1996, 2004). The results of this study should therefore be treated with particular caution. Although I show that trauma can have positive effects and even has the power to help the economy by inducing social entrepreneurial intentions, the negative effects should not be neglected. Future research should investigate how entrepreneurs can emerge positively from traumatic events and develop positive traits. Specifically, I suggest the investigation of contextual influencing factors that determine the outcome of trauma to be a particularly fruitful avenue for future research.

### **2.5.3 Practical Implications**

This study provides several practical implications. For programs aimed at enhancing social entrepreneurial intentions, this study suggests redirecting entrepreneurship programs from targeting university students to instead targeting people under more vulnerable life

circumstances. This is particularly relevant because university students typically do not identify with a more disadvantaged group. However, since social entrepreneurial intentions can arise based on trauma, entrepreneurship programs could be specifically designed for people suffering from traumatic events (e.g., people in detox clinics and homeless people). Approaching traumatized people and providing them with possibilities to support and act is particularly relevant for employees at entrepreneurship centers (e.g., startup coaches) and educators in the entrepreneurship field (e.g., teaching entrepreneurship at schools or universities). Helping traumatized persons to develop an understanding of their strengths, skills, and gifts is a first step into building social entrepreneurial intentions. Further, receiving support and being able to act might help traumatized persons to cope with their experience.

Second, while traumatic experiences can serve as powerful catalysts for social entrepreneurial intentions, the social entrepreneurial journey can be challenging. Specifically, if the foundation of the venture is based on the experience of a traumatic life event, startup centers, educators, and politicians should pay increased attention to the emotional well-being of the founders. Establishing support systems and further incorporating self-compassion routines (e.g., Engel et al., 2021) can be particularly beneficial for people navigating the intersection of trauma and entrepreneurship.

Lastly, practitioners could further try to enhance the understanding of people for traumatic events by, for example, offering apprenticeships in rather disadvantaged circumstances. Particularly if people who might engage in social entrepreneurship experience human suffering more closely, they might be more likely to aim to help by implementing social entrepreneurial methods.

#### **2.5.4 Limitations**

While this study extends knowledge in (social) entrepreneurship research, it is, however, subject to several limitations. First, the assessment of posttraumatic growth is based on self-

reported measures of the participants and a relatively small sample size, which does not yet capture the full essence of the greater public. While the self-reported measures are a proxy for actual posttraumatic growth, their reliability is not fully demonstrated yet (Zoellner & Maercker, 2006). Future research could add to my study by combining the investigation of social entrepreneurial intentions with other measures of posttraumatic growth and by conducting the study with a larger sample resembling greater public. Furthermore, shedding light on different nuances of posttraumatic growth would be beneficial. In this regard, a qualitative approach could be implemented to find out more about the role of posttraumatic growth in social entrepreneurial intentions.

Second, this study was conducted in Germany during the ongoing COVID-19 pandemic and at the beginning of the armed conflict in Ukraine, which both tremendously impacted people's lives. This might have affected the reporting since people had to cope with uncertainties and volatility. Thus, these two events could have biased respondents' perceptions. Furthermore, I did not differentiate between different traumatic life events in the investigation. However, the severity of the trauma might differently affect whether people are likely to engage in social entrepreneurship. Future research could add to this study by investigating whether differences in traumatic events impact social entrepreneurial intentions differently. Specifically, it could be interesting to investigate whether there is a difference if the traumatic event could not be avoided (e.g., because of the uncontrollable sickness of a loved one) or if someone else was to blame for the trauma (e.g., a hit-and-run car accident). The cause of the trauma could provide a distinction in how one copes with it and whether posttraumatic growth arises in the first place or whether other negative emotions, such as anger, prevail.

Third, within the survey, I asked the respondents to consider their whole life when answering the questions regarding traumatic events. Future research might benefit from considering to differentiate between traumatic life events experienced just recently and traumas

experienced at a younger age. The age at which one had the experience could play a defining role in how trauma and social entrepreneurial intentions are related to each other. In addition, a more recent traumatic event could have not yet been processed, and social entrepreneurial endeavors could be followed as a coping mechanism. Examining the formation of a social venture based on coping mechanisms could provide particularly interesting insights for future research.

### **3 Chapter III: Towards an understanding of hybridity in social entrepreneurial teams – Which values are needed within social entrepreneurial teams to achieve positive venture outcomes?**

#### **Abstract**

While knowledge about social entrepreneurship has proliferated at different levels, we still miss a team perspective to advance our understanding of how social entrepreneurial ventures achieve positive outcomes. Drawing from research on entrepreneurial teams and the theory of paradox, we suggest that social entrepreneurial teams, in contrast to their commercial counterparts, require a different team value composition (i.e., founding team members with self-enhancement and self-transcendence values) to successfully follow social and commercial aims in their business model. Using three-way interaction and polynomial regression analyses on 97 entrepreneurial teams consisting of all founding team members ( $n = 261$ ), we find that strong value congruence in social entrepreneurial teams (i.e., founding team members score either high on self-transcendence or high on self-enhancement) is significantly related to an enhanced social, environmental and commercial performance potential of the business model.

**Keywords:** self-enhancement, self-transcendence, social entrepreneurial teams, team composition, values

### **3.1 Introduction**

Social entrepreneurs address today's challenges by combining market-based methods to achieve economic as well as social aims (Saebi et al., 2019). These challenges are not addressed by single entrepreneurs all by themselves – most social ventures are instead founded in teams (Chandler et al., 2022; Powell et al., 2017; Uzuegbunam, Pathak, et al., 2021). An entrepreneurial team implies “two or more individuals who pursue a new business idea, are involved in its subsequent management, and share ownership” (Lazar et al., 2020, p. 29). While research on entrepreneurial teams underlines the importance of team composition for a venture's performance (e.g., Boone et al., 2020; Jin et al., 2017; Preller et al., 2020), social entrepreneurship is challenging the theoretical understanding of entrepreneurial phenomena (Dufays, 2017; Saebi et al., 2019; Vedula et al., 2021). Social ventures usually combine social welfare with commercial aims and means, hence pursuing at least two goals (Battilana & Lee, 2014; Saebi et al., 2019; Vedula et al., 2021). Research on social entrepreneurship demonstrates that forming and sustaining dual missions pose unique challenges for social compared to commercial ventures, as combining multiple aims and means creates conflicting demands (Ebrahim et al., 2014; Grimes et al., 2019; Smith et al., 2013).

Although social entrepreneurial phenomena have been investigated at different levels (Saebi et al., 2019), a theoretical understanding of the role of teams in the context of social entrepreneurship remains elusive (Ben-Hafaïedh & Dufays, 2021; Chandler et al., 2022; Powell et al., 2017; Saebi et al., 2019; Uzuegbunam, Pathak, et al., 2021). Literature on entrepreneurial teams underlines that a shared vision (Ensley et al., 2002; Preller et al., 2020), a shared team cognition (Mohammed et al., 2021), shared experiences (Jin et al., 2017; Zheng, 2012), and shared emotions (Sirén et al., 2020; Uy et al., 2020) prove essential determinants of a venture's success. In contrast, social entrepreneurship literature that draws on the theory of paradox stresses that for social ventures to be successful, they must continuously balance the paradoxes

that occur by following social and commercial means and aims (Battilana et al., 2017; Di Domenico et al., 2010; Shepherd et al., 2019). Although social entrepreneurship and entrepreneurial team literature has proliferated in the past decade, we lack insights regarding to what extent we can translate knowledge from entrepreneurial team literature to social entrepreneurship. Thereby, theoretical knowledge on how critical the team level is for social entrepreneurial outcomes is still scant.

In this paper, we suggest that the team value composition (i.e., the configuration of founding team members' values) provides an insightful angle to understand social entrepreneurial outcomes (e.g., the social, environmental, and commercial performance potential of the business model). Values are characterized as stable, trans-situational goals serving as guiding principles in people's lives (Schwartz, 2012). Social entrepreneurship literature underlines that the individual-level values of the founders are essential for social ventures' emergence, growth, and performance (Estrin et al., 2016; Miller et al., 2012; Vedula et al., 2022; Wry & York, 2017). We suggest that values concentrating on self-transcendence (i.e., benevolence, universalism) and self-enhancement (i.e., achievement, power) (Schwartz, 2012; Schwartz & Bilsky, 1987) are relevant to the hybridity of social ventures. Considering the paradox theory, we propose that social entrepreneurial teams need individuals with high self-transcendence in combination with individuals with high self-enhancement values to achieve hybridity, which is reflected in a higher business model quality (i.e., the social, environmental, and commercial performance potential of the venture).

In a study with 97 entrepreneurial teams consisting of all founding team members ( $n = 261$ ), we used three-way interaction and polynomial regression with surface response methodology to analyze the relationship between self-transcendence values, self-enhancement values, and business model quality. Our results show a significant difference in the relationship between a venture's team value composition and business model quality when comparing social

and commercial entrepreneurial teams. While our results do not indicate a significant negative relationship between opposing values and the business model quality of commercial entrepreneurial teams, we find that shared individual values of either self-transcendence or self-enhancement (and not a combination of both values) showed a significant positive relationship with the business model quality of social entrepreneurial teams.

Our study provides three main contributions. First, we advance the social entrepreneurship literature with an essential yet missing team perspective (Saebi et al., 2019; Vedula et al., 2022). Our results indicate that composing a team with individuals high in either self-transcendence or self-enhancement favors an enhanced business model quality. We add to social entrepreneurship research by taking a multi-level perspective and investigating not only individual social entrepreneurs but how the composition of individual characteristics within a team relates to venture outcomes. We further add by emphasizing the importance of an investigation of human values in the context of social entrepreneurship, as they play a crucial role in social ventures' aim (i.e., addressing hybrid goals). Second, we contribute to the entrepreneurship team literature by indicating that social entrepreneurial teams might require a different theoretical understanding to explain essential outcomes. Our study suggests that the type of venture affects the relationship between deep-level characteristics (e.g., values) and venture outcomes. Considering the type of venture provides the literature with one possible way of understanding why previous research found inconsistent effects of deep-level factors on entrepreneurial team outcomes (e.g., Jin et al., 2017; Preller et al., 2020). Finally, we extend the theory of paradox by incorporating a team and value angle. Our research indicates that the paradoxical aims of social ventures do not call for paradoxical values within social entrepreneurial teams. Instead, we find that shared values, either focusing on self-transcendence or self-enhancement, are necessary. Hence, our research suggests that besides the skill set to

cope with paradoxical tensions (Smith et al., 2012), shared individual values comprise an essential success factor when working within a paradoxical context.

### **3.2 Theory and Hypotheses**

Human values, which play a fundamental role in explaining human behavior, have found increasing attention in psychological research and recent social entrepreneurship literature (Bacq & Alt, 2018; Bacq et al., 2016; Estrin et al., 2016; Miller et al., 2012). The theory of human values proposes that “values are one important, especially central component of our self and personality, distinct from attitudes, beliefs, norms, and traits. Values are critical motivators of behaviors and attitudes” (Schwartz, 2012, p. 17). Human values are fundamental and strongly linked to the demands of group functioning and survival (Schwartz & Bardi, 2001). Within this theory, a set of ten values reflects the most fundamental manifestations in individuals: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction (Schwartz, 2012). Beyond defining specific values, the theory emphasizes the relationships of these values in higher-order dimensions (e.g., self-enhancement, self-transcendence) to explain whether values are corresponding (e.g., striving for self-direction and striving for power) or incompatible with each other (e.g., striving for achievement goals vs. striving for benevolence goals) (Schwartz, 2003, 2012).

In the context of social entrepreneurship, the opposing higher-order dimensions of self-transcendence and self-enhancement seem crucial, given the hybrid nature of social ventures (Chatterjee et al., 2021; Dorado, 2006). *Self-transcendence* values reflect values that go beyond an individual’s striving for personal benefit (Arieli et al., 2020; Schwartz, 2012). This dimension includes values of universalism and benevolence connected to the welfare and interest of others (Schwartz, 2012). Schwartz (2003, p. 268) defines universalism as the “understanding, appreciation, tolerance and protection for the welfare of all people and nature” and benevolence as the “preservation and enhancement of the welfare of people with whom one

is in frequent personal contact.” In contrast, *self-enhancement* values are concerned with pursuing self-oriented goals (Schwartz, 2012). Self-enhancement combines the values of power and achievement. Schwartz (2003, p. 267) defines power as aiming for “social status and prestige, control or dominance over people and resources” and achievement as “personal success through demonstrating competence according to social standards.”

### **3.2.1 Opposing Values in Social versus Commercial Entrepreneurial Teams**

Within our study, we propose that the theoretical understanding of entrepreneurial teams has its limits in explaining social entrepreneurial phenomena. To make the case that social entrepreneurship research calls for a different understanding, we compare the relationship between the team value composition and business model quality between social versus commercial entrepreneurial teams. We propose that commercial and social entrepreneurial teams differ in how values – particularly the composition of individuals’ self-enhancement and self-transcendence values – affect important outcomes, such as business model quality. From the literature on individual entrepreneurs, we know that human values need to align with the ventures’ goals for the venture to be successful (Estrin et al., 2016; Kruse et al., 2019; Pan et al., 2019; Wry & York, 2017). Thus, if entrepreneurs start a new venture within a team context, we propose that individual team members’ values must align with the ventures’ goals and context to achieve enhanced performance. Commercial entrepreneurial teams typically prioritize their commercial performance by drawing on entrepreneurial means (Austin et al., 2006; Pan et al., 2019). In contrast, social entrepreneurship literature suggests that multiple values are essential for social ventures’ emergence, growth, and performance (Bacq et al., 2016; Lambrechts et al., 2020; Saebi et al., 2019). Accordingly, we argue that the composition of self-enhancement and self-transcendence values is crucial for the business model quality of social versus commercial entrepreneurial teams. Individual self-enhancement values include achievement, high economic status, and prestige (Arieli et al., 2020; Schwartz, 2012) and thus

capture the economically driven context. In contrast, individual self-transcendence values involve helping others, protecting the environment, and enhancing overall societal well-being (Arieli et al., 2020; Schwartz, 2012), thereby capturing an other-oriented or socially driven context. Thus, to achieve alignment, the composition of self-enhancement and self-transcendence values will likely play differential roles in determining business model quality when comparing social and commercial ventures.

**Hypothesis 1:** Social and commercial entrepreneurial teams differ in their relationship between team value composition (i.e., founding team members' self-enhancement and self-transcendence values) and business model quality.

### 3.2.2 Opposing Values in Commercial Entrepreneurial Teams

Research on teams proposes that opposition or incongruence in values, as an example of a deep-level characteristic, favors team conflict and inhibits positive team processes and outcomes (Jehn et al., 1999; Jin et al., 2017; Knight et al., 2020; Triana et al., 2021). Following social categorization and similarity attraction perspectives, organizational team scholars explain the negative effect of incongruence in values by arguing that individuals harmonize more with others similar to themselves (Horwitz & Horwitz, 2007; Webber & Donahue, 2001). Incongruence in values represents fundamental differences in the way individuals evaluate what is right or wrong, process information, and approach problems (Harrison et al., 1998, 2002; van Knippenberg et al., 2004; van Knippenberg & Schippers, 2007). While diversity in deep-level factors can foster cooperation, information elaboration, and team learning (e.g., Homan et al., 2008; Nederveen Pieterse et al., 2013), most research shows that incongruence in deep-level factors yields complicated social interactions, including lack of understanding and reduced knowledge transfer, helping, and coordination (e.g., Martins et al., 2003; Puck et al., 2007). In particular, incongruence in values displays a strong detrimental effect on positive team processes (Jehn & Mannix, 2001; Triana et al., 2021; Wageman & Gordon, 2005).

While research on deep-level factors, and particularly values, in the context of entrepreneurial teams is still emerging, findings highlight that a lack of similarities results in poorer performance (de Mol et al., 2020; Fauchart & Gruber, 2011; Jin et al., 2017). In particular, studies investigating such deep-level aspects as passion claim that divergence in entrepreneurial team characteristics (e.g., passion) results in ambiguity, conflicts, and, ultimately, poorer performance (Boone et al., 2020; de Mol et al., 2020). Research on diversity in entrepreneurial orientation within entrepreneurial teams finds risk-taking diversity and diversity in proactiveness detrimental to team performance, which also suggests that conflicts result from differences in deep-level characteristics (Kollmann et al., 2017). In line with the argument that incongruence in deep-level characteristics is often detrimental for entrepreneurial teams, entrepreneurship research further underscores that shared team characteristics, such as emotions, visions, and identities, result in positive team outcomes (Fauchart & Gruber, 2011; Preller et al., 2020; Sirén et al., 2020; Zheng, 2012).

Based on findings from (entrepreneurial) team research, we argue that teams following an overarching, one-dimensional goal, such as commercial entrepreneurial teams, strive for consistency. This notion is supported by commercial entrepreneurs prioritizing profit-maximizing goals when their roles and identities align (Wry & York, 2017). Hence, commercial entrepreneurial teams are better off when values manifested within the team align with a focus on financial goals, creating a competitive advantage. Our study suggests that opposing values among team members (e.g., self-transcendence and self-enhancement) are detrimental to the business model quality of commercial entrepreneurial teams.

**Hypothesis 2:** In commercial entrepreneurial teams, the combination of team members' self-transcendence and self-enhancement values is related to poorer business model quality.

### 3.2.3 Opposing Values in Social Entrepreneurial Teams

Drawing on the theory of paradox, we propose that in social entrepreneurial teams, a combination of team members with self-transcendence and self-enhancement values is beneficial for outcomes such as business model quality. The theory of paradox, which is receiving increasing attention in management research, provides an alternative understanding of how organizations can cope with competing demands resulting from dual missions (e.g., Jay, 2013; McMullen & Bergman, 2017; Schad et al., 2016; Smith & Lewis, 2011). The theory of paradox can potentially improve our understanding of social entrepreneurial phenomena, providing a guideline to explain which characteristics enable social entrepreneurs to embrace arising paradoxes (e.g., Civera et al., 2020; Mafico et al., 2021; McMullen & Bergman, 2017; Smith & Besharov, 2019).

At its core, the theory of paradox holds that competing simultaneous demands in organizations produce continuous paradoxical tensions, which can result in innovative ideas and allow sustainable performance when those tensions are effectively addressed (Cameron & Lavine, 2006; Eisenhardt & Westcott, 1988; Miron-Spektor et al., 2018; Smith et al., 2013). Paradoxes are “contradictory yet interrelated elements that exist simultaneously and persist over time. Such elements seem logical when considered in isolation, but irrational, inconsistent, and even absurd when juxtaposed” (Smith & Lewis, 2011, p. 386). Performing tensions present one example of paradox. They arise from divergent goals, metrics, and stakeholders, as is the case with social ventures that combine social and commercial means and aims (Jay, 2013; McMullen & Bergman, 2017; Smith et al., 2013). For instance, one critical challenge for social ventures is their definition of success regarding diverging goals (Smith et al., 2013). Social ventures can enter into a virtuous cycle where paradoxes produce positive results but must accept that these paradoxes cannot be resolved, a phenomenon that requires steady effort in embracing rather than avoiding existing tensions (Hahn et al., 2018; Smith & Lewis, 2011).

We propose that social entrepreneurship provides a context demanding a team value composition that combines individuals with self-transcendence and individuals with self-enhancement values. By incorporating both value dimensions, social entrepreneurial teams can harness performing tensions and work towards an innovative and sustainable business model. Furthermore, the combination of self-enhancement and self-transcendence values allows social entrepreneurial teams to address the competing demands of stakeholders involved in the social and commercial aspects of the venture (e.g., beneficiaries, funding partners). Previous research has noted that if a founding team focuses only on the venture's social mission, economic performance decreases (Battilana et al., 2015), thus highlighting the importance of a team composition that secures the pursuit of both self- and other-oriented goals. Moreover, social entrepreneurial teams are likely to accept and work with paradoxes, as they explicitly subscribe to a paradoxical context when setting out to reconcile a social mission via commercial means (Moss et al., 2011). While the composition of opposing characteristics (i.e., self-transcendence and self-enhancement values) is likely to produce team conflicts (Dufays, 2019), we suggest that these conflicts produce positive outcomes because the opposing values are coherent with the social venture's dual goals.

**Hypothesis 3:** In social entrepreneurial teams, the combination of team members' self-transcendence and self-enhancement values is related to superior business model quality.

### **3.3 Method**

To test our hypotheses, we conducted a three-way interaction and polynomial regression with surface response analysis. Polynomial regression analysis enables the investigation of the relationship between the combination of two predictor variables and a respective outcome variable (Shanock et al., 2010). The primary benefit of polynomial regressions and response surface methodology is preserving the independent effect of each component measure, which

is the most suitable approach for depicting the impact of opposing values on business model quality.

### **3.3.1 Data Collection and Sample**

To collect our data, we first screened online databases on current operating entrepreneurial ventures and upcoming startup events (e.g., from universities, as well as privately operated programs). We then reached out to the entrepreneurial teams in person, by phone, or by email during start-up events, by visiting accelerators, incubator-programs, co-working spaces, and via the contact-information on crowd-funding websites. We identified 521 entrepreneurial teams in total and were able to talk to 323 of the teams, as some teams did not reply to our e-mails or were not available to talk to us via the phone. We further provided potential participants with a leaflet with further information on our study. Furthermore, this leaflet functioned as a marketing means for participation, as it provided an exemplary team assessment that the participants received after participating. This team assessment was offered as an incentive for participation in the study. To be able to provide the teams with the team assessments, we collected data on their contact information. Teams received the team assessment after the completion of the data collection. The assessment contained an analysis of their individual and team members' values.

Ultimately, 161 entrepreneurial teams participated in our study. To test our research model, we conducted a survey and implemented a multiple-informant design that required responses from all founding team members to measure the composition of all team members' values. Thus, in the first step, we identified the number of founding team members by asking the responding team members to indicate how many founding team members the venture has, as well as to indicate their position within the venture. In the second step, we checked how many founding team members participated in the survey and contacted those teams again in which team members were missing, as we only provided the teams with the team assessment

when all team members participated. Lastly, we eliminated 61 entrepreneurial teams in which only a portion of the founding team members participated in the survey. We further eliminated two entrepreneurial teams that did not provide any information regarding their business model and excluded one additional team from the analysis that did not provide any information regarding their type of venture. Hence, our final sample consisted of 97 entrepreneurial teams comprising all founding team members (261 individual founders).

Founding team members were, on average, 30.76 years old ( $SD = 6.27$ ), and 30% were female. The average team size was 2.66 ( $SD = 0.81$ ) and ranged from two to five members. On average, the teams have worked together within the composition investigated in our study for 22.45 months ( $SD = 22.45$ ). The teams have worked on their venture ideas on average for 34.16 months. Of the participating founders, 66% have registered a legal form for their new venture. The ventures employed, on average, 3.09 employees ( $SD = 7.27$ ). On average, 18,47% of the founders had prior experience in founding a social venture, while 13,22% had prior experience in founding a commercial venture.

### **3.3.2 Measures**

*Values.* We based the measurement of individual human values (i.e., self-enhancement and self-transcendence) on the Portrait Value Questionnaire (PVQ; Schmidt et al., 2007; Schwartz, 2003), which is well established in psychology research (Arieli et al., 2020) and has also been implemented in entrepreneurship research (e.g., Gorgievski et al., 2011; Sotiropoulou et al., 2021). The PVQ presents a series of statements, and respondents are requested to indicate how similar they are to a person described in different statements. For *self-transcendence values*, five items represent statements that show a participant's relatedness to a person that prioritizes "helping people," "caring for their well-being," "being loyal," "caring for the environment," and "treating everyone fairly." For *self-enhancement values*, we included four items to measure the relatedness of participants to a person that "aims to be wealthy," "likes

taking the lead,” “demonstrates his/her abilities,” and “aims to be successful.” All respondents rated their affinity with the person mentioned in each item on a six-point Likert scale ranging from 1 (“very dissimilar”) to 6 (“very similar”). Cronbach’s alpha for self-transcendence values was  $\alpha = .72$ , while Cronbach’s alpha for self-enhancement values was  $\alpha = .67$ . The two value dimensions (self-transcendence and self-enhancement) were measured by averaging items of the corresponding values within each team. The measured values thus demonstrate the mean values for self-enhancement and self-transcendence of the individual founders within the team.

*Type of venture.* We identified the type of venture (social vs. commercial start-up) by asking the teams to what extent their venture pursues social and/or commercial aims (c.f., Estrin et al., 2016; McMullen & Bergman, 2017; Uzuegbunam, Pathak, et al., 2021). Participants chose between four descriptions of their organization. These categories reflected to what extent the teams identified themselves as a rather commercially oriented venture, whereby social goals play a subordinate role (= 0: “Our team would consider our organization to be a for-profit organization dedicated to generating revenues without any specific social goals” or “Our team would consider our organization to be a for-profit organization dedicated to generating revenues while also following social goals”), a social venture, whereby social goals are at the focus of attention (= 1: “Our team would consider our organization to be a for-profit organization dedicated to generating revenues to fulfill social goals” or “Our team would consider our organization to be a non-profit organization dedicated to fulfilling social goals by generating revenues”). We then used the mean of the ratings of all team members (social vs. commercial venture). Agreement and reliability measures for the type of venture yielded acceptable values (Bliese & Halverson, 1998; LeBreton & Senter, 2008): ICC(1) = .43, ICC(2) = .66, mean rwg = .93. The final variable for the self-rating as a social or commercial venture ranged from 0 to 1, as an average of team members’ self-identification where 0 reflects being a commercial venture and 1 reflects being a social venture.

*Business model quality.* Following Amabile (1982) and Frederiks et al. (2019), we implemented the consensual assessment technique, which is well-established in creativity research and has also been used in entrepreneurship research regarding the quality of new venture ideas. For our study, we collected the Business Model Canvas of participating entrepreneurial teams to be able to capture information on the teams' business models, particularly the business models' social, environmental, and economic potential performance. The Business Model Canvas is a template used to develop, visualize, and assess a business model and is widely used in entrepreneurship contexts (Keane et al., 2018; Osterwalder, 2004). It represents the venture's key components (e.g., customer segments, value proposition). Furthermore, the Business Model Canvas has also been applied in previous research capturing the hybrid nature of social ventures reflected in their business models (e.g., Davies & Doherty, 2019). We further asked teams to add information regarding their mission statement and positive/negative external effects to provide a holistic picture of the entrepreneurial teams' business models, including social and environmental value-related aspects (see Appendix 8.2.1). Teams who participated offline obtained a prepared Business Model Canvas of their venture in advance, which they then checked and adjusted. Teams participating online directly included information about their business model within the survey. To make sure that the business model quality is not biased by the richness of the information provided in the business model canvas, we further checked the word count of each business model canvas to make sure the provided information is of equal length. When information was missing, we contacted teams again to obtain a complete business model.

We then measured the quality of the teams' business models by providing four judges, all independent experts (i.e., start-up incubator coaches), with the collected Business Model Canvas for evaluation purposes. Iterative pre-tests were conducted with two of the authors and three experts to prepare the evaluation sheet and judging process regarding business model

quality. In particular, the evaluation sheet for the assessment was first revised by two of the authors. Following this, a former entrepreneur who currently coaches entrepreneurial teams tested the evaluation sheet for understanding and realism of the presentation of the business models. Moreover, the evaluation sheet was tested with two persons independent of the entrepreneurship context for general understanding using the think-aloud technique (Dew et al., 2009). Feedback provided by the respondents was integrated into a revised version.

Using the revised version of the evaluation sheet, the four judges were asked to rate the quality of the business models based on five items, including the potential economic value, newness, perceived desirability, environmental value, and social value of a business model (adapted from Frederiks et al., 2019). Additionally, the judges obtained an evaluation guide to ensure an understanding of the items and the procedure (see Appendix 8.2.2). Each criterion was assessed on a 7-point scale ranging from “strongly disagree” to “strongly agree.” We then calculated the overall quality of the business models by averaging the scores of the five mentioned items from the four judges. To determine the inter-rater agreement and inter-rater reliability of the judges’ ratings, we further measured the standardized rwg values, as well as the intra-class correlation coefficients (ICC(1) and ICC(2)) regarding their evaluations of business model quality (Bliese & Halverson, 1998; LeBreton & Senter, 2008). The levels of agreement and reliability were acceptable: economic value ICC(1) = .48, ICC(2) = .79, mean rwg = .78, social value ICC(1) = .60, ICC(2) = .86, mean rwg = .75; environmental value ICC(1) = .69, ICC(2) = .90, mean rwg = .78; newness of the business model ICC(1) = .39, ICC(2) = .72, mean rwg = .71; perceived desirability ICC(1) = .34, ICC(2) = .67, mean rwg = .75. We can rule out common method bias regarding our measurement, by separating our dependent and independent variables through assessing the business model quality by an external evaluation (different raters and sources for both variables), and hence implementing separate questionnaires (Podsakoff et al., 2003).

*Control variables.* Within our analysis, we controlled for the team members' age and gender, as previous studies proved that these characteristics influence entrepreneurial teams' performance (e.g., Chandler et al., 2022; Ko et al., 2021). Similarly, we further included team size as a control variable (Uzuegbunam, Pathak, et al., 2021). Lastly, we controlled for the months since the team has been working on their venture idea within the team (idea tenure) to rule out any biases regarding the business model quality that might be based on the venture's stage, progress, or friendship ties (e.g., Agarwal et al., 2016; Hasan & Koning, 2019; Klotz et al., 2014).

### 3.4 Analytical Procedure and Results

Table 7 presents the means, standard deviations, and correlations of the study variables included in our analysis.

**Table 7.** Means, standard deviations, and correlations of model variables

	Mean	S.D.	1	2	3	4	5	6	7
1. SENH	0.01	0.50							
2. STRA	-0.02	0.60	0.06						
3. Business model quality	3.62	0.72	-0.15	-0.11					
4. Team size	2.66	0.81	-0.06	0.00	0.05				
5. Idea tenure	34.16	23.62	0.02	-0.05	0.07	-0.06			
6. Gender	0.30	0.35	-0.01	-0.11	0.20	-0.04	0.22		
7. Age	30.76	6.27	-0.33 **	-0.14	0.09	-0.04	0.37 **	0.14	
8. Type of venture	0.34	0.38	-0.18	0.10	0.02	-0.16	0.16	0.28 **	0.11

Notes: Means, standard deviations, and correlations of model variables are reported.  $N = 97$ . SENH = self-enhancement values, STRA = self-transcendence values; type of venture (continuous variable ranging from 1 = social venture to 0 = commercial venture); gender = mean of female team members based on individual level dummy coding (female =1, male =0) \*\* $p < .01$  (two-tailed); \* $p < .05$  (two-tailed).

### 3.4.1 Analytical Procedure and Results of the Three-way Interaction

We conducted a three-way interaction analysis for self-transcendence values, self-enhancement values, business model quality, and type of venture to investigate whether the effect of team member values on business model quality differs between social and commercial entrepreneurial teams. Consistent with Hypothesis 1, the coefficient for the three-way interaction between self-enhancement values, self-transcendence values, and type of venture on business model quality was significant ( $b = -1.37, p < .05$ ). Table 8 demonstrates this three-way interaction effect.

**Table 8.** Results of 3-way interaction analysis

<b>Business model quality</b>			
	<b>b</b>	<b>se</b>	<b>p-value</b>
Intercept	2.756	0.531	0.000**
Team size	0.115	0.118	0.330
Gender	0.468	0.220	0.034*
Age	0.013	0.014	0.357
Idea tenure	0.001	0.003	0.864
Type of venture	-0.059	0.195	0.762
SENH	-0.458	0.232	0.049*
STRA	-0.171	0.233	0.463
SENH x STRA	0.204	0.130	0.116
Type of venture x SENH	0.754	0.324	0.020*
Type of venture x STRA	-0.025	0.527	0.962
SENH x STRA x Type of venture	-1.365	0.593	0.021*

Notes:  $b$  = unstandardized coefficient;  $se$  = standard error;  $N = 97$  teams (social & commercial); SENH = self-enhancement values; STRA = self-transcendence values; type of venture (continuous variable ranging from 1 = social venture to 0 = commercial venture); gender = mean of female team members based on individual level dummy coding (female =1, male =0).

\*\* $p < .01$  (two-tailed); \* $p < .05$  (two-tailed).

### 3.4.2 Results of Polynomial Regression with Surface Response

To better understand differences in the effects of social versus commercial entrepreneurial teams and to test Hypotheses 2 and 3, we conducted a polynomial regression analysis. First, we investigated the two groups of social vs. commercial entrepreneurial teams, with the variable “type of venture” measured as a continuous variable ranging from 0 to 1. However, the polynomial regression analysis with surface response required us to separately investigate the two categories of entrepreneurial teams, social versus commercial. Thus, we sorted all entrepreneurial teams into two dichotomous categories (type of venture  $\geq 0.5$  = team agreement more oriented towards social goals and  $< 0.5$  = team agreement more oriented towards commercial goals). The final sample included 39 social entrepreneurial teams and 58 commercial entrepreneurial teams.

Second, as Shanock et al. (2010) proposed, we analyzed the distribution of value differences among entrepreneurial teams within our sample (see Table 9). We standardized the score of the teams’ self-enhancement and self-transcendence values and determined the percentages of teams “in agreement” and teams “in discrepancy.” Given the differences between self-enhancement and self-transcendence values in our data, we found that our data fulfills the requirements for conducting polynomial regression analysis.

**Table 9.** Frequencies of self-enhancement over, under, and in-agreement with self-transcendence levels needed for polynomial regression

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<b>Agreement groups</b>	<b>Percentage</b>	<b>Mean SENH</b>	<b>Mean STRA</b>
SENH higher than STRA	50.0	.3	-.29
In agreement	0	0	0
SENH lower than STRA	50.0	-.27	.27

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Notes:  $N = 97$  entrepreneurial teams (social = 39 teams; commercial = 58 teams). SENH = self-enhancement values, STRA = self-transcendence values.

Third, we mean-centered the variables and multiplied them to establish interaction terms (Edwards, 1994; Shanock et al., 2010). We then inserted the variables into our polynomial regression equation of the following form:

$$Y = b_0 + b_1 \text{ SENH} + b_2 \text{ STRA} + b_3 \text{ SENH}^2 + b_4 \text{ SENH} * \text{ STRA} + b_5 \text{ STRA}^2 + e \quad (1)$$

In the equation, “SENH” represents the level of self-enhancement values within a team, and “STRA” represents the level of self-transcendence values within a team. We used the polynomial regression equation results to calculate the four relevant surface test values  $a_1$  to  $a_4$  (Shanock et al., 2010). The surface tests help investigate the combined effect of two predictor variables on one outcome variable. In particular, they demonstrate the significance of the slope and curvature of the line of incongruence (self-enhancement values = - self-transcendence values; line of contradiction) and the line of congruence (self-transcendence values = self-enhancement values; line of equally high values). The surface test values are defined as follows:  $a_1$  represents the slope ( $b_1 + b_2$ ),  $a_2$  represents the curvature ( $b_3 + b_4 + b_5$ ) of the surface along the congruence line,  $a_3$  represents the slope ( $b_1 - b_2$ ), and  $a_4$  reflects the curvature ( $b_3 - b_4 + b_5$ ) for the incongruence line (Shanock et al., 2010). In line with Shanock et al., (2010), we evaluated the polynomial regression analysis results (Table 10) by considering the surface test values ( $a_1$ ,  $a_2$ ,  $a_3$ , and  $a_4$ ) rather than the significance of the regression coefficients (for further reference, see Shanock et al., 2010).

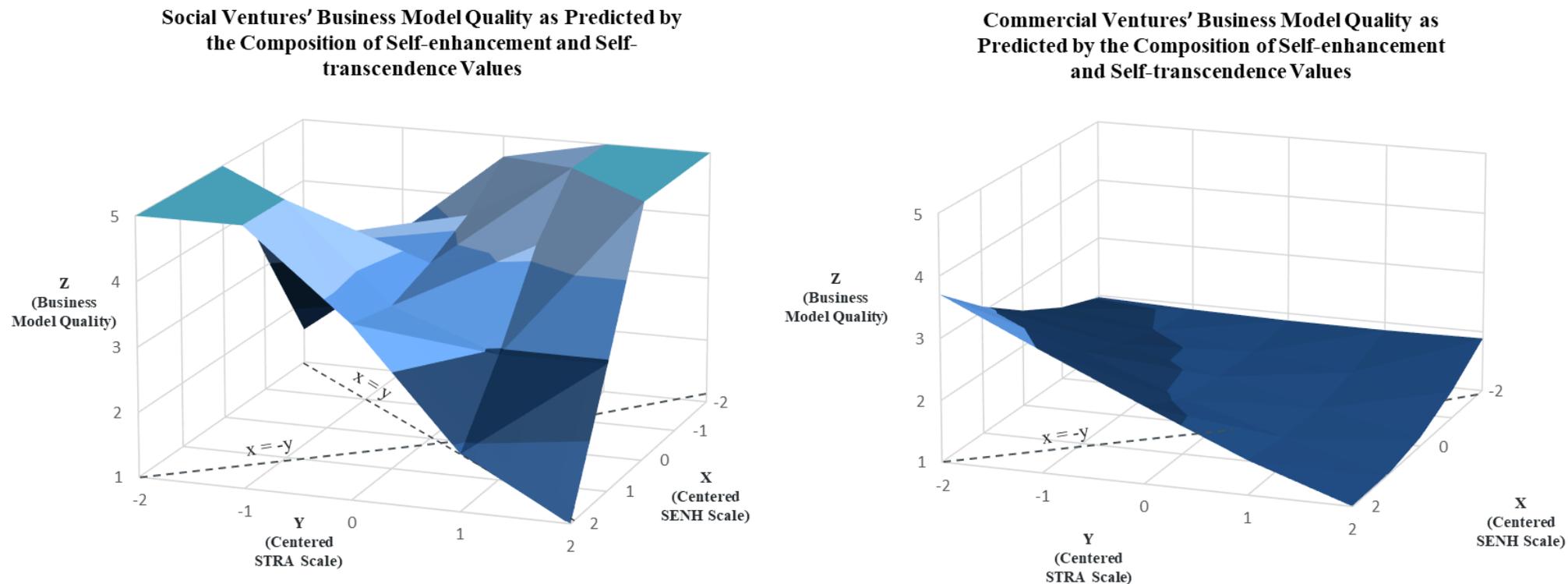
**Table 10.** Results of polynomial regression analysis with surface response

DV = Business Model Quality	Social Entrepreneurial Teams			Commercial Entrepreneurial Teams		
	b	se	p-value	b	se	p-value
Team size	-0.070	0.160	0.665	0.210	0.184	0.261
Gender	0.556	0.332	0.108	0.625	0.539	0.254
Age	0.004	0.022	0.843	-0.030	0.025	0.235
Idea tenure	-0.003	0.005	0.528	0.006	0.007	0.427
SENH	0.062	0.273	0.823	-0.363	0.358	0.318
STRA	-0.250	0.319	0.443	0.092	0.419	0.827
SENH squared	0.356	0.308	0.260	0.013	0.563	0.981
SENH x STRA	-1.106	0.421	0.015*	-0.171	0.740	0.819
STRA squared	0.101	0.537	0.853	0.062	0.556	0.912
<b><u>Lines of congruence (x = y)</u></b>						
Slope (a <sub>1</sub> )	-0.19	0.46	0.683	-0.27	0.53	0.611
Curvature (a <sub>2</sub> )	-0.65	0.76	0.396	-0.10	1.11	0.931
<b><u>Lines of incongruence (x = - y)</u></b>						
Slope (a <sub>3</sub> )	0.31	0.38	0.417	-0.46	0.57	0.429
Curvature (a <sub>4</sub> )	1.56	0.72	0.037*	0.25	1.15	0.831

Notes: *b* = unstandardized coefficient; *se* = standard error; *n* (social) = 39 teams; *n* (commercial) = 58 teams; SENH = self-enhancement values; STRA = self-transcendence values. \**p* < .05 (two-tailed).

Hypothesis 2 posited that a combination of self-enhancement and self-transcendence values negatively relates to commercial venture business model quality, which was not supported. The surface analysis for commercial entrepreneurial teams did not provide significant results ( $a_1 = -.27, p > .10$ ). We depict this interaction in Figure 3. Hypothesis 3 predicted that in social entrepreneurial teams, the combination of team members' self-transcendence and self-enhancement values is related to a superior business model quality, which was not supported. Instead, we find that the interaction of self-enhancement and self-transcendence values positively predicts the business model quality of social ventures if one value is high and the other value is low ( $a_4 = 1.56, p < .05$ ). In this regard,  $a_4$  ( $b_1 - b_2$ ) represents

the curvature of the incongruence line (self-enhancement values = - self-transcendence values). The line of incongruence (Fig. 1) thus shows that business model quality increases more sharply when the difference between self-enhancement and self-transcendence values increases (i.e., higher self-enhancement and lower self-transcendence values or lower self-enhancement and higher self-transcendence values). However, it does not show which of the value dimensions has to exceed the other to yield increased business model quality ( $a_3 = 0.31, p > .10$ ). These results show that social ventures do not need a similar manifestation of self-enhancement and self-transcendence values, but rather, individuals that follow one dominant value dimension. This relationship is demonstrated by the surface plot depicted in Figure 3.



**Figure 3.** Surface plot of the composition of values and its effect on business model quality within social and commercial entrepreneurial teams.

*Notes:* SENH = self-enhancement values; STRA = self-transcendence values.

### **3.5 Discussion**

This study investigated the relationship between the value composition (i.e., self-enhancement and self-transcendence) of founding team members and the business model quality of social versus commercial entrepreneurial teams. We drew on the theory of paradox to develop a theoretical understanding of the team members' value composition in social entrepreneurial teams and how they differ from commercial entrepreneurial teams. Overall, our findings show that the relationship between the composition of individual values within entrepreneurial teams and the business model quality significantly differs depending on the type of venture (social vs. commercial entrepreneurial teams). Surprisingly, our results revealed that when founders within social entrepreneurial teams held high self-transcendence and low self-enhancement values (or vice versa), their business model quality was significantly higher than when both values were high. However, we did not find any significant effect regarding commercial entrepreneurial teams. Our study has important implications concerning social entrepreneurship, entrepreneurial teams, and the theory of paradox and represents a valuable addition to the existing literature.

#### **3.5.1 Implications for Social Entrepreneurship Literature**

As one of the first empirical studies to examine teams in social entrepreneurship research (Chandler et al., 2022; Uzuegbunam, Pathak, et al., 2021), we answer calls for a team-focused perspective (Ben-Hafaïedh & Dufays, 2021; Saebi et al., 2019; Vedula et al., 2022). Our study revealed that the combination of founding team members' values relates to the business model quality of social entrepreneurial teams, and our results emphasize the need to theoretically and empirically distinguish the team level from the individual and organizational level to advance our understanding of social entrepreneurship phenomena. By indicating that a convergent set of values at a team level is necessary to achieve a higher business model quality in social ventures, we extend current perspectives, which focus on the individual founder's level

in social entrepreneurship (e.g., Pan et al., 2019; Sieger et al., 2016; Wry & York, 2017). From social entrepreneurship literature, we know that the traits and backgrounds of social entrepreneurs are essential for successful outcomes of the social entrepreneurial process (Bacq & Alt, 2018; Hockerts, 2017; Pan et al., 2019; Wry & York, 2017). Our work complements this insight by suggesting that founding team members' traits (i.e., values) are not only essential for positive venture outcomes of single social entrepreneurs but also particularly relevant when combined in a team.

Our findings further contribute to the theoretical development of self-oriented traits in social entrepreneurship. Surprisingly, our results show that the higher the self-enhancement values and the lower the self-transcendence values among social entrepreneurial teams, the higher the resulting business model quality. Most theorizing on influencing factors in social entrepreneurship focuses primarily on other-oriented factors (e.g., prosocial motivation, compassion, empathy) (e.g., Bacq & Alt, 2018; Miller et al., 2012; Shepherd et al., 2019). Conversely, entrepreneurship often focuses on the self-centered attributes of the founder (Baum & Locke, 2004; Shane et al., 2003). Since social entrepreneurship is focused not only on social value creation but also includes the use of commercial means, scholars argue that self-oriented aspects might play an important role in the emergence and performance of social ventures (e.g., Kruse et al., 2019). Our results contribute to the discussion surrounding the mingled role of self-and other-oriented factors. Social entrepreneurial teams with shared, high self-enhancement values might experience a smoother working process due to their convergence in values. Furthermore, they might exhibit a strong drive in their vision, making it easier to craft a coherent business model. Another possible explanation is that the social mission of teams with high self-enhancement values might be part of the venture's marketing means instead of representing the founding members' actual identification with the venture's goals. In this case, the objective of social value creation could be misused for enhancing overall financial

performance rather than sincerely trying to improve societal well-being. Hence, to further advance social entrepreneurship research, we encourage scholars to investigate the enhancing and deteriorating effects of self-oriented characteristics in the context of social venturing.

### **3.5.2 Implications for Research on Entrepreneurial Teams**

Our study contributes to research on entrepreneurial teams by demonstrating that the type of venture influences the relationship between teams' compositions and outcomes. Although exploration of the effects of entrepreneurial team composition on performance indicators provides meaningful insights, a recent meta-analysis by Jin et al. (2017) draws attention to inconsistencies in these findings. Jin et al. (2017, p. 748) note that while some studies found beneficial effects of heterogeneous team characteristics, others suggested a deteriorating effect of differences on team outcomes. We contribute to current research by suggesting that the type of venture could provide an important explanation for the inconsistencies and should be integrated when investigating entrepreneurial teams. Our results further align with a recent study from Preller et al. (2020), which highlights the importance of the type of venture and its underlying goals when investigating entrepreneurial teams by demonstrating that differences in the congruence of team members' visions result in different trajectories regarding the teams' opportunity development processes. Hence, we recommend that future studies on entrepreneurial teams move beyond the assumption of a one-dimensional goal or context of entrepreneurial teams (i.e., "launching and advancing a new business": Knight et al., 2020, p. 30) and advance this view by investigating the type of venture, the multitude of goals, and the connected stakeholders (e.g., societal well-being, environmental improvement, profit-seeking, accountability to beneficiaries and/or shareholders).

Furthermore, our study adds to the limited research concerning the role of deep-level characteristics in entrepreneurial teams (Organ & O'Flaherty, 2016; Schoss et al., 2021, 2022). In particular, we highlight that the composition of individual team members' values

significantly relates to a venture's success in the context of social entrepreneurial teams. Although values play a crucial role in determining actions, behaviors, and attitudes toward situations (Schwartz, 2003, 2012), the effects of values within entrepreneurial teams have gained little attention. While some studies have investigated singular effects of values on entrepreneurial outcomes (e.g., Estrin et al., 2016; Holland & Shepherd, 2013), our study indicates the need to investigate the combination of several values at the team level. In this regard, the theory of human values (Schwartz, 2003, 2012; Schwartz & Bilsky, 1987) provides great opportunities for future research. However, it also requires further theoretical development, as we still have a scant understanding of the interaction of several individual values within a team (Arieli et al., 2020). Our study exemplifies that combined values within entrepreneurial teams hold significant explanatory power.

Additionally, our study draws on organizational team literature, which stresses the importance of deep-level diversity for team outcomes, particularly the negative relationship between value diversity, positive emergent states, and team processes (Triana et al., 2021). In this vein, we propose that great potential remains for investigating deep-level diversity, such as value diversity, in the context of entrepreneurship. Particularly, we suggest that values might play a different role in the context of entrepreneurship compared to an organizational context, as the founding team members' values shape the overall venture's performance, goals, and processes (Arieli et al., 2020; Leung et al., 2013). We hence encourage entrepreneurship scholars to complement current diversity research by exploring the effects of value diversity in entrepreneurial teams.

### **3.5.3 Implications for the Theory of Paradox**

The approach and results of this study indicate that the theory of paradox could benefit from extending theoretical explanations to the team level. Contrary to our hypotheses, a strong tendency towards either self-enhancement or self-transcendence (with the opposing value set

being low) is positively related to the business model quality of social entrepreneurial teams. Drawing on the theory of paradox, we predicted that the combination of opposing values in the context of social entrepreneurial teams would not only be possible but also could relate to better outcomes (e.g., higher business model quality). However, our research indicates that paradoxical aims and means of social ventures necessitate the same values among entrepreneurial team members rather than the opposite. Namely, a clear set of shared self-transcendence or self-enhancement values among individual team members is necessary. For a positive business model quality outcome, value congruence appears to provide better results in a venture that faces competing demands. Thus, besides the skill set for coping with paradoxical tensions (e.g., paradoxical frames), value congruence between team members could be an essential success factor. Future research could benefit from distinguishing different levels of analysis at which paradoxes can occur and examining how these different levels contribute to addressing challenges posed by these paradoxes. Our study suggests that although the context of ventures may be paradoxical (e.g., social ventures), a team can produce positive venture outcomes when individual founding team members hold shared values.

#### **3.5.4 Implications for Practice**

Our study provides insights for stakeholders in the support system of newly emerging ventures (e.g., coaches, investors) and for social as well as commercial entrepreneurs. First, commercial and social entrepreneurial teams appear distinct in how their compositions promote successful performance. Thus, entrepreneurial ecosystems might need to develop different evaluations and support mechanisms to enhance the quality of business models. While current offerings in entrepreneurial ecosystems include business-related inputs (e.g., pitch training, business model development workshops), analyzing and systematically working with founding team members on their individual goals might help in staffing the team with fitting founding team members. Second, for social entrepreneurial teams, value congruence regarding the

founding team members seems necessary to achieve a higher quality in their business models. Thus, addressing potential co-founders' values at the beginning of the entrepreneurial process could help identify a critical value fit. This appears particularly important given the challenging dual aims that social entrepreneurial teams often balance, which can result in various tensions at the team and organizational levels. Beyond the convergence of individual values, our results also show that a robust set of values (high self-enhancement and low self-transcendence or high self-transcendence and low self-enhancement) is vital in producing better business models. For social entrepreneurial teams, this could mean that both discussions about individual values among team members and work at the individual level are necessary and would allow founding team members to clarify their values, develop an awareness of their personal goals, and articulate these values clearly in their workplace setting.

### **3.5.5 Limitations and Directions for Future Research**

Three primary limitations exist in our study. First, our theoretical reasoning and respective measurement focus on a dichotomy between social and commercial entrepreneurial teams. Recent research argues that social and commercial aims should be understood along a degree of hybridity, with economic and social logic at the ends of the continuum (Shepherd et al., 2019). We acknowledge that our study does not account for varieties between the two extremes of social and commercial entrepreneurial teams. Thus, the results must be interpreted with caution regarding their applicability to diverse types of hybrid entrepreneurial teams. Nevertheless, we believe that contrasting the two types of entrepreneurial teams demonstrates that considering the type of venture is essential when discussing the role of team composition. In this light, future research may develop a valid and reliable measure of hybridity and find a way to analyze its contingent effect on the entrepreneurial team process.

Second, our study focuses on the relationship between the value composition of founding team members and the business model quality contingent on the type of

entrepreneurial team. While our findings show that the constructs have meaningful relationships, we can only theoretically explain mechanisms that connect the influencing factors with the outcome variable. We hence recommend more research on team processes and relationships with mediating variables such as team conflict and team cognition (de Mol et al., 2015) to advance theoretical and empirically backed knowledge in (social) entrepreneurship.

Third, our research model takes a static view and only provides a snapshot of the entrepreneurial process. As recent research posits (e.g., Patzelt et al., 2021; Uy et al., 2020), dynamics in entrepreneurial teams represent a defining and crucial factor in the entrepreneurial process. Although the team of founders has an important effect on the resulting venture, the team is likely to change during the emergence of the venture (Patzelt et al., 2021). Typically, teams are part of a greater social system, including coaches, investors, and mentors who provide feedback on the business model (Ciuchta et al., 2018). Thus, the composition of individual values that influence the business model quality is also likely to change over time, and these particular changes could explain variances in the quality. Hence, we cannot rule out the possibility that our findings only apply to a specific phase or situation during the entrepreneurial process. Given this, future research could investigate how changes within the founding team or the hiring of initial employees affect the value composition and, thereby, the business model quality and vision of the team.

### **3.5.6 Conclusion**

In summary, our study suggests that the effect of team value composition differs depending on the type of venture (i.e., social vs. commercial) and that social entrepreneurial teams require either high self-transcendence or high self-enhancement values (and low values of the opposite type) to enhance their business model quality. Furthermore, our research suggests that deep-level characteristics (i.e., human values) are particularly relevant for social entrepreneurial teams. By investigating deep-level characteristics in entrepreneurial teams and

differing effects between social and commercial entrepreneurial teams, we open avenues for future theoretical conversations. Additionally, we suggest that opposing characteristics allow us to understand how social entrepreneurial teams manage to deal with the paradoxes inherent in their type of venture.

## **4 Chapter IV: Entrepreneurial Team Coping with Environmental Uncertainty: An Exploratory Mixed Methods Study**

### **Abstract**

Environmental uncertainty is a severe threat to the performance and well-being of entrepreneurial teams. During the first three months of the COVID-19 pandemic, we studied 35 entrepreneurial teams via weekly surveys (N= 671 team-time observations) and four waves of interviews with 25 of the same teams (N=88) to understand how environmental uncertainty affects entrepreneurial teams and how they cope with it. Adopting a convergent mixed methods analysis, we found significant differences in team dynamics and identified two coping trajectories—the optimistic growth trajectory and the damage mitigation trajectory—with important theoretical contributions to research on coping, well-being, and environmental uncertainty.

**Keywords:** entrepreneurial teams, coping, well-being, environmental uncertainty, mixed methods

## 4.1 Introduction

Entrepreneurial teams are increasingly faced with high levels of environmental uncertainty, such as during the COVID-19 pandemic, financial crises, armed conflicts, or natural disasters. As this type of uncertainty is much less controllable than uncertainty internal to the venture or the team (Griffin & Grote, 2020; Patzelt et al., 2021), it has crucial implications for entrepreneurial teams. On the one hand, environmental uncertainty makes strategic decision-making challenging and creates pressure on teams to constantly adapt their business operations, which potentially leads to negative emotions and well-being concerns (Breugst & Shepherd, 2017; Hmieleski & Cole, 2022; Schmitt et al., 2018). On the other hand, environmental uncertainty also presents opportunities for innovation, growth, resource acquisition, and improved performance (Alvarez & Barney, 2005; Griffin & Grote, 2020; Townsend et al., 2018). Amidst such uncertainty, coping (i.e., an entrepreneur's cognitive and behavioral efforts to navigate stressors) becomes crucial in mitigating the impact of environmental uncertainty on performance and well-being (Ahmed et al., 2022; Engel et al., 2021; Uy et al., 2013).

Successful coping provides manifold benefits for the well-being of entrepreneurs, such as reducing negative emotions (Patzelt & Shepherd, 2011), increasing physical well-being (Patel et al., 2019), and resilience, which in turn enables them to mitigate or overcome emotional impairment in the venturing process (Engel et al., 2021). Research further suggests that effective coping is associated with increased venture performance (Ahmed et al., 2022), emphasizing its significance in navigating the challenges and opportunities presented by environmental uncertainty. While previous research expands our knowledge of coping by examining problem-focused coping and emotion-focused coping as two critical approaches (Ahmed et al., 2022), far less is known about how coping encompasses the interplay between actions aimed at operational improvement and emotion-based actions. Thus, important components and dynamics of coping remain fairly unknown. The literature already shows that

social interactions are important for entrepreneurs to cope with uncertainty (Breugst & Shepherd, 2017; Hmieleski & Cole, 2022; Ivanova et al., 2022; Sirén et al., 2020). However, while these social interactions are most likely to happen within entrepreneurial teams, we lack insights into the dynamics of social interactions at times when there is a threat to both performance and well-being. To date, we have a scant theoretical understanding of how cofounders develop joint team activities to deal with uncertainty-related incidents—which constitute a threat to their venture and their personal lives—at an operational and emotional level. This is particularly interesting because team interactions can have both positive and negative effects on entrepreneurial teams' performance and well-being.

Team interactions, on the one hand, also have the power to help manage the threat to current venture operations and the negative emotions that come along with navigating uncertainty (Breugst & Shepherd, 2017; Ivanova et al., 2022). However, on the other hand, negative emotions can also be contagious and impair the teams' overall performance and well-being (Ivanova et al., 2022; Uy et al., 2013). As for research on entrepreneurial teams, it is crucial to identify what factors motivate social interactions in the face of environmental uncertainty and how these interactions help in regulating emotional distress, as this may explain why some teams are more successful in managing uncertainty, and correspondingly more successful in terms of performance and well-being, than others. Furthermore, investigating coping in a team context is important for research on the well-being of entrepreneurs as it provides a basis for explaining the underlying determinants of well-being.

To understand how the complexity of team interactions relates to team performance and well-being under environmental uncertainty, we ask *how entrepreneurial teams cope with a sudden increase in environmental uncertainty*. To develop a theoretical understanding of the evolution of entrepreneurial team coping, we applied an exploratory convergent parallel mixed methods study design (Creswell & Creswell, 2018; Webster & Haandrikman, 2020) in which

we quantitatively investigated 35 entrepreneurial teams during the first 12 weeks of the COVID-19 pandemic (April to July 2020), and conducted additional qualitative interviews with 25 of the same teams in the same timeframe. Since knowledge about entrepreneurial team coping is still in its infancy, an exploratory approach enables an in-depth longitudinal examination of how team coping unfolds in a highly dynamic, environmentally uncertain context (see Webster & Haandrikman, 2020 for similar study designs). In addition, a parallel mixed methods design enables the development of a more holistic picture of team coping that captures both how environmental uncertainty affects entrepreneurial teams and how they collectively address it.

Based on multiple quantitative analyses drawing on weekly surveys (N = 35 teams with a total of N= 671 team-time-observations), we explore the dynamics of important team outcomes, i.e., *perceived performance impairment* (hereafter performance impairment) and *team burnout*. We identified significant variations in performance and burnout across teams, which indicate the existence of important differences in the teams' coping trajectories. Parallel to the quantitative analysis, we conducted qualitative semi-structured interviews with 25 of the teams every three weeks to understand how coping trajectories evolve and how they differ between teams. A final convergent analysis, merging qualitative and quantitative results, revealed two dominant entrepreneurial team coping trajectories that represent different regulatory foci, interpersonal emotion regulation behavior, and levels of team compassion. That is, teams following an *optimistic growth trajectory* show a positive orientation toward business operations and put time and effort into the team's mental well-being. These teams rely on building team compassion and interpersonal emotion regulation (i.e., regulating emotions by building on social exchanges), involving the continuous emotional exchange within the team. In contrast, entrepreneurial teams following a *damage mitigation trajectory* predominantly focus on maintaining business operations and tend to neglect emotional and social exchange,

such as interpersonal emotion regulation. Instead, the team members focus on intrapersonal emotion regulation (i.e., regulating emotions individually) and refrain from communicating their well-being and emotional needs with the team.

The contribution of our study is threefold. First, we contribute to research on coping in entrepreneurship (e.g., Ahmed et al., 2022; Engel et al., 2021; Hmieleski & Cole, 2022; Uy et al., 2013) by showing two dominant coping trajectories in the context of a sudden increase in environmental uncertainty. Further, by treating entrepreneurial coping as a team-level concept, we find that social exchange about team members' negative emotions is an essential facet of coping. We complement recent coping research that vaguely considers problem-focused and emotion-focused coping in tandem (e.g., Engel et al., 2021; Hmieleski & Cole, 2022; Uy et al., 2013) rather than in isolation (e.g., Patel et al., 2019) by demonstrating the importance of combining both types of coping (emotion-focus and problem-focus). Second, we contribute to entrepreneurship research on team emotions and well-being (Sirén et al., 2020) by showing the positive effect of interpersonal emotion regulation on reducing performance impairment. In particular, by converging quantitative and qualitative findings, we find that burnout can be contagious and adversely affect team-level dynamics, emphasizing the need to treat well-being and, specifically, burnout as a team-level concept (Stephan, 2018). Third, we add to the conversation on entrepreneurial action under environmental uncertainty (Anwar et al., 2021; Hmieleski & Cole, 2022; Schmitt et al., 2018; Townsend et al., 2018) by demonstrating the relationship between coping trajectories and speed in emotional and business recovery. Over time, environmental uncertainty decreased regardless of the coping trajectory. However, teams that quickly adapted to the environmental dynamics increased their ability to act and adapt their business operations and team processes in response to environmental demands. In this vein, the mixed methods analysis proves to be particularly beneficial, since it enables us not only to

identify how performance and well-being are affected by environmental uncertainty, but also how teams specifically respond to a highly uncertain environment.

## **4.2 Theoretical Background**

### **4.2.1 The Importance of Coping in the Context of Environmental Uncertainty**

Facing environmental uncertainty can pose a significant threat to entrepreneurial teams, negatively affect their performance, the teams' emotions, and, ultimately, their well-being (Breugst & Shepherd, 2017; Patzelt et al., 2021; Rauch et al., 2018; Shepherd & Williams, 2020). Research indicates that effective coping—behaviors implemented to manage a stressful situation (Ahmed et al., 2022; Lazarus & Folkman, 1984)—are crucial for entrepreneurial teams continuously trying to navigate the challenges arising from environmental uncertainty (Hmieleski & Cole, 2022). Their effective implementation can even differentiate successful from unsuccessful teams in the venturing process (Hmieleski & Cole, 2022), for example, when faced with a major challenge, such as the COVID-19 pandemic. Applying appropriate coping behavior can help entrepreneurial teams avoid a decrease in their productivity, maintain their motivation, and ultimately increase the likelihood of venture success (Hmieleski & Cole, 2022; Uy et al., 2013).

On the operational side, entrepreneurship research emphasizes that uncertainty-induced stress can impact performance (Hmieleski & Cole, 2022; Patzelt et al., 2021; Sirén et al., 2020). Entrepreneurship research points towards mixed results regarding whether uncertainty positively or negatively affects performance (e.g., Griffin & Grote, 2020; Hmieleski & Baron, 2008; Rauch et al., 2018). On the one hand, research suggests that entrepreneurs can take advantage of an uncertain environment by recognizing opportunities to create value and, in turn, enhance their performance since pursuing new opportunities can help to mitigate the negative consequences of environmental uncertainty (e.g., Townsend et al., 2018). On the other hand, scholars also emphasize the dependence of entrepreneurial teams on market developments and

suggest a negative relationship between environmental uncertainty and performance (Hmieleski & Cole, 2022; Rauch et al., 2018). In their study, Schmitt et al. (2018) further underline that the levels of environmental uncertainty fluctuate throughout the entrepreneurial journey and that entrepreneurship research thus far neglects how the dynamics of environmental uncertainty affect entrepreneurial behavior and emotions. In particular, the authors claim that the dynamics of environmental uncertainty can lead to avoidance behaviors or the active exploration of new opportunities, while it can also lead to negative emotions such as anxiety and doubt (Schmitt et al., 2018). Because of the differences in the effects and dynamics of environmental uncertainty on performance, entrepreneurial teams may differ in their ability to manage the challenges arising from it (Hmieleski & Cole, 2022).

On the emotional side, the exposure of entrepreneurial teams to environmental uncertainty threatens the *teams' well-being* (Rauch et al., 2018; Stephan et al., 2022). As such, environmental uncertainty can result in stress, which in this context is described as “a substantial imbalance between environmental demands and the response capability of the focal organism” (Rauch et al., 2018, p. 342). It represents a significant emotional challenge that affects the mental well-being of entrepreneurs, constitutes a source of negative emotions, and ultimately results in an impairment of mental well-being (Ahmed et al., 2022; Kibler et al., 2019; Rauch et al., 2018; Stephan et al., 2022; Uy et al., 2013). In this regard, environmental uncertainty can be distinguished from the stress-inducing role of typical work characteristics, such as job demands, limited job control, conflicts, work overload, and fear of failure (Ahmed et al., 2022). Since environmental uncertainty affects not only the individual entrepreneur but the entire entrepreneurial team, we propose that the question of how entrepreneurial teams' well-being evolves under uncertainty and how they cope with potential effects requires special attention. Investigating entrepreneurial team coping trajectories under environmental uncertainty should provide essential insights into important differences in coping.

## 4.2.2 Understanding How Entrepreneurial Teams Manage Uncertainty

Research on entrepreneurial teams has not yet provided a clear understanding of how teams manage environmental uncertainty (Hmieleski & Cole, 2022; Sirén et al., 2020). This is surprising, as cases of high environmental uncertainty not only seem to be on the increase in recent years (e.g., the COVID-19 pandemic and natural disasters) but may have strong implications for team performance, which is directly related to team well-being (Cardon et al., 2012; Klotz et al., 2014; Sirén et al., 2020). When facing environmental uncertainty, team internal interactions have the power to shape the way they approach environmental uncertainty (Hmieleski & Cole, 2022; Lazar et al., 2020; Patzelt et al., 2021). So far, our knowledge of entrepreneurial coping is dominated by individual-level studies (Ahmed et al., 2022; Patzelt & Shepherd, 2011; Uy et al., 2013). Only a few team-level studies point to the importance of team interactions and emotions (e.g., Hmieleski & Cole, 2022; Sirén et al., 2020).

From the individual perspective, coping research suggests that entrepreneurs either act upon problem-focused coping or emotion-focused coping (Ahmed et al., 2022; Patzelt & Shepherd, 2011; Uy et al., 2013). Problem-focused coping (also known as active coping or task-oriented coping) describes an approach whereby the arising issues are confronted directly (Uy et al., 2013). By contrast, emotion-focused coping (including avoidance coping as one of its forms) refers to an approach that focuses on distancing oneself emotionally when encountering difficulties and finding a way of dealing with the emotional impairment caused by the issue (Ahmed et al., 2022; Uy et al., 2013). Emotion-focused coping (or avoidance coping) aims to manage and minimize emotional distress, in particular by regulating emotions (i.e., distancing from stressors), while problem-focused coping aims to objectively define the problem, analyze and solve it (i.e., by taking action to change the situation) (Ahmed et al., 2022; Engel et al., 2021; Patzelt & Shepherd, 2011; Uy et al., 2013).

Both forms of coping incorporate the natural human reaction to a threat by choosing between “flight or fight” (Hmieleski & Cole, 2022; Uy et al., 2013), which is in line with regulatory focus theory, whereby people adopt either a promotion or a prevention focus (Higgins & Pinelli, 2020). A prevention focus describes the motivation to avoid losses (i.e., maintaining the status quo), whereas a promotion focus describes the motivation to attain gains (i.e., enhancing the status quo) (Higgins & Pinelli, 2020). Interestingly, while both regulatory foci are in line with current knowledge on coping, research thus far does not take into account regulatory foci in the context of investigating coping (for exceptions, see Uy et al., 2013). Scholars emphasize that entrepreneurs predominantly act upon active coping (i.e., problem-focused strategies) (Schonfeld & Mazzola, 2015). However, the combination of both types of coping (i.e., emotion-focused and problem-focused) can be beneficial for entrepreneurs’ well-being, as both have the power to decrease negative emotions (Patzelt & Shepherd, 2011).

From a team perspective, we know that group engagement—the joint investment of emotional and psychological energy—affects teams’ well-being and further helps to prevent venture termination (Huang et al., 2019). Such joint investment can involve sharing emotions within the team and showing compassionate behavior for each other. For instance, Breugst and Shepherd (2017) add to our understanding of the importance of entrepreneurial teams when coping with negative emotions by demonstrating that social interactions with team members play a crucial role in the perception of negative emotions. Furthermore, Hmieleski and Cole (2022) suggest that shared emotional states within a team should significantly impact venture outcomes, more so than individual emotions. Ultimately, the authors emphasize the need to consider emotional hurdles and coping efforts as a team effort rather than as a solo endeavor (Hmieleski & Cole, 2022).

Individual-level entrepreneurship research on coping further emphasizes the power of compassionate behavior (e.g., self-compassion) to cope with stress and uncertainty (Engel et

al., 2021). We suggest that compassionate behavior should further be beneficial to coping in entrepreneurial teams. Thus, in entrepreneurial teams, the combination of compassionate behavior and relying on other team members in the face of environmental uncertainty could help the entrepreneurial team cope with impaired team well-being (i.e., team burnout). While the research to date suggests that team coping can offset adverse outcomes, we still don't know how entrepreneurial team coping unfolds over time and what team interactions occur in the coping process.

While entrepreneurship research currently points to the importance of coping within teams when confronted with hurdles in the venturing process (e.g., Breugst & Shepherd, 2017; Hmieleski & Cole, 2022; Patzelt et al., 2021; Sirén et al., 2020), this aspects remains under-researched in the context of coping with environmental uncertainty. With our study, we aim to explore how coping trajectories unfold in an entrepreneurial team context and particularly how teams can jointly address performance impairment and team well-being in an uncertain environment.

### **4.3 Methodology**

#### **4.3.1 Exploratory Mixed Methods Design**

To create a comprehensive picture of entrepreneurial team coping, we employed a convergent mixed methods design which involves collecting both quantitative and qualitative data simultaneously, analyzing the data with the respective methods, and integrating the findings (Creswell, 2021). While this design equally values quantitative and qualitative data, their combination allows for a more nuanced and in-depth understanding of entrepreneurial team coping (Creswell, 2021). Prior research in entrepreneurship has demonstrated the benefits of using exploratory mixed methods designs to study dynamic social processes in entrepreneurship (Desa, 2012; DiVito & Bohnsack, 2017; Webster & Haandrikman, 2020). In this study, we simultaneously collected quantitative and qualitative data during the first three

months of the COVID-19 pandemic to understand how entrepreneurial teams are affected by environmental uncertainty and how they manage it by following different coping trajectories. A quantitative analysis is useful for investigating dynamic time trends in performance impairment and team burnout. It allows us to observe how the environmental uncertainty induced by the COVID-19 pandemic affects entrepreneurial teams operationally and emotionally. Additionally, a quantitative analysis investigates how different regulatory foci influenced these trends. This is complemented by a qualitative analysis which is focused on understanding how coping trajectories evolve and how they differ between teams. Finally, the convergent perspective enabled us to provide a holistic picture of different coping trajectories, how they evolve, and how they relate to different time trends. In this vein, we take a three-step approach: (a) presenting the measures and analytical procedure of the quantitative part, (b) presenting the interviews and analytical procedure of the qualitative part, and (c) converging the results of both analysis steps.

### **4.3.2 Sample**

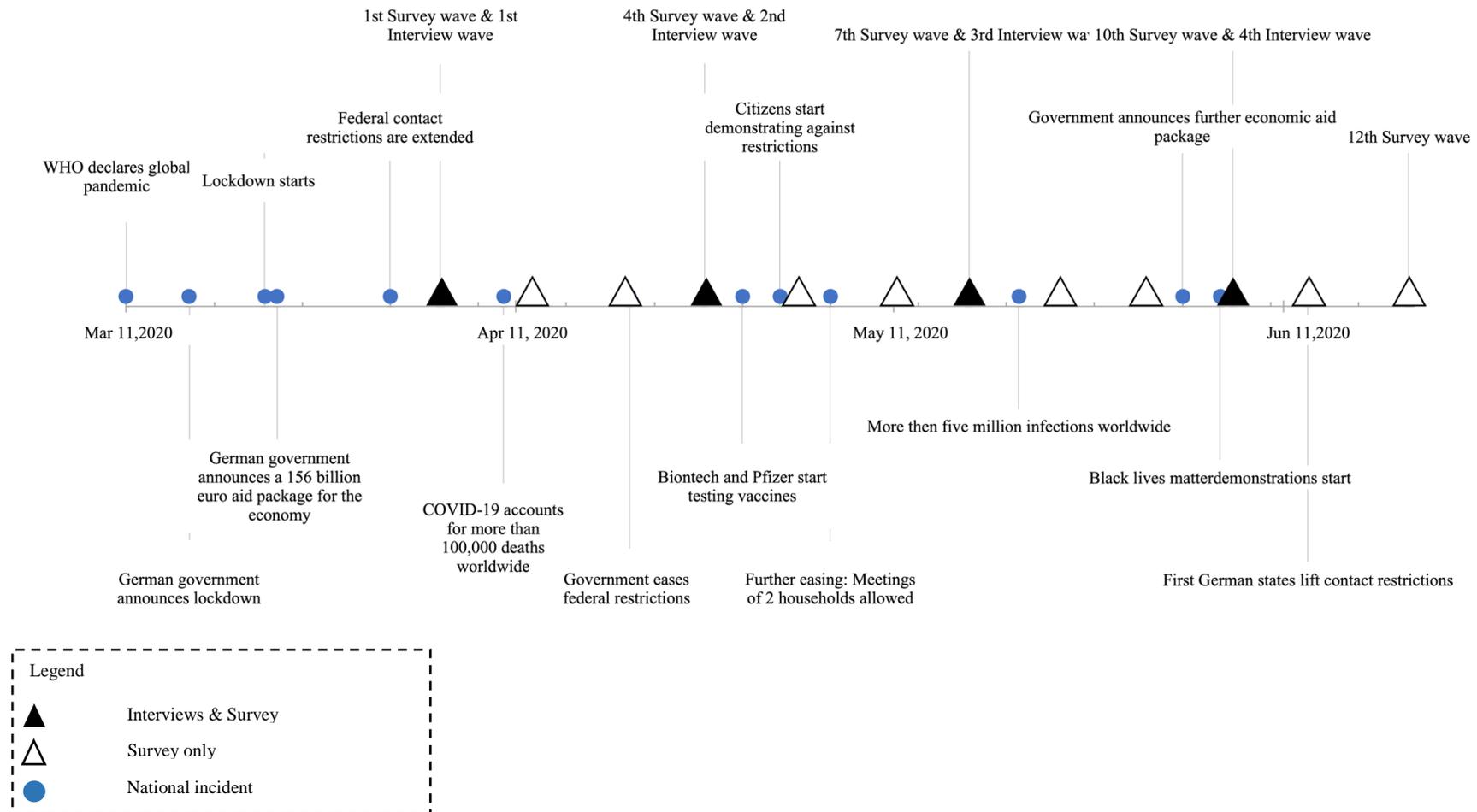
The data was collected via a weekly survey (N = 35 teams with a total of N= 671 team-time-observations) and four waves of qualitative interviews with 25 teams (resulting in a total of N=88 interviews) at the beginning of the COVID-19 pandemic in Germany (from April 5 until June 22, 2020). In the sampling process, we first screened online databases (i.e., databases from universities and privately-run platforms that provide an overview of operating startups such as startbase) on currently operating entrepreneurial teams. Further, we identified entrepreneurial teams in the incubator program of two of the authors' universities and their broader networks. As a result, we contacted 101 teams via phone or e-mail. After the initial contact with potential participating teams, we sent them an e-mail containing a leaflet with further information on the study and on the benefits of participating. As an incentive, the teams were offered a team assessment regarding their development (e.g., performance indicators,

emotional state) to take place after the data collection process. Since we followed an exploratory approach, we added team burnout as a further construct to our survey in the fourth wave, as the qualitative interviews indicated a substantive impact of the COVID-19 pandemic on the impairment of team well-being. The members of the entrepreneurial teams were, on average, 30.70 years old ( $SD = 4.68$ ), and 40% were female. The average team size was 2.67 ( $SD = 1.06$ ). All participating teams are start-up teams with an average tenure (i.e., years working together) of 1.87 ( $SD = 1.21$ ). On average, the entrepreneurial ventures had 2.85 employees ( $SD = 6.00$ ). Of the participating team members, 34% had prior experience in founding a venture in an entrepreneurial team.

### **4.3.3 The Context: The Role of the COVID-19 Pandemic**

The COVID-19 pandemic had unexpected and unprecedented consequences for the economy and the well-being of people (Kuckertz et al., 2020). Given the rapid spread of COVID-19 infections, the German federal government announced the first and strictest nationwide lockdown on the March 16 2020, which started a week later. The government closed the borders, announced travel warnings for several countries, and closed restaurants, service businesses with close contact with the customer (e.g., hairdressers), and public facilities (e.g., kindergartens and schools). Remote working was recommended by the government, and social distancing measures were introduced, the latter to limit the contact of citizens with members of the same household in the private sphere, which affected people's social life. The federal government enacted all rules initially for two weeks and prolonged them in a stepwise process. On the May 4 2020, the government decided to lift the restrictions slowly. By April 2020, the infection rates had increased to 100,000, compared to the first registered infection on the January 27 2020 (Fazit Communication GmbH, 2022; Tagesschau, 2020). Figure 4 depicts the development of the COVID-19 pandemic.

**Figure 4.** *The COVID-19 Pandemic in Germany & data collection time frames*



#### 4.3.4 Quantitative Measures and Analytical Procedure

To build a base for our understanding of entrepreneurial team coping, we first analyzed trends in teams' performance impairment and burnout in the course of the pandemic. To do so, we sent each member of the team a weekly survey. It consisted of questions about demographic variables (about their team and the respective team member) and variables measuring perceived performance impairment and team burnout (Appendix 8.3.1). After investigating the time trends, we explored plausible explanations for the differences in teams' performance impairment and burnout both quantitatively and qualitatively. In the quantitative analysis, we analyzed the role of regulatory foci (i.e., prevention and promotion focus), which have been recognized as vital drivers of how individuals and teams pursue goals and make decisions (Higgins & Pinelli, 2020).

We measured performance impairment with five items of a self-developed index tailored to the COVID-19 pandemic. The response format varied with the respective question. For instance, for the item "How has the Corona crisis affected your customers so far?", we used a 7-point scale ranging from 1 ("we added new customers") to 7 ("we lost customers"), whereas for "How much are you currently struggling with sales losses?", we used a 7-point scale ranging from 1 (not at all) to 7 (very strongly). Agreement and reliability measures for performance impairment (mean values across time) were: ICC (1) = .53, ICC (2) = .94, M rwg = .78. The mean alpha reliability coefficients were .79 (min = .70; max = .90).

We measured team burnout with three items by Bride et al. (2007) adapted to a) the team level and b) the weekly (i.e., non-trait) level; the response format was a 7-point scale ranging from 1 (does not apply at all) to 7 (applies completely). The measure is based on the overall question of how the teams felt in the last week. An example was, "My team has felt depressed as a result of our work." Agreement and reliability measures for team burnout (mean

values across time) were: ICC (1) = .51, ICC (2) = .91,  $M(rwg) = .83$ . The mean alpha reliability coefficients were .66 (min = .45; max = .88).

We used the Neubert et al. (2008) scale to measure *regulatory foci*. In this regard, *promotion focus* was measured with two items on a 7-point scale ranging from 1 (never) to 7 (very frequently). An example was, “We are taking risks right now to maximize our chances of success.” *Prevention focus* was likewise measured with two items. An example was, “We are currently doing everything we can to reduce losses.” Agreement and reliability measures for promotion focus (mean values across time) were: ICC (1) = .49, ICC (2) = .94,  $M\ rwg = .82$ . The mean alpha reliability coefficients were .50 (min = .34; max = .61). The values for prevention focus also proved to be acceptable: ICC (1)= .39, ICC (2)= .91,  $Mrwg = .76$  (Cho & Kim, 2015; LeBreton & Senter, 2008). The mean alpha reliability coefficient was .55 (min = .34; max = .79).

We further included control variables in our measurements. Specifically, we controlled for the teams’ average gender, as research shows that it influences entrepreneurial teams’ outcomes (Lyngsie & Foss, 2017). In this vein, we further included team size as a control variable (Ensley et al., 2002). Lastly, we controlled for the teams’ tenure (i.e., how long the team had been working on their venture together) to rule out any biases regarding the outcomes that might be based on the ventures’ stage, progress, or relationships within the team (e.g., Klotz et al., 2014; Lazar et al., 2021).

As a longitudinal design requires substantial effort from the participating parties, especially in a crisis, not all startups participated in all 12 waves. Of the 35 teams, 16 participated in all 12 waves, and an additional 14 teams participated in at least half of the waves. However, we did not exclude any teams since implementing a multilevel model allows us to utilize information from richer trajectories to estimate trajectories for startups with a substantial number of missing observations (Suk et al., 2019).

For the quantitative data, we conducted two kinds of analyses. The first focused on analyzing nonlinear, dynamic time trends of performance impairment and team burnout separately for each team to understand the specific shapes of the teams' trajectories. In the second analysis, we applied generalized additive mixed models (i.e., GAMMs, McKeown & Sneddon, 2014; Wood, 2017) to the overall sample to analyze to what extent regulatory foci might provide insights into how entrepreneurial teams manage performance impairment and team burnout. Analogous to traditional multilevel modeling, GAMMs allow disentangling between-team differences from within-team effects. Whereas traditional approaches to modeling nonlinear relationships or trajectories focus on polynomial functions (e.g., square or cubic functions), a generalized additive model is more flexible and does not require a prespecified functional form. The nonlinear trajectory is estimated from the data, and a penalty is embedded to avoid overfitting and to maximize out-of-sample generalizability.

We built the model via traditional approaches: First, we compared a model with a nonlinear trend as the predictor with a model with a linear trend as the predictor. We investigated the models in terms of the Akaike Information Criterion (i.e., a measure that considers the models' quality of fit and the number of parameters used; AIC) and Pseudo-R<sup>2</sup> (i.e., how well the models explain the variation in the dependent variable) to assess the best fitting model. For performance impairment, the various models resulted in a best-fitting model showing a linear average trend but significant team differences in the functional form (i.e., the random curve model). By contrast, for team burnout, we selected the random slope model. Second, the superior model in terms of the AIC and Pseudo-R<sup>2</sup> was further developed by adding a) random intercepts (i.e., individual team trends were allowed to vary around the average trend in their level), b) random slopes (i.e., team trends were allowed to vary in their relationship between predictor and outcome variable), and c) random curves (i.e., the team trends were allowed to vary regarding the functional form, that is, creating the option for team trends to be

of varying degrees of nonlinearity). Third, we compared these models using the AIC and Pseudo-R<sup>2</sup>. Fourth, we used the most appropriate model to add promotion focus and prevention focus as predictors of the differences in level, slope, or functional form. These models estimated nonlinear main effects for prevention and promotion focus and their interaction with the time trend.

#### **4.3.5 Qualitative Interviews and Analytical Procedure**

For the interviews, we used an interview guide that asked participants about their experiences of the last three weeks (e.g., “What has changed in your everyday life as a founding team in the last three weeks?”; “What challenges have you faced as a team in the last three weeks and how did you manage to overcome them?”). The average duration of the interviews was 30 minutes, with 8 minutes being the shortest interview and 70 minutes the longest. Five co-founders dropped out of the interview cycles (two after the first round, two after the second round, and one after the third round of interviews). In total, our data set comprised 88 interviews from 25 entrepreneurial teams, with a total duration of 44.2 hours. Due to the restrictions regarding face-to-face meetings that came along with the containment of the COVID-19 pandemic, all interviews were held online and recorded using either Zoom, Skype, or Microsoft Teams. Before conducting the interviews, we asked for the consent of all participants for the interviews to be recorded for research purposes.

In the qualitative analysis, we examined the teams’ operational activities and their emotional experiences to elicit their coping trajectories during the first 12 weeks of the COVID-19 pandemic. Applying an inductive analysis logic (Gioia et al., 2013), we used open coding to explore performance-related coping behavior (e.g., strategic adaptations, the teams’ perception of opportunities and threats due to the pandemic) and internal team dynamics (e.g., team emotional experiences, interactions) more broadly. For example, we summarized similar statements such as “being overwhelmed,” “fear of the future,” and “this is, unfortunately, the

new normal” into the second-order theme *awareness of negative emotions* (Appendix 8.3.2, 7.3.3). After the initial coding, we iterated the coding among the team of authors and further informed the analysis with relevant research.

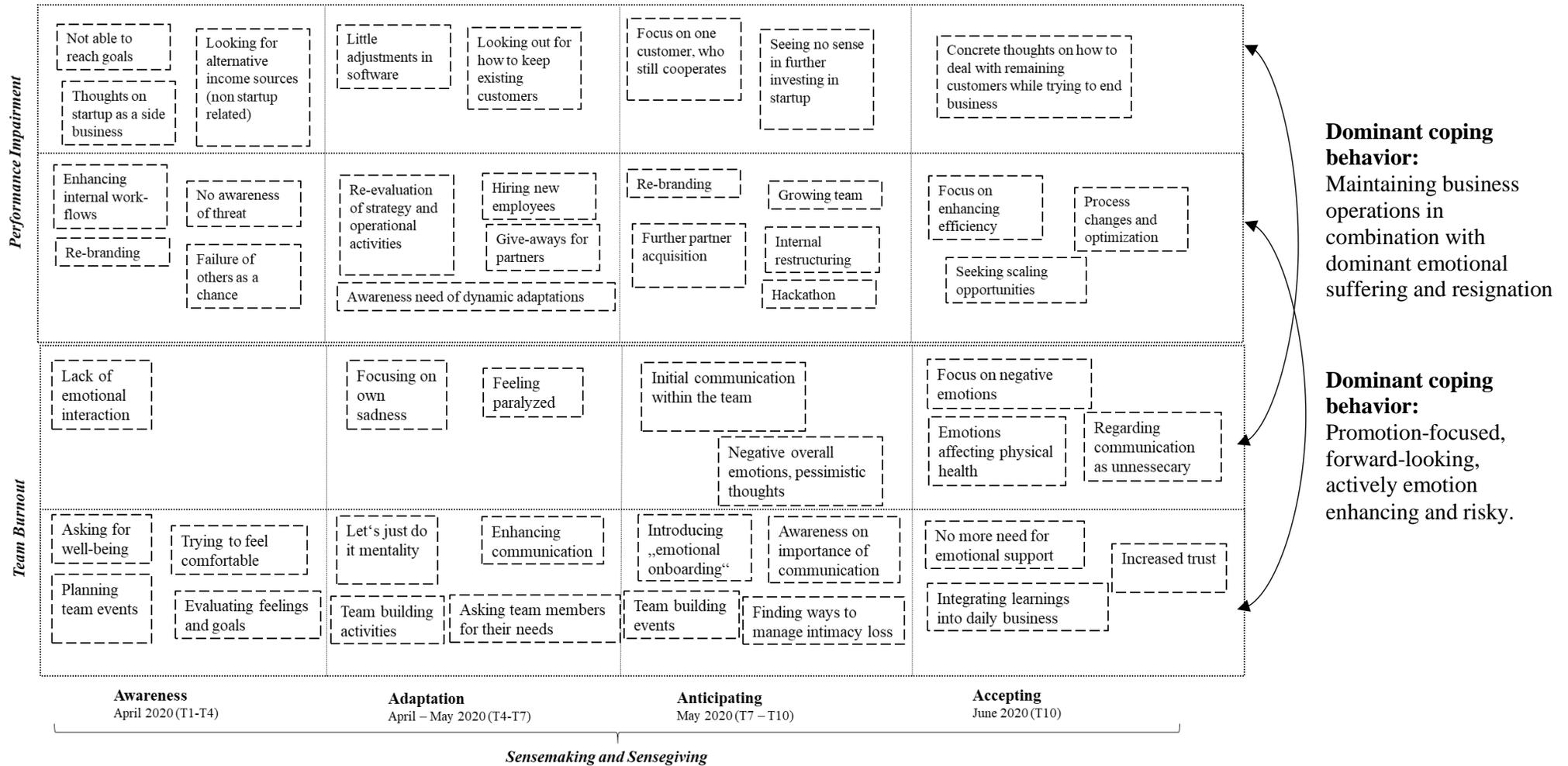
We then aggregated six second-order themes through axial coding into the categories of *active coping*, *avoidance coping*, and *sensemaking and sense-giving*, capturing operational elements of coping trajectories. Previous findings on entrepreneurs’ coping behavior inform this analysis by explaining that individuals opt for different methods to cope with uncertainty by either engaging in active coping or avoidance coping (Ahmed et al., 2022; Hmieleski & Cole, 2022). While the categories of *identifying new business opportunities* and *pivoting the business model* are in line with an orientation towards active coping (i.e., enhancing the status quo), the categories of *working on business maintenance and survival* and *focusing on retaining existing customers* are in line with an orientation towards avoidance coping (i.e., maintaining the status quo). The category of sensemaking and sense-giving reflects the teams’ cognitive understanding of the environmental uncertainty induced by the crisis. As a result of our analysis, we find the themes *developing awareness of the crisis* and *understanding the crisis* as forming the basis of how the teams’ perception of the dynamics of environmental uncertainty evolves. Specifically, we observe changes over time in how the teams perceive the level of environmental uncertainty and how they relate that level to upcoming challenges for their ventures. These observed changes in the perception of environmental uncertainty are in line with research on environmental uncertainty, which suggests that environmental uncertainty is an ongoing threat to entrepreneurs and that its perception has to be examined dynamically since it is subject to fluctuations over time (Schmitt et al., 2018). Ultimately, the theoretical category of *sensemaking and sense-giving* reflects how the teams plan their future operations, accept that the situation has become permanent, and represents the “new normal.”

Informed by the literature on the role of emotions in management and entrepreneurship (R. A. Baron, 2007; De Cock et al., 2019; Gagnon & Monties, 2023; Ivanova et al., 2022; Uy et al., 2017), six second-order themes were meaningfully aggregated as *interpersonal emotion regulation*, *intrapersonal emotion regulation*, and *team compassion*, capturing aspects of psychological well-being. While *awareness of negative emotions* and *communicating personal emotions and struggles with team members* describe interpersonal emotion regulation, *venting and focusing on own needs* and *dealing with personal emotional distress* express intrapersonal emotion regulation. The themes *engaging in team-building activities* and *building team empathy* capture the activities and efforts aimed at increasing team compassion.

#### **4.3.6 Convergent Analysis**

In a final analytical step, we converged the quantitative and qualitative results to examine how teams coped with the effects of the uncertain environment during the COVID-19 pandemic. The convergent analysis allowed us to explore how the teams encountered the dynamics in terms of performance impairment and team burnout with different operational as well as emotional activities. We did so by applying temporal bracketing (Langley, 1999) to analyze the presence and dominance of the first-order codes and respective second-order themes (e.g., active coping, understanding the crisis, awareness of negative emotions) for each team across the three-month-long entrepreneurial journeys (Figure 5). By doing so, we identified differences in how entrepreneurial teams coped with uncertainty. In the next convergent analysis step, we further merged the results with the quantitative findings regarding the time trends in performance impairment and team burnout and the results regarding the interactions of performance impairment and team burnout with regulatory foci.

**Figure 5.** *Convergent analysis of quantitative & qualitative data*



## 4.4 Findings

### 4.4.1 Entrepreneurial Teams under Environmental Uncertainty

To understand how teams were affected by the pandemic-induced environmental uncertainty, we present the findings of analyzing the trends in performance impairment and team burnout within the teams, the dynamics across teams, and the effects of regulatory foci. The means, standard deviations, and correlations of the study variables included in our analysis are represented in Table 11. First, we visualized and, thus, explored the linear trends of performance impairment and team burnout across time for each entrepreneurial team to learn about their overall development in the pandemic. Figure 6 shows the nonlinear time trends. The results imply that teams were differently affected by environmental uncertainty. In addition, we estimated linear trends to analyze the overall trajectory underlying a team's progress or decline (see Appendix 8.3.4 for the complete list of team-specific linear trends). For performance impairment, we observed six significant negative and eight positive trends, while for team burnout, we observed 13 significant negative and only two positive trends (Appendix 8.3.4).

Second, we formally tested these illustrated trends by estimating generalized additive mixed effect models (GAMM) that provide fixed (i.e., average) effects for linear vs. nonlinear time trends, in addition to random effects to address the cross-teams variances in level, trends, and the functional form (i.e., linear vs. nonlinear trends). Regarding the time trend, we found a significant negative time trend for performance impairment ( $B = -.05, p < .01$ ), indicating an overall decrease in performance impairment over time (Table 12). Thus, on average, teams seem to succeed in their coping trajectories. While there was no overall significant trend for team burnout ( $B = -.03, p > .05$ ), the significance of the random curve component reveals a different degree of increases and decreases in team burnout across time. Thus, depending on the observed week, the change in team burnout differed.

**Table 11.** Means, Standard Deviations, and Correlations Among Study Variables

Variable	M	SD	1	2	3	4	5	6
1. Performance impairment	3.41	1.01						
2. Team burnout	3.32	1.14	0.23**					
3. Prevention focus	4.14	1.13	0.46**	0.03				
4. Promotion focus	4.40	1.06	-0.02	0.04	0.18**			
5. Tenure (in years)	1.87	1.21	0.03	0.02	0.11*	0.26**		
6. Percentage of females	0.40	0.35	0.10	0.01	-0.04	-0.24**	-0.03	
7. Team size	2.67	1.06	0.10	0.07	-0.09	0.38**	0.25**	0.08

Note.  $N = 35$  entrepreneurial teams across 12 survey waves

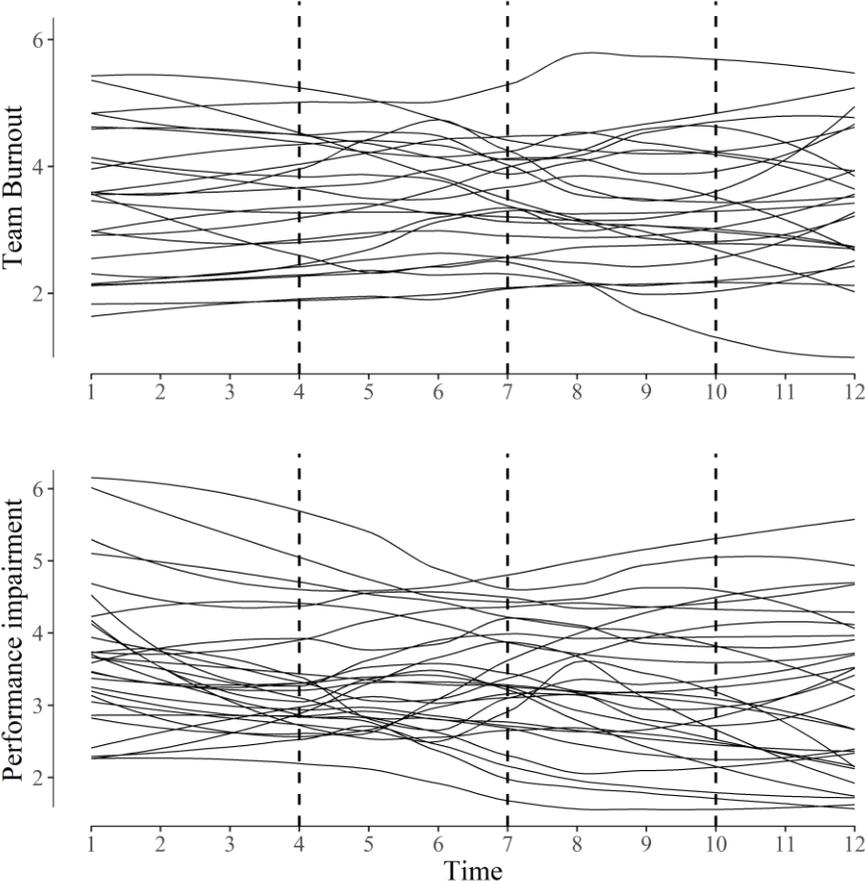
\*  $p < .05$ . \*\*  $p < .01$ .

**Table 12.** Baseline Time Trend Models

	Linear trend model	Random intercept model	Random slope model	Random curve model
<i>Perceived business impairment</i>				
Linear trend <sup>a</sup>	-.05**	-.04**	-.04**	-.05**
Random intercept <sup>b</sup>		34.74***	31.62***	
Random slope			21.37***	
Random curve <sup>c</sup>				82.11***
Pseudo-R <sup>2</sup>	2.79%	68.60%	74.60%	78.20%
AIC	961.46	611.94	558.08	530.08
ΔAIC		349.52	53.86	28.00
<i>Team burnout</i>				
Linear fixed trend	-.03	-.01	-.01	-.03
Random intercept		32.40***	25.77**	
Random slope			16.17**	
Random curve <sup>a</sup>				56.89**
Pseudo-R <sup>2</sup>	0.00%	69.80%	72.70%	73.10%
AIC	767.32	502.85	488.2	494.06
ΔAIC		264.47	14.65	-5.86

Note. <sup>a</sup>Coefficients are linear regression coefficients; <sup>b</sup>Coefficients are effective degrees of freedom (EDF) analogous to variance components in traditional multilevel models; <sup>c</sup>The random curve model implies random intercepts and slopes; AIC = Akaike Information criterion (smaller values indicates better fit); ΔAIC = difference to the former model.

**Figure 6.** *The development of the team burnout and performance impairment over time*



Third, we investigated the role of promotion focus and prevention focus, respectively, for performance impairment and team burnout over time (Table 13). We included time and the predictors (i.e., promotion and prevention focus) as main effects and predictors  $\times$  time as interactions. In addition, we added several control variables (i.e., average tenure, percentage of females, and average team size). Entering prevention and promotion focus as predictors in separate models (i.e., models 1 and 2) showed a significant curvilinear main effect of promotion focus for performance impairment (EDF = 2.984,  $p = .003$ ) but no interaction with time (EDF = 1.001,  $p = .567$ ). Thus, promotion focus showed a curvilinear relationship with performance impairment, with medium levels showing up to be most detrimental for the impairment variable. Prevention focus, by contrast, showed a positive linear relationship. Concerning team burnout, the evidence did not strongly support that regulatory foci play a role in explaining the

differences across teams in their trends (Table 14). Overall, the quantitative results imply differences across the entrepreneurial teams and reveal that regulatory foci do play a role in explaining differences in the teams' performance.

**Table 13.** *Perceived performance impairment as the dependent variable*

	Model 1		Model 2	
	B	p	B	p
<i>Linear part of the model</i>				
Time	-0.050	.069	-0.054*	0.030
Average tenure	0.020	.850	0.020	0.840
Percentage of females	0.210	.567	0.430	0.160
Average member age	-0.007	.800	-0.022	0.360
	EDF	p	EDF	p
<i>Nonlinear part of the model</i>				
Promotion focus	2.894	.003**		
Promotion focus x time	1.001	.567		
Prevention focus			1.000	< .001***
Prevention focus x time			1.000	0.280
<i>Random effects</i>				
Random curve	75.20	< .001***	73.92	< .001***
Pseudo-R <sup>2</sup>	78.40%		78.10%	

*Note.* EDF = effective degrees of freedom, indicates the amount of wigglyness of a curve. EDF=1 indicates a straight line; § p < .10, \*p < .05, \*\*p < .01, \*\*\*p < .001

**Table 14.** *Team burnout as the dependent variable*

	Model 1		Model 2	
	B	p	B	p
<i>Linear part of the model</i>				
Time	-0.010	0.633	-0.015	0.457
Average tenure	0.074	0.682	0.153	0.349
Percentage of females	0.531	0.410	0.631	0.281
Average member age	-0.070	0.156	-0.082	0.071
	EDF	p	EDF	p
<i>Nonlinear part of the model</i>				
Promotion focus	1.000	0.747		
Promotion focus x time	2.233	0.078		
Prevention focus			2.796	0.195
Prevention focus x time			2.863	0.128
<i>Random effects</i>				
Random intercept	23.403	< .001***	21.083	< 0.001***
Random slope	15.240	< .001***	13.921	0.006**
Pseudo-R <sup>2</sup>	73.50%		0.731	

*Note.* EDF = effective degrees of freedom, indicates the amount of wigglyness of a curve. EDF=1 indicates a straight line; <sup>§</sup>p < .10, \*p < .05, \*\*p < .01, \*\*\*p < .001

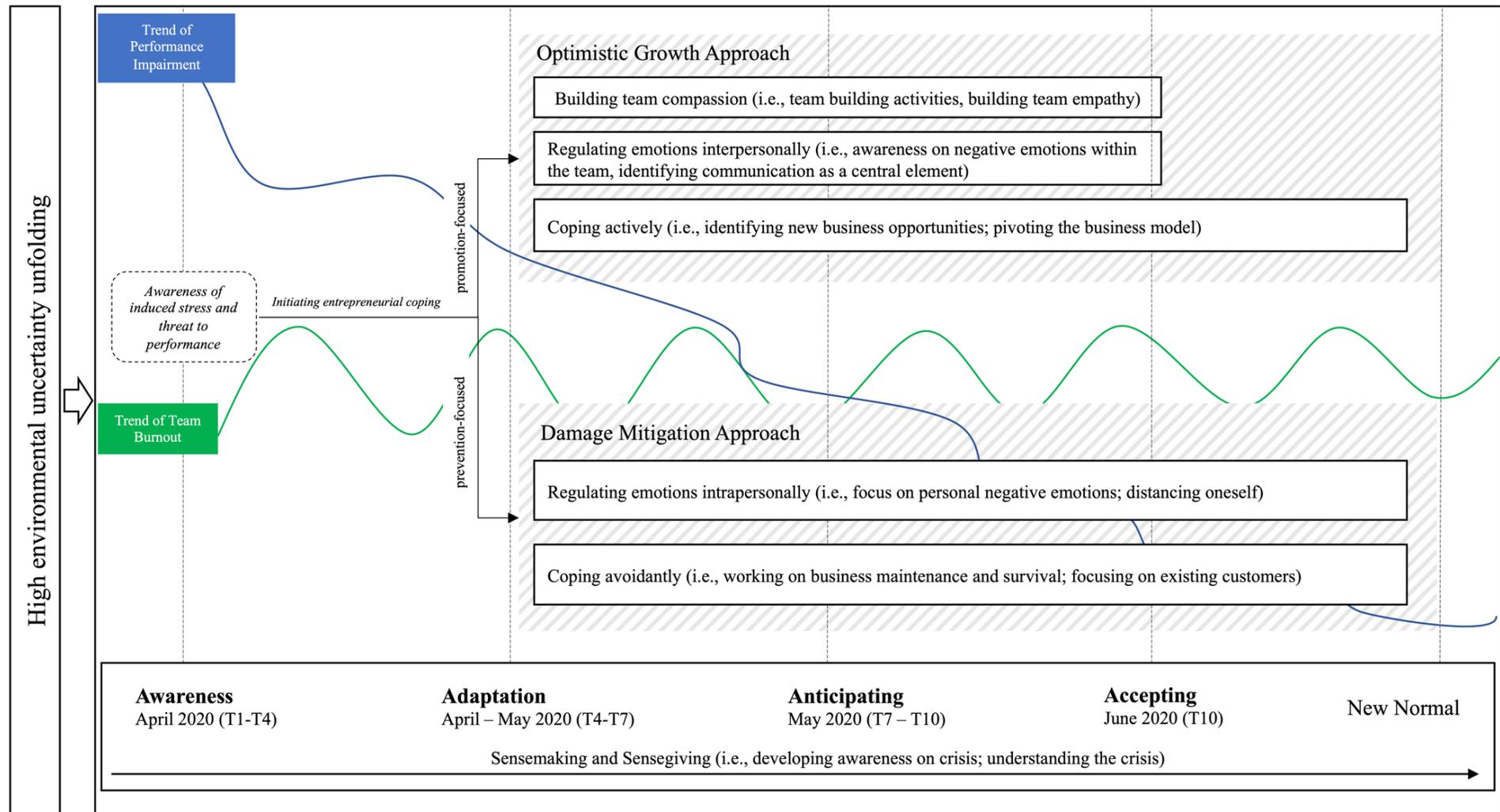
#### 4.4.2 Different Entrepreneurial Team Coping Trajectories

As the quantitative analysis revealed significant differences between teams, we explored how teams approached environmental uncertainty in terms of operational and emotional activities, respectively. Thus, we qualitatively analyzed our interview data with a focus on how team coping trajectories affected performance impairment and team burnout and converged the quantitative results on regulatory foci and qualitative findings to develop a framework for entrepreneurial team coping. This process allowed us to identify two different trajectories of entrepreneurial team coping: (1) the *optimistic growth trajectory* and (2) the *damage mitigation trajectory*. Based on our convergent data analysis, we can explain how and why the two coping trajectories differ in terms of overcoming operational and emotional hurdles, as most teams

became increasingly conscious of the pandemic's psychologically harmful and demotivating effects.

The two trajectories differed in the focus of their inherent motivations. Teams that had followed an *optimistic growth trajectory* acted upon gain-focused motives. By contrast, teams that followed a *damage mitigation trajectory* acted upon non-loss-focused motives. This fits the understanding of the role of regulatory foci (Higgins, 1997; Higgins & Pinelli, 2020). Teams who follow the optimistic growth trajectory act in a more promotion-focused manner, which implies a more positive outlook, i.e., focusing on achievement, growth, and positive outcomes (Crowe & Higgins, 1997), whereas entrepreneurial teams following the damage mitigation trajectory seemed to rely on a prevention focus which implies taking responsibility, establishing safety, and securing the status quo (Higgins & Pinelli, 2020). In the following, we explain the two coping trajectories in detail. As a summary, Figure 7 displays the general time trends and the different foci in both coping trajectories.

**Figure 7.** *Converging quantitative and qualitative results to entrepreneurial team coping trajectories*



*Note.* The quantitative results reveal a significant negative time trend for performance impairment ( $B = -.05, p < .01$ ) and no overall significant trend for team burnout ( $B = -.03, p > .05$ ). However, the significance of the random curve component reveals a different degree of increases and decreases in team burnout across time. The depicted timetrends do not display the measured timetrends, but are adapted for illustrative purposes. For the measured timetrends see Figure 3.

#### 4.4.3.1 The Optimistic Growth Coping Trajectory

On the one hand, some entrepreneurial teams showed optimistic growth coping as they combined business growth aspirations coupled with risk-seeking behavior, and generally displayed a positive emotional attitude toward their future business development. These teams acted in a promotion-focused way not only on their business operations but also regarding the teams' emotional needs, in particular, the teams' well-being. In this regard, they put additional effort into interpersonal emotion regulation by emphasizing the need for communication and focusing on joint team activities to enhance team compassion. In the following, we provide evidence for our key findings that promotion focus is in line with a reduction in performance impairment and that interpersonal emotion regulation and team compassion is in line with a decrease in team burnout.

##### *Performance Impairment Effects*

Identifying new business opportunities and pivoting the business model was central to all teams that focused on *active coping* when dealing with pandemic-induced environmental uncertainty. Teams following this coping trajectory think about opportunities resulting from the crisis, which may positively impact their overall business operations; for example, one team concentrated on enterprise rebranding: “We have launched a complete rebranding [...]. Well, really, with a new logo, with a new design [...]. Now we are just in the process of the wholesale replacement of old documents, old merchandise [...].” Those teams start experimenting with alternatives more quickly and position themselves accordingly on the market:

Of course, it's also a chance for us to be among those who are still alive, who won't go bankrupt in the next two months or so and have to say, “poof, yes, it went badly with Corona. It simply destroyed us.” [...] Then, of course, investors continue to look for good investment opportunities. And you know that people also invest in times of crisis. That means there is also another chance for us to position ourselves well again to be more interesting in further investment rounds, which we are already planning. (B14)

These teams reflected an optimistic attitude and acted promotion-focused despite the increasing awareness of the adverse effects that the pandemic might have on overall business operations.

This is also supported by the results of the quantitative analysis that show that teams with high levels of promotion focus are more likely to have a lower degree of performance impairment (EDF = 2.984,  $p = .003$ ) (Table 13). The teams' operational activities (e.g., hiring new employees, rebranding the business, moving into new offices) and their orientation towards pivoting, adapting, and scaling their business underpin the teams' strong promotion-focused motivation towards the enhancement of their status quo:

Well, one considers each week again to what extent the strategy [...] is still valid compared to the week before. Now and then, changes, adjustments are needed. Still, it is part of our daily business to evaluate the situation over and over again and to really include changes in the further development of the business. (Team B14)

#### *Well-being Effects*

Although a positive, optimistic attitude characterizes the entrepreneurial coping trajectory, these teams were aware of the pandemic-induced stress and psychological challenges affecting team members' well-being. They showed *interpersonal emotion regulation* and *team compassion*. These teams creatively adjusted current business practices to tackle the emotional threat. While they showed high levels of promotion focus in their activities, they also supported their promotion-focused behavior with active engagement in measures to address the pandemic-induced psychological threat. We suggest that the combination of promotion-focused activities, interpersonal emotion regulation, and team compassion helped in explaining the dynamics of team burnout, and specifically, why teams that were more clearly promotion-focused firstly experienced an increase in burnout, which lasted until interpersonal emotion regulation and team compassion was introduced to help them cope better.

Teams that followed the optimistic growth coping trajectory purposively displayed and further tried to enhance team compassion by engaging in team-building activities, such as online gatherings, online team quizzes, and sending packages with food and beverages to team members. Entrepreneurial teams also developed greater team compassion by promoting a sense of team empathy. For instance, team A14 started sharing emotional needs, despite the lack of

face-to-face interactions and the focus on online meetings. They started talking about personal circumstances like child care and personal struggles during the pandemic, spurring team solutions like meeting at different times (e.g., in the evenings), offering to take additional vacations, and taking over each other's responsibilities to free up time for personal issues and to work through emotions. These empathic actions show an ability to meet the entrepreneurial team's needs and to adjust to the demanding changes in team members' private lives.

Additionally, our findings show that team members strategically included interpersonal emotion regulation in their coping by building internal awareness of stress and strain, i.e., negative emotions affecting work, as this quote shows:

I asked myself the question, what is my role in the team? And how can I get involved in the best possible way with the skills I have now? [...] There was always a conflict in me, a field of tensions. (Team B26)

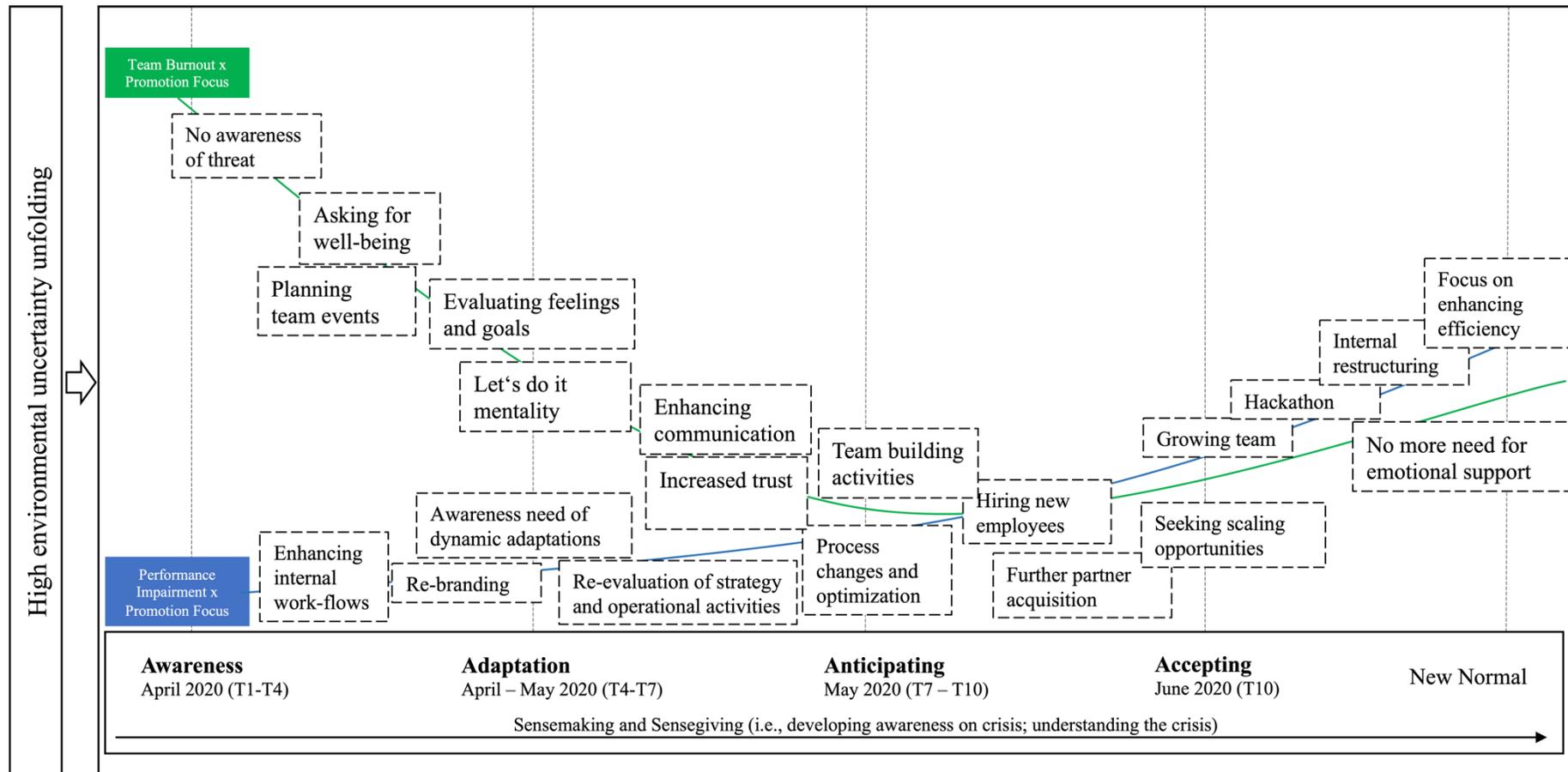
The need for enhanced internal communication became critical for emotion regulation:

So even if, perhaps, or at the beginning, it's generally rather unpleasant for me when the discussion gets a bit livelier. But that's also good. Everyone has different views, and they can also be valuable in finding common ground. That's why it's good that there's room for discussion. If someone doesn't like something, he can say so, and we can also exchange ideas with each other. Maybe there will be a conflict, but that's a good sign that there's something that should be discussed more. (B26)

### *Temporal Development*

Our convergent analysis shows that optimistic growth coping emerges as a *promotion-focused trajectory* whereby entrepreneurial teams actively deal with the emotions arising within the team, and conduct performance-enhancing activities. As a result of the convergent analysis, Figure 8 shows the interaction of promotion focus with performance impairment, and promotion focus with team burnout over a three-month-long period, combined with an illustration of how the teams deal with the pandemic-induced environmental uncertainty. We find that teams apply *sensemaking* and *sense-giving* to develop an awareness of the pandemic's effects on their business. Initially, as the teams are not yet aware of the business risks, they only highlight the loss of valuable information flows due to limited personal contacts (at t0).

**Figure 8.** *The optimistic growth coping trajectory*



*Note.* The quantitative results reveal a significant a significant curvilinear main effect of promotion focus for performance impairment ( $EDF = 2.984, p = .003$ ) but no interaction with time ( $EDF = 1.001, p = .567$ ). As for the interaction of promotion focus with team burnout the quantitative results reveal a marginally significant interaction ( $EDF = 2.23, p = .078$ ). The results show tentative contrasting ups and downs in the time trend according to high versus low levels of promotion focus. That is, teams with a low promotion focus started with a higher level of burnout, which then decreased over time. The depicted results do not display the measurements, but are adapted for illustrative purposes. For the quantitative results in detail see Figures 6 and 7 and Tables 3 und 4.

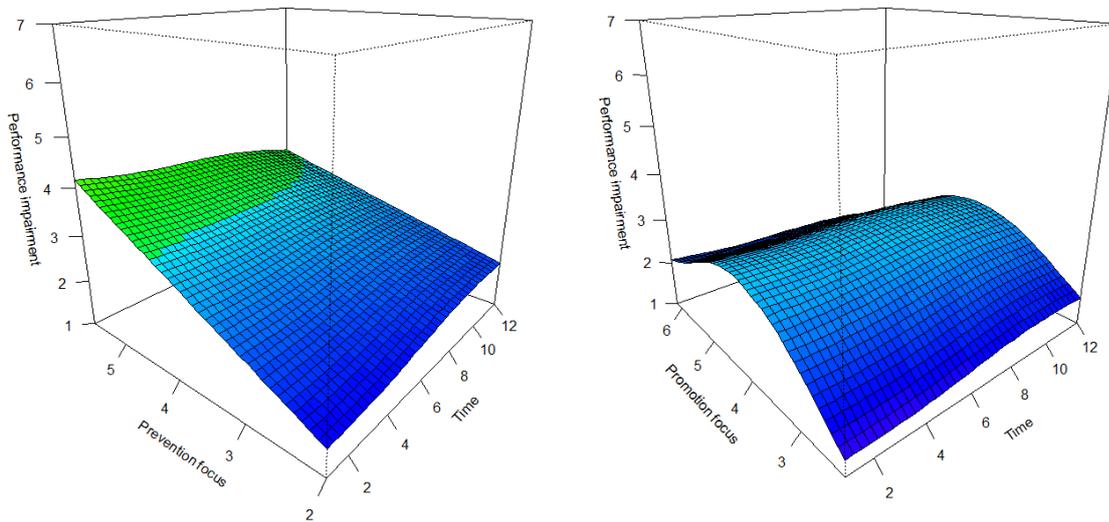
Over time the teams on an optimistic growth coping trajectory adjusted their activities according to the uncertainty they experienced. Environmental uncertainty was high at the beginning of the pandemic. Hence, the teams made an effort to understand the effects that come along with the uncertain environment. As a result, they emphasized activities aimed at adapting to the crisis and to enhance their business operations while taking care of their team members in a compassionate manner. Due to the efforts expended on team compassion and team emotion regulation, the teams became more cognizant of the dynamics of the pandemic (at t4 and t7) and soon realized the need—in the long run—to make operational and promotion-focused adjustments, alongside those managing emotional well-being (mainly at t7). Hence, the teams' awareness of pandemic-induced business risks increased over time but without entailing any threats (e.g., financial losses, a loss of customers, emotional deficiencies).

Lastly, as the pandemic-induced uncertainty decreased, these entrepreneurial teams also decreased their efforts invested in team compassion and interpersonal emotion regulation, while maintaining a promotion-focused mindset and trying to enhance their status quo. At that point, entrepreneurial teams reduced their team compassion activities, as they regarded it as no longer justified in terms of time and resources. In turn, this demonstrates that organizational processes and practice adaptations become part of new daily business routines. Within three months, sense-giving led to making substantial business adjustments and regarding the pandemic as “the new normal.”

While our results do not show any time effects between promotion focus and performance impairment, the results reveal a significant interaction between them. Figure 9 shows the form of the nonlinear role of promotion focus, indicating that both low and high levels of promotion focus were associated with a lower degree of impairment. In contrast, moderate levels of promotion focus were associated with a higher degree of performance impairment. Concerning the development of the teams' well-being, we found only a marginally significant interaction

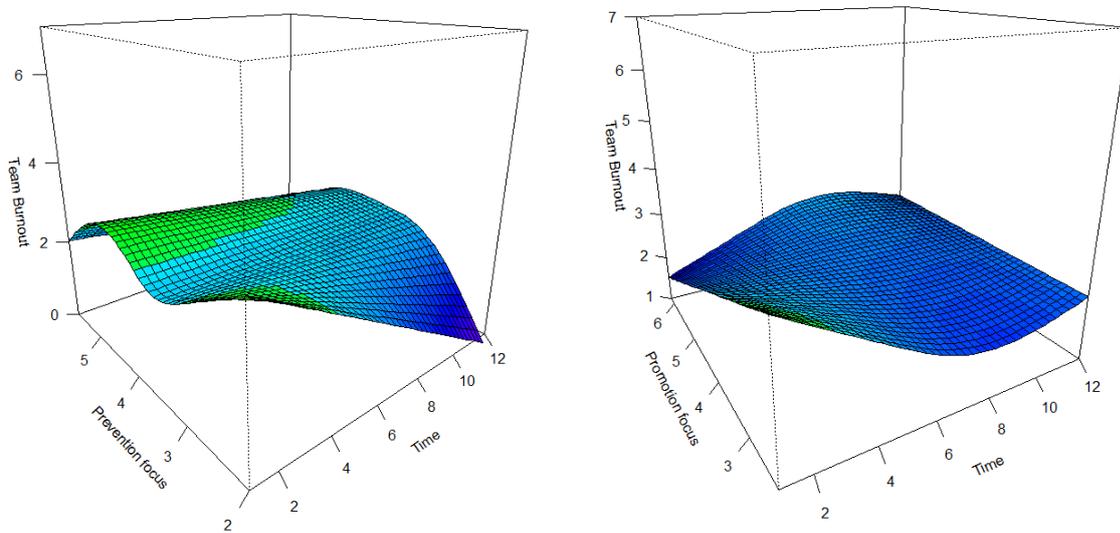
effect for promotion focus ( $EDF = 2.23, p = .078$ ; Table 14), which means that the teams' interpersonal emotion regulation practices were more important than their regulatory focus. Teams that were high in promotion focus started with a lower level of burnout. However, burnout then dynamically increased over time and ultimately decreased again (Table 14 and Figure 10). The dynamic evolution of team burnout paralleled the dynamics of the uncertainty to which teams were exposed, whereby uncertainty initially dynamically in- and decreased until teams got used to the uncertainty.

**Figure 9.** Relationships between self-regulatory predictors and the time trend in perceived performance impairment (left: prevention focus, right: promotion focus)



**Note.** The left figure depicts a strongly significant linear effect of prevention focus for performance impairment (indicated by the  $EDF = 1, p < .001$ ). The right figure shows a significant curvilinear main effect of promotion focus for performance impairment ( $EDF = 2.984, p = .003$ ) but no significant interaction with time ( $EDF = 1.001, p = .567$ ).

**Figure 10.** Relationships between self-regulatory predictors and the time trend in team burnout (left: prevention focus, right: promotion focus)



*Note.* The left figure depicts a nonsignificant interaction between prevention focus and team burnout. The right figure shows a marginally significant interaction between promotion focus and team burnout ( $EDF = 2.23, p = .078$ ). The interaction of promotion focus and team burnout reveals the contrasting ups and downs in the time trend according to high and low levels of promotion focus.

#### 4.4.3.2 The Damage Mitigation Coping Trajectory

In contrast to the optimistic growth coping trajectory, some entrepreneurial teams opted for prevention-focused activities and efforts aimed at maintaining the status quo and only marginally dealing with team members' emotional needs, which we identify as the *damage mitigation coping trajectory*. Teams typically responded quickly to environmental uncertainty by focusing their efforts on rescuing business operations but neglected teams' emotional needs and well-being. Instead, individual team members typically adopted intrapersonal regulation mechanisms to ensure their personal well-being. In the following, our results show that prevention focus is related to an increase in performance impairment. For team burnout, our results do not reveal any significance in the interaction with a prevention focus.

##### *Performance Impairment Effects*

The damage mitigation trajectory refers to entrepreneurially coping with uncertainty by focusing on avoidance coping, preservation, and survival-oriented operational behavior. Avoidance coping becomes visible when teams actively prioritize business maintenance and

survival as the dominant strategic thought (e.g., developing what-if scenarios and thinking about the required actions needed to survive in these scenarios), as this entrepreneurial team member highlights: “We have now written plans for ourselves. A, B, and C. [...] We definitely did that, just to be a little bit prepared for everything.” (Team B68).

Additionally, these teams had an operational focus on retaining existing customers to keep the business afloat (e.g., regular contact with customers and integrating customers into current plans). In line with this interpretation, our quantitative results reveal a strong significant linear effect between prevention focus and performance impairment (indicated by the EDF = 1). A post hoc linear multilevel model further revealed a positive linear effect ( $B = .47, p < .001$ ), indicating that an approach aimed at preventing the deterioration of the situation increased the performance impairment of the teams (Table 13 and Figure 9).

#### *Well-being Effects*

Teams following the damage mitigation trajectory displayed a tendency towards coping through intrapersonal emotion regulation. Team members prioritized actions aimed at improving their own distress without taking the emotions of other team members into account, as this quote illustrates:

So far, I have noticed that I am a bit exhausted after a very long period of working without any free time in between. Free time in the sense of real days off, like vacations or something. So, I think that would help. But, as mentioned earlier, I still have to plan this somehow [...]. For me, it is much worse than for the others who joined the venture later. (Team B50)

Ultimately, the team members dealt with their emotions in a self-centered manner while focusing almost solely on retaining their business operations to enable the overall survival of the venture:

The current plan, which we haven't thought through yet, is to somehow work in a way that we work somewhere else on the side to secure our finances and then work on the startup for another ten hours a week or so. [...] We would simply try to maintain working on the existing contracts. (Team BA16)

In terms of the teams' well-being, we find survival-oriented behavior to be embodied by a more pessimistic emotional habitus. Specifically, and in contrast to the optimistic growth coping trajectory, entrepreneurs that followed a damage mitigation trajectory opted for dealing with their emotions at an individual level and incorporating emotional regulation through self-compassionate behavior, such as distancing themselves from work and focusing on balancing their own emotions.

In this regard, these entrepreneurial teams did not show any coping behavior that explicitly addressed the emotional impact of the pandemic on the teams' well-being. However, individual negative emotions did, at times, spread among the team. Despite awareness about the harm that negative emotions can inflict on team well-being, the teams did not actively promote the communication of stress and strain. Instead, interpersonal emotion regulation was, to a large extent, suppressed. This became particularly visible in one team (BA16), which completely failed to acknowledge the teams' emotions. Instead, the team focused on their business losses in terms of lost customers or partnerships and the emotional suffering they were going through:

In principle, it is always like dangling a carrot in front of a horse. It is never so hopeless that you would say it isn't worth it; it has no potential. But you also never reach the carrot so that you say, 'Now there's so much going on that it's all really fun, that there's so much going on that it's worth going into self-employment.' (Team BA16)

Furthermore, the absence of additional team-building activities or attempts to communicate with each other and develop a mutual understanding of different emotions in the team was symptomatic. The following response to our question on whether they talked to each other about their feelings or engaged in any team-building activities stresses this deficiency:

No, actually, we don't do any of that, except for regularly discussing political decisions, and so on [...] Our Monday jour fixe is now much longer because we basically include everything that would have been small talk otherwise. We talk about the current political decisions regarding Corona and get annoyed because of the deniers (Team BA16)

This suggests that teams following this entrepreneurial coping trajectory do not engage in emotion-based activities aimed at fostering a positive team spirit.

#### *Temporal Development*

Over time, the damage mitigation coping trajectory evolves as a prevention-focused trajectory where team members focus on the teams' operational activities aimed at maintaining the current performance status (e.g., consolidating existing partnerships) and on their personal well-being. Similar to the optimistic growth trajectory, we find that teams applied sensemaking and sense-giving in the face of environmental uncertainty. However, emotions were not sufficiently dealt with, which might explain the increase in performance impairment of the teams since an impairment of well-being likely affects the overall venture performance.

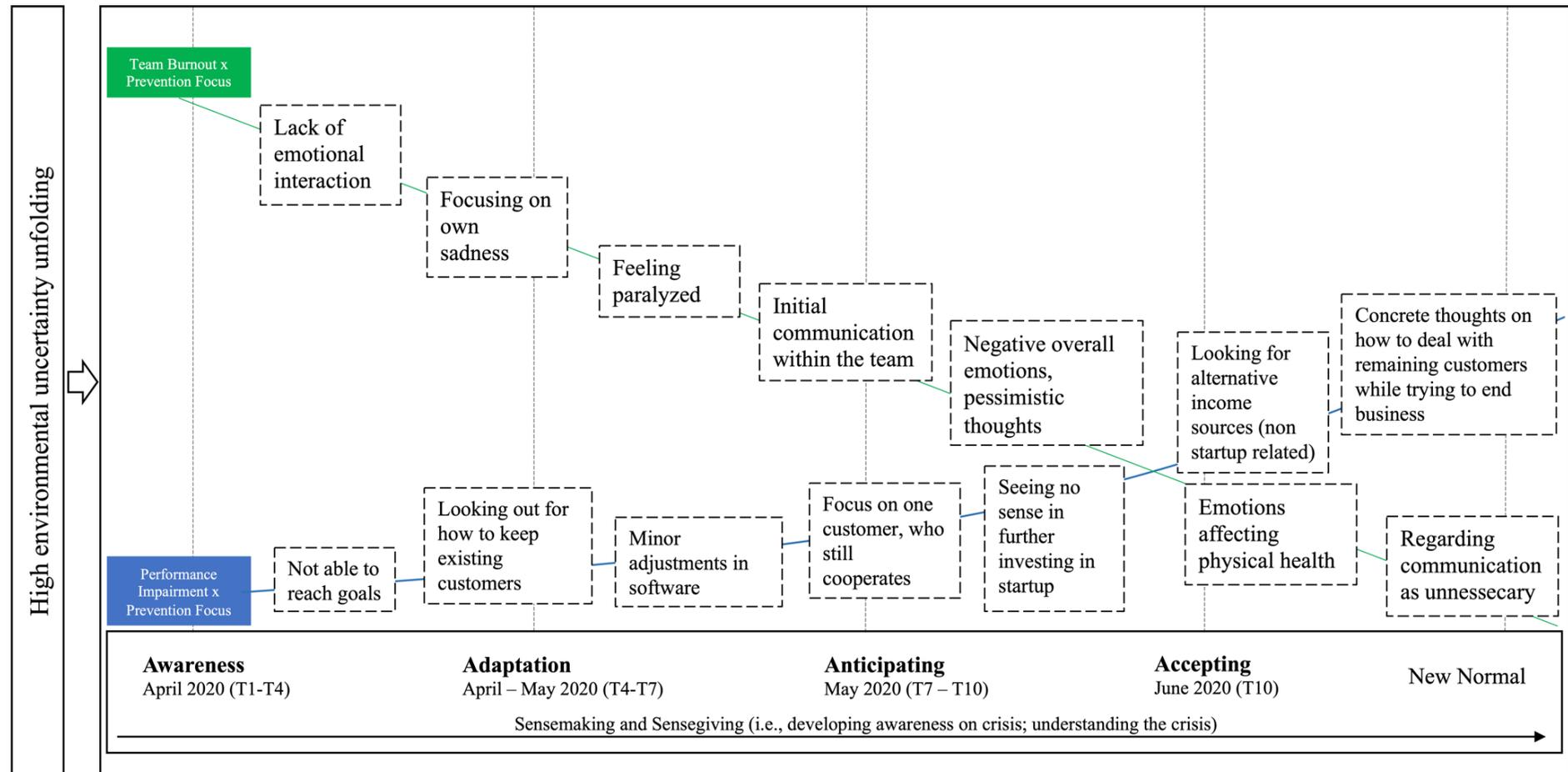
Regarding the temporal development of this coping trajectory (Figure 5 and Appendix 8.3.3), we find that teams first only became aware of the pandemic-induced threats to their ventures by, for example, realizing that venture goals are likely to be jeopardized (T1-T4). However, the teams did not engage in enhancing emotions within the team, which might explain the increase in performance impairment throughout the pandemic (Figures 6 and 7). As awareness grew (T4-T7), the teams started to adapt their business operations according to the threats. At this point, teams focused on keeping their business operations running by reaching out to customers and partners and trying to secure funding. Thus, preventive measures were taken to secure the venture's performance. However, these preventive measures were not sufficient to further reduce performance impairment. Instead, we find that team members focused on negative emotions in private but not as a team. In this way, team members tried to distance themselves from the decline of their well-being.

In the anticipation phase (T7-T10), negative emotions continued to dominate. However, teams started to anticipate the future development of the venture but were rather pessimistic when doing so: "We are running through scenarios [...]. The main scenario is what happens if

you don't do any more direct projects for the rest of the year? [...] The next scenario is what happens if the situation continues to be such that projects are canceled as a result" (Team B68). These pessimistic thoughts developed up to the point of asking themselves whether they should keep the venture going. Ultimately, while the environmental uncertainty decreased (T10), thoughts on terminating the venture and opting for alternative income sources strengthened in some entrepreneurial teams. At the same time, we find that emotional and physical well-being deteriorated. Figure 11 shows a combination of the teams' actions, the emotions across time, and the interactions between prevention focus and performance impairment and between prevention focus and team burnout.

Teams that followed a damage mitigation trajectory took prevention-focused actions and neglected team members' emotional needs; however, their sensemaking and sense-giving patterns were similar to those following optimistic growth (i.e., initial awareness of the threat, adaptation of business operations, anticipating future business operations, and accepting the uncertainty). In contrast to the optimistic growth trajectory, however, the interaction effect between the regulatory focus (i.e., prevention focus) and time was non-significant, indicating that the harmful effect of the prevention focus remained constant across time.

**Figure 11.** *The damage mitigation coping trajectory*



*Note.* The quantitative results reveal a strongly significant linear effect for the interaction of prevention focus and performance impairment (indicated by the  $EDF = 1$ ). A post hoc linear multilevel model revealed a substantial positive linear effect ( $B = .47, p < .001$ ), indicating that a mechanism to prevent the deterioration of their situation increased the impairment of a team's performance. In contrast, the interaction effect between prevention focus and time was non-significant, indicating that the harmful effect of prevention focus remained constant across time. As for the interaction of prevention focus with team burnout the quantitative results did not strongly support that prevention focus plays a role in explaining the differences across teams. The depicted results do not display the measurements, but are adapted for illustrative purposes. For the quantitative results in detail see Figures 6 and 7 and Tables 3 and 4.

## 4.5 Discussion

This study explored entrepreneurial team coping in the face of environmental uncertainty and its relationship with performance impairment and team well-being. Based on a convergent mixed methods analysis, we show that entrepreneurial teams are differently affected in terms of performance impairment and team burnout. However, all teams develop coping trajectories to face environmental uncertainty. In this regard, we introduce the coping trajectories of *optimistic growth* and *damage mitigation*. Based on the convergence of quantitative and qualitative results, we suggest that an optimistic growth trajectory results in faster operational recovery (i.e., performance enhancement over time) and higher team well-being (i.e., lower team burn-out), while a damage mitigation trajectory leads to an increase in performance impairment and has no positive effects on entrepreneurial teams' well-being. Our study further uncovers that the two coping trajectories differ not only in their inherent approaches towards self-regulation (i.e., promotion vs. prevention focus) but also in terms of the efforts invested in interpersonal emotion regulation and the teams' compassion dynamics. We suggest that both these insights are particularly valuable for entrepreneurial team research (see Table 15). These findings have implications for research on coping and well-being of entrepreneurial teams and, more broadly, for entrepreneurial action under environmental uncertainty.

**Table 15.** *Performance, Well-being, and Temporal Elements of the Optimistic Growth and Damage Mitigation Coping Trajectory*

Effects of coping	Optimistic Growth Trajectory	Damage Mitigation Trajectory
<i>Performance-related elements</i>	<ul style="list-style-type: none"> <li>● Identification of new business opportunities</li> <li>● Pivoting the business model</li> <li>● Active coping (problem-focused coping)</li> <li>● Promotion-focused behavior (enhancing the status quo)</li> <li>● High promotion focus in line with a decrease in performance impairment</li> <li>● Pivoting, Adapting, Scaling</li> </ul>	<ul style="list-style-type: none"> <li>● Rescuing current business operations</li> <li>● Avoidance coping (emotion-focused)</li> <li>● Prevention-focused orientation, maintaining the status quo</li> <li>● However: teams don't act inactive; they still put effort into their ventures but in a protective manner</li> </ul>
<i>Well-being-related elements</i>	<ul style="list-style-type: none"> <li>● Awareness of the psychological effects of the pandemic</li> <li>● Implementation of interpersonal emotion regulation</li> <li>● Attempts to increase team compassion</li> <li>● Promotion focus increases burnout (marginal significance)</li> <li>● Team building, emotional exchange, trust, team empathy</li> </ul>	<ul style="list-style-type: none"> <li>● Focus on business operations while neglecting emotional needs</li> <li>● Acting out of fear to survive (protective)</li> <li>● Emotional, pessimistic habitus</li> <li>● No attempts to cope with the emotional consequences of the pandemic</li> <li>● Lack of communication with team members limited to no efforts in emotional regulation</li> <li>● Emotional indifference</li> </ul>
<i>Temporal Dynamics</i>	<ul style="list-style-type: none"> <li>● Increased awareness of pandemic-induced effects</li> <li>● Increased efforts regarding team well-being as awareness increases</li> <li>● Decrease in uncertainty with time in line with the decrease of efforts in interpersonal emotion regulation, while promotion-focus still evident</li> </ul>	<ul style="list-style-type: none"> <li>● Starting by neglecting the possible effects of the pandemic</li> <li>● Increasing awareness along with an increase in fear</li> </ul>

#### 4.5.1 Implications for Coping in Entrepreneurial Teams

First and foremost, our study provides a more holistic picture of entrepreneurial team coping, challenging the dominant categorization of coping into either problem- or emotion-focused, which tends to oversee the complexity of coping. Currently, most entrepreneurship studies categorize coping as either problem-focused, when individuals actively engage in changing the situation, or emotion-focused, when individuals neglect the arising threats to

restrict the impairment of well-being (Ahmed et al., 2022). We find that effective entrepreneurial team coping trajectories include facets of both foci (Table 16).

**Table 16.** Facets of Dominant Entrepreneurial Team Coping Trajectories

		<b>Optimistic Growth Coping Trajectory</b>	<b>Damage Mitigation Coping Trajectory</b>
<b>Emotion-focused Coping</b>	<i>Current Research</i>	<ul style="list-style-type: none"> <li>Relying on the team to regulate emotions and to enhance overall team well-being (Cardon et al., 2012; Gagnon &amp; Monties, 2023; Ivanova et al., 2022; Sirén et al., 2020; Troth et al., 2018)</li> </ul>	<ul style="list-style-type: none"> <li>Intrapersonal emotion regulation is dominant in terms of dealing with own negative emotions (De Cock et al., 2019; Engel et al., 2021; Shepherd et al., 2023; Troth et al., 2018)</li> </ul>
	<i>Complementation</i>	<ul style="list-style-type: none"> <li>Interpersonal emotion regulation is a key component of coping</li> <li>Team compassion efforts increased by inducing team events</li> <li>Promotion-focused attitude in terms of emotional enhancement</li> </ul>	<ul style="list-style-type: none"> <li>Emotional avoidance towards team members' well-being impairment up to neglecting the emotions of others</li> <li>Prevention focused on emotional efforts</li> </ul>
<b>Problem-focused Coping</b>	<i>Current Research</i>	<ul style="list-style-type: none"> <li>Opportunity recognition and pivoting business models (Griffin &amp; Grote, 2020; Hmieleski &amp; Baron, 2008)</li> <li>Growth-seeking and optimistic towards operations (Galkina &amp; Lundgren-Henriksson, 2017; Hmieleski &amp; Cole, 2022)</li> <li>Promotion-focused activities aimed at enhancing business operations (Uy et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>Avoidant in terms of business enhancement (Kollmann et al., 2019; Schonfeld &amp; Mazzola, 2015)</li> <li>Maintaining the status quo by taking appropriate measures (Hmieleski &amp; Baron, 2008; Uy et al., 2013)</li> </ul>
	<i>Complementation</i>	<ul style="list-style-type: none"> <li>Interplay between team well-being and performance-enhancing activities</li> <li>Regarding the threat to others as an opportunity for the team</li> </ul>	<ul style="list-style-type: none"> <li>Trying to keep business operations as they are and rescuing customer-base and partners</li> <li>Prevention-focused activities aimed at increasing the likelihood of survival</li> </ul>

Notably, we reveal that both optimistic growth and damage mitigation trajectories contain problem-focused coping, but with very different operational and well-being effects. On the one hand, some entrepreneurial teams adopted a damage mitigation stance and exclusively prioritized activities aimed at protecting operational performance. However, these prevention-focused activities were less effective than promotion-oriented activities, whereby entrepreneurs

change their business practices, recognize new opportunities, and adopt bricolage and effectuation techniques to deal with upcoming hurdles (Ahmed et al., 2022). While our study reveals that with both coping trajectories facets of problem-focused coping became evident, we complement existing research (Ahmed et al., 2022; Patel et al., 2019; Uy et al., 2013) by demonstrating that the optimistic growth trajectory enabled the interplay between team well-being and problem-focused activities. Thereby, we suggest that problem-focused coping becomes effective only in combination with emotion-focused activities. Specifically, the optimistic growth trajectory demonstrates that entrepreneurial teams promote team performance through engagement in problem-focused coping and managing the emotional needs of the team simultaneously.

Research on emotion-focused coping highlights the importance of intrapersonal emotion regulation, emphasizing that this form of emotion regulation involves centering activities around tackling negative emotions, which in turn positively affects well-being (Ahmed et al., 2022; Engel et al., 2021; Ivanova et al., 2022). It further suggests that adopting emotion-focused coping is more likely to be associated with disengagement from interventions that seek to address the impairment of operational performance (Ahmed et al., 2022; Uy et al., 2013). With our convergent analysis, we show that an emotional focus on individual needs and individual negative affect is dominant in the damage mitigation trajectory. Members of entrepreneurial teams tended to focus on their individual emotions instead of taking appropriate actions to advance business operations and foster the well-being of the team. Thus, it became evident that the team avoided engaging collectively with the team's well-being and its impairment. We, however, show that entrepreneurial teams are not distancing themselves completely from their ventures' business operations by not acting at all, as the literature on emotion-focused coping would suggest (Ahmed et al., 2022). Instead, entrepreneurial teams that follow the damage mitigation trajectory do take specific actions to tackle environmental uncertainty. These actions

are, however, prevention-focused and oriented toward individual, rather than the team's, emotional needs.

#### **4.5.2 Implications for Team Emotions and Well-being**

Entrepreneurship research on coping stresses the importance of intrapersonal emotion regulation to ensure the entrepreneurs' well-being (Engel et al., 2021; Kibler et al., 2019; Nikolaev et al., 2020; Sirén et al., 2020). Our study, however, shows that both intra- and interpersonal emotion regulation emerge as decisive features of coping trajectories that help entrepreneurial teams to tackle challenges to their performance and to the impairment of team well-being. We demonstrate that teams that develop an optimistic growth coping trajectory take advantage of social exchanges within the team. While research on the well-being of entrepreneurs points towards individual emotion regulation techniques, it also proposes that social interactions are essential for team well-being since these interactions have the power not only to enhance but also to deteriorate emotions (e.g., Breugst & Shepherd, 2017). This insight is consistent with the findings of our study, emphasizing that social interactions within the team are critical to well-being. Thus, the team context deserves more attention in research on entrepreneurial coping.

Moreover, we add to existing management research on team emotions (Gagnon & Monties, 2023) that has shown that facilitating emotion regulation by others (i.e., team members or partners) is particularly beneficial for the improvement of negative emotions. We offer a more nuanced view of this facilitation by disentangling the actions that teams take in the face of an impairment of their well-being. Notably, we suggest that interpersonal emotion regulation, in terms of positively connotated team interactions, is particularly valuable for entrepreneurial team coping, and therefore deserves further attention in entrepreneurship research. Entrepreneurial teams differ from other teams in organizational settings in that co-creating an entrepreneurial venture involves a higher degree of ambiguity, continuous exposure to pressure

and stress, and increased risk for well-being (De Cock et al., 2019; Patzelt et al., 2021; Rauch et al., 2018; Stephan et al., 2022). Furthermore, working in an entrepreneurial team entails high interdependence (Klotz et al., 2014; Knight et al., 2020), whereby impaired well-being has a more profound impact on the relationships between team members and, ultimately, on the success of the venture (Cardon et al., 2012). Given the unique characteristics of entrepreneurial teams, interpersonal emotion regulation is likely to be beneficial in coping with upcoming challenges since it helps to reduce stress and to make informed decisions despite emotional hurdles. By fostering positive emotional exchanges within the team, entrepreneurial teams can ultimately improve their collective ability to overcome challenges and achieve their goals.

At the same time, we note a few downsides of regulating emotions at an interpersonal level in the workplace. In this regard, our findings suggest that not only positive but also negative emotions can be contagious and spill over across teams. Positive emotional contagion can alleviate the well-being of the entrepreneurial team, while the contagion of negative emotions may damage team well-being and internal team dynamics. Team emotion regulation can thus be best understood as a dynamic process of interpersonal co-regulation of emotions, in which team members suppress or amplify their own emotions depending on how other team members react to them (cf. Troth et al., 2018). Both the amplification and suppression of positive emotions can be beneficial for entrepreneurial teams. However, particularly the suppression of negative emotions can be harmful (e.g., De Cock et al., 2019).

Interestingly, research shows that people are more likely to adopt emotion suppression when facing an uncontrollable situation and stress (Ivanova et al., 2022; Trougakos et al., 2020). Hence, emotion suppression is a particularly relevant challenge for entrepreneurial teams since they are continuously exposed to high levels of environmental uncertainty. In their recent study, Ivanova et al. (2022) state that emotion suppression impacts not only the relationships within the entrepreneurial team (e.g., inhibiting relationship formation and diminishing social support)

but also the well-being of the entrepreneurs (e.g., leading to depression), and the ventures' chances of long-term survival. Taking these notions into account, the optimistic growth coping trajectory, which combines interpersonal emotion regulation and team compassion with an overall promotion-focused motivation, should be particularly beneficial for entrepreneurial teams since it inhibits emotion suppression by actively promoting positive emotional exchanges within the team.

Apart from interpersonal emotion regulation, we found team compassion to be a central element of the entrepreneurial teams' coping trajectories. Recent research on coping in entrepreneurship introduces self-compassion as an effective coping trajectory to tackle challenges in the venturing process (Engel et al., 2021). In this regard, self-compassion is introduced as a teachable trait and includes being kind to oneself, accepting negative emotions, and treating oneself with understanding (Engel et al., 2021). While the investigation of self-compassion is critical to move forward our understanding of coping in entrepreneurship, we suggest adopting this concept from a team perspective and thus investigating team compassion. Notably, our findings on the optimistic growth trajectory reveal that entrepreneurial teams actively adopt behaviors aimed at enhancing compassion not for themselves but for fellow team members. We suggest that entrepreneurial teams facing environmental uncertainty can benefit from team compassion by implementing team-building activities, emphasizing the need for mutual understanding of emotional hurdles, and trying to foster empathy in the team. We argue that team compassion likely fosters connectedness within the team, increases team cohesion and induces an overall positive attitude towards each other.

In sum, we contribute to research on well-being and emotion regulation in entrepreneurial teams by integrating in-depth knowledge and indicators of how entrepreneurial teams act upon the occurrence of emotional challenges and how these actions unfold. Future studies could add to our findings by exploring how coping trajectories affect different types of challenges in

entrepreneurial teams, e.g., the threat of failure, and investigate the interplay between team compassion and interpersonal emotion regulation and their impact on team well-being and other entrepreneurial team outcomes. Specifically, the contagious power of emotions (e.g., Sy et al., 2005) is a promising avenue to understanding various entrepreneurial team outcomes, such as team conflict (i.e., relationship conflict and task conflict), team member exit, and trust within the team.

### **4.5.3 Implications for Action under Environmental Uncertainty**

We further contribute to research on entrepreneurial action under environmental uncertainty (Townsend et al., 2018) by showing that the rapid implementation of coping trajectories helps to compensate for the threats posed by environmental uncertainty. Our findings show that entrepreneurial teams make sense of the pandemic-induced uncertainty in similar ways, regardless of the followed coping trajectory. Specifically, we find that teams rapidly engage in adapting their operations such that they enact either one of both coping trajectories (i.e., optimistic growth trajectory or damage mitigation trajectory). While entrepreneurial teams within both coping trajectories adapt their behavior in response to environmental uncertainty, opportunity recognition is specific to teams that follow the optimistic growth trajectory. These teams quickly adapt their behavior but also reduce coping efforts after perceiving the changes within their environment as “normal.”

These findings contribute to research on action under environmental uncertainty by showing that rapid responses in terms of adapted behavior regarding the ventures’ operations help not only to refine the ventures’ overall strategy but also to quickly learn from mistakes. Previous research suggests that changes in the perception of the level of environmental uncertainty are related to the identification of new opportunities (Schmitt et al., 2018). While this is in line with our findings regarding the optimistic growth trajectory, we further propose to incorporate reaction speed when investigating opportunity recognition under environmental

uncertainty since a speedy reaction is dominant in both coping trajectories. Specifically, we propose that speedy reactions can regulate the perceived level of uncertainty. Typically, entrepreneurs engage in iterative processes of experimentation and learning, which is crucial for their success (Shepherd & Gruber, 2021). In turn, when facing environmental uncertainty, a speedy response and experimentation with solutions may alter the learning experience and ultimately regulate the perception of the threat that environmental uncertainty poses. Additionally, rapid reactions enable entrepreneurial teams to dynamically navigate upcoming challenges and persevere in the face of environmental uncertainty.

Our study responds to the call to consider well-being in synergy with entrepreneurial actions in the face of uncertainty (Ramli et al., 2023). Entrepreneurship research to date has focused either on how environmental uncertainty (or adversity) affects well-being (e.g., Stephan et al., 2023) or on how it operationally affects ventures' performance and how business practices are adapted (e.g., Anwar et al., 2021). However, with our study, we show that entrepreneurial team coping trajectories address *both* the impact on performance *and* on well-being. We, therefore, suggest future research to look at well-being and performance in tandem, as both are affected and influence each other, such that the impairment of one may influence the impairment of the other. In this regard, our findings suggest that action under environmental uncertainty may further help entrepreneurial teams to increase their resilience. Some researchers define resilience as "the process by which either an individual or organization develops and leverages its capability endowments to interact with adverse disruptions" (Anwar et al., 2021, p. 864). Notably, continuous exposure to environmental uncertainty is emotionally draining for entrepreneurial teams (Ramli et al., 2023). However, the ongoing need to adapt business practices and combat negative emotions by adopting effective coping trajectories should alter teams' resilience in handling future environmental disruptions, which is an

intriguing avenue for future research. Hence, we concur with research that suggests investigating coping, well-being, and resilience jointly (Ahmed et al., 2022).

#### **4.5.4 Implications for Practice**

Our study underlines the relevance of coping for entrepreneurial teams, particularly that interpersonal emotion regulation and team compassion are vital for performance and team well-being. From a practical point of view, this study is important for numerous reasons. First, even though entrepreneurial coping is essential not only when facing uncertainty but throughout the whole entrepreneurial process (e.g., Engel et al., 2021; Patzelt & Shepherd, 2011), it is typically overlooked by entrepreneurs themselves. We suggest that entrepreneurial teams should develop an understanding of emotional needs within their teams and the challenges that team members face. We further suggest that entrepreneurial teams should actively engage in interpersonal emotion regulation and team compassion. While many entrepreneurial teams focus on operational activities, they lack in communicating about team members' emotions, acknowledging differences, and the need to work towards an improvement of the well-being.

Second, our findings offer valuable insights for entrepreneurship educators. Since entrepreneurship is an emotional rollercoaster mostly conducted in teams (De Cock et al., 2019; Klotz et al., 2014), educators could include emotion management and mental well-being in their educational material. Alongside raising awareness of well-being, educators could offer knowledge on appropriate coping trajectories and the importance of team dynamics. This helps students to emotionally deal with challenges arising as part of becoming part of or consulting entrepreneurial teams. Lastly, while many accelerator and incubator programs focus on coaching entrepreneurial teams regarding their daily operations and financial opportunities, a well-being perspective often remains neglected. We, therefore, suggest that startup coaches and members of the entrepreneurial ecosystem engage in activities addressing potential threats that entrepreneurial teams might face when emotions are neglected. For instance, organizing events

beyond team-building activities that also include mindfulness and well-being would benefit entrepreneurial teams in the long run.

#### **4.5.5 Limitations**

This study is subject to several limitations. First, we limited our research to a relatively small sample size, which prevented us from quantitatively assessing the effects of the coping trajectories on our dependent variables. However, while the sample size is rather small, the longitudinal convergent parallel mixed methods design still enabled the rather comprehensive exploration of entrepreneurial practices and processes over time. Thus, by complementing existing sequential mixed methods designs in entrepreneurship research (cf. Kistruck et al., 2016), this innovative methodological approach is particularly beneficial when investigating more dynamic, micro-level entrepreneurial phenomena from multiple angles. In this regard, we concur with Van Burg et al. (2020), who encourage future mixed and multi-methods designs, specifically when researching underexplored phenomena.

Second, our convergent analysis revealed that not all teams neatly fall into one of the two coping strategies identified. Instead, a small number of teams opt for a more balanced coping trajectory, combining elements of optimistic growth coping and of damage mitigation coping. These teams show elements of both active and avoidance coping in iterative cycles. We suggest that future research could investigate antecedents of entrepreneurial team coping and why some teams opt to change their coping trajectories in iterative cycles. So far, research on the individual level of analysis has focused on personality traits, experiences, and social capital as antecedents of entrepreneurial coping (Ahmed et al., 2022). However, we know very little about which team characteristics foster differences in coping behavior. We further suggest that investigating how differences in the characteristics of entrepreneurial team members (e.g., regarding deep-level diversity) relate to the chosen coping trajectories provides an interesting path for future research.

Lastly, we investigated entrepreneurial teams at the beginning of the COVID-19 pandemic, which was marked by high levels of uncertainty (Kuckertz et al., 2020). Research, however, stresses that each crisis has unique elements that differentiate it from others (Doern et al., 2019; Stephan et al., 2023). The COVID-19 pandemic differed from other uncertain contexts because of its prolonged and unforeseeable developments, both for citizens and the economy. Hence future research should contrast coping with different degrees of environmental uncertainty and its differential effects on different industries (e.g., hospitality vs. digital businesses).

#### **4.5.6 Conclusion**

This study provides a holistic picture of how entrepreneurial teams cope under environmental uncertainty and thereby follow two different coping trajectories –optimistic growth and damage mitigation. Our findings indicate that when confronted with environmental uncertainty, entrepreneurial teams benefit more from adopting a trajectory focused on team efforts (i.e., optimistic growth coping) instead of focusing on emotion regulation by individual team members (i.e., damage mitigation). Specifically, we observed that in optimistic growth coping, interpersonal emotion regulation and team compassion play crucial roles in mitigating the impact of environmental uncertainty, addressing both performance impairment and team burnout simultaneously. Therefore, our study highlights the importance of prioritizing not only operational performance but also the well-being of the team in uncertain environments.

## **5 Chapter V: The Equivocal Image of Young Social Enterprises – How self- vs. other-oriented values influence external perceptions<sup>2</sup>**

### **Abstract**

Social enterprises follow the dual mission of achieving social aims as well as attaining financial sustainability and therefore elude easy categorization into either a non-profit or for-profit organization. Consequently, social enterprises might struggle with their image since external stakeholders (e.g., job applicants and customers) could hold back their support when the enterprise's dual aims seem unusual to them. Despite the importance of the image to gain stakeholder support, factors that determine how individuals perceive social enterprises are underexplored, especially in their early life stages, before they have developed reputational capital and brand recognition. Following human value theory, we propose that stakeholders' self-transcendence ("other-oriented") versus self-enhancement ("self-centered") values explain how they evaluate social versus commercial enterprises. In a vignette study with 969 individuals, we reveal that social enterprises are more likely to attract self-transcendent individuals, whereas individuals with stronger self-enhancement values are less likely to feel attracted to social enterprises. Moreover, our findings show that individuals' values were more strongly related to the image of social enterprises than the image of commercial enterprises. Thus, external individuals' values lead to stronger and more contrasting reactions regarding social compared to commercial enterprises. The findings indicate that the image of social enterprises is more equivocal and distinct compared to commercial enterprises and, therefore, might require a different theoretical understanding and careful management as it depends on stakeholders' deep-seated values.

**Keywords:** social enterprises, external perceptions, human value theory, self-enhancement, self-transcendence, enterprise image

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## 5.1 Introduction

By harnessing market-based methods to solve social issues, social enterprises have received great attention from researchers and practitioners (Asarkaya & Keles Taysir, 2019; Heinze et al., 2016; Ip et al., 2021; Saebi et al., 2019). According to the literature, young social enterprises – defined as social enterprises younger than 12 years old (Hannan et al., 1996; Siqueira et al., 2018) – often face legitimacy issues related to their image since they follow dual objectives which are simultaneously profit and non-profit oriented (Costanzo et al., 2014; Ebrahim et al., 2014; Vedula et al., 2022). An enterprise image is defined as the overall external impression, set of beliefs, feelings, and associations of the enterprise (Riordan et al., 1997; Zhu & Chang, 2013). This image is vital for any enterprise as it represents the basis for any assessment and evaluation of its actions and accomplishments (Barnett et al., 2006; Foroudi et al., 2020; Villena Manzanares, 2019). Young enterprises are particularly dependent on a positive image as it can grant legitimacy to the enterprise that helps launch and grow the business by attracting customers, investors, and employees (Bublitz et al., 2018; Lin-Hi et al., 2020; Younger & Fisher, 2018). As young social enterprises straddle the binary organizational categories of non-profit or for-profit, individuals often find it hard to grasp the concept of what a young social enterprise entails, and hence may question their legitimacy (Austin et al., 2006; Barraket et al., 2016; Dart, 2004; Grieco, 2018).

Although the image is critical and challenging for a young social enterprise's success (Dacin et al., 2011; Goldberg et al., 2003; Riordan et al., 1997; Spear, 2006), a systematic understanding of its antecedents is still limited. While some research has been conducted on how young social enterprises use their image to attract individuals, such as customers in local communities and investors (e.g., Ruebottom, 2013; Teasdale, 2010), it remains unclear which factors influence the image of a young social enterprise. This study sets out to contribute to the discussions on the legitimacy of early-stage social enterprises before they have developed their

reputation or any brand recognition (Kibler et al., 2018; Murphy et al., 2019; Weidner et al., 2019). We specifically investigate the characteristics that determine how external individuals evaluate the image of young social enterprises.

Based on the theory of human values and value congruence (Schwartz, 2003; Schwartz & Bilsky, 1987), we argue that the image of a young enterprise depends on an individual's deeply rooted value system and that this relationship varies for young social versus commercial enterprises. Human values are defined as a person's desirable goals, which guide the evaluation of actions, policies, people, and events (Agle & Caldwell, 1999; Meglino, 1998; Schwartz, 2003). The theory of human values argues that values are arranged in a circular structure representing the corresponding and conflicting potential of each type of value (Schwartz, 2003, 2012). In this vein, values concerning self-orientation (i.e., self-enhancement) oppose values reflecting a fundamental orientation toward others (i.e., self-transcendence) (Schwartz, 2003, 2012). In our study, we propose the conflicting *self-transcendence* versus *self-enhancement* value dimension of individuals as being highly relevant to understand differences between the image of young social versus commercial enterprises. A person's positive perception of an enterprise's image is determined by the congruence between his/her value system and the value system that is expressed by the enterprise's main mission (e.g., social vs. commercial) (Muchinsky & Monahan, 1987). Consequently, individuals' personally held values and how they perceive the values of an organization and its founders should play a key role in explaining why individuals perceive young social enterprises differently than commercial enterprises.

For this paper, we conducted a vignette study with 969 university students entering the job market. We presented a between-subject vignette design containing an interview with a founder of a young social or commercial enterprise. The vignettes specifically include information on the founders' goals and objectives for forming the enterprise. Compared to more established enterprises, the founders of young enterprises develop the enterprises closely

around their meanings and values (Blake et al., 2015; O’Neil & Ucbasaran, 2016; Sieger et al., 2016). Hence, using an interview with a founder who spoke about his/her enterprise, increased the external validity of our vignette study. Additionally, in the enterprise’s inception phase, where entrepreneurial teams are still small, the enterprises evolve around the founders' ideas, putting them at the center of attention (e.g., Andersson & Walk, 2022). Especially in the context of young social enterprises and non-profit organizations, founders use storytelling as a marketing approach which helps gaining legitimacy from their stakeholders (Margiono et al., 2019). For instance, founders use themselves as a main character in an engaging story of how they started the social enterprise which can produce empathy of stakeholders and thereby enables their support in terms of (non-)financial resources (Margiono et al., 2019). We regard students close to graduation as one of the most relevant populations of external individuals as they, depending on their specific life course, will occupy a variety of roles relevant to social enterprises, such as business founders, applicants, customers, investors, journalists, and politicians.

This study contributes to the literature along two lines. First, our study introduces human value theory as an explanatory framework for understanding how external individuals generate an image of young enterprises. We learn about the antecedents of the evaluation of young social enterprises. Thus, we can point to particular human dispositions that result in a supporting or deprecating stance toward newly founded social enterprises. This finding is particularly fruitful since research thus far has considered a marketing perspective in non- and for-profit organizations (e.g., Michaelidou et al., 2015; Michel & Rieunier, 2012) but only tentatively investigated the enterprise image of young social enterprises. Our research proposes that social enterprises may suffer from having an enterprise image, which signals the role of the enterprise as a social contributor, but at the same time creates disinterest in individuals with opposing values, which eventually leads to an equivocal image of social enterprises. Consequently, this

equivocal image could create difficulties when seeking to access economically driven resources and capabilities needed for the young enterprise's survival, such as attracting potential customers, employees, and investors—who may hold differing values.

Second, our research adds to the literature on social entrepreneurship by showing differences between young social and commercial enterprises. Particularly, the differences in the perception of young social and commercial enterprises indicate that mechanisms, such as investment seeking, networking activities, and decision-making, may vary systematically depending on whether the young enterprise is of a social or a commercial type (Nicholls, 2010; Riedo et al., 2019; Shaw & Carter, 2007; Wry & York, 2017). Hence, we extend research by showing that social and commercial enterprises do not only differ regarding their structures and the motivation of their founders (Beugré, 2014; Yitshaki & Kropp, 2016) but also differ regarding the perception of the young enterprise itself. Our study demonstrates that a central tenet of Schwartz's theory of human values, specifically, the proposition that individuals cannot simultaneously hold contradictory self-oriented versus other-oriented values helps to explain a plethora of human attitudes and behaviours relevant to the (social) entrepreneurial process such as recruitment or investment decisions.

## **5.2 Theory and Hypotheses**

### **5.2.1 Young Social Enterprises and Their Struggle for Legitimacy**

Social enterprises follow the dual mission of achieving social aims as well as attaining financial sustainability and, therefore, blur our understanding of for-profit and non-profit organizations (Dart et al., 2010; Doherty et al., 2014; Saebi et al., 2019). Social enterprises, for instance, strive to improve the lives of disadvantaged people or secure biodiversity by implementing entrepreneurial methods that help generate revenues (Doherty et al., 2014; Saebi et al., 2019). In contrast to this dual mission, for-profit or commercial enterprises focus on maximizing shareholders' financial returns while social aims are secondary (Battilana & Lee,

2014; Saebi et al., 2019; Vedula et al., 2022). Likewise, the dual mission distinguishes social enterprises from non-profit organizations, which may also generate income (e.g., donations). However, in non-profit organizations, the revenue is typically bound to a specific project and is not included in the organization's mission (Saebi et al., 2019). While social enterprises differ in many ways from commercial and pure non-profit organizations (e.g., governance structure, strategies, norms; Dart et al., 2010), their dual mission is one of the most crucial distinguishing factors. The dual mission is the guiding post for strategic decision-making (Doherty et al., 2014; Saebi et al., 2019). Furthermore, it is part of the interaction with stakeholders, particularly in the early emergence of social enterprises (Battilana & Dorado, 2010; Nielsen et al., 2021).

The dual mission of social enterprises, however, entails the challenge of gaining legitimacy from stakeholders (i.e., employees, potential customers, potential investors, and suppliers), which is particularly necessary for young enterprises (Doherty et al., 2014; O'Neil & Ucbasaran, 2016; Siqueira et al., 2018; Wiklund et al., 2010). Hence, legitimacy is a prerequisite for young social enterprises' success, making it particularly important (Vedula et al., 2022). Social enterprises, on the one hand, face the challenge that incorporating two missions can produce conflicting demands and implies a balance between social and economic means and aims. This need to balance both missions makes the categorization by stakeholders difficult (Doherty et al., 2014; Suykens et al., 2019; Vedula et al., 2022). On the other hand, the effort to gain legitimacy is more intense during the enterprises' emergence phase. Notably, their liability of newness, which implies that young social enterprises lack established routines and organizational capabilities, hinders them from obtaining critical resources (Battilana & Dorado, 2010; Uzuegbunam, Ofem, et al., 2021; Wiklund et al., 2010).

The legitimacy issues are further reflected in the young social enterprise's marketing strategy (Mitzinneck & Besharov, 2019) since external individuals (e.g., potential customers) often criticize a social enterprise when the impression arises that one of the two goals inherent

in the enterprise's mission might be overprioritized (Liu et al., 2015). Remarkably, this criticism arises since the young enterprise's social mission is particularly relevant in the eyes of potential customers and the general public (Doherty et al., 2014). Hence, current research stresses that young social and commercial enterprises must distinguish marketing capabilities and approaches since an overemphasis on economic objectives endangers the possibility for social enterprises to gain legitimacy (Liu et al., 2015). However, balancing both missions is challenging because social enterprises must implement commercial enterprise means while also addressing social or environmental problems with their efforts (Liu et al., 2015).

Research underlines that being oriented toward a social mission calls for more marketing and branding efforts (Michaelidou et al., 2015; Michel & Rieunier, 2012). Notably, the social enterprise's image is essential to its efforts to position itself in the market and has the power to shape consumers' attitudes and actions (e.g., purchasing behavior) (Michaelidou et al., 2015; Riordan et al., 1997; Younger & Fisher, 2018). Despite its importance, we know very little about which factors shape the image of young social enterprises. When following a social mission, the image of the enterprise relates not only to functional associations (e.g., functional benefits of the product/service) but also to symbolic associations (e.g., associations with the values of the organization) (Michel & Rieunier, 2012). Symbolic associations affect the enterprise's success since they are closely related to stakeholders' values and behavior, such as their willingness to donate to the organization's cause (Michel & Rieunier, 2012). Since young social enterprises encompass elements of non-profit organizations and, at the same time, aspects of commercial enterprises, creating a positive enterprise image is particularly challenging. Ultimately social enterprises that incorporate a dual mission need to address external individuals from both spheres (i.e., social/symbolic and commercial/functional) and hence need to align their marketing efforts with stakeholders' values.

### 5.2.2 Human Value Theory

Values have become an important subject not only in psychological research but also in the field of management. For instance, studies show that values influence engagement in corporate social responsibility (Baumgartner, 2014), the formation of an organizational stigma (Devers et al., 2009; Tracey & Phillips, 2016), work attitudes among employees (Arieli et al., 2020; de Hoogh et al., 2005), customer intention and decision making (Ahmad et al., 2020) and also employer attractiveness (Chatman, 1989). We draw on Schwartz's human value theory (Schwartz, 2003; Schwartz & Bilsky, 1987) because it captures the different foci of human values and provides an overarching structure showing the pattern of conflict and congruity among values. Schwartz (2012, p. 17) states that "values are one important, especially central component of our self and personality, distinct from attitudes, beliefs, norms, and traits. Values are critical motivators of behaviors and attitudes". Furthermore, Bardi and Schwartz (2003, p.1208) claim values to be "relatively stable motivational characteristics of persons that change little during adulthood." Schwartz (2003) proposes a set of ten values that reflect the most fundamental foci: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction.

As values imply similar classes of specific goals and standards, some values will be congruent with others of similar classes of goals (e.g., striving for power and striving for achievement). In contrast, values may stand in conflict with each other when the underlying goals imply conflicting ends (e.g., serving oneself versus serving others). Figure 12 is an illustration of values in a circumplex structure according to Schwartz's human values theory (Schwartz, 2003; Schwartz & Bilsky, 1987), which helps to delineate the contradictory or compatible nature of values and their two orthogonal dimensions. While an individual's values regarding the dimension of openness to change versus conservation might affect all kinds of innovation and entrepreneurship topics, we propose that an individual's values regarding the

dimension of self-enhancement/self-transcendence hold explanatory value for differences in their evaluation of the image of a young social or commercial enterprise.

*Self-transcendence* is reflected by values that transcend an individual's striving for his/her personal benefit (Schwartz, 2012). This dimension concerns values of universalism and benevolence, which are connected to the welfare and interest of others (Schwartz, 2012). Schwartz (2003, p.268) defines universalism as the "understanding, appreciation, tolerance and protection for the welfare of all people and for nature" and benevolence as the "preservation and enhancement of the welfare of people with whom one is in frequent personal contact." In contrast, *self-enhancement* is concerned with the pursuit of one's own interest and success (Schwartz, 2012). Self-enhancement consists of the values power and achievement. Schwartz (2003, p.267) defines power as a value that aims for "social status and prestige, control or dominance over people and resources" and achievement as "personal success through demonstrating competence according to social standards." The pursuit of self-enhancement and self-transcendence are motivational opposites and, therefore, individuals are unlikely to endorse both sets of values to an equal extent (Schwartz, 2012).

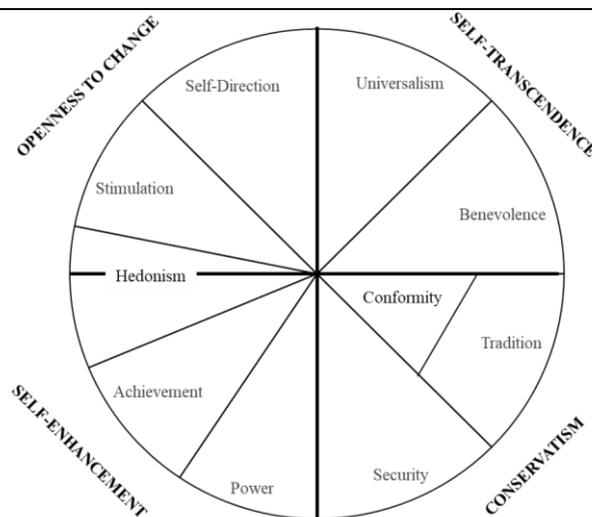
While the theory of human values stresses the compatible versus the conflicting potential of different sets of values, we argue that this postulate can be generalized to a potential compatibility versus conflict between a person's value and the actual or signaled values of other persons or collectives. This generalization implies that the image of a firm should be a function of the degree of congruence between the values of an individual and the values that an enterprise signals (Hoffman & Woehr, 2006; Kristof, 1996; O'Reilly et al., 1991). For instance, research shows that job applicants regard the similarity between their own and the perceived values of a potential employer as an important basis for their intention to apply (Judge & Bretz, 1992). Furthermore, research suggests that value congruence is a determinant of job satisfaction and organizational identification (Ihm & Baek, 2021; van Vianen, 2018). We propose that the

subjective value congruence between the individual's values and those values expressed by the young enterprise through its stated mission, marketing strategy, or the explicit behavior visible to the individual provides the basis for image generation. For instance, if an individual with strong other-oriented values (i.e., self-transcendence values) perceives an enterprise and its founders to have those same values, he/she will be more likely to positively evaluate the enterprise's image. Conversely, if the same individual perceives the enterprise and its founders to hold strong self-enhancement values, we expect the individual to evaluate the enterprise's image more negatively. This proposition does not require that these expressed values are actually held by the organization nor that the person validly and correctly observes the behavior of the enterprise.

**Figure 12.**

**Theoretical Circular Structure of Human Values** (own illustration based on Schwartz, 2003)

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### 5.2.3 The Role of Values for the Perception of the Enterprise Image

Following human value theory (Schwartz, 2003, 2012), we propose that self-transcendence (i.e., other-oriented) values result in a more positive evaluation of the image of young social enterprises. Within social enterprises, the aim to benefit the collective interest is seen as outweighing the importance of economic value creation (Bacq et al., 2016; Peredo & McLean, 2006; Shaw & Carter, 2007). Young social enterprises are founded by compassionate

people, who have a high sense of empathy with their (typically deprived) target group(s) (Forster & Grichnik, 2013; Miller et al., 2012). Thus, social enterprises focus on creating value for the benefit of society or the environment (e.g., reducing poverty, and carbon emissions), while they capture value to sustain their primary social welfare objective (Costanzo et al., 2014; Doherty et al., 2014; Michaud & Tello-Rozas, 2020). Based on human value theory, we propose that self-transcendence values will positively affect an individual's appreciation of the social welfare goals of young social enterprises to the extent that an individual perceives the enterprise and its founders' goals and motivations to match his/her value system.

In contrast, we further propose that self-transcendence values are likely to relate negatively to the image of young commercial enterprises. Although commercial enterprises may also seek to contribute to the collective interests of a specific target group or wider society (van de Ven et al., 2007), they are more strongly connected with a commercial logic, and the enterprise is expected to act in a profit-generating manner (Ebrahim et al., 2014; Riedo et al., 2019; Yitshaki & Kropp, 2016). High self-transcendence values will lead to a less positive evaluation of young commercial enterprises due to the enterprise's striving for financial success and, thus, self-enhancement aims. This notion is strengthened through findings from prior research on person-organization fit suggesting that individuals are likely to identify with an enterprise if the values portrayed by the enterprise are congruent with their own values, and more likely to distance themselves when they cannot connect to the enterprise's values (Hoffman & Woehr, 2006; Kristof, 1996; O'Reilly et al., 1991).

**Hypothesis 1:** Individuals' self-transcendence values interact with the type of enterprise (i.e., social vs. commercial) such that, the higher one's self-transcendence values, the more positive one's image of social enterprises compared to commercial enterprises.

Next, we suggest that individuals with high self-enhancement values are more likely to have a less positive image when being confronted with a young social enterprise that they

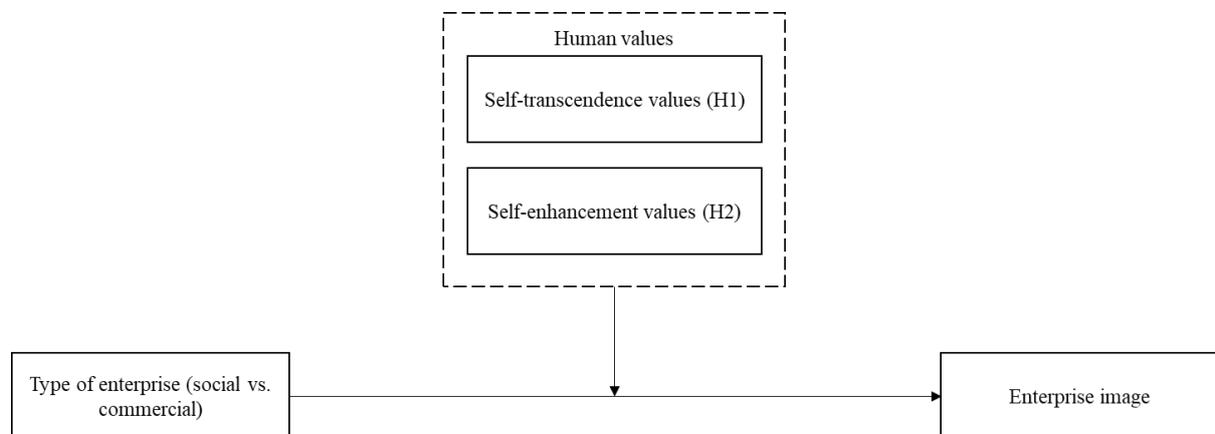
associate with having a strong orientation toward others. Due to the prominence of the social mission in social enterprises (Austin et al., 2006; Miller et al., 2012; Nicholls, 2010), an individual with strong self-enhancement values should have a less positive evaluation of the image of young social enterprises due to signalling standards and goals that are in conflict with their own self-enhancing goals.

Analogously, we argue that individuals' values of self-enhancement lead to the generation of a more positive image when being confronted with a young commercial enterprise since the individuals perceive that the enterprise shares those values. While social enterprises prioritize their social mission over economic aims (Saebi et al., 2019; Santos, 2012), commercial enterprises represent the realization of needs such as the need for income, status, and prestige, which in turn match the motivational objectives of self-enhanced individuals (Hirschi & Fischer, 2013; Holland & Shepherd, 2013). Hence, the image of young commercial enterprises should be evaluated more positively by individuals with high self-enhancement values due to the matching goals of the enterprises and self-enhancement-oriented individuals. According to human value theory (Schwartz, 2003), self-enhancement values and self-transcendence values are in conflict with each other. Thus, we propose that strong self-enhancement values are congruent with young commercial enterprises' goals, and less congruent with values reflected in young social enterprises (e.g., enhancing the overall societal well-being) (Riedo et al., 2019). Following the previous and following Hypotheses, the research model of our study is depicted in Figure 13.

**Hypothesis 2:** Individuals' self-enhancement values interact with the type of enterprise (i.e., social vs. commercial) such that, the higher one's self-enhancement values, the less positive one's image of social enterprises compared to commercial enterprises.

**Figure 13. The Research Model Based on Human Value Theory (Schwartz 2003; 2012)**

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### 5.3 Method

To test our hypotheses, we conducted a vignette study. A vignette study provides a realistic setting and enables the manipulation of factors of interest (Aguinis & Bradley, 2014). To this end, we randomly assigned participants to different versions of a presented scenario in which variables of interest, such as the enterprise's mission, are varied. In our case, the scenario consisted of the description of a fictitious interview with the founder of an enterprise. Presenting an interview resembles real-life examples since social founders tend to underline their enterprise's mission by establishing marketing approaches aimed at prosocial motives (e.g., image movies incorporating the disadvantaged group, positioning themselves as heroes, etc.) (Ruebottom, 2013). In particular, research shows that in young enterprises, the founders and their backgrounds can be regarded as a proxy for the enterprise itself (e.g., Blake et al., 2015; Breugst et al., 2015), making their own statements particularly important. Hence, we increased our study's validity by confronting participants with the description of a fictitious interview with the founder of an enterprise.

We randomly assigned the participants to one of two forms of the scenario (social versus commercial enterprise) in a between-subject design. The first form consisted of the presentation

of a young commercial enterprise developing coffee with a prolonged awakening effect. The second form consisted of a description of a young social enterprise selling fair coffee. Both scenarios differed in four characteristics. First, the social enterprise's idea was generated due to the experience with a disadvantaged group (i.e., coffee farmers in South America without access to clean water), whereas the commercial enterprise's idea was generated based on the founders' self-interest in studying for long hours. Second, the social enterprise focused on the disadvantaged group (i.e., the coffee farmers), whereas the commercial enterprise was oriented toward external consumers. Third, in the social enterprise scenario, the long-term goal of the enterprise aims at improving the overall living conditions of the disadvantaged group. In contrast, the long-term goal of the commercial enterprise aims at increasing the enterprise's sales. Fourth, the social enterprise's founders guaranteed a reasonable salary for coffee farmers, whereas the commercial enterprise was solely concerned with the quality of the coffee (see Appendix 8.4.1).

### **5.3.1 Participants**

Our study was conducted with 969 students from various disciplines at three German universities, which had, on average, 1.76 years of studies left until graduation (54% females; mean age = 22.9,  $SD= 2.9$ ). Sampled participants were enrolled in business ( $n = 56\%$ ), engineering ( $n = 13\%$ ), informatics and information systems ( $n = 7\%$ ), media ( $n = 8\%$ ), psychology ( $n = 4\%$ ), humanities ( $n = 5\%$ ), and other studies ( $n = 4\%$ ).

Whereas some scholars criticized the use of student samples in business research (Peterson & Merunka, 2014), we regard students as the relevant target population because they face the major decisions in their early career decision phase that might result in an occupation relevant for young social enterprises. In particular, students are an appropriate sample to test our hypotheses due to three theoretical considerations. First, students who are in a career development context are or become customers and employees that shape interactions with

commercial and social enterprises either because they decide on whether to purchase at, work for/with, or start these types of enterprises (Grégoire et al., 2019; Türk et al., 2020). Second, we investigate human values, which are shown to remain relatively stable over time (Ahmad et al., 2020; Schwartz, 2003). Third, in the realm of entrepreneurial motivation, there are no substantial empirical differences between student and non-student samples (Steinmetz et al., 2021). For instance, the recent meta-analysis predicting entrepreneurial intention based on over 260,000 individuals showed no differences between student samples, samples comprised of specific occupations, and broad, probability-based population samples (Steinmetz et al., 2021).

### **5.3.2 Procedure**

The participants were randomly assigned to one vignette that either presented an interview with a founder of a social enterprise or a commercial enterprise (see Appendix 8.4.1). We described the young social enterprise by presenting its mission to enhance well-being in society, whereas the economic mission of the young commercial enterprise solely referred to making profits.

Each vignette was constructed in an iterative process, which was based on discussions with actual founders and comparisons to other experimental studies on related issues (e.g., Diekmann et al., 2011; Gupta et al., 2008). The goal was to stylistically design the vignette such that it resembles an interview with a real founder (Aguinis & Bradley, 2014). We based the content of the interview on real-life examples such as *BeanZ & Co.*, an enterprise with a socially focused mission ([www.beanzandco.com](http://www.beanzandco.com)) versus *Timberyard*, an enterprise with a commercially-focused mission ([www.tyuk.com](http://www.tyuk.com)). We used the following guidelines to create the vignettes: To achieve comparability in all respects despite the manipulated factors and the generated clear and distinct presentation, we presented all missions as targeting the creation and distribution of coffee. However, we varied the vignettes in specific details to capture the enterprise's mission (e.g., “selling coffee to make profit versus selling fair-trade coffee to

support local farmers” or “running a café for profit reasons” versus “running the café to employ people with disabilities”). In this way, we kept the main characteristics of the context identical while varying essential features across treatments. After reading the vignette, participants responded to measures of the main constructs.

### 5.3.3 Measures

*The image* was measured with three items and the participants were asked how interesting they perceived the portrayed enterprise to be, how successful they thought the enterprise is, and how likable they perceived the founder of the enterprise presented in the vignette. The three items were evaluated on a seven-point rating scale ranging from 0 (“not interesting at all/ not likable at all/ not successful at all”) to 6 (“very interesting/ very likable/ very successful”). To assess the reliability of our measures, we calculated McDonald’s omega, which is recommended in contrast to the traditional measure, Cronbach’s alpha (Cho & Kim, 2015; Deng & Chan, 2017; Sijtsma, 2009). The reason is that Cronbach’s alpha relies on the assumption of essential tau-equivalence (i.e., equal factor loadings) which in case its violated, underestimates the true reliability. McDonald’s Omega, in contrast, results in correct estimates even in cases where factor loadings are unequal which is most often the case (Cho & Kim, 2015; Deng & Chan, 2017; Sijtsma, 2009). McDonald’s omega for the image measure was .90 (Cronbach’s Alpha = .81), which is considered excellent (Gadermann et al., 2012).

*Self-transcendence* and *self-enhancement values* were measured with the Portrait Value Questionnaire (PVQ; Schmidt et al., 2007; Schwartz, 2003). The PVQ presents a series of statements about the value orientations of a fictitious person and respondents are requested to indicate how similar they were to that person prompted by the question “*how similar are you to the person described below?*”. Within the PVQ, each statement describes a different random person’s goals and what he/she deems to be important in life (e.g., “*He/She believes it is important that everyone in the world should be treated equally. He/She believes that everyone*

*should have equal opportunities in life*”). By rating their similarity to the fictitious person, the respondent’s own value orientation was indicated. For *self-transcendence values*, four items represent statements that indicate the importance of “helping people,” “caring for their well-being,” “being loyal,” “caring for the environment,” and “treating everyone fairly” (Schwartz, 2003). Respondents rated their similarity to the person mentioned in each item on a seven-point Likert scale ranging from 0 (“very dissimilar”) to 6 (“very similar”). McDonald’s omega for self-transcendence was .79 (Cronbach’s Alpha = .74) and thus indicates good reliability regarding the measurement of self-transcendence (Gadermann et al., 2012). *Self-enhancement values* were assessed with four items, which included asking how relatable the participants were to a person that “is aiming for being wealthy,” “likes taking the lead,” “demonstrates his/her abilities,” and “aims to be successful” (Schwartz, 2003). McDonald’s omega for our self-enhancement scale was .90 (Cronbach’s Alpha = .82), which is considered excellent (Gadermann et al., 2012). The *type of enterprise* represented the assigned scenario. Hence, it was a binary variable coded with 0 for a commercial enterprise and 1 for a social enterprise.

#### **5.3.4 Pretest**

To maximize comprehensibility and validity, we conducted cognitive probing interviews (Alaimo et al., 1999; Willis, 2004) to test the comprehension of the vignettes and the appended questionnaire. In such interviews, techniques including thinking aloud and comprehension probing are applied to identify elements of improvement. The pre-test was conducted with 18 persons from different disciplines who faced career decisions in the near future (mean duration = 49.81 min/interview, *SD* = 20.65 min). Interviews were conducted iteratively: Whenever a participant indicated comprehension problems, the problem was discussed within the team of authors and the construction of the scenario or the questioned wording was adjusted. Afterward, the updated questionnaire went into a new round of interviews until no further problems occurred.

### **5.3.5 Checks of Implementation Quality**

The length of the vignettes was comparable (403 to 417 words). Nevertheless, we included questions that measured the implementation success of the scenarios to test whether understanding the content of the scenarios was hampered by unintended difficulties (Shadish et al., 2002). To this end, we measured the participants' need to concentrate while reading the scenarios, their level of tiredness, and the vignette's closeness to reality. Regressing these three implementation measures on the type-of-scenario variable resulted in non-significant relationships regarding the need for concentration ( $b = .05, p > .10$ ), the level of tiredness ( $b = .10, p > .10$ ), and the closeness to reality ( $b = -.01, p > .10$ ). Thus, the scenarios did not deviate systematically according to these factors. Finally, we administered a manipulation check that tested whether the participants had grasped the social versus commercial mission of the presented enterprise. The manipulation check questions were placed right at the beginning of the questionnaire following the description of the enterprise. In particular, we tested participants' understanding of the overall content of the scenario (e.g., whether the venture opportunities had arisen from previously insufficient products/services or bad living conditions). We eliminated 24 participants who incorrectly answered either one of the three questions. Thus, our final sample size amounted to 945 responses.

### **5.3.6 Analytical Procedure**

To analyze differences in the effects of values on the image of young social versus commercial enterprises, we followed Frederiks et al. (2019), Hsu et al. (2019), and Nagel et al. (2019) by opting for a regression analysis rather than an AN(C)OVA. Both analytical procedures are statistically equivalent models and reflections of the same statistical model (i.e., the general linear model) with the AN(C)OVA being a special case of regression analysis. Hence, both types of analyses lead to the same results (King, 1986). Regression analysis allows us to observe the direction of the interactions by interpreting the regression coefficient

(Shepherd & Zacharakis, 2019). We conducted a moderated regression analysis in which the effect of each of the type-of-scenario variable (i.e., *social vs. commercial enterprise*) on the dependent variable (i.e., *image*) interacted with *self-enhancement versus self-transcendence values*. As previous studies provide evidence for gender differences within the Schwartz value theory (i.e., females show higher self-transcendence values and lower self-enhancement values, Borg, 2019), we further included the respondents' gender (female = 1, male = 0) as a covariate in the regression. In contrast, the vignettes were formulated in a gender-neutral form.

The selected research design and analytical procedure allow testing for the differences in the role of a certain value dimension (e.g., self-transcendence) for the evaluation of the image of the respective type of enterprise being either a young social or a commercial enterprise. The product terms in the regression indicate the change in mean differences in the image between both enterprise types along the respective value dimension. Beyond the interaction analysis, we conducted a simple slope analysis for each type of enterprise (i.e., social vs. commercial) to examine the exact relationship between a respective value and the image of the type of enterprise.

## 5.4 Results

Table 17 presents the means, standard deviations, and correlations of the study variables. As illustrated, young social enterprises were, on average, more positively evaluated than young commercial enterprises ( $r = .11, p < .01$ ). Likewise, respondents' self-transcendence values correlated positively with their evaluation of young social versus commercial enterprises ( $r = .23, p < .01$ ), whereas respondents' levels of self-enhancement values, showed a slightly negative relationship with their perceptions of social enterprises ( $r = -.07, p < .05$ ). The non-significant and close-to-zero correlations between both value dimensions and whether the organization in the vignette was a social enterprise supports the success of the randomization procedure.

**Table 17. Means, Standard Deviations, and Correlations of Model Variables**

	Mean	S.D.	1	2	3	4
1. Type of enterprise	.49	.50				
2. Female	.54	.50	.03			
3. Image	3.68	1.45	.11**	.23**		
4. Self-transcendence values	4.22	1.12	.03	.25**	.23**	
5. Self-enhancement values	3.14	1.36	-.04	-.06	-.07*	-.14**

Note: Means, standard deviations, and correlations of model variables are reported.  $N= 945$ . Type of enterprise is dummy-coded (1 = social enterprise, 0 = commercial enterprise); gender is dummy-coded (1 = female, 0 = male) \*\* $p < .01$  (two-tailed); \* $p < .05$  (two-tailed)

The results of our regression analysis are presented in Table 18. The results of the main effect show a significant effect of the treatment variable (i.e., the type of enterprise) on the dependent variable (i.e., Enterprise image;  $B = .19, p < .01$ ). The results indicate a significant interaction of self-transcendence values and the treatment (i.e., type of enterprise) ( $B = .22, p < .01$ ). This positive interaction shows that the positive effect of the type of enterprise treatment was stronger (i.e., more positive) for individuals with greater self-transcendence values. This result provides support for Hypothesis 1. Figure 14 illustrates the interaction. The figure shows the means for one standard deviation below (“low self-transcendence”) versus one standard deviation above the mean of self-transcendence values (“high self-transcendence”). The interaction is visible in the change of the differences between both enterprise types for low versus high self-transcendence. The results of the simple slope analysis are depicted in Table 19. Table 19 shows the significant effect of self-transcendence on the social enterprise image ( $B = .28, p < .01$ ). This effect is visible in Figure 14 in the form of the mean difference in the right panel (i.e., the image of young social enterprises). As Figure 14 illustrates, individuals

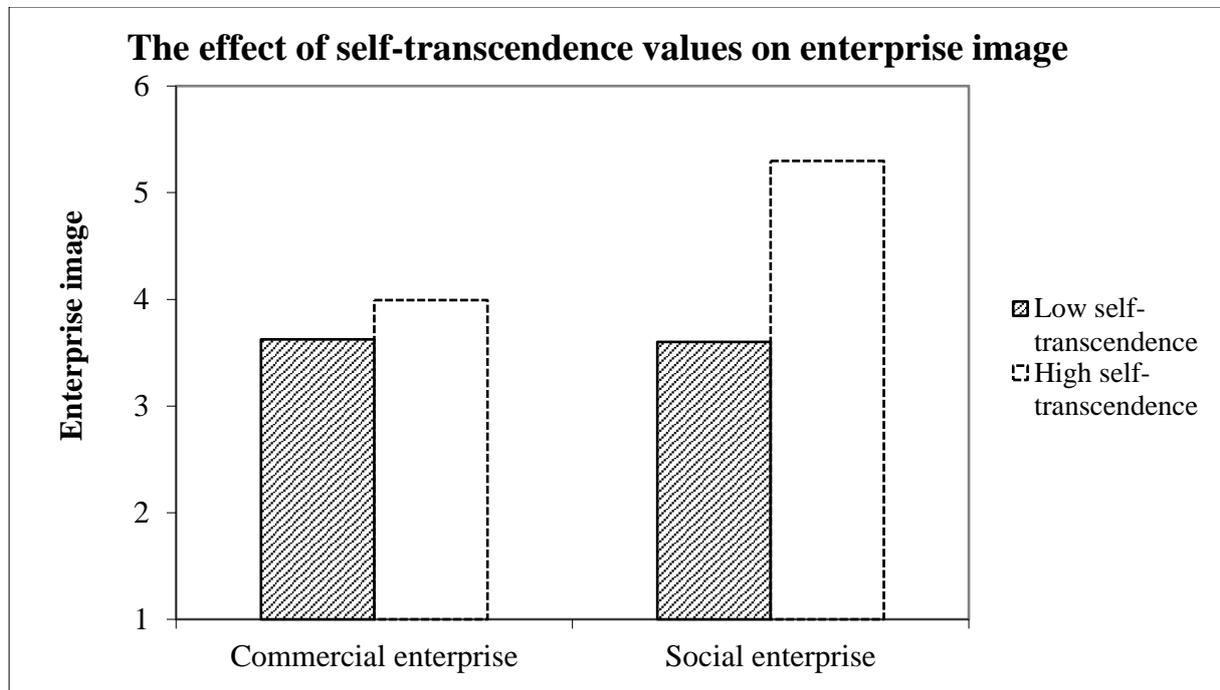
with high self-transcendence values, as well as individuals with low self-transcendence values evaluated young commercial enterprises similarly.

**Table 18. Results of The Moderated Regression Analysis**

Dependent variable: Enterprise Image	Model 0	Model 1 [H1]	Model 2 [H2]
	B (SE)	B (SE)	B (SE)
Independent variables			
Type of enterprise	.19 (.06) **	.19 (.06) **	.19 (.06) **
Female	.35 (.06) **	.36 (.06) **	.35 (.06) **
Moderator variables			
Self-transcendence values	.17 (.04) **	.06 (.05)	.17 (.04) **
Self-enhancement values	-.03 (.03)	-.03 (.03)	.06 (.05)
Product terms			
Self-transcendence values x Type of enterprise		.22 (.07) **	
Self-enhancement values x Type of enterprise			-.17 (.06) **
F (df1,df2)		23.08. (5, 940) **	20.75(5, 940) **
R <sup>2</sup>		.11	.10

*Note:* B = unstandardized coefficient; SE = standard error; N= 945. Type of enterprise is dummy coded (1 = social enterprise, 0 = commercial enterprise); gender is dummy coded (1 = female, 0 = male); \*\*  $p < .01$  (two-tailed); \*  $p < .05$  (two-tailed).

**Figure 14. Interaction Effect Between the Type of Enterprise and Self-Transcendence Values**



*Note.* Low self-transcendence = 1 *SD* below the average; high self-transcendence = 1 *SD* above the average.

Hypothesis 2 predicted a significant interaction between individuals' levels of self-enhancement values and the type of enterprise treatment on the enterprise's image, which was supported (see table 18;  $B = -.17, p < .01$ ). As expected, the coefficient of the product term variable indicated that the positive image effect of the type of enterprise treatment (i.e., if the assigned organization was a social enterprise) is weaker for people with higher levels of self-enhancement values. Figure 15 shows the means for low self-enhancement versus high self-enhancement. The interaction is visible in the change of the differences between both business types for low versus high self-transcendence. Figure 15 shows that individuals with low self-enhancement values evaluate young social enterprises more positively than young commercial enterprises. However, the effect of the type of enterprise treatment (i.e., if the assigned organization was a social enterprise) is actually expected to be negative for individuals with the highest levels of self-enhancement values resulting in a negative evaluation of young social

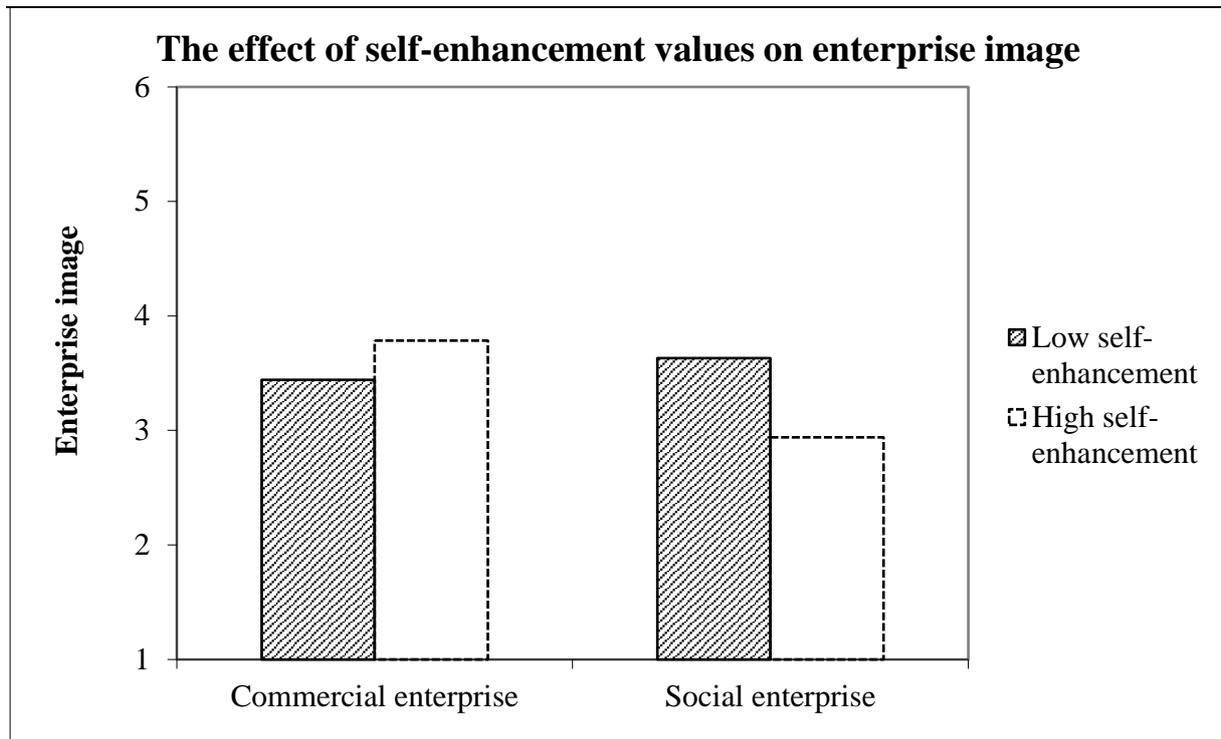
enterprises. The results of the simple slope analysis showed a significant effect of individuals' levels of self-enhancement values on their image of young social enterprises ( $B = -.12, p < .01$ ). Furthermore, the findings of the simple slope analysis showed a non-significant relationship for the effect of an individual's self-enhancement values on the evaluation of the image of young commercial enterprises ( $B = .06, p > .10$ ). A posthoc simple comparison of the means of the evaluations of the enterprises reveals that young social enterprises are generally perceived more positively than their commercial counterparts ( $p < .01$ ). However, as explained above, this warm glow effect on the image of social enterprises depends on an individual's levels of self-transcendence and self-enhancement values. Figure 15 demonstrates the effects of individuals' self-enhancement values on their image of young social enterprises with the pillars to the right, while the effect of individuals' self-transcendence values on young commercial enterprises is demonstrated with the pillars to the left.

**Table 19. Results of The Simple Slope Analysis**

<b>Dependent variable: Enterprise Image</b>	<b>B</b>	<b>t</b>
Self-transcendence values		
Social enterprise	.28	8.95 **
Commercial enterprise	.06	1.11
Self-enhancement values		
Social enterprise	-.12	-3.64 **
Commercial enterprise	.06	1.04

Note: Based on a two-way interaction.  $N = 945$ . Type of enterprise is dummy-coded (1 = social enterprise, 0 = commercial enterprise); gender is dummy coded (1 = female, 0 = male); \*\* $p < .01$  (two-tailed); \* $p < .05$  (two-tailed).

**Figure 15. Interaction Effect Between the Type of Enterprise and Self-Enhancement Values**



Note. Low self-enhancement = 1 SD below the average; high self-enhancement = 1 SD above the average.

## 5.5 Discussion

Social enterprises elude easy categorization into either a non-profit or for-profit organization, in turn, posing a challenge for external individuals to fully grasp the concept of social enterprise and to fully evaluate those enterprises compared to commercial (or non-profit) organizations (Austin et al., 2006; Bacq & Alt, 2018; Barraket et al., 2016; Peiffer et al., 2020). This study extends our understanding of individual-level factors that explain external stakeholders' evaluation of social enterprise image compared to their perceptions of commercial enterprises operating in the same industry. The results show that self-transcendence values (i.e., other-oriented values) positively influence individuals' evaluation of the image of young social enterprises, whereas self-enhancement values (i.e., self-centered values) are negatively related to social enterprise image. Surprisingly, our findings also reveal that high

self-transcendence values positively relate with the image of young commercial enterprises, whereas self-enhancement values were not related with the image of commercial enterprises.

### **5.5.1 Theoretical Implications**

First, this study shows the fruitfulness of using human value theory for social entrepreneurship research to investigate the evaluation of the image of young social versus commercial enterprises by external individuals. Viewing social enterprises from a values perspective lends an important and understudied lens to understand the roots of motivations, perception, affective responses, and actions of humans. While we focused on the role of values for the evaluation of external individuals, values further concern the aspirations, goals, and strategies of founders and, their employees, or consumers. Human values do not only act as guiding principles but also function as antecedents of actions and behavior (Schwartz, 2003, 2012). In line with previous research on the importance of values for prosocial behavior and intentions (Ahmad et al., 2020; Ip et al., 2021; Sastre-Castillo et al., 2015) we suggest that implementing human value theory contributes not only by acknowledging which aspects are positively related to social enterprises (Bacq & Alt, 2018; Ruskin et al., 2016), but also adds an explanation for which aspects might deteriorate the image of social enterprises.

Furthermore, our findings suggest that values play a crucial role in explaining phenomena connected to social enterprises. According to our results, social enterprises are more likely to attract self-transcendent individuals whereas individuals with stronger self-enhancement values are less likely to feel attracted to social enterprises. As values are fairly stable and explain attitudes and behaviors (Schwartz, 2003; Vecchione et al., 2016), they might also determine the extent to which social enterprises attract employees, customers, and investors. As we discuss, this can be especially important for young social enterprises as they seek investment, donations, customers, and other support to grow and sustain their operations (Ihm & Baek, 2021; Lee, 2021). Research has already shown that welfare versus commercial

orientation in the way human resource practices by social enterprises are crafted, influences the acquisition of employees (Moses & Sharma, 2020). Our study adds the importance of individual-level factors that influence the effects of such organization-level actions and attributes. As our findings show, individuals with high self-enhancement values hold less favorable views of social enterprises which might affect the behavior of potential job candidates, customers, and investors. Particularly in areas where self-enhancement values might be more inherent in everyday practices (e.g., profit-seeking in investment and business), social enterprises could face problems, such as disinterest, and negative expectations relative to commercial enterprise counterparts.

Moreover, past research has shown that self-enhancement values such as achievement and power are likely to arise in combination with openness to change values such as stimulation and self-direction (Steinmetz et al., 2012), which are crucial drivers for entrepreneurial activities (Hirschi & Fischer, 2013). By solely focusing on the social mission, social enterprises might run the risk of signaling non-enhancement-related goals and characteristics. Thereby, they might fail to attract individuals with high self-enhancement values and, thus, might miss out on leveraging crucial entrepreneurial characteristics, such as the motivation for growth and profitability (Giones et al., 2020; Gorgievski et al., 2011; Tykkyläinen et al., 2016). On the other hand, emphasizing the economic similarity to commercial enterprises could be expected to deter individuals with self-transcendence values. However, we find self-transcendence values to have a positive (rather than a negative) effect on the image of young commercial enterprises as well, implying that self-transcendent individuals are not deterred from commercial enterprises. A possible reason for this unexpected effect could be that individuals with high self-transcendence values associate concern and empathy for others with emergent enterprises independently of the type. Empathy for others is required to understand customers' problems and increase their interest in a product or service (Gabbott & Hogg, 2001; Wieseke

et al., 2012). Furthermore, particularly self-transcendent individuals might regard commercial enterprises as socially desirable, despite their economic orientation, since they also provide a societal value (e.g., creating potential job opportunities). We encourage future research to further investigate other self-oriented personality traits that might explain the relationship between self-transcendence values and the positive image of commercial enterprises. External individuals could associate a more profound meaning with commercial enterprises beyond achievement and power-oriented goals. Hence, different personality traits might be more relevant for evaluating young commercial enterprises.

Lastly, this study adds value to the debate on the distinction between social and commercial enterprises (Austin et al., 2006; P. A. Dacin et al., 2010; Peredo & McLean, 2006). Thus, this study provides insights by investigating factors explaining why and to which degree the two types of enterprises are perceived differently. Our findings suggest that perceptions of social and commercial enterprises differ depending on value profiles. Our findings further suggest that young social enterprises are on average evaluated more positively, regardless of which values individuals hold. Thereby, we add to the literature on the legitimacy of social enterprises (Dart, 2004; Nicholls, 2010; Ruebottom, 2013) by showing that the concept of social entrepreneurship is regarded positively by externals, despite the controversies on its dual missions, which is discussed in the literature (Doherty et al., 2014; Moss et al., 2011). Future research should aim at investigating which consequences may result from a stronger reaction to social versus commercial enterprises and if these reactions are related to an enterprise's survival.

### **5.5.2 Practical Implications**

The study points to two important practical implications. First, our results indicate that social enterprises mainly attract self-transcendent individuals, while it also indicates that individuals with stronger self-enhancement values might be less attracted to social enterprises.

When aiming to employ self-enhanced people, social enterprises may benefit from portraying not only self-transcendence values regarding their image but also self-enhancement values. Accordingly, social enterprises might benefit from tailoring their outward communications to the audience that they are trying to reach. Thereby, these enterprises may benefit from attracting a higher number of candidates with the desired and needed human values.

Second, our results suggest individuals' self-transcendent values have a positive impact on the image of both social and commercial enterprises. This finding strengthens the notion that for enterprises' engagement with social value creation as their business model, it pays to project self-transcendent values, which would result in the enterprise having a positive image and hence give them better access to resources. Communication of values related to enhancing overall societal well-being carries an important value for either type of enterprise. Our results provide further evidence that commercial enterprises benefit from highlighting the social orientation of their business practices.

### **5.5.3 Limitations and Future Research**

This study is subject to four main limitations. First, we limited our research to the simplified dichotomy between social and commercial enterprises. However, social enterprises take a variety of hybrid forms (Aileen Boluk & Mottiar, 2014; Hota et al., 2019; Mair & Martí, 2006). While the social enterprise's mission is undoubtedly one of the most distinguishing elements between social and commercial enterprises, there are further distinguishing factors (e.g., differences in governance structures and differences regarding the beneficiaries and potential investors and how to address them). Future research could extend our findings by integrating other hybrid organizations that follow mixed missions to investigate more nuanced differences. Furthermore, our study focuses on social versus commercial enterprises. Hence, we did not include non-profit organizations in the analysis as non-profit organizations differ

from social enterprises because they do not aim at economic goals. Future research could enhance our understanding by investigating all three types of organizations.

Second, the participants of our study were restricted to university students and we did not investigate the differences in the effect of values on enterprise image for explicit stakeholder groups (e.g., investors, customers, and the general public). Given that individuals' values are generally stable throughout their life (Schwartz, 2003; Vecchione et al., 2016), we propose that a student-sampled study provides insights into a wider context. Nevertheless, future research could benefit from an assessment of individuals' perceptions of enterprises under topic-related circumstances (e.g., venture capitalists, politicians).

Third, our sample was restricted to a German population. Germany provides an interesting and salient context to study social entrepreneurship, as it can be regarded as representative for countries with a poor entrepreneurial culture (Bosma & Kelley, 2019; Foreman-Peck & Zhou, 2013). As values have been proven to be closely related to culture (Schwartz & Bardi, 2001), future research could extend our findings in other contexts or on an international level and investigate differences and commonalities between the effects of values and enterprise image perceptions in a cross-national or cross-cultural comparison.

Fourth, we focused on the role of human values in the perception of organizations' image in our study. While the human values that we investigated are closely linked to the perceived legitimacy of the organizations represented in our study and strongly affect stakeholders' symbolic associations, other relevant factors might also affect external stakeholders' perceptions of social and commercial enterprises. Within our study, we controlled for any differences by gender since entrepreneurship research demonstrates that women tend to have a greater orientation towards social motives than men (Chandler et al., 2022). Our study also supports this finding. Hence, future research could benefit from investigating the role of sociodemographic factors in greater depth. For example, in addition to controlling for other

socio-demographic factors, future research could benefit from analyzing which elements of an enterprise's image might be more relevant for female than male stakeholders. Future research could also go beyond socio-demographic aspects and explore which other personality traits (e.g., big five personality traits) might affect individuals' evaluation of an enterprise's image. Since previous research underlines the prosocial characteristics of social entrepreneurs and shows that entrepreneurs, in general, imprint their enterprises with their characteristics and values (Blake et al., 2015), other traits might be highly relevant for future research to investigate.

## **6 Chapter VI: Conclusion**

### **6.1 Findings of four Studies on Collective Interests in Entrepreneurship**

This dissertation contributes to research and practice on entrepreneurship by disentangling the role of collective interests in entrepreneurial ventures. Research in this regard has proliferated in recent years by incorporating prosociality, compassionate behavior, and the role of values as central elements determining entrepreneurial behavior and the entrepreneurial journey (e.g., Kruse et al., 2019; Miller et al., 2012; Mittermaier et al., 2023; van de Ven et al., 2007; Vedula et al., 2022). However, this dissertation identifies important gaps in current research. Addressing these research gaps is important to advance our knowledge regarding the role of collective interests in entrepreneurship and to further promote its integration into entrepreneurial practice. In summary, the studies in this dissertation emphasize the opportunities and challenges that come along with balancing self- and other-oriented goals and behaviors in entrepreneurship. Notably, the findings of this dissertation show that incorporating collective interests into entrepreneurship cannot simply be accomplished without overcoming difficult challenges. Nevertheless, the findings show that there is value in integrating collective interests for both social and traditional entrepreneurs. In the following, the main findings of the dissertation will be summarized.

First, *Chapter II* analysed the antecedents of social entrepreneurial intentions by shedding light on the role of traumatic life events and posttraumatic growth. The investigation of social entrepreneurial intentions of professionals and students reveals that traumatic life events positively relate with social entrepreneurial intentions. Further, the results within *Chapter II* demonstrate that the relationship between traumatic life events and social entrepreneurial intentions can be explained by four domains of posttraumatic growth (i.e., personal strength; relating to others; recognition of new possibilities, and spiritual change). However, appreciation of life is not aligned with an increase in social entrepreneurial intention.

Second, Chapter III investigated how social entrepreneurial teams have to be composed to achieve hybrid venture goals. In this regard, the study shows that although social ventures' goals are hybrid (i.e., containing social and commercial aspects alike), the values of the founding teams do not have to capture self- and other interests. Instead, the findings of the study demonstrate that social entrepreneurial teams are more successful regarding their business model quality when the team is homogenous in its values (i.e., either the whole team has high self-enhancement or the whole team has high self-transcendence values). While research on commercial entrepreneurial teams suggests that shared characteristics are beneficial to team outcomes, we could not find any significance regarding human values. Instead, our results suggest human values are important for social entrepreneurial teams but not for commercial entrepreneurial teams.

Third, Chapter IV explores how entrepreneurial teams cope with environmental uncertainty. In this vein, the study reveals two coping trajectories –optimistic growth coping and damage mitigation coping. The optimistic growth coping trajectory stresses the importance of pursuing collective interests through social exchanges within the team. Notably, these exchanges foster team performance and team well-being. Teams following this coping trajectory display an optimistic and forward-looking attitude towards their business operations and team emotions, whereby a promotion-focused motivation is evident throughout the whole coping trajectory. The findings of the study show that team compassion and interpersonal emotion regulation are decisive features of successful coping. In contrast, the damage mitigation coping trajectory suggests that teams that rather focus on intrapersonal emotion regulation and act in a prevention-focused manner towards their business operations while neglecting the emotions of their team members are less successful in combating environmental uncertainty.

Lastly, Chapter V demonstrates that external stakeholders evaluate young social enterprises differently than young commercial enterprises based on the stakeholders' inherent human values. Specifically, the study in this chapter shows that high self-transcendence values positively relate to the image of young commercial enterprises. As for young social enterprises, self-transcendence values positively relate to the enterprise image, while self-enhancement values negatively relate to the enterprise image.

## **6.2 Theoretical Implications**

The findings of the four studies in this dissertation provide important theoretical implications and opportunities for future research. First, Chapter II adds to social entrepreneurship research by emphasizing that personal human suffering through traumatic life events results in an increased likelihood of engaging in social entrepreneurship. Thereby the study adds to research that only vaguely points to a relationship between former traumatic experiences and social entrepreneurial intentions (e.g., Hockerts, 2017; Lambrechts et al., 2020), by empirically showing that traumatic life events have the power to induce posttraumatic growth, which in turn positively affects social entrepreneurial intentions. Thus, the study sheds light on thus far neglected explanatory factors of social entrepreneurial intentions. Furthermore, this study complements research by showing that prosociality and morality are not given traits but, at times, are developed through trauma. Future research can build on my findings by further integrating the concept of posttraumatic growth into (social) entrepreneurship. Specifically, investigating how traumatic life events and posttraumatic growth affect (social) entrepreneurial journeys in the long run, for example, in terms of the founders' well-being (e.g., Kibler et al., 2019) or the threat of mission drift (e.g., Grimes et al., 2019) are promising avenues for future research.

Second, Chapter III provides important implications for social entrepreneurship research by being among the first studies that investigates the composition of social

entrepreneurial teams and, thus, provides an important but yet missing team perspective. In this vein, the study in this chapter demonstrates that the challenges that come along with balancing dual objectives do not reflect in the team in terms of the needed values. Furthermore, it complements research that investigates the characteristics of individual entrepreneurs by showing that team members need to possess shared values to achieve positive venture outcomes. Additionally, this study contributes to research emphasizing that social entrepreneurs are oriented towards collective interests (e.g., Bacq & Alt, 2018; Kruse et al., 2019) by showing that not only other-oriented values (i.e., self-transcendence values) but also self-oriented values (i.e., self-enhancement values) can be beneficial for social entrepreneurial teams. Lastly, this study contributes to research on entrepreneurial teams (e.g., Preller et al., 2020) by investigating deep-level characteristics and demonstrating that the role of values for entrepreneurial team outcomes differs depending on the type of venture (i.e., social vs. commercial venture). Thus, the study suggests that the context that the entrepreneurial team works in shapes the deep-level characteristics that the teams need to succeed.

Future research could build on this study by further investigating the context in which entrepreneurial teams operate. Specifically, the characteristics that are needed for positive outcomes may depend on the stakeholders involved in the venture. Thus, integrating stakeholder interests as contextual factors that determine entrepreneurial team success should provide an interesting avenue for future research. Furthermore, future research could benefit from further investigating the role of deep-level characteristics in entrepreneurial teams. In this vein, I suggest moving beyond investigating diversity concerning one singular character trait and instead investigating the combination of different characteristics simultaneously.

While the external context of the venture can determine entrepreneurial teams' success, internal team dynamics are further relevant for entrepreneurial teams. In this vein, Chapter IV adds to research on entrepreneurial teams by uncovering how entrepreneurial teams cope with

a sudden increase of environmental uncertainty. Specifically, the study reveals that teams that follow an optimistic growth coping trajectory benefit from focusing on the collective interest of the team and taking advantage of social interactions. Thus, the study adds to research on coping that focuses on the individual level of analysis, by further emphasizing the need to investigate team behavior in the context of coping (for exceptions see Hmieleski & Cole, 2022; Sirén et al., 2020). Furthermore, the study advances research on entrepreneurial coping that categorizes coping as either problem or emotion-focused (Ahmed et al., 2022) by providing a more nuanced picture of coping in terms of an interplay between emotion-based and problem-based coping behavior. Lastly, the study adds to research on action under environmental uncertainty by demonstrating that while entrepreneurial teams similarly make sense of uncertainty, the speed in responding to the uncertain environment has the power to shape the entrepreneurial teams' success.

Future research could build on this study by further investigating how different coping trajectories affect entrepreneurial team outcomes. In particular, the interplay between well-being and performance is of relevance for future studies. Furthermore, research should consider interpersonal emotion regulation and team compassion as interesting explanatory variables for team outcomes. Additionally, research on entrepreneurial teams could further complement this study by investigating the contagious power of emotions. Specifically, not only positive emotions can have spill-over effects on the whole venture team, but also negative emotions can be contagious and thus impair the overall team well-being and, ultimately, team functioning and performance.

Lastly, *Chapter V* adds to research on social entrepreneurship by introducing human value theory (Schwartz, 2003, 2012) to explain differences in the perceptions of the image of social compared to commercial enterprises. Investigating the enterprise's image is particularly important for enterprises at a young age since the image has the power to determine the

enterprise's long-term success (e.g., attracting future customers, and investors). As this study demonstrates differences in the perception of both types of enterprises, it contributes to research by suggesting treating both types differently in terms of determinants of enterprise image.

Future research could complement the findings of this study by further investigating determinants of young enterprises' image and by exploring how young social entrepreneurs can combat the challenges that arise due to their hybrid nature. Additionally, future research could build on our study by further differentiating between different stakeholder groups (e.g., customers and investors) when investigating the enterprise image. Notably, the influential role of human values on enterprise image may differ depending on the outcome that the stakeholders desire (e.g., financial return for investors versus helping those in need of customers).

### **6.3 Practical Implications**

The findings of this dissertation further provide important practical implications. The findings in *Chapter II* stress the need to start social entrepreneurial endeavors where the experience of human suffering is made. In that regard, programs aiming at fostering social entrepreneurial intentions, such as accelerator programs, should shift their focus from trying to reach university students to reaching out to individuals who live under more vulnerable life circumstances, such as individuals living in disadvantaged areas who might opt for jobs without the need for a degree. Another approach could be to reach out to those people who are addressed in programs treating trauma (e.g., clinics or shelters for the homeless). Furthermore, entrepreneurship programs could aim to integrate the experience of human suffering into their programs by either showing educational material on trauma-related circumstances or offering apprenticeships in areas close to the trauma.

The findings of *Chapter III* suggest that entrepreneurial teams need to be aligned concerning the team members' values. In this vein, entrepreneurial ecosystems need to establish support systems that foster team building and congruency in visions and values. These support

systems could focus on working on the development of a mutual understanding of differing values in the teams early on in the venturing process. Furthermore, startup coaches could encourage communication about differing views and mindsets within the team.

These practical suggestions are in line with those from *Chapter IV*. *Chapter IV* demonstrates that entrepreneurial coping is particularly relevant for entrepreneurial teams. In this regard, interpersonal emotion regulation and team compassion provide advantages for the teams. Thus, entrepreneurial teams should develop a mutual understanding of how to interact when it comes to an impairment of well-being within the team and further should emphasize communication and team compassion when facing obstacles. For educators, this chapter further stresses the need to incorporate the topics related to mental well-being in entrepreneurship education. Specifically, since the entrepreneurial journey is oftentimes referred to as an emotional rollercoaster (De Cock et al., 2019), knowledge of how entrepreneurial teams can cope with upcoming hurdles can help them to succeed in the long run.

Ultimately, *Chapter V* stresses that particularly young social enterprises struggle with their image when trying to attract people with strong self-enhancement values. However, social enterprises may need investors or employees who focus on economic aims and the scaling of the venture. Thus, social enterprises should focus on portraying values that not only capture their social mission but also the possibility to follow up on self-enhancement values within the venture (i.e., achievement orientation, power-orientation). In this vein, outward communications, such as social media posts, should be adjusted. Furthermore, since the study shows that self-transcendence values are beneficial to social and commercial enterprises alike, commercial enterprises can further benefit by engaging in societal issues to improve their image and advance society as a whole.

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## 8 Appendix

### 8.1 Appendix Chapter II

#### 8.1.1 Examples of Social Ventures Based on Traumatic Life Events

Venture Name	Year of foundation	Description	Reason for founding the venture	Relation to the experience
Chancenwerk e.V.	2018	They are helping parents with a lack of education to be able to help their children to succeed in school.	Troubles with exclusion in elementary school due to poor German language skills. A feeling of not fitting in.	It happened to the founder.
Companion2Go	2017	Connecting people with and without disabilities.	The founder struggled with a disability throughout his life (i.e., needing a wheelchair).	It happened to the founder.
Heartbeat Edutainment gUG	2018	Development of innovative educational programs for children and youth.	The founder had a challenging childhood and problems in the youth. Wants to help children who suffer equally.	It happened to the founder.
The Hempany GmbH	2018	The venture develops and sells food based on the hemp plant. Additionally, the venture aims at improving the image of hemp.	Multiple sclerosis disease of the girlfriend of a co-founder, who could not legally buy products based on hemp, led to the foundation of the venture. Hemp, however, could promote muscular relaxation and thus help people affected by multiple sclerosis.	It happened to the girlfriend of one of the founders.
mylittlebukhara	2019	A fashion label that cooperates with Uzbek craftswomen to enable them to work.	Experience of discrimination and the experience of sexism of women in Uzbekistan.	It happened to the founder and women in her network.
Stiftung MyHandicap gGmbH/ EnableMe	2005	Offer projects that are supposed to help people with disabilities to get their lives back.	Founder lost his right arm and leg in a motorcycle accident in South Africa. The accident was not his fault.	This happened to the founder.

### 8.1.2 Life-events Checklist (adapted from Gray et al., 2004)

#### Traumatic Events

**Trigger Warning:** At this point, we would like to point out that this survey deals with traumatic experiences that can trigger discomfort, stressful memories, or even flashbacks in some people. However, in case you are affected, you are not asked to describe the experience. The question only refers to whether you had the experience to some degree. However, you should only fill out this questionnaire if you feel stable enough to do so. If you are looking for support in coping, there is, for example, the offer of the help hotline (08000 116 016).

**Instructions:** Listed below are several difficult or stressful events that sometimes happen to people. For each event, check one or more of the boxes to indicate that: (a) it happened to you personally; (b) you witnessed it happen to someone else; (c) you learned about it happening to a close family member or close friend; (d) you were exposed to it as part of your job (for example, paramedic, police, military, or other first responder); (e) you're not sure if it fits; or (f) it doesn't apply to you. Be sure to consider your entire life (growing up as well as adulthood) as you go through the list of events.

#### List of Traumatic Life Events

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1. Natural disasters (for example, floods, hurricanes, tornados, earthquakes)
2. Fire or explosion
3. Transportation accidents (for example, car accidents, boat accidents, train wrecks, and plane crashes)
4. Serious accidents at work, home, or during recreational activity
5. Exposure to toxic substances (for example, dangerous chemicals, radiation)
6. Physical assault (for example, being attacked, hit, slapped, kicked, or beaten up)
7. Assault with a weapon (for example, being shot, stabbed, or threatened with a knife, gun, or bomb)
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)
9. Other unwanted or uncomfortable sexual experiences
10. Combat or exposure to a war zone (in the military or as a civilian)
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)
12. Life-threatening illness or injury
13. Severe human suffering
14. Sudden violent death (for example, homicide, suicide)
15. Sudden accidental death
16. Serious injury, harm, or death you caused to someone else
17. Any other very stressful event or experience

**8.2 Appendix Chapter III**

**8.2.1 Adapted Business Model Canvas Template**

<b>Mission statement</b>					<b>Positive external effects</b>
<b>Key</b>	<b>Problem</b>	<b>Value</b>	<b>Customer relationships</b>	<b>Target group(s)</b>	
<b>Key Partners/ Resources</b>	<b>Solution</b>		<b>Channels</b>	<b>Performance indicators</b>	<b>Negative external effects</b>
<b>Cost structure</b>			<b>Revenue streams</b>		

## 8.2.2 Evaluation guidelines for judges

### Business Model Judges: Evaluation Guide

Dear jury,

Thank you for taking the time to support us in our research and for evaluating these business models. We are happy to provide you with a guide that you can use to evaluate the business models.

#### General remarks:

- First of all, we would like to assure you that your data will be treated completely anonymously. We only use it for research purposes and anonymize it before analyzing the data.
- Experience has shown that the deeper you go in the evaluation process, the less concentrated you become, so the evaluations may be distorted. Hence, we separate the evaluation process into different sets of business models.
- Please use any random order for the sets of business models. Please do not start with 1,2,3,4.....
- Each assessment set of business models contains between 11 and 20 business models.
- From experience, the evaluation of the first set takes about 7 to 10 minutes. However, once you are into the topic, you progress a bit faster, so it usually takes 3 to 5 minutes per business model.
- We have set up the survey so that you can cache your results and return to the survey later. Please use this function if you notice that your concentration is fading or that you are increasingly giving too-good/too-bad ratings.
- In addition, we ask that you do NOT communicate with the other judges about the scores during the judging process. We want to try to keep the results as objective as possible without any external influence.
- Please try to evaluate the business models as objectively as possible. It is not about the level of detail in the wording and nice writing style but about the content that can be derived from the BMCs. If information is missing for a particular category and there is no way for you to objectively rate it, leave the field blank.
- Should you want to look at the BMC again, you can always scroll up.

#### Notes on the evaluation of the quality of the business models:

- Economic added value: This is about the potential economic value or the potential economic benefit of a business idea. For example, it could be a technological breakthrough innovation, but it could also be a business model that enormously simplifies supply chains or benefits the labor market (jobs, relief, etc.). Another possible example is a high return on investment, which also results in an economic added value.
- Novelty: This is about the value of novelty behind the product or service. The novelty of products/services can be compared and classified with all currently existing products and services. Not every idea is highly novel.
- Social/Sustainable Value Added: This is about the social benefit that the business model/product/service provides. Please don't focus here on, for example, people being happy because they own the latest technology. It's about "making the world a little better" at this point. As a small incentive in which direction it goes, you can look at the SDGs at this point.

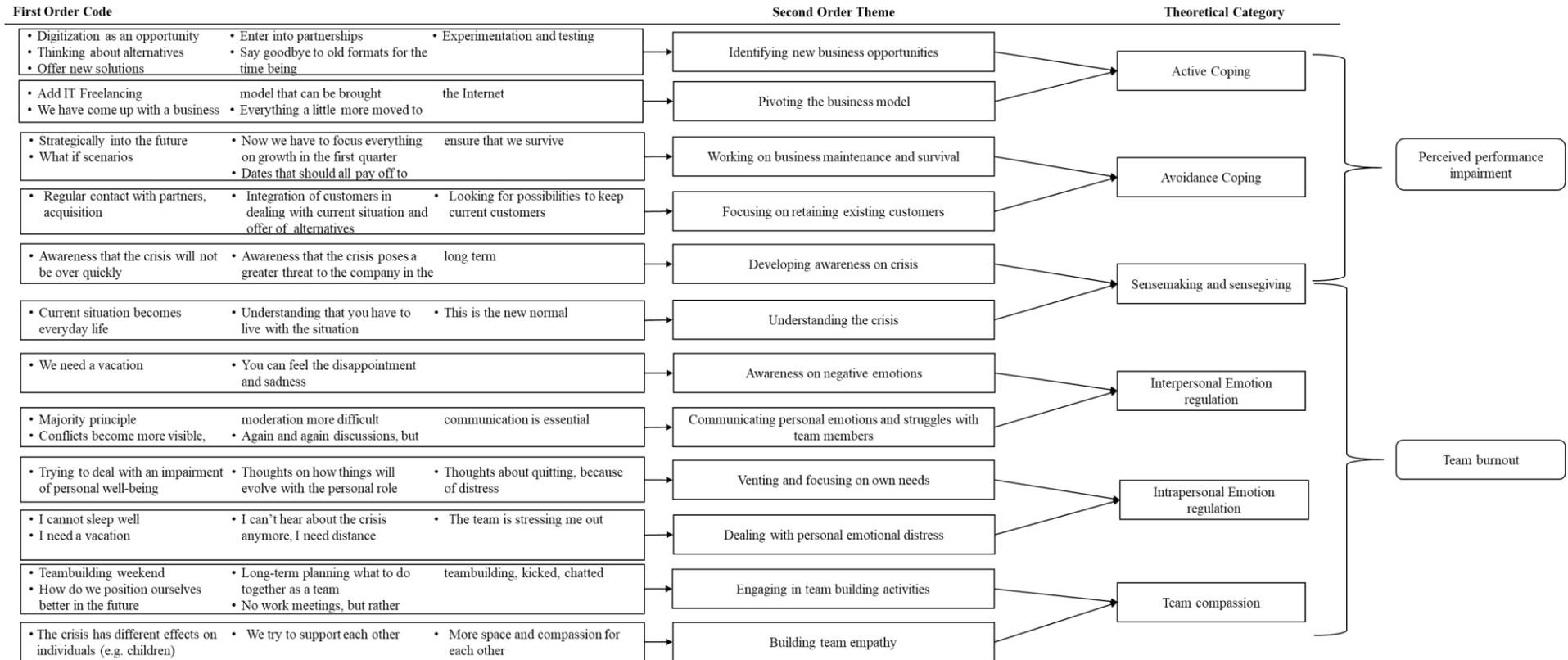
### 8.3 Appendix Chapter IV

#### 8.3.1 Overview of Measures

Variable	Items	Scale	
<b>Perceived Performance Impairment</b>	“How much have your work processes and projects been affected by the Corona crisis in the last 7 days?”	1to7 [1= not at all, 7= very much]	
	“How much has your company's development been affected by the Corona crisis in the last 7 days?”	1to7 [1= not endangered at all, 7= endangered a lot]	
	“To what extent is the existence of your start-up project currently threatened by the Corona crisis?”	1to7 [1= not at all, 7= very much]	
	“How has the Corona crisis affected your customers so far? We have...”	1to7 [1= lost customers, 4= no change, 7= gained customers]	
	“How much are you currently struggling with sales losses?”	1to7 [1= not at all, 7= very much]	
<b>Team Burnout</b>	“We worry that we will not succeed in achieving our team goals.”	1to7 [1= I do not agree at all, 7= I fully agree]	
	“My team has felt depressed as a result of our work.”	1to7 [1= I do not agree at all, 7= I fully agree]	
	“My team has felt that we are not succeeding in separating work from our personal lives.”	1to7 [1= I do not agree at all, 7= I fully agree]	
<b>Regulatory Focus</b>	<b>Prevention focus</b>	“Within the last 7 days.... we were focusing on the correct execution of central tasks to ensure our security.”	1to7 [1=never, 4=sometimes 7= very often]
		“Within the last 7 days.... we were doing everything we could to reduce losses.”	1to7 [1=never, 4=sometimes 7= very often]
	<b>Promotion focus</b>	“Within the last 7 days.... we were taking risks to maximize our chances of success.”	1to7 [1=never, 4=sometimes 7= very often]
		“Within the last 7 days.... the opportunity for growth was an important factor in planning activities.”	1to7 [1=never, 4=sometimes 7= very often]

# Appendix

## 8.3.2 Qualitative Data Analysis Procedure



## 8.3.3 Qualitative Data Analysis Details on Second-order Themes

Theoretical Category	Second Order Theme	Description
Active Coping <i>Motivated by a desire to enhance the status quo and hence fits the self-regulation of promotion focus</i>	Identifying new business opportunities	<ul style="list-style-type: none"> <li>• Experimenting and testing with new solutions, which resulted from the pandemic</li> <li>• Example: Redirecting original operational activities from selling coffee to larger companies to organizing backyard concerts and selling coffee while also helping ventures working in the service sector as well as people working in the entertainment</li> </ul>
	Pivoting the business model	<ul style="list-style-type: none"> <li>• Shifting operations and changing the direction of the products and services while realizing that the current offerings no longer fulfill the entrepreneurial teams' customers' needs</li> </ul>
Avoidance Coping <i>Motivated by a desire to maintain the status quo and hence fits the self-regulation of prevention focus</i>	Working on business maintenance and survival	<ul style="list-style-type: none"> <li>• Summarizes activities related to thoughts on survival and maintaining the status quo of the entrepreneurial teams' operations</li> </ul>
	Focusing on retaining existing customers	<ul style="list-style-type: none"> <li>• Emphasizes the customer base – integration of existing customers</li> <li>• Example: contacting customers regularly to keep in touch and increase the customers' connection to the startup</li> </ul>
Sensemaking and sense-giving	Developing awareness of the crisis	<ul style="list-style-type: none"> <li>• The process that teams undertake the more prolonged the crisis prevails</li> <li>• Teams start understanding that the pandemic is not a one-time event that will end soon but will endure over a longer time</li> </ul>
	Understanding the crisis	<ul style="list-style-type: none"> <li>• Teams' sense of understanding and acceptance that they have to start living with the pandemic in the long term and taking it as a new form of everyday life</li> </ul>

## 8.3.3 (continued) Qualitative data analysis details on second-order themes

Theoretical Category	Second Order Theme	Description
Interpersonal emotion regulation	The awareness of negative emotions	<ul style="list-style-type: none"> <li>Refers to the teams' conscious expressions of their current emotional state and what consequences they draw from it</li> <li>Example: expressing the need for a vacation, distance, or feelings of disappointment and sadness</li> </ul>
	Communicating personal emotions and struggles with team members	<ul style="list-style-type: none"> <li>Summarizes teams' communication efforts</li> <li>Example: Enhancing communication when coping with conflicts mainly arising from the lack of face-to-face interactions</li> </ul>
Intrapersonal emotion regulation	Venting and focusing on own needs	<ul style="list-style-type: none"> <li>Refers to an increase in the awareness of personal distress and thoughts on the future personal development</li> <li>Example: Taking active measures to improve personal well-being and thinking about the worth of working in the venture</li> </ul>
	Dealing with personal emotional distress	<ul style="list-style-type: none"> <li>Refers to the realization of how crisis and work impact personal well-being</li> <li>Example: Not being able to sleep and needing distance</li> </ul>
Team compassion	Engaging in team-building activities	<ul style="list-style-type: none"> <li>Relates to the activities held to foster team spirit and team compassion.</li> </ul>
	Building team empathy	<ul style="list-style-type: none"> <li>Refers to the support granted to each other</li> <li>Acknowledging the need to develop an understanding of each other within the team</li> </ul>

### 8.3.4 Linear Trends of Dependent Variables Across Time

#### Trends of performance impairment

Team ID	Trend	SE	Z
C01	-0.31	0.03	-8.89**
B34	-0.23	0.04	-5.52**
B76	-0.14	0.04	-3.87**
B14	-0.12	0.04	-3.55**
B57	-0.12	0.06	-2.08*
B65	-0.08	0.05	-1.50
B50	-0.07	0.04	-1.59
B26	-0.06	0.03	-2.22*
B68	-0.05	0.04	-1.27
A14	0.00	0.05	0.05
B39	0.01	0.03	0.39
C04	0.04	0.02	2.33*
B24	0.05	0.04	1.31
B03	0.06	0.04	1.59
B45	0.06	0.09	0.63
B05	0.07	0.02	2.79*
B71	0.07	0.03	2.19*
B60	0.07	0.03	1.95
BA06	0.07	0.02	4.04**
C02	0.07	0.04	1.95
B55	0.08	0.04	2.04*
B63	0.16	0.04	3.65**
B81	0.12	0.03	4.87**
BA16	0.14	0.02	9.44**

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\* $p < .05$ . \*\* $p < .01$

**8.3.4 (continued): Linear Trends of Dependent Variables Across Time****Trends of team burnout**


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Team ID	Trend	SE	Z
B45	-0.19	0.03	-5.83**
B52	-0.18	0.06	-3.10*
B24	-0.16	0.02	-8.65**
B50	-0.14	0.04	-3.79**
B14	-0.14	0.03	-4.77**
B65	-0.13	0.03	-4.05**
B34	-0.12	0.04	-2.78*
C01	-0.11	0.03	-3.51**
C04	-0.09	0.03	-2.54**
B71	-0.09	0.02	-3.79**
C06	-0.08	0.01	-5.46**
BA06	-0.07	0.02	-3.39**
B39	-0.07	0.03	-2.12*
B59	-0.07	0.04	-1.93
B05	-0.05	0.02	-2.55*
C02	-0.03	0.06	-0.44
B19	-0.01	0.07	-0.16
B57	-0.01	0.07	-0.19
B63	0.00	0.03	0.00
B26	0.01	0.03	0.19
B55	0.01	0.06	0.09
A14	0.01	0.04	0.40
B76	0.01	0.04	0.14
B81	0.02	0.05	0.47
B03	0.06	0.03	1.65
BA16	0.06	0.04	1.53
B60	0.05	0.04	1.23
B68	0.07	0.02	2.90*
B77	0.22	0.04	5.59**

\* $p < .05$ . \*\* $p < .01$

## **8.4 Appendix Chapter V**

### **8.4.1 Vignette Texts**

In the following, you will find a short report of a person who has just finished his/her studies and set up his/her own, now three-year-old company. S/he explains how s/he experienced that move.

#### **Scenario –Commercial Enterprise**

##### **“I developed coffee that really keeps you awake “**

*Founders Magazine December 1, 2017*

#### **How did you come up with the idea of starting a business?**

The idea was born during our studies. I’ve always had a lot of coffee, especially in the learning periods as a student. When I was late learning again, I was dependent on caffeine. Unfortunately, the effect of coffee was always very short. At first, I thought it was because of the type or the brand. Then, I tested everything – without any notable success. In between, I tried drinking energy drinks. But the taste was horrible. At some point I thought to myself, “There has to be another way!”. Then I started to develop a coffee, with an effect that lasts much longer than the one of standard coffee.

#### **How did you start your business?**

It all started with an experimental setup in the kitchen. I ordered different beans and roasted them in different ways. In order to get feedback on the effect and taste, I gave my products to others for testing. I also found that a lot of people are looking for something to keep them awake longer. With a very good type of bean and a slow roasting process, I now make the coffee with the best wake-up function. Now, of course not at home in my kitchen anymore. I officially founded the business after I completed my studies. With tasting stands at street food events and a big Facebook campaign, I received my first orders for my product. Despite initial scepticism, I was able to convince a private investor to finance my wake-up coffee concept.

**How do others perceive your product?**

I now receive orders for my product on a regular basis, so I am busy with production and handling. I can pay myself a salary and the business is growing. I am in close contact with my suppliers and am currently discussing further financing with my investor. I would like to expand my product range to increase my sales.

**How do you evaluate being self-employed?**

At the beginning, I was on my own. That meant a lot of work, but I could also decide faster what to do. With my company, I have the freedom to achieve my own goals. I am very satisfied. With my coffee I managed to offer people a real wake-up call. It offers a real alternative to standard coffee.

**Scenario –Social Enterprise**

**“I developed a fair coffee with really good taste“**

*Founders Magazine December 1, 2017*

**How did you come up with the idea of starting a business?**

The idea was born during my studies. I did a long backpacking tour through South America. There I saw how bad the living conditions were for coffee farmers. The families lived in a confined space without access to clean water. The children of the farmers asked me for food. The prices for coffee beans were simply so low that the families could hardly keep themselves above water. At some point, I thought to myself, “There has to be another way!”. Then I developed a fair coffee with really good taste.

**How did you start your business?**

It all started with some fresh coffee beans I took back from South America. I roasted the beans at home. That's when I discovered that when the beans are so fresh, they have a very intense coffee taste. I told many friends about my experiences with the coffee farmers. I found out that many people want to do something about these side effects of their coffee consumption. With

## Appendix

the help of a local organization, I established contact with a network of fair coffee farmers. With the best coffee beans, I now produce fair coffee with really good taste. Now, of course, I don't fly in the beans myself anymore. I officially founded the business after I completed my studies. With tasting stands at street food events and a big Facebook campaign, I received my first orders for my product. Despite initial scepticism, I was able to convince a private investor to finance my wake-up coffee concept.

### **How do others perceive your service?**

I now receive orders for my product on a regular basis, so I am busy with production and handling. I can pay myself a salary and the business is growing. I am in close contact with the coffee farmers' association and talk to my investor about further financing. In this way I want to reach more customers in order to improve the living conditions of the coffee farmers.

### **How do you evaluate being self-employed?**

At the beginning, I was on my own. That meant a lot of work, but I could also decide faster what to do. With my company, I have the freedom to achieve my own goals. I am very satisfied. With my coffee I have managed to guarantee a reasonable salary for the coffee farmers. A real alternative to standard coffee.

## 9 Eidesstattliche Erklärung

Ich, Yasmine Yahyaoui, versichere an Eides statt, dass die vorliegende Dissertation von mir selbstständig und ohne unzulässige fremde Hilfe unter Beachtung der Grundsätze zur Sicherung guter wissenschaftlicher Praxis an der Universität Bayreuth erstellt worden ist.

Bayreuth, im Juli 2023

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Yasmine Yahyaoui