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Dark, Down, and Destructive: The Negative Sides of Entrepreneurship

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Abbreviations

AI	Artificial intelligence
AM	Ante meridiem
AOM	Academy of Management
CI	Confidence interval
DV	Depended variable
Dr.	Doctor
e.g.	Exempli gratia (for example)
Et al.	Et alii (and others)
ERI	Entrepreneurship Research Institute
i.e.	Id est (that is)
IV	Independent variable
k	Thousands
ML	Machine learning
NLP	Natural language processing
PM	Post meridiem
pp.	Pages
Prof.	Professor
SMS	Strategic Management Society
TUM	Technical University of Munich
U.S.	United States of America
USA	United States of America

Abstract

This doctoral thesis undertakes a comprehensive exploration of the lesser-studied negative aspects of entrepreneurship, categorizing them into three distinct but interconnected dimensions: the dark, the down, and the destructive side, each of which impacts a different level of the entrepreneur's life and environment (i.e., the micro-, meso-, and macro-levels). The thesis comprises three in-depth studies designed to shed light on these adverse dimensions.

The first study focuses on the dark side of entrepreneurship, exploring the emotional repercussions of entrepreneurial failure. Utilizing a unique dataset from Kickstarter and Twitter, this study employs AI-based machine learning techniques to identify patterns of sadness that entrepreneurs experience after a failure of their crowdfunding campaign. Additionally, it explores the mitigating role of prior entrepreneurial experience in this process. The second study addresses the downside of entrepreneurship, aiming to resolve mixed findings about its effects on work-family balance. Using time diary data, the study shows that male entrepreneurs (i.e., incorporated business owners) spend more time at work compared to their employed counterparts, whereas unincorporated business owners and female entrepreneurs often enjoy greater work-family flexibility. The third study investigates the destructive aspect of entrepreneurship by examining the existence and societal impact of hate groups from the USA, as examples of destructive ventures, over an 18-year period (2000 - 2017). Specifically, the study uses longitudinal data to explore how community attributes, specifically community social capital, influence these groups.

Together, these studies move beyond the often romanticized narrative associated with entrepreneurship, emphasizing the need for a more nuanced understanding of its societal implications. This thesis thereby contributes valuable insights into the multifaceted impacts of entrepreneurship, serving as a catalyst for further research into its darker aspects.

Zusammenfassung

Diese Doktorarbeit unternimmt eine umfassende Untersuchung der weniger beachteten negativen Aspekte des Unternehmertums und kategorisiert sie in drei unterschiedliche, aber miteinander verbundene Dimensionen: die dunkle („Dark“), die niedere („Down“), und die zerstörerische („Destructive“) Seite des Unternehmertums. Jede dieser Seiten hat Auswirkungen auf eine andere Ebene des Lebens und der Umgebung von Unternehmern und Unternehmerinnen (d.h. die Mikro-, Meso-, und Makroebene). Die Arbeit umfasst drei detaillierten Studien, die darauf abzielen, die Literatur im Bereich Management und Unternehmertum zu vergrößern.

Die erste Studie konzentriert sich auf die „Dark Side“ des Unternehmertums und erforscht die emotionalen Auswirkungen von Momenten des Scheiterns. Unter Verwendung eines einzigartigen Datensatzes von Kickstarter und Twitter setzt diese Studie künstliche Intelligenz ein, um Dauer und Intensität von Traurigkeit zu messen, die Unternehmer und Unternehmerinnen nach einem Fehlschlag erleben. Weitergehend wird der Einfluss von vorheriger unternehmerischer Erfahrung untersucht. Die zweite Studie befasst sich mit der „Downside“ des Unternehmertums und zielt darauf ab, uneindeutige Ergebnisse über die Auswirkungen auf die „Work-Family Balance“ zu klären. Anhand von Zeittagebüchern zeigt die Studie, dass männliche Unternehmer (Inhaber von Unternehmen eingetragen als Kapitalgesellschaft) mehr Zeit bei der Arbeit verbringen als ihre angestellten Kollegen und Kolleginnen, während Inhaber und Inhaberinnen von Unternehmen, die nicht als Kapitalgesellschaft eingetragen sind, und weibliche Unternehmerinnen (Inhaberinnen von Unternehmer eingetragen als Kapitalgesellschaft) oft eine größere Flexibilität bei der Vereinbarkeit von Beruf und Familie genießen. Die dritte Studie untersucht die „Destructive Side“ des Unternehmertums, indem sie die Existenz von Hassgruppen in den USA — als Beispiele für Unternehmungen, die der Gesellschaft schaden — über einen Zeitraum von 18

Jahren (2000 - 2017) analysiert. Die Studie verwendet Längsschnittdaten, um zu untersuchen, wie bestimmte Eigenschaften von Gemeinden, insbesondere „Community Social Capital“, diese Hassgruppen beeinflussen.

Insgesamt gehen diese Studien über die oft verherrlichte Erzählung, die mit dem Unternehmertum verbunden ist, hinaus und betonen die Notwendigkeit eines differenzierteren Verständnisses der gesellschaftlichen Auswirkungen. Diese Arbeit trägt daher wertvolle Erkenntnisse zu den vielfältigen Auswirkungen des Unternehmertums bei und dient als Katalysator für weitere Arbeiten über die negativen Aspekte.

1. THE UNDERRATED NEGATIVE OUTCOMES OF ENTREPRENEURSHIP

Entrepreneurship is widely recognized as a driver of innovation and social prosperity (Schumpeter, 1942; Venkataraman, 1997). As a result, an entrepreneurial career has become an aspirational path, and entrepreneurial meccas such as Silicon Valley, with its vibrant startup culture and string of successful tech giants, resemble the dreams of many aspiring entrepreneurs (Kumar, 2016). Moreover, founders of successful startups are often celebrated as rock stars, and entrepreneurs who create the next big thing are hailed as heroes. However, recent high-profile cases have also shed light on the dark side of startup culture. Notable examples include allegations of fraud, as with Samuel Bankman-Fried and FTX; disclosed unethical behaviors, like the cooperation between Cambridge Analytica and Facebook; and claims of toxic work cultures, as in the revelations surrounding Theranos (Clayton, 2022; Griffith, 2023). These cases suggest that the romanticized view of entrepreneurship may mask a more nuanced and complex reality in which the pursuit of innovation and disruption can have unintended and even harmful consequences. Shedding light on these often forgotten or ignored consequences of entrepreneurial activity is the aim of this thesis.

1.1. The Dark, Down, and Destructive Side of Entrepreneurship

The idealized perception of entrepreneurship in society is also echoed in the academic literature on the subject. Scholars have contended that the field has developed a normative bias favoring positive entrepreneurial outcomes over time. This focus risks neglecting the negative aspects of entrepreneurship, such as failure, risk, and unintended consequences (Kets de Vries, 1985; Shepherd, 2019; Tedmanson et al., 2012; Vedula, Doblinger, et al., 2022; Wright & Zahra, 2011). To overcome this bias and develop a more balanced view, in recent years several scholars have called for more research in this area (Khan, Munir, & Willmott, 2007; Shepherd, 2019; Wright & Zahra, 2011). In a guidepost outlining potential future focus areas for research on the negative side of entrepreneurship, Shepherd (2019) distinguishes three aspects of negative

outcomes to structure research in this area, namely: the dark side, the downside, and the destructive side of entrepreneurship. Each aspect focuses on a different level of analysis at which the consequences of entrepreneurial action are directed.

The first aspect, the dark side of entrepreneurship, focuses on the negative psychological and emotional reactions of entrepreneurs caused by engaging in entrepreneurial activity, and thus on the micro level of the entrepreneur. The second dimension, the downside, explores the loss of various forms of capital — financial and social — that entrepreneurs experience as a consequence of their entrepreneurial activities. While this aspect initially appears to target the individual level, especially concerning financial losses, its scope broadens upon considering the social costs tied to entrepreneurship. Specifically, the downside extends its impact to the meso level by affecting not only the entrepreneur but also their family and friends, thereby influencing the entrepreneur's personal relationships (Ucbasaran et al., 2013). The third aspect, the destructive side focuses not on the negative aspects for the entrepreneur herself or for her social relationships, but rather on the impact and consequences on society, and thus on the macro level impacts of entrepreneurial action. In contrast to productive entrepreneurship, which creates and efficiently uses resources, unproductive entrepreneurship redistributes existing wealth, with destructive entrepreneurship further leading to undesirable social and economic impacts such as regional and national inequality (Baumol, 1996; Kwon & Sorenson, 2023; Lippmann, Davis, & Aldrich, 2005; Sorensen & Sorenson, 2007), a lack of attention to power imbalances (Dey & Mason, 2018; Spinosa, Flores, & Dreyfus, 1999), production of fraud and misconduct (Palmer & Weiss, 2022; Scheaf & Wood, 2022), and over-reliance on entrepreneurship to combat social exclusion (Blackburn & Ram, 2006). Figure 1 summarizes the aforementioned definitions, illustrating the three negative aspects of entrepreneurial outcomes and their corresponding impact on various levels of entrepreneurs.

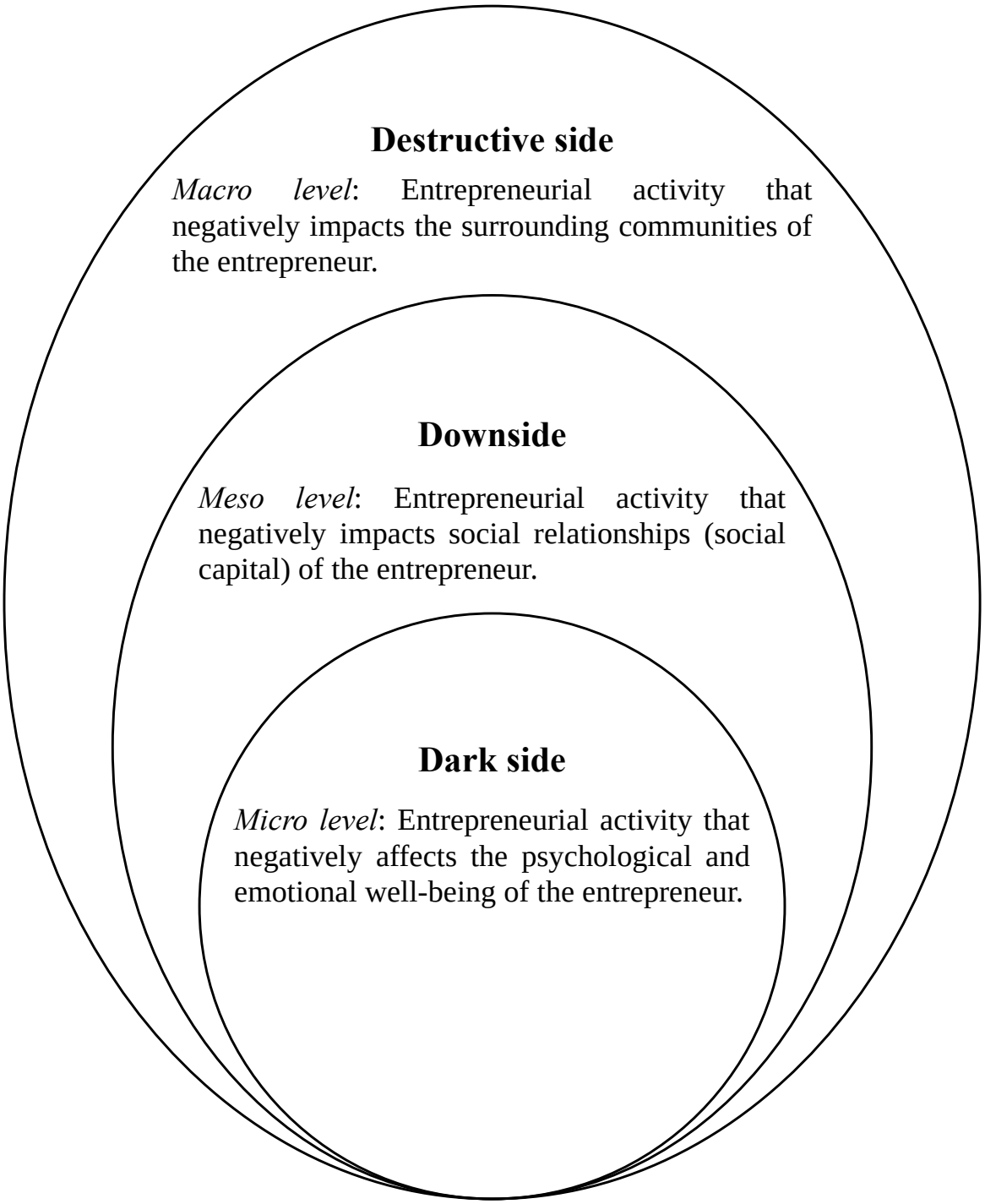

Figure 1: The different levels of negative outcomes of entrepreneurship – adaption of framework suggested by Shepherd (2019).

1.2. The Adverse Side of Entrepreneurship in Literature

In advocating for further research into the adverse outcomes of entrepreneurship, scholars underscore the need to delve into the roots and complexities of suffering caused by entrepreneurial activities. There is also a call to develop strategies to alleviate its impact and expedite recovery. This comprehension allows both individuals and their close associates to better grasp their situations, curtail the extent of distress, and potentially avert comparable scenarios in the future (Kets de Vries, 1985; Shepherd, 2019; Tedmanson et al., 2012; Vedula, Doblinger, et al., 2022; Wright & Zahra, 2011). Although the conceptualizations of the dark, down, and destructive facets of entrepreneurship are relatively recent developments (with the exception of the destructive side as defined by Baumol, 1996), a substantial body of literature has emerged in each of these domains. In the following, I provide a concise overview of the existing literature for each of these dimensions.

The scholarship on the dark side of entrepreneurship has specifically centered on the psychological implications of entrepreneurial actions for the entrepreneur. Entrepreneurship is widely acknowledged as an emotionally charged endeavor (Baron, 2008; Cardon et al., 2012), with the bond between entrepreneurs and their ventures drawing parallels to human-to-human relationships (Cardon et al., 2005; Shepherd, 2003). The heightened levels of uncertainty and personal risk intrinsic to the entrepreneurial journey can intensify emotional experiences (Baron, 2008). Over the past two decades, academic attention has increasingly been directed towards understanding how the entrepreneurial journey influences human emotions. Importantly, emotions have also been postulated as precursors to entrepreneurship, with research exploring their role in processes like opportunity evaluation and exploitation (Foo, 2011; Welpe et al., 2012). Shepherd and his colleagues have contributed significantly to this discourse, focusing on a series of influential studies on the grief response that follows one of the most dramatic events during an entrepreneurial endeavor, business failure (Shepherd, 2003,

2004, 2009; Shepherd, Covin, & Kuratko, 2009). Further research has delved into emotional recovery and learning post-failure (Fang He et al., 2018; Shepherd et al., 2016; Walsh & Cunningham, 2017) as well as strategies deployed by entrepreneurs to cope with such situations (Omorede, 2021; Singh, Corner, & Pavlovich, 2007; Ucbasaran et al., 2013).

Scholars have also looked at the downside of entrepreneurship. Also because of the similarities between the dark side and the downside of entrepreneurship this research focuses mainly on the consequences of business failure, but with a focus on financial and social costs (rather than psychological costs; Ucbasaran et al., 2013). In his foundational study on business failure and the associated grieving process, Shepherd (2003, p. 323) made a significant contribution to this area, linking business failure to a "loss of income, social status, and self-perception". Similarly, Ucbasaran et al. (2013) have enumerated the financial, social, and psychological costs that accompany business failure. Evidently, financial costs, such as enduring personal debt (Cope, 2011), are pronounced and can be intensified by entrepreneurs who tend to invest heavily with high opportunity costs (Arora & Nandkumar, 2011). The social costs can inflict damage on personal and professional relationships, engender stigma, and push entrepreneurs towards self-isolation (Cope, 2011; Shepherd & Haynie, 2011; Singh, Corner, & Pavlovich, 2007). Additionally, research on work-life balance (WLB) and work-family balance (WFB) delves into the social costs of entrepreneurship (Boswell & Olson-Buchanan, 2007; Greenhaus & Parasuraman, 2002; Parasuraman & Greenhaus, 2002; Vedula & Kim, 2018). While this body of work underscores the challenges entrepreneurs encounter, the findings on the impact of entrepreneurship on WLB and WFB remain mixed and conflicted in the literature (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Kirkwood & Tootell, 2008; Schindehutte, Morris, & Brennan, 2001; Tahir, 2022).

Defining the concept of unproductive and destructive entrepreneurship by contrasting it with productive entrepreneurship, Baumol (1996) set the stage for research on societal

outcomes of entrepreneurial activity, such as environmental degradation (Vedula, Doblinger, et al., 2022) and labor exploitation (Khan, Munir, & Willmott, 2007). Despite these negative effects, destructive entrepreneurship can also drive innovation and competition, although these positive effects are typically offset by negative effects on displaced firms and workers as well as the affected community (Baumol, 1996; Desai, Acs, & Weitzel, 2013). Much of the research on destructive entrepreneurship is conceptually oriented (Baumol, 1996; Desai, Acs, & Weitzel, 2013; Sauka, 2008; Shepherd, 2019). Exceptions include empirical studies on child labor in manufacturing (Khan, Munir, & Willmott, 2007), the societal costs of crime-related businesses (Champeyrache, 2018), and the effect of corruption on value-creating entrepreneurship (Boudreaux, Nikolaev, & Holcombe, 2018).

In summary, each aspect of negative entrepreneurial outcomes — the dark side, the downside, and the destructive side — is represented in the literature, albeit to varying degrees. However, important research gaps remain in each of these areas. The dark side literature, with a focus on the literature on the emotional consequences of entrepreneurship, predominantly emphasizes significant events like business failures and their corresponding intense emotions, such as grief (Delgado García, De Quevedo Puente, & Blanco Mazagatos, 2015; Shepherd, 2019). Consequently, it often overlooks minor setbacks that entrepreneurs face, which might elicit milder emotional responses (Jenkins & McKelvie, 2016). Furthermore, the research does not thoroughly investigate the diverse intensities and durations of emotions that individuals undergo during failure processes (Brans & Verduyn, 2014). The downside literature, in contrast, largely examines the financial consequences of entrepreneurial activity and provides mainly conceptual and qualitative insights into the social costs (Ucbasaran et al., 2013). Finally, the literature on the destructive side remains particularly underdeveloped, given that much of the work is primarily conceptual in nature.

The aim of this dissertation is to respond to the need for further research in the area of negative outcomes of entrepreneurial activity by conducting an analysis that extends the existing literature, with a particular emphasis on quantitative analyses, in order to expand the largely theoretical and conceptual literature on all three aspects.

1.3. Research Methodology and Data

This dissertation used quantitative methodologies to investigate the negative outcomes of entrepreneurship. It capitalized on secondary data analysis, thus offering a novel perspective on measuring these outcomes and strengthening the credibility and veracity of the findings. The study aimed to enrich the fields of management and entrepreneurship research by applying proven quantitative techniques from different fields.

The dissertation is divided into three separate studies, each exploring different facets of negative entrepreneurial outcomes. The first study delves into the micro level, using big data and machine learning (ML) approaches to scrutinize the psychological transitions that entrepreneurs go through. This was achieved by analyzing a combination of 21,908 crowdfunding campaigns, linked social media account, and corresponding 20 million social media posts. The primary focus was on the emotional shifts expressed by entrepreneurs before, during, and after their crowdfunding efforts. The second study examined the social costs associated with entrepreneurial careers at the meso level. Drawing on an extensive pool of time use survey data from the Bureau of Labor Studies in the USA (Flood, Sayer, & Backman, 2022), spanning 12 years and including 154,215 participants, the study compared the day-to-day activities of entrepreneurs with those of traditionally employed individuals. This research highlighted the unique challenges and costs faced by entrepreneurs. The third study ventured into the destructive side of entrepreneurship, considering the macro-level impact on communities. Integrating multiple datasets, including a hate group dataset of 4,600 different U.S. (United States) hate groups (SPLC, 2023), a hate crime dataset (ADL, 2023), and a dataset

including a community social capital (CSC) measurement (Rupasingha, Goetz, & Freshwater, 2006), the study examined how community characteristics (i.e., CSC) shape the formation, persistence, and destructive societal impacts of these ventures.

1.4. Outline of this Thesis

This dissertation addresses the need for additional research on the negative outcomes of entrepreneurship by leveraging Shepherd's (2019) framework. Each distinct study corresponds to a defined aspect within the framework (see summary in Table 1). The first essay explores emotional responses to failure during entrepreneurship, shedding light on emotional reactions during failure and how entrepreneurial experience (EE) moderates this process. The analysis reveals that with greater entrepreneurial experience comes an enhanced ability to cope with the negative emotional aspects of entrepreneurship. The second study addresses the mixed findings in literature, offering clarity on the effects of entrepreneurs' daily routines on family life. It highlights that, particularly for male entrepreneurs, an entrepreneurial career can have adverse implications. In contrast, female entrepreneurs and owners of unincorporated businesses display greater flexibility, suggesting that an entrepreneurial career can indeed cater to enhanced WFB. Lastly, the third essay examines the influence of community characteristics on the success of destructive entrepreneurial ventures. It emphasizes that fostering trust within a community can be an efficacious tactic to counteract destructive entrepreneurial organizations within that community.

Table 1: Chapter summary overview.

	The Dark Side: Leveraging Big Data and Machine Learning to Analyze How Entrepreneurial Experience Shapes Emotional Responses to Crowdfunding Failure (Chapter 2)	**The Downside: Time for life? Revisiting the entrepreneurship – family life relationship using daily time diary routines** (Chapter 3)	**The Destructive Side: Prevention or Promotion – Two Sides of Community Social Capital on the Success of Destructive Ventures** (Chapter 4)
Research question	How does emotional experience behave during the failure process? And how does EE moderate emotional effort?	Does an entrepreneurial career negatively affect WFB?	How do community characteristics effect the existence and societal impact of destructive ventures (i.e., hate groups)?
Methodology	Quantitative analysis based on secondary data	Quantitative analysis based on secondary data	Quantitative analysis based on secondary data
Sample and data	17.9k entrepreneurs (Twitter accounts) and a total of approximately 20 million social media posts (Tweets); plus 21.9k crowdfunding campaigns (Kickstarter) that can be linked to the Twitter accounts.	154k time diaries (one diary per person) including 143k employed individuals, 3.5k entrepreneurs (i.e. incorporated business owners), and 7.3k unincorporated business owners.	18-year (2000 - 2017) panel data on 4.6k hate groups across the USA and related hate crime information.
Key findings	Failure events trigger the expression of negative emotions, particularly sadness, but the intensity and duration of such sadness is lessened for more experienced entrepreneurs compared to novices.	Male owners of incorporated businesses experience a negative impact on their WFB compared to the employed population, whereas female owners of incorp. businesses and owners of unincorporated businesses do not experience this effect.	CSC appears to initially prevent the rise of hate groups and related crimes. However, it can also be a “dual-edged sword”, wherein individual CSC components (which proxy for interpersonal, generalized, or institutional forms of social trust) can have directionally differing

			impacts of hate group formation, persistence, and destructive impact.
Contributions	• Theoretical: Theorizing about the impact of EE on duration and intensity of negative emotions caused by entrepreneurial failures. Underscoring the notion that EE can enhance coping abilities concerning the dark side facets entrepreneurship. • Empirical: Providing empirical evidence on the experience of negative emotions during entrepreneurial failure events. • Methodological: Utilizing innovative ML-based techniques to reliably measure emotions, advancing research methods in entrepreneurship.	• Theoretical: Resolving mixed findings in existing literature by incorporating both gender and business owner perspectives. • Empirical: Enriching the literature with a quantitative analysis and adding a nuanced view on daily habits of entrepreneurs and their employed counterparts with time-based measurements. • Methodological: Introducing a novel time-diary approach to the field of entrepreneurship research.	• Theoretical: Theorizing about the emergence, longevity, and destructive impact of ventures, while also assessing the moderating effects of community attributes. Thereby, emphasizing its efficacy as a strategy to cope with the destructive aspects of entrepreneurship. • Empirical: Providing a nuanced view on the emergence and failure of hate groups, along with the counteracting effects of CSC and social trust. • Methodological: Introducing and utilizing a novel longitudinal dataset that includes CSC and its sub-components to the field of destructive entrepreneurship.

2. THE DARK SIDE: LEVERAGING BIG DATA AND MACHINE LEARNING TO ANALYZE HOW ENTREPRENEURIAL EXPERIENCE SHAPES EMOTIONAL RESPONSES TO CROWDFUNDING FAILURE[1]

2.1. Exploring the Emotional Impact of Entrepreneurial Failure

Entrepreneurship is an intensely emotional experience (Baron, 2008; Cardon et al., 2012). The emotional closeness between entrepreneurs and their ventures is comparable to that between two humans (Cardon et al., 2005; Shepherd, 2003). The high levels of uncertainty and personal risk involved in the venturing process can also exacerbate affect (Baron, 2008). Thus over the past two decades scholars have focused on how the entrepreneurial journey shapes human emotions.[2] Most notably, in a series of influential studies, Shepherd and colleagues focused on the grief response elicited by business failure (Shepherd, 2003, 2004, 2009; Shepherd, Covin, & Kuratko, 2009). Subsequent studies have explored emotional recovery and learning (Fang He et al., 2018; Shepherd et al., 2016; Walsh & Cunningham, 2017), as well as entrepreneurial coping strategies (Omorede, 2021; Singh, Corner, & Pavlovich, 2007; Ucbasaran et al., 2013).

Our study directly builds upon and extends this body of research, focusing on three key underexamined aspects. First, by almost exclusively focusing on catastrophic business failures and the grief response, existing research implicitly deprioritizes the smaller-scale failures (e.g., not be able to close a deal with a potential customer or financier) which occur on a regular basis throughout the entrepreneurial journey. Such setbacks likely provoke other hitherto under-theorized and researched emotions (Shepherd, 2019), such as sadness. Thus, there is merit in exploring the emotional responses to failure events that are arguably objectively lower in failure severity (Jenkins & McKelvie, 2016), but commonplace in entrepreneurship (Shepherd, 2019). Second, existing research almost exclusively focuses on emotional changes after a failure event

[1] Preliminary versions of this paper were presented at the SMS Annual Conference in 2022 and the AOM Annual Meeting in 2023.

[2] Note that scholars have also conceptualized of emotions as *antecedents* to entrepreneurship, by examining their influence on processes such as opportunity evaluation and exploitation (Foo, 2011; Welpe et al., 2012). See Delgado Garcia et al. (2015) for a detailed review of the interrelationship between these two literature streams.

(e.g., Byrne & Shepherd, 2015; Shepherd, 2003, 2009; Shepherd, Covin, & Kuratko, 2009; Shepherd, Patzelt, & Wolfe, 2011; Ucbasaran et al., 2013). More attention needs to be paid to the progression of an emotional response both before and after an entrepreneurial failure event (Delgado García, De Quevedo Puente, & Blanco Mazagatos, 2015; Shepherd, 2019), and extant research largely overlooks how specific emotions develop throughout the entrepreneurial journey. And third, given that failures are often repetitive in nature, heterogeneity in the experience of entrepreneurs should be, but is seldom, taken into account in modeling affective responses to failure. Given that EE is a key construct in the broader entrepreneurship literature (Morris et al., 2012; Stuart & Abetti, 1990; Westhead, Ucbasaran, & Wright, 2005a), understanding how it regulates affective responses to failure would also help answer calls for more research on factors that reduce the emotional distress caused by entrepreneurial failure (Cacciotti & Hayton, 2015; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2009, 2016; Shepherd, 2019).

To address these gaps in the literature, we examine the emotional responses to entrepreneurial failure in the context of crowdfunding project campaigns. We add to a nascent but growing body of research focusing on this phenomenon (Fan-Osuala, 2021; Lee & Chiravuri, 2019; Piening et al., 2021; Soublière & Gehman, 2020), by temporally tracking one particular emotion that we expect to be associated with failure in this context, namely sadness. We investigate sadness because of its interesting temporal properties — it is a basic human emotion that typically persists after a triggering event (Verduyn & Lavrijsen, 2015). Moreover although sadness as a theoretical construct has parallels to grief, which has been extensively studied to-date (Shepherd, 2003), they are two distinct emotional experiences.[3] For instance, events provoking sadness are typically less severe, i.e., objectively smaller-scale setbacks, compared to those that cause grief (Huron, 2018). Given that crowdfunding campaigns are often

[3] Note that while the terms sadness and grief are phenomenally similar, and are sometimes used interchangeably, this is not entirely accurate (Bonanno et al., 2008; Huron, 2018). See Chapter 2.2.1 for more details.

project-based and exploratory in nature (Mollick, 2014), sadness is a relevant emotion to investigate given that the "magnitude" of the loss suffered by a campaign creator is likely less than that caused by a catastrophic business failure.

Drawing upon affective events theory (Fang He et al., 2018; Weiss & Beal, 2005; Weiss & Cropanzano, 1996) a guiding framework, we created and analyzed a unique dataset that contains both crowdfunding (Kickstarter) as well as social media (Twitter) data of entrepreneurs. Specifically, we matched 21,908 crowdfunded projects with approximately 20 million Tweets from 17,971 project creators for the period from 2009 to 2021. This dataset provides the opportunity to non-obtrusively, and (semi-) automatically recognize emotions expressed by the entrepreneurs both before, during, and after a crowdfunding campaign. Our findings both confirm and extend prior research. As has been previously demonstrated, we find that failure events are associated with the expression of negative emotions (Shepherd, 2003), and more specifically higher levels of sadness in our context. Moreover, we also find that EE dampens the relationship between failure and emotion. The intensity (i.e., peak of response) of sadness is lower, and the duration (i.e., length of response) of sadness is shorter for more experienced project creators (vs. novices) who fail.

We make several contributions through this study. First and foremost, we contribute theoretically to the literature on emotions and entrepreneurial failure (Byrne & Shepherd, 2015; Shepherd, 2003, 2009; Shepherd, Covin, & Kuratko, 2009; Ucbasaran et al., 2013). Our study specifically addresses the research gaps identified by Cardon et al. (2012) and Delgado García, De Quevedo Puente and Blanco Mazagatos (2015) in their reviews of the entrepreneurship and emotions literature by a) investigating the temporal properties of sadness, both before and after an entrepreneurial failure event, b) looking at a broader range of failure events and emotions, beyond business failure and grief (Shepherd, 2019), and c) theorizing and demonstrating how EE moderates the emotional response (i.e., the intensity and the duration) associated with

entrepreneurial failure. Second, we contribute methodologically to the broader entrepreneurship field, by showcasing how big data and ML-based techniques can be effectively utilized. Our study directly answers the call by Obschonka and Audretsch (2020) to introduce new big data and ML technologies to entrepreneurship research, while also addressing Cardon et al. (2012)'s request to utilize novel methods to measure emotions in entrepreneurship research. And third, we also contribute to practice by showing which kinds of individuals are most likely to be emotionally impacted by failure in crowdfunding campaigns. This is important to understand given the increasing use of crowdfunding platforms by entrepreneurs (McKenny et al., 2017; Pollack et al., 2021; Short et al., 2017), and its growing importance within the broader venture financing landscape (Drover et al., 2017).

2.2. Theoretical Background and Hypotheses Development

2.2.1. Conceptualizations of Sadness

Sadness is a basic human emotion, which means that its expression is universally recognizable, it is produced automatically, and it cannot be deconstructed into other emotions (Ekman, 1992).[4] Feeling sad is a natural reaction to negative situations that humans experience on a day-to-day basis, whether it be the inability to achieve an intended goal (Huron, 2018), or an unexpected loss (Bonanno, Goorin, & Coifman, 2008; Smith & Lazarus, 1990). Basic needs such as hunger or feeling cold can also provoke sadness (Huron, 2018). "In general, sadness is associated with failure or powerlessness" (Huron, 2018, p. 60). The physical and behavioral outcomes of sadness are, besides others, low arousal, decreased energy levels, reduced activity, diminished interest, and social withdrawal (Huron, 2018). Chronic experiences of sadness can also lead to cognitive and behavioral changes, such as sustained, unhealthy reflection about one's life or a reduction in self-esteem (Huron, 2018; Nesse, 1991).

[4] While many theories of basic emotions exist (Ekman, 1992, 1999; Ekman et al., 2013; Ekman & Friesen, 1986; Frijda & Parrott, 2011; Izard, 1992; Ortony & Turner, 1990), a popular one developed by Ekman (1992, 1999) indicates that humans have six basic emotions, namely: sadness, happiness, fear, anger, surprise, and disgust.

The conceptual parallels and relationship between sadness and grief are also important to understand, given the extensive attention that entrepreneurship scholars have paid to the latter (Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2003, 2009; Shepherd, Covin, & Kuratko, 2009). Both emotions can be triggered by the same kinds of events (e.g., a bereavement), and can be experienced in parallel. Admittedly, sadness is one of the prominent emotions experienced during the grieving process and experiencing sadness can develop into grief (Bonanno, Goorin, & Coifman, 2008; Coifman & Bonanno, 2010; Leventhal, 2008). However, while sadness is a basic human emotion (Ekman, 1992; Ekman & Friesen, 1986; Ekman, Friesen, & Ellsworth, 2013), grief is a broader and more complex response encompassing multiple emotions and behaviors, including sadness. Bonanno, Goorin and Coifman (2008) provided four dimensions to differentiate between sadness and grief. First, the duration of grief is usually much longer than sadness. While sadness usually lasts between a couple of hours to several days (Verduyn & Lavrijsen, 2015), grieving can often occur for several years . Second, the grieving process encompasses multiple emotions. People suffering from grief also experience other emotions such as anger or guilt, and even some positive emotions (Archer, 2003; Bonanno, Goorin, & Coifman, 2008). Third, events that lead to a grief response are typically traumatic and alter a persons' life structure fundamentally, in a way that sadness does not. And fourth, the increased duration and the higher impact of grief often require additional coping strategies that are not necessarily utilized when one merely feels sad about a focal event.

In conclusion, sadness and grief are related but different concepts. While sadness is a basic human emotion (Bonanno, Goorin, & Coifman, 2008), grief is a broader concept that may include the experience of sadness. Given that the grief response has been studied extensively by entrepreneurship scholars (Shepherd, 2003, 2004, 2009; Shepherd, Covin, & Kuratko, 2009; Shepherd, Patzelt, & Wolfe, 2011; Shepherd et al., 2016; Ucbasaran et al., 2013), a less severe

or traumatic form of entrepreneurial failure event (i.e., other than business insolvency) may instead be associated with sadness, as we elaborate on further below.

2.2.2. Temporal Dynamics of Sadness Associated with Entrepreneurial Failure

To develop the baseline hypotheses for our study, we draw upon affective events theory (AET) (Weiss & Beal, 2005; Weiss & Cropanzano, 1996). AET is an extension of appraisal theory (Lazarus & Smith, 1988; Scherer, 1999) to the workplace context, and primarily focuses on explaining the connection between job performance and emotions. More specifically, it helps to explain both the valence and type of emotional response associated with specific events in this environment (Weiss & Beal, 2005; Weiss & Cropanzano, 1996). According to AET, when a failure event occurs, individuals engage in a two-phase appraisal process since she/he has not achieved a specific aspirational goal (Carver & Scheier, 1990). The first appraisal phase determines the valence of the expressed affect (i.e., positive or negative emotional state), while the second phase produces discrete emotions. The valence determination in the first phase depends on the individual's evaluation of the event. For example, if an individual perceives that an event will impede their own well-being significantly (Lazarus & Smith, 1988), they are likely to have a strong negative emotional response. Since a business failure impedes the well-being of the entrepreneur, it generally results in a negative emotional state (Fang He et al., 2018; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2003; Ucbasaran et al., 2013). For less severe failure events in the context of entrepreneurship, such as missing a potential financing opportunity (e.g., a failed crowdfunding campaign), one can similarly expect individuals to experience a negative emotional state, although the magnitude of the impact may be weaker.

In the second appraisal phase, the individual produces discrete emotions through a closer assessment of the event's content, causes, and consequences, including his/her potential to cope with it (Fang He et al., 2018). In the context of business failure, individuals can theoretically experience several negative emotions such as anger, fear, grief, guilt, or sadness

(Shepherd, 2003; Singh, Corner, & Pavlovich, 2007). Grief is the concept that has received the most attention to-date in the literature. However, when the failure event is objectively less severe than a catastrophic business failure, we expect that the first appraisal phase should lead to a smaller negative impact on the entrepreneur (e.g., the failure event does not lead to one believing that life holds no meaning anymore; Omorede, 2021), and a commensurate emotional response in the second appraisal phase. Thus, for objectively less severe (i.e., not catastrophic) failure events, we expect that entrepreneurs are more likely to experience an appropriate basic human emotion such as sadness (Huron, 2018).

> ***Hypothesis 1a:*** *Entrepreneurial failure is associated with an <u>increase</u> in sadness.*

An additional important dimension of sadness to take into consideration is that it typically "lingers" — i.e., it typically lasts much longer than other basic emotions associated with a focal event and does not immediately return to a "baseline" level (i.e., the level of sadness prior to the focal event; Verduyn & Lavrijsen, 2015). The reason for the lingering effect of sadness is two-fold. First, sadness-eliciting events are usually perceived as important to individuals (Brans & Verduyn, 2014) and this appraisal dimension (i.e., perceived event importance) also prolongs the subsequent duration of sadness experience (Verduyn & Lavrijsen, 2015). And second, the experience of sadness is typically associated with coping strategies such as high levels of rumination (Nolen-Hoeksema, 1991; Verduyn & Lavrijsen, 2015). Rumination consists of repetitively thinking about the causes, consequences, and symptoms associated with negative affect (Conway et al., 2000; Martin, Tesser, & McIntosh, 1993; Nolen-Hoeksema & Morrow, 1991). Such a repeated recap of the event associated with sadness prolongs the felt duration of the emotion. In combination, both appraisal and rumination effects prolong the sadness emotional response so that it does not return to the baseline level shortly after the failure event.

Hypothesis 1b: *The sadness associated with entrepreneurial failure persists (i.e., lingers) after the failure event.*

2.2.3. Contingent Effects of Entrepreneurial Experience

In his recent editorial on the negative emotional consequences of entrepreneurial action, Shepherd (2019) indicates that in addition to investigating more negative emotions as research outcomes (i.e., our baseline hypothesis), studies should also explore contingent factors that can minimize such suffering. More specifically in the case of negative emotions, emotional suffering is increased when the amplitude of the emotional response is higher and/or lasts longer. These two dimensions correspond to what Brans and Verduyn (2014) refer to as emotional intensity and duration respectively. In the context of our study, we next discuss how one specific factor, namely entrepreneurial experience — the extent to which an individual has already engaged in a related entrepreneurial action (Dew et al., 2009; Stuart & Abetti, 1990; Westhead, Ucbasaran, & Wright, 2005a, 2005b; Westhead et al., 2005) — can both dampen the intensity (i.e., magnitude) and duration (i.e., length of time) of sadness associated with failure.

As indicated previously in our discussion of AET, the most important predictor for emotional intensity associated with a failure event is the appraisal process (Brans & Verduyn, 2014; Sonnemans & Frijda, 1995). To the extent that a mismatch exists between the desired and reached state, a negative emotional response follows, and the bigger the gap, the stronger the emotional response (Frijda, 1986; Scherer, 1984). However, heterogeneity among individuals in appraisals of objectively similar failures can occur if they differ in their perceived capabilities to cope with failure events (Lazarus, 1991; Lazarus & Folkman, 1984). A common characteristic of more experienced entrepreneurs are higher levels of self-confidence. As Baron (1998, p. 285) indicates, experienced entrepreneurs "tend to perceive their abilities, dedication, and effort as crucial to success." As such, more experienced and serial entrepreneurs are likely to be confident, and potentially even overconfident (Cooper, Folta, & Woo, 1995; Westhead,

Ucbasaran, & Wright, 2005b), in their ability to cope with failure. From the perspective of appraisal theory, this means that more experienced entrepreneurs who believe more strongly in their abilities to cope with a failure event (i.e., that she/he can learn from it, and eventually create something positive to reach the desired goal) should have a smaller mismatch between the desired and reached emotional state during a failure event, and thus have a less intense sadness response.

In addition to experiencing emotions less intensely, we also expect that more experienced entrepreneurs might be better able to regulate their emotions. Emotional regulation is typically defined as "control activities or strategies based on the anticipation of adverse response consequences (retaliation, failure, discomfort, exhaustion)" (Sonnemans & Frijda, 1995, p. 486). For example, a particularly effective strategy to dampen the intensity of experienced negative emotions is reappraisal, or cognitive reframing of the emotion-eliciting event (Gross, 2013; Gross & John, 2003; Liu et al., 2010; Nolen-Hoeksema, 1991). Interestingly, individual differences might also affect the ability to apply emotional regulation strategies. In particular, several studies have shown that increasing age and life experience lead to more frequent use of reappraisal as a strategy (see also Nolen-Hoeksema & Aldao, 2011; Zimmermann & Iwanski, 2014). In a similar vein, Philipps and colleagues (2008) also indicate that experience can both increase the use and efficacy of reappraisal strategies. Transferring these findings to failure in the context of entrepreneurship, we expect that it should be similarly easier for entrepreneurs with more experience to apply reappraisal strategies to cope with failure, and thereby lower the intensity of felt sadness. More formally, we hypothesize that:

> ***Hypothesis 2a:*** *Entrepreneurial experience <u>dampens the intensity</u> of the relationship between failure and sadness (i.e., the peak magnitude of sadness is lower (higher) for more (less) experienced entrepreneurs).*

We next focus on how entrepreneurial experience can moderate the duration of sadness after a failure event. Several scholars have argued that individuals might differ in their temporal orientation — the extent to which their cognitive focus is primarily on past, present, or future events (Holman & Silver, 1998). Studies have also shown that more experienced and skilled entrepreneurs are also more likely to possess a future-focused temporal orientation; this means that in comparison to novices, experienced entrepreneurs are less likely to dwell on the past or present, and instead cognitively focus on the future (Das & Teng, 1998; Dorado, 2005; Eager, Grant, & Maritz, 2018; Frederiks et al., 2019). Thus, we reason that as entrepreneurial experience increases, the tendency to ruminate about the emotion-eliciting event (i.e., failure) should decrease, concurrently shortening the duration of sadness.

In addition to their future-oriented temporal orientation, experienced entrepreneurs are also more likely to recognize that setbacks and failures are part-and-parcel of the entrepreneurial journey. A repeated experience of such situations leads to habituation (Grissom & Bhatnagar, 2009; Thompson & Spencer, 1966). Habituation refers to a learning process "in which the magnitude of the response to a specific stimulus decreases with repeated exposure to that stimulus" (Grissom & Bhatnagar, 2009, p. 215). Thus, in the context of our study, we expect that being more habituated with failure should lower the perceived importance of a focal (i.e., any given) failure event. This effectively decreases affective appraisal, which in turn also shortens the duration of the emotional response (Verduyn & Lavrijsen, 2015). In summary, we expect that both the future-focused temporal orientation and habituation with failure of experienced entrepreneurs (relative to novices) should help suppress the "lingering" effects of sadness. We thus hypothesize that:

> ***Hypothesis 2b:*** *Entrepreneurial experience shortens the duration of the relationship between failure and sadness (i.e., the length of time for which sadness is felt is lower (higher) for more (less) experienced entrepreneurs).*

2.3. Methodology of Analysis in Chapter 2

2.3.1. Research Context: Crowdfunding and Social Media

Crowdfunding is an increasingly popular financing alternative to traditional funding mechanisms (Short et al., 2017). Project creators (i.e., entrepreneurs in this context) pitch their ideas to an online community, and backers receive rewards for their support (Pahnke, Katila, & Eisenhardt, 2015).[5] Backers are typically motivated by a community logic whose goal is to encourage project creators to bring nascent ideas to life (Soublière & Gehman, 2020; Wessel, Thies, & Benlian, 2022). Several crowdfunding platforms have emerged over the last decade, and one of the largest is Kickstarter (Soublière & Gehman, 2020).

Academic research on crowdfunding and entrepreneurship has also rapidly grown over the last two decades (see McKenny et al., 2017; Short et al., 2017 for detailed reviews). Within this body of work, a nascent but growing number of studies focus on emotions (Davis et al., 2017; Gorbatai & Nelson, 2015; Hou, Zhang, & Zhang, 2019; Kim, Cho, & Lee, 2016; Kim & Park, 2017; Moysidou & Spaeth, 2016; Reyes & Bahm, 2016; Rhue & Robert, 2018; Rose et al., 2021). We chose this context for several reasons. First, crowdfunding platforms allow us to observe the occurrence of failure in entrepreneurial endeavors (Piening et al., 2021). It also allows us to investigate an objectively less severe form of entrepreneurial failure (i.e., a missed financing opportunity) than catastrophic business delinquency. Second, entrepreneurs often use social media as a means to publicly share personal information as well as their opinions, and a vast amount of posts are published every day (Obschonka, Fisch, & Boyd, 2017; Schwartz et al., 2013). As we, and others have previously demonstrated (Guntuku et al., 2019), such social media posts can be used to measure human emotions by using cutting-edge machine learning algorithms. This method also does not suffer from recall biases that limit other commonly used methods to study entrepreneurial emotions, such as retrospective surveys (Cardon et al., 2012).

[5] Other types of crowdfunding also exist, such as equity-based crowdfunding (Vulkan et al., 2016). However, these platforms are not the focus of this study.

Third, the combined dataset (crowdfunding and social media) provides a dynamic picture of emotional changes over the entire duration of the entrepreneurial journey, enabling us to measure emotional changes over an extended time period. And finally, the dataset also allows us to measure entrepreneurial experience based on prior activity of project creators on the platform, and, thus, look at the impact of an important theoretical contingency that might moderate the emotional response to failure.

2.3.2. Using Social Media to Measure Emotions

Automatic text analysis using natural language processing (NLP) has been used extensively in management research to analyse stock market behaviours, firm valuations, and product reviews (Kang et al., 2020). Its application to measure emotions is still relatively new but promising. In particular, social media platforms such as Twitter offer interesting avenues for research, as individuals (e.g., entrepreneurs) often use it as a means to share personal information; furthermore, the data is publicly available, and a vast amount of posts are published every day (Obschonka, Fisch, & Boyd, 2017; Schwartz et al., 2013).

In the field of entrepreneurship, multiple scholars have used NLP and social media data to compare groups of entrepreneurs with others (Tata et al., 2017), or to study entrepreneurs from different geographical regions (Kuffó et al., 2018; Obschonka et al., 2020). The extant body of work largely approaches the study of emotions from a static, or trait-based perspective (Delgado García, De Quevedo Puente, & Blanco Mazagatos, 2015) — focusing for example on largely invariant characteristics of individuals such as their big five personality traits (Obschonka, Fisch, & Boyd, 2017). For example, Fisch and Block (2021) investigate the changes in the expressed personality traits due to business failure, and Tumasjan, Braun and Stolz (2021) used an event-based model to predict venture financing using Twitter sentiment. In contrast, research looking at short-term emotional responses to specific events using social media data is nascent. Another common attribute of extant research (except Obschonka et al.,

2020) is the use of a dictionary-based approach to measure emotions or personality traits, such as the Linguistic Inquiry Word Count (LIWC; Tausczik & Pennebaker, 2010) or Valence Awareness Dictionary for Sentiment Reasoning (VADER) approaches (Hutto & Gilbert, 2014). Such dictionary-based approaches use a pre-defined list that contains words and phrases with corresponding valence scores to determine the emotional value of each text. Most dictionary-based approaches also use a ratio measure (e.g., the number of keywords of interest divided by the total number of words in the document) to assign a score to a focal document. However, such measures are not well suited to analyze social media data since most posts are extremely short. For example, a Twitter post has an upper limit of 280 characters, and thus a small number of keywords can have a disproportionate impact on a post's computed score.[6] A further challenge with dictionary-based approaches is that the respective dictionaries are typically static and hence fail to accurately capture changes in language and disclosed sentiment over time (Frankel, Jennings, & Lee, 2021). ML-based NLP methodologies are better suited to accurately measure emotions in these kinds of datasets (Chan, Pethe, & Skiena, 2021; Van Atteveldt, van der Velden, & Boukes, 2021). In this approach, a pre-trained language model is fine-tuned on labeled social media data in order to learn the specifics of social media posts, e.g., slang and emoticons. Scholars have adopted this approach in other fields, such as finance, to make stock predictions by analyzing Twitter data (Das, Behera, & Rath, 2018). Using this approach, in our research context, social media posts of a crowdfunding creator allow us to measure her/his emotional changes over time and thus examine the temporal characteristics of the emotional response both before, during, and after a failure event (i.e., the end of an unsuccessful crowdfunding campaign).

[6]https://developer.twitter.com/en/docs/counting-characters

2.3.3. Leveraged Crowdfunding and Social Media Dataset

To create our combined dataset, we first scraped all crowdfunding campaigns from Kickstarter with a self-developed web crawler for the period from the platform's inception in 2009 to the end of 2021. In addition to the metadata of crowdfunding campaigns, our dataset also included information from the creators' profiles on linked social media accounts (see Figure 1 below). Crucial for our purpose are the Twitter handles of project creators. We used this information to link the Kickstarter projects to the corresponding Twitter account, after which we downloaded all Tweets from each creator via the official Twitter API.[7] In total, we were able to obtain data from 71,301 Kickstarter campaigns by 48,132 creators that linked a Twitter account in their profile. We automatically checked the status of each Twitter account, i.e., if it was still active, private, suspended, or not available. We found 39,882 active Twitter accounts and could download Tweets from 33,117 Twitter accounts as not every account published Tweets in the considered timeframe. Following prior crowdfunding research (Mollick, 2014; Piening et al., 2021), prior to our data analyses we also filtered out entrepreneurs who had funding campaigns of less than $5,000 to only analyze more serious endeavors. Our final sample consisted of 21,908 crowdfunding campaigns matched to 17, 971 Twitter accounts. To explore emotional changes, we defined the timeframe of our analysis as one year before the campaign launch, during the campaign itself, and one year after the campaign deadline (Fisch & Block, 2021), resulting in roughly 20 million Tweets. On average, each user tweeted every 28 hours during our observation period. The flowchart on the left of

Figure 2 below visually summarizes the steps we took to combine, process, and filter our dataset.

[7] https://developer.twitter.com/en/docs

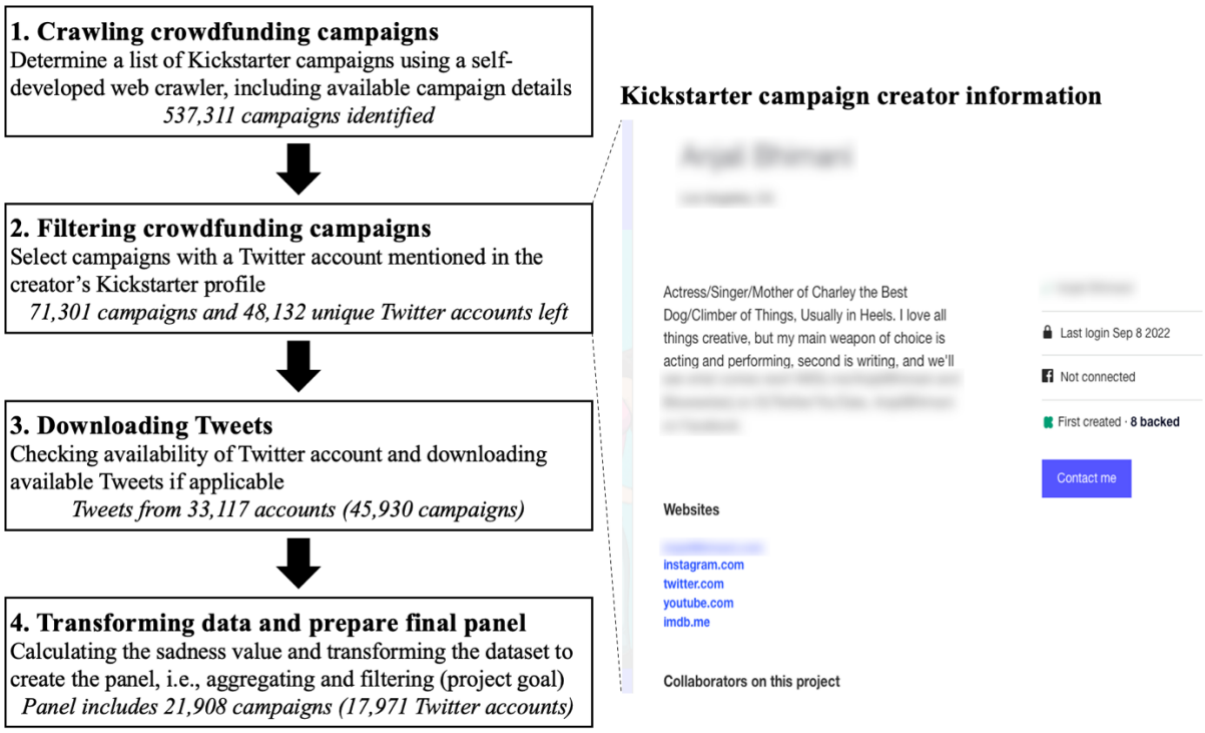

Figure 2: Data collection and transformation process.

2.3.4. Measures for Analysis in Chapter 2

2.3.4.1. Dependent Variable

Sadness Delta: The dependent variable (DV) for our models is a weekly, time-varying measure sadness delta — the extent to which an entrepreneurs' sadness changes during and after a crowdfunding campaign compared to the average baseline over a one-year time frame before the start of the campaign. To compute this measure, we used the entire set of tweets from every project creator during our study period and implemented an ML-based NLP model proposed by Barbieri et al. (2020). The model can recognize the probability that a text includes a specific emotion, such as sadness. The utilized NLP model is a model based on the RoBERTA (Liu et al., 2019) and BERT (Devlin et al., 2018) language models, and subsequently finetuned using two different Twitter datasets, one for sentiment (Rosenthal, Farra, & Nakov, 2017) and another for emotion recognition (Mohammad et al., 2018).[8] In other research domains where automatic

[8] BERT is an acronym for Bidirectional Encoder Representations from Transformers. It is a relatively novel natural language processing method that relies on unannotated texts from the web, instead of a language corpus that is been labelled specifically for a task (Devlin et al., 2018). RoBERTa refers to a Robustly optimized BERT Pretraining approach which finetunes the parameter selection and optimizes the pretraining in BERT (Liu et al., 2019).

text analysis plays a significant role, BERT (e.g., Chan, Pethe, & Skiena, 2021) or finetuned BERT models (e.g., FinBERT by Araci, 2019) have been previously utilized. For example, in the field of finance sentiment analysis using these algorithms has been applied to predict stock prices (Mishev et al., 2020). Using the selected approach, we calculated the probability of sadness for all Tweets.[9] To minimize noise, we aggregated and averaged the emotions every week for each campaign of an entrepreneur. To calculate the emotional change, sadness delta, and not the absolute value, we subtracted a baseline emotion, defined as average emotion before the project (over a one-year period), from the week-by-week value before, during, and after the campaign.

2.3.4.2. Key Independent Variable

Failure: Kickstarter uses an all-or-nothing funding mechanism, meaning pledges are only paid out if the funding goal is reached or exceeded. Therefore, the independent variable (IV) of our models is Failure, coded as 0 if the project succeeded or 1 if the project did not reach its goal. Similar measures have frequently been used in crowdfunding research (Buttice, Colombo, & Wright, 2017; Colombo, Franzoni, & Rossi–Lamastra, 2015; Fan-Osuala, 2021; Piening et al., 2021). As mentioned previously, since some entrepreneurs choose extremely low funding goals in order to circumvent the all-or-nothing funding threshold, we also followed prior studies and excluded campaigns with a funding goal below $5,000 to only analyze more serious endeavors (Mollick, 2014; Piening et al., 2021).

2.3.4.3. Moderating Variable

Entrepreneurial Experience: In our models, we investigate how the EE of entrepreneurs impacts the emotional response caused by business failure. Thus, our moderating variable is Entrepreneurial Experience. Following Soublière and Gehman (2020), we used the number of previously created crowdfunding campaigns, i.e., campaigns created before the focal campaign,

[9] See Appendix A for a sample set of Tweets used in our analysis and their corresponding sadness value.

as a proxy for experience in this context. We used the natural logarithm (ln) of this variable in our models since it was skewed (Vedula, York, et al., 2022).

2.3.4.4. Control Variables

To control for potential alternative explanations, we used three time-variant control variables. First, we measure the effort a creator puts into his or her campaign using the number of weekly updates (Soublière & Gehman, 2020). Second, we also used a similar measure for the effort the creator invested in his or her social media (Twitter) account; here, we determined the number of hundreds of weekly Tweets (i.e., number of weekly Tweets divided by one hundred), called Twitter Activity. And third, in order to control for calendar effects, we also added a set of dummy variables for calendar time. This categorical variable had a unique value for each calendar week and associated year during our study period, for a total of 652 dummy variables (i.e., from 2009-2021). Furthermore, we also controlled for fixed effects at the project level.

2.3.4.5. Fixed-effects Panel Regression Model

For our analysis, we follow prior work that has studied the temporal dynamics of behavior on social media. Specifically, we implemented a relative time model (see Cheng, Greenwood, & Pavlou, 2022; Rietveld, Schilling, & Bellavitis, 2019; Rietveld, Seamans, & Meggiorin, 2021) to calculate emotional changes both before, during, and after a crowdfunding campaign. In our context, the campaign starts at the first day of Week 1. We use two weeks before the campaign launch (Week -1) as a reference to normalize computed week-by-week β coefficients (Cheng, Greenwood, & Pavlou, 2022). We chose this baseline week as the omitted category in our regression analyses and figures because we expected to see emotional changes in anticipation/preparation for the launch of a campaign. The campaign deadline represents the potential failure event as Kickstarter campaigns typically last 30 days, which is also recommended by the platform, meaning that the outcome is usually determined in Week 5.[10]

[10] https://help.kickstarter.com/hc/en-us/articles/115005128434-What-is-the-maximum-project-duration-

Following this, we created a panel dataset, where the unit of observation was the project-week. For each crowdfunding campaign and the corresponding Twitter account, the panel includes one observation for each week, ten weeks before, five weeks during, and ten weeks after the crowdfunding campaign, if a Tweet is available in the corresponding week. Furthermore, we averaged/collapsed all available weeks before (<10 weeks before the campaign start) and after (>15 weeks after the campaign start) to one observation to improve the interpretability of our data tables (Cheng, Greenwood, & Pavlou, 2022). To estimate the impact of our binary measure of failure, as well as to study emotional responses over time, we ran a series of fixed-effects panel regressions, whose results we discuss next.

2.4. Results of Analysis in Chapter 2

Table 2 provides descriptive statistics, variance inflation factors (VIFs), and pairwise correlations between the variables in our model, other than time dummies for the project weeks and dummies for the calendar weeks. All bivariate correlations for variables of interest were in the direction we expected. For example, we observe that failure is positively correlated with an increase in sadness ($r = 0.025$, $p = 0.00$). Similarly, having more EE is negatively correlated with the likelihood of failure in a focal campaign ($r = -0.23$, $p = 0.00$). The mean VIF across all variables is 1.05, and we did not find concerns of multicollinearity in our models (Craney & Surles, 2002).

Next, we ran our multivariate fixed effects panel regressions, whose results are presented in Table 3. Note that the table does not show the project time-invariant omitted variables (e.g., the main effects of EE and the failure dummy are omitted due to the fixed effects specification) as well as the base levels of categorical variables. Model 1 contains the main effect of our variable week, representing dummies for the campaign weeks, and all our controls. Note that Week -1 is the baseline (i.e., omitted week) of the regression, with other βs computed relative to this week. As indicated previously, we chose this week as a reference point as

emotional changes begin soon after this time point in anticipation of (i.e., prior to) campaign launch at the start of Week 1. Moreover, for both Table 3 and all the figures, we combined Week -10 and all preceding campaign weeks into a single category labeled "Week ≤ -10" for clarity. The same holds also for Week 15 and all available weeks after Week 15, we aggregated these to the category labeled "Week ≥ 15". We observe that both, twitter activity (β = -0.002, p = 0.00) and weekly updates (β = -0.01, p = 0.00), are negatively associated with our sadness variable. Thus, higher levels of twitter activity of the entrepreneur and weekly updates lead to a slight decrease in the sadness delta.

Table 2: Descriptive statistics.

Variables	Mean	S.D.	VIF	1	2	3	4	5
1 Sadness delta	-0.002	0.092	1.00	1.000				
2 Failure (1/0)	0.467	0.499	1.08	0.025	1.000			
3 EE (ln)	0.408	0.698	1.06	-0.001	-0.230	1.000		
4 Twitter activity	0.129	0.302	1.03	-0.016	-0.014	0.020	1.000	
5 Weekly updates (100s)	0.03	0.01	1.06	-0.038	-0.164	0.050	0.154	1.000

Notes: N = 373,290 observations from 21,908 campaigns. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests.

2.4.1. Prolonged Disappointment Caused by Entrepreneurial Failure

Model 2 introduces the variable failure and the interaction of between week and failure. Thus, this model illustrates the effect of unsuccessful campaigns on sadness delta for campaign creators. Note that Figure 3 (Panel A) shows that sadness delta for both successful and unsuccessful entrepreneurs decrease initially just prior to and during the campaign launch period (Week 0 and 1). However, after campaign launch (Week 1: β = 0.01, p = 0.00), levels of sadness between both groups returns towards baseline levels of sadness, but on different trajectories. Project creators whose campaigns subsequently fail return much more quickly to the baseline. The emotional experience for unsuccessful entrepreneurs eventually peaks shortly after the campaign (Week 6). One interpretation of this finding is that it becomes apparent to project creators during the first days of the campaign that the project is not on a promising trajectory — this is also consistent with prior research that shows that crowdfunding projects

that fail tend to usually do so by large margins and do not pick up any funding momentum (Mollick, 2014).

In terms of our baseline hypotheses, and Figure 3 Panel A and B both show that sadness delta is statistically significant different between both groups (failed vs. successful) campaigns after the campaign's launch. Figure 3 (Panel A) also highlights that sadness delta is also significantly different from zero ($p < 0.05$) starting from the campaign's deadline (Week 5) for failed campaigns. After peaking in Week 6 (Figure 3 – Panel A) it also stays significant and greater than the baseline level for the rest of the observation period (i.e., a lingering effect of sadness). The increase in sadness from the launch of the campaign (i.e., Week 1) to this peak in Week 6 is approximately 150%. Moreover, the difference between both groups also stays statistically significant (Figure 3 – Panel B). Thus, sadness lingers for several weeks (at least until Week 9; $\beta = 0.01$, $p = 0.05$) post the failure event in the context of our study. Taken together, these findings provide support for H1a and H1b.

Table 3: Fixed effects panel regression results.

Variables	Model 1	Model 2	Model 3	Model 4
Main effects				
Week				
≤-10	.004*** (.00) [.00]	.003+ (.00) [.07]	.006*** (.00) [.00]	.005* (.00) [.01]
-9	.003* (.00) [.01]	.001 (.00) [.58]	.005*** (.00) [.00]	.003 (.00) [.13]
-8	.006*** (.00) [.00]	.004* (.00) [.02]	.006*** (.00) [.00]	.005* (.00) [.01]
-7	.006*** (.00) [.00]	.006*** (.00) [.00]	.007*** (.00) [.00]	.007*** (.00) [.00]
-6	.003** (.00) [.00]	.002 (.00) [.14]	.004** (.00) [.00]	.003+ (.00) [.07]
-5	.003** (.00) [.00]	.002 (.00) [.29]	.005*** (.00) [.00]	.004+ (.00) [.06]
-4	.003** (.00) [.00]	.001 (.00) [.64]	.005*** (.00) [.00]	.003 (.00) [.13]
-3	.003* (.00) [.01]	.002 (.00) [.30]	.004** (.00) [.00]	.003 (.00) [.15]
-2	.003* (.00) [.02]	.001 (.00) [.70]	.003** (.00) [.01]	.002 (.00) [.35]
-1	Omitted baseline			
0	-.010*** (.00) [.00]	-.011*** (.00) [.00]	-.010*** (.00) [.00]	-.010*** (.00) [.00]
1	-.013*** (.00) [.00]	-.017*** (.00) [.00]	-.013*** (.00) [.00]	-.018*** (.00) [.00]
2	-.005*** (.00) [.00]	-.011*** (.00) [.00]	-.005*** (.00) [.00]	-.012*** (.00) [.00]
3	-.003** (.00) [.01]	-.009*** (.00) [.00]	-.002* (.00) [.04]	-.009*** (.00) [.00]
4	-.004*** (.00) [.00]	-.010*** (.00) [.00]	-.003* (.00) [.01]	-.010*** (.00) [.00]
5	-.003** (.00) [.00]	-.011*** (.00) [.00]	-.003* (.00) [.01]	-.013*** (.00) [.00]
6	.004** (.00) [.00]	-.004* (.00) [.02]	.003* (.00) [.02]	-.006*** (.00) [.00]
7	.005*** (.00) [.00]	.000 (.00) [.96]	.005*** (.00) [.00]	-.000 (.00) [.87]
8	.006*** (.00) [.00]	.002 (.00) [.16]	.007*** (.00) [.00]	.003 (.00) [.16]

9	.006*** (.00) [.00]	.003+ (.00) [.10]	.007*** (.00) [.00]	.004* (.00) [.04]
10	.007*** (.00) [.00]	.004* (.00) [.03]	.008*** (.00) [.00]	.005** (.00) [.01]
11	.007*** (.00) [.00]	.004* (.00) [.01]	.008*** (.00) [.00]	.006** (.00) [.00]
12	.008*** (.00) [.00]	.005** (.00) [.00]	.008*** (.00) [.00]	.005* (.00) [.01]
13	.007*** (.00) [.00]	.004* (.00) [.03]	.008*** (.00) [.00]	.003 (.00) [.11]
14	.008*** (.00) [.00]	.005* (.00) [.01]	.010*** (.00) [.00]	.007** (.00) [.00]
≥15	.013*** (.00) [.00]	.010** (.00) [.00]	.014*** (.00) [.00]	.011** (.00) [.00]
Week × Failure				
≤-10 × Yes		.003 (.00) [.20]		.001 (.00) [.72]
-9 × Yes		.005* (.00) [.04]		.003 (.00) [.27]
-8 × Yes		.003 (.00) [.17]		.002 (.00) [.45]
-7 × Yes		.001 (.00) [.73]		.000 (.00) [.88]
-6 × Yes		.002 (.00) [.42]		.001 (.00) [.75]
-5 × Yes		.004 (.00) [.10]		.002 (.00) [.42]
-4 × Yes		.006* (.00) [.01]		.003 (.00) [.25]
-3 × Yes		.003 (.00) [.25]		.002 (.00) [.45]
-2 × Yes		.004+ (.00) [.06]		.003 (.00) [.28]
-1 × Yes		Omitted baseline		
0 × Yes		.000 (.00) [.81]		-.000 (.00) [.88]
1 × Yes		.008*** (.00) [.00] [11]		.008*** (.00) [.00]
2 × Yes		.012*** (.00) [.00]		.011*** (.00) [.00]
3 × Yes		.012*** (.00) [.00]		.012*** (.00) [.00]
4 × Yes		.011*** (.00) [.00]		.013*** (.00) [.00]
5 × Yes		.018*** (.00) [.00]		.020*** (.00) [.00]
6 × Yes		.016*** (.00) [.00]		.019*** (.00) [.00]
7 × Yes		.010*** (.00) [.00]		.011*** (.00) [.00]
8 × Yes		.008*** (.00) [.00]		.008** (.00) [.00]
9 × Yes		.006* (.00) [.01]		.005+ (.00) [.07]
10 × Yes		.007** (.00) [.00]		.006* (.00) [.03]
11 × Yes		.006* (.00) [.01]		.003 (.00) [.27]
12 × Yes		.006** (.00) [.01]		.006* (.00) [.03]
13 × Yes		.007** (.00) [.00]		.008** (.00) [.00]
14 × Yes		.007** (.00) [.00]		.005+ (.00) [.06]
≥15 × Yes		.007** (.00) [.00]		.005* (.00) [.03]
Week × EE (ln)				
≤-10 × EE			-.003+ (.00) [.06]	-.003+ (.00) [.07]
-9 × EE			-.004* (.00) [.02]	-.003+ (.00) [.07]
-8 × EE			-.002 (.00) [.29]	-.002 (.00) [.38]
-7 × EE			-.002 (.00) [.15]	-.002 (.00) [.29]
-6 × EE			-.002 (.00) [.27]	-.002 (.00) [.33]
-5 × EE			-.003* (.00) [.04]	-.003+ (.00) [.08]
-4 × EE			-.003* (.00) [.04]	-.004+ (.00) [.05]
-3 × EE			-.002 (.00) [.15]	-.002 (.00) [.31]
-2 × EE			-.002 (.00) [.22]	-.002 (.00) [.29]
-1 × EE			Omitted baseline	
0 × EE			-.001 (.00) [.53]	-.001 (.00) [.41]
1 × EE			.000 (.00) [.86]	.001 (.00) [.49]
2 × EE			-.001 (.00) [.56]	.000 (.00) [.83]

[11] First week with statically significant difference between failed and successful campaigns.

3 × EE			-.001 (.00) [.49]	.001 (.00) [.78]
4 × EE			-.002 (.00) [.29]	.001 (.00) [.49]
5 × EE			-.000 (.00) [.79]	.003+ (.00) [.07]
6 × EE			.001 (.00) [.44]	.005** (.00) [.00]
7 × EE			-.001 (.00) [.35]	.001 (.00) [.69]
8 × EE			-.002 (.00) [.25]	-.001 (.00) [.69]
9 × EE			-.003+ (.00) [.06]	-.002 (.00) [.18]
10 × EE			-.004* (.00) [.02]	-.003 (.00) [.13]
11 × EE			-.002 (.00) [.23]	-.003 (.00) [.16]
12 × EE			-.001 (.00) [.52]	-.000 (.00) [.86]
13 × EE			-.001 (.00) [.47]	.001 (.00) [.71]
14 × EE			-.005** (.00) [.00]	-.004* (.00) [.03]
≥15 × EE			-.002 (.00) [.14]	-.002 (.00) [.18]
Week × Failure × EE (ln)				
≤-10 × Yes × EE				.003 (.00) [.42]
-9 × Yes × EE				.002 (.00) [.64]
-8 × Yes × EE				.002 (.00) [.60]
-7 × Yes × EE				-.001 (.00) [.76]
-6 × Yes × EE				.001 (.00) [.71]
-5 × Yes × EE				.002 (.00) [.66]
-4 × Yes × EE				.005 (.00) [.16]
-3 × Yes × EE				-.000 (.00) [.95]
-2 × Yes × EE				.003 (.00) [.44]
-1 × Yes × EE			Omitted baseline	
0 × Yes × EE				.002 (.00) [.64]
1 × Yes × EE				.001 (.00) [.88]
2 × Yes × EE				.002 (.00) [.52]
3 × Yes × EE				.001 (.00) [.80]
4 × Yes × EE				-.005 (.00) [.14]
5 × Yes × EE				-.005 (.00) [.19]
6 × Yes × EE				-.008* (.00) [.04]
7 × Yes × EE				-.003 (.00) [.43]
8 × Yes × EE				.001 (.00) [.84]
9 × Yes × EE				.001 (.00) [.77]
10 × Yes × EE				-.001 (.00) [.89]
11 × Yes × EE				.007+ (.00) [.07]
12 × Yes × EE				.001 (.00) [.78]
13 × Yes × EE				-.004 (.00) [.36]
14 × Yes × EE				.001 (.00) [.72]
≥15 × Yes × EE				.004 (.00) [.26]
Controls				
Twitter activity	-.002** (.00) [.01]	-.002* (.00) [.01]	-.002** (.00) [.01]	-.002* (.00) [.03]
Weekly updates	-.001*** (.00) [.00]	-.001*** (.00) [.00]	-.001*** (.00) [.00]	-.001*** (.00) [.00]
Calendar dummies	Yes	Yes	Yes	Yes
Constant	.066 (.08) [.39]	.071 (.08) [.35]	.064 (.08) [.40]	.068 (.08) [.37]
R^2	.008	.008	.008	.009
N	362,200	362,200	362,200	362,200

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed.

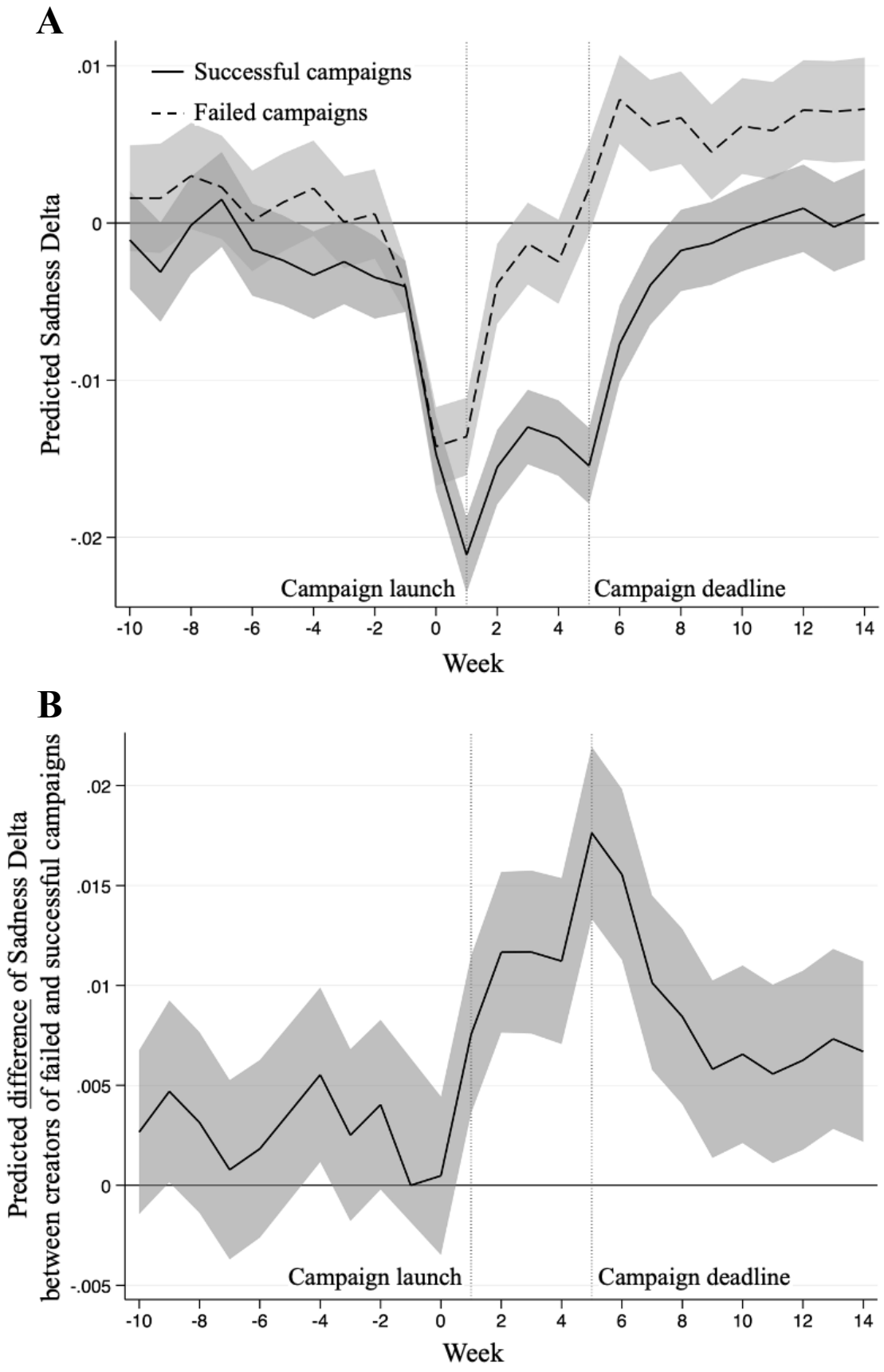

Figure 3: Conditional marginal impact of failure on sadness delta and corresponding 95%-CI. Panel A shows the response curves for successful (sold line) vs. failed (dotted line) campaigns. Panel B shows the difference between both groups (failed vs. successful).

2.4.2. Entrepreneurial Experience and the Mitigation of Sadness due to Failure

For our second set of hypotheses (H2a and H2b), we focus on the extent to which EE moderates the baseline response shown in Model 2. Thus, in Model 3 and Model 4 of Table 2 we add the EE variable. Given our interest in the temporal dynamics of the emotional response, we interacted EE with the week and the failure dummy in Model 4. The conditional marginal impact of this interaction effect is plotted in Figure 4. We show the response curves for failed and successful campaigns for novice (Panel A) and serial (Panel B) entrepreneurs respectively. We use the 10^{th} and 90^{th} percentile values of EE to define novice vs serial entrepreneurs, although due to the skewness of the EE variable it should be noted that it has a value of 0 till the 50^{th} percentile value. In Panel C we show the difference curve for novice entrepreneurs (i.e., the difference between the two lines in Panel A). In Panel D we show the difference curve for serial entrepreneurs (i.e., the difference between the two lines in Panel B). We observe through these four panels that novices have a pattern similar to the response curve of our baseline hypotheses (i.e., Figure 3 – Panel A and B). However, this is clearly not the case for serial entrepreneurs, where there is no statistically significant difference in the response curve between failed and successful campaigns (i.e., Figure 2 – Panel C and D).

Table 3 (Model 4, section Week × Failure × EE) illustrates that between Week 4 (β = -0.01, p = 0.14) and 6 (β = -0.01, p = 0.04) there is a significant moderating effect of EE. We also observe that at higher levels of experience, both the amplitude (H2a) and duration (H2b) of the emotional response are reduced. Thus, in terms of the three-way interaction (i.e., Week × Failure × EE) we observe that these dampening effects of EE on the affective response occur just before and just after the end of the campaign period (note that in graphical terms this is effectively the difference between Panel C and D in Figure 2, if the two panels were overlaid).

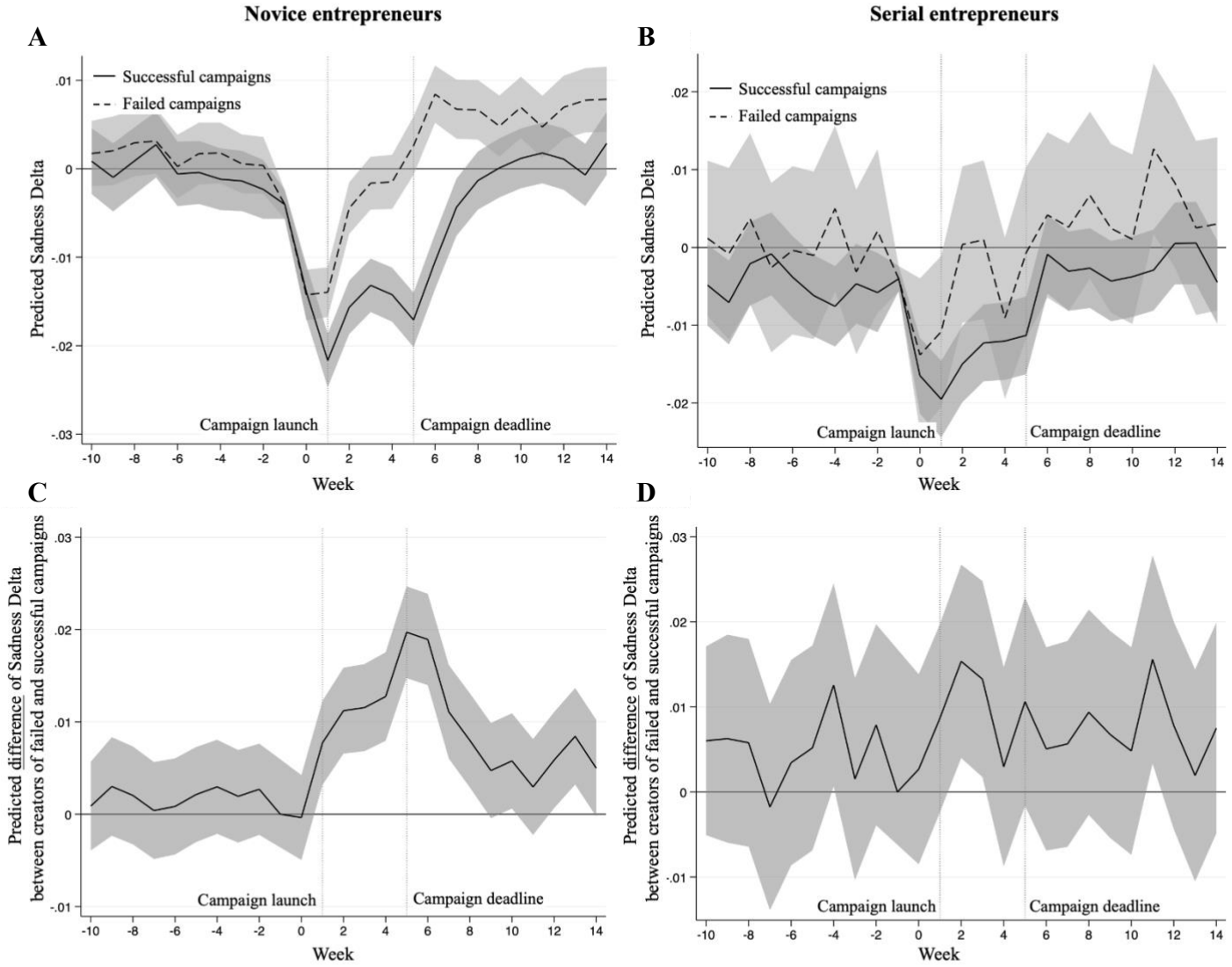

Figure 4: Conditional marginal impact of failure and EE on sadness delta. Panel A (B) compares novice (serial) entrepreneurs of successful vs. failed campaigns including the 95% confidence intervals. Panel C and D illustrates for both groups the difference between failed and successful campaigns. Novice entrepreneurs are represented by the 10th percentile, and serial entrepreneurs by the 90th of EE.

2.4.3. Robustness Tests for Analysis in Chapter 2

We ran several sensitivity tests to ensure our results were robust to alternate variables, data subsamples, and model specifications. First, to demonstrate the robustness of the different measures, we used several different operationalizations of our dependent, independent, moderator, and control variables. We validated our dependent variable, sadness delta, by rerunning our analysis using a measure of negative emotions in general (instead of just sadness). Therefore, we use again our ML-based NLP model, which also provides the functionality to measure negative sentiment (however, trained using another Twitter dataset; Barbieri et al., 2020). We also used a dictionary-based approach optimized for sentiment analysis on social media posts, VADER sentiment (Hutto & Gilbert, 2014). For both approaches, our results were similar to our main findings. We validated our independent binary variable failure, by changing it to a categorical measured based on four success levels introduced by Soublière and Gehman (2020). These four levels differentiate the campaign's success depending on their attained funding goal (in percentage), namely: <20%, between 20% and <100%, 100% to <150%, and >150%. We used the third level as the baseline, and our findings were robust to this change. We also validated our moderator measure, EE, using several different operationalizations. We replaced the number of previously created campaigns with the number of backed campaigns (logged; Calic & Mosakowski, 2016), as well as the sum of backed and created campaigns (logged). Our results were robust to both these alternate operationalizations. We also replaced our measure of the number of previously created campaigns with the number of previously created failed campaigns (logged; i.e., the logged count of previously created campaigns by a project creator that did not achieve a funding goal). Our results were robust to all these potential alternate specifications of the EE variable.

Second, we carried out a series of subsample analyses to ensure that our moderation results were not biased by the composition of projects in our sample. As about 70% of the

campaigns originated in the USA, we re-ran our models only focusing on non-US projects. Moreover, about two-thirds of our campaigns were created by men. Hence, we created split samples on these two variables and re-ran analysis, the results of which are shown in Table 3. We again found results consistent with our main models, indicating that the unbalanced geographic and demographic composition of crowdfunding campaigns was not a cause for concern.[12]

Lastly, we tried alternate model specifications, in addition to the fixed effects panel regression we show in our main analysis. Specifically, we used a multiple regression analysis (MRA) by running an independent regression for each week (Newson, 2003). We again found results comparable to our main analyses when using this pooled-cross sectional approach (instead of the fixed-effects approach which we preferred due to omitted variable bias concerns).

Table 4: Regression results for sensitivity analysis using split sample categories for project geography (country) and project creator gender.

	Project country		Gender	
Variables	**Non-US**	**US**	**Female**	**Male**
Main effects				
Week				
≤-10	.016*** (.00) [.00]	.013*** (.00) [.00]	.016** (.01) [.00]	.014*** (.00) [.00]
-9	.014*** (.00) [.00]	.014*** (.00) [.00]	.007 (.01) [.22]	.014*** (.00) [.00]
-8	.016*** (.00) [.00]	.016*** (.00) [.00]	.013* (.01) [.02]	.017*** (.00) [.00]
-7	.012*** (.00) [.00]	.013*** (.00) [.00]	.015** (.01) [.01]	.016*** (.00) [.00]
-6	.016*** (.00) [.00]	.012*** (.00) [.00]	.017** (.01) [.00]	.014*** (.00) [.00]
-5	.012*** (.00) [.00]	.012*** (.00) [.00]	.005 (.01) [.39]	.011** (.00) [.00]
-4	.012*** (.00) [.00]	.012*** (.00) [.00]	.012* (.01) [.02]	.015*** (.00) [.00]
-3	.009** (.00) [.00]	.012*** (.00) [.00]	.005 (.01) [.29]	.017*** (.00) [.00]
-2	.007* (.00) [.03]	.011*** (.00) [.00]	.015** (.01) [.00]	.011** (.00) [.00]
-1	Omitted baseline			
0	.014*** (.00) [.00]	.012*** (.00) [.00]	.011* (.00) [.02]	.015*** (.00) [.00]
1	-.004 (.00) [.19]	-.009*** (.00) [.00]	-.007 (.00) [.14]	-.010** (.00) [.00]
2	-.001 (.00) [.80]	-.002 (.00) [.26]	-.003 (.00) [.54]	-.002 (.00) [.48]
3	.005 (.00) [.11]	-.001 (.00) [.69]	-.005 (.00) [.31]	.000 (.00) [.99]
4	.001 (.00) [.67]	-.001 (.00) [.70]	.001 (.00) [.88]	-.003 (.00) [.34]

[12] We identified the gender and the race of the creators using their Kickstarter profile names and campaign countries (https://github.com/lead-ratings/gender-guesser). We excluded observations from the sample that resulted in an "unknown" gender.

5	.001 (.00) [.71]	-.005* (.00) [.02]	-.012* (.01) [.02]	-.002 (.00) [.56]
6	.004 (.00) [.26]	.004+ (.00) [.06]	.001 (.01) [.90]	.003 (.00) [.45]
7	.014*** (.00) [.00]	.008*** (.00) [.00]	.004 (.01) [.49]	.011** (.00) [.00]
8	.017*** (.00) [.00]	.011*** (.00) [.00]	.010+ (.01) [.07]	.008* (.00) [.03]
9	.015*** (.00) [.00]	.014*** (.00) [.00]	.019*** (.01) [.00]	.015*** (.00) [.00]
10	.017*** (.00) [.00]	.015*** (.00) [.00]	.016** (.01) [.00]	.017*** (.00) [.00]
11	.019*** (.00) [.00]	.015*** (.00) [.00]	.016** (.01) [.01]	.017*** (.00) [.00]
12	.018*** (.00) [.00]	.014*** (.00) [.00]	.007 (.01) [.21]	.019*** (.00) [.00]
13	.017*** (.00) [.00]	.012*** (.00) [.00]	.005 (.01) [.41]	.015*** (.00) [.00]
14	.022*** (.00) [.00]	.015*** (.00) [.00]	.012* (.01) [.05]	.020*** (.00) [.00]
≥15	.030*** (.01) [.00]	.021*** (.00) [.00]	.010 (.01) [.37]	.030*** (.01) [.00]
Week × Failure				
≤-10 × Yes	.000 (.00) [.94]	.001 (.00) [.66]	-.002 (.01) [.77]	-.001 (.00) [.91]
-9 × Yes	.001 (.00) [.87]	.002 (.00) [.44]	.002 (.01) [.78]	-.000 (.01) [.96]
-8 × Yes	.002 (.00) [.62]	-.001 (.00) [.81]	-.003 (.01) [.74]	.001 (.01) [.87]
-7 × Yes	.004 (.00) [.38]	-.001 (.00) [.79]	-.002 (.01) [.75]	-.005 (.01) [.30]
-6 × Yes	.002 (.00) [.73]	.002 (.00) [.54]	-.006 (.01) [.43]	.001 (.00) [.88]
-5 × Yes	.004 (.00) [.40]	.002 (.00) [.43]	.008 (.01) [.31]	.001 (.00) [.77]
-4 × Yes	.002 (.00) [.59]	.001 (.00) [.62]	-.007 (.01) [.32]	.001 (.00) [.81]
-3 × Yes	.004 (.00) [.30]	.002 (.00) [.51]	.006 (.01) [.42]	-.003 (.00) [.54]
-2 × Yes	.005 (.00) [.19]	-.002 (.00) [.39]	-.013+ (.01) [.07]	.001 (.00) [.87]
-1 × Yes	Omitted baseline			
0 × Yes	-.001 (.00) [.77]	-.001 (.00) [.58]	-.002 (.01) [.80]	-.003 (.00) [.42]
1 × Yes	.005 (.00) [.16]	.009*** (.00) [.00]	-.004 (.01) [.55]	.010* (.00) [.03]
2 × Yes	.011** (.00) [.01]	.011*** (.00) [.00]	.003 (.01) [.66]	.013** (.00) [.00]
3 × Yes	.009* (.00) [.03]	.012*** (.00) [.00]	.005 (.01) [.46]	.013** (.00) [.00]
4 × Yes	.013** (.00) [.00]	.012*** (.00) [.00]	.002 (.01) [.74]	.016*** (.00) [.00]
5 × Yes	.022*** (.00) [.00]	.018*** (.00) [.00]	.009 (.01) [.20]	.018*** (.00) [.00]
6 × Yes	.022*** (.00) [.00]	.017*** (.00) [.00]	.012+ (.01) [.09]	.025*** (.00) [.00]
7 × Yes	.010* (.00) [.03]	.011*** (.00) [.00]	.014+ (.01) [.05]	.008+ (.00) [.10]
8 × Yes	.007+ (.00) [.10]	.008** (.00) [.01]	.005 (.01) [.51]	.014** (.00) [.00]
9 × Yes	.011* (.00) [.01]	.002 (.00) [.53]	-.009 (.01) [.24]	.007 (.00) [.14]
10 × Yes	.010* (.00) [.03]	.003 (.00) [.26]	-.001 (.01) [.90]	.002 (.00) [.75]
11 × Yes	.004 (.00) [.41]	.002 (.00) [.45]	-.002 (.01) [.80]	-.001 (.01) [.84]
12 × Yes	.003 (.00) [.54]	.007* (.00) [.02]	.017* (.01) [.02]	.002 (.00) [.66]
13 × Yes	.014** (.00) [.00]	.006* (.00) [.05]	.005 (.01) [.50]	.005 (.01) [.31]
14 × Yes	.002 (.00) [.62]	.006+ (.00) [.06]	.014+ (.01) [.06]	.001 (.01) [.89]
≥15 × Yes	.004 (.00) [.28]	.005+ (.00) [.07]	.007 (.01) [.33]	.005 (.00) [.24]
Week × EE (ln)				
≤-10 × EE	-.002 (.00) [.55]	-.001 (.00) [.48]	-.000 (.01) [.97]	-.002 (.00) [.55]
-9 × EE	.000 (.00) [.89]	-.000 (.00) [.84]	.010 (.01) [.24]	.001 (.00) [.68]
-8 × EE	.001 (.00) [.84]	-.001 (.00) [.69]	.005 (.01) [.55]	.001 (.00) [.75]
-7 × EE	.003 (.00) [.40]	-.001 (.00) [.51]	-.003 (.01) [.73]	-.003 (.00) [.41]
-6 × EE	-.003 (.00) [.36]	-.001 (.00) [.50]	-.003 (.01) [.69]	-.003 (.00) [.35]
-5 × EE	-.001 (.00) [.74]	-.002 (.00) [.23]	.013 (.01) [.12]	-.001 (.00) [.71]
-4 × EE	-.000 (.00) [.95]	-.000 (.00) [.84]	-.003 (.01) [.73]	.000 (.00) [.97]
-3 × EE	.002 (.00) [.53]	-.001 (.00) [.51]	.009 (.01) [.25]	-.002 (.00) [.62]
-2 × EE	.002 (.00) [.50]	.001 (.00) [.60]	-.005 (.01) [.51]	.001 (.00) [.76]
-1 × EE	Omitted baseline			
0 × EE	-.001 (.00) [.84]	-.000 (.00) [.92]	.002 (.01) [.84]	-.000 (.00) [.91]

1 × EE	.004 (.00) [.25]	.002 (.00) [.19]	-.003 (.01) [.74]	.003 (.00) [.32]
2 × EE	.004 (.00) [.20]	.001 (.00) [.61]	.004 (.01) [.61]	.002 (.00) [.49]
3 × EE	-.000 (.00) [.98]	.003 (.00) [.18]	.009 (.01) [.23]	.002 (.00) [.48]
4 × EE	.003 (.00) [.41]	.003 (.00) [.19]	.006 (.01) [.48]	.005 (.00) [.11]
5 × EE	.006+ (.00) [.10]	.004* (.00) [.03]	.010 (.01) [.18]	.004 (.00) [.28]
6 × EE	.006+ (.00) [.10]	.007*** (.00) [.00]	.016* (.01) [.04]	.012*** (.00) [.00]
7 × EE	-.001 (.00) [.69]	.003+ (.00) [.10]	.019* (.01) [.02]	.005 (.00) [.14]
8 × EE	.000 (.00) [.98]	.001 (.00) [.65]	.001 (.01) [.93]	.005 (.00) [.17]
9 × EE	.002 (.00) [.61]	-.002 (.00) [.39]	-.009 (.01) [.25]	.001 (.00) [.68]
10 × EE	-.001 (.00) [.69]	-.001 (.00) [.50]	.003 (.01) [.67]	-.002 (.00) [.62]
11 × EE	.000 (.00) [.93]	-.002 (.00) [.45]	.001 (.01) [.93]	.000 (.00) [.93]
12 × EE	-.001 (.00) [.84]	.002 (.00) [.38]	.006 (.01) [.45]	.002 (.00) [.66]
13 × EE	.006+ (.00) [.09]	.001 (.00) [.57]	.010 (.01) [.21]	.003 (.00) [.42]
14 × EE	-.002 (.00) [.65]	-.003 (.00) [.15]	.020* (.01) [.02]	-.004 (.00) [.31]
≥15 × EE	.001 (.00) [.72]	-.002 (.00) [.45]	-.003 (.01) [.73]	.000 (.00) [.93]
Week × Failure × EE (ln)				
≤-10 × Yes × EE	-.003 (.01) [.66]	.003 (.00) [.44]	-.004 (.01) [.78]	.008 (.01) [.18]
-9 × Yes × EE	-.004 (.01) [.52]	.003 (.00) [.47]	-.002 (.02) [.90]	.003 (.01) [.65]
-8 × Yes × EE	-.008 (.01) [.26]	-.000 (.00) [.95]	-.006 (.02) [.70]	-.003 (.01) [.66]
-7 × Yes × EE	-.016* (.01) [.02]	.007 (.00) [.12]	-.006 (.02) [.69]	.011 (.01) [.13]
-6 × Yes × EE	-.005 (.01) [.49]	.003 (.00) [.49]	-.001 (.02) [.96]	.011 (.01) [.12]
-5 × Yes × EE	-.003 (.01) [.70]	.007+ (.00) [.10]	-.005 (.01) [.73]	.009 (.01) [.17]
-4 × Yes × EE	-.005 (.01) [.41]	.000 (.00) [.95]	.014 (.01) [.36]	.001 (.01) [.93]
-3 × Yes × EE	-.004 (.01) [.50]	.004 (.00) [.38]	.005 (.01) [.72]	.003 (.01) [.66]
-2 × Yes × EE	-.012+ (.01) [.05]	.003 (.00) [.43]	-.002 (.01) [.89]	.008 (.01) [.20]
-1 × Yes × EE	Omitted baseline			
0 × Yes × EE	-.000 (.01) [.95]	.005 (.00) [.22]	.002 (.01) [.89]	.009 (.01) [.12]
1 × Yes × EE	-.008 (.01) [.17]	.002 (.00) [.65]	.001 (.01) [.93]	.003 (.01) [.64]
2 × Yes × EE	-.005 (.01) [.41]	.003 (.00) [.44]	-.006 (.01) [.69]	-.001 (.01) [.94]
3 × Yes × EE	.001 (.01) [.84]	-.001 (.00) [.85]	-.012 (.01) [.40]	.001 (.01) [.85]
4 × Yes × EE	-.016* (.01) [.01]	-.003 (.00) [.54]	-.020 (.01) [.17]	-.005 (.01) [.43]
5 × Yes × EE	-.019** (.01) [.00]	-.001 (.00) [.87]	-.004 (.02) [.81]	.003 (.01) [.66]
6 × Yes × EE	-.007 (.01) [.26]	-.009* (.00) [.03]	-.034* (.01) [.02]	-.015* (.01) [.03]
7 × Yes × EE	-.011 (.01) [.11]	-.001 (.00) [.88]	-.025 (.02) [.10]	.002 (.01) [.82]
8 × Yes × EE	.000 (.01) [.96]	-.001 (.00) [.87]	-.008 (.01) [.60]	-.006 (.01) [.42]
9 × Yes × EE	-.019** (.01) [.00]	.008+ (.00) [.08]	-.009 (.02) [.54]	-.001 (.01) [.86]
10 × Yes × EE	-.007 (.01) [.27]	.001 (.00) [.88]	-.010 (.01) [.51]	.007 (.01) [.33]
11 × Yes × EE	.001 (.01) [.92]	.008+ (.00) [.07]	.015 (.02) [.32]	.008 (.01) [.26]
12 × Yes × EE	.003 (.01) [.69]	-.001 (.00) [.80]	-.021 (.02) [.18]	.004 (.01) [.53]
13 × Yes × EE	-.014* (.01) [.05]	-.001 (.00) [.77]	-.026+ (.02) [.09]	-.001 (.01) [.90]
14 × Yes × EE	-.014* (.01) [.04]	.006 (.00) [.16]	-.017 (.02) [.27]	.014+ (.01) [.06]
≥15 × Yes × EE	-.005 (.01) [.41]	.006 (.00) [.13]	.006 (.01) [.67]	.004 (.01) [.50]
Controls				
Twitter activity	-.000 (.00) [.50]	-.000** (.00) [.01]	-.000 (.00) [.91]	-.000* (.00) [.01]
Weekly updates	-.001** (.00) [.00]	-.001*** (.00) [.00]	-.001 (.00) [.18]	-.001** (.00) [.01]
Calendar dummies	Yes	Yes	Yes	Yes
Constant	-.083 (.10) [.43]	.079 (.08) [.31]	-.013 (.14) [.93]	.041 (.11) [.70]
R^2	.014	.010	.028	.016
N	107,113	266,177	43,164	103,083

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed.

2.5. Discussion of Chapter 2

We demonstrate that failure in entrepreneurial crowdfunding campaigns is associated with the expression of an important basic human emotion, namely sadness. As our research design allows us to capture the temporal dynamics of emotional responses, we also find robust evidence that sadness lingers. Interestingly, project creators of failed and successful crowdfunding projects experienced a decrease of sadness around the launch of their campaign, most likely due to the excitement of the event. Post launch, we observe a rapid divergence in the response curves of failed vs. successful campaigns, with failed campaigns returning to baseline sadness levels quicker and surpassing it. Moreover, we find that these elevated levels of sadness persist well after the campaign ends, lasting for up to three weeks. Lastly, we also find that EE dampens the intensity and duration of sadness. Our findings have important theoretical, empirical, and practical implications. We discuss each of these in turn below.

2.5.1. Negative Emotions and Entrepreneurial Failure

A vast body of entrepreneurship scholarship has focused on affective responses to entrepreneurial failure (Byrne & Shepherd, 2015; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2003; Ucbasaran et al., 2013). In particular, building on initial work by Shepherd and colleagues (2003) several studies have focused on both the expression of, and ability to cope with grief due to catastrophic business failures (Omorede, 2021; Shepherd, 2009; Shepherd, Covin, & Kuratko, 2009; Singh, Corner, & Pavlovich, 2007; Ucbasaran et al., 2013). Our study both leverages and builds on this extensive body of research. By studying the temporal dynamics of sadness, an emotion that is conceptually related but distinct from grief (see Chapter 2.2.1), we are able to investigate the impacts of an arguably "less severe" entrepreneurial failure event. Sadness is both ubiquitous as a basic human emotion, and less severe loss events typically provoke sadness (Bonanno, Goorin, & Coifman, 2008; Huron, 2018). Thus, our work helps to fill an important gap in the entrepreneurship and affect literature that has hitherto had a rather

narrow focus on grief (Shepherd, 2019). Moreover, by looking at the modulation of sadness both before and after a failure event, our work provides a more temporally holistic perspective on affective responses to failure than have been previously examined (Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2003, 2009; Shepherd, Covin, & Kuratko, 2009).

On the one hand, our findings are along expected lines. For example, it is not particularly surprising or counterintuitive that failure events should be associated with higher levels of sadness. However, the nuances of our results are interesting and merit further discussion. In particular, our finding of both the modulation of sadness before and during the campaign, and the lingering effect of sadness for failed entrepreneurs after the campaign are important. Given the communal nature of platform-based entrepreneurial activities such as crowdfunding, individuals who fail in this context likely risk reputational damage from publicly not delivering on their promise (Brown, Boon, & Pitt, 2017), which may impede their chance to acquire funding from other sources. Thus, while failure in such a context is not akin to catastrophic business failure, it likely carries social and psychological penalties that entrepreneurs both need to plan ahead for (i.e., before failure happens) and subsequently cope with. Moreover, the fact that EE is able to mitigate both the intensity and lingering effects of sadness is interesting to consider, given the interest in understanding how entrepreneurs can mitigate the emotional distress associated with failure events (Cacciotti & Hayton, 2015; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2009, 2016; Shepherd, 2019). More broadly, our findings indicate that there is substantial merit in better understanding the heterogeneity of individual's emotional responses to entrepreneurial failure, as well as digging deeper into the other mechanisms through which the emotional duress caused by failure can be more fully alleviated. Work in this vein will both advance our theoretical understanding of how entrepreneurial activities can shape affective responses, while simultaneously expanding the nascent body of work looking at the negative

(Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011), and non-pecuniary (Wiklund, Wright, & Zahra, 2019) outcomes associated with venturing.

2.5.2. Methodical Advances in the Entrepreneurship and Emotions Literature

Emotions research in entrepreneurship literature has classically relied on retrospective surveys and interviews of entrepreneurs. However, these methods of measuring affect undoubtedly have their limitations, such as recall biases and a lack of temporal specificity (Cardon et al., 2012). Thus, over the years, several scholars have tried to implement alternate methods such as real-time experience sampling methodologies using wireless devices (Foo, Uy, & Baron, 2009; Uy, Foo, & Aguinis, 2010), or smartphone applications (Lackéus, 2014). Yet, almost all these approaches rely on the user (i.e., entrepreneur) actively interpreting their affective state. We offer an alternate, unobtrusive, and validated approach (Guntuku et al., 2019; Yu et al., 2022) using ML-based NLP methodology that can infer an individual's affective state retrospectively over an extended period of time. Moreover, with a final panel including about 360,000 observations from over 20,000 crowdfunding campaign-Twitter account pairs, we have a unique observation sample for failure and emotions research. Our method can also be potentially extended to measure other aspects of entrepreneurs in an unobtrusive manner such as their personality traits (Obschonka, Fisch, & Boyd, 2017), similar to what scholars have attempted in the past using archival data (Chatterjee & Hambrick, 2007). In sum, our approach shows how big data and analytics can be used in a creative way to answer important questions in entrepreneurship research (Obschonka & Audretsch, 2020).

Methodologically, our work also extends prior studies that have used crowdfunding as a context to study human emotions. Interestingly, existing research in this domain almost exclusively focuses on the emotional responses of backers of crowdfunding campaigns. For example, several studies have shown that backers' emotions can impact the performance of crowdfunding campaigns (Gorbatai & Nelson, 2015; Rose et al., 2021). Other studies treat

emotion as an intermediate variable, by showing that certain campaign characteristics such as a video recording or project creator profile picture can induce positive/negative emotions in backers, which in turn influences project success (Hou, Zhang, & Zhang, 2019; Kim & Park, 2017; Reyes & Bahm, 2016; Rhue & Robert, 2018). In contrast, the emotional journey of the project creators (i.e., entrepreneurs) themselves has surprisingly not been examined to-date. And second, no prior work exists that focuses on the temporal dynamics of emotions over an extended time period, both before and after the launch and end of a crowdfunding campaign. In general, our conceptualization of emotions as an outcome of the entrepreneurial journey is also novel in this research context (also see Footnote 2), and aligned with calls in the broader entrepreneurship literature to study emotions as non-pecuniary outcomes of entrepreneurial activity (Cardon et al., 2012; Delgado García, De Quevedo Puente, & Blanco Mazagatos, 2015).

2.5.3. Practical Implications: Reducing Emotional Distress for Entrepreneurs

Our study also has important practical implications. Given that the entrepreneurial journey is emotional (Baron, 2008) and often ends in failure (Ucbasaran et al., 2013), it is important for scholars to better understand which kinds of factors and associated mechanisms can play a role in reducing emotional distress (Cacciotti & Hayton, 2015; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2009, 2016; Shepherd, 2019). As such, our interest in looking at EE as one potential moderator of the failure – affect relationship was guided by theoretical precedent and the extensive study of EE in the literature (Dew et al., 2009; Jenkins, Wiklund, & Brundin, 2014; Stuart & Abetti, 1990; Ucbasaran et al., 2010; Westhead, Ucbasaran, & Wright, 2005b; Westhead et al., 2005), but also by practical considerations. As entrepreneurship educators, practitioners, and policymakers often emphasize, the joy of venturing often lies in the journey. Embracing the learnings gained through committing to the entrepreneurial process, as opposed to focusing on the ultimately uncertain and unpredictable outcome is more valuable in entrepreneurial activities (Schindehutte, Morris, & Allen, 2006). The research on effectuation

also offers practical advice in a similar vein; that through acquiring experience, and learning-by-doing, entrepreneurs become much better "pilots in the plane" understanding what is controllable, and what resources they can realistically commit to a focal venture (Read & Sarasvathy, 2005; Sarasvathy, 2001, 2009). Our findings speak directly to this practice-oriented stream of work by demonstrating that EE can help entrepreneurs essentially "keep on an even keel", and keep their emotional losses affordable (Sarasvathy, 2001, 2009), that is both small and manageable. Interestingly, our findings also have a direct correlate with those in the broader mental health literature; several studies have demonstrated that the ability to cope with emotional distress in general as well as particularly stressful events (e.g., Covid-19 most recently) improves with life experience (Fuller & Huseth-Zosel, 2021). Lastly, our findings also draw attention to the tangible mental health implications of participating in community-based forms of entrepreneurial activity (Bacq, Hertel, & Lumpkin, 2020; Lyons et al., 2012), of which crowdfunding is just one example (Stephan, 2018; Wiklund et al., 2020). Given the increasing popularity of such platforms, learning how to emotionally cope with failure (and success) is critical and of practical value.

2.5.4. Limitations of Analysis in Chapter 2

Like all studies, ours is not without limitations. First and foremost, our findings might arguably be context specific unless crowdfunding projects are generally representative of other entrepreneurial endeavors. While many scholars have argued that such activities are indeed a legitimate form of entrepreneurship (Giudici et al., 2012; McKenny et al., 2017; Mollick, 2014; Schwienbacher & Larralde, 2010; Short et al., 2017), we nevertheless focused on crowdfunding projects with a funding threshold of at least $5,000. This threshold is commonly used in the crowdfunding literature to concentrate on what might arguably be more "serious" entrepreneurial initiatives (Mollick, 2014; Piening et al., 2021). Second, our research context also determines the kind of failure events we are investigating. The failure of a crowdfunding

campaign does not necessarily end in closing a business and, hence, in business failure. Thus, we focus on a more general term, entrepreneurial failure and a general associated emotion (sadness) that is more appropriate to study in our context. Thus, our study does not allow us to directly build on the extensive literature on entrepreneurial grief, but rather borrows from it to build plausible theoretical mechanisms that may also shape sadness. Future studies might investigate other associated emotions (e.g., loneliness), as well as those with positive valence. Third, our analysis is based on data sourced from two different online platforms: Kickstarter and Twitter. Both platforms are just one example of their respective categories: crowdfunding and social media. Thus, our findings are conditional on an important self-selection bias — namely individuals who choose to be active on these specific platforms. However, given that both Kickstarter and Twitter are the leading platforms in each domain (Obschonka, Fisch, & Boyd, 2017; Schwartz et al., 2013; Soublière & Gehman, 2020), we expect that they are a suitable data sample, and that the individuals who participate in these platforms are representative of the broader population who both tweet and participate in crowdfunding platforms. We investigated the sample composition in part through our split-sample analysis in Table 4. Nevertheless, future work could expand the dataset by adding additional crowdfunding platforms and social media sources. Fourth, another vital part of the analysis is the ML-based NLP model. These models are generally hard to retrace due to their nature (Mathews, 2019), and so is ours, in particular, as we have not trained it ourselves.[13] However, the model is trained and tested for emotion recognition on Twitter data (Barbieri et al., 2020) and, hence, is well suited for the purpose of this study (see sample Tweets an corresponding sadness values in Appendix A). Besides a good NLP model reliable results depend on good input data. We use the Tweets of the entrepreneurs as input data, and an important question is if these accurately reflect the experienced emotions. This question is valid; however to mitigate this we collected

[13] To further increase the reliability of the NLP model and the input data, future work could sample some Tweets from the dataset and fine-tune the existing NLP model by manually labeling the Tweets, i.e., assigning emotions.

a large sample size across a long time period, and followed prior studies in the medical literature that have validated such an approach to analyzing emotion unobtrusively (Guntuku et al., 2019; Yu et al., 2022). Note that to show the validity of the novel ML-based approach, we also re-ran the analysis using a more common (i.e., in management and entrepreneurship literature) dictionary-based approach (optimized for Twitter posts; e.g., Fisch & Block, 2021; Obschonka, Fisch, & Boyd, 2017; Tumasjan, Braun, & Stolz, 2021). The results of this approach were consistent with our main analysis.

2.5.5. Conclusion of Chapter 2

Through our study, we contribute to the nascent but growing body of research on the negative outcomes associated with entrepreneurial action (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011). In line with the guidepost articulated by Shepherd (2019), we examine emotional sources of suffering when people engage in entrepreneurial action but also identify mechanisms to mitigate the corresponding distress component. Our study confirms that entrepreneurial failure generally causes sadness and the emotional reactions persists well beyond the actual failure event. Moreover, we show that EE can lower both the peak and lingering effects of sadness just before, during, and after the failure event, and thus soften the emotional blow associated with failure. Our study is but an initial step, and we hope it can prompt further scholarship at the nexus of entrepreneurship, big data, artificial intelligence, and machine learning.

3. THE DOWNSIDE: TIME FOR LIFE? REVISITING THE ENTREPRENEURSHIP – FAMILY LIFE RELATIONSHIP USING DAILY TIME DIARY ROUTINES

"Doing less is the path of the productive."
– The 4-Hour Workweek, Timothy Ferris

– vs. –

"Work like there is someone working 24-hours a day to take it all away from you."
– Mark Cuban

3.1. Introduction to the Entrepreneurship – Family Life Relationship

The introductory quotes from Timothy Ferris (Ferris, 2007) and Mark Cuban encapsulate divergent perspectives on the nature of entrepreneurial endeavors. While Ferris praises the virtues of flexibility, minimal hierarchy, and the potential for high impact, Cuban presents a less rosy picture, emphasizing the intense workloads, constant availability, and considerable personal sacrifices often required. These differing viewpoints raise important questions about whether entrepreneurship truly fosters a harmonious WFB or, conversely, complicates the achievement of such equilibrium. These competing viewpoints and the corresponding debate is also reflected in the academic literature (Foley & Powell, 1997; Greenhaus & Singh, 2003; Jennings & McDougald, 2007; Kirkwood & Tootell, 2008; Schindehutte, Morris, & Brennan, 2001).

WFB refers to individuals' satisfaction and engagement with their work and family duties (Greenhaus, Collins, & Shaw, 2003; Greenhaus & Singh, 2003; Parasuraman & Greenhaus, 2002).[14] This satisfaction arises from effectively navigating the numerous conflicts that emerge when juggling various roles within a family setting. These conflicts span a range of job and family demands, such as balancing responsibilities between job and parenting, job

[14] In the literature, two terms, WLB and WFB, are commonly used interchangeably, though they have slightly distinct meanings. WFB can be considered a subset of WLB. This paper focuses on WFB and its related aspects of WLB, such as the general daily routine of an entrepreneur.

and spousal roles, and job and homemaking duties. According to scholars, work-family imbalance can have significant implications for the well-being of both partners and their families. For instance, work-family conflict has been found to negatively impact job satisfaction, family satisfaction, and life satisfaction (Foley & Powell, 1997; Greenhaus, Collins, & Shaw, 2003; Kopelman, Greenhaus, & Connolly, 1983). Furthermore, conflict between work and family obligations impairs managing non-work responsibilities, which can result in elevated stress levels and cause employee burnout (Haar, 2006). Consequently, comprehending the relevance and ramifications of WFB, is crucial for both employee well-being and organizational achievements.

In the context of entrepreneurship literature, WFB is also a well-discussed topic. However, current research presents mixed findings on how entrepreneurship impacts WFB, reflecting the public's ambivalent perception of an entrepreneurial career — caught between the promise of flexibility and the reality of personal sacrifice. While some studies suggest that entrepreneurship can improve WFB, particularly for women who desire flexibility between their work and family roles (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001), others have found that entrepreneurship can have a negative impact on WFB. For example, Kirkwood and Tootell (2008) argue that entrepreneurship is not a panacea for achieving work-family balance, and Tahir (2022) notes that it can be difficult to draw clear boundaries between work and family in the context of entrepreneurship. Hence, while an entrepreneurial career may be beneficial for the entrepreneurs' WFB, it is also important to recognize the potential challenges and limitations that arise when balancing work and family responsibilities. Consequently, more rigorous empirical research is needed to fully understand the complex relationship between entrepreneurship and WFB, and to resolve on the existing mixed findings in the literature body.

This study aims to shed light on the conflicting results in the empirical record, by more deeply studying the influence of an entrepreneurial career on WFB. We introduce a well-established methodology in sociology and economics to the entrepreneurship literature; namely the use of time-diaries to study daily life routines (e.g., Aguiar, Hurst, & Karabarbounis, 2013; Anxo et al., 2011; Basner et al., 2007; Flood & Moen, 2015).[15] We leveraged a large-scale pooled cross-sectional dataset known as the American Time Use Survey (ATUS), which is collected annually by the U.S. Bureau of Labor Statistics and publicly accessible through the Integrated Public Use Microdata Series (IPUMS; Flood, Sayer, & Backman, 2022). This dataset includes time diaries of over 154,215 individuals detailing daily activities, as well as the associates with whom they engaged in these activities. Studying the time allocation of entrepreneurs compared to their employed counterparts provides insights into dynamic shifts and utilizes time as a quantifiable and universal resource (Bird & West III, 1998; Bluedorn & Denhardt, 1988).

More specifically, we explored two competing hypotheses suggesting that entrepreneurship either positively or negatively affects WFB. We explored how the work efforts of entrepreneurs (Bitler, Moskowitz, & Vissing-Jørgensen, 2005; Carree & Verheul, 2009; Verheul, Carree, & Thurik, 2009), compared to their employed counterparts, influence their daily routines and their relationships with family members. This is especially relevant since addressing and streamlining both work (e.g., reducing time spent on work activities) and home (e.g., increasing time spent with immediate family members) demands have been demonstrated to enhance WFB (Becker & Moen, 1999; Frone, 2003; Wiersma, 1994). Our approach improves upon existing research in several ways. First, through our time measurement, we provide a more nuanced perspective on this relationship. Existing research on WFB in the context of entrepreneurship primarily relies on subjective assessments using surveys (Eddleston & Powell,

[15] https://www.bls.gov/tus/home.html

2012; Lee Siew Kim & Seow Ling, 2001) or is predominantly qualitative (Kirkwood & Tootell, 2008; Tahir, 2022) and conceptual (Agarwal & Lenka, 2015; Jennings & McDougald, 2007). Second, in our detailed review of the literature, we recognized that past studies are also inconsistent in their definition of entrepreneurs. Terms like self-employed, business owners, and entrepreneurs are frequently used interchangeably, despite their potential differences in meaning and consequent impact on WFB. Thus, following work by Levine and Rubinstein (2017), we argue that using self-employment as a proxy for entrepreneurship can be misleading because it groups together diverse individuals and their varied activities (Glaeser, 2007). Those classified as incorporated business owners, referred to as entrepreneurs, typically engage in tasks demanding high nonroutine cognitive skills, aligning with productivity-enhancing entrepreneurship. Conversely, unincorporated business owners, or other business owners (OBOs), usually partake in activities requiring lower cognitive abilities and are less apt to transition into incorporated ventures (Levine & Rubinstein, 2017). In our analysis, we adhered to this differentiation to discern the unique characteristics and behaviors of employed individuals, incorporated business owners, and unincorporated business owners. And third, we also examine the contingent effects of gender on our main results, given the societal pressures women often face in balancing their career aspirations with familial roles (Eddleston & Powell, 2012; Jennings & McDougald, 2007; Kirkwood, 2009; Kirkwood & Tootell, 2008).

Our findings indicate that male entrepreneurs (i.e., individuals with incorporated businesses) allocate more time to work and less to leisure activities, whereas female entrepreneurs and OBOs (both genders) exhibit the opposite trend. Our results also show that female entrepreneurs and OBOs spend more time with their partners and children (only OBOs). In contrast, we do not find any significant differences for entrepreneurs compared to employees. However, despite the lack of this significant distinction, the notably increased work demands suggests a negative impact on (male) entrepreneurs' family balance (Becker & Moen, 1999;

Frone, 2003; Wiersma, 1994). In contrast, OBOs appear to benefit from greater flexibility, notably by distributing their work efforts across not only the workweek but also the weekends. This flexibility allows them to allocate more time for their family.

With our analysis we make three significant contributions. Firstly, we contribute to the literature on WFB in entrepreneurship (Eddleston & Powell, 2012; Jennings & McDougald, 2007; Kirkwood & Tootell, 2008). We provide a more nuanced perspective by analyzing daily routines, which allows us to underscore the differences in day-to-day activities between various groups of business owners and the employed population. Furthermore, by differentiating between two types of business owners and emphasizing gender differences, we address the mixed findings in existing literature, offering a key piece to complete the puzzle. Secondly, we contribute to the nascent but growing literature on the negative social costs associated with entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011). We demonstrate that incorporated business owners, commonly perceived as entrepreneurs (Levine & Rubinstein, 2017), work extensively and sacrifice personal leisure time; yet their close family relationships do not suffer. Thirdly, we offer insights for practitioners and aspiring entrepreneurs by providing evidence that, while an entrepreneurial career may necessitate personal sacrifices, it does not significantly undermine family relationships. This suggests that work-family conflicts can be reconciled. In essence, we demonstrate that a career in entrepreneurship, despite its sacrifices, can still be compatible with a satisfying family life.

3.2. The Impact of Entrepreneurship on the Work-Family Balance

3.2.1. The Downside of Entrepreneurship

The entrepreneurship literature has often romanticized the outcomes and impact of entrepreneurial activities, leading to a normative bias within academic entrepreneurship literature. In response to this phenomenon, several researchers have urged for more comprehensive and varied approaches to research in the field of negative outcomes of

entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011). One of the potential disadvantages of entrepreneurial initiatives is the possibility of losing capital, including financial and social capital. Shepherd (2019) has aptly defined this as the downside of entrepreneurship. On the one hand, this aspect affects the entrepreneur her- or himself by leading to a loss of financial or social resources. On the other hand, when considering the social costs associated with entrepreneurship, such as the impact on social relationships (Ucbasaran et al., 2013), it becomes clear that the downside also examines the impact on the entrepreneur's personal relationships, including family and friends. As a result, the downside extends its influence beyond the personal level and reaches the meso-level by affecting the entrepreneur's relationships with family and friends. While the financial costs of entrepreneurship may be more obvious (Ucbasaran et al., 2013), it is equally important to recognize the significant social costs that can profoundly affect the personal lives of entrepreneurs (Adler & Kwon, 2002; Bubolz, 2001; Edwards, Franklin, & Holland, 2003).

Despite Shepherd's (2019) relatively recent definition of the downside of entrepreneurship, previous research had already explored topics fitting this definition, especially concerning the loss of financial and social capital. For instance, Shepherd's (2003) influential study on how self-employed individuals cope with failure delves into the emotional and learning experiences that follow such setbacks. Shepherd emphasizes that failure not only entails psychological costs but also results in a "loss of income, social status, and self-perception" (Shepherd, 2003, p. 323). Existing research on the downsides of entrepreneurship focuses primarily on the outcomes associated with business failure, due to the negative nature of such events. Ucbasaran et al. (2013) identified three main types of costs associated with these

adverse events: financial, social, and psychological. Each of these topics has been extensively researched in the literature.[16]

The financial costs of business failure are obvious, as the loss of a business is often associated with the loss of capital (Ucbasaran et al., 2013). For example, it can take years to recover from personal debt (Cope, 2011). Arora and Nandkumar (2011) report that entrepreneurs with high opportunity costs, meaning they have numerous alternative ventures, tend to be more impatient for success and invest more aggressively, increasing the chances of significant financial gains or losses. The social costs associated with business failure often manifest themselves in impacts on personal and professional relationships (Ucbasaran et al., 2013), including the potential breakdown of marriages and personal stigmatization (Cope, 2011; Singh, Corner, & Pavlovich, 2007). Stigma can also lead to negative discrimination in employment opportunities and access to future resources (Cope, 2011; Shepherd & Haynie, 2011; Sutton & Callahan, 1987). These experienced or anticipated social costs resulting from the stigma of failure may explain why some entrepreneurs engage in self-imposed social distancing and withdrawal (Cope, 2011; Shepherd & Haynie, 2011; Singh, Corner, & Pavlovich, 2007).

Another line of research that explores the downsides of entrepreneurship, particularly the social costs, revolves around WLB and WFB (Boswell & Olson-Buchanan, 2007; Greenhaus & Parasuraman, 2002; Parasuraman & Greenhaus, 2002; Vedula & Kim, 2018). This line of research sheds light on the challenges entrepreneurs face in effectively managing their work and personal lives, including the repercussions on their relationships and overall well-being (Greenhaus, Collins, & Shaw, 2003; Kirkwood & Tootell, 2008). However, the current literature yields mixed results, also reflecting the ambivalent public recognition of an

[16] Studies that focus on the psychological consequences and related behaviors are more consistent with Shepherd's concept of the dark side of entrepreneurship and are not the primary focus of this paper.

entrepreneurial career and the inherent trade-offs between flexibility and personal sacrifice (Harris, Saltstone, & Fraboni, 1999; Miller, 2015). While some studies suggest that entrepreneurship can increase flexibility and consequently improve work-life and work-family balance (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001), others have found that entrepreneurship can have a detrimental effect on these aspects (Kirkwood & Tootell, 2008; Tahir, 2022). To shed light on these mixed findings in the literature, we now provide a comprehensive review of research on WFB, with a specific focus on entrepreneurial endeavors.

3.2.2. Work-Family Balance during an Entrepreneurial Career

The well-researched concept of WFB proposes that people strive to achieve a balance between their work and personal responsibilities. More specifically, this concept which primarily features in the broader management literature, centers on employee satisfaction and engagement in fulfilling their professional and personal duties. WFB addresses the interrelatedness of an individual's roles at work and home and the potential conflict that may arise between them (Greenhaus & Beutell, 1985; Greenhaus & Parasuraman, 2002; Kopelman, Greenhaus, & Connolly, 1983).

WFB entails balancing various conflicts that result from different demands of roles within the work and family environment, such as job and parent, job and spouse, and job and homemaker (Greenhaus & Parasuraman, 2002; Kirkwood & Tootell, 2008; Kopelman, Greenhaus, & Connolly, 1983). It is important that gender differences exist in these conflicts, influenced by societal expectations and traditional gender roles that shape individuals' experiences. Women, in particular, often face unique challenges in juggling their work and family responsibilities due to societal expectations and cultural norms. These disparities in work-family conflicts have significant implications for both men and women in terms of their well-being and overall satisfaction with their work and family life (Duxbury & Higgins, 1991;

Greenhaus, Collins, & Shaw, 2003; Greenhaus & Parasuraman, 2002; Haar, 2006; Kirkwood, 2009; Kirkwood & Tootell, 2008).

Scholars have highlighted the serious implications of work-family imbalance for the well-being of employees and their families. Work-family conflict, i.e., the competition and interference between work and family demands, can have detrimental effects on various aspects of individuals' lives. Research shows that this conflict can be associated with reduced levels of multiple forms of satisfaction, including job satisfaction, family satisfaction, and overall life satisfaction (Foley & Powell, 1997; Greenhaus, Collins, & Shaw, 2003; Greenhaus & Singh, 2003; Kopelman, Greenhaus, & Connolly, 1983). Moreover, the strain resulting from work-family conflicts not only leads to reduced satisfaction levels but also affects individuals' ability to effectively manage non-work responsibilities, leading to increased stress levels and contributing to employee burnout (Haar, 2006). Thus, understanding the meaning and implications of work-life balance, particularly work-family balance, is critical to promoting employee well-being and enhancing organizational success. Recognizing and addressing work-life-family concerns is important not only for individual well-being, but also for job performance (Kossek, Colquitt, & Noe, 2001). This increase in performance also has benefits for organizational performance. In addition, organizations that prioritize and support work-life and WFB initiatives are likely to experience higher levels of employee satisfaction, engagement, and productivity. By creating a supportive work environment that values the integration of work and personal life, organizations can foster a positive organizational culture and attract and retain talented employees. In addition, work-family policies and practices that promote flexibility and accommodation can contribute to a more diverse and inclusive workforce, benefiting both employees and the organization as a whole (Liu & Wang, 2011; Perry-Smith & Blum, 2000; Witt & Carlson, 2006).

The interface between work, life, and family has also been a subject of study in entrepreneurship research (Aldrich & Cliff, 2003; Andric et al., 2021; Jaskiewicz et al., 2017; Liang & Dunn, 2013; Molina, 2020). However, the literature on WFB in relation to entrepreneurship has yielded mixed results, reflecting the inherent ambivalence surrounding the public recognition of an entrepreneurial career. Some studies suggest that entrepreneurship may enhance WFB, particularly for individuals, especially women, who seek flexibility in balancing work and family responsibilities (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001). Conversely, other studies suggest that entrepreneurship may have a negative impact on WFB. Kirkwood and Tootell (2008), for example, argue that entrepreneurship is not a guaranteed solution for achieving work-family balance. They highlight the challenges entrepreneurs face in managing the demands of their business ventures alongside their family responsibilities. The nature of entrepreneurship often involves long working hours, unpredictable schedules, and high levels of commitment, which can significantly impede an individual's ability to achieve a harmonious balance between work and family domains. Furthermore, Tahir (2022) notes that drawing clear boundaries between work and family can be particularly challenging in the context of entrepreneurship. The blurred boundaries between personal and professional life make it difficult for entrepreneurs to separate themselves from work-related responsibilities, leading to increased work-family conflict and potential strain on family relationships.

While there are likely several reasons for these mixed and confounding findings in the literature, a particularly important one that we identified is that studies frequently offer inconsistent definitions of entrepreneurship, an oversight that can impede comprehensive understanding. In many cases, the terms self-employed, business owners, and entrepreneurs are used interchangeably. Yet, as Levine and Rubinstein (2017) assert, it is crucial to distinguish between incorporated and unincorporated business owners. Using self-employment as a mere

stand-in for entrepreneurship risks lumping together a diverse range of individuals and their multifaceted activities (Glaeser, 2007). Levine and Rubinstein (2017) maintain that incorporated ventures align more with the traditional notion of productivity-enhancing entrepreneurship. In contrast, unincorporated ventures, which typically engage in activities demanding fewer cognitive skills, rarely transition to incorporated entities and might be better framed as other types of business ownership (OBO). This differentiation reveals potential contrasts in work-family dynamics between these groups, owing to their varying responsibilities (like legal) and aspirations (Levine & Rubinstein, 2017). An indistinct conceptualization of entrepreneurship in scholarly works can obfuscate its true effects on WFB. For a holistic comprehension, we must probe whether incorporated entrepreneurs and OBOs allocate less family time due to their occupational obligations compared to employed individuals. Delving into these nuances offers a clearer picture of the distinct challenges and demands entrepreneurs and OBOs face, illuminating the unique work-family interplay they navigate and helping resolve the conflicting findings in extant research.

In summary, the literature on entrepreneurship and WFB presents mixed findings and lacks a clear distinction between incorporated and unincorporated business owners. This inconsistency in defining entrepreneurship poses a significant challenge in understanding its impact on work-family dynamics. Therefore, more research is needed to unravel the complexity of the relationship between entrepreneurship and WFB. Future studies should explore the underlying mechanisms and contextual factors that shape this interplay, taking into account individual differences, industry contexts, and cultural influences. By addressing these gaps, researchers can provide valuable insights to guide entrepreneurs, policymakers, and organizations in developing targeted policies and support systems that promote effective work-family integration and enhance the overall well-being of entrepreneurs and their families.

3.2.3. Fostering Work-Family Balance: Optimizing the Resource Time

Individuals have various strategies at their disposal to improve their WFB. Fundamentally, it is about mitigating or more effectively managing the stressors from both work and home commitments. This could involve decreasing work hours, seeking social support at work, or optimizing the time dedicated to family roles (Becker & Moen, 1999; Frone, 2003; Wiersma, 1994).

In the professional landscape, particularly for business owners and founders, it may seem straightforward to reduce working hours to enhance WFB. However, implementing such a change is not always easy. For instance, the "placing limits" strategy — such as capping work hours or declining extra hours — suggested by Becker and Moen (1999) can be challenging for those who bear primary responsibility within their own firms. Nevertheless, the autonomy that comes with being the principal decision-maker offers founders the discretion to determine, for example, if extensive travel is truly necessary.

Another approach to enhance balance is to streamline family responsibilities at home, especially when navigating various roles such as spouse, parent, or homemaker. One option is to seek external assistance, for instance, to reduce tasks associated with homemaking or childcare (Frone, 2003). Another strategy is to prioritize spending quality time with different family members. Certainly, external help can facilitate this by freeing up more hours, allowing for focused, quality interactions in other familial roles. This approach recognizes the importance of family relationships and the impact they have on individuals' overall well-being. According to Thomas, Liu and Umberson (2017), family relationships, particularly marital relationships, play a crucial role in individuals' well-being. Married individuals, on average, enjoy better mental health, physical health, and longer life expectancy compared to those who are divorced, separated, widowed, or never married (Hughes & Waite, 2009; Simon, 2002). However, the benefits of marriage depend on the quality of the relationship. Lower-quality relationships

generally do not provide the same benefits as being single (Umberson et al., 2006; Williams, 2003).

Studies have emphasized the significance of shared activities and the quality of couple leisure involvement in marital satisfaction. Examinations by Smith et al. (1988) confirmed the importance of leisure activity patterns for marital satisfaction. Time spent in individual activities or with others excluding the spouse was significantly correlated with marital distress. Guldner and Swensen (1995) found that although many studies have shown associations between the amount of time spent together and relationship satisfaction, none have established the causal direction of the association. Furthermore, Johnson, Zabriskie and Hill (2006) found that it was the satisfaction with couple leisure involvement, rather than the amount of time spent together or the level of leisure involvement itself, that contributed to marital satisfaction.

Individuals can proactively improve their work-family balance by mitigating or more effectively managing the stressors from both work and home commitments. However, it is important to recognize the complexities involved in achieving this balance, particularly in the entrepreneurial context. In combination with the aforementioned mixed findings in the entrepreneurial WFB literature regarding whether an entrepreneurial career has a positive or negative impact on WFB, we propose two competing hypotheses (H-A vs. H-B) for further analysis.

> ***Hypothesis A:*** *Engaging in an entrepreneurial career enhances the work-family balance by decreasing work-related activities and increasing time spent with immediate family members.*
>
> ***Hypothesis B:*** *Engaging in an entrepreneurial career diminish the work-family balance by increasing work-related activities and decreasing the time spent with immediate family members.*

3.3. Methodology Used in Chapter 3

3.3.1. Data Used in Chapter 3

For our analysis, we leveraged a rich dataset obtained from the U.S. Bureau of Labor Statistics, specifically the ATUS dataset, made available through IPUMS (Flood, Sayer, & Backman, 2022). This dataset provides valuable insights into individuals' daily routines and activities, as well as information about the individuals involved in these activities, i.e., information if an activity is conducted alone or with someone else, and the corresponding social relationship. By utilizing this dataset, we could gain a comprehensive understanding of the daily activities and contact behavior of entrepreneurs and OBOs.

The selected ATUS data spans a period from 2003 to 2014, enabling us to capture longitudinal trends across the sample, and control for potential survey sampling effects.[17] It consists of detailed time diaries that individuals maintained, documenting their daily activities and the reference person with whom they performed each activity. This level of granularity allows us to examine not only the type and duration of activities but also the social context in which they occur. One significant advantage of this dataset is the ability to distinguish between individuals engaging in incorporated and unincorporated entrepreneurial activities. This distinction, based on the classification provided in the data, helped us differentiate between individuals engaged in traditional entrepreneurship and those involved in other forms of business ownership (Levine & Rubinstein, 2017). This differentiation is crucial for understanding the nuances and unique challenges faced by different types of entrepreneurs when it comes to WFB.

While the ATUS dataset has been widely used in social science research, for example, to examine questions of well-being and differences in time use among people of different

[17] The range of years was limited because additional years lacked important data required for the stratified regression models (please refer to the *Models* sub-chapter).

genders (e.g., Aguiar, Hurst, & Karabarbounis, 2013; Anxo et al., 2011; Basner et al., 2007; Flood & Moen, 2015), to the best of our knowledge, it has not been used in the management and entrepreneurship domain. By utilizing this dataset in our analysis, we aim to bridge the gap between these disciplines and shed light on the specific work-life dynamics experienced by entrepreneurs. This novel application of the ATUS data to explore WFB in the context of entrepreneurship has the potential to uncover valuable insights and contribute to the existing literature on the subject.

The transformation of the original ATUS data into our final dataset produced a panel with observations spanning from 2003 to 2014. Each observation represents a summary of a time diary for one day from an individual. We have a total of 154,215 observations, with one observation per individual. Our dataset emphasizes employed individuals (143,351) and business owners, further differentiated into entrepreneurs (3,580) and OBOs (7,284). Consequently, we excluded unemployed individuals from the sample. In addition to our primary independent variable, which distinguishes between the two types of business owners and employed individuals, the dataset includes several dependent variables. Each dependent variable corresponds to a specific analysis and indicates the time devoted to particular activities or social relationships. The dataset also includes two moderating variables and other control variables.

3.3.2. Measures for Analysis in Chapter 3

3.3.2.1. Dependent Variables

Time Spent with a Particular Activity: To examine the differences in daily activity patterns between employed individuals and incorporated and unincorporated business owners, we utilized multiple dependent variables that capture the amount of time allocated to specific activities throughout the day. Each variable represents the number of minutes spent on a particular activity over the course of a day. Each variable thus has a range between 0 and 1440.

Our analysis focused on six distinct activity categories: *work and education*, *leisure*, *care*, *household*, *community*, and *other*. These are a result of careful grouping the 17 major activity types provided by ATUS, so we ensure clarity and consistency in our analysis.[18] In Table 5, we provide the matching between our categories, and the major activity codes used by ATUS.

The first category, *work and education*, encompasses activities directly related to employment and educational pursuits. The name already defines this category and includes activities such as working at a job, attending classes, or engaging in professional development. The second category, *leisure*, encompasses activities associated with relaxation, recreation, and sports. This category includes a wide range of leisure activities, allowing us to explore how individuals allocate their free time and engage in hobbies and personal interests. The *care* category focuses on activities related to self-care (e.g., sleep) and other caregiving responsibilities, like childcare and care of the elderly. Understanding how individuals integrate their caregiving duties with their other activities and demands provides valuable insights into the work-family dynamics of employed individuals and business owners. The *household* activities category captures tasks related to running a household, such as shopping, cooking, cleaning, and managing household finances. Additionally, it covers activities necessary to consume professional household services, further highlighting the demands placed on individuals in maintaining their homes. The *community* category examines activities that involve social engagement and community involvement. This includes participating in church activities, volunteering, attending community events, and engaging in social interactions outside of work and home settings. Finally, the *other* category accounts for activities that do not fall explicitly into the aforementioned categories. This category allows for the inclusion of activities that may not fit neatly into the predefined categories but are nonetheless essential to understanding individuals' time allocation patterns.

[18] https://www.bls.gov/tus/lexicons.htm

By examining these six activity categories, we could gain a comprehensive understanding of how employed individuals and business owners distribute their time across various domains. This analysis provides valuable insights into the specific activity patterns and priorities of different groups and sheds light on the work-life dynamics experienced by individuals in various occupational roles.

Table 5: Overview of activity categories hierarchy.

Activity category	ATUS major activity category	Included activities (samples)
Work & education	05 – Work	Working, job search
	06 – Education	Attending classes, extracurricular school activities (except sports)
Leisure	12 – Socializing, Relaxing & Leisure	Socializing and communicating, attending or hosting social events
	13 – Sports, Exercise & Recreation	Attending or participating in sports, exercise, or recreation (events)
Care	01 – Personal Care	Sleeping, grooming, health-related self-care
	03 – Caring For & Helping Household Members	Child-care, adult-care
	04 – Caring For & Helping non-Household Members	Child-care, adult-care
	08 – Professional & Personal Care Services	Childcare services, personal-care services, legal-services
Household	02 – Household Activities	Housework, food prep., garden work
	07 – Consumer Purchases	Shopping, researching purchases
	09 – Household Services	Household or garden services (not done by self)
	11 – Eating and Drinking	Eating, drinking and waiting for it
Community	14 – Religious and Spiritual Activities	Religious/Spiritual practices and activities
	15 – Volunteer Activities	Administrative & support activities, social service & care activities (except medical)
Other	10 – Government Services & Civic Obligations	Using government services, civic obligations and participation
	16 – Telephone Calls	Different telephone calls
	18 – Traveling	Traveling for multiple purposes
	Any other category	

Time Spent with a Particular Relationship Partner: To examine the time spent with social relationships of the reference person, we utilized the information provided by our dataset, which indicates the individuals with whom an activity is conducted. The structure of the variable is equal to our first set of variables; therefore it represents the minutes spent with a relationship through a day and can vary between 0 and 1440. By considering the social context of activities, we could gain insights into the dynamics of social relationships and how they are influenced by employment status and business ownership.

We have categorized the social relationships into six distinct categories based on the dataset information. These categories include time spent *alone*, with a *partner*, with at least one *child from the household*, with at least one *family member* who is not part of the first two categories, with at least one *friend*, and an *other* category for instances where none of the previous categories apply.

Analyzing the time spent in these six categories enabled us to understand how employment and business ownership impact individuals' interactions with different social relationships. By comparing the time allocation patterns between employed individuals and business owners, we could gain insights into how WFB is affected by employment.

Time Spent with a Particular Relationship Partner Doing a Particular Activity: The third category of dependent variables in our analysis is a combination of the first and second category. Therefore, it has the same structure as those two categories. We have combined specific activities with corresponding social relationships to examine how employment status and business ownership influence the amount of time spent on these activities with different social connections. This approach allows us to investigate the impact of employment versus business ownership on the allocation of time for specific activities within various social relationship contexts.

3.3.2.2. Key Independent Variable

Business Owner: Our primary independent variable is our indicator for entrepreneurship. It distinguishes between individuals who are employed and those who are business owners. Specifically, we have created a three-level categorical variable that differentiates between employed individuals, incorporated business owners (entrepreneurs), and unincorporated business owners (OBOs; Levine & Rubinstein, 2017). Therefore, we excluded all unemployed from our sample.

3.3.2.3. Moderating Variables

Weekend: Typically, individuals spend more time working on workdays than during the weekend. However, in light of the claimed flexibility of business ownership, it raises the question whether business owners reallocate more effort to working during weekends. To fully harness the capabilities of our time diary dataset and provide a more nuanced perspective, we introduced a weekend variable. This binary variable indicates whether a given diary entry was logged on a weekend (Saturday or Sunday) as opposed to a workday (Monday to Friday). This variable was derived from our pre-existing day variable (refer to section 3.3.2.4).

Gender: Gender, and particularly the experiences of women, has been extensively studied in the literature on WFB, both in the context of entrepreneurship and non-entrepreneurship (e.g., Agarwal & Lenka, 2015; Eddleston & Powell, 2012; Jennings & McDougald, 2007; Kirkwood & Tootell, 2008; Schindehutte, Morris, & Brennan, 2001; Tahir, 2022). Given the state of existing research, it is particularly intriguing to examine how gender influences the findings of our analysis. However, it is important to note that due to the limitations of the dataset, we can only consider a binary gender variable, distinguishing between male and female. Nonetheless, exploring the impact of gender within the scope of our analysis could provide valuable insights into potential gender differences in work-family dynamics and shed light on the unique

challenges and opportunities faced by men and women in achieving a satisfactory work-life integration.

3.3.2.4. Other Control Variables

In addition to our main variables of interest, we also included several control variables to ensure a comprehensive analysis and to account for potential confounding factors. We included age as a control variable to capture the influence of age on work-family dynamics (Kossek, Colquitt, & Noe, 2001; Lee Siew Kim & Seow Ling, 2001). The race variable to account for potential differences that may exist between different racial groups (Liang & Dunn, 2013). To examine the impact of the presence of children, we included the number of children under the age of 18 in the household (Eddleston & Powell, 2012; Kossek, Colquitt, & Noe, 2001; Lee Siew Kim & Seow Ling, 2001). To control for socioeconomic status and its potential influence we included the household income, categorized into different buckets (by $25k steps). And to capture temporal variation we added year, month, and day of week variables. In addition, the state variable accounts for regional differences that may play a role in the WFB. Finally, we included the partner relationship status (married, unmarried, or no partner) to explore the influence of partnership on WFB (Eddleston & Powell, 2012). By including these control variables, we aim to improve our understanding of the unique contributions of entrepreneurship to the WFB, while also controlling for the influence of other relevant factors.

3.3.2.5. Stratified Regression Model

We examined the effect of entrepreneurship on the allocation of time to different activities and social relationships by using simple regression models in our analysis. More specifically, we used stratified regression models to increase the precision of the estimates. Stratified sampling divides the population into mutually exclusive and homogeneous groups, called strata, and then draws samples at random from these strata. This results in smaller standard errors for the estimates (Cochran, 1977; Farhat & Robb, 2014).

The dependent variables in our study measure the duration of particular activities and social interactions throughout a day. The main objective of our analysis is to explore how the business owner variable, along with other independent variables, affects the allocation of time. Through the use of stratified regression models, we analyzed the influence of entrepreneurship and other pertinent variables on the duration of diverse activities and social interactions. By implementing this approach, we gained insight into the association between entrepreneurship and the allocation of time in individuals' daily routines.

3.4. Results of Analysis in Chapter 3

To offer a comprehensive summary of our primary analysis findings, and thus facilitate navigation through the results section of this study, we present the findings in Table 6. This table presents the effect size and the p-value across major activity and contact categories. The core results encompass our observations from contrasting business owners with employed individuals (basis category for regression). This comparison spans categories such as time allocated to specific activities and contacts, in addition to interaction effects incorporating our moderating variables: weekend and gender.

Table 6: Summary of main analysis results.

	IV – Business owner			
	Incorporated Entrepreneur		**Unincorporated** OBO	
	Coefficient	**p-value**	**Coefficient**	**p-value**
Main effects				
Activity (refer to section 3.4.1)				
Work & education	**20.28**	0.00	**-33.04**	0.00
Leisure	**-16.89**	0.00	**8.73**	0.00
Care	2-62	0.33	**6.41**	0.01
Contact (refer to section 3.4.2)				
Alone	6.41	0.22	**25.30**	0.00
Partner	4.09	0.42	**18.57**	0.00
Children	5.45	0.32	**11.26**	0.01
Weekend effects – business owner × weekend (= yes; refer to section 3.4.4)				

Activity				
Work & education	7.31	0.44	**78.67**	0.00
Leisure	0.18	0.98	**-23.73**	0.00
Care	**-11.36**	0.03	**-11.36**	0.00
Contact				
Alone	-15.98	0.10	**-27.79**	0.00
Partner	**-24.46**	0.02	**-36.76**	0.00
Children	6.51	0.59	**-25.44**	0.01
Gender effects – business owner × gender (= female; refer to section 3.4.5)				
Activity				
Work & education	**-60.58**	0.00	**-25.72**	0.00
Leisure	**16.94**	0.02	-2.73	0.62
Care	5.02	0.40	-1.68	0.73
Contact				
Alone	**34.16**	0.00	**14.73**	0.05
Partner	**19.86**	0.06	-1.01	0.90
Children	-0.46	0.97	**30.93**	0.00

Notes: The table presents the primary results from the regression tables for the entrepreneur variable (baseline - employed individuals – not displayed; see details in Appendix B – K). The effects for weekend and gender correspond to interaction results between the entrepreneur variable and weekend or gender. Baseline (not displayed) for weekend = 0 and gender = male. The bolded coefficients indicate a significant result (95%-CI).

We present the descriptive statistics, VIFs, and pairwise correlations for our variables, excluding the USA state dummies, from multiple analyses in Tables 7 through 10. For the sake of clarity, we have only included a full correlation table for time spent with a particular activity (Table 7) and time spent with a particular contact (Table 9). Table 8 and Table 10, show the pairwise correlations of the dependent variables described above with the intendent variables (except states in the USA). All bivariate correlations for our variables of interest were in the expected direction. The mean VIF across all variables is 1.07 for Table 7 and 1.10 for Table 9, and we found no concerns about multicollinearity in our models (Craney & Surles, 2002).

3.4.1. Divergent Activity Patterns: Entrepreneurs vs. Other Business Owners

We present the detailed results of the main activity analysis in Table 11 and Figure 5. The table includes six models each for every activity category. The chart illustrates the predicted mean values (i.e., the time dedicated to an activity) for each category, distinguished by the business

owner variable. Additionally, the chart displays the percentage deviation between the two types of business owners relative to employed individuals.

The table as well as the figure reveal contrasting patterns of behavior between owners of incorporated (entrepreneurs) and unincorporated enterprises (OBO) across different activity categories. Specifically, entrepreneurs show a significant increase of about 20 minutes ($p = 0.00$) in daily work time compared to the employed population. In contrast, owners of unincorporated enterprises show a significant decrease of about 33 minutes ($p = 0.00$) in daily work time compared to the employed population. This corresponds to an increase of six percent in working time for entrepreneurs and a decrease of ten percent in working time for OBOs compared to the average of the employed population (see Figure 5). Conversely, leisure time shows an inverse trend. Entrepreneurs spend about 16 minutes less per day ($p = 0.00$) on leisure activities, while other business owners spend about eight minutes more per day ($p = 0.00$) than the employed population. This corresponds to a decrease of seven percent in leisure time for entrepreneurs and an increase of four percent in leisure time for OBOs.

In comparison to the employed population, we observed similar behavior among entrepreneurs and OBOs in terms of community engagement activities. Entrepreneurs allocate more time (+3.10, $p = 0.01$) to invest in their surrounding community, whereas other business owners dedicate more time (+4.42, $p = 0.00$). This translates to a 21% increase in community activity time for entrepreneurs and a 31% increase for OBOs, respectively. Regarding household activities, we found a significant difference (+16.88, $p = 0.00$) only for OBOs, indicating that they spend more time in household-related tasks compared to the employed population. Similarly, in care activities, we observed only for OBOs significant differences (+6.41, $p = 0.01$), suggesting that they allocate more time to caregiving responsibilities. It is important to note that the high number of minutes spent on care activities primarily includes personal care activities such as sleeping.

Upon examining our other independent variables, several interesting findings emerge. First, gender has a consistently significant effect on time spent in all activity categories. Women generally work less and have less leisure time, but spend more time on domestic, caring, and community activities. Also age demonstrates a notable impact. Increasing age is associated with less time spent on work and education (-0.69, p = 0.00) and care activities (-1.14, p = 0.00), while showing a parallel increase in leisure activities (+0.19, p = 0.00), household activities (+1.58, p = 0.00), and community engagement (+0.19, p = 0.00). Furthermore, being without a partner is linked to more leisure time (+26.23, p = 0.00) and community engagement (+26.23, p = 0.00), but to less time devoted to care activities (-8.45, p = 0.00) and household responsibilities (-24.97, p = 0.00). The number of children appears to decrease the time spent on work and education (-5.28, p = 0.00), leisure activities (-13.71, p = 0.00), and community engagement (-13.71, p = 0.00). However, it is associated with an increased demand for childcare (+13.41, p = 0.00) and household work (+2.43, p = 0.00). Finally, as anticipated, public holidays and weekends are characterized by more leisure, community, care, and household activities, while the time spent on work and education decreases.

3.4.2. Differences in Contact Patterns: Other Business Owners vs. Entrepreneurs

We show the detailed outcomes of the primary category analysis in Table 12 and Figure 6. Similar to the activity results in Table 11, this table features six models, each representing a different contact category. Figure 6 follows the same structure as Figure 5 but displays the predicted mean values for all contact categories instead of the activity ones.

Table 12 as well as Figure 6 show notable differences in the allocation of time to different contact groups between OBOs and the employed population. While entrepreneurs show significant differences in only two of the six categories, other business owners show clear patterns in five of the six categories. In particular, OBO tend to spend significantly more time alone (+25.30, p = 0.00), with their partner (+18.57, p = 0.00), children (+11.26, p = 0.01), and

friends (+10.69, p = 0.00), and less time with contacts such as neighbors or colleagues (-64.76; p = 0.00). In contrast, entrepreneurs primarily spend more time with friends (+7.28, p = 0.00) and less time with other contacts (-20.78; 0.00). Furthermore, a comparison between entrepreneurs and OBOs reveals significant differences, suggesting unique contact patterns for each group.

Our additional independent variables reveal intriguing findings. Comparable to the results obtained from analyzing activity types (Table 11), gender does have an impact on the time spent with different contacts. Specifically, females spend less time alone (-17.79, p = 0.00), with their partners (-13.71, p = 0.00), and with friends (-5.93, p = 0.00), but more time with their children (+71.83, p = 0.00) and family members (+8.72, p = 0.00). Age also demonstrates a significant effect. Older individuals tend to spend more time alone (+3.90, p = 0.00) and less time with their children (-0.49, p = 0.00), but more time with the rest of their family (+0.09, p = 0.00) and less time with friends (-1.15, p = 0.00). Interestingly, marital status does make a difference. Unmarried couples who live together spend more time alone (+12.47, p = 0.00) and less time with their partners (-29.32, p = 0.00). The remaining results of this variable are more expected. Individuals with no partners spend more time alone (+112.24, p = 0.00), less time with children (-162.00, p = 0.00), more time with family members (+24.40, p = 0.00), and more time with their friends (+42.89, p = 0.00). Weekdays and public holidays exhibit the anticipated behavior, with individuals engaging in less work-related activities and allocating more time to leisure and social interactions.

In summary, based on these results from, and in reference to our two competing hypotheses (H-A vs. H-B), it is essential to distinguish the term "entrepreneurial career" into two distinct types of businesses: incorporated and unincorporated. From our findings in this sub-chapter and the sub-chapter above, the evidence predominantly supports H-B, especially for OBOs, indicating that they allocate more time to their partners and children as well as less

time to work-related activities. For entrepreneurs (i.e., incorporated business owners), we observed a similar trend, albeit less pronounced. Importantly, there is no discernible significant impact in categories related to immediate family members, like partners and children. Yet, there is a noticeable rise in time allocated to work-related activities, aligning more closely with our first hypothesis, H-A.

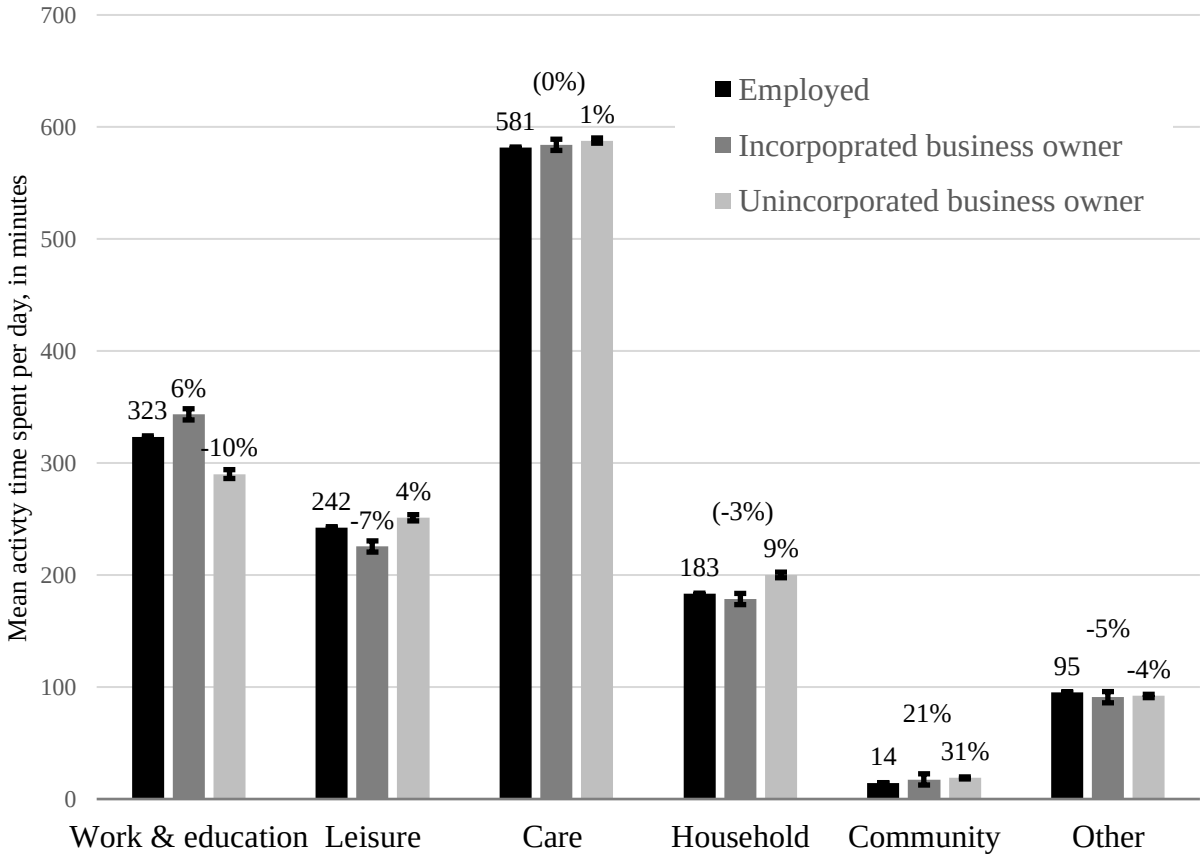

Figure 5: Comparison of time spent on certain activities between employed population and business owners. On top of employed population bar (black), mean time spent (in minutes). On top of grey bars, percentage difference between employed population and business owners. Numbers in parentheses indicate insignificant results (95%-CI threshold).

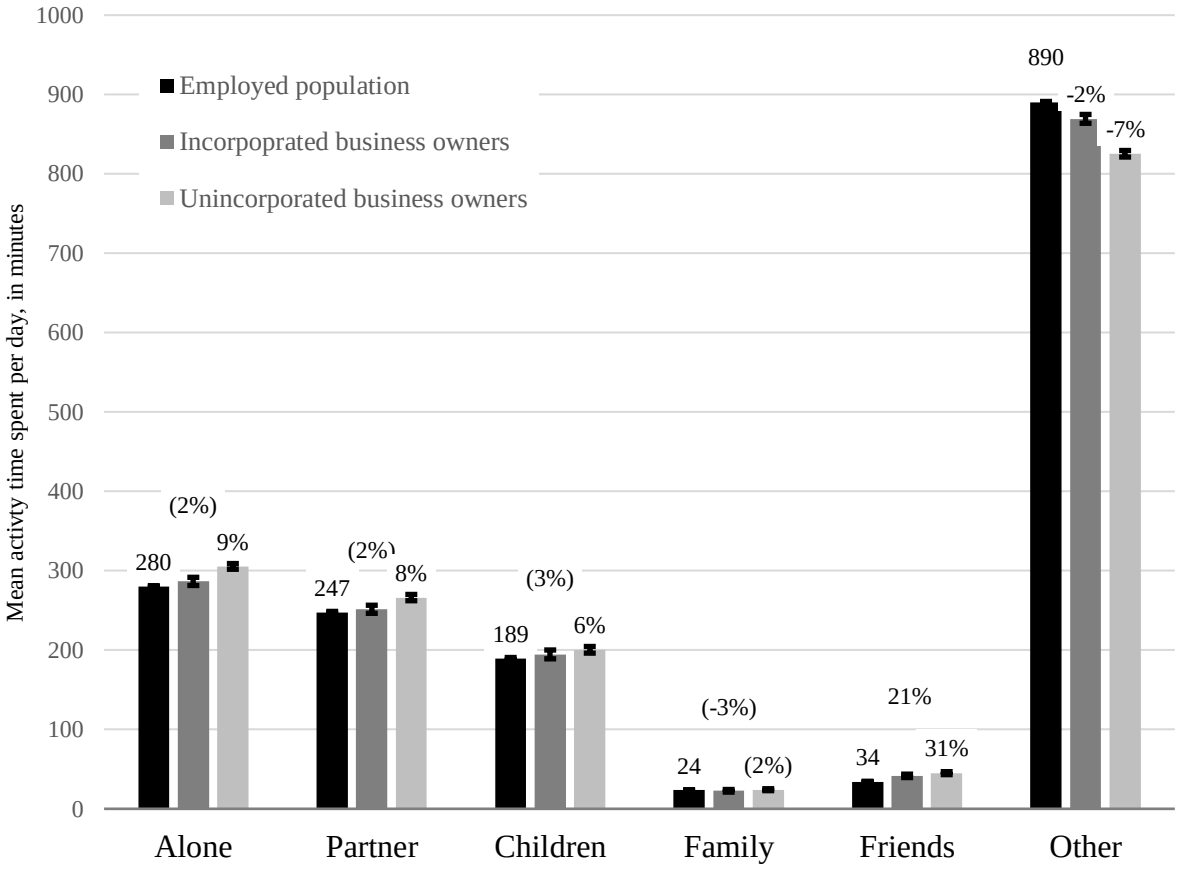

Figure 6: Comparison of time spent with certain contacts between employed population and business owners. On top of employed population bar (black), mean time spent (in minutes). On top of grey bars, percentage difference between employed population and business owners. Numbers in parentheses indicate insignificant results (95%-CI threshold).

Table 7: Descriptive statistics for Model "work and education time".

Variables	Mean	S.D.	VIF	1	2	3	4	5	6	7	8	9	10	11	12
1 Work & education time	262.53	264.02	1.02	1.00											
2 Business owner	0.19	0.55	1.02	0.00	1.00										
3 Gender	1.51	0.50	1.03	-0.09	-0.07	1.00									
4 Age	42.46	13.25	1.21	-0.03	0.13	0.00	1.00								
5 Ethnicity	103.80	14.08	1.00	0.01	-0.02	0.02	-0.03	1.00							
6 Relationship	1.85	0.97	1.17	0.02	-0.05	0.11	-0.12	0.04	1.00						
7 No. HH children	0.98	1.14	1.27	-0.02	0.00	-0.01	-0.32	0.00	-0.29	1.00					
8 HH income	90.29	267.39	1.02	0.00	0.03	0.00	0.04	-0.01	0.00	-0.02	1.00				
9 Weekday	3.99	2.35	1.01	0.04	-0.01	0.00	-0.01	0.00	0.01	-0.01	-0.02	1.00			
10 Public holiday	0.02	0.13	1.01	-0.09	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.07	1.00		
11 Month	6.25	3.48	1.01	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	0.00	-0.02	1.00	
12 Year	2007.79	3.40	1.04	0.01	-0.01	-0.01	0.06	0.02	0.04	-0.02	-0.16	-0.01	0.00	-0.06	1.00

Notes: N = 154,215 observations. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests.

Table 8: Descriptive statistics for all DVs focusing on time spent on specific activities, including pairwise correlations with IVs.

Variables	Mean	S.D.	Business owner	Gender	Age	Ethnicity	Relationship	HH children	HH income	Weekday	Public holiday	Month	Year
1 Work & education time	262.57	264.02	0	-0.09	-0.03	0.01	0.02	-0.02	0	0.04	-0.09	-0.01	0.01
2 Leisure time	257.41	185.89	0.00	-0.11	0.04	-0.01	0.08	-0.12	0.00	0.01	0.08	0.00	0.00
3 Care time	602.66	155.13	-0.02	0.14	-0.14	0.02	-0.02	0.14	-0.01	-0.10	0.03	-0.02	0.01
4 HH activities time	201.35	156.76	0.02	0.14	0.14	-0.02	-0.11	0.02	0.00	0.03	0.03	0.02	-0.02
5 Community activities time	19.29	63.18	0.03	0.03	0.05	0.01	-0.04	0.03	0.01	-0.13	0.00	0.00	0.00
6 Other activities time	96.77	92.91	-0.01	0.01	-0.02	0.01	0.02	0.01	0.00	0.06	-0.01	0.01	0.00

Table 9: Descriptive statistics for Model "time alone".

Variables	Mean	S.D.	VIF	1	2	3	4	5	6	7	8	9	10	11	12
1 Time alone	269.41	235.42	1.24	1.00											
2 Business owner	0.19	0.55	1.03	0.04	1.00										
3 Gender	1.51	0.50	1.02	-0.02	-0.07	1.00									
4 Age	42.46	13.25	1.28	0.27	0.13	0.00	1.00								
5 Ethnicity	103.80	14.08	1.00	0.02	-0.02	0.02	-0.03	1.00							
6 Relationship	1.85	0.97	1.27	0.28	-0.05	0.11	-0.12	0.04	1.00						
7 HH children (#)	0.98	1.14	1.29	-0.28	0.00	-0.01	-0.32	0.00	-0.29	1.00					
8 HH income	90.29	267.39	1.03	-0.01	0.03	0.00	0.04	-0.01	0.00	-0.02	1.00				
9 Weekday	3.99	2.35	1.01	-0.01	-0.01	0.00	-0.01	0.00	0.01	-0.01	-0.02	1.00			
10 Public holiday	0.017	0.13	1.01	-0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.07	1.00		
11 Month	6.25	3.48	1.01	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	0.00	-0.02	1.00	
12 Year	2007.79	3.40	1.05	0.12	-0.01	-0.01	0.06	0.02	0.04	-0.02	-0.16	-0.01	0.00	-0.06	1.00

Notes: N = 154,215 observations. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests.

Table 10: Descriptive statistics for all DVs focusing on time spent with specific contacts, including pairwise correlations with IVs.

Variables	Mean	S.D.	Business owner	Gender	Age	Ethnicity	Relationship	HH children	HH income	Weekday	Public holiday	Month	Year
1 Time alone	269.41	235.42	0.04	-0.02	0.27	0.02	0.28	-0.28	-0.01	-0.01	-0.03	0	0.12
2 Time w/ partner	283.45	242.05	0.01	-0.04	0.00	-0.02	-0.03	-0.05	-0.01	-0.04	0.10	0.00	0.02
3 Time w/ children	267.28	247.61	0.01	0.09	0.01	-0.01	-0.22	0.14	-0.02	-0.02	0.07	0.00	0.03

4 Time w/ family	29.71	98.70	0.00	0.04	-0.01	-0.01	-0.15	0.10	0.00	-0.01	0.08	0.01	-0.02
5 Time w/ friends	39.68	120.12	0.00	-0.02	-0.11	0.00	0.19	-0.09	-0.01	0.06	0.00	0.00	-0.01
6 Time w/ other	849.29	258.57	-0.06	-0.03	-0.13	0.01	0.12	-0.03	0.03	0.00	-0.05	-0.01	-0.10

Table 11: Analysis results for activity category models.

	Work & education	Leisure	Care	Household	Community engagement	Other
Main effects						
Business owner						
Incorporated	20.28*** (5.21) [.00]	-16.89*** (3.56) [.00]	2.62 (2.70) [.33]	-4.61 (3.02) [.13]	3.10* (1.27) [.01]	-4.50* (1.85) [.02]
Unincorporated	-33.04*** (4.08) [.00]	8.73** (2.89) [.00]	6.41** (2.42) [.01]	16.88*** (2.56) [.00]	4.42*** (.92) [.00]	-3.41* (1.53) [.03]
Controls						
Gender						
Female	-53.94*** (2.00) [.00]	-39.52*** (1.47) [.00]	43.28*** (1.22) [.00]	45.65*** (1.09) [.00]	2.74*** (.42) [.00]	1.78* (.77) [.02]
Age	-.69*** (.08) [.00]	.19** (.06) [.00]	-1.14*** (.05) [.00]	1.58*** (.04) [.00]	.20*** (.02) [.00]	-.15*** (.03) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	7.17 (5.07) [.16]	7.87* (3.85) [.04]	-2.69 (3.36) [.42]	-3.31 (2.83) [.24]	-8.17*** (.67) [.00]	-.86 (2.00) [.67]
No partner	2.87 (2.35) [.22]	26.23*** (1.73) [.00]	-8.45*** (1.41) [.00]	-24.97*** (1.30) [.00]	-1.63*** (.49) [.00]	5.95*** (.86) [.00]
HH children (#)	-5.28*** (.99) [.00]	-13.71*** (.76) [.00]	13.41*** (.62) [.00]	2.43*** (.52) [.00]	1.77*** (.20) [.00]	1.38*** (.36) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	290.18*** (3.37) [.00]	-115.88*** (2.62) [.00]	-80.03*** (2.16) [.00]	-66.67*** (1.94) [.00]	-31.45*** (.81) [.00]	3.85** (1.40) [.01]
Tuesday	307.61*** (3.32) [.00]	-123.28*** (2.53) [.00]	-84.40*** (2.09) [.00]	-71.43*** (2.00) [.00]	-31.06*** (.83) [.00]	2.57+ (1.32) [.05]
Wednesday	306.17*** (3.28) [.00]	-123.51*** (2.56) [.00]	-84.37*** (2.15) [.00]	-72.61*** (1.92) [.00]	-29.42*** (.85) [.00]	3.73** (1.26) [.00]

Thursday	314.76*** (3.36) [.00]	-125.48*** (2.52) [.00]	-88.49*** (2.04) [.00]	-75.02*** (1.95) [.00]	-30.42*** (.85) [.00]	4.64*** (1.32) [.00]
Friday	279.36*** (3.49) [.00]	-93.68*** (2.80) [.00]	-105.02*** (2.26) [.00]	-62.27*** (2.02) [.00]	-30.45*** (.90) [.00]	12.06*** (1.38) [.00]
Saturday	30.52*** (2.53) [.00]	4.13+ (2.34) [.08]	-40.88*** (1.74) [.00]	17.58*** (1.92) [.00]	-23.78*** (.85) [.00]	12.42*** (1.15) [.00]
Public holiday	-241.40*** (7.23) [.00]	148.28*** (7.37) [.00]	43.00*** (5.05) [.00]	54.13*** (5.68) [.00]	-2.96** (1.15) [.01]	-1.05 (3.74) [.78]
Month	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
US State	Yes	Yes	Yes	Yes	Yes	Yes
Constant	145.94*** (13.75) [.00]	343.43*** (9.63) [.00]	703.06*** (7.88) [.00]	134.70*** (6.94) [.00]	28.14*** (2.45) [.00]	84.73*** (6.23) [.00]
R^2	0.28	0.14	0.11	0.14	0.05	0.01
N	154,215	154,215	154,215	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Table 12: Analysis results for contact category models.

	Alone	**Partner**	**Children**	**Family**	**Friends**	**Other**
Main effects						
Business owner						
Incorporated	6.41 (5.23) [.22]	4.09 (5.11) [.42]	5.45 (5.52) [.32]	-.81 (1.70) [.64]	7.28*** (2.17) [.00]	-20.78*** (5.70) [.00]
Unincorporated	25.30*** (3.75) [.00]	18.57*** (4.08) [.00]	11.26** (4.21) [.01]	.58 (1.30) [.66]	10.69*** (1.87) [.00]	-64.76*** (4.29) [.00]
Controls						
Gender						
Female	-17.79*** (1.86) [.00]	-13.71*** (2.09) [.00]	71.83*** (2.17) [.00]	8.72*** (.64) [.00]	-5.93*** (1.02) [.00]	-23.60*** (2.14) [.00]
Age	3.90*** (.08) [.00]	-.16 (.11) [.14]	-.49*** (.10) [.00]	.09*** (.03) [.00]	-1.15*** (.05) [.00]	-2.07*** (.09) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						

Unmarried partner in HH	12.47** (4.46) [.01]	-29.32*** (4.49) [.00]	-61.83*** (7.35) [.00]	-8.52*** (1.81) [.00]	1.23 (2.13) [.56]	33.97*** (5.56) [.00]
No partner	112.24*** (2.22) [.00]		-162.00*** (2.82) [.00]	-24.40*** (.74) [.00]	42.89*** (1.18) [.00]	42.57*** (2.58) [.00]
HH children (#)	-20.56*** (.83) [.00]	-12.44*** (.98) [.00]	23.04*** (1.29) [.00]	5.19*** (.50) [.00]	-6.97*** (.48) [.00]	-8.01*** (1.10) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	23.36*** (3.26) [.00]	-201.26*** (3.83) [.00]	-133.74*** (3.82) [.00]	-32.77*** (1.16) [.00]	-20.95*** (1.62) [.00]	156.62*** (3.65) [.00]
Tuesday	15.51*** (3.27) [.00]	-213.58*** (3.65) [.00]	-145.89*** (3.69) [.00]	-31.94*** (1.26) [.00]	-17.83*** (1.68) [.00]	171.11*** (3.57) [.00]
Wednesday	14.67*** (3.15) [.00]	-214.92*** (3.73) [.00]	-149.29*** (3.62) [.00]	-31.74*** (1.19) [.00]	-16.37*** (1.65) [.00]	170.97*** (3.59) [.00]
Thursday	4.97 (3.14) [.11]	-212.39*** (3.76) [.00]	-140.31*** (3.71) [.00]	-30.86*** (1.21) [.00]	-13.14*** (1.74) [.00]	175.93*** (3.59) [.00]
Friday	-6.58* (3.10) [.03]	-172.98*** (3.89) [.00]	-128.49*** (3.89) [.00]	-24.10*** (1.30) [.00]	.68 (2.05) [.74]	149.53*** (3.64) [.00]
Saturday	-.81 (2.61) [.76]	-26.34*** (3.78) [.00]	-12.24*** (3.67) [.00]	-2.23+ (1.33) [.09]	19.48*** (1.71) [.00]	-1.97 (2.84) [.49]
Public holiday	-55.35*** (8.19) [.00]	213.06*** (11.90) [.00]	154.45*** (11.88) [.00]	66.02*** (5.47) [.00]	8.78+ (4.88) [.07]	-127.93*** (9.66) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	44.97*** (12.04) [.00]	445.23*** (17.14) [.00]	359.65*** (16.05) [.00]	46.87*** (4.46) [.00]	82.03*** (7.24) [.00]	898.24*** (13.71) [.00]
R^2	0.15	0.18	0.2	0.07	0.08	0.15
N	154,215	114,960	111,274	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

3.4.3. Detailed Contact Behavior Analysis

In order to further understand the mechanisms behind the results described above, we deepened our analysis by looking at contact behavior across our six activity categories (results shown in Appendix B –Appendix G). Below, we detail the results of this additional analysis with interesting findings.

In terms of work by contact category (Figure 7), both entrepreneurs and other business owners show distinct behavior compared to the employed population. Entrepreneurs tend to spend more time working alone (+53.44, p = 0.00), as well as more time with their partner (+8.29, p = 0.00) and children (+5.74, p = 0.01). However, they spend less time working with others (-17.54, p = 0.00). In contrast, OBOs also work more alone (+20.75, p = 0.00) and spend more time working with their partner (+5.52, p = 0.00) and children (+6.34, p = 0.00; working time while their children are around), but they show a significant decrease in working time with others (-65.03, p = 0.00).

When analyzing leisure activities by contact category (Figure 8), entrepreneurs and OBOs show contrasting patterns. Entrepreneurs (partly) compensate for their increased time spent working alone by reducing their time spent with leisure activities alone (-17.88, p = 0.00). Instead, they allocate more leisure time to socializing with friends (+4.31, p = 0.00), resulting in a significant increase of 20% compared to the employed population. OBOs, in contrast, despite spending more time alone at work, do not experience any change in their leisure time spent alone. They allocate less leisure time to children (-5.47, p = 0.00), but similar to entrepreneurs, they have increased leisure time with friends (+4.12, p = 0.00).

Furthermore, the detailed analysis of leisure activities by contact category shows that the increased time spent on care activities by OBO (see Table 11) is mainly due to additional time spent on child care (+4.14, p = 0.02). The results also show that women are primarily responsible for caring for and raising children (+29.31, p = 0.00). With regard to community

involvement, the increased time spent by entrepreneurs in this area is mainly due to more time spent alone in this type of activity (+1.18, p = 0.06). OBOs also spend more time participating in community activities than employed populations (see Table 11). The increase is due to additional community activities with all social relationship groups except family. However, the category with the greatest impact is alone (+2.13, p = 0.00).

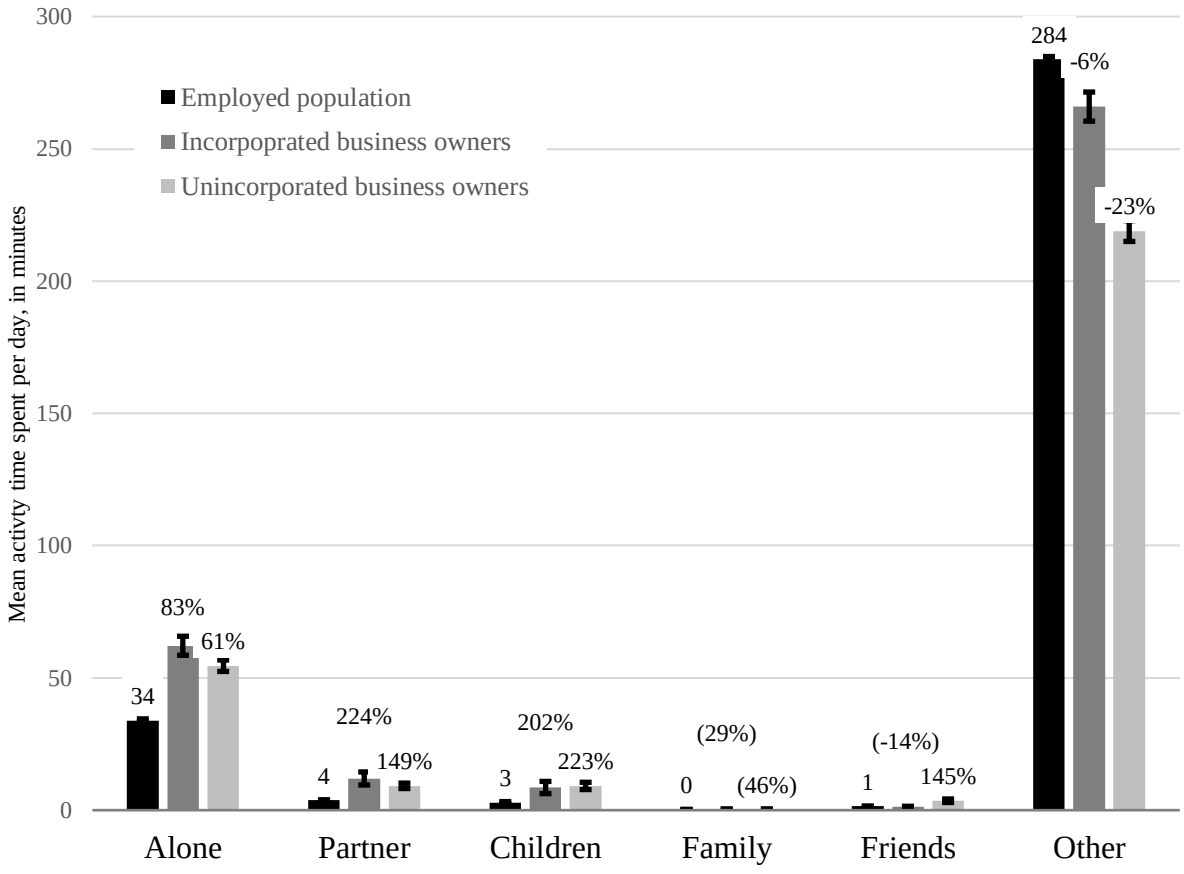

Figure 7: Comparison of work and education time spent with certain contacts between employed population and business owners. On top of employed population bar (black), mean time spent (in minutes). On top of grey bars, percentage difference between employed population and business owners. Numbers in parentheses indicate insignificant results (95%-CI threshold).

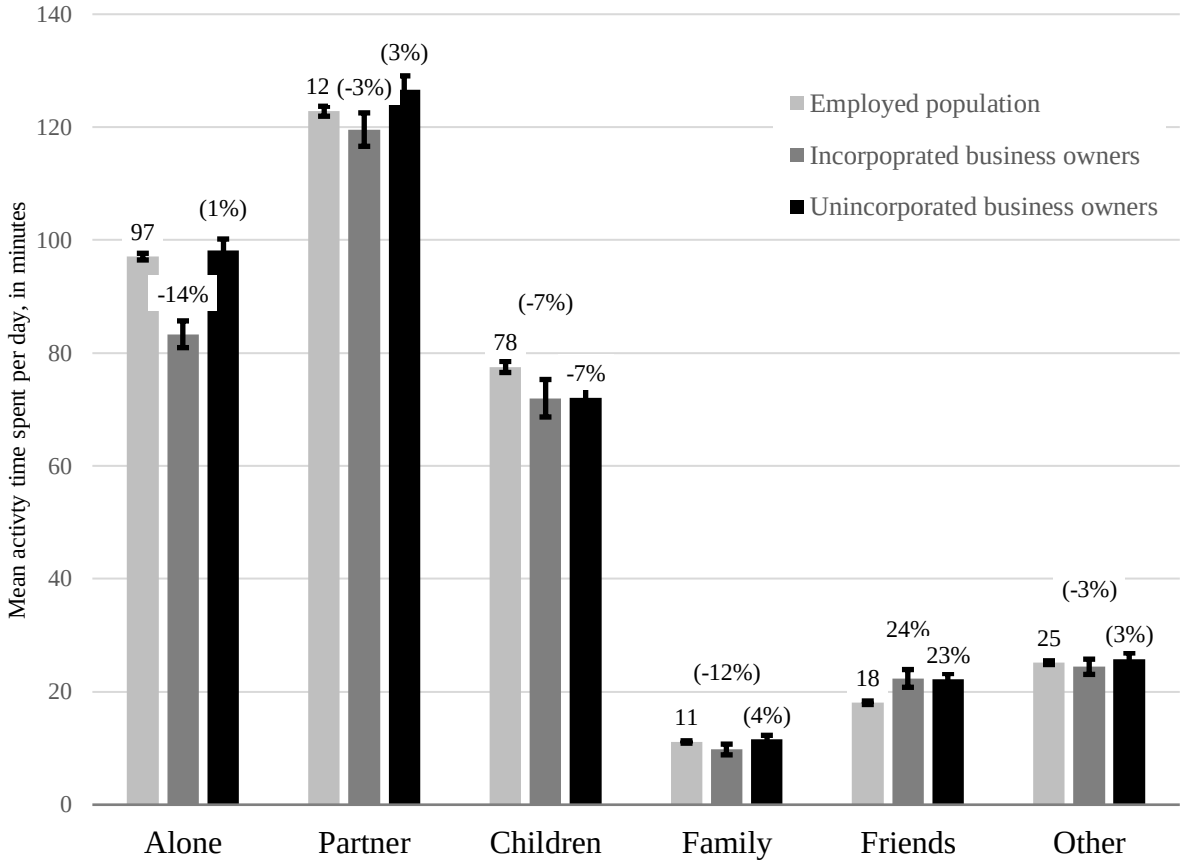

Figure 8: Comparison of leisure time spent with certain contacts between employed population and business owners. Percentage difference between employed population and business owners on top of bars. Numbers in parentheses indicate insignificant results (95%-CI threshold).

3.4.4. The Weekend Differences Between Entrepreneurs and OBOs

To provide a more detailed perspective on individuals' daily schedules and their impact on WFB, we examined the variations in daily routines between weekends and workdays. For this purpose, we leveraged the comprehensive nature of our dataset, introducing an interaction between our business owner and weekend variable. Our summary table (Table 6) in the beginning of Chapter 3.4 as well as the two result tables in the appendix (Appendix H and Appendix I) present the relevant details.

Interestingly, our findings suggest a behavior that contrasts with the baseline effects. We observed significant effects for OBOs during weekends in areas such as work and education (+78.67, p = 0.00), leisure (-23.73, p = 0.00), care (-23.86, p = 0.00), and household (-32.46, p = 0.00). This suggests that the added flexibility available during workdays may be somewhat

offset by heightened work efforts during the weekend. The effect size becomes clearer when predicting the mean values for the work and education category (see Figure 9). On workdays, OBOs spend 14% less ($p = 0.00$) on work-related activities compared to employed individuals.[19] Conversely, over the weekend, OBOs spend 20% more on work-related activities ($p = 0.00$). This trend is also evident in their contact behavior. For almost every category (except family and others), we noticed a negative and significant effect. For the others category (+71.35, $p = 0.00$), a positive significant effect emerges, suggesting that the increased work efforts might be balanced out by contact situations that our analysis did not specifically address.

For entrepreneurs, the result tables in the appendices (specifically Appendix H and Appendix I) rarely show significant effects for both the activity and contact categories. This indicates that entrepreneurs, who own and operate incorporated businesses, typically focus their work efforts on workdays, mirroring the patterns seen with employed individuals. However, it is worth noting that when predicting mean values (see Figure 9), entrepreneurs still spend significantly more time on work-related activities (at levels comparable to OBOs) than employed individuals do. Interestingly, the absolute difference between employed individuals and entrepreneurs during both workdays and weekends is relatively consistent. This suggests that the significant difference observed on weekends arises from the main effect, not the interaction effect.

[19] To test for significance, we compared the mean predictions pairwise using an Adjusted Wald Test.

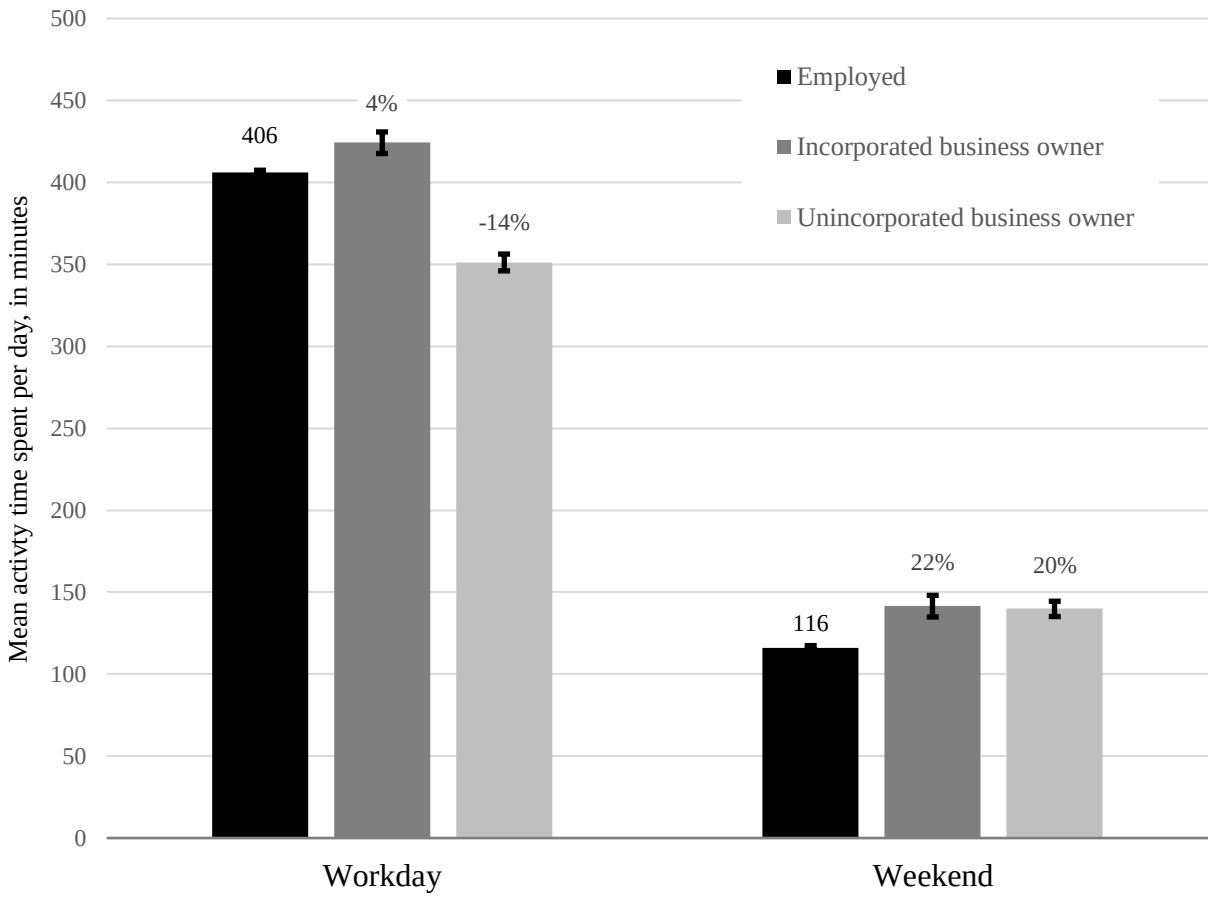

Figure 9: Comparison work activity time spent between workweek and weekend. Percentage difference between employed population and business owners on top of bars. Numbers in parentheses indicate insignificant results (95%-CI threshold).

3.4.5. The Role of Women Entrepreneurs

Many scholars in entrepreneurship study the influence of female entrepreneurship on WFB, particularly focusing on women who seek flexibility between their work and family roles (e.g., Agarwal & Lenka, 2015; Eddleston & Powell, 2012; Jennings & McDougald, 2007; Kirkwood & Tootell, 2008; Schindehutte, Morris, & Brennan, 2001; Tahir, 2022). We were also interested in delving deeper into this topic. Consequently, we have added an interaction between our entrepreneurship and gender variables to observe variations in the WFB between women entrepreneurs and their employed counterparts. Our analysis focuses on work and education, leisure, and caring activities since they are most relevant to our main goal of examining the relationship between work and family activities. The analysis of contact behavior in different social relationships did only yield in selected additional insights; therefore, it will not be

examined in greater detail. Figure 10 displays the predicted mean values of the focused activities. The appendices contain detailed regression results based on activity and contact categories. You can find these results specifically in Appendix J and Appendix K.

Figure 10 reveals interesting findings. We found that male entrepreneurs work eleven percent ($p = 0.00$) more than the overall employed population, and OBOs work slightly less compared to the employed population (-7%, $p = 0.00$).[20] In contrast, women, both incorporated (-7%, $p = 0.02$) and unincorporated (-16%, $p = 0.00$) business owners, spend less time on work and educational activities. Highlighting that the opposing effect on time spent with work and education activities across different types of business owners, i.e., incorporated owners spend more time and unincorporated owners spend less time (as detailed in Chapter 3.4.1), is different for both genders. Considering the observation that female entrepreneurs also spend slightly more time with their partners (see Appendix K), we can infer that our results more closely align with H-B rather than H-A, as previously concluded.

Regarding leisure activities as presented in Panel B, there is a contrasting effect observed among men. Male entrepreneurs spend less time on leisure activities compared to their employed counterparts (-8%, $p = 0.00$), whereas those in the OBO category spend more (+4%, $p = 0.02$). A similar trend is seen for women; however, the difference is of a smaller magnitude and is not statistically significant (Ent. = -2%, $p = 0.34$; OBOs = +3%, $p = 0.07$). Thus, we can infer that the main effect of decreased time spent on leisure activities for entrepreneurs, and increased time for those in the OBO category (as detailed in Chapter 3.4.1), is primarily driven by men. Chapter 3.4.1 also highlighted a significant increase in caregiving time for those in the OBO category. Delving deeper into gender specifics in Panel C, we found that only male OBOs participants exhibit this increased caregiving time (+1%, $p = 0.03$). Entrepreneurs, in contrast, register a non-significant difference compared to their employed counterparts ($p = 0.73$). For

[20] To test for significance, we compared the mean predictions pairwise using an Adjusted Wald Test.

women, both entrepreneurs (+4%, p = 0.22) and those in the OBO category (+4%, p = 0.12) demonstrate an increase in caregiving times; however, both are statistically insignificant. Thus, while the results are not statistically significant, there is a trend suggesting the combined effect for both types of business owners is primarily influenced by women, but moderated by men.

3.4.6. Robustness Tests for Analysis in Chapter 3

To demonstrate the robustness of our findings, we conducted a robustness analysis that examined relative time values in addition to absolute time values. To do this, we divided the time spent on each contact or activity by the total minutes in a day (1440 minutes) and used the resulting fraction as our dependent variable. To analyze the effect of this transformed dependent variable, we used a fractional response regression method known as "fracreg". The choice of distribution for the fractional response regression depended on the distribution of the dependent variable, with either a probit or logit distribution used accordingly. Notably, the results of this analysis confirmed the results presented earlier, further supporting the reliability and consistency of our findings. Moreover, we excluded the sleeping hours (11:00 PM – 6:00 AM) from our sample and recalculated the fraction-based dependent variable. Once again, the results confirmed our previous findings.

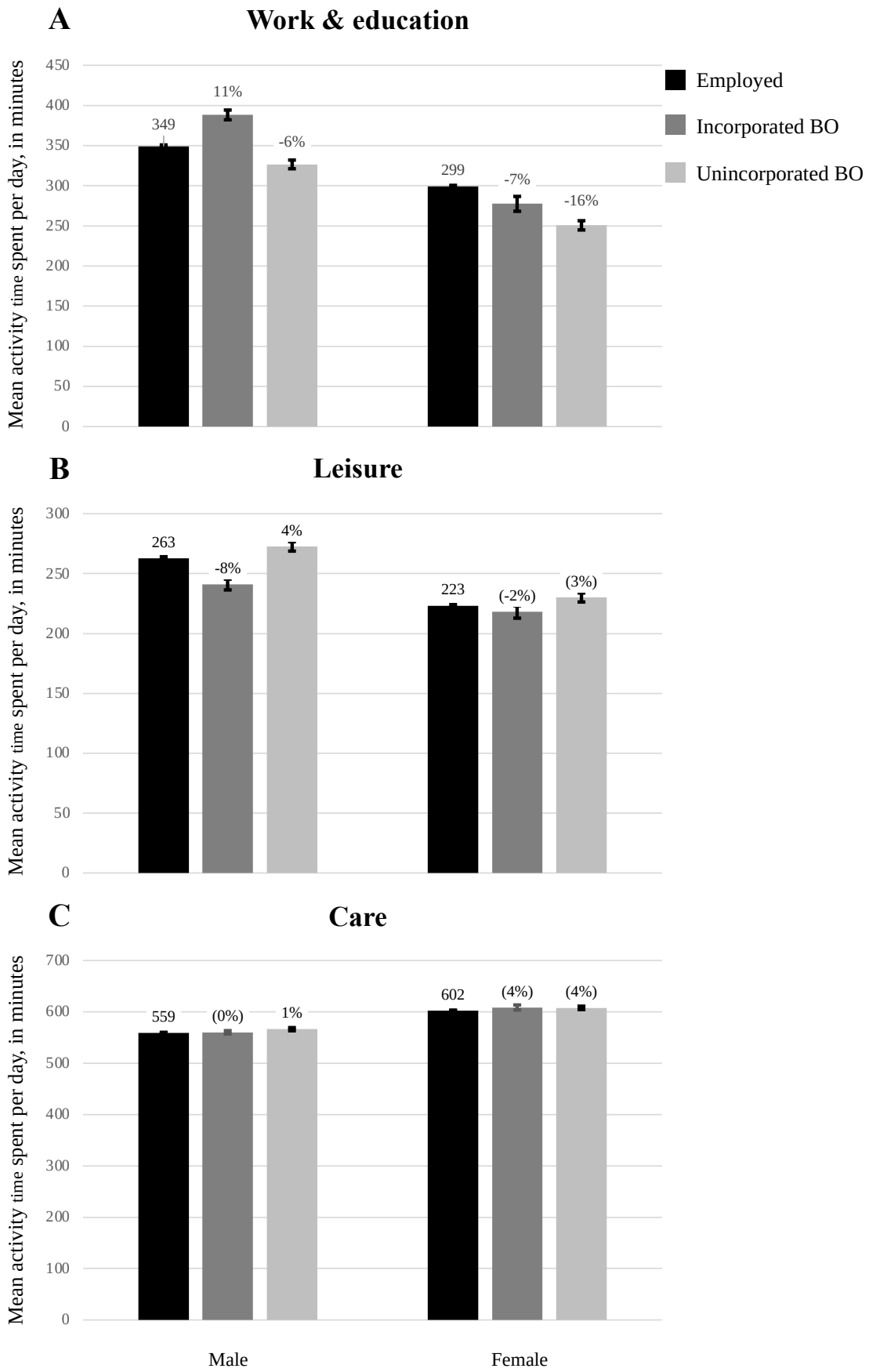

Figure 10: Comparison of time spent differentiated by gender and employment type. The baseline for percentages is the employed population. Numbers in round brackets indicate non-significance at the 95% confidence interval.

3.5. Discussion of Chapter 3

In our article, we sought to examine the impact of entrepreneurship on WFB. To this end, we proposed two competing hypotheses (H-A vs. H-B). Both hypotheses suggest that an entrepreneurial career either enhances or diminishes the WFB. Through an in-depth quantitative analysis of secondary data, we garnered compelling results that offer insights into the intricate relationship between entrepreneurship and work-life dynamics.

To derive clear findings from our proposed hypotheses, we differentiated between two categories of business owners: incorporated business owners (referred as entrepreneurs) and unincorporated business owners (referred as OBOs; Levine & Rubinstein, 2017). Our research identified distinct differences between the two groups. Specifically, for entrepreneurs, there was tentative evidence supporting H-A. They demonstrated increased work dedication and reduced leisure time. However, they also showed a minor, albeit non-significant, increase in time spent with immediate family members like partners and children, suggesting a trend towards H-A. In contrast, OBOs displayed a significant reduction in work-related activities and a notable increase in time spent with their partners and children, lending support to our H-B hypothesis. However, our findings indicate that the increased flexibility OBOs experience during the workweek is somewhat counterbalanced by heightened work efforts over the weekend.

In our study, alongside differentiating between types of business owners, we further categorized them by gender, revealing compelling findings. The data presented contrasting effects for each gender on their WFB based on their career choices. Specifically, the negative impact of entrepreneurial careers on WFB appears to be mitigated for women. Female entrepreneurs, in fact, allocate less time to work activities than their employed counterparts. Coupled with a significant increase in time spent with their partners, we deduced that their WFB does improve, though the effects were more pronounced for OBOs. For male entrepreneurs, our findings mirrored those of the overall analysis.

3.5.1. Insights into the Intersection of Entrepreneurship and WFB

Our study makes a significant contribution to the existing literature on WFB in the context of entrepreneurship (Aldrich & Cliff, 2003; Andric et al., 2021; Jaskiewicz et al., 2017; Liang & Dunn, 2013; Molina, 2020). By adding a more nuanced perspective on differences in the daily patterns (weekend vs. workweek) of entrepreneurs, OBOs, and employed individuals. Moreover, we address the mixed findings in this literature, by solving the puzzle in the current literature and providing clarity on the impact of an entrepreneurial career on these important aspects of individuals' lives. A common theme in the literature, and a potential explanation for these mixed findings, is the interchangeable use of terms such as self-employment and entrepreneurship. To address this gap, our analysis introduces a clear distinction between entrepreneurs and OBOs (Levine & Rubinstein, 2017) and also added a detailed analysis by gender. Those distinctions are crucial for understanding the nuanced effects on the WFB.

Our findings provide important insights into the work-life dynamics of entrepreneurs and OBOs. OBOs generally enjoy greater flexibility in managing their work and personal lives, resulting in improved WFB although they seem to use this flexibility (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001) by spending more time in work-related activities during the weekend. In contrast, entrepreneurs experience greater work demands, leading to reduced leisure time (Kirkwood & Tootell, 2008; Tahir, 2022). While their interaction patterns do not entirely indicate a decline in their social relationships, especially with their immediate family, in combination with the increase significant work-time spent we can still infer a deterioration in their WFB. But we can also conclude that despite their demanding schedules, entrepreneurs prioritize spending time with their partners and children, and interestingly, they even have more time to socialize with friends than individuals in traditional employment. These findings highlight the complex interplay between work demands

and personal relationships, and underscore the importance of understanding both the quantity and quality of time when assessing the impact on WFB.

Our gender-based analysis provides a deeper understanding of these relationships and offers significant insights. However, additional studies are needed to thoroughly comprehend the underlying reasons. We found that a contrasting effect is primarily observed in males. Women, regardless of their type of business ownership, both exhibit signs of an improved WFB compared to their traditionally employed counterparts. This aligns with prior research suggesting that women often pursue entrepreneurship and self-employment as career paths to reduce work-related time commitments and enjoy greater flexibility (Agarwal & Lenka, 2015; Eddleston & Powell, 2012; Lee Siew Kim & Seow Ling, 2001). It is crucial to clarify that our intention is not to suggest female entrepreneurs work less; instead, we propose that women may spend less time on work-related activities due to increased efficiency. Given the contrasting results observed for women compared to our overarching findings, the effects for men were even more pronounced. Furthermore, male entrepreneurs appear to offset the additional time dedicated to work-related activities by reducing time spent on leisure activities.

Also our second additional analysis, the detailed contact analysis, revealed an interesting pattern among entrepreneurs. As they tend to work more alone, they compensate for this increased workload by allocating more leisure time for social activities with their friends. This suggests that entrepreneurs may find ways to balance their work responsibilities by prioritizing social connections and leisure activities.

In summary, we posit that the mixed findings in the literature stem from varying definitions of entrepreneurship, self-employment, and business ownership. Furthermore, considering gender is essential, as our analysis indicated distinct results when comparing male and female counterparts.

3.5.2. Filling the Gap in the Downside Entrepreneurship Research

On a broader context with our analysis we make a valuable contribution to the field of understanding the downside consequences of entrepreneurship, as defined by Shepherd (2019). Specifically, we shed light on the potential social costs associated with entrepreneurship (Shepherd, 2019; Ucbasaran et al., 2013) and how individuals cope with these challenges.

The results of our study suggest that a blanket proposition for all business owners is unfeasible. Instead, it is contingent upon the nature of the business one establishes and owns. For OBOs (i.e., unincorporated business owners), our analysis indicates that they spend more time with their partners, children, and friends, implying a potential reduction in their social costs. This observation is bolstered by the activity analysis, which revealed that OBOs work fewer hours but allocate more time for leisure activities, however, offset this flexibility with increased work-efforts during weekends. For entrepreneurs, we did not observe significant differences compared to their employed counterparts. However, the activity analysis does suggest that they dedicate more time to work and less to leisure, pointing to heightened social costs associated with their career choice. Moreover, the gender-based analysis revealed existing gender differences. Nonetheless, further research is required to comprehensively understand the motivations and reasons underlying these observed differences.

Overall, our research supports the notion that an entrepreneurial career, while challenging and demanding, can be effectively balanced with family and social responsibilities. In doing so, it mitigates the potential social costs of the entrepreneur (Shepherd, 2019; Ucbasaran et al., 2013). By shedding light on these dynamics, our study contributes to a deeper understanding of the potential downsides of entrepreneurship (Shepherd, 2019) and provides valuable insights for entrepreneurs, policymakers, and organizations that aim to support individuals in meeting the challenges of entrepreneurship while maintaining a healthy and

fulfilling family and social life (Kossek, Colquitt, & Noe, 2001; Stephan, 2018; Thomas, Liu, & Umberson, 2017).

3.5.3. Practical implications: Balancing an Entrepreneurial Endeavor and a Family Life

Our study offers critical insights for practitioners in the field of entrepreneurship. Firstly, our results emphasize that entrepreneurs, especially male entrepreneurs, grapple with heightened work demands and diminished leisure time, potentially compromising their overall work-life-family relationship. Specifically, male entrepreneurs might consider looking to their female counterparts as role models, as they exemplify how entrepreneurship can be a career choice that offers greater flexibility and an improved work-family balance. Therefore, for entrepreneurs it is crucial to identify and effectively manage these challenges to be able to maintain their well-being (Greenhaus, Collins, & Shaw, 2003; Haar, 2006; Kossek, Colquitt, & Noe, 2001; Thomas, Liu, & Umberson, 2017; Williams, 2003). Implementing strategies such as prioritizing tasks, delegating responsibilities, and setting boundaries between work and personal life can help mitigate the negative effects on WFB.

Second, our study highlights the importance of the entrepreneurs' family relationships and other social connections (Buswell et al., 2012; Haar, 2006; Thomas, Liu, & Umberson, 2017). Despite their demanding schedules, entrepreneurs do not have to sacrifice time with their partners and children. This suggests that entrepreneurs can successfully balance their family responsibilities with the demands of their entrepreneurial endeavors. Encouraging entrepreneurs to prioritize and devote time to family activities may contribute to their overall WFB and well-being (Stephan, 2018).

In addition, the finding that entrepreneurs spend more time socializing with friends again underscores the importance of social connections for entrepreneurs. Building and maintaining a strong support network of friends and colleagues can provide emotional support,

opportunities for collaboration, and a sense of community (Frone, 2003). Entrepreneurs should, thus, actively cultivate these relationships and view them as essential components of their entrepreneurial journey.

3.5.4. Limitations of the Analysis in Chapter 3

While our study provides valuable insights into the relationship between entrepreneurship and WFB, it is important to acknowledge the limitations inherent in our research design and data collection. These limitations should be taken into account when interpreting our findings and applying them to broader contexts.

First, a notable limitation is that our study focuses primarily on measuring the quantity of time spent together, rather than capturing the quality of activities. Time spent together does not necessarily reflect the depth of engagement or the satisfaction derived from these interactions (Johnson, Zabriskie, & Hill, 2006). Future research should, therefore, consider to incorporate measures that assess the quality of family and social interactions to provide a more comprehensive understanding of the relationship between entrepreneurship and WFB.

Second, our study may be subject to potential selection bias. Given that our data collection depended on survey responses, individuals who chose to participate might possess distinct characteristics or viewpoints compared to those who opted out. Such differences could bias the results and restrict the generalizability of our conclusions. However, by employing the ATUS dataset, we capitalize on a resource that is widely utilized across various research domains (e.g., Aguiar, Hurst, & Karabarbounis, 2013; Anxo et al., 2011; Basner et al., 2007; Flood & Moen, 2015) and is upheld by high-quality standards (Flood, Sayer, & Backman, 2022). Moreover, we adopted stratified sampling (Cochran, 1977; Farhat & Robb, 2014) to mitigate selection biases. Future research could expand upon our work by exploring additional datasets spanning multiple countries and more recent years.

Third, our study is limited by the available data and the specific context in which it was conducted. We only examined data from 2003 to 2014 and focused on individuals residing in the USA. It is important to recognize that the relationship between entrepreneurship and WFB may vary across countries and cultures. Therefore, caution should be exercised in generalizing our findings to other populations or time periods. However, our study benefits from a large sample size, stratified sampling, and controls for time and regional differences within the USA, which increases our confidence to provide robust findings in this context.

In conclusion, while our study provides valuable insights into the relationship between entrepreneurship and WFB, it is important to consider the limitations outlined above. Future research should aim to address these limitations by incorporating measures of activity quality, extending the time span of the data sample, and exploring work-family dynamics in different cultural contexts. By doing so, we can further improve our understanding of the complex interplay between entrepreneurship and WFB.

3.5.5. Conclusion of Chapter 3

In summary, our study sheds light on the impact of entrepreneurship WFB and therefore generates interesting insights on a negative consequences of entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011). By differentiating between incorporated business owners (entrepreneurs) and unincorporated business owners (OBOs; Levine & Rubinstein, 2017) in combination with a gender-based view, we provide valuable insights into the nuanced effects of entrepreneurship on these important aspects of individuals' lives. Our findings highlight that male entrepreneurs face increased work demands and reduced leisure time diminishing their WFB. However, it is noteworthy that entrepreneurs do not sacrifice time with their partners and children, and even spend more time socializing with friends, compared to individuals in traditional employment. Moreover, we show that OBOs (male and female) and female entrepreneurs in particular experience greater flexibility in managing their work and

personal lives, indicating improved WFB. This distinction by business owners as well as gender helps to clarify the mixed findings within the entrepreneurship literature regarding the impact of an entrepreneurial career on work-life dynamics. Moreover, our study enriches the discourse on the potential negative ramifications of entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011). While we demonstrate that an entrepreneurial career can adversely impact WFB, it is also evident that the reverse can occur, suggesting ways to curtail the consequential social costs (Shepherd, 2019; Ucbasaran et al., 2013).

Overall, our research contributes to a deeper understanding of the interplay between entrepreneurship and work-family balance. By addressing the limitations and providing insights for future research, our study paves the way for further exploration of the complex dynamics between entrepreneurship and WFB. The implications derived from our findings can guide individuals, organizations, and policymakers in supporting entrepreneurs in achieving healthy and fulfilling family lives alongside their entrepreneurial endeavors.

4. THE DESTRUCTIVE SIDE: PREVENTION OR PROMOTION – TWO SIDES OF COMMUNITY SOCIAL CAPITAL ON THE SUCCESS OF DESTRUCTIVE VENTURES

4.1. Introduction to the Two Sides of Community Social Capital

Destructive entrepreneurship refers to the establishment of organizations that engage in activities that have a detrimental impact on society and the economy (Baumol, 1996; Shepherd, 2019). These activities can include corruption, worker exploitation, and money laundering (Boudreaux, Nikolaev, & Holcombe, 2018; Champeyrache, 2018; Khan, Munir, & Willmott, 2007). Despite the negative consequences of such activities, society often has a romanticized view of entrepreneurship, and scholars tend to concentrate on its positive aspects. However, in recent years, there has been a growing recognition of the normative biases and negative consequences associated with entrepreneurial activity (Shepherd, 2019; Tedmanson et al., 2012; Vedula, Doblinger, et al., 2022; Wright & Zahra, 2011).

Despite repeated calls for more research on the conditions under which entrepreneurial activity can lead to negative societal outcomes, the current literature on destructive entrepreneurship is limited in several ways. The available literature is primarily conceptual and theoretical in nature (Baumol, 1996; Desai, Acs, & Weitzel, 2013; Sauka, 2008; Shepherd, 2019). The limited number of empirical studies that do exist are also primarily qualitative in-nature (Boudreaux, Nikolaev, & Holcombe, 2018; Champeyrache, 2018; Khan, Munir, & Willmott, 2007; Sauka, 2008). Therefore, in this paper we provide a complementary quantitative examination of the factors influencing the emergence and longevity of destructive ventures, as well as strategies to mitigate their detrimental effects on society. Specifically, we focus on the research context of hate groups, which are membership-based organizations that engage in attacks or insults against a specific group of people (SPLC, 2021). In the USA, hate groups have been a source of concern for communities and policymakers alike (Hamm & Perry, 2009), and have attracted growing interest from scholars in sociology, economics, and political

science (Adamczyk et al., 2014; Chan, Ghose, & Seamans, 2016; Chermak, Freilich, & Suttmoeller, 2013; Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999; Jendryke & McClure, 2019; Mulholland, 2013; Ryan & Leeson, 2011; Szendro, 2021). Starting and establishing hate groups involves processes similar to those in launching a new business, such as opportunity discovery and exploitation (Shane & Venkataraman, 2000; Venkataraman, 1997). Consequently, in this article, we conceptualize hate group organizations and their actions as forms of destructive entrepreneurship, specifically referring to them as destructive organizations (Baumol, 1996; Shepherd, 2019).

By definition, destructive entrepreneurship is detrimental to societal prosperity, and communities are an important driver of entrepreneurial activity (Bacq, Hertel, & Lumpkin, 2020; Hertel, Bacq, & Belz, 2019). To add to the nexus of communities and entrepreneurship literature (Bacq, Hertel, & Lumpkin, 2020), we examine how communities influence the success of destructive organizations, incorporating the concept of CSC, which embodies the trust, goodwill, and social networks inherent to a geographic community, offering distinctive resources to its members (Kwon, Heflin, & Ruef, 2013; Putnam, 1993). CSC has already been shown to have a significant impact on the entrepreneurial process (Kleinhempel, Beugelsdijk, & Klasing, 2022; Kwon, Heflin, & Ruef, 2013; Laursen, Masciarelli, & Prencipe, 2012; Vedula & Frid, 2019) as well as on the presence of hate groups (Goetz, Rupasingha, & Loveridge, 2012). Moreover, scholars have already demonstrated a moderating effect on the intersection between entrepreneurship and a domain related to destructive entrepreneurship, criminal activity (Churchill et al., 2023). However, the current literature lacks a detailed explanation of how CSC affects hate groups and their relationship to hate crimes. In this study, we aim to fill this gap by analyzing how CSC affects hate group formation, failure, and the relationship with related hate crimes (i.e., the destructive impact on the surrounding community).

Examining the interrelationship between CSC and hate groups is interesting due to the possibility of competing theoretical dynamics. At first glance, it seems obvious that higher levels of CSC may have a preventive effect on hate groups (Goetz, Rupasingha, & Loveridge, 2012), as a trusting environment may not be receptive to their messages, preventing them from achieving their intended segregation of the target group ("ingroups and outgroups" mechanism by Brewer, 1999). However, several studies have also shown that the higher levels of generalized and institutional trust associated with CSC allows information (and disinformation) to spread more easily within social groups (Kwon, Heflin, & Ruef, 2013; Laursen, Masciarelli, & Prencipe, 2012). Thus, a tight-knit community with high levels of trust could also promote the spread of hate groups' messages (Goetz, Rupasingha, & Loveridge, 2012), analogous to the spread of a virulent infectious disease. In the absence of "social distancing", high levels of CSC may in fact counterintuitively allow hate groups to find more support for their harmful activities, in line with the old adage that "introducing one rotten apple can spoil the entire barrel". Thus to better understand the mechanism of CSC on hate groups and the communities, we theorize and investigate effects in both directions, i.e., whether CSC either prevents or promotes hate group activities.

We started with a novel 18-year panel dataset on hate group formation and survival in the USA, based on the Southern Poverty Law Center's (SPLC) Hate Map.[21] Next, we combined this dataset with hate crime data from the Anti-Defamation League (ADL) to examine the societal impact of hate groups.[22] We then joined the multi-component CSC measure from Rupasingha, Goetz and Freshwater (2006) to our data, further breaking it down into its subcomponents. These can be categorized into three trust dimensions (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021): (1) particularized (interpersonal-trust), (2) generalized (trust

[21] https://www.splcenter.org/hate-map
[22] https://www.adl.org/resources/tools-to-track-hate/heat-map

in communities), and (3) institutional (trust in authorities). This categorization provided deeper insights into the intricate mechanisms at play.

At first glance, our findings suggest that CSC acts as barrier preventing the formation of new hate groups and does not evidently promote their likelihood of failure. Additionally, CSC seems to function as a buffer, minimizing the adverse effects of hate groups on communities. Yet, our deeper analysis revealed a multifaceted and somewhat countervailing influence of CSC, particularly concerning the dimensions of trust. Our findings show that distinct trust dimensions differentially impact hate group dynamics, including their formation, longevity, and destructive influence. While interpersonal trust aids hate group emergence and longevity, it hinders the relationship between hate groups and hate crimes. Conversely, generalized trust impedes hate group formation and accelerates their dissolution. Institutional trust, however, does not affect group emergence or duration but exacerbates their community impact.

With our analysis we make several important contributions to the literature. First, we address the need for increased attention to the negative effects of entrepreneurial activity (Shepherd, 2019; Tedmanson et al., 2012; Wright & Zahra, 2011). We concentrate on the emergence and longevity of destructive organizations, using hate groups as our research context, and explore an effective strategy to mitigate the harmful effects of such organizations. Second, we contribute to the nascent but growing body of research at the intersection of entrepreneurship and communities (Bacq, Hertel, & Lumpkin, 2020) by highlighting the impact of community characteristics, namely CSC, that have not been extensively exploited by entrepreneurship scholars (Churchill et al., 2023; Kleinhempel, Beugelsdijk, & Klasing, 2022; Kwon, Heflin, & Ruef, 2013; Vedula & Frid, 2019), on destructive entrepreneurial activity. Third, we contribute to the existing literature on hate groups (Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999; Mulholland, 2010; Ryan & Leeson, 2011) by adding a nuanced

overall notion that a high level of CSC is beneficial in terms of preventing hate group formation as well as combating their destructive effects. Moreover, we also underscore complexity of this relationship, indicating that different aspects of CSC (Rupasingha, Goetz, & Freshwater, 2006) and the analogous trust dimensions (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021) can have varying, sometimes counterintuitive, effects on hate group dynamics. Finally, this research provides guidance to policymakers on prioritizing specific dimensions of CSC to minimize the emergence and persistence of hate group organizations in communities and their negative local impacts.

4.2. Theory of Destructive Entrepreneurship and Communities

The body of literature on entrepreneurship research has grown significantly in the past decade, resulting in a more positive perception of entrepreneurs and entrepreneurship in general (Wright & Zahra, 2011). Entrepreneurial activities are often not only viewed as heroic and innovative, but also as important drivers of innovation and societal welfare (Schumpeter, 1942). However, as the number of ventures increases, so too do examples of ventures that have a destructive impact on society, such as the recent fraud case of Wirecard (Heese, Wang, & Labruyère, 2021). One of the first scholars who described this phenomenon of negative outcomes of entrepreneurship on society was Baumol (1996), he referred it as unproductive and destructive entrepreneurship. In contrast to productive entrepreneurship, which creates new goods and services and uses resources efficiently, unproductive entrepreneurship involves redistributing existing wealth, such as through rent-seeking behavior. Destructive entrepreneurship refers to activities that negatively impact the society and the economy, like causing environmental degradation (Vedula, Doblinger, et al., 2022) or exploiting workers (Khan, Munir, & Willmott, 2007). Despite the negative consequences of destructive entrepreneurship, some scholars also note that destructive entrepreneurship can also have positive impacts, for example it can drive innovation and competition in industries. However, these positive effects are often balanced

against the negative consequences for displaced firms and their employees resulting in an overall negative effect for society (Baumol, 1996; Desai, Acs, & Weitzel, 2013).

The existing body of literature on destructive entrepreneurship and its negative impacts is largely theoretical in nature, focusing on establishing a foundation for future research (Baumol, 1996; Desai, Acs, & Weitzel, 2013; Sauka, 2008; Shepherd, 2019) rather than engaging in detailed empirical studies. Some notable exceptions include Khan and colleagues' (2007) examination of child labor exploitation in manufacturing plants, Champeyrache's (2018) analysis of societal costs of organized crime's ownership of legal businesses, Boudreaux and colleagues' (2018) investigation of the effects of corruption on value-creating entrepreneurship, and Sauka and Welter's (2007) operationalization of the concept of productive, unproductive, and destructive entrepreneurship (Baumol, 1996) by studying the value creation of new firms in Latvia.[23] This limited list of examples highlights the existing gap in detailed quantitative studies within the literature. There is a noticeable lack of empirical research addressing the adverse and destructive outcomes of entrepreneurial endeavors. This includes understanding factors that foster the emergence and persistence of harmful ventures and strategies to alleviate their societal impact. Our study delves into this subject, especially in the context of hate groups and hate crimes.

Hate crimes are criminal acts motivated by bias or prejudice against a particular group of people, based on characteristics such as race, religion, sexual orientation, gender identity, or ethnicity (FBI, 2023; SPLC, 2021). These crimes can take various forms, including physical

[23] In addition to this literature, there is a separate stream within the literature on the negative side of entrepreneurship (Shepherd, 2019) that focuses not on the outcomes of entrepreneurial activity but on "negative" inputs, such as the personal characteristics of entrepreneurs and their impact on performance. For example, researchers have examined the role of greed (Haynes, Hitt, & Campbell, 2015; Tacke et al., 2023), selfishness (Urbig et al., 2012), and narcissism (Buttice & Rovelli, 2020; Wales, Patel, & Lumpkin, 2013). Following Shepherd's (2019) three different categories of negative sides of entrepreneurship, the dark side (i.e., personal level), the downside (i.e., family level), and the destructive side (i.e., societal level), this body of work on personal traits should be classified as research on the dark side of entrepreneurship rather than the destructive side, and thus is only marginally related to the focus topic of this study, destructive entrepreneurship.

violence, vandalism, and verbal or written threats (McDevitt, Levin, & Bennett, 2002; Woolf & Hulsizer, 2004). The consequences of hate crimes can be severe for the victims and the wider community, including damage to social cohesion and trust, and long-term impacts on mental health and well-being (Levin & MacDevitt, 2013; McDevitt, Levin, & Bennett, 2002; Pain, 2000). Hate crimes or the promotion of such crimes can be perpetrated by individuals or in a more organized forms, known as hate groups. These organizations espouse and promote hateful ideologies and beliefs, often targeting specific groups of people based on characteristics such as race, religion, sexual orientation, or ethnicity (Jefferson & Pryor, 1999; SPLC, 2021). They define their collective identity as a norm and those outside their norm are excluded (Perry & Scrivens, 2018). To grow and find support for their ideology, e.g., by recruiting new members, hate groups often exploit social and economic issues (Woolf & Hulsizer, 2004). Although hate groups do not always resort to violence, their activities can have serious consequences for their targets, including physical violence and intimidation, as well as psychological harm and social isolation (Bjørgo, 2004; McDevitt, Levin, & Bennett, 2002; Woolf & Hulsizer, 2004). Besides the individual harm, hate groups can also have broader impacts on society, eroding social cohesion and trust, and undermining the values of democracy and equality (Levin & MacDevitt, 2013).[24]

The relationship between hate groups and entrepreneurship may not seem apparent at first, but upon closer examination, it becomes clear that the activities of hate groups can be viewed as a type of destructive entrepreneurship. The process of starting a hate group involves opportunity recognition, just like starting a new venture (Baron, 2006). Hate groups aim to isolate their target groups by promoting harmful beliefs and ideologies (Glaeser, 2005; Perry & Scrivens, 2018), often in response to social or economic issues (Woolf & Hulsizer, 2004). To achieve their goals, hate groups must recruit followers and resources, necessitating the

[24] Example list of hate group organizations: https://www.splcenter.org/fighting-hate/extremist-files/groups

development of effective structures and processes (Chermak, Freilich, & Suttmoeller, 2013; Gerstenfeld, Grant, & Chiang, 2003; Phadke & Mitra, 2020). Research has shown that hate groups that exhibit more violent behavior are even more successful in attracting members and resources (Chermak, Freilich, & Suttmoeller, 2013). This ability to quickly adapt to changing environments is a key factor in the success of ventures (Baron, 2008; Shane, 2003). These similarities demonstrate that hate groups can be identified as power-seeking organized crimes (Gottschalk, 2010; Gottschalk & Smith, 2011; van Duyne, von Lampe, & Newell, 2003) and thus provide a clear understanding of hate groups as examples of destructive entrepreneurial organizations.

4.2.1. The Geography of Hate Groups in the USA

Although hate groups are currently not covered in the (destructive) entrepreneurship literature, adjacent fields such as politics or socioeconomics already provide a broad overview of their activities and presence. The prevalence of hate groups in the USA varies by location, but the factors that contribute to this variation are not yet fully understood (Jendryke & McClure, 2019; Medina et al., 2018). Jefferson and Pryor (1999) examined the presence of hate groups in a USA county and found that sociological and economic variables such as income distribution, laws against hate crimes, and social disintegration were not significant. Instead, they found that historical circumstances leading to the Civil War and population density (i.e. rural vs. urban counties) continue to influence the presence of hate groups. Using a Poisson model, Goetz, Rupasingha and Loveridge (2012) extended their results and proposed that low levels of CSC, ethnic and religious diversity, and the nonexistence of Walmart stores, used as proxy for economic prosperity, also indicate factors promoting the presence of hate groups. Jendryke and McClure (2019) confirmed with their spatial analysis previous results that hate groups tend to be more prevalent in rural areas. Meanwhile, Medina et al. (2018) conducted a geographical analysis of the presence of hate groups in the USA and identified regions with increased

presence of hate groups. They argue that sociohistorical and migratory processes can best explain this phenomenon. Moreover, they identified several variables that positively impact the presence of hate groups, including diversity, poverty, population change, and education, with the magnitude of their effect varying depending on the region. On the contrary, Perry and Scrivens (2018) identified three structural patterns by conducting a study of right-wing hate groups in Canada: historical normativity of racism, political climates of intolerance, and weak law enforcement frameworks.

In summary, scholars have examined various factors, such as historic, economic, and sociological characteristics, that contribute to the presence of hate groups. They identified that regional differences exist and that structural factors such as historical racism and a political climate of intolerance can foster hate (Jefferson & Pryor, 1999; Medina et al., 2018; Perry & Scrivens, 2018). This suggests that a general climate of fear and intolerance can foster a hateful environment. People experience hatred when they feel threatened or in pain (Brogaard, 2020), and in the case of bias or racial hatred, this can manifest as a fear of losing something or being disadvantaged (Woolf & Hulsizer, 2004). However, none of the prior studies use longitudinal data, relying instead on cross-sectional datasets. This makes it much harder to rigorously identify cause-and-effect relationships (Bascle, 2008; Hamilton & Nickerson, 2003; Hill et al., 2021) and examine rates of hate group entry over time. Furthermore, somewhat surprisingly, the current literature has also not focused on factors that may shape the longevity of individual hate groups. That is, the unit of analysis has largely been exclusively at the regional level, possibly due to the fact that this topic has not been looked at to-date by organizational theorists. As a result, it is currently difficult to make definitive statements about individual variables in understanding the emergence and persistence of hate groups.

4.2.2. Community Social Capital: A Barrier Against Hate Groups

CSC, or community social capital, refers to the trust, goodwill, and social networks within a community that foster positive relationships and cooperation. Unlike general social capital (Putnam, 1993), CSC is specific to a particular geographic community and allows individuals access to unique resources and benefits (Kwon, Heflin, & Ruef, 2013). CSC is a valuable resource for communities as it promotes collaboration, a sense of belonging and inclusivity, which can be demonstrated through various forms of civic engagement such as association memberships, volunteer work, or adherence to common norms. These activities help to build trust, cooperation, and a sense of shared purpose among community members, making the community more cohesive and better equipped to address common challenges (Kwon, Heflin, & Ruef, 2013; Putnam, 2000), contributing to its resilience and vitality (Aldrich & Meyer, 2015). Delving deeper, trust within the CSC concept spans multiple dimensions: particularized (within interpersonal relationships), generalized (within the broader community), and institutional (in regard to authorities; Lounsbury, 2023; Schilke, Reimann, & Cook, 2021). And due to CSC's multifaceted nature, its impact is magnified, as its diverse elements mutually reinforce each other (Messner, Rosenfeld, & Baumer, 2004; Putnam, 2000).

The impact of CSC on the entrepreneurial process is well established (Kleinhempel, Beugelsdijk, & Klasing, 2022; Kwon, Heflin, & Ruef, 2013; Laursen, Masciarelli, & Prencipe, 2012; Vedula & Frid, 2019), highlighting the crucial role of communities as drivers of entrepreneurial activity (Bacq, Hertel, & Lumpkin, 2020; Hertel, Bacq, & Belz, 2019). Given that disruptive ventures are inherently detrimental to societal prosperity, it is important to investigate the extent to which communities can influence their success or failure. To address this question, we incorporate the concept of CSC (Kwon, Heflin, & Ruef, 2013; Putnam, 1993) into our analysis.

The relationship between CSC and hate groups has also been explored by Goetz, Rupasingha and Loveridge (2012). They found that high levels of CSC can reduce the presence of hate groups. In their discussion, they provide two possible explanations for this mechanism: first, increased community activity promotes connectedness and communication among existing groups, and second, established groups and associations create competition for hate groups, making it more difficult for them to recruit members. To theorize this mechanism in more detail, we focus on both the formation and longevity of hate groups. Hate groups enforce norms and values that exclude and discriminate against certain groups (Glaeser, 2005; Perry & Scrivens, 2018). In contrast, communities with high levels of CSC prioritize inclusiveness, tolerance, solidarity, and cooperation among members, creating a robust social network infrastructure that acts as a protective barrier against the influence of hate groups (Goetz, Rupasingha, & Loveridge, 2012; Oosterlynck, Schuermans, & Loopmans, 2017; Putnam, 2000). Hate groups aim to divide communities ("ingroups and outgroups" mechanism by Brewer, 1999) by promoting negative emotions and animosity toward specific groups (Gerstenfeld, Grant, & Chiang, 2003; Phadke & Mitra, 2020). However, communities with high CSC have stronger bonds and solidarity among members (Oosterlynck, Schuermans, & Loopmans, 2017), countering the divisive tactics of hate groups. By reinforcing positive norms and values, high CSC can create a protective barrier against the spread of hate groups, reducing the opportunities for individuals to form or join such groups. In addition, individuals who may be driven to form hate groups may have fewer opportunities to do so in communities with high CSC because the number of potential peers is limited (Baron, 2006; Davidsson, 2015; Shane, 2000; Shane, 2003). As a result, higher levels of CSC reduce the overall level of hate in a community by promoting inclusive and tolerant communities that are less susceptible to the formation of hate groups. Thus, we hypothesize:

Hypothesis 1: *Higher levels of CSC <u>lower</u> the formation rate of hate groups.*

In addition to protecting communities from the formation of hate groups, we concurrently expect that higher levels of CSC should also help reduce the longevity of existing hate groups. Hate groups, as ventures in general (Baron, 2008; Carroll & Hannan, 1989; Carroll & Khessina, 2005; Shane, 2003), rely on resources such as new members, funding, and social support to sustain their activities and maintain their presence in a community (Chermak, Freilich, & Suttmoeller, 2013; Goetz, Rupasingha, & Loveridge, 2012). However, communities with high CSC tend to have stronger bonds and solidarity among members, creating fewer opportunities for hate groups to acquire new resources by promoting negative emotions and animosity toward certain groups, ultimately shortening their longevity (i.e., lowering firm survival time). By promoting inclusiveness, tolerance, solidarity, and cooperation among members of a community, high CSC may create a strong social network infrastructure that acts as a protective barrier against the divisive tactics employed by hate groups, limiting their ability to acquire new resources and maintain their presence in a community. Thus, we hypothesize:

Hypothesis 2: *Higher levels of CSC <u>decrease</u> the longevity of hate groups.*

4.2.3. The Hate Group-Hate Crime Relationship: Possible "double-edged" impacts of CSC

Hate groups and hate crimes are interrelated but distinct concepts. While hate groups do not always participate in criminal activity, they can still incite or influence others to commit hate crimes through their language and behavior (Bjørgo, 2004; McDevitt, Levin, & Bennett, 2002; Woolf & Hulsizer, 2004). Hate crimes, in contrast, refer to criminal acts motivated by prejudice against a certain group based on their race, religion, ethnicity, gender identity, or sexual orientation (FBI, 2023; SPLC, 2021). Despite the distinction between hate groups and hate crimes, they have been linked in studies. Recent research for instance indicates a positive correlation between the number of hate groups and hate crime incidents in a community (Adamczyk et al., 2014; Jendryke & McClure, 2019; Mulholland, 2013), though earlier studies failed to find a significant connection (Ryan & Leeson, 2011). However, there is a lack of

research addressing the mitigation of this relationship. Some scholars have found a negative relationship between CSC and hate crimes (Messner, Rosenfeld, & Baumer, 2004; Putnam, 2000; Ruiter & De Graaf, 2006), suggesting that higher levels of CSC, including greater trust and stronger social networks, result in lower crime rates. Chermak, Freilich and Suttmoeller (2013) found that organizational capacity, such as age and size, can impact violence in hate groups, with older and larger groups being more violent. Charismatic leadership was also found to be a predictor of greater violence, while publishing ideological literature reduced the likelihood of violent incidents. The authors suggest that hate groups that publish such literature use it to obtain resources and therefore do not need to resort to violence to attract attention.

Focusing on the mitigating role of CSC, our study examines the relationship between hate groups and hate crime within a community. Hate groups aim to divide and exclude specific target groups, which, if successful, can have a diametral effect on society, leading to higher levels of hate and hate crime. However, as proposed in H1 and H2, communities with higher levels of CSC have stronger ties and shared values, making it more difficult for hate groups to spread their ideology and gain legitimacy. As a result, communities with higher levels of CSC are less likely to have hate groups operating within their borders. They are also less likely to adopt the norms and values of hate groups, resulting in lower levels of hate and hate crimes. In contrast, communities with lower levels of CSC may have weaker social networks and may be more susceptible to the divisive tactics employed by hate groups. Therefore, following this line of argumentation, we conclude that CSC plays an important role in acting as a "buffer" and moderating the relationship between hate groups and hate crimes within a community. Communities with higher levels of CSC have a protective barrier against hate groups, resulting in fewer hate crimes and a more unified community. We thus hypothesize that:

> ***Hypothesis 3a:*** *Higher levels of CSC <u>mitigate</u> the relationship between hate groups and hate crimes.*

It is important to note, however, that higher levels of CSC can also theoretically have a competing effect on the destructive impacts of hate groups. The increased trust and connectedness resulting from high levels of CSC can facilitate the sharing and transmission of information (Goetz, Rupasingha, & Loveridge, 2012; Laursen, Masciarelli, & Prencipe, 2012), potentially amplifying the harmful effects of hate groups within the community. This dynamic is reminiscent of how infectious diseases like COVID-19 spread, or the old adage of how a single rotten apple can affect an entire barrel. In tight-knit communities, with no effective "social distancing" the introduction of hate group ideologies could lead to a higher level of hate propagation among community members, such that dissemination of hate group ideologies could accelerate once an individual becomes influenced. Following this line of reasoning, we propose a competing hypothesis suggesting that higher levels of CSC strengthen the relationship between hate groups and hate crimes.

> ***Hypothesis 3b:*** *Higher levels of CSC <u>amplify</u> the relationship between hate groups and hate crimes.*

4.3. Methodology of the Analysis in Chapter 4

4.3.1. Data Used in the Analysis in Chapter 4

For our models testing three hypotheses, we utilized four data sources: the SPLC's hate map (SPLC, 2023), the ADL's hate crime statistics (ADL, 2023), the CSC measurement by Rupasingha, Goetz and Freshwater (2006), and additional county/metropolitan area information from the U.S. Census Bureau and state authorities. The SPLC's hate map covers 18 years, from 2000 to 2017, and provides the locations of active hate groups and chapters of hate groups for each year.[25] We added the county code and core-based statistical area (CBSA) code using semi-automatic methods, based on city and state information. It is important to add that the SPLC provides two types of information. On the one hand, hate groups including city and year (the

[25] Chapters refer to subgroups of a hate group at different regional locations.

data we used), and on the other hand, hate groups that are active statewide. We excluded this information because we thought it would distort the local events, so we tend to underestimate hate group activity. The ADL's hate crime statistics, available from 2004 to 2021, were mapped to the SPLC data using similar semi-automatic methods to add the CBSA code. The final data source, from the U.S. Census Bureau, provides information to control for various county/metro characteristics.

4.3.1.1. Hate Group Data Panel

To test our first hypothesis, we followed a similar structure as other researchers (Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999) but went one step further by creating a longitudinal, multi-year panel allowing us to measure newly entered hate groups instead of their presence. Using the hate group data and county characteristics as our two data sources, we built an 18-year panel (2000 – 2017) at the county level. This panel comprises of the number of new hate groups per year and county (1,120 counties with hate group information), the active (i.e., existing) hate groups, and various county characteristics.

4.3.1.2. Hate Group Failure Event Panel

To examine our second hypothesis on the survival of hate groups, we created a multi-year panel on a chapter basis. For every city-year combination where a hate group was active, we included a row in the panel. This allowed us to calculate the hate groups' lifespan and the failure event (3,670 failure events). In the next step, we defined a hate group failure event for the year following the last year in which the dataset contained the hate group. Additionally, we incorporated the characteristics of the county where the hate group's city was located.

4.3.1.3. Hate Group – Hate Crime Relationship Panel

Like H1, H3 also has multiple studies as guidelines (Adamczyk et al., 2014; Jendryke & McClure, 2019; Mulholland, 2013; Ryan & Leeson, 2011), exploring the relationship between hate groups and hate crimes. Although these studies utilized the SPLC data and some form of

crime statistics, they did not create a multi-year panel. Therefore, we combined our hate group information with the hate crime data using the CBSA code and included the metropolitan statistical area (MSA) characteristics. In total, 152 metropolitan areas were included in our hate group and hate crime panel. When MSA-level data was not available, we used weighted averages based on population share to allocate county-level data to the MSA data.

4.3.2. Measures of CSC and Hate Group Activities

4.3.2.1. Dependent Variables

Number of New Hate Groups Entrants (H1): With our first hypothesis, we want to determine how CSC affects the emergence of hate groups. Therefore, our dependent variable is the count of the newly formed hate groups or hate group chapters in a county in a given year. This measurement is based on the SPLC data.

Time of Existence (H2): In our second hypothesis, we want to determine how CSC affects the longevity of hate groups. Therefore, in the analysis at the hate group level, the dependent variable is the corresponding time of existence. Since our base data (SPLC) includes years of activity for each hate group − U.S. County pair, the unit of our survival time is whole years. Specifically, we calculated survival time by constructing the difference between the first year the hate group appeared in a city and the year after the last appearance.

Number of Hate Crimes (H3): The third hypothesis examines the relationship between the number of hate groups and the number of hate crimes in a metropolitan area in a given year and how CSC moderates this relationship. Thus, the dependent variable is the number of hate crime incidents in a metropolitan area in a given year. This measurement is based on the ADL data.

4.3.2.2. Key Independent Variable

Number of Active Hate Groups: The main independent variable in all three panels is the number of active hate groups or hate group chapters (active hate groups) within a given county and year. This is similar to the dependent variable in H1 but counts the active ones and the new

ones (number of emerging hate groups) created in that year. For H3, we aggregated this county measure to the corresponding metropolitan area.

4.3.2.3. Moderating Variables

Community Social Capital: We use a county-level measurement developed and presented by Rupasingha, Goetz and Freshwater (2006) and used by several scholars in subsequent studies (e.g., Ferwana & Varshney, 2021; Goetz, Rupasingha, & Loveridge, 2012; Rupasingha & Goetz, 2007). This CSC measurement is a factor variable that can assume both positive and negative values. Positive values indicate a high level of CSC. The measurement is based on the establishment of various organizations (including religious, civic and social, non-profit, business, political, labor, professional, and multiple leisure and sports organizations), voter turnout, and the census response rate within a county that represent the social cohesion in a community. The creators calculated the measurement for the years 1990, 1997, 2005, 2009, and 2014. For our analysis, we interpolated and extrapolated the missing years.

CSC Subcomponents: Rupasingha, Goetz and Freshwater (2006) base their CSC measure on several subcomponents, consistent with the multi-component nature of CSC (Messner, Rosenfeld, & Baumer, 2004; Putnam, 2000). Specifically, the authors used four individual variables. The first subcomponent pertains to memberships in affinity groups, such as local clubs within the community, representing interpersonal or particularized trust in the community. The second subcomponent is linked to community service activities, which serve as indicators for grassroots activism, embodying generalized trust or trust in a community. The third subcomponent, indicated by voter turnout, stands for political participation. Meanwhile, the fourth subcomponent, indicated by the census response rate, symbolizes democratic participation. Both political and democratic participation are conceptualized as institutional trust, signifying trust in authorities (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021). To provide a comprehensive analysis of the primary driver of the outcome within the multi-

component construct of CSC, we also examined the four main subcomponents of this measure to explore the implications of the various trust dimensions.

4.3.2.4. Other Control Variables

In our models, we control for several county or metro characteristics, depending on the level of analysis. The controls include the share of population without high school diploma as a proxy for educational attainment (Jefferson & Pryor, 1999; Mulholland, 2013; Ryan & Leeson, 2011). The number of food stamps per capita as a proxy for poverty (food stamps per capita) (Jefferson & Pryor, 1999). The population of the observation area as proxy for areas with higher population (Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999; Mulholland, 2010). And two measures of diversity: voting diversity and ethnic diversity (Goetz, Rupasingha, & Loveridge, 2012). Since some of the measures were only available for a certain period of time, we interpolated and extrapolated the values for the missing years. In addition to time-varying county and metro controls, we also control for the effects of the calendar year.

Our survival analysis for H2 is at the hate group level, so we add two additional firm-level controls that take hate group information into account. First, we control for the number of chapters of the same hate group active in other counties in the same year (active chapters). Second, we also control for the ideology of a hate group, that is, the commonality of the group of people that a hate group targets. Based on the information provided by the SPLC, we created four main categories: general hate, gender (e.g., “Male Supremacy”, “Anti-LGBTQ”), race (“Racist Skinhead”, “Neo-Nazi”), and religion (e.g., “Christian Identity”, “Anti-Muslim”).

4.3.2.5. Poisson Regression and Cox Proportional Hazards Model

In our analysis, we used two different types of analysis due to the different nature of the analysis. On the one hand, for H1 and H3 we used a count regression model, in detail a Poisson regression (PR) due to the nature of the count dependent variables. In both models, we controlled for county (H1) or metropolitan area (H3) fixed effects. For H2, on the other hand, we used a fixed

effects Cox proportional hazards model (CHM) with robust standard errors to determine the hazard probability of hate groups. In addition, in all of our analyses, including the CSC subcomponents, we standardized all four subcomponent variables to facilitate comparability of results. And given the panel structure of our dataset, we lead our dependent variable in all models by one time period (i.e., one year). To deal with heteroscedasticity, we used robust SE estimators in all our models for H1 and H3. For the H2 models, we used clustered sandwich estimators.

4.4. Results of the Analysis in Chapter 4

The tables 13 – 15 present the descriptive statistics, VIFs, and pairwise correlations among the variables of all models for the corresponding hypotheses and excluding the year dummies and, for Table 14 (H2), the hate group ideology. The same mean and standard deviation across all CSC subcomponents (Variable 4 – 7) are the result of variable standardization for improved comparability. Due to the nature of a CHM, the model for H2 does not include the dependent variable but, instead, the failure variable. All bivariate correlations for our variables of interest were in the expected direction. The average VIF across all variables is 4.68, 4.03, and 3.70, respectively, and we did not find any concerns about multicollinearity in our models (Craney & Surles, 2002).

We present the results of our analysis in Table 16 and Table 17. We have three models each for H1 and H2 and seven models for H3. For H1 and H2, we first stepwise introduced the moderator variable CSC, followed by replacing CSC with its four subcomponents. For H3, we also added the interaction with the main independent variable, the number of hate groups, and CSC and its subcomponents respectively.

4.4.1. Mitigating Effect of CSC on the Emergence and Longevity of Hate Groups

The results of Model 2 show that CSC ($\beta = -0.17$, $p = 0.04$) has a significant negative effect on the emergence of hate groups (H1), and thus we find significant support for our first hypothesis.

In contrast, the number of active hate groups within the community (β = 0.03, p = 0.06) increases the likelihood of the emergence of an additional hate group. The other control variables show that communities with higher population density (β = 2.10, p = 0.02) have a higher probability of hate group emergence. The other controls show no significant effect. The CSC subcomponent analysis for H1, results shown in Model 3, indicates that the mitigating effect of CSC on hate group formation is mainly driven by generalized trust in a community represented by grassroots activities (β = -0.64, p = 0.00).

The results of Model 4 and 5 show that we did not find a significant effect of CSC on the hazard probability of hate groups (β = -0.00, p = 0.97) and thus did not find support for our hypothesized increasing effect of CSC on the hate group failure rate (2). In contrast to Model 2, the number of active hate groups increases the probability of a hazard event (β = 0.07, p = 0.00) and thus decreases the expected survival time, possibly pointing to a localized competition effect (Baum & Mezias, 1992). Looking at this effect in more detail, the subcomponents show that affinity group membership (i.e., interpersonal trust; β = -0.29, p = 0.06) and grassroots activism (generalized trust; β = 0.35, p = 0.00) have opposite effects, suggesting that they cancel each other out.

Among our controls, which are used in all models, no variable shows a significant effect. Our specific firm-level H2 controls, active chapters and hate group ideology, both show interesting effects. Although other hate groups within the community increase the hazard probability, the number of active chapters of the same hate group in other communities decreases the hazard probability (β = -0.00, p = 0.00). Compared to general hate groups (i.e., groups categorized as having no specific ideology), religious (β = 0.16, p = 0.03) and racist (β = 0.59, p = 0.00) hate groups are significantly more likely to experience a hazard event. This effect is also evident in the Kaplan-Meier estimates shown in Figure 11.

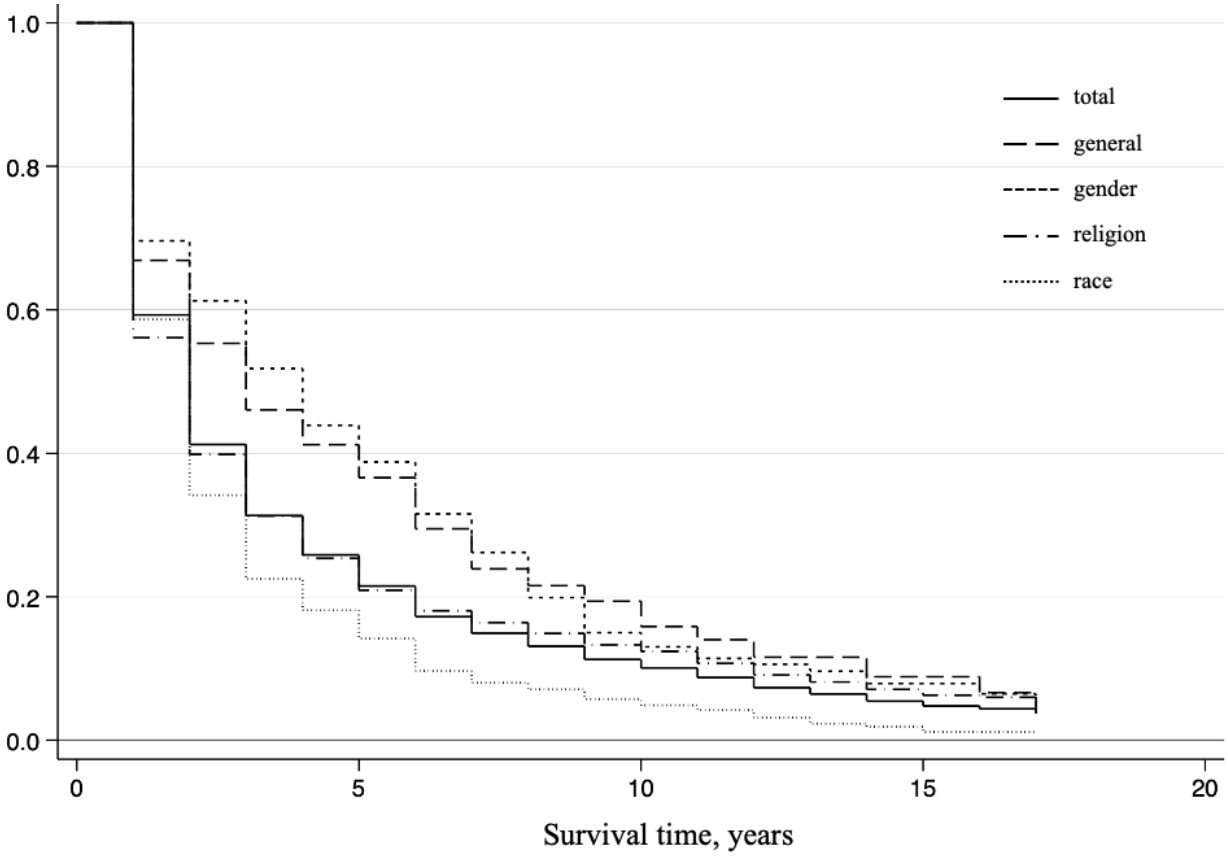

Figure 11: Kaplan-Meier survival estimates for all hate groups (total) and by ideology.

Table 13: Descriptive statistics for Model 1 – 3 (H1).

Variables	Mean	S.D.	VIF	1	2	3	4	5	6	7	8	9	10	11	12
1 New hate group entrants (#)	0.21	0.59	2.00	1.00											
2 Active hate groups (#)	0.63	1.39	2.32	0.70	1.00										
3 CSC	-0.38	1.07	21.79	-0.06	-0.05	1.00									
4 Affinity group membership	0.00	1.00	4.86	-0.10	-0.13	0.63	1.00								
5 Grassroots activism	0.00	1.00	9.89	-0.02	0.01	0.82	0.35	1.00							
6 Political participation	0.00	1.00	1.59	-0.01	0.01	0.19	0.02	0.02	1.00						
7 Democratic participation	0.00	1.00	4.85	-0.06	-0.02	0.47	0.06	0.12	0.39	1.00					
8 Population w/o HS (%)	15.70	7.03	2.48	0.00	-0.06	-0.39	-0.06	-0.17	-0.52	-0.63	1.00				
9 Food stamps per cap (#)	0.12	0.07	1.59	-0.05	0.01	-0.20	-0.04	-0.07	-0.12	-0.07	0.32	1.00			
10 Population (log)	4.91	0.58	2.28	0.29	0.42	-0.16	-0.42	-0.10	0.31	0.07	-0.32	-0.20	1.00		
11 Voting diversity	-0.53	0.06	1.13	0.00	-0.05	0.12	-0.02	0.06	0.14	0.13	-0.21	-0.16	0.22	1.00	
12 Ethnic diversity	-0.77	0.16	1.40	0.16	0.26	-0.16	-0.17	-0.04	-0.15	-0.07	0.11	0.26	0.30	0.04	1.00

Notes: N = 20,021 observations from 1,120 U.S. counties. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests. The variables 4 - 7 are centralized and therefore have unified SD and mean values.

Table 14: Descriptive statistics for Model 4 – 6 (H2).

Variables	Mean	S.D.	VIF	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Hate Group Failure (1/0)	0.20	0.40	1.03	1.00													
2 Active hate groups (#)	3.43	3.72	1.85	-0.05	1.00												
3 CSC	-0.52	0.95	21.50	-0.02	-0.11	1.00											
4 Affinity group membership	0.00	1.00	6.87	0.00	-0.21	0.76	1.00										
5 Grassroots activism	0.00	1.00	7.71	-0.05	0.08	0.80	0.55	1.00									
6 Political participation	0.00	1.00	4.46	0.03	-0.08	0.47	0.07	0.10	1.00								
7 Democratic participation	0.00	1.00	1.57	0.03	-0.05	0.18	-0.03	-0.04	0.46	1.00							
8 Population w/o HS (%)	28.21	4.80	1.32	0.04	-0.21	-0.10	-0.16	-0.24	0.19	0.23	1.00						

Regional level controls																	
9 Food stamps per cap (#)	0.12	0.07	1.62	-0.02	0.15	-0.01	0.12	0.11	0.01	-0.13	-0.08	1.00					
10 Population (log)	5.42	0.69	2.94	-0.08	0.57	-0.25	-0.51	-0.06	-0.02	0.21	-0.06	-0.06	1.00				
11 Voting diversity	-0.54	0.07	1.50	0.05	-0.32	-0.14	-0.18	-0.29	0.12	0.21	0.38	-0.33	-0.03	1.00			
12 Ethnic diversity	-0.68	0.16	1.83	-0.11	0.39	-0.10	-0.14	0.10	-0.11	-0.15	-0.27	0.34	0.47	-0.25	1.00		
Firm level controls																	
13 Hate group ideology	2.97	0.93	1.08	0.08	-0.05	0.02	-0.01	-0.03	-0.01	0.06	0.06	-0.15	0.00	0.12	-0.16	1.00	
14 Active chapters (#)	40.80	44.59	1.10	-0.09	-0.11	-0.04	0.02	-0.01	-0.14	-0.10	-0.03	0.00	0.00	0.02	0.15	-0.03	1.00

Notes: N = 13,220 observations from 4,360 hate groups. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests. The variables 4 - 7 are centralized and therefore have unified SD and mean values.

Table 15: Descriptive statistics for Model 7 – 13 (H3).

Variables	Mean	S.D.	VIF	1	2	3	4	5	6	7	8	9	10	11	12
1 Hate crimes (#)	22.12	77.88	2.01	1.00											
2 New hate group entrants (#)	3.04	5.02	3.66	0.67	1.00										
3 CSC	-0.53	0.76	14.09	-0.08	-0.11	1.00									
4 Affinity group membership	0.00	1.00	4.81	-0.10	-0.18	0.68	1.00								
5 Grassroots activism	0.00	1.00	4.06	-0.02	-0.05	0.77	0.58	1.00							
6 Political participation	0.00	1.00	4.69	-0.02	-0.01	0.63	0.17	0.31	1.00						
7 Democratic participation	0.00	1.00	1.62	0.02	0.00	0.45	0.27	0.31	0.50	1.00					
8 Population w/o HS (%)	12.69	5.21	2.28	0.05	0.02	-0.63	-0.35	-0.38	-0.63	-0.49	1.00				
9 Food stamps per cap (#)	0.12	0.05	1.52	-0.07	-0.06	-0.28	-0.03	-0.22	-0.06	-0.06	0.30	1.00			
10 Population (log)	5.82	0.50	3.01	0.32	0.68	-0.24	-0.43	-0.17	0.00	0.05	0.05	-0.04	1.00		
11 Voting diversity	0.51	0.04	1.20	0.10	0.20	-0.11	0.11	0.03	-0.23	-0.22	0.16	-0.07	0.05	1.00	
12 Ethnic diversity	0.71	0.13	1.48	-0.15	-0.40	0.14	0.15	0.16	0.00	0.12	-0.02	-0.15	-0.45	-0.15	1.00

Notes: N = 2,115 observations from 152 metropolitan areas. |r| > 0.01 were significant at the 95% confidence level. Two-sided t-tests. The variables 4 - 7 are centralized and therefore have unified SD and mean values.

Table 16: Analysis results H1 and H2.

	H1			H2		
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
	Poisson Regression			Cox Proportional Hazards Model		
Main effects						
Active hate groups	.03+ (.02) [.08]	.03+ (.02) [.06]	.02 (.02) [.24]	.07*** (.01) [.00]	.07*** (.01) [.00]	.08*** (.01) [.00]
CSC		-.17* (.08) [.04]			-.00 (.08) [.97]	
Affinity group membership			.12 (.09) [.17]			-.29+ (.15) [.06]
Grassroots activism			-.64*** (.19) [.00]			.35** (.12) [.00]
Political participation			-.11+ (.06) [.05]			.07 (.07) [.29]
Democratic participation			-.06 (.08) [.48]			-.01 (.05) [.80]
Controls						
Population w/o HS (%)	.01 (.02) [.64]	.00 (.02) [.96]	.01 (.02) [.49]	-.01 (.02) [.43]	-.02 (.02) [.41]	-.02 (.02) [.37]
#food stamps per cap	.80 (1.30) [.54]	1.44 (1.28) [.26]	1.77 (1.33) [.18]	-.31 (1.06) [.77]	-.28 (1.14) [.81]	-.41 (1.13) [.72]
Population (log)	1.92* (.90) [.03]	2.10* (.90) [.02]	1.86+ (.97) [.06]	.31 (.80) [.70]	.33 (.81) [.68]	.38 (.81) [.64]
Voting diversity	.10 (.96) [.92]	.00 (.97) [1.00]	.20 (.96) [.84]	-.98 (.97) [.31]	-.93 (.97) [.34]	-1.02 (.98) [.30]
Ethnic diversity	-.13 (1.82) [.94]	-.32 (1.81) [.86]	-.38 (1.81) [.83]	-2.56 (1.65) [.12]	-2.61 (1.65) [.11]	-2.08 (1.69) [.22]
Active chapters				-.00*** (.00) [.00]	-.00*** (.00) [.00]	-.00*** (.00) [.00]
Ideology						
Gender				-.07 (.10) [.47]	-.07 (.10) [.47]	-.08 (.10) [.40]
Religion				.16* (.07) [.03]	.16* (.07) [.03]	.15* (.07) [.03]
Race				.59*** (.07) [.00]	.59*** (.07) [.00]	.58*** (.07) [.00]
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
N	18,377	18,326	18,326	13,840	13,826	13,826

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. All independent variables standardized. Coefficients reported as exponentiated coefficients. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed.

Table 17: Analysis results H3.

	H3						
	Model 7	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**	**Model 13**
Main effects							
Active hate groups	.01+ (.01) [.09]	.01+ (.01) [.09]	.00 (.02) [.77]	.00 (.02) [.77]	.01*** (.00) [.00]	.01** (.00) [.00]	.01+ (.00) [.07]
CSC		-.03 (.15) [.82]	-.00 (.17) [.98]				
Affinity group membership				-.38 (.29) [.19]	-.37 (.30) [.23]	-.41 (.30) [.18]	-.40 (.28) [.16]
Grassroots activism				-.23 (.35) [.50]	-.26 (.35) [.46]	-.22 (.35) [.52]	-.33 (.34) [.34]
Political participation				.31* (.14) [.03]	.30* (.14) [.03]	.32* (.14) [.03]	.25+ (.14) [.07]
Democratic participation				.05 (.10) [.61]	.04 (.10) [.71]	.05 (.10) [.60]	.11 (.10) [.26]
Active hate groups × CSC			-.01 (.01) [.63]				
HG × affinity group memb.				-.01 (.02) [.58]			
HG × grassroots activism					.02+ (.01) [.06]		
HG × political particip.						.00 (.00) [.98]	
HG × democratic particip.							.02*** (.00) [.00]
Controls							
Population w/o HS (%)	-.06 (.07) [.38]	-.06 (.07) [.34]	-.06 (.07) [.39]	-.03 (.07) [.65]	-.02 (.07) [.74]	-.04 (.07) [.62]	-.04 (.07) [.56]
#food stamps per cap	-1.72 (3.22) [.59]	-1.56 (3.47) [.65]	-1.51 (3.48) [.66]	-3.19 (3.00) [.29]	-2.85 (3.17) [.37]	-3.29 (3.10) [.29]	-3.96 (2.92) [.18]
Population (log)	4.92* (2.07) [.02]	5.07* (2.10) [.02]	4.94* (2.13) [.02]	1.03 (3.23) [.75]	1.30 (3.19) [.68]	1.23 (3.16) [.70]	.69 (3.08) [.82]
Voting diversity	5.97* (2.71) [.03]	6.10* (2.64) [.02]	6.26* (2.74) [.02]	6.05* (2.54) [.02]	6.18* (2.52) [.01]	6.19* (2.79) [.03]	3.04 (2.10) [.15]
Ethnic diversity	-16.03+ (9.64) [.10]	-16.03+ (9.69) [.10]	-16.04+ (9.64) [.10]	-16.39+ (9.00) [.07]	-15.50+ (9.00) [.09]	-16.37+ (9.04) [.07]	-14.38+ (8.69) [.10]
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Metropolitan area FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,976	1,976	1,976	1,964	1,964	1,964	1,964

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. All independent variables standardized. Coefficients reported as exponentiated coefficients. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed.

4.4.2. A Buffering Effect: Mitigating Destructive Outcomes

Model 8 shows that we did find a significant relationship between the number of active hate groups and the number of hate crimes within a community ($\beta = 0.01$, $p = 0.09$), defined as metropolitan areas. Figure 12, shows that CSC has a negative moderating effect on the relationship between hate groups and hate crimes (H3a). CSC lowers the probability of hate crimes up to a certain threshold (around CSC values smaller than its mean), after which (for larger values) the average marginal effect is not statistically different from zero. Taken together, these initial findings suggest that even relatively low levels of CSC within a community (i.e., less than the population mean) may act as a buffer that prevents hate groups from accelerating their community segregation efforts and ultimately prevents hate crimes from occurring, even in the presence of hate groups. Moreover, the subcomponent analysis (Figure 13) reveals important details. The moderating effect is mainly driven by one component, affinity group membership (i.e., a proxy for interpersonal trust; Panel A). Interestingly, despite their small effect size, particularly the components representing institutional trust (i.e., political and democratic participation; Panel B and D) show an amplifying effect, increasing the likelihood of hate crimes occurring while hate groups are active in a community, and show that we also find some evidence for H3b.

Model 8 and 9, including our moderator CSC, the proxies for population density ($\beta_8 = 5.07$, $p_8 = 0.02$, $\beta_9 = 4.94$; $p_9 = 0.02$), voting diversity ($\beta_8 = 6.10$, $p_8 = 0.02$; $\beta_9 = 6.26$, $p_9 = 0.02$), and ethnic diversity ($\beta_8 = -16.03$, $p_8 = 0.10$; $\beta_9 = -16.04$, $p_9 = 0.10$) within a community, show a significant effect. Therefore, it is interesting to note that the results indicate that higher levels of voting diversity and communities with higher population density lead to higher levels of hate crime. In contrast, more diverse communities have a mitigating effect.

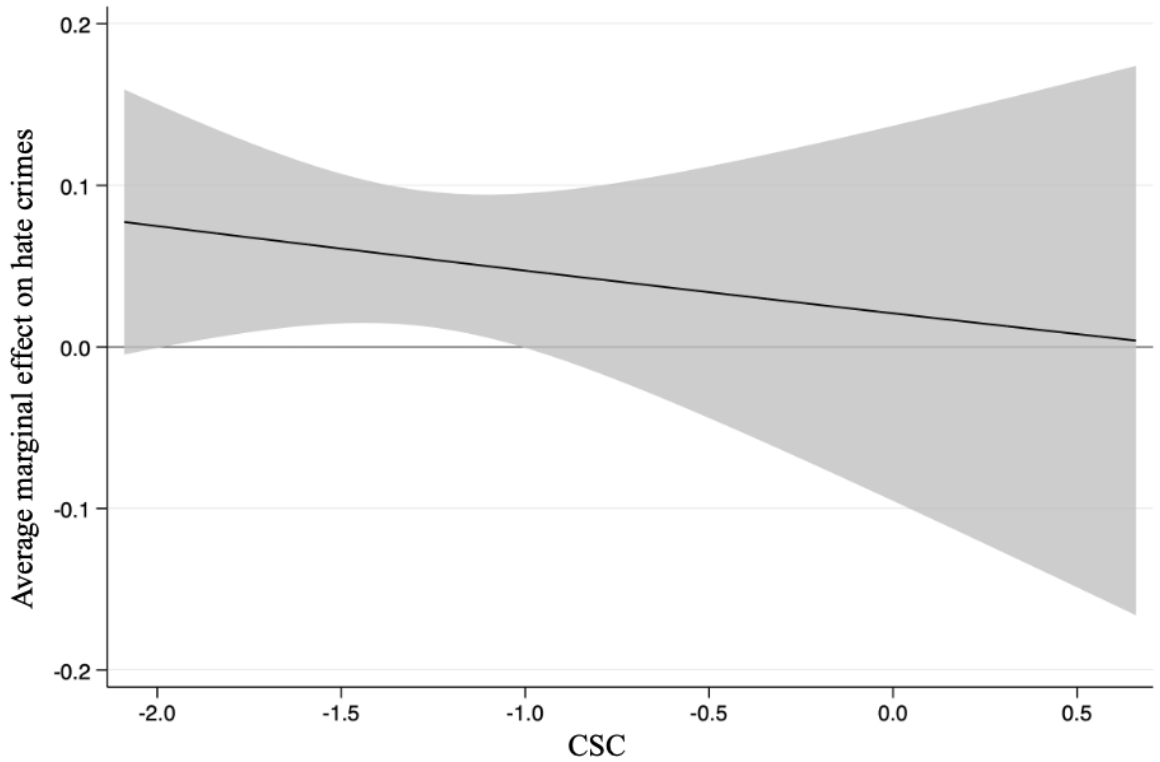

Figure 12: Conditional marginal effect of CSC on the hate group - hate crime relationship. Including the corresponding 90%-CI (grey shade). Plotted for mean of CSC (= -0.53) and ± two standard deviations (SD = 0.76).

4.4.3. Robustness Tests for Chapter 4's Analysis

To illustrate the robustness of our analysis, we ran it with different models. For example, we also used negative binomial models for our Poisson panel regression. We also tried our models without using the predefined panel model by creating year dummies or by using robust multiple variance-covariance matrix (VCM) estimation. In order to test whether the extrapolation of our variables has a significant effect, we tried several time windows. However, the results remained consistent across all additional analyses and robustness checks.

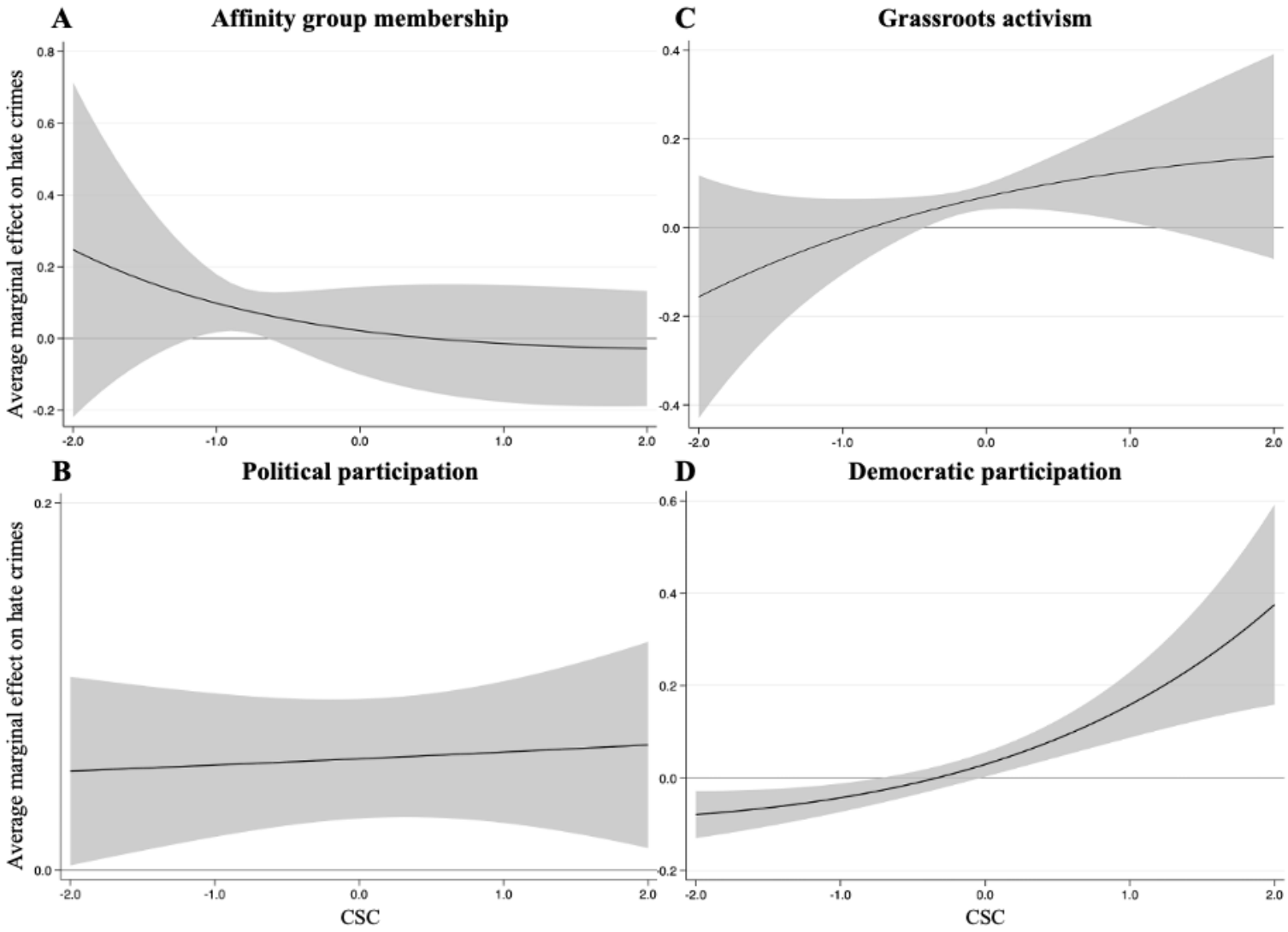

Figure 13: Conditional marginal effect of CSC on the hate group - hate crime relationship. Including the corresponding 90%-CI (grey shade). Plotted for mean of standardized CSC (= 0.0) and ± two standard deviations (SD = 1.0).

4.5. Discussion of Chapter 4

Our study shows that high levels of CSC can lower the level of hate in a community and can reduce the destructive impact of hate groups on society. Specifically, we found that CSC has a significant impact on the formation of hate groups, thereby reducing the presence of hate groups (Adamczyk et al., 2014; Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999; Mulholland, 2013; Ryan & Leeson, 2011). Furthermore, we found that CSC has the power to mitigate the relationship between hate groups and hate crimes up to a certain threshold of CSC, allowing us to conclude that CSC acts as a buffer against the community segregating efforts of hate groups. However, we also find that while CSC has a mitigating effect on hate group formation, it has no significant effect on the likelihood of hate group failures and, therefore, longevity. In addition, our detailed analysis of the CSC subcomponents (Rupasingha, Goetz, & Freshwater, 2006) representing three different dimensions of trust (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021) allowed us to highlight the individual main drivers of the CSC effects presented. In particular, this analysis highlights the more complex effect of CSC on the relationship between hate groups and hate crimes. It shows that only interpersonal trust (i.e., affinity group membership) drives the overall mitigating effect, and that institutional trust (i.e., political and democratic participation) in particular has an amplifying effect on the relationship.

In addition to our contribution to the literature on hate groups, we also contribute to the research on the negative outcomes of entrepreneurship and, in particular, the literature on destructive entrepreneurship (Baumol, 1996). By conceptualizing hate groups as destructive entrepreneurial organizations and theorizing about mitigating effects of CSC on their destructive impacts, we extend the literature on destructive entrepreneurship with an empirical example that is currently lacking (Shepherd, 2019), with few exceptions (Boudreaux, Nikolaev, & Holcombe, 2018; Khan, Munir, & Willmott, 2007; Sauka & Welter, 2007). Moreover, we

provide important guidance to practitioners on what to consider when creating targeted mechanisms to address hate group activities and destructive ventures in general.

4.5.1. Filling the Gap in Destructive Entrepreneurship Research

The current literature on the destructive side of entrepreneurship is largely focused on theoretical and conceptual work and lacks empirical research on the destructive outcomes of entrepreneurial activity (Shepherd, 2019), such as factors that facilitate the emergence and survival of destructive ventures and strategies to mitigate their harm to society. Our analysis begins to fill this gap by adding an example to the current small body of empirical work in this area (Boudreaux, Nikolaev, & Holcombe, 2018; Khan, Munir, & Willmott, 2007; Sauka & Welter, 2007) by identifying hate groups as destructive entrepreneurial ventures and showing that CSC is an effective way to mitigate their destructive effects. However, our analysis also revealed that, in our context, CSC has a significant effect only on the formation and not on the survival of hate group organizations. Furthermore, while it is important to note that CSC is a multi-component construct (Messner, Rosenfeld, & Baumer, 2004), it is also important to examine its single driver in order to truly understand the detailed mechanisms, drivers, and, as in our analysis, countervailing effects.

Furthermore, by using the concept of CSC, we extend the body of literature on community entrepreneurship (Hertel, Bacq, & Belz, 2019) and apply a concept that has been used inconsistently in the entrepreneurship field (Kleinhempel, Beugelsdijk, & Klasing, 2022; Kwon, Heflin, & Ruef, 2013; Vedula & Frid, 2019).

4.5.2. Extending the Hate Group Literature: The Dual Side of CSC

Our analysis builds on the current literature on hate groups and adds an important nuance. Goetz, Rupasingha and Loveridge (2012) first showed that there is a negative relationship between CSC and the presence of hate groups in a community. In theorizing about the two determinants of hate group presence, emergence and failure, we build on the authors' arguments

and thus argue that CSC mitigates both. However, our analysis shows that CSC has only a moderating effect on emergence, but no significant effect on longevity. Thus, a trusting environment and strong social networks can prevent the entry of organizations that try to segregate the community. However, the nonsignificant results for survival processes do not allow us to interpret what happens once such organizations have infiltrated a community. This is where the utility of our subcomponent analysis comes to the fore. It shows that the effect of CSC on preventing hate group emergence is mainly driven by high levels of generalized trust in the community proxied by social community activities (grassroots activism). This suggests that a trustful community provides an alternative to hate group activities and hinders hate groups in recruiting initial resources for their efforts, supporting Goetz et al.'s (2012) first argument that higher levels of community activity can lead to lower levels of hate group activity. The same holds true for the survival analysis, as a higher level of generalized trust seems to hinder the resource recruitment of new members and a successful persistence. However, in the survival process, particularized (or interpersonal) trust, another dimension of CSC, acts as a counterbalancing factor. It diminishes the likelihood of hazard, subsequently enhancing longevity. This is interesting because Goetz, Rupasingha and Loveridge (2012) discuss in their analysis that a higher number in local club memberships can create local competition for hate groups, preventing them from acquiring new resources and thus reducing the presence of hate groups. However, in our study, it appears that local competition (Baum & Mezias, 1992) from non-hate groups actually increases the legitimacy of hate groups and thus has a counterintuitive effect on the longevity of hate groups. Additionally, while not statistically significant, the increase in particularized trust and its consequent legitimacy seems to heighten the rate at which hate groups emerge. However, it should also be noted that competition from other hate groups within the community has a decreasing effect on longevity, as it appears that this competition attracts the same target audience and thus increases the struggle for resources (Carroll & Hannan, 1989; Carroll & Khessina, 2005). In summary, our analysis supports the findings of

Goetz, Rupasingha and Loveridge (2012) in that the sum of the effects of CSC on the formation and survival processes suggests that communities with high levels of CSC are likely to have fewer hate groups. However, our analysis also shows that a more detailed analysis of the mechanisms by which CSC works is needed to explain the exact processes.

Like previous literature on hate groups, we also examined the relationship between hate groups and hate crime incidents. Scholars have found that increased hate group activity leads to increased hate crime incidents (Adamczyk et al., 2014; Jendryke & McClure, 2019; Mulholland, 2013). We were able to confirm this significant relationship with our analysis. In addition, we extend the current literature with our analysis of the moderating effect of CSC by theorizing in two competing ways that CSC either mitigates or enhances the relationship. Our analysis shows that CSC generally moderates the relationship, and thus we have identified a mechanism that not only moderates hate crimes (Messner, Rosenfeld, & Baumer, 2004; Putnam, 2000; Ruiter & De Graaf, 2006), but also the relationship between hate groups and hate crimes. Specifically, we found that CSC moderates this relationship up to a certain level of CSC, beyond which CSC no longer has a significant effect. Thus, CSC provides some buffer against the divisive efforts of hate group organizations. We also detailed this analysis as previously described for the formation and survival processes. We examined the effect of the different dimensions of trust (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021). On the one hand, this analysis showed that only particularized trust drives the mitigating effect. Institutional trust, on the other hand, show a significant reinforcing effect, providing some evidence for our compelling hypothesis that CSC reinforces the relationship between hate groups and hate crimes. Of particular interest is that while particularized trust (i.e., affinity group membership) has a pro-hate group effect on hate group emergence and longevity, it has an anti-hate group effect on the hate group-hate crime relationship. In contrast, higher levels of both generalized and institutional trust each exhibit either anti- or pro-hate group effects.

Generalized trust acts as a barrier to hate group formation and accelerates their dissolution. Meanwhile, institutional trust does not significantly influence the emergence or longevity of hate groups, but it does positively (pro-hate group) affect the destructive impacts these groups have on their communities. This dual side of CSC and the different dimension of trust further highlights the importance of an analysis that looks at the detailed drivers of certain effects and requires additional research to fully understand the mechanisms.

4.5.3. Empowering Practitioners: Strengthening Communities to Combat Hate

Our findings suggest that CSC, including solidarity, trust, and social support networks (Putnam, 1993; Putnam, 2000), can help reduce the number of new hate groups and the incidence of hate crimes, thereby protecting potential victims and society as a whole from their destructive effects. CSC does this by fostering a sense of belonging and mutual respect among community members. However, individual trust dimensions can have opposing effects. This underscores the importance of targeted community-level interventions designed to address specific processes, like reducing the formation of hate groups, decreasing the longevity of hate groups, as well as reducing hate crime incidents while hate groups are active in order to reduce their social impact. We recommend that policymakers, law enforcement, and community organizations work together to promote CSC and strengthen social ties within diverse communities to mitigate the impact of hate groups and hate crimes (Bjørgo, 2004; McDevitt, Levin, & Bennett, 2002; Woolf & Hulsizer, 2004). However, we emphasize the importance for policymakers to select interventions such as community-building programs based on the specific dimensions of trust, depending on the specific problem to be addressed.

4.5.4. Limitations of Chapter 4

In interpreting our findings, it is important to consider several limitations. First, our analysis is based on hate group data from the SPLC, which only includes hate groups at the community level and excludes statewide organizations. While this conservative approach may have

underestimated the relationship between hate groups and community social capital, it is also possible that the relationship is even stronger with the inclusion of more active hate groups. Moreover, we only had access to the years during which a hate group was active, rather than precise founding and failure dates. Nevertheless, we excluded all hazard events from the last year of our panel to account for this, and our results are not dependent on exact founding or survival dates. Second, our analysis relied on CSC data, with the last available year being 2014. We extrapolated from this year till 2017, which may have introduced error and could falsify our results. However, the measurement of CSC is not strongly fluctuating, so we expect that our extrapolation is stable (in sensitivity analyses we also used a shorter time panel that ended at 2014 and found robust results). Finally, the ADL hate crime dataset we used is based on FBI statistics, which is often criticized for being insufficient and only focused on cities (e.g., Farrell & Lockwood, 2023; Nolan et al., 2015).[26] We were also unable to find reliable county or metro level data on hate crime incidents by ideology, which would have been interesting to analyze, especially when combining hate groups of different ideologies. Despite these limitations, this is the best available dataset for hate crime incidents, and our results are likely to be conservative rather than overestimated. These limitations should be taken into account in future research on the relationship between hate groups, hate crime, and CSC.

4.5.5. Conclusion of Chapter 4

Our study theorizes about the impact of communities on the success of destructive ventures. Thus, our empirical study adds to the small body of literature on destructive entrepreneurship and goes beyond previous research on hate groups by examining the characteristics that influence their formation and their relationship to hate crimes. Using novel multi-year data panels, we examined hate group formation, longevity, and violent activity, with a particular focus on the role of CSC. Our findings suggest that CSC may play an important role in

[26] https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/ucr/hate-crime

mitigating the overall hate environment within a community. However, we find that individual CSC components and corresponding dimensions of trust have opposite effects on one process (i.e., hate group formation, longevity, or the relationship between hate groups and hate crime), but also that a dimension of trust can have a pro-hate group effect on one process and a parallel and anti-hate group effect on another process. This underscores the importance for policymakers to select interventions to combat hate groups and their destructive effects based on the processes in their community or area. More generally, this research highlights the need to further explore these issues in order to fully understand the activities of hate groups and identify strategies to mitigate their negative effects, ultimately contributing to the development of more resilient and less vulnerable communities.

5. DISCUSSION

In this dissertation, I introduce three distinct quantitative analyses, each addressing various aspects of the negative outcomes of entrepreneurship as defined by Shepherd (2019) and strategies how to cope with them. These analyses aim to investigate: (1) the emotional journey encountered during an entrepreneurial failure and the moderating role of entrepreneurial experience, (2) the influence of an entrepreneurial career on WFB, and (3) the impact of community attributes, specifically CSC, on the presence and societal harm of destructive ventures, namely hate groups in the USA. To examine these objectives, I implemented quantitative analyses on three unique and disparate datasets. Through this approach, I leveraged and combined novel methods and datasets previously utilized in other research fields, thereby introducing them into management and entrepreneurship literature. The dissertation concludes by summarizing the key findings, contributions, and implications of each analysis, outlining the overall contributions and implications, suggesting potential directions for future research, and providing concluding reflections.

5.1. Key Findings, Contributions, and Implications

5.1.1. Enhancing the Research on the Dark Side of Entrepreneurship

Chapter 2 highlights the significant link between the failure during the entrepreneurial process (i.e., in this case failure of a crowdfunding campaign as example for a missed financing opportunity Giudici et al., 2012) and the expression of sadness, a fundamental human emotion (Bonanno, Goorin, & Coifman, 2008; Leventhal, 2008). The findings demonstrate that the emotional reaction lasts beyond the actual event of the failure and can last for up to three weeks. The study unveils a swift divergence in emotional responses between successful and unsuccessful campaigns post-launch. Specifically, the sadness associated with failed campaigns surges immediately after the campaign's initiation and lingers, returning to baseline levels around three weeks post the campaign's conclusion. This suggests a prolonging impact of

disappointment (Verduyn & Lavrijsen, 2015). Interestingly, both successful and failed entrepreneurs experienced reduced sadness around the launch of their campaign, likely due to the excitement of the event. In addition, there is evidence that EE is an effective moderator of the intensity and duration of sadness.

This analysis makes a significant contribution to the entrepreneurship research discourse, particularly with regard to emotions, entrepreneurial failure, and research methodologies. It underscores the need for a comprehensive understanding of diverse emotional responses to entrepreneurial failure and the exploration of mechanisms to alleviate failure-induced emotional distress (in this case entrepreneurial experience). Besides deepening our theoretical comprehension of emotional reactions driven by entrepreneurial endeavors, this study enriches the burgeoning debate on both the negative consequences of entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011), and the non-financial outcomes (Wiklund, Wright, & Zahra, 2019). Notably, it provides insight into the dark side of entrepreneurship as delineated by Shepherd (2019).

The analysis also presents a novel and validated (Guntuku et al., 2019; Yu et al., 2022) method for studying emotions in entrepreneurship, using an ML-based NLP approach instead of traditional retrospective surveys and interviews. This approach provides more accurate, time-specific measurements of entrepreneurs' affective states. With data from over 21,000 Kickstarter-Twitter pairs, this study provides a unique perspective on emotional responses to entrepreneurial failure, emphasizing the overlooked emotional journey of project creators and demonstrating the creative use of a big data and ML-based approach (Obschonka & Audretsch, 2020). In the era of ChatGPT, Large Language Models (LLM), and generative AI, this method shows a first idea of how to creatively use new datasets to effectively implement in entrepreneurial research to create a new perspective in already existing fields.

The study also provides important insights for scholars, educators, practitioners, and policymakers in the field of entrepreneurship. It underscores the importance of understanding the factors and mechanisms that can mitigate the emotional distress (Cacciotti & Hayton, 2015; Jenkins, Wiklund, & Brundin, 2014; Shepherd, 2009, 2016; Shepherd, 2019) often associated with the entrepreneurial journey (Baron, 2008), especially given the high likelihood of failure (Ucbasaran et al., 2013). EE has been identified as a key moderator in this context. The value of entrepreneurship often lies in the journey and the learning that comes from engaging in the entrepreneurial process, rather than in the uncertain and unpredictable outcome. In line with this, the findings confirm that EE can help entrepreneurs better manage their emotional responses, keeping emotional losses small and manageable. Furthermore, our research is consistent with studies in the broader mental health field, which suggest that the ability to cope with emotional distress and stressful events improves with life experience. This ties into the mental health implications of participating in community-based entrepreneurial activities (Bacq, Hertel, & Lumpkin, 2020; Lyons et al., 2012) such as crowdfunding (Stephan, 2018; Wiklund et al., 2020), and underscores the need to learn how to emotionally manage failure and success, especially given the increasing popularity of such platforms.

5.1.2. Enhancing the Research on the Downside of Entrepreneurship

Chapter 3 delves into the influence of entrepreneurship on WFB. Specifically, it examines the differences between employed individuals and to two distinct categories of business owners as delineated by Levine and Rubinstein (2017): those who are incorporated (referred to as "entrepreneurs") and those who are unincorporated (termed "other business owners" or OBOs). In general, the study revealed that entrepreneurs allocate more time to work-related activities and less to leisure pursuits. Conversely, OBOs display a contrasting pattern, seemingly finding flexibility that allows them to spend more time with their immediate family. However, the analysis also underscores that they utilize this flexibility by dedicating significantly more time

to work during the weekends. Additionally, given the growing scholarly attention on women in entrepreneurship and its interplay with work-family dynamics (e.g., Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001), the study also investigate gender-specific differences in this context. The analysis reveals a marked difference: male entrepreneurs experience heightened work commitments and offset this by curtailing their leisure activities. Yet, their interaction patterns with their family do not significantly diverge from those of their employed peers. Despite the non-significant differences in their interaction frequencies with immediate family members, namely partner and children, the substantial shifts in their activity patterns suggest that their entrepreneurial career choice may indeed negatively influence their WFB. Conversely, OBOs (both genders) and female entrepreneurs had a positive impact on this balance, spending less time on work-related activities, more time on leisure activities as well as spent more time with their immediate family members. Another interesting finding is that both categories of entrepreneurs spend more time socializing with friends, underscoring the importance of social connections in their lives.

The contrasting findings underscore the complex nature of this relationship, emphasizing the need for a nuanced perspective that differentiates between types of business owners, considers both workdays and the weekend, and accounts for gender distinctions. This insight enriches the current literature on the influence of entrepreneurial careers on work-life-family dynamics (Agarwal & Lenka, 2015; Jennings & McDougald, 2007; Schindehutte, Morris, & Brennan, 2001) and helps to resolve previously conflicting findings. The study contributes significantly to the literature by taking advantage of the novel time diary dataset allowing to measure differences in daily patterns of business owners and employed individuals. In detail, it introduces new dimensions such as time spent on different social relationships and different activities, thus further contributing a new perspective and a quantitative secondary

data-based example to the discussions on the downside of entrepreneurship (Shepherd, 2019) as well as the relationship between entrepreneurship and time (Bird & West III, 1998).

This study offers vital insights for both budding and established entrepreneurs, as well as professionals dedicated to bolstering entrepreneurial well-being. It has identified key challenges faced by entrepreneurs, especially the increased workload and limited leisure time, which can potentially compromise WFB. Nonetheless, it also spotlights that female entrepreneurs, for instance, exemplify how an entrepreneurial path can be synonymous with greater flexibility, reduced work demands, and enhanced time with close family members. It is therefore paramount for individuals to embrace efficacious strategies to bolster WFB. Moreover, my findings underscore the feasibility for entrepreneurs to uphold familial ties and other social connections, even amidst the rigorous demands of entrepreneurship. As such, it illuminates the potential for entrepreneurs to adeptly juggle both family commitments and entrepreneurial endeavors, leading to an enhanced WFB and overall well-being (Frone, 2003; Greenhaus, Collins, & Shaw, 2003; Kirkwood & Tootell, 2008).

5.1.3. Enhancing the Research on the Destructive Side of Entrepreneurship

Chapter 4 demonstrates that high levels of CSC (Putnam, 2000) can mitigate hate within communities and reduce the harmful influence of hate groups. It highlights that CSC significantly affects the formation of hate groups, thereby reducing their prevalence. CSC also acts as a protective barrier against the divisive tactics of hate groups, moderating the relationship between hate groups and hate crimes up to a certain CSC threshold. However, the impact of CSC on hate group longevity is insignificant. A thorough examination of the CSC components (Rupasingha, Goetz, & Freshwater, 2006), aligned with three dimensions of trust (Lounsbury, 2023; Schilke, Reimann, & Cook, 2021), illuminates the underlying drivers of the overarching effect. Moreover, this scrutiny clarifies the individual drivers behind the main effects, revealing contrasting impacts from the different trust dimensions encompassed by CSC.

Specifically, only particularized trust emerges as the factor that mitigates the relationship between hate groups and hate crimes, whereas institutional trust intensified it.

This analysis refines the hate group literature by confirming previous findings (Adamczyk et al., 2014; Goetz, Rupasingha, & Loveridge, 2012; Jefferson & Pryor, 1999; Mulholland, 2013; Ryan & Leeson, 2011) and introducing a nuanced perspective on hate groups' longevity and influence. The dissection of the different trust dimensions enables conclusive insights on the effects of distinct elements within the multi-component construct of CSC. By showcasing the community's impact, especially CSC's role (Kleinhempel, Beugelsdijk, & Klasing, 2022; Kwon, Heflin, & Ruef, 2013; Vedula & Frid, 2019) in thwarting destructive ventures, the research adds to the discourse on the intersection of communities and entrepreneurship (Hertel, Bacq, & Belz, 2019). Lastly, this quantitative analysis provides a critical contribution to the largely conceptual and theoretical domain of destructive entrepreneurship (Baumol, 1996; Shepherd, 2019).

The study also provides important guidance for practitioners. It suggests that CSC, which includes elements such as solidarity, trust, and social networks (Putnam, 1993; Putnam, 2000), can mitigate the emergence of new hate groups and the incidence of hate crimes, thereby protecting society from their harmful effects. However, the individual components of CSC may have different effects, underscoring the importance of targeted community-level interventions that address specific processes, such as reducing the formation of hate groups, their longevity, and their adverse impact on their community. This study underscores the need for law enforcement to actively build trust (across all dimensions) within communities in order to effectively combat hate crime. Thus, it recommends that policymakers, law enforcement, and community organizations work together to improve CSC and strengthen social ties within diverse communities to reduce the impact of hate groups and hate crimes. However, the study

emphasizes the need for policymakers to select interventions, such as community-building initiatives, based on specific dimension of trust that are relevant to the issue at hand.

5.1.4. General Contributions and Implications

This dissertation makes a significant contribution to the entrepreneurship literature, particularly with regard to the negative outcomes of entrepreneurship. By meticulously analyzing the dark, down, and destructive sides of entrepreneurship as defined by Shepherd (2019), I successfully extend the existing literature on these distinct aspects.

The prevailing literature in this area is predominantly theoretical and conceptual, often lacking empirical support. Through my research, I have bridged this gap by incorporating quantitative analysis to provide concrete examples, thereby demonstrating novel methodologies to explore and answer intriguing research questions. In my research, I have used secondary data and methodologies that, while well-established in other research fields, are largely untapped in the field of entrepreneurship. This innovative approach, therefore, broadens the horizon of methods used in management and entrepreneurship research and paves the way for future research opportunities. Moreover, the secondary data used, especially in Chapter 2 and 3, serves as a practical guide on how to measure personal metrics unobtrusively and reliably. This novel contribution underscores the potential for quantitative metrics to play a significant role in assessing the negative impact of entrepreneurship, an aspect that has been historically under-researched (Khan, Munir, & Willmott, 2007; Shepherd, 2019; Wright & Zahra, 2011).

This dissertation provides invaluable insights for practitioners immersed in the entrepreneurial ecosystem. Through nuanced analyses, it paints a more realistic portrait of entrepreneurial endeavors by highlighting not just the successes, but also the potential negative outcomes. Nevertheless, beyond merely identifying challenges, the thesis presents tangible strategies to navigate these adverse aspects. For example, Chapter 2 underscores that as EE accumulates, the psychological costs of failure can diminish. This emphasizes the importance

of mentors, peer networks, and the value of iterative learning in the entrepreneurial journey (Shepherd et al., 2016). Chapter 3 delves into the sacrifices often associated with an entrepreneurial career, but it also sheds light on the potential for such a path to offer enhanced flexibility, thus facilitating improved WFB. In Chapter 4, the focus shifts to the broader community, suggesting that cultivating trust within this sphere serves as an effective buffer against the harmful effects of destructive entrepreneurial ventures. In summation, while this dissertation unravels the multifaceted challenges inherent to entrepreneurship, it concurrently offers strategies to practitioners to tackle these issues, nurturing a robust and well-rounded entrepreneurial ecosystem.

5.2. Avenues for Future Research

This dissertation delves into the largely unexplored area of the negative side of entrepreneurship, making an important contribution by providing quantitative examples in a predominantly theoretical literature. Furthermore, it uses validated datasets and methodologies from other fields, bringing new perspectives to entrepreneurship research, especially following the framework outlined by Shepherd (2019).

However, this is only the tip of the iceberg, as the multifaceted field of negative entrepreneurship outcomes offers a wealth of research opportunities. Future studies should aim to expand this area, especially by presenting more quantitative examples. In particular, research must investigate the causes of these outcomes, demonstrate their existence, and propose strategies to mitigate them (Shepherd, 2019). It is also important not to lose sight of the positive aspects of entrepreneurship. Research should maintain a balanced perspective, shedding light on both the bright and dark sides of entrepreneurship, and exploring ways to enhance the former while reducing the latter, as few studies have done to date (Steyaert & Hjorth, 2008; Vedula, Doblinger, et al., 2022; Verduijn et al., 2014).

Furthermore, this thesis also calls for a broader use of novel research methods and datasets (Obschonka & Audretsch, 2020). In the era of advanced artificial intelligence tools such as ChatGPT and other large-scale language models, researchers can use innovative methods to analyze a wider range of data sources, including images, audio, and text files. This could pave the way for deeper analysis of entrepreneurs' emotions and digital footprints, such as emails, to provide insights into their daily habits and routines. These cutting-edge approaches have the potential to significantly advance the field of entrepreneurship research, and it is an avenue that future work should eagerly explore.

5.3. Conclusion of this Dissertation

This dissertation sheds light on the multifaceted nature of entrepreneurship by exploring its negative outcomes at different levels: the dark side (micro level), the downside (macro level), and the destructive side (meso level; Shepherd, 2019). While entrepreneurship is widely recognized as a driver of innovation and public welfare (Schumpeter, 1942; Venkataraman, 1997), it is crucial to acknowledge and examine the potential detrimental effects associated with entrepreneurial behavior and potential strategies to mitigate these effects. By delving into the literature on the negative outcomes of entrepreneurship (Kets de Vries, 1985; Shepherd, 2019; Wright & Zahra, 2011), this research contributes valuable insights into each level of these negative effects. The results show that entrepreneurial behavior can lead to negative outcomes not only at the micro level, affecting individual entrepreneurs (the dark side), but also at the meso level, affecting an entrepreneur's social relationships (the downside), as well as at the macro level, affecting broader societal and economic aspects (the destructive side).

The dissertation presents three distinct studies to comprehensively examine these outcomes and offer strategies to mitigate the harm. First, it examines the emotional experience of failure events during the entrepreneurial process, shedding light on the personal outcomes of entrepreneurship. Second, it examines how an entrepreneurial career affects work-family

dynamics compared to the employed population, addressing macro-level implications. Finally, it examines how community characteristics influence the longevity of destructive ventures, providing insights into meso-level effects.

The findings highlight the existence of negative effects of entrepreneurship and emphasize the need for further research in this area. It is important for researchers to explore other fields and use new tools and techniques, such as artificial intelligence and machine learning, to make innovative advances in the management and entrepreneurship literature. Proven methodologies and datasets from different disciplines can provide fresh perspectives and contribute to a comprehensive understanding of entrepreneurial outcomes from all angles. By encouraging researchers to take a comprehensive approach to studying entrepreneurial outcomes and embracing interdisciplinary approaches, we can foster a more nuanced understanding of entrepreneurship and develop strategies to mitigate potential negative effects. Ultimately, this will contribute to the sustainable growth of entrepreneurship as a driver of innovation, while ensuring the well-being and prosperity of entrepreneurs, communities, and society as a whole.

References

Adamczyk, A., Gruenewald, J., Chermak, S. M., & Freilich, J. D. (2014). The relationship between hate groups and far-right ideological violence. *Journal of contemporary criminal justice*, *30*(3), 310-332.

ADL. (2023). *ADL H.E.A.T. Map*. Retrieved 31.08.2022 from https://www.adl.org/resources/tools-to-track-hate/heat-map

Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, *27*(1), 17-40.

Agarwal, S., & Lenka, U. (2015). Study on work-life balance of women entrepreneurs–review and research agenda. *Industrial and Commercial Training*.

Aguiar, M., Hurst, E., & Karabarbounis, L. (2013). Time use during the great recession. *American Economic Review*, *103*(5), 1664-1696.

Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, *59*(2), 254-269.

Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, *18*(5), 573-596.

Andric, M., Hsueh, W.-J., Hatak, I., & Zellweger, T. M. (2021). Childhood Roots of Entrepreneurship: Parental Divorce, Entrepreneurial Entry and Performance. Academy of Management Proceedings,

Anxo, D., Mencarini, L., Pailhé, A., Solaz, A., Tanturri, M. L., & Flood, L. (2011). Gender differences in time use over the life course in France, Italy, Sweden, and the US. *Feminist Economics*, *17*(3), 159-195.

Araci, D. (2019). Finbert: Financial sentiment analysis with pre-trained language models. *arXiv preprint*.

Archer, J. (2003). *The nature of grief: The evolution and psychology of reactions to loss*. Routledge.

Arora, A., & Nandkumar, A. (2011). Cash-out or flameout! Opportunity cost and entrepreneurial strategy: Theory, and evidence from the information security industry. *Management Science*, *57*(10), 1844-1860.

Bacq, S., Hertel, C., & Lumpkin, G. (2020). Societal Impact at the Nexus of Community and Entrepreneurship: Taking Stock and Looking Ahead. Academy of Management Proceedings,

Barbieri, F., Camacho-Collados, J., Neves, L., & Espinosa-Anke, L. (2020). Tweeteval: Unified benchmark and comparative evaluation for tweet classification. *arXiv preprint*.

Baron, R. A. (1998). Cognitive mechanisms in entrepreneurship: Why and when enterpreneurs think differently than other people. *Journal of Business Venturing*, *13*(4), 275-294.

Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities. *Academy of Management Perspectives*, *20*(1), 104-119.

Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, *33*(2), 328-340.

Bascle, G. (2008). Controlling for endogeneity with instrumental variables in strategic management research. *Strategic Organization*, *6*(3), 285-327.

Basner, M., Fomberstein, K. M., Razavi, F. M., Banks, S., William, J. H., Rosa, R. R., & Dinges, D. F. (2007). American time use survey: sleep time and its relationship to waking activities. *Sleep*, *30*(9), 1085-1095.

Baum, J. A., & Mezias, S. J. (1992). Localized competition and organizational failure in the Manhattan hotel industry, 1898-1990. *Administrative Science Quarterly*, 580-604.

Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Business Venturing*, *11*(1), 3-22. http://dx.doi.org/10.1016/0883-9026(94)00014-x

Becker, P. E., & Moen, P. (1999). Scaling back: Dual-earner couples' work-family strategies. *Journal of Marriage and the Family*, 995-1007.

Bird, B. J., & West III, G. P. (1998). Time and entrepreneurship. *Entrepreneurship Theory and Practice*, *22*(2), 5-9.

Bitler, M. P., Moskowitz, T. J., & Vissing-Jørgensen, A. (2005). Testing agency theory with entrepreneur effort and wealth. *The Journal of Finance*, *60*(2), 539-576.

Bjørgo, T. (2004). *Root causes of terrorism: Myths, reality and ways forward*. Routledge.

Blackburn, R., & Ram, M. (2006). Fix or fixation? The contributions and limitations of entrepreneurship and small firms to combating social exclusion. *Entrepreneurship and Regional Development*, *18*(1), 73-89.

Bluedorn, A. C., & Denhardt, R. B. (1988). Time and organizations. *Journal of Management*, *14*(2), 299-320.

Bonanno, G. A., Goorin, L., & Coifman, K. G. (2008). Sadness and Grief.

Boswell, W. R., & Olson-Buchanan, J. B. (2007). The use of communication technologies after hours: The role of work attitudes and work-life conflict. *Journal of Management*, *33*(4), 592-610.

Boudreaux, C. J., Nikolaev, B. N., & Holcombe, R. G. (2018). Corruption and destructive entrepreneurship. *Small Business Economics*, *51*, 181-202.

Brans, K., & Verduyn, P. (2014). Intensity and duration of negative emotions: Comparing the role of appraisals and regulation strategies. *PLoS One*, *9*(3), e92410.

Brewer, M. B. (1999). The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues*, *55*(3), 429-444.

Brogaard, B. (2020). *Hatred: Understanding our most dangerous emotion*. Oxford University Press.

Brown, T. E., Boon, E., & Pitt, L. F. (2017). Seeking funding in order to sell: Crowdfunding as a marketing tool. *Business Horizons*, *60*(2), 189-195.

Bubolz, M. M. (2001). Family as source, user, and builder of social capital. *The Journal of Socio-Economics*, *30*(2), 129-131.

Buswell, L., Zabriskie, R. B., Lundberg, N., & Hawkins, A. J. (2012). The relationship between father involvement in family leisure and family functioning: The importance of daily family leisure. *Leisure Sciences*, *34*(2), 172-190.

Buttice, V., Colombo, M. G., & Wright, M. (2017). Serial crowdfunding, social capital, and project success. *Entrepreneurship Theory and Practice*, *41*(2), 183-207.

Byrne, O., & Shepherd, D. A. (2015). Different Strokes for Different Folks: Entrepreneurial Narratives of Emotion, Cognition, and Making Sense of Business Failure. *Entrepreneurship Theory and Practice*, *39*(2), 375-405. https://researchrepository.ucd.ie/bitstream/10197/7293/1/Different_Strokes_final.pdf

Cacciotti, G., & Hayton, J. C. (2015). Fear and entrepreneurship: A review and research agenda. *International Journal of Management Reviews*, *17*(2), 165-190.

Calic, G., & Mosakowski, E. (2016). Kicking off social entrepreneurship: How a sustainability orientation influences crowdfunding success. *Journal of Management Studies*, *53*(5), 738-767.

Cardon, M. S., Foo, M. D., Shepherd, D., & Wiklund, J. (2012). Exploring the heart: Entrepreneurial emotion is a hot topic. *Entrepreneurship Theory and Practice*, *36*(1), 1-10.

Cardon, M. S., Zietsma, C., Saparito, P., Matherne, B. P., & Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, *20*(1), 23-45.

Carree, M., & Verheul, I. (2009). Time allocation by the self-employed: the determinants of the number of working hours in start-ups. *Applied Economics Letters*, *16*(15), 1511-1515.

Carroll, G. R., & Hannan, M. T. (1989). Density delay in the evolution of organizational populations: A model and five empirical tests. *Administrative Science Quarterly*, 411-430.

Carroll, G. R., & Khessina, O. M. (2005). The ecology of entrepreneurship. In *Handbook of Entrepreneurship Research* (pp. 167-200). Springer.

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: a control-process view. *Psychological Review*, *97*(1), 19.

Champeyrache, C. (2018). Destructive entrepreneurship: The cost of the mafia for the legal economy. *Journal of Economic Issues*, *52*(1), 157-172.

Chan, C. R., Pethe, C., & Skiena, S. (2021). Natural language processing versus rule-based text analysis: Comparing BERT score and readability indices to predict crowdfunding outcomes. *Journal of Business Venturing Insights*, *16*, e00276.

Chan, J., Ghose, A., & Seamans, R. (2016). The Internet and Racial Hate Crime. *MIS Quarterly*, *40*(2), 381-404.

Chatterjee, A., & Hambrick, D. C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, *52*(3), 351-386.

Cheng, Z., Greenwood, B. N., & Pavlou, P. A. (2022). Location-based mobile gaming and local depression trends: a study of Pokémon Go. *Journal of Management Information Systems*, *39*(1), 68-101.

Chermak, S., Freilich, J., & Suttmoeller, M. (2013). The organizational dynamics of far-right hate groups in the United States: Comparing violent to nonviolent organizations. *Studies in Conflict & Terrorism*, *36*(3), 193-218.

Churchill, S. A., Hayward, M., Smyth, R., & Trinh, T.-A. (2023). Crime, community social capital and entrepreneurship: Evidence from Australian communities. *Journal of Business Venturing*, *38*(2), 106291.

Clayton, J. (2022). *Elizabeth Holmes: Has the Theranos scandal changed Silicon Valley?* BBC. Retrieved Septembeer 14th, 2023 from https://www.bbc.com/news/technology-58469882

Cochran, W. G. (1977). *Sampling techniques*. John Wiley & Sons.

Coifman, K. G., & Bonanno, G. A. (2010). When distress does not become depression: emotion context sensitivity and adjustment to bereavement. *Journal of Abnormal Psychology*, *119*(3), 479.

Colombo, M. G., Franzoni, C., & Rossi–Lamastra, C. (2015). Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, *39*(1), 75-100.

Conway, M., Csank, P. A., Holm, S. L., & Blake, C. K. (2000). On assessing individual differences in rumination on sadness. *Journal of Personality Assessment*, *75*(3), 404-425.

Cooper, A. C., Folta, T. B., & Woo, C. (1995). Entrepreneurial information search. *Journal of Business Venturing*, *10*(2), 107-120.

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, *26*(6), 604-623.

Craney, T. A., & Surles, J. G. (2002). Model-dependent variance inflation factor cutoff values. *Quality Engineering*, *14*(3), 391-403.

Das, S., Behera, R. K., & Rath, S. K. (2018). Real-time sentiment analysis of twitter streaming data for stock prediction. *Procedia Computer Science*, *132*, 956-964.

Das, T. K., & Teng, B.-S. (1998). Time and entrepreneurial risk behavior. *Entrepreneurship Theory and Practice*, *22*(2), 69-88.

Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, *30*(5), 674-695.

Davis, B. C., Hmieleski, K. M., Webb, J. W., & Coombs, J. E. (2017). Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: The influence of perceived product creativity and entrepreneurial passion. *Journal of Business Venturing*, *32*(1), 90-106.

Delgado García, J. B., De Quevedo Puente, E., & Blanco Mazagatos, V. (2015). How affect relates to entrepreneurship: A systematic review of the literature and research agenda. *International Journal of Management Reviews*, *17*(2), 191-211.

Desai, S., Acs, Z. J., & Weitzel, U. (2013). A model of destructive entrepreneurship: Insight for conflict and postconflict recovery. *Journal of Conflict Resolution*, *57*(1), 20-40.

Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2018). Bert: Pre-training of deep bidirectional transformers for language understanding. *arXiv preprint*.

Dew, N., Read, S., Sarasvathy, S. D., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, *24*(4), 287-309.

Dey, P., & Mason, C. (2018). Overcoming constraints of collective imagination: An inquiry into activist entrepreneuring, disruptive truth-telling and the creation of 'possible worlds'. *Journal of Business Venturing*, *33*(1), 84-99.

Dorado, S. (2005). Institutional entrepreneurship, partaking, and convening. *Organization Studies*, *26*(3), 385-414.

Drover, W., Busenitz, L., Matusik, S., Townsend, D., Anglin, A., & Dushnitsky, G. (2017). A review and road map of entrepreneurial equity financing research: venture capital, corporate venture capital, angel investment, crowdfunding, and accelerators. *Journal of Management*, *43*(6), 1820-1853.

Duxbury, L. E., & Higgins, C. A. (1991). Gender differences in work-family conflict. *Journal of Applied Psychology*, *76*(1), 60.

Eager, B., Grant, S. L., & Maritz, A. (2018). Classifying coping among entrepreneurs: is it about time? *Journal of Small Business and Enterprise Development*.

Eddleston, K. A., & Powell, G. N. (2012). Nurturing entrepreneurs' work–family balance: A gendered perspective. *Entrepreneurship Theory and Practice*, *36*(3), 513-541.

Edwards, R., Franklin, J., & Holland, J. (2003). *Families and social capital: Exploring the issues*. South Bank University London.

Ekman, P. (1992). An argument for basic emotions. *Cognition & Emotion*, *6*(3-4), 169-200.

Ekman, P. (1999). Basic Emotions. *Handbook of Cognition and Emotion*, *98*(45-60), 16.

Ekman, P., & Friesen, W. V. (1986). A new pan-cultural facial expression of emotion. *Motivation and Emotion*, *10*(2), 159-168.

Ekman, P., Friesen, W. V., & Ellsworth, P. (2013). *Emotion in the human face: Guidelines for research and an integration of findings* (Vol. 11). Elsevier.

Fan-Osuala, O. (2021). All failures are not equal: Degree of failure and the launch of subsequent crowdfunding campaigns. *Journal of Business Venturing Insights*, *16*, e00260.

Fang He, V., Sirén, C., Singh, S., Solomon, G., & von Krogh, G. (2018). Keep calm and carry on: Emotion regulation in entrepreneurs' learning from failure. *Entrepreneurship Theory and Practice*, *42*(4), 605-630.

Farhat, J. B., & Robb, A. (2014). Applied survey data analysis using Stata: The Kauffman firm survey data. *SSRN 2477217*.

Farrell, A., & Lockwood, S. (2023). Addressing Hate Crime in the 21st Century: Trends, Threats, and Opportunities for Intervention. *Annual Review of Criminology*, *6*, 107-130.

FBI. (2023). *Hate Crime Statistics*. Retrieved January 4th, 2023 from https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/ucr/hate-crime

Ferris, T. (2007). *The 4-hour workweek* (Vol. 17). Crown Publishing Group.

Ferwana, I., & Varshney, L. R. (2021). Social capital dimensions are differentially associated with COVID-19 vaccinations, masks, and physical distancing. *PLoS One*, *16*(12), e0260818.

Fisch, C., & Block, J. H. (2021). How does entrepreneurial failure change an entrepreneur's digital identity? Evidence from Twitter data. *Journal of Business Venturing*, *36*(1), 106015.

Flood, S., Sayer, L., & Backman, D. (2022). American Time Use Survey Data Extract Builder: Version 3.1 dataset. *College Park, MD: University of Maryland and Minneapolis, MN: IPUMS*.

Flood, S. M., & Moen, P. (2015). Healthy time use in the encore years: do work, resources, relations, and gender matter? *Journal of Health and Social Behavior*, *56*(1), 74-97.

Foley, S., & Powell, G. N. (1997). Reconceptualizing work-family conflict for business/marriage partners: A theoretical model. *Journal of Small Business Management*, *35*(4), 36.

Foo, M.-D., Uy, M. A., & Baron, R. A. (2009). How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. *Journal of Applied Psychology*, *94*(4), 1086.

Foo, M. D. (2011). Emotions and entrepreneurial opportunity evaluation. *Entrepreneurship Theory and Practice*, *35*(2), 375-393.

Frankel, R., Jennings, J., & Lee, J. (2021). Disclosure Sentiment: Machine Learning vs. Dictionary Methods. *Management Science*.

Frederiks, A. J., Englis, B. G., Ehrenhard, M. L., & Groen, A. J. (2019). Entrepreneurial cognition and the quality of new venture ideas: An experimental approach to comparing future-oriented cognitive processes. *Journal of Business Venturing*, *34*(2), 327-347.

Frijda, N. H. (1986). *The emotions*. Cambridge University Press.

Frijda, N. H., & Parrott, W. G. (2011). Basic emotions or ur-emotions? *Emotion Review*, *3*(4), 406-415.

Frone, M. R. (2003). Work-family balance.

Fuller, H. R., & Huseth-Zosel, A. (2021). Lessons in resilience: initial coping among older adults during the COVID-19 pandemic. *The Gerontologist*, *61*(1), 114-125.

Gerstenfeld, P. B., Grant, D. R., & Chiang, C. P. (2003). Hate online: A content analysis of extremist Internet sites. *Analyses of Social Issues and Public Policy*, *3*(1), 29-44.

Giudici, G., Nava, R., Rossi Lamastra, C., & Verecondo, C. (2012). Crowdfunding: The new frontier for financing entrepreneurship? *SSRN 2157429*.

Glaeser, E. L. (2005). The Political Economy of Hatred. *The Quarterly Journal of Economics*, *120*(1), 45-86.

Glaeser, E. L. (2007). Entrepreneurship and the City. In: National Bureau of Economic Research Cambridge, Mass., USA.

Goetz, S. J., Rupasingha, A., & Loveridge, S. (2012). Social Capital, Religion, Wal-Mart, and Hate Groups in America*. *Social Science Quarterly*, n/a-n/a.

Gorbatai, A., & Nelson, L. (2015). The narrative advantage: Gender and the language of crowdfunding. *Haas School of Business UC Berkeley. Research Papers*, 1-32.

Gottschalk, P. (2010). Entrepreneurship in organised crime. *International Journal of Entrepreneurship and Small Business*, *9*(3), 295-307.

Gottschalk, P., & Smith, R. (2011). Criminal entrepreneurship, white-collar criminality, and neutralization theory. *Journal of Enterprising Communities: People and Places in the Global Economy*.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*(1), 76-88.

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior*, *63*(3), 510-531.

Greenhaus, J. H., & Parasuraman, S. (2002). The allocation of time to work and family roles.

Greenhaus, J. H., & Singh, R. (2003). Work-family linkages. *A Sloan Work and Family Encyclopedia Entry*

Griffith, E. (2023, April 15th, 2023). The End of Faking It in Silicon Valley. *The New York Times*. https://www.nytimes.com/2023/04/15/business/silicon-valley-fraud.html

Grissom, N., & Bhatnagar, S. (2009). Habituation to repeated stress: get used to it. *Neurobiology of Learning and Memory*, *92*(2), 215-224.

Gross, J. J. (2013). *Handbook of Emotion Regulation*. Guilford publications.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*(2), 348.

Guldner, G. T., & Swensen, C. H. (1995). Time spent together and relationship quality: Long-distance relationships as a test case. *Journal of Social and Personal Relationships*, *12*(2), 313-320.

Guntuku, S. C., Schneider, R., Pelullo, A., Young, J., Wong, V., Ungar, L., Polsky, D., Volpp, K. G., & Merchant, R. (2019). Studying expressions of loneliness in individuals using twitter: an observational study. *BMJ open*, *9*(11), e030355.

Haar, J. M. (2006). The downside of coping: Work–family conflict, employee burnout and the moderating effects of coping strategies. *Journal of Management & Organization*, *12*(2), 146-159.

Hamilton, B. H., & Nickerson, J. A. (2003). Correcting for endogeneity in strategic management research. *Strategic Organization*, *1*(1), 51-78.

Hamm, M. S., & Perry, B. (2009). From the Klan to skinheads: A Critical history of American hate groups. *Hate Crimes*, *1*.

Harris, J. A., Saltstone, R., & Fraboni, M. (1999). An evaluation of the job stress questionnaire with a sample of entrepreneurs. *Journal of Business and Psychology*, *13*, 447-455.

Heese, J., Wang, C., & Labruyère, T. (2021). Wirecard: The downfall of a German Fintech star. *Harvard Business School Case*, 121-058.

Hertel, C., Bacq, S., & Belz, F.-M. (2019). It takes a village to sustain a village: A social identity perspective on successful community-based enterprise creation. *Academy of Management Discoveries*, *5*(4), 438-464.

Hill, A. D., Johnson, S. G., Greco, L. M., O'Boyle, E. H., & Walter, S. L. (2021). Endogeneity: A review and agenda for the methodology-practice divide affecting micro and macro research. *Journal of Management*, *47*(1), 105-143.

Holman, E. A., & Silver, R. C. (1998). Getting" stuck" in the past: temporal orientation and coping with trauma. *Journal of Personality and Social Psychology*, *74*(5), 1146.

Hou, J.-R., Zhang, J., & Zhang, K. (2019). Can title images predict the emotions and the performance of crowdfunding projects? Proceedings of the 52nd Hawaii International Conference on System Sciences,

Hughes, M. E., & Waite, L. J. (2009). Marital biography and health at mid-life. *Journal of Health and Social Behavior*, *50*(3), 344-358.

Huron, D. (2018). On the functions of sadness and grief. In *The Function of Emotions* (pp. 59-91). Springer.

Hutto, C., & Gilbert, E. (2014). Vader: A parsimonious rule-based model for sentiment analysis of social media text. Proceedings of the International AAAI Conference on Web and Social Media,

Izard, C. E. (1992). Basic Emotions, Relations among Emotions, and Emotion-cognition Relations.

Jaskiewicz, P., Combs, J. G., Shanine, K. K., & Kacmar, K. M. (2017). Introducing the family: A review of family science with implications for management research. *Academy of Management Annals*, *11*(1), 309-341.

Jefferson, P. N., & Pryor, F. L. (1999). On the geography of hate. *Economics Letters*, *65*(3), 389-395.

Jendryke, M., & McClure, S. C. (2019). Mapping crime–Hate crimes and hate groups in the USA: A spatial analysis with gridded data. *Applied Geography*, *111*, 102072.

Jenkins, A., & McKelvie, A. (2016). What is entrepreneurial failure? Implications for future research. *International Small Business Journal*, *34*(2), 176-188.

Jenkins, A. S., Wiklund, J., & Brundin, E. (2014). Individual responses to firm failure: Appraisals, grief, and the influence of prior failure experience. *Journal of Business Venturing*, *29*(1), 17-33.

Jennings, J. E., & McDougald, M. S. (2007). Work-family interface experiences and coping strategies: Implications for entrepreneurship research and practice. *Academy of Management Review*, *32*(3), 747-760.

Johnson, H. A., Zabriskie, R. B., & Hill, B. (2006). The contribution of couple leisure involvement, leisure time, and leisure satisfaction to marital satisfaction. *Marriage & Family Review*, *40*(1), 69-91.

Kang, Y., Cai, Z., Tan, C.-W., Huang, Q., & Liu, H. (2020). Natural language processing (NLP) in management research: A literature review. *Journal of Management Analytics*, *7*(2), 139-172.

Kets de Vries, M. F. (1985). The Dark Side of Entrepreneurship. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.

Khan, F. R., Munir, K. A., & Willmott, H. (2007). A Dark Side of Institutional Entrepreneurship: Soccer Balls, Child Labour and Postcolonial Impoverishment. *Organization Studies*, *28*(7), 1055-1077.

Kim, J., Cho, D., & Lee, B. (2016). The mind behind crowdfunding: An empirical study of speech emotion in fundraising success.

Kim, J., & Park, J. (2017). Does facial expression matter even online? An empirical analysis of facial expression of emotion and crowdfunding success.

Kirkwood, J. (2009). Is a lack of self-confidence hindering women entrepreneurs? *International Journal of Gender and Entrepreneurship*, *1*(2), 118-133.

Kirkwood, J., & Tootell, B. (2008). Is entrepreneurship the answer to achieving work–family balance? *Journal of Management & Organization*, *14*(3), 285-302.

Kleinhempel, J., Beugelsdijk, S., & Klasing, M. J. (2022). The changing role of social capital during the venture creation process: A multilevel study. *Entrepreneurship Theory and Practice*, *46*(2), 297-330.

Kopelman, R. E., Greenhaus, J. H., & Connolly, T. F. (1983). A model of work, family, and interrole conflict: A construct validation study. *Organizational Behavior and Human Performance*, *32*(2), 198-215.

Kossek, E. E., Colquitt, J. A., & Noe, R. A. (2001). Caregiving decisions, well-being, and performance: The effects of place and provider as a function of dependent type and work-family climates. *Academy of Management Journal*, *44*(1), 29-44.

Kuffó, L., Vaca, C., Izquierdo, E., & Bustamante, J. C. (2018). Mining Worldwide Entrepreneurs Psycholinguistic Dimensions from Twitter. 2018 International Conference on eDemocracy & eGovernment (ICEDEG),

Kumar, R. (2016, Mar 3rd, 2016). *Why Entrepreneurship is Becoming First Career Choice for Youngsters*. Retrieved May 10th, 2023 from https://www.entrepreneur.com/en-in/starting-a-business/why-entrepreneurship-is-becoming-first-career-choice-for/271860

Kwon, D., & Sorenson, O. (2023). The silicon valley syndrome. *Entrepreneurship Theory and Practice*, *47*(2), 344-368.

Kwon, S.-W., Heflin, C., & Ruef, M. (2013). Community social capital and entrepreneurship. *American Sociological Review*, *78*(6), 980-1008.

Lackéus, M. (2014). An emotion based approach to assessing entrepreneurial education. *The International Journal of Management Education*, *12*(3), 374-396.

Laursen, K., Masciarelli, F., & Prencipe, A. (2012). Regions matter: How localized social capital affects innovation and external knowledge acquisition. *Organization Science*, *23*(1), 177-193.

Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, *46*(8), 819.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.

Lazarus, R. S., & Smith, C. A. (1988). Knowledge and appraisal in the cognition—emotion relationship. *Cognition & Emotion*, *2*(4), 281-300.

Lee, C. H., & Chiravuri, A. (2019). Dealing with initial success versus failure in crowdfunding market: Serial crowdfunding, changing strategies, and funding performance. *Internet Research*.

Lee Siew Kim, J., & Seow Ling, C. (2001). Work-family conflict of women entrepreneurs in Singapore. *Women in Management Review*, *16*(5), 204-221.

Leventhal, A. M. (2008). Sadness, depression, and avoidance behavior. *Behavior Modification*, *32*(6), 759-779.

Levin, J., & MacDevitt, J. (2013). *Hate crimes: The rising tide of bigotry and bloodshed*. Springer.

Levine, R., & Rubinstein, Y. (2017). Smart and illicit: who becomes an entrepreneur and do they earn more? *The Quarterly Journal of Economics*, *132*(2), 963-1018.

Liang, C., & Dunn, P. (2013). The “love of my life” or the “life I love”—investigating impacts of new venture creation on marriage. *Journal of Business and Entrepreneurship*, *25*(1), 95-115.

Lippmann, S., Davis, A., & Aldrich, H. E. (2005). Entrepreneurship and inequality. In *Entrepreneurship* (pp. 3-31). Emerald Group Publishing Limited.

Liu, N.-C., & Wang, C.-Y. (2011). Searching for a balance: work–family practices, work–team design, and organizational performance. *The International Journal of Human Resource Management*, *22*(10), 2071-2085.

Liu, Y., Ott, M., Goyal, N., Du, J., Joshi, M., Chen, D., Levy, O., Lewis, M., Zettlemoyer, L., & Stoyanov, V. (2019). Roberta: A robustly optimized bert pretraining approach. *arXiv preprint.*

Liu, Y., Prati, L. M., Perrewé, P. L., & Brymer, R. A. (2010). Individual differences in emotion regulation, emotional experiences at work, and work-related outcomes: A two-study investigation. *Journal of Applied Social Psychology*, *40*(6), 1515-1538.

Lounsbury, M. (2023). The Problem of Institutional Trust. *Organization Studies*, *44*(2), 308-310.

Lyons, T. S., Alter, T. R., Audretsch, D., & Augustine, D. (2012). Entrepreneurship and community: The next frontier of entrepreneurship inquiry. *Entrepreneurship Research Journal*, *2*(1).

Martin, L. L., Tesser, A., & McIntosh, W. D. (1993). Wanting but not having: The effects of unattained goals on thoughts and feelings.

Mathews, S. M. (2019). Explainable artificial intelligence applications in NLP, biomedical, and malware classification: a literature review. Intelligent computing-proceedings of the computing conference,

McDevitt, J., Levin, J., & Bennett, S. (2002). Hate crime offenders: An expanded typology. *Journal of Social Issues*.

McKenny, A. F., Allison, T. H., Ketchen Jr, D. J., Short, J. C., & Ireland, R. D. (2017). How should crowdfunding research evolve? A survey of the entrepreneurship theory and practice editorial board. *Entrepreneurship Theory and Practice*, *41*(2), 291-304.

Medina, R. M., Nicolosi, E., Brewer, S., & Linke, A. M. (2018). Geographies of organized hate in America: A regional analysis. *Annals of the American Association of Geographers*, *108*(4), 1006-1021.

Messner, S. F., Rosenfeld, R., & Baumer, E. P. (2004). Dimensions of social capital and rates of criminal homicide. *American Sociological Review*, *69*(6), 882-903.

Miller, D. (2015). A downside to the entrepreneurial personality? In (Vol. 39, pp. 1-8): SAGE Publications Sage CA: Los Angeles, CA.

Mishev, K., Gjorgjevikj, A., Vodenska, I., Chitkushev, L. T., & Trajanov, D. (2020). Evaluation of sentiment analysis in finance: from lexicons to transformers. *IEEE access*, *8*, 131662-131682.

Mohammad, S., Bravo-Marquez, F., Salameh, M., & Kiritchenko, S. (2018). Semeval-2018 task 1: Affect in tweets. Proceedings of the 12th international workshop on semantic evaluation,

Molina, J. A. (2020). Family and entrepreneurship: New empirical and theoretical results. In (Vol. 41, pp. 1-3): Springer.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, *29*(1), 1-16.

Morris, M. H., Kuratko, D. F., Schindehutte, M., & Spivack, A. J. (2012). Framing the entrepreneurial experience. *Entrepreneurship Theory and Practice*, *36*(1), 11-40.

Moysidou, K., & Spaeth, S. (2016). Cognition, emotion and perceived values in crowdfunding decision making. Open and User Innovation Conference, Boston, USA,

Mulholland, S. E. (2010). Hate fuel: On the relationship between local government policy and hate group activity. *Eastern Economic Journal*, *36*, 480-499.

Mulholland, S. E. (2013). White supremacist groups and hate crime. *Public Choice*, *157*(1-2), 91-113.

Nesse, R. M. (1991). What good is feeling bad. *The Sciences*, *31*(6), 30-37.

Newson, R. (2003). Confidence intervals and p-values for delivery to the end user. *The Stata Journal*, *3*(3), 245-269.

Nolan, J. J., Haas, S. M., Turley, E., Stump, J., & LaValle, C. R. (2015). Assessing the "statistical accuracy" of the national incident-based reporting system hate crime data. *American Behavioral Scientist*, *59*(12), 1562-1587.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, *100*(4), 569.

Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences*, *51*(6), 704-708.

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: the 1989 Loma Prieta Earthquake. *Journal of Personality and Social Psychology*, *61*(1), 115.

Obschonka, M., & Audretsch, D. B. (2020). Artificial intelligence and big data in entrepreneurship: a new era has begun. *Small Business Economics*, *55*(3), 529-539.

Obschonka, M., Fisch, C., & Boyd, R. (2017). Using digital footprints in entrepreneurship research: A Twitter-based personality analysis of superstar entrepreneurs and managers. *Journal of Business Venturing Insights*, *8*, 13-23.

Obschonka, M., Lee, N., Rodríguez-Pose, A., Eichstaedt, J. C., & Ebert, T. (2020). Big data methods, social media, and the psychology of entrepreneurial regions: capturing cross-county personality traits and their impact on entrepreneurship in the USA. *Small Business Economics*, *55*(3), 567-588.

Omorede, A. (2021). Managing crisis: a qualitative lens on the aftermath of entrepreneurial failure. *International Entrepreneurship and Management Journal*, *17*(3), 1441-1468.

Oosterlynck, S., Schuermans, N., & Loopmans, M. (2017). Beyond social capital: Place, diversity and solidarity. In *Place, diversity and solidarity* (pp. 1-18). Routledge.

Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, *97*(3), 315.

Pahnke, E. C., Katila, R., & Eisenhardt, K. M. (2015). Who takes you to the dance? How partners' institutional logics influence innovation in young firms. *Administrative Science Quarterly*, *60*(4), 596-633.

Pain, R. (2000). Place, social relations and the fear of crime: a review. *Progress in Human Geography*, *24*(3), 365-387.

Palmer, D., & Weiss, T. (2022). The unique vulnerabilities of entrepreneurial ventures to misconduct. In *Entrepreneurialism and Society: New Theoretical Perspectives* (Vol. 81, pp. 129-159). Emerald Publishing Limited.

Parasuraman, S., & Greenhaus, J. H. (2002). Toward reducing some critical gaps in work–family research. *Human Resource Management Review*, *12*(3), 299-312.

Perry, B., & Scrivens, R. (2018). A climate for hate? An exploration of the right-wing extremist landscape in Canada. *Critical Criminology*, *26*(2), 169-187.

Perry-Smith, J. E., & Blum, T. C. (2000). Work-family human resource bundles and perceived organizational performance. *Academy of Management Journal*, *43*(6), 1107-1117.

Phadke, S., & Mitra, T. (2020). Many faced hate: A cross platform study of content framing and information sharing by online hate groups. Proceedings of the 2020 CHI conference on human factors in computing systems,

Phillips, L. H., Henry, J. D., Hosie, J. A., & Milne, A. B. (2008). Effective regulation of the experience and expression of negative affect in old age. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *63*(3), P138-P145.

Piening, E. P., Thies, F., Wessel, M., & Benlian, A. (2021). Searching for Success—Entrepreneurs' Responses to Crowdfunding Failure. *Entrepreneurship Theory and Practice*, *45*(3), 626-657.

Pollack, J. M., Maula, M., Allison, T. H., Renko, M., & Günther, C. C. (2021). Making a contribution to entrepreneurship research by studying crowd-funded entrepreneurial opportunities. In (Vol. 45, pp. 247-262): SAGE Publications.

Putnam, R. (1993). The prosperous community: Social capital and public life. *The American Prospect*, *13*(4).

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon and Schuster.

Read, S., & Sarasvathy, S. D. (2005). Knowing what to do and doing what you know: Effectuation as a form of entrepreneurial expertise. *The Journal of Private Equity*, *9*(1), 45-62.

Reyes, J., & Bahm, C. (2016). Crowdfunding: Applying collective indexing of emotions to campaign videos. Proceedings of the 19th ACM Conference on Computer Supported Cooperative Work and Social Computing Companion,

Rhue, L., & Robert, L. P. (2018). Emotional delivery in pro-social crowdfunding success. Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems,

Rietveld, J., Schilling, M. A., & Bellavitis, C. (2019). Platform strategy: Managing ecosystem value through selective promotion of complements. *Organization Science*, *30*(6), 1232-1251.

Rietveld, J., Seamans, R., & Meggiorin, K. (2021). Market orchestrators: The effects of certification on platforms and their complementors. *Strategy Science*, *6*(3), 244-264.

Rose, S., Wentzel, D., Hopp, C., & Kaminski, J. (2021). Launching for success: The effects of psychological distance and mental simulation on funding decisions and crowdfunding performance. *Journal of Business Venturing*, *36*(6), 106021.

Rosenthal, S., Farra, N., & Nakov, P. (2017). SemEval-2017 task 4: Sentiment analysis in Twitter. Proceedings of the 11th international workshop on semantic evaluation (SemEval-2017),

Ruiter, S., & De Graaf, N. D. (2006). National context, religiosity, and volunteering: Results from 53 countries. *American Sociological Review*, *71*(2), 191-210.

Rupasingha, A., & Goetz, S. J. (2007). Social and political forces as determinants of poverty: A spatial analysis. *The Journal of Socio-Economics*, *36*(4), 650-671.

Rupasingha, A., Goetz, S. J., & Freshwater, D. (2006). The production of social capital in US counties. *The Journal of Socio-Economics*, *35*(1), 83-101.

Ryan, M. E., & Leeson, P. T. (2011). Hate groups and hate crime. *International Review of Law and Economics*, *31*(4), 256-262.

Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, *26*(2), 243-263.

Sarasvathy, S. D. (2009). *Effectuation: Elements of entrepreneurial expertise*. Edward Elgar Publishing.

Sauka, A. (2008). *Productive, Unproductive and Destructive Entrepreneurship: A Theoretical and Empirical Exploration*.

Sauka, A., & Welter, F. (2007). Productive, unproductive and destructive entrepreneurship in an advanced transition setting: The example of Latvian small enterprises. *Empirical Entrepreneurship in Europe: New Perspectives*, 87-105.

Scheaf, D. J., & Wood, M. S. (2022). Entrepreneurial fraud: A multidisciplinary review and synthesized framework. *Entrepreneurship Theory and Practice*, *46*(3), 607-642.

Scherer, K. R. (1984). On the nature and function of emotion: A component process approach. *Approaches to Emotion*, *2293*(317), 31.

Scherer, K. R. (1999). Appraisal Theory.

Schilke, O., Reimann, M., & Cook, K. S. (2021). Trust in social relations. *Annual Review of Sociology*, *47*, 239-259.

Schindehutte, M., Morris, M., & Allen, J. (2006). Beyond achievement: Entrepreneurship as extreme experience. *Small Business Economics*, *27*(4), 349-368.

Schindehutte, M., Morris, M., & Brennan, C. (2001). Female entrepreneurs and their children: implications for family life, career aspirations and entrepreneurial perceptions. *Frontiers of Entrepreneurship Research*.

Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. Harper & Row.

Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Dziurzynski, L., Ramones, S. M., Agrawal, M., Shah, A., Kosinski, M., Stillwell, D., & Seligman, M. E. (2013). Personality, gender, and age in the language of social media: The open-vocabulary approach. *PLoS One*, *8*(9), e73791.

Schwienbacher, A., & Larralde, B. (2010). Crowdfunding of small entrepreneurial ventures. *Handbook of Entrepreneurial Finance, Oxford University Press, Forthcoming*.

Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, *11*(4), 448-469.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217-226.

Shane, S. A. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.

Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of Management Review*, *28*(2), 318-328.

Shepherd, D. A. (2004). Educating entrepreneurship students about emotion and learning from failure. *Academy of Management Learning & Education*, *3*(3), 274-287.

Shepherd, D. A. (2009). Grief recovery from the loss of a family business: A multi-and meso-level theory. *Journal of Business Venturing*, *24*(1), 81-97.

Shepherd, D. A. (2016). An emotions perspective for advancing the fields of family business and entrepreneurship: Stocks, flows, reactions, and responses. In (Vol. 29, pp. 151-158): Sage Publications.

Shepherd, D. A. (2019). Researching the Dark Side, Downside, and Destructive Side of Entrepreneurship: It is the Compassionate Thing to Do! *Academy of Management Discoveries*, *5*(3), 217-220.

Shepherd, D. A., Covin, J. G., & Kuratko, D. F. (2009). Project failure from corporate entrepreneurship: Managing the grief process. *Journal of Business Venturing*, *24*(6), 588-600.

Shepherd, D. A., & Haynie, J. M. (2011). Venture failure, stigma, and impression management: A self-verification, self-determination view. *Strategic Entrepreneurship Journal*, *5*(2), 178-197.

Shepherd, D. A., Patzelt, H., & Wolfe, M. (2011). Moving forward from project failure: Negative emotions, affective commitment, and learning from the experience. *Academy of Management Journal*, *54*(6), 1229-1259.

Shepherd, D. A., Williams, T., Wolfe, M., & Patzelt, H. (2016). *Learning from entrepreneurial failure*. Cambridge University Press.

Short, J. C., Ketchen Jr, D. J., McKenny, A. F., Allison, T. H., & Ireland, R. D. (2017). Research on crowdfunding: Reviewing the (very recent) past and celebrating the present. *Entrepreneurship Theory and Practice*, *41*(2), 149-160.

Simon, R. W. (2002). Revisiting the relationships among gender, marital status, and mental health. *American Journal of Sociology*, *107*(4), 1065-1096.

Singh, S., Corner, P., & Pavlovich, K. (2007). Coping with entrepreneurial failure. *Journal of Management & Organization*, *13*(4), 331-344.

Smith, C. A., & Lazarus, R. S. (1990). Emotion and Adaptation. *Handbook of Personality: Theory and Research*, *21*, 609-637.

Smith, G. T., Snyder, D. K., Trull, T. J., & Monsma, B. R. (1988). Predicting relationship satisfaction from couples' use of leisure time. *American Journal of Family Therapy*, *16*(1), 3-13.

Sonnemans, J., & Frijda, N. H. (1995). The determinants of subjective emotional intensity. *Cognition & Emotion*, *9*(5), 483-506.

Sorensen, J. B., & Sorenson, O. (2007). Corporate demography and income inequality. *American Sociological Review*, *72*(5), 766-783.

Soublière, J.-F., & Gehman, J. (2020). The legitimacy threshold revisited: How prior successes and failures spill over to other endeavors on Kickstarter. *Academy of Management Journal*, *63*(2), 472-502.

Spinosa, C., Flores, F., & Dreyfus, H. L. (1999). *Disclosing new worlds: Entrepreneurship, democratic action, and the cultivation of solidarity*. MIT press.

SPLC. (2021, 18.03.2020). *Frequently asked questions about hate groups*. Retrieved 18.08.2021 from https://www.splcenter.org/20200318/frequently-asked-questions-about-hate-groups#hate%20group

SPLC. (2023). *Hate Map*. Southern Povery Law Center. Retrieved Feb 10th, 2023 from https://www.splcenter.org/hate-map?year=2020

Stephan, U. (2018). Entrepreneurs' mental health and well-being: A review and research agenda. *Academy of Management Perspectives*, *32*(3), 290-322.

Steyaert, C., & Hjorth, D. (2008). *Entrepreneurship as social change: A third new movements in entrepreneurship book* (Vol. 3). Edward Elgar Publishing.

Stuart, R. W., & Abetti, P. A. (1990). Impact of entrepreneurial and management experience on early performance. *Journal of Business Venturing*, *5*(3), 151-162.

Sutton, R. I., & Callahan, A. L. (1987). The stigma of bankruptcy: Spoiled organizational image and its management. *Academy of Management Journal*, *30*(3), 405-436.

Szendro, B. (2021). Suicide, social capital, and hate groups in the united states. *World Affairs*, *184*(4), 501-520.

Tahir, R. (2022). Work–life balance: is an entrepreneurial career the solution? *Journal of Entrepreneurship in Emerging Economies*(ahead-of-print).

Tata, A., Martinez, D. L., Garcia, D., Oesch, A., & Brusoni, S. (2017). The psycholinguistics of entrepreneurship. *Journal of Business Venturing Insights*, *7*, 38-44.

Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, *29*(1), 24-54.

Tedmanson, D., Verduyn, K., Essers, C., & Gartner, W. B. (2012). Critical perspectives in entrepreneurship research. *Organization*, *19*(5), 531-541.

Thomas, P. A., Liu, H., & Umberson, D. (2017). Family relationships and well-being. *Innovation in Aging*, *1*(3).

Thompson, R. F., & Spencer, W. A. (1966). Habituation: a model phenomenon for the study of neuronal substrates of behavior. *Psychological Review*, *73*(1), 16.

Tumasjan, A., Braun, R., & Stolz, B. (2021). Twitter sentiment as a weak signal in venture capital financing. *Journal of Business Venturing*, *36*(2), 106062.

Ucbasaran, D., Shepherd, D. A., Lockett, A., & Lyon, S. J. (2013). Life after business failure: The process and consequences of business failure for entrepreneurs. *Journal of Management*, *39*(1), 163-202.

Ucbasaran, D., Westhead, P., Wright, M., & Flores, M. (2010). The nature of entrepreneurial experience, business failure and comparative optimism. *Journal of Business Venturing*, *25*(6), 541-555.

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior*, *47*(1), 1-16.

Uy, M. A., Foo, M.-D., & Aguinis, H. (2010). Using experience sampling methodology to advance entrepreneurship theory and research. *Organizational Research Methods*, *13*(1), 31-54.

Van Atteveldt, W., van der Velden, M. A., & Boukes, M. (2021). The validity of sentiment analysis: Comparing manual annotation, crowd-coding, dictionary approaches, and machine learning algorithms. *Communication Methods and Measures*, *15*(2), 121-140.

van Duyne, P., von Lampe, K., & Newell, J. L. (2003). *Criminal finances and organising crime in Europe*. Wolf Legal Publishers.

Vedula, S., Doblinger, C., Pacheco, D., York, J. G., Bacq, S., Russo, M. V., & Dean, T. J. (2022). Entrepreneurship for the public good: a review, critique, and path forward for social and environmental entrepreneurship research. *Academy of Management Annals*, *16*(1), 391-425.

Vedula, S., & Frid, C. J. (2019). Community social capital and the venture gestation process. *The Oxford Handbook of Entrepreneurship and Collaboration*, 177.

Vedula, S., & Kim, P. H. (2018). Marching to the beat of the drum: the impact of the pace of life in US cities on entrepreneurial work effort. *Small Business Economics*, *50*, 569-590.

Vedula, S., York, J. G., Conger, M., & Embry, E. (2022). Green to gone? Regional institutional logics and firm survival in moral markets. *Organization Science*.

Venkataraman, S. (1997). The Distinctive Domain of Entrepreneurship Research. In J. A. Katz & A. C. Corbett (Eds.), *Seminal Ideas for the Next Twenty-Five Years of Advances* (Vol. 21). Emerald Publishing Limited.

Verduijn, K., Verduyn, P. D. D. T., Caroline Essers, K., Dey, P., Tedmanson, D., & Essers, C. (2014). Emancipation and/or oppression? Conceptualizing dimensions of criticality in entrepreneurship studies. *International Journal of Entrepreneurial Behavior & Research*, *20*(2), 98-107.

Verduyn, P., & Lavrijsen, S. (2015). Which emotions last longest and why: The role of event importance and rumination. *Motivation and Emotion*, *39*(1), 119-127.

Verheul, I., Carree, M., & Thurik, R. (2009). Allocation and productivity of time in new ventures of female and male entrepreneurs. *Small Business Economics*, *33*, 273-291.

Vulkan, N., Åstebro, T., & Sierra, M. F. (2016). Equity crowdfunding: A new phenomena. *Journal of Business Venturing Insights*, *5*, 37-49.

Walsh, G. S., & Cunningham, J. A. (2017). Regenerative failure and attribution: Examining the underlying processes affecting entrepreneurial learning. *International Journal of Entrepreneurial Behavior & Research*.

Weiss, H. M., & Beal, D. J. (2005). Reflections on affective events theory. In *The effect of affect in organizational settings*. Emerald Group Publishing Limited.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory. *Research in Organizational Behavior*, *18*(1), 1-74.

Welpe, I. M., Spörrle, M., Grichnik, D., Michl, T., & Audretsch, D. B. (2012). Emotions and opportunities: The interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. *Entrepreneurship Theory and Practice*, *36*(1), 69-96.

Wessel, M., Thies, F., & Benlian, A. (2022). The role of prototype fidelity in technology crowdfunding. *Journal of Business Venturing*, *37*(4), 106220.

Westhead, P., Ucbasaran, D., & Wright, M. (2005a). Decisions, actions, and performance: do novice, serial, and portfolio entrepreneurs differ? *Journal of Small Business Management*, *43*(4), 393-417.

Westhead, P., Ucbasaran, D., & Wright, M. (2005b). Experience and cognition: do novice, serial and portfolio entrepreneurs differ? *International Small Business Journal*, *23*(1), 72-98.

Westhead, P., Ucbasaran, D., Wright, M., & Binks, M. (2005). Novice, serial and portfolio entrepreneur behaviour and contributions. *Small Business Economics*, *25*(2), 109-132.

Wiersma, U. J. (1994). A taxonomy of behavioral strategies for coping with work-home role conflict. *Human Relations*, *47*(2), 211-221.

Wiklund, J., Hatak, I., Lerner, D. A., Verheul, I., Thurik, R., & Antshel, K. (2020). Entrepreneurship, clinical psychology, and mental health: an exciting and promising new field of research. *Academy of Management Perspectives*, *34*(2), 291-295.

Wiklund, J., Wright, M., & Zahra, S. A. (2019). Conquering relevance: Entrepreneurship research's grand challenge. In: Sage Publications.

Williams, K. (2003). Has the future of marriage arrived? A contemporary examination of gender, marriage, and psychological well-being. *Journal of Health and Social Behavior*, *44*(4), 470.

Witt, L. A., & Carlson, D. S. (2006). The work-family interface and job performance: moderating effects of conscientiousness and perceived organizational support. *Journal of Occupational Health Psychology*, *11*(4), 343.

Woolf, L. M., & Hulsizer, M. R. (2004). Hate groups for dummies: How to build a successful hate-group. *Humanity & Society*, *28*(1), 40-62.

Wright, M., & Zahra, S. (2011). The Other Side of Paradise: Examining the Dark Side of Entrepreneurship. *Entrepreneurship Research Journal*, *1*(3). https://doi.org/10.2202/2157-5665.1043

Yu, H., Yang, C.-C., Yu, P., & Liu, K. (2022). Emotion diffusion effect: Negative sentiment COVID-19 tweets of public organizations attract more responses from followers. *PLoS One*, *17*(3), e0264794.

Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development*, *38*(2), 182-194.

Appendices

Appendices Chapter 2

Appendix A: Sample Tweet texts with corresponding value for sadness.

Tweet Text	Sadness
It makes me super sad when one of my friends is suffering and I can't help. :(	1.0
Looks like today's upload is canceled because my internet is still completely down and won't work. Hopefully it will get fixed tomorrow because I have no idea what the issue is :(	0.9
It's one of those nights. Can't stop thinking. It's like everything that's ever been on my mind is just like, "hi, remember me?" Life.	0.8
Photo 32/365 After a long week, working on 4 different projects and doing very long writing days all week, I thought I would have a night off and have an early night, before getting back… <URL>	0.7
Still looking for support to get the game polished and ported to other platforms, we're waaaaay below our goal. <URL>	0.6
I didn't realize Instagram doesn't share my actual posts on here 😭 but this is the June pin club preview ! <URL>	0.5
Today is your last chance to pick up Full Bore at the rock-bottom price of $5.00 at <URL> Dig it.	0.4
The Portsea - we only have limited stock remaining so don't miss out! #portseawatch #melbourne… <URL>	0.3
Lamentum will be available in English, Chinese, Spanish, German, Italian, French, Japanese. Please, if you find an error in our steam page translation leave us a comment at: <URL> #pixelart #SurvivalHorror #HorrorGame #gamedev #indiedev #indiegame #2D <URL>	0.2
<Account> The travel case is mostly intended to slide inside your bag. But, adding a fold-flat Velcro belt loop was only a couple of cents extra. And some of us are huge dorks.	0.1
When you open a can of whoop-ass, <name> jumps out. Thanks for the HYDROPHONIC Kickstarter campaign pledge man. You KICK ASS!!	0.0

Appendices Chapter 3

Appendix B: Work and education time spent by contact categories.

	Alone	Partner	Children	Family	Friends	Other
Main effects						
Business owner						
Incorporated	28.22*** (3.67) [.00]	8.29*** (2.42) [.00]	5.74** (2.12) [.01]	.07 (.18) [.68]	-.19 (.23) [.40]	-17.84** (5.63) [.00]
Unincorporated	20.68*** (2.23) [.00]	5.52*** (1.02) [.00]	6.34*** (1.42) [.00]	.11 (.14) [.42]	2.11** (.67) [.00]	-64.88*** (4.06) [.00]
Controls						
Gender						
Female	-10.78*** (1.07) [.00]	.71+ (.40) [.08]	1.19** (.40) [.00]	.12 (.09) [.22]	-.29 (.26) [.27]	-44.08*** (2.07) [.00]
Age	.02 (.04) [.70]	-.01 (.02) [.62]	.06** (.02) [.00]	.00 (.00) [.29]	-.10*** (.01) [.00]	-.55*** (.08) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	-6.28* (2.54) [.01]	-.61 (.67) [.36]	-1.03 (.71) [.15]	-.13 (.08) [.10]	-.25 (.41) [.54]	15.03** (5.29) [.00]
No partner	7.28*** (1.31) [.00]		-1.24** (.43) [.00]	.00 (.17) [1.00]	2.55*** (.30) [.00]	-4.46+ (2.44) [.07]
HH children (#)	-1.53** (.50) [.00]	-.68*** (.17) [.00]	.20 (.55) [.71]	.24 (.18) [.19]	.24+ (.14) [.09]	-4.75*** (1.03) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	29.64*** (1.95) [.00]	-.39 (.68) [.57]	.82 (.84) [.33]	.11 (.11) [.31]	1.46*** (.41) [.00]	258.00*** (3.45) [.00]
Tuesday	30.52*** (1.81) [.00]	-.90 (.62) [.14]	.18 (.40) [.65]	-.08 (.05) [.13]	.78* (.32) [.02]	275.88*** (3.37) [.00]
Wednesday	28.15*** (1.75) [.00]	-1.03+ (.62) [.10]	.53 (.48) [.26]	-.01 (.08) [.93]	1.89*** (.45) [.00]	275.90*** (3.39) [.00]
Thursday	27.03*** (1.77) [.00]	.19 (.84) [.82]	1.59* (.79) [.05]	.29 (.27) [.27]	1.62*** (.45) [.00]	284.20*** (3.44) [.00]
Friday	18.13*** (1.54) [.00]	-1.26+ (.65) [.05]	.41 (.46) [.37]	-.02 (.06) [.73]	1.24** (.43) [.00]	260.14*** (3.48) [.00]
Saturday	1.82+ (.94) [.05]	-.66 (.52) [.20]	1.18** (.41) [.00]	.19+ (.11) [.08]	-.02 (.21) [.92]	28.33*** (2.39) [.00]

Public holiday	-24.86*** (2.57) [.00]	-1.56 (1.18) [.19]	1.50 (1.89) [.43]	-.03 (.12) [.78]	-1.97*** (.26) [.00]	-213.76*** (6.56) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-6.49 (7.74) [.40]	2.89 (3.73) [.44]	-.05 (2.56) [.98]	-.29 (.67) [.66]	5.22*** (1.47) [.00]	148.15*** (14.44) [.00]
R^2	0.1	0.02	0.02	0.01	0.01	0.25
N	154,215	114,960	108,919	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix C: Leisure time spent by contact categories.

	Alone	Partner	Children	Family	Friends	Other
Main effects						
Business owner						
Incorporated	-13.75*** (2.42) [.00]	-3.23 (2.97) [.28]	-5.54+ (3.30) [.09]	-1.33 (.97) [.17]	4.31** (1.58) [.01]	-.73 (1.38) [.60]
Unincorporated	1.10 (2.11) [.60]	3.79 (2.47) [.12]	-5.47* (2.33) [.02]	.43 (.79) [.58]	4.12*** (1.12) [.00]	.65 (1.12) [.56]
Controls						
Gender						
Female	-26.06*** (1.06) [.00]	-21.01*** (1.32) [.00]	.25 (1.18) [.83]	2.38*** (.36) [.00]	-5.97*** (.66) [.00]	-3.59*** (.66) [.00]
Age	1.60*** (.05) [.00]	.01 (.07) [.89]	.54*** (.06) [.00]	.01 (.02) [.52]	-.71*** (.03) [.00]	-.46*** (.03) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	9.81*** (2.32) [.00]	-8.66** (2.98) [.00]	-13.51** (4.81) [.00]	-5.58*** (1.00) [.00]	1.20 (1.46) [.41]	8.21*** (1.62) [.00]
No partner	71.14*** (1.28) [.00]		-48.35*** (1.49) [.00]	-13.13*** (.45) [.00]	23.35*** (.74) [.00]	21.75*** (.78) [.00]
HH children (#)	-11.34*** (.50) [.00]	-11.74*** (.65) [.00]	-1.50* (.72) [.04]	1.88*** (.21) [.00]	-4.58*** (.30) [.00]	-.46 (.31) [.14]

HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	-19.85*** (1.98) [.00]	-83.24*** (2.48) [.00]	-56.05*** (2.21) [.00]	-16.71*** (.70) [.00]	-12.03*** (1.06) [.00]	-13.54*** (1.20) [.00]
Tuesday	-24.07*** (1.96) [.00]	-88.83*** (2.33) [.00]	-60.22*** (2.10) [.00]	-16.12*** (.70) [.00]	-9.84*** (1.12) [.00]	-13.48*** (1.11) [.00]
Wednesday	-23.24*** (1.91) [.00]	-90.55*** (2.36) [.00]	-61.44*** (2.06) [.00]	-16.35*** (.71) [.00]	-9.74*** (1.09) [.00]	-14.53*** (1.12) [.00]
Thursday	-29.51*** (1.84) [.00]	-88.10*** (2.47) [.00]	-59.15*** (2.20) [.00]	-15.65*** (.73) [.00]	-7.67*** (1.12) [.00]	-14.17*** (1.18) [.00]
Friday	-28.60*** (1.88) [.00]	-67.79*** (2.51) [.00]	-45.11*** (2.18) [.00]	-11.85*** (.79) [.00]	-.02 (1.36) [.99]	-7.12*** (1.22) [.00]
Saturday	-10.57*** (1.70) [.00]	-9.22*** (2.48) [.00]	.79 (2.17) [.71]	-.31 (.82) [.70]	13.32*** (1.17) [.00]	11.52*** (1.22) [.00]
Public holiday	3.51 (5.41) [.52]	112.81*** (8.33) [.00]	105.45*** (8.80) [.00]	43.07*** (4.00) [.00]	8.36* (3.38) [.01]	34.05*** (4.99) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	34.62*** (7.02) [.00]	215.66*** (11.44) [.00]	144.60*** (9.28) [.00]	25.71*** (2.55) [.00]	49.58*** (4.74) [.00]	46.09*** (4.12) [.00]
R^2	0.13	0.11	0.11	0.05	0.07	0.05
N	154,215	114,960	110,324	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix D: Care activities time spent by contact categories.

	Alone	**Partner**	**Children**	**Family**	**Friends**	**Other**
Main effects						
Business owner						
Incorporated	-.02 (.57) [.97]	-.52 (.86) [.54]	1.66 (1.98) [.40]	-.13 (.43) [.77]	.15 (.21) [.48]	.64 (2.33) [.78]
Unincorporated	.06 (.46) [.89]	1.59 (.98) [.10]	4.14* (1.83) [.02]	-.05 (.37) [.89]	.75+ (.40) [.06]	1.82 (2.11) [.39]
Controls						

Gender						
Female	2.01*** (.29) [.00]	.09 (.48) [.86]	29.31*** (.92) [.00]	1.53*** (.20) [.00]	-.16 (.12) [.17]	25.52*** (1.07) [.00]
Age	.11*** (.01) [.00]	-.33*** (.02) [.00]	-1.11*** (.05) [.00]	.01 (.01) [.13]	-.01** (.01) [.01]	-.92*** (.05) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	.74 (.76) [.33]	-4.95*** (.85) [.00]	-12.26*** (2.80) [.00]	-.51 (.45) [.26]	-.03 (.20) [.87]	6.99* (2.88) [.02]
No partner	.46 (.34) [.17]		-48.56*** (1.18) [.00]	-2.23*** (.18) [.00]	1.02*** (.15) [.00]	11.18*** (1.26) [.00]
HH children (#)	-.01 (.12) [.93]	5.25*** (.24) [.00]	6.42*** (.63) [.00]	1.08*** (.22) [.00]	.01 (.05) [.83]	-3.43*** (.54) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	2.13*** (.43) [.00]	-6.41*** (.91) [.00]	-.80 (1.54) [.60]	-1.61*** (.32) [.00]	-.73*** (.20) [.00]	-80.22*** (1.90) [.00]
Tuesday	1.85*** (.42) [.00]	-7.79*** (.78) [.00]	-.72 (1.71) [.67]	-1.80*** (.43) [.00]	-.67*** (.20) [.00]	-84.66*** (1.83) [.00]
Wednesday	2.48*** (.57) [.00]	-7.79*** (.84) [.00]	-3.13* (1.51) [.04]	-1.83*** (.30) [.00]	-.38 (.25) [.13]	-84.27*** (1.90) [.00]
Thursday	1.97*** (.43) [.00]	-6.76*** (.83) [.00]	-.32 (1.54) [.84]	-1.95*** (.28) [.00]	-.39+ (.23) [.09]	-88.27*** (1.81) [.00]
Friday	2.05*** (.46) [.00]	-6.32*** (.93) [.00]	-9.15*** (1.59) [.00]	-.86* (.34) [.01]	-.42* (.21) [.04]	-101.59*** (2.06) [.00]
Saturday	1.34*** (.34) [.00]	-.40 (.79) [.62]	-2.93* (1.31) [.03]	.72* (.32) [.02]	.47* (.24) [.05]	-43.68*** (1.57) [.00]
Public holiday	-1.96** (.69) [.00]	5.02* (2.19) [.02]	-7.81* (3.18) [.01]	2.08** (.76) [.01]	-.49* (.21) [.02]	49.03*** (4.60) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-.26 (1.68) [.88]	34.88*** (5.01) [.00]	88.03*** (6.10) [.00]	4.56*** (1.33) [.00]	1.42* (.63) [.02]	665.10*** (6.78) [.00]
R^2	0.01	0.03	0.09	0.01	0	0.1
N	154,215	114,960	109,338	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix E: Household activities time spent by contact categories.

	Alone	Partner	Children	Family	Friends	Other
Main effects						
Business owner						
Incorporated	-2.16 (2.45) [.38]	-.19 (2.06) [.92]	.48 (2.37) [.84]	.66 (.67) [.32]	1.54* (.71) [.03]	-3.47*** (.85) [.00]
Unincorporated	8.53*** (2.05) [.00]	6.82*** (1.85) [.00]	5.43** (1.89) [.00]	.20 (.50) [.69]	1.64** (.56) [.00]	-2.58** (.82) [.00]
Controls						
Gender						
Female	2.01*** (.29) [.00]	.09 (.48) [.86]	29.31*** (.92) [.00]	1.53*** (.20) [.00]	-.16 (.12) [.17]	25.52*** (1.07) [.00]
Age	.11*** (.01) [.00]	-.33*** (.02) [.00]	-1.11*** (.05) [.00]	.01 (.01) [.13]	-.01** (.01) [.01]	-.92*** (.05) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	6.48** (2.19) [.00]	-10.46*** (1.86) [.00]	-26.70*** (2.36) [.00]	-2.08** (.71) [.00]	1.72* (.81) [.04]	5.13*** (.98) [.00]
No partner	17.67*** (1.00) [.00]		-46.65*** (1.15) [.00]	-6.40*** (.26) [.00]	8.96*** (.41) [.00]	8.58*** (.47) [.00]
HH children (#)	-4.78*** (.36) [.00]	-3.92*** (.41) [.00]	5.34*** (.50) [.00]	1.55*** (.16) [.00]	-1.99*** (.15) [.00]	-.38* (.17) [.03]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	-11.73*** (1.44) [.00]	-63.69*** (1.71) [.00]	-43.06*** (1.61) [.00]	-9.31*** (.42) [.00]	-4.79*** (.49) [.00]	.67 (.66) [.31]
Tuesday	-15.17*** (1.50) [.00]	-67.03*** (1.76) [.00]	-48.78*** (1.51) [.00]	-8.91*** (.46) [.00]	-3.84*** (.50) [.00]	1.21+ (.64) [.06]
Wednesday	-16.27*** (1.44) [.00]	-67.68*** (1.69) [.00]	-50.10*** (1.51) [.00]	-8.49*** (.47) [.00]	-3.59*** (.51) [.00]	1.07 (.71) [.13]
Thursday	-17.34*** (1.47) [.00]	-69.41*** (1.66) [.00]	-48.60*** (1.52) [.00]	-8.51*** (.44) [.00]	-2.84*** (.53) [.00]	.67 (.64) [.30]
Friday	-19.32*** (1.45) [.00]	-58.04*** (1.74) [.00]	-45.19*** (1.64) [.00]	-6.94*** (.48) [.00]	2.11** (.78) [.01]	3.38*** (.74) [.00]
Saturday	5.72*** (1.38) [.00]	-.11 (1.82) [.95]	3.33* (1.66) [.05]	-1.13* (.49) [.02]	4.60*** (.59) [.00]	3.31*** (.66) [.00]
Public holiday	-8.12* (3.55) [.02]	64.43*** (6.07) [.00]	42.55*** (4.94) [.00]	17.10*** (1.68) [.00]	2.58 (1.78) [.15]	6.02** (2.26) [.01]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes

Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-.57 (4.81) [.91]	123.93*** (8.81) [.00]	84.35*** (7.60) [.00]	10.90*** (1.50) [.00]	12.40*** (2.44) [.00]	17.39*** (2.37) [.00]
R^2	0.09	0.11	0.14	0.04	0.03	0.02
N	154,215	114,960	110,774	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix F: Community engagement time spent by contact categories.

	Alone	**Partner**	**Children**	**Family**	**Friends**	**Other**
Main effects						
Business owner						
Incorporated	1.18+ (.62) [.06]	.05 (.60) [.93]	.90 (.83) [.28]	.18 (.28) [.51]	.13 (.32) [.68]	1.21 (.82) [.14]
Unincorporated	2.13*** (.55) [.00]	.82+ (.48) [.09]	1.25* (.58) [.03]	.10 (.16) [.53]	.78* (.33) [.02]	.70+ (.42) [.10]
Controls						
Gender						
Female	.12*** (.01) [.00]	.06*** (.01) [.00]	.12*** (.01) [.00]	.00+ (.00) [.05]	.01 (.01) [.26]	.04*** (.01) [.00]
Age	1.26*** (.18) [.00]	-.09 (.25) [.72]	1.18*** (.26) [.00]	.28*** (.07) [.00]	.07 (.15) [.65]	.52* (.26) [.04]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	-1.15*** (.22) [.00]	-2.84*** (.42) [.00]	-4.15*** (.54) [.00]	-.12 (.20) [.57]	-.68** (.22) [.00]	-2.67*** (.40) [.00]
No partner	1.25*** (.22) [.00]		-3.43*** (.32) [.00]	-.54*** (.08) [.00]	.53** (.19) [.00]	.09 (.29) [.76]
HH children (#)	-.08 (.08) [.32]	.79*** (.13) [.00]	.54** (.17) [.00]	.12*** (.03) [.00]	-.10 (.06) [.13]	.60*** (.12) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						

Monday	-4.02*** (.34) [.00]	-19.76*** (.60) [.00]	-20.29*** (.63) [.00]	-2.22*** (.16) [.00]	-2.74*** (.24) [.00]	-7.32*** (.49) [.00]
Tuesday	-4.12*** (.34) [.00]	-19.97*** (.58) [.00]	-20.36*** (.62) [.00]	-2.16*** (.16) [.00]	-2.25*** (.29) [.00]	-7.22*** (.51) [.00]
Wednesday	-3.75*** (.36) [.00]	-19.11*** (.61) [.00]	-19.40*** (.63) [.00]	-2.20*** (.15) [.00]	-2.37*** (.25) [.00]	-6.30*** (.52) [.00]
Thursday	-4.30*** (.33) [.00]	-19.65*** (.58) [.00]	-19.83*** (.63) [.00]	-2.11*** (.17) [.00]	-2.29*** (.28) [.00]	-6.49*** (.53) [.00]
Friday	-4.68*** (.34) [.00]	-19.10*** (.68) [.00]	-19.49*** (.66) [.00]	-2.21*** (.16) [.00]	-2.35*** (.33) [.00]	-6.65*** (.53) [.00]
Saturday	-4.21*** (.29) [.00]	-16.49*** (.61) [.00]	-16.84*** (.68) [.00]	-1.80*** (.17) [.00]	-1.54*** (.28) [.00]	-3.77*** (.57) [.00]
Public holiday	-.22 (.58) [.71]	1.03 (1.08) [.34]	.12 (.96) [.90]	.49* (.24) [.05]	-.82*** (.19) [.00]	-2.36*** (.60) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.50 (1.24) [.23]	18.30*** (1.66) [.00]	17.22*** (1.79) [.00]	1.46*** (.32) [.00]	2.93*** (.76) [.00]	7.60*** (1.49) [.00]
R^2	0.02	0.06	0.07	0.01	0	0.01
N	154,215	114,960	109,000	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix G: Other activities time spent by contact categories.

	Alone	Partner	Children	Family	Friends	Other
Main effects						
Business owner						
Incorporated	-7.07*** (1.21) [.00]	-.31 (1.36) [.82]	2.36+ (1.43) [.10]	-.26 (.33) [.43]	1.35* (.57) [.02]	-.58 (.69) [.40]
Unincorporated	-7.19*** (1.03) [.00]	.02 (1.02) [.99]	1.07 (1.15) [.35]	-.22 (.23) [.34]	1.30** (.40) [.00]	-.48 (.57) [.40]
Controls						
Gender						
Female	-5.69*** (.52) [.00]	.74 (.61) [.23]	11.82*** (.54) [.00]	1.12*** (.14) [.00]	.05 (.25) [.85]	-1.12** (.36) [.00]

Age	.21*** (.02) [.00]	-.08** (.03) [.01]	.17*** (.02) [.00]	.01+ (.01) [.08]	-.16*** (.01) [.00]	-.08*** (.01) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	2.88* (1.37) [.04]	-1.80 (1.36) [.19]	-8.64*** (1.70) [.00]	-.10 (.50) [.84]	-.72* (.33) [.03]	1.26 (.80) [.11]
No partner	14.43*** (.60) [.00]		-17.39*** (.62) [.00]	-2.10*** (.16) [.00]	6.49*** (.30) [.00]	5.43*** (.40) [.00]
HH children (#)	-2.82*** (.23) [.00]	-2.13*** (.27) [.00]	.89** (.31) [.00]	.32*** (.07) [.00]	-.55*** (.13) [.00]	.40* (.17) [.02]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	27.20*** (.99) [.00]	-27.78*** (1.11) [.00]	-18.27*** (1.03) [.00]	-3.03*** (.25) [.00]	-2.13*** (.48) [.00]	-.97+ (.56) [.08]
Tuesday	26.50*** (.86) [.00]	-29.05*** (1.12) [.00]	-19.95*** (.95) [.00]	-2.86*** (.28) [.00]	-2.01*** (.49) [.00]	-.62 (.55) [.26]
Wednesday	27.31*** (.88) [.00]	-28.76*** (1.09) [.00]	-20.37*** (.93) [.00]	-2.87*** (.26) [.00]	-2.18*** (.37) [.00]	-.91+ (.55) [.10]
Thursday	27.11*** (.84) [.00]	-28.66*** (1.09) [.00]	-19.25*** (.97) [.00]	-2.93*** (.26) [.00]	-1.57*** (.40) [.00]	-.00 (.63) [1.00]
Friday	25.83*** (.88) [.00]	-20.49*** (1.14) [.00]	-14.40*** (.98) [.00]	-2.21*** (.28) [.00]	.13 (.43) [.77]	1.37+ (.75) [.07]
Saturday	5.10*** (.64) [.00]	.53 (1.10) [.63]	.25 (.98) [.80]	.10 (.29) [.74]	2.64*** (.41) [.00]	2.32*** (.50) [.00]
Public holiday	-23.70*** (2.53) [.00]	31.34*** (3.68) [.00]	18.52*** (3.38) [.00]	3.32*** (.95) [.00]	1.12 (.86) [.19]	-.91 (.96) [.34]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	16.17*** (4.34) [.00]	49.58*** (4.56) [.00]	32.79*** (3.56) [.00]	4.54*** (.88) [.00]	10.48*** (1.62) [.00]	13.90*** (3.05) [.00]
R^2	0.07	0.05	0.06	0.01	0.03	0.01
N	154,215	114,960	109,772	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix H: Comparison by activity category including entrepreneurship and weekend interaction.

	Work & education	Leisure	Care	Household	Community engagement	Other
Main effects						
Business owner						
Incorporated	18.13** (6.71) [.01]	-17.00*** (4.39) [.00]	5.97+ (3.36) [.08]	-4.85 (3.61) [.18]	4.49** (1.57) [.00]	-6.74** (2.27) [.00]
Unincorporated	-54.90*** (5.30) [.00]	15.28*** (3.59) [.00]	13.16*** (3.03) [.00]	25.75*** (3.16) [.00]	5.10*** (1.12) [.00]	-4.40* (1.91) [.02]
Weekend						
Yes	-290.05*** (1.94) [.00]	120.21*** (1.59) [.00]	69.77*** (1.28) [.00]	80.87*** (1.22) [.00]	18.77*** (.53) [.00]	.43 (.80) [.59]
Bus. owner × weekend						
Inc. × yes	7.31 (9.53) [.44]	.18 (7.26) [.98]	-11.36* (5.34) [.03]	.04 (6.12) [1.00]	-4.18 (2.58) [.10]	8.02* (3.72) [.03]
Uninc.× yes	78.67*** (7.21) [.00]	-23.73*** (5.64) [.00]	-23.86*** (4.54) [.00]	-32.46*** (4.90) [.00]	-2.02 (1.84) [.27]	3.40 (2.83) [.23]
Controls						
Gender						
Female	-53.83*** (2.01) [.00]	-39.53*** (1.48) [.00]	43.22*** (1.22) [.00]	45.54*** (1.09) [.00]	2.79*** (.42) [.00]	1.80* (.77) [.02]
Age	-.69*** (.08) [.00]	.19** (.06) [.00]	-1.14*** (.05) [.00]	1.58*** (.04) [.00]	.20*** (.02) [.00]	-.15*** (.03) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	7.19 (5.07) [.16]	8.10* (3.84) [.03]	-3.19 (3.38) [.34]	-3.01 (2.84) [.29]	-8.40*** (.67) [.00]	-.69 (2.00) [.73]
No partner	2.76 (2.35) [.24]	26.33*** (1.73) [.00]	-8.53*** (1.41) [.00]	-24.92*** (1.30) [.00]	-1.64*** (.49) [.00]	5.98*** (.86) [.00]
HH children (#)	-5.38*** (.99) [.00]	-13.66*** (.76) [.00]	13.42*** (.62) [.00]	2.43*** (.52) [.00]	1.80*** (.20) [.00]	1.38*** (.36) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Public holiday	-245.20*** (7.14) [.00]	146.74*** (7.35) [.00]	49.59*** (5.06) [.00]	52.93*** (5.68) [.00]	-1.24 (1.15) [.28]	-2.82 (3.76) [.45]
Month	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes

US State	Yes	Yes	Yes	Yes	Yes	Yes
Constant	445.15*** (13.63) [.00]	227.74*** (9.65) [.00]	614.32*** (7.81) [.00]	64.39*** (6.81) [.00]	-1.82 (2.36) [.44]	90.21*** (6.24) [.00]
R^2	0.28	0.14	0.1	0.14	0.04	0.01
N	154,215	154,215	154,215	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix I: Comparison by contact category including entrepreneurship and weekend interaction.

	Alone	**Partner**	**Children**	**Family**	**Friends**	**Other**
Main effects						
Business owner						
Incorporated	10.46 (6.65) [.12]	11.31+ (6.16) [.07]	3.91 (6.65) [.56]	-2.35 (1.69) [.16]	8.14** (2.58) [.00]	-26.16*** (7.37) [.00]
Unincorporated	32.95*** (4.88) [.00]	29.10*** (5.01) [.00]	18.54*** (5.07) [.00]	.76 (1.49) [.61]	13.60*** (2.35) [.00]	-84.43*** (5.47) [.00]
Weekend						
Yes	-8.27*** (1.81) [.00]	193.79*** (2.38) [.00]	134.91*** (2.35) [.00]	28.99*** (.80) [.00]	24.34*** (1.14) [.00]	-171.69*** (2.12) [.00]
Bus. owner × weekend						
Inc. × yes	-15.98 (9.74) [.10]	-24.46* (10.60) [.02]	6.51 (12.12) [.59]	5.95 (4.55) [.19]	-3.21 (4.74) [.50]	20.19* (10.29) [.05]
Uninc.× yes	-27.79*** (7.20) [.00]	-36.76*** (8.86) [.00]	-25.44** (9.40) [.01]	-.59 (3.07) [.85]	-10.82** (3.74) [.00]	71.35*** (7.61) [.00]
Controls						
Gender						
Female	-17.98*** (1.86) [.00]	-13.77*** (2.09) [.00]	71.80*** (2.18) [.00]	8.76*** (.64) [.00]	-5.90*** (1.02) [.00]	-23.44*** (2.14) [.00]
Age	3.89*** (.08) [.00]	-.17 (.11) [.13]	-.49*** (.10) [.00]	.09*** (.03) [.00]	-1.15*** (.05) [.00]	-2.07*** (.09) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						

Unmarried partner in HH	12.32** (4.48) [.01]	-29.38*** (4.51) [.00]	-61.79*** (7.35) [.00]	-8.49*** (1.81) [.00]	1.64 (2.14) [.45]	33.66*** (5.57) [.00]
No partner	112.16*** (2.23) [.00]		-161.83*** (2.82) [.00]	-24.37*** (.74) [.00]	42.98*** (1.19) [.00]	42.46*** (2.58) [.00]
HH children (#)	-20.59*** (.83) [.00]	-12.42*** (.98) [.00]	23.11*** (1.28) [.00]	5.21*** (.49) [.00]	-6.95*** (.48) [.00]	-8.05*** (1.10) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Public holiday	-50.98*** (8.27) [.00]	213.95*** (11.76) [.00]	156.67*** (11.86) [.00]	65.16*** (5.43) [.00]	4.34 (4.88) [.37]	-129.07*** (9.59) [.00]
Month	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
US State	Yes	Yes	Yes	Yes	Yes	Yes
Constant	53.95*** (11.95) [.00]	241.86*** (16.85) [.00]	219.29*** (15.76) [.00]	16.97*** (4.40) [.00]	68.49*** (7.23) [.00]	1063.72*** (13.62) [.00]
R^2	0.15	0.18	0.2	0.06	0.08	0.15
N	154,215	114,960	111,274	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix J: Comparison by activity category including entrepreneurship and gender interaction.

	Work & education	**Leisure**	**Care**	**Household**	**Community engagement**	**Other**
Main effects						
Business owner						
Incorporated	39.02*** (6.22) [.00]	-22.02*** (4.60) [.00]	1.11 (3.24) [.73]	-15.62*** (3.38) [.00]	3.08* (1.52) [.04]	-5.56* (2.24) [.01]
Unincorporated	-22.58*** (5.62) [.00]	9.78* (4.03) [.02]	7.07* (3.30) [.03]	5.36 (3.37) [.11]	2.79** (1.06) [.01]	-2.42 (2.10) [.25]
Gender						
Female	-50.23*** (2.11) [.00]	-39.84*** (1.56) [.00]	43.25*** (1.29) [.00]	42.53*** (1.13) [.00]	2.45*** (.43) [.00]	1.85* (.83) [.03]
Bus. owner × gender						
Inc. × female	-60.58*** (11.34) [.00]	16.94* (7.08) [.02]	5.02 (5.98) [.40]	35.10*** (6.99) [.00]	-.07 (2.76) [.98]	3.59 (4.03) [.37]

Uninc.× female	-25.72** (8.26) [.00]	-2.73 (5.58) [.62]	-1.68 (4.79) [.73]	28.53*** (5.17) [.00]	4.08* (1.88) [.03]	-2.48 (2.94) [.40]
Controls						
Age	-.69*** (.08) [.00]	.19** (.06) [.00]	-1.14*** (.05) [.00]	1.59*** (.04) [.00]	.20*** (.02) [.00]	-.15*** (.03) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	6.74 (5.07) [.18]	7.93* (3.84) [.04]	-2.68 (3.36) [.43]	-2.98 (2.83) [.29]	-8.15*** (.67) [.00]	-.86 (2.00) [.67]
No partner	2.53 (2.34) [.28]	26.26*** (1.73) [.00]	-8.45*** (1.41) [.00]	-24.68*** (1.30) [.00]	-1.60** (.49) [.00]	5.95*** (.86) [.00]
HH children (#)	-5.30*** (.99) [.00]	-13.70*** (.76) [.00]	13.41*** (.62) [.00]	2.44*** (.52) [.00]	1.77*** (.20) [.00]	1.38*** (.36) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	290.31*** (3.36) [.00]	-115.87*** (2.62) [.00]	-80.02*** (2.16) [.00]	-66.81*** (1.94) [.00]	-31.47*** (.81) [.00]	3.86** (1.40) [.01]
Tuesday	307.66*** (3.32) [.00]	-123.29*** (2.53) [.00]	-84.40*** (2.09) [.00]	-71.48*** (1.99) [.00]	-31.07*** (.83) [.00]	2.58+ (1.32) [.05]
Wednesday	306.18*** (3.28) [.00]	-123.52*** (2.56) [.00]	-84.38*** (2.15) [.00]	-72.60*** (1.92) [.00]	-29.42*** (.85) [.00]	3.73** (1.26) [.00]
Thursday	314.72*** (3.36) [.00]	-125.47*** (2.52) [.00]	-88.49*** (2.04) [.00]	-74.99*** (1.95) [.00]	-30.42*** (.85) [.00]	4.64*** (1.32) [.00]
Friday	279.40*** (3.48) [.00]	-93.69*** (2.80) [.00]	-105.02*** (2.26) [.00]	-62.31*** (2.02) [.00]	-30.45*** (.90) [.00]	12.07*** (1.38) [.00]
Saturday	30.43*** (2.53) [.00]	4.15+ (2.34) [.08]	-40.87*** (1.74) [.00]	17.65*** (1.92) [.00]	-23.77*** (.85) [.00]	12.42*** (1.15) [.00]
Public holiday	-241.54*** (7.23) [.00]	148.24*** (7.37) [.00]	42.98*** (5.05) [.00]	54.33*** (5.67) [.00]	-2.93* (1.15) [.01]	-1.07 (3.74) [.77]
Month	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
US State	Yes	Yes	Yes	Yes	Yes	Yes
Constant	143.95*** (13.76) [.00]	343.63*** (9.63) [.00]	703.09*** (7.88) [.00]	136.34*** (6.95) [.00]	28.28*** (2.45) [.00]	84.71*** (6.23) [.00]
R^2	0.28	0.14	0.11	0.14	0.05	0.01
N	154,215	154,215	154,215	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.

Appendix K: Comparison by contact category including entrepreneurship and gender interaction.

	Alone	Partner	Children	Family	Friends	Other
Main effects						
Business owner						
Incorporated	-4.16 (6.43) [.52]	-1.96 (6.08) [.75]	5.29 (6.55) [.42]	-.39 (2.02) [.85]	5.01+ (2.73) [.07]	-2.89 (6.97) [.68]
Unincorporated	19.32*** (5.08) [.00]	18.95*** (5.35) [.00]	-1.97 (5.65) [.73]	1.98 (1.62) [.22]	12.86*** (2.68) [.00]	-55.68*** (5.94) [.00]
Gender						
Female	-19.89*** (1.94) [.00]	-14.45*** (2.21) [.00]	69.64*** (2.26) [.00]	9.01*** (.68) [.00]	-5.78*** (1.10) [.00]	-20.23*** (2.26) [.00]
Bus. owner × gender						
Inc. × female	34.16** (10.92) [.00]	19.86+ (10.48) [.06]	-.46 (12.06) [.97]	-1.25 (3.72) [.74]	7.69+ (4.42) [.08]	-57.91*** (11.53) [.00]
Uninc. × female	14.73+ (7.56) [.05]	-1.01 (8.06) [.90]	30.93*** (8.80) [.00]	-3.50 (2.70) [.19]	-5.46 (3.58) [.13]	-22.29** (8.45) [.01]
Controls						
Age	3.90*** (.08) [.00]	-.16 (.11) [.14]	-.49*** (.10) [.00]	.09*** (.03) [.00]	-1.15*** (.05) [.00]	-2.07*** (.09) [.00]
Ethnicity	Yes	Yes	Yes	Yes	Yes	Yes
Relationship						
Unmarried partner in HH	12.72** (4.46) [.00]	-29.23*** (4.49) [.00]	-61.62*** (7.35) [.00]	-8.55*** (1.81) [.00]	1.24 (2.14) [.56]	33.57*** (5.56) [.00]
No partner	112.43*** (2.22) [.00]		-161.60*** (2.82) [.00]	-24.43*** (.74) [.00]	42.88*** (1.18) [.00]	42.26*** (2.58) [.00]
HH children (#)	-20.54*** (.83) [.00]	-12.45*** (.98) [.00]	23.05*** (1.28) [.00]	5.19*** (.50) [.00]	-6.96*** (.48) [.00]	-8.03*** (1.10) [.00]
HH income	Yes	Yes	Yes	Yes	Yes	Yes
Weekday						
Monday	23.29*** (3.26) [.00]	-201.28*** (3.83) [.00]	-133.77*** (3.82) [.00]	-32.76*** (1.16) [.00]	-20.93*** (1.62) [.00]	156.74*** (3.65) [.00]
Tuesday	15.48*** (3.27) [.00]	-213.61*** (3.65) [.00]	-145.85*** (3.70) [.00]	-31.93*** (1.26) [.00]	-17.82*** (1.68) [.00]	171.15*** (3.57) [.00]
Wednesday	14.67*** (3.15) [.00]	-214.95*** (3.73) [.00]	-149.36*** (3.62) [.00]	-31.74*** (1.19) [.00]	-16.38*** (1.65) [.00]	170.98*** (3.59) [.00]
Thursday	4.99 (3.14) [.11]	-212.38*** (3.76) [.00]	-140.34*** (3.71) [.00]	-30.86*** (1.21) [.00]	-13.14*** (1.74) [.00]	175.90*** (3.59) [.00]

Friday	-6.61* (3.10) [.03]	-172.99*** (3.89) [.00]	-128.52*** (3.89) [.00]	-24.09*** (1.30) [.00]	.69 (2.05) [.74]	149.57*** (3.64) [.00]
Saturday	-.75 (2.61) [.77]	-26.32*** (3.78) [.00]	-12.18*** (3.67) [.00]	-2.23+ (1.33) [.09]	19.48*** (1.71) [.00]	-2.06 (2.84) [.47]
Public holiday	-55.27*** (8.19) [.00]	213.03*** (11.90) [.00]	154.65*** (11.90) [.00]	65.99*** (5.47) [.00]	8.73+ (4.88) [.07]	-128.05*** (9.66) [.00]
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
US State FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	46.10*** (12.09) [.00]	445.74*** (17.14) [.00]	360.73*** (16.05) [.00]	46.72*** (4.49) [.00]	81.98*** (7.22) [.00]	896.42*** (13.75) [.00]
R^2	0.15	0.18	0.2	0.07	0.08	0.15
N	154,215	114,960	111,274	154,215	154,215	154,215

Notes: +p≤0.10, *p≤0.05, **p≤0.01, ***p≤0.001. Standard errors in parentheses. P-values in square brackets. Omitted variables and base-levels are not displayed. Categorical variables marked with "yes" are not further detailed for the sake of clarity.