

MASTER THESIS

The Entrepreneurial Stress Circle – a Grounded Theory Approach

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EXECUTIVE SUMMARY

Entrepreneurship is one of the most important drivers for innovation, job creation, and economic growth. However, its positive benefits can only be reaped if ventures are economically successful. Thereby, business success is highly dependent on the individual entrepreneur's performance. Research has highlighted links between the entrepreneur's health and his or her performance. Impacted entrepreneurial well-being has been suggested to lead to business failure.

Work-related stress constitutes one of the biggest threats to functioning in Western societies and stress among employees is a well-documented and investigated phenomenon. Recently, scholarly attention on entrepreneurial stress has grown. Most studies so far have compared employees' stress levels with those of entrepreneurs and came to contradicting results. Other studies focused on specific aspects of entrepreneurial stress. However, the current stream of research is highly fragmented and is lacking a congruent framework. This study taps into this academic gap and aims to gain a more nuanced understanding on entrepreneurial stress, thereby developing the first comprehensive model of the entrepreneurial stress process.

Due to the explorative character of this study, a qualitative approach is required. 40 interviews with entrepreneurs were conducted and analyzed following the iterative constructivist grounded theory approach. Grounded theory is a set of techniques which allows to perform explorative studies in a structured, yet flexible manner and is a widely accepted approach for generating theory in an under-researched field, making it the best suited instrument for stress research in the entrepreneurial context.

Analysis of the interviews revealed the first comprehensive model on entrepreneurial stress: The Entrepreneurial Stress Cycle. The derived individual, organizational, and environmental characteristics were categorized into stressors, such as private challenges or task overload; contingency factors, such as coping or firm size; and outcomes, such as reduced creativity or decreased health. Results point out, that the stressors lead to an individual stress level, which in turn results in specific outcomes, which again can influence

the initial stressors. All relationships are potentially impacted by contingencies. Hence, the model depicts a circular stress process for entrepreneurs.

This study contributes to existing theory in several ways. First, by applying a qualitative in-depth approach, a more nuanced understanding of entrepreneurial stress is gained in a field dominated by quantitative studies. Second, prior research often focused on specific aspects of the phenomenon. This study takes a broader view resulting in a comprehensive model depicting interrelations of numerous relevant factors. Third, it paves the way for further research by providing a systematic, yet flexible framework.

Further, results of this study imply beneficial outcomes for practice. First, entrepreneurs may develop a more delicate sense for their personal health and its potential consequences. Additionally, it may equip them with strategies for handling elevated stress levels. Second, institutions, such as health insurance organizations, may benefit from an improved understanding of entrepreneurial stress in designing programs aimed at preventing or decreasing stress among founders. This, in turn, may lead to beneficial outcomes for society in general which profits from a healthier entrepreneurial population in terms of general economic developments, rate of employment, and innovativeness.

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1. INTRODUCTION

Entrepreneurship is one of the most important drivers of innovation, job creation, and economic growth (Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Fölster, 2000; Kollmann, Stöckmann, Hensellek, & Kensbock, 2016; Wong, Ho, & Autio, 2005). Recent statistics demonstrate that 14.5% of the EU citizens are engaged in self-employment and that a venture on average employs 13 employees after 2.5 years, thereby contributing significantly to the rate of employment (de Wit & de Kok, 2014; Kollmann et al., 2016). Additionally, startups are often utilized as a vehicle to place innovative products into the market (van Praag & Versloot, 2007).

However, those positive benefits of entrepreneurship can only be reaped if ventures are economically successful. Especially in early business stages, the founder's individual contribution to venture performance is substantial (Rauch & Frese, 2007). Although most entrepreneurs are not aware of their impact, their well-functioning, and thereby the success of their venture, is dependent on their personal health (Ayala & Manzano, 2014; Feldt et al., 2013; Hatak, Rauch, Fink, & Baranyi, 2015; Uy, Foo, & Zong, 2013; Volery, 2010). Impaired entrepreneurial well-being has been suggested to lead to business failure (Shepherd, Marchisio, Morrish, Deacon, & Miles, 2010). Thus, entrepreneurial health is a relevant factor for general societal developments through its secondary effects on overall venture performance.

Work-related stress constitutes one of the greatest threats to the functioning of Western societies in the 21st century and has gained increasing attention among scholars over the last decades (Schaufeli & Bakker, 2013). Stress in the workplace has been shown to lead to several negative consequences on personal (LePine, Podsakoff, & LePine, 2005; Örtqvist, Drnovsek, & Wincent, 2007; Shepherd et al., 2010; Van Vegchel, De Jonge, Bosma, & Schaufeli, 2005) and organizational levels (Shepherd et al., 2010).

Prior research has compared stress levels among entrepreneurs and employees from different theoretical perspectives (e.g. Benz & Frey, 2004; Hmieleski & Baron, 2008; Millán, Hessels, Thurik, & Aguado, 2013). However, findings are contradicting and inconclusive. A recent longitudinal study by Hessels, Rietveld, and van der Zwan (2017) found that founders experienced significantly less stress than their employed counterparts. This is in line with

other studies pointing to lower stress levels among entrepreneurs (Baron, Franklin, & Hmieleski, 2016; Benz & Frey, 2004; Binder & Coad, 2013; Eden, 1975; Stephan & Roesler, 2010). In contrast, a number of scholars found that entrepreneurs experienced higher levels of stress compared to employees (Blanchflower, 2004; Cardon & Patel, 2015; Lewin-Epstein & Yuchtman-Yaar, 1991; Prottas, 2012). Additionally, other findings indicate no significant difference in stress levels between the two groups (Parasuraman & Simmers, 2001; Prottas & Thompson, 2006). Hence, research in this field remains inconclusive and scholars have not delivered an explanation for those contradicting results yet.

Although these conflicting findings may partly be explained by diverging operationalizations of stress and definitions of entrepreneurship (Rauch, Hatak, & Fink, 2016) as well as diverse methodologies applied in the various studies (Hessels, Rietveld, & van der Zwan, 2017), the heterogeneity of the entrepreneurial population may also contribute to the variance of results (Shepherd & Patzelt, 2015). Hatak and Fink (2016) call for a more precise understanding of entrepreneurial stress and argue that “the impact of stressors on entrepreneur’s stress reactions and subsequent stress outcomes is not straightforward but depend on intervening and moderating processes that make entrepreneurship a distinct and attractive context for stress research” (p.2). Despite the discussed societal relevance entrepreneurs possess and the potentially severe consequences for their own health, individual factors contributing to their experience of stress are hardly understood and traditional stress theories are not necessarily applicable in the entrepreneurial context (Rauch et al., 2016). Furthermore, the current stream of research is highly fragmented and is missing a comprehensive framework for a deeper understanding of entrepreneurial stress (Rauch et al., 2016). The current study taps into this academic gap. By applying a qualitative research design this work aims to contribute to a more nuanced understanding of entrepreneurial stress and thereby creating the first comprehensive theoretical model of its underlying processes. Following a grounded theory approach, semi-structured interviews with entrepreneurs about their stress experience were conducted and analyzed. Interrelations between individual, organizational, and environmental factors were extracted, resulting in a comprehensive model of entrepreneurial stress.

This study contributes to research and practice in several ways. First, the it develops

a comprehensive model of the entrepreneurial stress process, thereby enhancing the understanding of this under-researched topic. Previous studies mainly focused on a comparison of entrepreneurs and employees (Hessels et al., 2017; Hmieleski & Carr, 2008). This study aims to explain the variation of stress experience within the entrepreneurial population.

Second, although scholars investigated the entrepreneurial stress process in greater detail, those studies only focused on certain aspects of this topic, such as personality (e.g. Shepherd & Patzelt, 2015; Brandstätter, 2010) or the impact of financial hardship (Annink, Gorgievski, & Den Dulk, 2016). The current study takes a broader view, thereby identifying interrelations between multiple factors relevant for the entrepreneurial stress process.

Third, the stream of research is dominated by quantitative approaches (e.g. Baron et al., 2016; Grant & Ferris, 2009; Hessels et al., 2017). Without denying their contribution to the established body of knowledge, a qualitative study is urgently needed to gain a deeper understanding of the underlying processes (Dooley, 2001).

In practical terms, this study may raise awareness among entrepreneurs of their own health and its associated significance. Furthermore, it may equip them with inspiration on how to reduce their individual stress level or mitigate its adverse effects. Institutions such as governmental agencies or health insurance companies would profit from a more nuanced understanding of the entrepreneurial stress process when designing programs aimed at decreasing or preventing stress among founders. Finally, entrepreneurship has a profound impact on economic and social developments. Therefore, society in general may benefit from the adoption of current findings by entrepreneurs and institutions, resulting in a healthier entrepreneurial population.

2. THEORETICAL BACKGROUND

Stress is defined as “a relationship between the person and the environment that is appraised as personally significant and as taxing or exceeding resources for coping” (Folkman, 2013, p.19). Research shows that the relationship between stress and performance can be explained by an inverted U-curve, known as the Yerkes-Dodson Law

(Schiffirin & Nelson, 2010). Although this relationship has not been established for the entrepreneurial context, it seems arguable that up to a certain level stress can be beneficial and increase productivity (Schaufeli & Bakker, 2013). However, when exceeding the optimal level of arousal, stress shows its opposite side. It is associated with several negative bodily consequences including hypertension, arteriosclerosis, general deterioration of health, and mental strain (LePine et al., 2005; Örtqvist et al., 2007; Shepherd et al., 2010; Van Vegchel et al., 2005). Sustained stress can on the long run lead to burnout which is commonly defined as a psychological syndrome characterized by exhaustion, cynicism and lack of professional efficacy (Bakker, Demerouti, & Schaufeli, 2002). Burnout is associated with negative personal outcomes, including anxiety, self-doubt, weakened and severed relationships, general poor health, alcoholism, and drug abuse (Brigham, 2004; Cardon & Patel, 2015; Cordes & Dougherty, 1993). However, it can also be harmful on organizational levels. Research has highlighted links between burnout and increased executive absenteeism, decreased productivity, and business failure (Shepherd et al., 2010).

In this chapter, results of the systematic literature review are presented. It was conducted according to the methodology proposed by Tranfield, Denyer, and Smart (2003) due to its appropriateness for the current research context (Denyer & Tranfield, 2009). The suggested process guided in defining the area of interest, searching relevant literature, selecting appropriate sources, analyzing them, and finally reporting the results. (Tranfield, Denyer, & Smart, 2003; Denyer & Tranfield, 2009). Electronic databases such as Google Scholar were utilized. Grouping of keywords such as 'entrepreneur AND stress' were used to discover appropriate sources. Additionally, cross-referencing and backward citations guided in identifying further articles (Denyer & Tranfield, 2009). This process resulted in 201 sources, which were checked for relevance by reading the abstracts and scanning relevant passages. Preference was given to journals with a focus on the area of interest such as 'Entrepreneurship Theory and Practice'. The relevant sources were read, meaningful information was extracted and interpreted by identifying interrelationships and contradictions. The reference management software Mendeley aided in conducting the literature review.

The extracted findings were categorized into three sections, that is individual,

organizational, and environmental characteristics. Individual characteristics refer to the specific entrepreneur, organizational characteristics are located on the firm level, while environmental characteristics are external to the entrepreneur and the venture.

2.1 Individual characteristics

The literature review revealed five categories of individual characteristics influencing the entrepreneurial stress process: demographics, personality, psychological capital, coping, motives and identity, each of which will be discussed in this subsection.

Demographics. First, the gender of the entrepreneur may influence the experience of stress. Annink (2016) found that female founders struggled with role conflicts between being a mother and entrepreneurship. Those findings are supplemented by other studies which revealed higher stress levels among female entrepreneurs in comparison to their male counterparts (de Smet et al., 2005; Vermeulen & Mustard, 2000). However, other studies revealed no significant difference between genders (Baron et al., 2016; Martocchio & O’Leary, 1989). Hence, evidence on this issue is not clear and must be further investigated.

Second, research has shown that age is related to stress among entrepreneurs (Bluedorn & Martin, 2008). In contrast to younger founders, older entrepreneurs experienced significantly lower levels of stress (Bluedorn & Martin, 2008). Another study yielded contradicting results and found no significant impact of age on stress levels (Baron et al., 2016). However, it seems reasonable that age may constitute a factor for entrepreneurial stress via a mediating effect of work experience which enhances the entrepreneur’s skills to cope with stressful situations (Baron et al., 2016; Shepherd et al., 2010; Volery, 2010). Therefore, age should be considered when investigating entrepreneurial stress.

Third, education may impact stress among entrepreneurs. Studies found that higher levels of education lead to lower levels of entrepreneurial satisfaction which in turn may impact stress (Bradley & Roberts, 2004; Clark, 1997; VandenHeuvel & Wooden, 1997). Carree and Verheul (2012) argue that highly educated founders may overestimate their abilities and consequently are more likely to be disappointed by unfulfilled expectations. Furthermore, Ferrante (2009) found that individuals with higher educational levels are more prone to lament over foregone opportunities which may also lead to higher levels of stress.

Hence, higher education potentially leads to increased stress levels among entrepreneurs.

Personality. Research shows that personality significantly influences individual well-being (Higgs & Dulewicz, 2014; Weiss, Bates, & Luciano, 2008) and results indicate that entrepreneurs tend to differ in their personality from the general population (Brandstätter, 2011; Zhao & Seibert, 2006). A study by Brandstätter (2010) showed that Australian entrepreneurs score on average higher on the character trait extraversion than their non-entrepreneurial comparison group. In their meta study, Zhao and Siebert (2006) found higher levels of conscientiousness and openness to experience, while on neuroticism and agreeableness entrepreneurs scored lower in comparison with employed managers. Stephan and Roesler (2010) found that extraversion, agreeableness, emotional stability, and conscientiousness are positively linked to subjective well-being among entrepreneurs. Those findings are supported by more recent evidence from Berglund (2014). Another study found locus of control to be predictive for entrepreneurial stress (Wincent & Örtqvist, 2009). Individuals with an internal locus believe that they are responsible for and in control of their own success, while individuals with an external locus of control believe that external forces determine their outcomes (Rotter, 1966). Results showed that entrepreneurs with an internal locus of control experienced lower levels of stress in contrast to entrepreneurs with an external locus of control (Wincent & Örtqvist, 2009). Additionally, low self-esteem as well as overly self-critical perfectionism have been linked to a greater vulnerability to stress experiences (Dunkley, Zuroff, & Blankstein, 2003). Concluding, personality must be considered in entrepreneurial stress research.

Psychological capital. The theoretical construct psychological capital consists of self-efficacy, optimism, hope, and resilience (Fedai Çavuş, Gökçen, & Shen, 2015; Luthans & Youssef, 2004). Prior research indicates a negative relationship between psychological capital and entrepreneurial stress (Baron et al., 2016). Furthermore, studies have investigated its single components among entrepreneurial samples (Bradley & Roberts, 2004; Cooper & Artz, 1995; Hmieleski & Carr, 2008). For example, self-efficacy and optimism are positively related to various measures of individual well-being (Bradley & Roberts, 2004; Cooper & Artz, 1995) and Hmieleski and Carr (2008) showed that hope acted as buffer of stress among entrepreneurs. Those results are in line with a more recent study which found

that psychological capital is negatively related to emotional exhaustion (Roche, Haar, & Luthans, 2014). Therefore, psychological capital as an overarching construct as well as its individual components must be considered when investigating entrepreneurial stress.

Coping. Coping is defined as cognitive and/or behavioral responses to manage stress (Zeidner & Endler, 1996) and may constitute one of the most relevant determinants of entrepreneurial stress: “In the entrepreneurial process, effective self-regulation and the ability to cope with negative emotions and omnipresent stress are indispensable” (Przepiorka, 2016, p.7). Researchers classify coping strategies into active coping and avoidance coping (Uy et al., 2013). Active strategies entail activities which directly address the underlying problem at hand, while avoidance coping aims to create distance to the stressor (Uy et al., 2013). Research shows that a combination of both approaches has yielded the most effective results for entrepreneurs in reducing their stress experiences (Blonk, Brenninkmeijer, Lagerveld, & Houtman, 2006; Shepherd & Patzelt, 2015). Furthermore, there exists considerable agreement among scholars that experience is predictive for coping effectiveness among entrepreneurs (Boyd & Gumpert, 1983; Corbett, 2005; Fritz & Sonnentag, 2005; Shane & Stuart, 2002; Uy et al., 2013). Uy et al. (2013) argue that “prior experience can also offer a sense of control in times of stress as a result of being exposed to relatively familiar environments” (p.12). Therefore, coping must be incorporated in the entrepreneurial stress process as it may help entrepreneurs to deal with demanding situations.

Motives and identity. Hatak et al. (2015) distinguish three types of entrepreneurial motivation: necessity driven, rationality driven, and opportunity driven. Necessity-driven entrepreneurs are individuals who perceive “entrepreneurship to be a negative outcome resulting from a lack of suitable employment opportunities” (Hatak et al., 2015, p.3). Rational entrepreneurs found their businesses because they expect higher incomes compared to employment, while opportunity-driven entrepreneurs are “driven by the desire to pursue an interesting entrepreneurial opportunity than by the need to leave career employment” (Hatak et al., 2015, p.3). Results showed higher levels of burnout symptoms among necessity- and opportunity-driven respondents. Those findings are supported by a recent longitudinal study which found that necessity-motivated entrepreneurs reported

lower rates of subjective well-being and overall life satisfaction compared to their opportunity-motivated counterparts (Binder & Coad, 2016).

Other scholars have examined the motivation to become an entrepreneur through the lens of social identity theory (Fauchart & Gruber, 2011). This approach has recently gained increasing attention among scholars (Sieger, Gruber, Fauchart, & Zellweger, 2016). Social identity theory differentiates between Darwinian founders who are driven by economic self-interest, Communitarian entrepreneurs considering “their firms as social objects that support and are supported by a particular community because of mutually beneficial relationships” (Fauchart & Gruber, 2011, p.936), and Missionaries who want to benefit society in general (Sieger et al., 2016). Sherman, Randall, and Kuanui (2015) found, that entrepreneurs value purposeful work. However, what is considered purposeful varies among the entrepreneurial population (Fauchart & Gruber, 2011). Thus, different motivations lead to distinct assessments of firm success. Since negative assessments of own performance may lead to stressful experiences (Cooper & Artz, 1995), the motivation to become an entrepreneur may influence their stress experiences.

2.2 Organizational characteristics

Organizational characteristics relate to the business and work characteristics of the entrepreneur. The literature review revealed six characteristics which may impact the entrepreneurial stress process, each of which will be discussed in turn: legal form, employees, founder team interaction and expertise, human resources, job characteristics, financial problems and venture success, and firm age.

Legal form. Founders can choose from a variety of legal forms when setting up their business (McLaney & Atrill, 2012). While with some forms, founders are privately liable for their business, other forms limit the owner’s liability (McLaney & Atrill, 2012). In the first case, financial problems incurred by the venture can directly be transferred to the private belongings of the owner (McLaney & Atrill, 2012), a situation which may create substantial stress. A study conducted in Sweden found that mortality among owners was significantly higher in sole proprietorship than in limited partnership (Toivanen, Mellner, & Vinberg, 2015). Although this study did not investigate direct links of legal forms to entrepreneurial

stress, the authors suggest that stress may have acted as a mediator between legal form and mortality (Toivanen et al., 2015). Therefore, legal form should be considered when investigating entrepreneurial stress.

Founder team interaction and expertise. The quality of the founding team is one of the most important predictors of venture growth (Visintin & Pittino, 2014). Heterogeneity in professional backgrounds among founders has been shown to positively impact creativity and business performance (Beckman, 2006). However, conflict within the entrepreneurial team can also be a source of stress. Fauchart and Gruber (2011) found that different motivations to enter entrepreneurship led to conflict within founding teams and that homogeneity among co-founders resulted in positive energy and enthusiasm. Hence, while professional diverse backgrounds are beneficial to venture performance and thereby potentially preventing stressful situations, distinct motivations and related personal goals among co-founders cause internal team conflict, which in turn may result in stress.

Further, scholars have compared role stress and conflict among owners of family businesses and non-family businesses (Carr & Hmieleski, 2015; Cinamon & Rich, 2002; Werbel & Danes, 2010). Results indicate that owners of family businesses experience additional pressure (Werbel & Danes, 2010) and increased role conflict (Cinamon & Rich, 2002). A study by Carr and Hmieleski (2015) found increased tension from family-work conflict for founders of family businesses compared to founders of non-family businesses. However, founders of family businesses also profit from a shared understanding, which contributes to an increased level of social support (Halbesleben & Wheeler, 2007; Sirmon & Hitt, 2003). Thus, the relationship between family business and entrepreneurial stress is a complex one, but needs to be considered when investigating this phenomenon.

Human resources. Ventures are often categorized as run by a single person or contracting employees (Earle & Sakova, 2000). This distinction can have an impact on the stress level of the entrepreneur (Blanchflower, 2004; Hessels et al., 2017; Tekleab, Quigley, & Tesluk, 2009). A study by Blanchflower (2004) reported significantly higher working pressure for founders who hired employees than those who did not. Hessels et al. (2017) argue that “running a business employing others is also accompanied by a higher workload.” (p.184) and that ventures contracting employees are generally more complex which

increases entrepreneur's workload. Additionally, conflict arising from team friction is prone to create stress (Tekleab et al., 2009). Therefore, challenges related to human resources must be considered in the entrepreneurial stress process.

Job characteristics. Entrepreneurs are confronted with highly diverse tasks including strategy making, acquisition of financial and non-financial resources, managing and leading employees, negotiating with suppliers and customers, and administrative work (Patzelt & Shepherd, 2011; Prottas & Thompson, 2006). Those diverse tasks lead to specific demands for entrepreneurs. They have been shown to feel personally responsible for the well-being of their ventures and to be more involved in their business than employees (Grant & Ferris, 2012). Due to increasing environmental complexity (Walsh, Kirchhoff, & Newbert, 2002), entrepreneurs face greater uncertainty which in turn is prone to create stress (Baron et al., 2016). Further, studies showed that they often feel lonely and socially isolated, due to their role as entrepreneur and CEO of the venture (Örtqvist et al., 2007). Next to that, founders experience elevated levels of role conflict and ambiguity (Shepherd et al., 2010; Wincent, Örtqvist, & Drnovsek, 2008) and work long hours which even may extend into nightshifts and holidays (Ayala & Manzano, 2014; Örtqvist et al., 2007). Those demanding job characteristics are prone to create stress among entrepreneurs (Feldt et al., 2013).

However, entrepreneurship also comes with its benefits. Founders experience greater autonomy in their work life in comparison with employees (Eden, 1975; Prottas & Thompson, 2006; Stephan & Roesler, 2010). Autonomy, the capacity of individuals to make informed and uncoerced decisions (Leman, Bremmer, Parke, & Guavain, 2012), has been shown to be the most important role characteristic distinguishing entrepreneurship from employment and was able to explain differences in job satisfaction between employees and entrepreneurs (Benz & Frey, 2004; Prottas & Thompson, 2006). It allows entrepreneurs to schedule their days accordingly to their needs, thereby enhancing flexibility and deriving at a more satisfactory work-life balance (van Praag & Versloot, 2007). Hence, entrepreneurial work characteristics are on the one hand demanding and stress fostering, while on the other hand they equip entrepreneurs with autonomy which allows them to better deal with challenging situations.

Financial challenges and venture success. Venture performance is an obvious

determinant of entrepreneurial satisfaction (Cooper & Artz, 1995). However, as described above, the estimation of organizational performance is dependent on personal goals of the entrepreneur (Fuachart & Gruber, 2011). As Darwinian motivated entrepreneurs may use economic measures as a source of performance appraisal, missionaries may consider other parameters (Fuachart & Gruber, 2011). A study by Rau et al. (2008) found a negative relationship between experienced venture success and entrepreneurial exhaustion and depression. Thus, subjective measures of satisfaction with business performance may result in more nuanced insights into the entrepreneurial stress process than relying only on hard numbers derived from financial statements.

A special stream of research focused on financial hardship and work-related stress (e.g. Annink et al., 2016; Wahlbeck, Anderson, Basu, McDaid, & Stuckler, 2011). It is commonly acknowledged that financial trouble can lead to increased stress levels, anxiety and depression (McDaid et al., 2013; Wahlbeck et al., 2011). Specifically, a recent study by Annink (2016) highlighted a significant relation between financial hardship and impaired well-being among entrepreneurs. Those results are supported by a longitudinal study which found a negative impact of financial problems on health of self-employed farming couples (Gorgievski-Duijvesteijn, Giesen, & Bakker, 2000). Financial trouble can have severe consequences for founders. Smith and McElwee (2011) found that a proportion of their entrepreneurial sample slipped into a personal crisis triggered by feelings of shame resulting from financial problems. This crisis resulted in extreme cases in murder of loved ones, suicide, and alcohol abuse (Pieper, Smith, Kudlats, & Astrachan, 2015; Smith & McElwee, 2011). Concluding, personal estimation of venture success and financial challenging situations constitute relevant characteristics for entrepreneurial stress.

Firm age. Distinct stages of the entrepreneurial process require different tasks which need to be executed by the entrepreneur (Acs & Audretsch, 2003). In early venture phases, entrepreneurs spend a considerable proportion of the time writing a business plan and acquiring seed financing (Van Auken & Neeley, 1996). Later, the business plan needs to be implemented and employees may need to be hired (Baron, 2007; Korunka, Kessler, Frank, & Lueger, 2010). Those changing demands lead to different challenges, which in turn may impact the entrepreneurial stress experience. Evidence confirms that especially in early

business stages, entrepreneurs are prone to elevated stress levels due to an intense workload, lack of social support and feedback, as well as limited control options (Patzelt & Shepherd, 2011; Shepherd et al., 2010). One study even found lower levels of well-being among aspiring entrepreneurs in comparison individuals who actually founded their venture (Shir, 2015). Thus, firm age constitutes a relevant factor for stress among entrepreneurs, with a tendency to increased stress levels in early venture stages.

2.3 Environmental characteristics

Environmental characteristics are external to the organization and the entrepreneur. The literature review suggested three environmental characteristics to be relevant for the entrepreneurial stress process, each of which will be discussed in this subsection: industry, economic development, and institutions.

Industry. Work-related stress has been shown to differ across industries (Johnson et al., 2005). A study by Stephan and Roesler (2010) revealed that restaurant owners reported better health than entrepreneurs operating in the information technology. This is in line with another study which showed that founders who introduced radical innovation into the market reported less satisfaction than entrepreneurs focusing on incremental innovation (Simon & Houghton, 2003). Carree and Verheul (2012) argue that “greater environmental complexity may lead to less satisfaction as the entrepreneur is confronted with multiple sources of unexpected setback” (p.378). This was supported by their own results which indicated that a high level of environmental complexity lowered the satisfaction of entrepreneurs (Carree & Verheul, 2012). Next to that, competition intensity has been shown to be predictive for systolic blood pressure during leisure time and night among entrepreneurs, which in turn is indicative of increased stress levels (Rau et al., 2008). Thus, industry characteristics must be considered in entrepreneurial stress research.

Economic development. To a certain extent, each venture is dependent on general economic developments. Fairlie (2013) found that demands perceived by entrepreneurs are dependent on his/her predictions about short- and long-term economic trends. In line with that, Hatak's et al. (2015) results indicate that pessimistic expectations about general economic developments are positively related to burnout symptoms among entrepreneurs.

Thus, general economic developments constitute a relevant factor for the entrepreneurial stress process.

Institutions. Institutional norms vary significantly across countries (Annink et al., 2016). A study conducted in the tourism industry showed that national institutional configurations influenced well-being among entrepreneurs (Cuellar-Molina, Lucia-Casademunt, & Mercedes Garcia-Cabrera, 2015). Especially, government practices to enhance business competitiveness contributed to entrepreneurial well-being (Cuellar-Molina et al., 2015). Those findings are supported by recent evidence. Annink et al. (2016) found that the availability of unemployment allowance, which differs significantly across countries, buffered the positive relationship between financial hardship and personal well-being among an international entrepreneurial sample. The study also revealed that formalized childcare gave entrepreneurs more leeway for engaging in social activities which had a positive impact on their work-life balance (Annink, den Dulk, & Steijn, 2015). Thus, national institutions may influence entrepreneurial stress.

In sum, prior research on entrepreneurial stress revealed meaningful insights, but focused on specific aspects. An overview of relevant characteristics derived from the literature can be found in Table 1. A comprehensive model considering multiple dimensions is needed to provide deeper insights into determinants of stress experience among entrepreneurs, their consequences, and potential contingencies. Therefore, the following research question is formulated:

Which individual, organizational and environmental characteristics lead to stress among entrepreneurs, with what effects, and how are they interrelated?

The current study is the first to comprehensively explain stress among founders considering individual, organizational, and environmental characteristics. The remainder of the paper is structured as follows. First, the applied methodology is laid out, followed by the presentation of results. Thereafter, the findings, limitations and paths for future research are discussed. The paper ends with a short conclusion.

Table 1
Literature overview

Level	Characteristics
Individual	Demographics, Personality, Psychological capital, Coping, Goals and identity
Organization	Legal form, Human resources, Founding team interaction and expertise, Job characteristics, Financial challenges and venture success, Firm age
Environment	Industry, Economic development, Institutions

3. METHODOLOGY

3.1 Epistemological position

Epistemology is defined as “the study of the nature of knowledge and justification” (Schwandt, 2001, p. 71). This definition implies, that epistemology can be thought of as beliefs about knowledge a researcher has while conducting a study. It is crucial to reflect on this issue before conducting research as it affects the selection of the general research strategy and methodologies (Dooley, 2001). This paper follows the assumption that the researcher is always part of the process of data collection and analysis. Furthermore, realities of humans are constructed: “Social reality is multiple, processual, and constructed, and we must take the researcher’s position, privileges, perspective, and interactions into account as an inherent part of the researcher’s reality.” (Charmaz, 2014, p.53). Therefore, the current study adopts a constructivist position. This epistemological position accepts that the researcher can be biased in his or her interpretation of reality and must take this into account through all stages of the research process which makes, it the ideal viewpoint for the current research context, investigating highly individual perceptions of reality (Hurd, 2008).

3.2 Research approach

The lack of established theoretical frameworks for entrepreneurial stress calls for an exploratory design which allows to obtain in-depth information and provides flexibility in

conducting research (Dooley, 2001). In line with the formulated epistemological position, constructivist grounded theory was chosen as research approach (Charmaz, 2014). Grounded theory is a set of techniques for conducting exploratory research (Charmaz, 2014; Glaser & Strauss, 1967; Strauss & Corbin, 2008). It is a widely-accepted approach for extending existing and/or generating new theory, thereby uncovering potentially hidden themes and patterns (Walsh et al., 2015). The goal of grounded theory is to generate an explanatory model that is grounded in the experience of participants currently engaged in the topic under study (Charmaz, 2014; Glaser & Strauss, 1967; Walsh et al., 2015). In the original grounded theory approach, Glaser and Strauss (1967) suggest that the researcher should enter data collection without performing an extensive review of literature beforehand. They argue that researchers should maintain a blank mind and should not be influenced by prior knowledge. This aims to ensure that the developed theory is truly grounded in the data (Glaser & Strauss, 1967). While Strauss later diverged from this standpoint (Strauss & Corbin, 2008), Glaser continued to believe that theory simply emerges from gathered data and that an extensive research review is harmful to the end product (Cooney, 2010). The current study not only rejects this view, but adopts the constructivist grounded theory approach as proposed by Charmaz (2014), which states that generated knowledge need not necessarily influence the researcher in a negative way. Rather, knowledge can guide as a framework while conducting a study and enrich the resulting product. Thus, inductive techniques can be backed up by deductive reasoning, thereby utilizing the existent body of knowledge (Charmaz, 2014). Furthermore, constructivist grounded theory provides a flexible, yet scientific and process-oriented approach to execute studies (Charmaz, 2014). This makes it an ideal instrument for conducting qualitative research in a field which lacks a common theoretical framework and which is dominated by quantitative approaches (Ramalho, Adams, Huggard, & Hoare, 2015).

Specifically, semi-structured interviews are selected as research tool as they provide a suitable manner to gain insights on the topic under investigation (Dooley, 2001). However, due to resource constraints of the current research, the interviews could only be conducted once, which implies a cross-sectional design (Dooley, 2001). Since three different researchers were involved, the interviews were held in a time span of 16 months.

3.3 Data collection and participants

This study adopted the definition of entrepreneurs as the founder of a business (Carland, Hoy, & Carland, 1988). This was the only prerequisite candidates had to fulfill to be selected as participants. The sample consisted of 40 entrepreneurs. Two sets of interviews ($n = 31$) were conducted by students from the University of Twente in the context of their master theses¹, nine were conducted by the author of this research. The first two sets of interviews were split into three parts.

First, a priming exercise along an entrepreneurial activities grid was conducted. Second, a projective technique was used to extract potentially subliminal feelings and thoughts entrepreneurs may be unaware of about their stress experience. Finally, semi-structured interviews about the entrepreneur's personal stress experience were conducted. For more detailed descriptions on methods applied it is referred to Wolf (2016).

The interviews of the current study were split into two main parts. First, the researcher conducted semi-structured interviews with respondents about their individual stress experience. Second, findings from already conducted interviews were discussed in an open manner with the respondents (see appendix A for the interview guideline). Through this technique, the researcher gained insights on the entrepreneurial stress process and an open feedback from domain experts on the so far gathered results.

The interviews lasted between 30 to 60 minutes. Respondents were interviewed either face to face or via online communication technologies (e.g. Skype). All interviews were recorded and transcribed. In line with grounded theory, the researcher continued to conduct interviews until theoretical saturation was reached (Glaser & Strauss, 1967). At this point, it is assumed that no further insights will be gained through further data collection (Glaser & Strauss, 1967).

This study followed a convenience sampling approach (Dooley, 2001). Participants were recruited via the personal and professional network of the respective researchers and contacted via social networks (Facebook, LinkedIn), e-mail, phone, or face to face. One set of participants ($n = 16$) constituted of entrepreneurs whose ventures were active in the green

¹ Thanks to Ines Wolf and Laura Morren for conducting the interviews and making the transcripts available for this work.

sector; the remainder of participants operated in diverse industries (see table 2). Age ranged from 23 to 53 years, 30 respondents were male, 10 were female. Detailed information on sample composition can be found in table 2.

Table 2
Sample characteristics

Participant	Age	Gender	Education	Entrepreneurial experience	Co-founders	Employees	Industry
R1	31	Male	Dipl.-Ing.	4 years	1	0	Renewable Energies
R2	30	Male	Dipl.-Ing.	1 year	1	1	Finance
R3	28	Female	Msc.	2.5 years	3	5	Retail, Food Service
R4	34	Female	Dipl.-Ing.	3 years	1	0	Architectural Services
R5	33	Male	MBA	16 years	0	10	Recycling
R6	26	Male	Msc.	2 years	2	0	Renewable Energies
R7	46	Male	High School	20 years	5	6	Food Service
R8	33	Female	Msc.	1 year	0	5	Retail, Food Service
R9	38	Female	PhD	2 years	0	1	Online Retail
R10	29	Female	Msc.	10 years	3	28	Renewable energies
R11	27	Male	Msc.	10	4	1	Renewable energies
R12	32	Female	Msc.	1	1	1	Apparel & Textile
R13	-	Male	Dipl.-Mgmt	17 years	1	1	Agriculture
R14	26	Male	Msc.	2	1	3	Manufacturing & Retail
R15	27	Female	Bsc.	4	1	50+	Food Service
R16	46	Male	University	20	1	16	IT/Finance
R17	23	Male	University	2	1	9	IT
R18	27	Male	Higher vocational education	2	0	18	IT/ automotive
R19	41	Male	Higher vocational education	8	1	11	IT/ software
R20	27	Male	University	5	3	8	IT/ consultancy
R21	27	Male	Higher vocational education	7	3	2	IT/ app development
R22	25	Male	Intermediate vocational education	4	0	5	IT/ marketing
R23	32	Male	University	10	1	9	IT/ software

Table 2 continued

Participant	Age	Gender	Education	Entrepreneurial experience	Co-founders	Employees	Industry
R24	28	Male	University	16	1	2	IT/ software
R25	39	Male	University	3	0	2	IT
R26	23	Male	University	3	3	0	IT/ entertainment
R27	49	Male	University	11	0	17	IT/ software
R28	25	Male	University	2	1	2	IT/ softwarej
R29	29	Male	University	5	1	12	IT/ aviation
R30	38	Male	Higher vocational education	3	3	0	IT/ software
R31	53	Male	University	4	3	0	IT/ mobility
R32	32	Female	Bachelor	4	2	20	IT
R33	25	Male	Master	3	1	5	Media and design
R34	34	Male	Bachelor	7	1	4	Digital agency
R35	34	Male	Master	3	2	130	Fashion
R36	32	Male	Bachelor	4	1	2	IT
R37	36	Male	Bachelor	4	1	0	IT
R38	23	Male	Bachelor	1	2	0	Real estate
R39	35	Female	Bachelor	4	2	20	IT
R40	40	Male	Dipl.-Ingenieur	10	2	20	IT

Note. Since data was gathered by three researchers, different names level of abstractions for Education and Industry were captured.

3.4 Data analysis

Analysis of the interviews followed an iterative process as proposed by constructivist grounded theory (Charmaz, 2014). It consists of three steps: open coding, focused coding, and theoretical coding. The software Atlas TI aided in analyzing the interviews (Muhr, 2004).

The goal of the first phase, open coding, is to identify themes in the data by summarizing and rephrasing text passages. Through this detail oriented process, the researcher got a first understanding of the entrepreneurs' experiences of stress (Charmaz, 2014). Open coding resulted in 4398 open codes.

The goal of the second step, focused coding, is to identify broader themes and analyze the potentially hidden deeper meanings behind what participants expressed during the interviews (Charmaz, 2014). This was done by iterating the open codes several times and

comparing between participants. Thereby, broader categories emerged and open codes were linked to those categories. This second phase resulted in 18 categories (see appendix C).

The last step is theoretical coding. The goal of this phase is interrelate emerged categories (Charmaz, 2014). Examining the relationships between the identified categories was an essential part of this study since the categories do not have an inherent meaning in themselves. Backed up by prior research and logical reasoning, the categories were related and the final model emerged. This task was especially challenging since it was not always obvious how the categories relate to each other. This challenge was tackled by rigorously focusing on the data and iterating the model several times.

In the appendix, a list of all categories as well as an example for a coding scheme can be found (see Appendix B and C). During the entire process of the analysis, the researcher took memos in which he recorded spontaneous thoughts (Charmaz, 2014; Glaser & Strauss, 1967). Those memos supported in developing the final model and aided in writing this paper.

3.5 Efforts to enhance trustworthiness

Each research approach has its specific shortcomings (Dooley, 2001). Lincoln and Guba (1985) suggest four factors through which qualitative research can be evaluated: credibility, transferability, dependability, and confirmability.

Credibility refers to the accurate representation of the respondent's original data (Lincoln & Guba, 1985). This can constitute a special challenge in qualitative research settings since data is usually captured in words or observations which makes it more intricate to represent them in accurate way, compared to quantitative approaches (Lincoln & Guba, 1985). To tackle this challenge, in this research it was ensured that each interview was thoroughly recorded and transcribed which enhances the accuracy of data representation. Besides, the structured methodology of the constructivist grounded theory approach as well as choosing semi-structured interviews as research instrument made responses more comparable and the process more systematic and transparent (Charmaz, 2014). Still, the researcher has played an active role in gathering and analyzing the data and therefore his

own interpretations may have influenced the outcomes (Charmaz, 2014; Dooley, 2001).

Transferability is the degree to which results can be generalized to other settings (Lincoln & Guba, 1985). The participants of the current study constitute a reasonable, yet not representative sample of the entrepreneurial population (Kollmann et al., 2016). Due to convenience sampling, the current sample has certain limitations, such as a lack of necessity-driven entrepreneurs and a bias towards male participants, which should be addressed in future research. However, characteristics of the participants are provided in Table 2 which enables readers to set the results into its context.

Dependability refers to the changing context in which research occurs (Lincoln & Guba, 1985). The current research tackled this challenge by asking respondents about the history of their stress experience (see appendix A). However, studies must always be considered in their historical context and environmental events, such that a major financial crisis may impact the entrepreneurial stress process.

Finally, confirmability is the degree to which findings are unaffected by researcher's biases, interests, or motivations (Lincoln & Guba, 1985). As described above, the researcher engaged in a reflexive attitude, meaning that he tried to be as neutral as possible and recognized that own beliefs may shape the outcome of the study (Charmaz, 2014). However, constructivism accepts that the researcher plays an active role in conducting research (Charmaz, 2014) and explicitly mentioning it in the final work enhances the transparency of results.

4. FINDINGS

In this section, the findings of the current study are presented. They are divided into five parts. First, to provide the reader with an overview the derived overall model with its interrelationships is presented. Afterwards, the components of the entrepreneurial stress process are discussed, that is stressors, stress level, contingencies, and outcomes. The findings are split into individual, organizational, and environmental characteristics, which is in line with the clustering applied in the section two of this paper. To provide a more comprehensive and rigorous understanding, the findings are enriched with citations

extracted from the interviews.

4.1 Overall model

In this subsection, the overall model is presented. During the last phase of the analysis, theoretical coding, the derived categories were set into relation and a circular model of the entrepreneurial stress process emerged (see Figure 1).

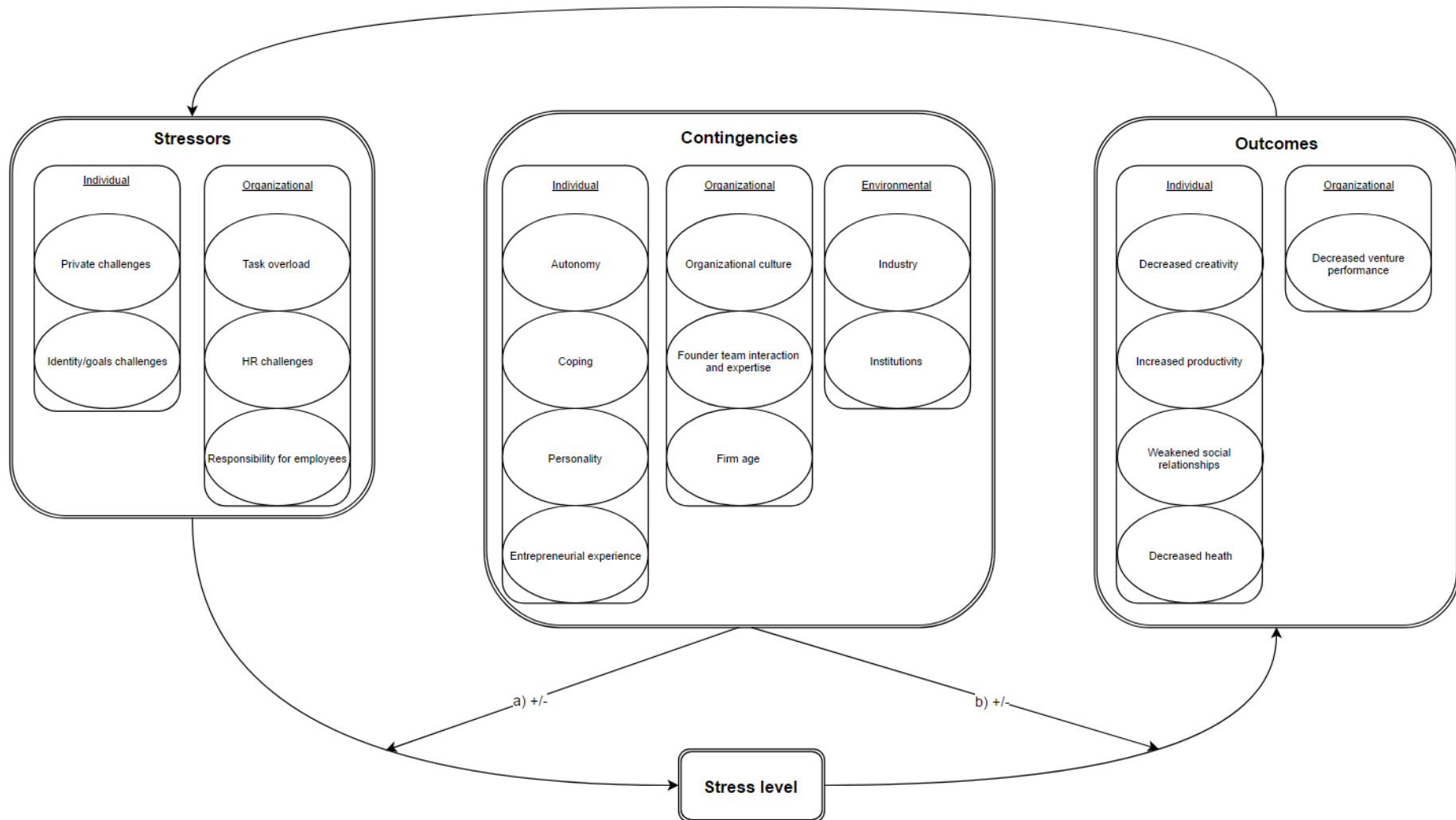


Figure 1: The Entrepreneurial Stress Cycle.

The derived model is a process model which consists of four dimensions: stressors, stress level, outcomes, and contingencies. The definition of Beehr & Franz (1986) is adopted, which characterizes stressors as environmental stimuli or events causing stress. Transferring this into the current research context, stressors can impact stress levels of entrepreneurs. The stress level in turn can lead to certain outcomes, which again can impact the stressors. The interrelationships are influenced by contingencies that strengthen or weaken the relationships between a) stressors and stress level, and b) stress level and outcomes. It must be noted that results revealed, that the stress experience is highly individual for each entrepreneur and that it can differ significantly between participants. Therefore, this model depicts the most common factors and their interrelations derived from the data.

4.2 Stressors

In this subsection, the stressors are presented. Analysis of the data revealed two individual-level and three organizational-level stressors, discussed in this order.

Private challenges. Many entrepreneurs mentioned that private challenges can lead to elevated stress levels. This was especially true for interpersonal problems or family issues:

“When I had problem in my relationships some years ago, that also strongly affects work. Because it's really like that kind of stress the way you always have to think about something” (R35).

However, other respondents put this aspect into perspective:

“It depends on the private stress. If it's something more crazy, like not just a fight or something but let's say in sickness in the family, that's something with which is a lot harder to fade out” (R36),

while others even mentioned that their work helped them to shift their attention away from it:

“I think, it's relatively easy to switch [from private to work] because I can just lose myself in my work. So, I'd say it doesn't really impact my work.” (R32).

Still, private challenges constitute an individual stressor for entrepreneurs and was therefore integrated into the model.

Identity/goals challenges. Every entrepreneur has an individual motivation to start his or her venture. Most entrepreneurs in this sample were driven by the desire for self-

realization, better working conditions, an economical opportunity, and/or a sustainable mission of their venture. However, when the entrepreneurs were not able to reach their goals, this could lead to stress, as described by following quotes:

"Because entrepreneurs usually tend to seek for their personal development and freedom. And when you feel you don't reach that I think that can create a lot of stress." (R35)

and *"when I feel that I don't reach my goals, this could create stress"* (R38).

Since the overall goal of the entrepreneurs is closely connected to their entrepreneurial identity, this category was labeled entrepreneurial identity/goals challenges and constitutes an individual stressor.

Task overload. Task overload represents situations, in which entrepreneurs feel overwhelmed by the amount and diversity of tasks they must carry out: *"it's basically all the things that you have to handle."* (R2), or when *"there are too many things coming together [this creates stress]"* (R20). Additionally, deadlines create further pressure: *"Stress in general [comes up], if you have deadlines."* (R11), *"Not having enough time [creates stress]."* (R27), and *"Sometimes I feel stressed out when I have a lot of things to do in a short period of time."* (R30).

Analysis revealed four potential areas which are prone to create task overload: operations, finance, hiring, and administration. The following quotes will demonstrate this.

Many entrepreneurs mentioned, that operational challenges lead to the experience of stress. Those situations can be diverse:

"But I think the thing that is most mentally demanding is what's going wrong at that specific moment. And that can be anything." (R17).

Other entrepreneurs became more specific and mentioned that especially unfulfilled customer expectations can create stress: *"[Stress comes up] If I can't fulfill the customer request or wishes."* (R9). Also, unexpected problems in the operational processes are potentially stress creating:

"You give something to the customer and within two minutes it crashed and doesn't work. That means that you continuously have to manage it." (R31).

Tasks related to administration, such as preparing tax declarations, were often described as *"boring"* (R1), *"nothing too exciting and fun"* (R9), and *"annoying"* (R13). Other respondents found harder words: *"I hate all the paperwork and the accounting and stuff like*

taxes.” (R19) or *“This is the worst part of your company, really the worst part.”* (R23). Many entrepreneurs circumvent those unloved activities through outsourcing: *“pay bills and bureaucratic overhead, I try to outsource that as well.”* (R13).

Next to that, hiring employees was mentioned as especially demanding by most respondents: *“Finding the right people to work is terrible, exhausting”* (R7). Still, it is of crucial importance for the success of the venture: *“Hiring is the key for everybody.”* (R1). Some participants expressed, that especially for startups hiring employees is a challenging task:

“Hiring employees is one of the more difficult things I encountered during entrepreneurship. It's very difficult to find the right people, especially also to get them with the culture of a startup.” (R32).

Also, for certain positions it appears harder to attract candidates: *“And also finding people, it's very difficult, mainly for the development [IT jobs].”* (R19).

Next to administration and hiring, various entrepreneurs classified finance issues as demanding. While some said that *“Finance is hard.”* (R11, R12), others explicitly mentioned that it can lead to stress: *“But the most stress is in financial [topics].”* (R13). This stressor is particularly present during the early stages of the venture:

“In the beginning of our company, we tried to get an investment. The effort and time it took us to try to achieve that, is very hard. You need to have a lot of understanding of how those investment processes work.” (R24).

Next to attracting financial resources from investors, the administration related to finance has also been described as challenging:

“Right now, we have raised capital so it's less, but still, the financial administration et cetera.” (R17).

Summarizing, task overload is a highly relevant stressor for entrepreneurs and was mentioned by the majority of the current sample. Especially tasks related to operations, administration, hiring, and finance, are likely to result in task overload.

HR challenges. HR challenges can be situations in which entrepreneurs have to deal with problems on founder level:

“The management with the co-founders, that's also a pretty hard thing. Management problems.” (R21),

or problems with employees:

"But if you have someone in your team working against you, that's a really stressful situations" (R32).

It was repeatedly mentioned, that the team composition is of crucial importance for the entrepreneurial stress process, since it is connected to a broad range of situations which potentially are stress creating:

"You need people who respect you as a person and your working style. I'm just realizing it is all about people." (R32),

and

"It's okay to have problems. Everyone has problems, but the important part is if you have the right people. Then you can solve almost any problem. Everyone sometimes has those black stripes in your life and you have to wait for it to become better. And it's much easier and enjoyable sometimes, to have to go through this tough time with good people." (R37).

This factor was one of the most commonly mentioned aspects among all respondents. Therefore, HR challenges constitute a potential stressor for entrepreneurs.

Responsibility for employees. Next to private factors, the felt responsibility for employees was a commonly mentioned experience which resulted in stress for participants:

"You have the responsibility, in this matter for ten people who work here. They have to have their salary." (R19).

This feeling can be amplified when more people with families are employed:

"But at some point you also have people working for you, so you also have responsibility. We are now in the thirties and people are having children, things like that. That's more the stress you're coping with." (R23).

Another entrepreneur explicitly linked responsibility for employees to finance issues:

"And, especially as an entrepreneur it is the problem of financing the whole company. This is also something which really can create stress and fear. This is especially true when you have hired people and need to ensure that they are getting paid." (R32).

Thus, the experienced responsibility to lead the company in a successful way in order to pay employees, was integrated as stressor.

4.3 Stress level

The identified stressors result in a specific stress level for each entrepreneur. In the current sample, entrepreneurs reported different experienced levels of stress. Some

lamented over intense stress: *"I'm stressed right now"* (R26) or *"I mean, it [entrepreneurship] is stressful and you get exhausted"* (R13).

Other respondents reported low stress levels: *"I don't have that many problems with stress"* (R27), *"Luckily, I don't have that much stress."* (R16) or even excluded stress for the entrepreneurial context: *"There is no stress. There is no stress as an entrepreneur"* (R1).

A proportion of the sample mentioned that they do not experience intense stress at this point in time, but expect it for the future:

"I hope that will never happen to me, but I can imagine that there will be a point where it is too stressful. But it never happened to me:" (R28).

However, due to its qualitative design, the present study did not assess stress levels in a thoroughly comparable way. Still, results clearly indicate diverging intensity of stress experience among the participants.

4.3 Outcomes

The identified stressors result in an individual stress level which in turn leads to certain outcomes. Analysis of the data revealed four individual and one organizational outcome of entrepreneurial stress.

Decreased creativity. An individual consequence, which was described by many entrepreneurs is reduced creativity: *"I am incredibly uncreative when I am stressed"* (R4). Creativity must be understood in a wide sense. While some entrepreneurs wanted to express that their artistic creativity suffers: *"Creative sector is not good to be stressed"* (R5), others referred to quality of strategic decision making which declines with stress:

"But the stress doesn't give you the space to think about your company, to look at the helicopter view of your company" (R22).

Thus, the ability for entrepreneurs to think and act in a creative way can be reduced through elevated stress levels.

Increased productivity. On the other hand, the majority of participants mentioned that a certain level of stress can lead to increased productivity:

"Sometimes I perform better under stress than when I don't have that much stress. Under pressure, everything becomes more fluent. Stress sometimes can be okay." (R30).

This seems to be especially true when deadlines are pending:

“Because if you've had the stress and at the end you make a deadline of when you'll finish all your tasks [then you get it done]” (R21).

Some even expressed that they need stress in order to perform: *“If you don't have stress, you won't do anything” (R27).*

Thus, increased productivity can be a beneficial outcome of stress. The critical point, at which stress leads to negative outcomes could not be clearly identified, but potentially depends on contingencies, which will be discussed in the next subsection.

Weakened social relationships. Next to those work-related individual consequences, the entrepreneurs also reported individual private outcomes. Most respondents mentioned that reduced social relationship can be a negative consequence of high stress levels:

“When you have too much stress on your work, then you're continuously solving problem and thinking about that and neglecting your social life and family” (R16).

A widespread problem among many participants is that they tend to *“take work and stress back to home” (R21).* This can lead to severe social consequences:

“I know a lot of stories of people who are divorced or whatever because of the entrepreneurship” (R23).

Although such drastic consequences are not represented among the current sample, most entrepreneurs mentioned that *“finding time for movies or seeing friends is a bit hard” (R9)* and *“that the business always comes first” (R29).*

Concluding, decreased social relationships can be a consequence of elevated entrepreneurial stress levels.

Reduced health. Additionally, many entrepreneurs highlighted health problems as potential outcomes of stress: *“Long-term stress is not good for your health” (R18).* Some respondents were more specific and mentioned *“sleeping problems” (R29), “getting depressed” (R7), “[feeling] exhausted” (R20), “accelerated heartbeat” (R7)* and unhealthy eating habits: *“you stay at the office, you order a pizza instead of having a healthy meal” (R20).* Also, *“smoking more cigarettes and drinking more alcohol” (R35)* were reported by entrepreneurs. Although not experienced by a participant of the current sample, burnout was mentioned as one potential consequence of long-term stress (R30). Therefore, reduced health clearly constitutes an outcome of high stress levels.

Decreased venture performance. Next to those individual effects, the analysis

revealed reduced venture performance as an organizational consequence of elevated entrepreneurial stress levels: *“Reduced venture performance can be a consequence of the stress”* (R35).

Especially innovation and sales were mentioned as being negatively impacted by high levels of stress. However, the participants had different opinions on this point: *“I had the feeling it [stress] even helped more than that it decreased performance”* (R38). Some respondents referred to firm size as potential contingency factor for this relationship:

“We’re only a team of three. When thirty percent is not functioning ok, it affects everything. So I think yes [stress can reduce venture performance].” (R30).

This opinion was supported by another participant who stated that stressed entrepreneurs have a negative impact on the rest of the team:

“If you’re stressed out about one thing, it will affect other tasks and other departments and other people. Of course, they can see you stressing and they’ll get stressed about getting the planning done faster. You affect your environment” (R21).

However, the impact of entrepreneurial stress on reduced venture performance remains unclear. Although more entrepreneurs pointed to potentially negative impacts, others stated that it can also increase venture performance. Still, it must be considered when explaining the entrepreneurial stress process and was therefore integrated as outcome into the model.

4.4 Circularity

Data pointed out, that the outcomes can influence initial stressors. This important finding accounts for the circularity of the derived model. One participant eloquently summarized the circular effect of entrepreneurial stress:

“Well, it can become kind of a downward spiral. You experience stress and this makes the situation even worse, because it can even, you know, aggravate the initial situation and influence it in many ways. It can be very hard to break through this cycle. But, I also think, that stress is experienced in a very individual way and that there are certain things which can influence it.” (R40).

While this respondent took a broad view on his stress experience, others focused on more specific aspects:

“If I had not enough sleep, I drink a lot of coffee, I thought I need it to survive. I am

just clicking through emails which one I should answer next but really get nothing done, kind of blocked. To solve this, I just need to get home and sleep.” (R2)

Here, drinking coffee and not getting enough sleep are outcomes in terms of health problems which decrease the productivity of the participants. This in turn may impact initial stressors, such as task overload.

Additionally, some participants explicitly mentioned that weakened social relationships impact their work as entrepreneur:

“When I had problem in my relationships some years ago, that also strongly affects work. Because it's really like that kind of stress the way you always have to think about something, where you feel ‘OK something is not in order’”, then I'm not able to focus 100 percent on my work.” (R36)

In such a situation, the outcome weakened social relationships would negatively impact initial stressors, potentially resulting in further task overload or financial challenges since the entrepreneurs is not able to properly concentrate on work. More obvious, weakened social relationships can also exacerbate the stressor private challenges:

“Yes, that [stress] could be some kind of circle. That means that when you neglect your family, you get stressed at home. They'll say: 'we feel neglected' and then you also have some extra problems at home. So, then you have more stress. That's the downward spiral.” (R16)

Thus, outcomes can influence stressors, potentially resulting in a vicious, self-reinforcing cycle. Therefore, circularity was integrated into the resulting model.

4.5 Contingencies

Entrepreneurial stress is a complex and highly individual phenomenon. All depicted relationships are dependent on manifold contingencies. The analysis of the current study revealed four individual, three organizational, and two environmental contingencies, which can influence the stress process in two ways. First, they might strengthen or weaken the impact of stressors on stress level. Second, they might influence the relationship between stress level and outcomes. No contingencies were obtained for the relationship between outcomes and stressors.

Autonomy. Autonomy is an important contingency, highlighted by many respondents: *“being my own boss is nice” (R3).* Especially the related flexibility provides

entrepreneurs with the necessary freedom to plan accordingly to their specific needs: *"I like, that I can plan my days and do the things I like right now feel are important"* (R11).

In contrast, many respondents described that feelings of losing control can increase their stress experience:

"Another thing that is demanding is the financing part. Why is it demanding? Because you're obviously dependent on other people. That's the difficult thing." (R16).

Hence, elevated levels of perceived autonomy can weaken the effect of stressors on stress levels by allowing entrepreneurs to accomplish their tasks in flexible ways or increase adverse effects of stressors on stress levels when there is a lack of control. For example, it allows them to plan their day in such a way that private challenges and task overload can be minimized through which the impact of those stressors on stress level would be buffered. On the other hand, it may strengthen stressors' impact when entrepreneurs experience a lack of control. Therefore, autonomy constitutes an important contingency for the entrepreneurial stress process.

Coping. Next to autonomy, coping is a contingency mentioned by all entrepreneurs of the current sample. The analysis revealed two different coping strategies. First, many entrepreneurs engaged in avoidance coping. With this strategy, participants found relief from the stressor by escaping the stressful situations:

"I do home office, a bit of distance, you see it from a different angle, you saw that sure this was important but not urgent, so why did I stress? It is normal you get into it and lose the feeling a bit, then you just need to relax" (R11).

Also, taking a walk was a strategy applied by many respondents: *"Walk the river, think about the problem there and then I usually come up with the solution."* (R5). Especially sports helped entrepreneurs dealing with stress: *"I think do a lot of sports"* (R1), *"Go running"* (R28), *"When I go dancing, I always become calm"* (R15). Furthermore, talking to trusted persons about stressful situations facilitated many entrepreneurs with coping: *"I have a girlfriend, I speak a lot with her and she's very supportive"* (R23) or *"My friends they all help me to get back. I get big support in that"* (R7). However, since free time is a rare resource for many entrepreneurs, some respondents explained that they dedicatedly schedule it into their daily life: *"I try to get here [office] early and take time later to plan something fun in your schedule"* (R5), or *"Yes, I put that [free time] into my agenda."* (R7).

Next to these avoidance focused coping strategies, many respondents engaged in active coping styles: *“Not wait too long, just take action [to solve the problem]”* (R27). With these approaches, entrepreneurs try to solve the problem at hand and thereby get relief from high stress levels. One important aspect of this strategy is to prioritize tasks: *“prioritize what is really adding value”* (R2). A tactic which can be helpful is delegating activities to employees: *“When it is possible, I always delegate it [tasks]”* (R16). Additionally, a well-structured schedule helps to focus on the most relevant topics: *“try to structure things; that helps so you can get less stressful situations”* (R16).

Most entrepreneurs of the current sample engaged in both coping styles since they potentially complement each other. As described above, escaping from the stressful situations helps to change perspective which fosters identifying a solution for a given problem. Thereby, escaping the situation would be an avoidance oriented coping strategy while identifying a solution would be an active coping strategy.

Thus, coping aids entrepreneurs in dealing with elevated stress levels, thereby impacting the effect of stress level on outcomes in the revealed model.

Personality. The personality of the entrepreneur is closely related to coping: *“Well, I think it really depends on the personality how you deal with stress.”* (R32). Many respondents mentioned that their personality potentially increases stress levels: *“I explode quite easily I'd say”* (R9), or *“I am very emotional.”* (R15), or *“I am personally a little impatient.”* (R1).

In contrast, other participants also feel that their personality helps them to deal with stress: *“[I] just take it easy”* (R5) or *“Become optimistic, think positive [helps to deal with stress]”* (R7). Being optimistic and hopeful was a common theme among various entrepreneurs who expressed that those characteristics helped them dealing with stress: *“I feel a bit of positive thoughts are helpful [in dealing with stress]”* (R8).

Thus, respondents explained that their personality makes them more vulnerable to stress or that it equips them with resistance towards stress. Therefore, personality can strengthen or weaken the relationships between stressors and stress level, respectively.

Additionally, as described above, some entrepreneurs expressed that their personality allows them to transform increased levels of stress into productivity. Thus,

personality also influences the relationship between stress level and outcomes and constitutes an important contingency for the entrepreneurial stress process.

Entrepreneurial experience. Another contingency which emerged from analysis of the interviews is entrepreneurial experience. This influences the stress process in two ways.

First, many respondents explained that their coping style has become more effective through accumulated work experience:

"I think it's [stress] something you first have to experience and then you have to learn how you can cope with it and how you can deal with the stress." (R18).

Thus, coping effectiveness increases with entrepreneurial experience. Next to that, experience fosters stress preventing behavior through improved skills and gained knowledge. A considerable proportion of the current sample expressed that they faced more stressful situations at the start of their entrepreneurial career as a result of lacking skills:

"when you start a business, and especially when you start to grow a little bit, you aren't really skilled to manage projects" (R2).

This changes with experience via a learning process:

"Because you've got the experience on how it happened, because stress won't come out of the air. You got the experience with that and you can use it in your next project or customer, or something else." (R21).

Thus, entrepreneurs can learn from stressful experience and are enabled to avoid them in the future. Therefore, entrepreneurial experience is a contingency in the entrepreneurial stress process and can buffer the relationship between stressors and stress level and can leverage coping effectiveness, thereby buffering the effect of stress level on outcomes.

Organizational culture. A much agreed on contingency factor among participants was organizational culture:

"There are always stressful situations when you have deadlines or commitments, but it really depends if you have guys around you who support you or if you have people around waiting for you to fail, this is really the worst thing and very stressful." (R32).

A positive and supportive company culture can help dealing with stressors can increase the entrepreneurial stress. Especially trust among colleagues was a key factor for many respondents: *"Trust each other and [establish a] good atmosphere to work and solve problems." (R5).*

These quotes demonstrate, that company culture can weaken effects of stressors on stress level by establishing an organizational climate which prevents stress and that it can buffer the effect of elevated stress levels on outcomes for entrepreneurs as a supportive company culture may help dealing with elevated stress levels. Thus, organizational culture constitutes a relevant contingency for the entrepreneurial stress process and was therefore integrated into the model.

Founder team interaction and expertise. Related to the organizational culture and exclusively relevant for entrepreneurs is the founder team interaction and expertise. This contingency includes two topics. First, there is a level which depicts the interpersonal communication style and interaction:

“Founding a company with someone is like a having a partnership, you need to know that it is working on a work-related basis but also personal basis. It needs to work.” (R2)

or

“I can talk with my co-founder and we get along pretty well, which is really important.” (R24).

Since co-founders encounter many stressful situations together, the interpersonal relationship is of crucial importance for the individual stress experience.

Additionally, it was mentioned that a diverse set of skills can help preventing stress: *“Having diverse skills within your founding team is very important”* (R40). When essential skills are missing, this can lead to challenges which in turn can create stress:

“The other problem is that we are 5 people [co-founders] and we are 5 engineers, and we don't have a lot of business skills, marketing skills. And so this is the big problem” (R12).

Having well-functioning interpersonal relationships within the founding team and a diverse set of skills is a contingency factor because it weakens the relationship between stressors and stress level. In contrast, negative personal interrelations or a lack of relevant skills potentially amplifies its effect, thereby leading to increased stress levels. Additionally, well-functioning founder teams may be better capable of handling elevated stress levels and dealing with its negative outcomes, thereby buffering the effect of outcomes on stressors.

Thus, founder team interaction and expertise constitutes a relevant contingency factor for the entrepreneurial stress process.

Firm age. Another contingency factor mentioned by several entrepreneurs is firm age. However, there were diverging opinions among the participants on whether stress increases or decreases with the age of their venture. Some entrepreneurs experienced higher levels of stress during the startup period due to financial constraints:

"I have experienced before, at the beginning of the company, almost running out of money, and then it's like: 'This is my life existence'. That feeling is not good." (R24).

Also, working long hours during early venture stages was a stressor for some respondents:

"So especially in the beginning when you start a new company, you start all over again. It's a lot of work. Weeks of 60-80 hours, it's demanding" (R23).

Still, other participants link their stress experience to responsibility and employees, which tend to increase along with firm age:

"Stress changes and challenges change a lot. The stress can grow with the number of employees, because you have more responsibility and more topics".

Concluding, firm age can potentially influence the relationship between stressors and stress level. Thus, despite of those contradicting findings, firm age constitutes a relevant contingency, but its direction seems to differ between individuals and organizational context.

Industry. Next to the discussed individual and organizational contingency factors, environmental factors potentially influence the entrepreneurial stress process as well. A small number of entrepreneurs in the current study mentioned that the venture's industry can influence their stress experience: *"Creative sector is not good to be stressed"* (R5).

As discussed above, reduced creativity can be a potential consequence of entrepreneurial stress. Therefore, this respondent argued that stressed entrepreneurs operating in industries in which creativity is required, are potentially influenced in a more substantial way than others. Furthermore, the level of competition can influence entrepreneurial stress:

"I think there are industries where competition is stronger than in other industries. Tech industry for example is usually said to be very relaxed and is taking care of its people." (R35).

However, other respondents felt that industry does not constitute a factor for their

stress process:

"I have the feeling that it's not that important in which industry you're in. [...] high tech industry, they're getting more disruptive and more competitive. But, I mean, basically every single industry is trying to do innovation because they are feeling that in some way, there are those startups or different businesses they are afraid of." (R37).

Thus, industry is a potential contingency for the entrepreneurial stress process but data of the current study is not congruent on this aspect. Results point to its relevance in the relationship of stress level and outcomes, as it may strengthen the relationship between increased stress and decreased creativity, and between stressors and stress level, as some industries may be more prone to create stress than others, thereby amplifying the effect of stressors on stress level. Despite of inconclusive findings, it was considered relevant and integrated into the model.

Institutions. Institutions were identified as another contingency factor. As discussed above, task overload is partially a result of administrative work. Entrepreneurs of the current sample described their efforts related to requirements imposed upon them by institutions and their bureaucracy:

"If you're at the Chamber of Commerce, if you employ someone and your employee number rises, you actually have to file them with the form that you print and you send it to them. If you want to change your bank account or submit your bank account to the tax authority, you have to send it to them by post. If you need to change your address because you have moved one office, you have to send it by letters to the Chamber of Commerce and to the tax authority. That's the most tedious part [of entrepreneurship]." (R17).

Such stories were told by a considerable proportion of the current sample. Many entrepreneurs felt stressed by bureaucracy and institutional regulations.

Thus, business climate constitutes a relevant contingency since it can increase stress in a country with many regulations or decrease stress in a less regulated country, thereby influencing the relationship from stressors on stress level.

For a better overview, all contingency factors and their potential effects on depicted relationship within the entrepreneurial stress process are depicted in table 3.

Table 3
Contingency factors

Relation	Influential contingencies
Stressors → Stress level	Autonomy, Personality, Experience, Organizational culture, Founder team interaction and expertise, Firm age, Industry, Institutions
Stress level → Outcomes	Coping, Personality, Experience, Organizational culture, Founder team interaction and expertise, Industry

5. DISCUSSION

The aim of the present study was to identify determinants and outcomes of entrepreneurial stress and their interrelations. Specifically, following research question should be answered:

Which individual, organizational and environmental characteristics lead to stress among entrepreneurs, with what effects, and how are they interrelated?

Following a constructivist grounded theory approach (Charmaz, 2014), the analysis of 40 interviews with entrepreneurs resulted in a comprehensive theoretical model, thereby increasing the understanding of underlying processes in this under-researched topic. This section is structured as follows. First, findings of the current study will be discussed along the resulting model, linking them back to prior evidence and theoretical approaches. Thereafter, contributions to prior research and practical implications are highlighted. The section ends with limitations and advice for future research.

5.1 The Entrepreneurial Stress Cycle

The analysis of the interviews revealed manifold dimensions of the entrepreneurial stress process and their interrelationship. The resulting ‘Entrepreneurial Stress Cycle’ is a circular model aiming at explaining stress among founders. In this subsection, its individual components stressors, stress level, outcomes, circularity, and contingencies, will be

discussed against the background of literature and will be interrelated.

Stressors. Analysis of the qualitative data revealed three individual and two organizational stressors which can lead to the experience of stress for entrepreneurs.

Private challenges constitute an individual stressor for entrepreneurs. Research on work-family interface points to its relevance for entrepreneurial well-being (Jennings & McDougald, 2007). Although evidence indicates that entrepreneurs could enhance their psychological well-being via enrichment processes (Beutell, 2007), other scholars identified adverse effects caused by conflict between work and family domains (Hsu, Wiklund, Anderson, & Coffey, 2016). Those results are in line with findings of this study. Participants mentioned problems with their life partner or family issues as sources for private challenges. This is not surprising since entrepreneurs tend to work long hours (Ayala & Manzano, 2014; Örtqvist et al., 2007), which is prone to create conflict between partners and can lead to stressful situations for both parties (Greenhaus & Beutell, 1985). Additionally, enrichment processes may be hampered because entrepreneurs may not spend enough time with their families. Scholars highlighted that problems in social relationships can become extremely stressful (Walen & Lachmann, 2000). Therefore, private problems, especially those related to interpersonal relationships, constitute an important stressor in entrepreneur's life.

Another identified stressor is experienced responsibility for employees. This is in line with a study by Grant and Ferris (2012) which depicts that entrepreneurs feel personally responsible for their ventures. The authors measured experienced responsibility via questionnaire items such as "accountability for decision making and mistakes" (Grant & Ferris, 2012, p. 15) or "being responsible for the company" (Grant & Ferris, 2012, p. 15). Accordingly, in this study participants expressed their feelings about being stressed by bearing responsibility for the economic well-being of the venture and its associated effects on employees. Research has pointed to the major contribution of the individual entrepreneur to venture success (Rauch & Frese, 2007) and founders are obviously aware of their substantial impact. Another theoretical explanation for this aspect is delivered by Pierce and Jussila (2011), who state that experienced responsibility is a consequence of psychological ownership, a state in which an "individual feels psychologically tied to an object" (Pierce & Jussila, 2011, p.2). This feeling of ownership results from i.a. high

commitment and leads to increased experienced responsibility for a given object (Pierce & Jussila, 2011). Hence, entrepreneurs experience high responsibility for their ventures and employees because they are intensely committed to their business. This is reflected in the results of this study and delivers an underlying explanation for this aspect. Thus, responsibility for employees constitutes a relevant stressor for founders and was therefore integrated into the model.

Challenges resulting from entrepreneurial identity clashes and connected unfulfilled goals were found a relevant stressor in the current study. This is in line with results from prior research (Hatak, Fink, Rauch, & Baranyi, 2014). The authors argue that physical well-being is connected to entrepreneurial motivation and distinguished three types of entrepreneurs. Although the results on the impact of entrepreneurial motivation are not conclusive, they point to some indication of its relevance. Rauch et al. (2016) argue that necessity-pushed founders view their business only as a temporary solution and consequently invest fewer resources than opportunity-driven entrepreneurs, which in turn leads to lower stress reactions for this group. The current sample lacks necessity-driven entrepreneurs and therefore, stress experience could not be compared between individuals with distinct motivation, which potentially decreases the validity of this specific stressor. A potential explanation for the impact of entrepreneurial motivation on the stress process can be found in control theory, which states that stress is a result of an experienced discrepancy between perceptions of the status quo and the desired goals (Edwards, 1992). Transferring Edward's (1992) assumption on control into the entrepreneurial context results in diverging goals for necessity- and opportunity-driven entrepreneurs. E.g., necessity-driven entrepreneurs would aim at bridging a limited period of time until they find a preferred employment opportunity compared to entrepreneurship. In contrast, opportunity-driven entrepreneurs would aim at developing their business with an ultimate goal of a financially rewarding exit or generating a high income. Thus, in terms of control theory, entrepreneurial motivation would have a secondary effect on entrepreneurial stress through its impact on personal goals. Future research should investigate the role of entrepreneurial motivation more rigorously, thereby enhancing the understanding of its precise impact on stress among founders.

Furthermore, prior studies have highlighted that entrepreneurs who have hired employees experience more stress than founders running their business alone (Blanchflower, 2004). However, this finding is not explicitly meaningful as underlying reasons have not been explained (Blanchflower, 2004). Evidence points out that conflict arising from team issues such as distribution of work and rewards (Wageman, 1995) is prone to create stress (Tekleab et al., 2009) which is a potential explanation for Blanchflower's (2004) finding and in line with results of this study. Additionally, Hessels et al. (2017) argue that "running a business employing others is also accompanied by a higher workload." (p.184) and that ventures contracting employees are generally more complex which increases entrepreneur's workload. Therefore, HR challenges constitute a stressor for entrepreneurs and was consequently integrated into the model.

Additionally, support was found that financial challenges lead to stress among entrepreneurs. A considerable body of research agrees that financial hardship leads to stress in non-entrepreneurial samples (e.g. McDaid et al., 2013; Wahlbeck et al., 2011) and a recent study has also highlighted links between financial trouble experienced by entrepreneurs and increased stress levels (Annink et al., 2016). The authors apply the conservation of resources theory (Hobfoll, 1989) to argue that financial reserve constitute a resource and that its threatening or loss leads to increased stress (Annink et al., 2016). The findings of the current study are in line with this argumentation, illustrating that loss or threatening of financial resources constitute a relevant stressor for entrepreneurs.

Task overload is another factor which led to increased stress levels among the current sample. Earlier studies came to equivalent results and found that task overload resulted in higher stress levels among entrepreneurial samples (Ajayi-Obe & Parker, 2005; Örtqvist et al., 2007; Patzelt & Shepherd, 2011; Prottas & Thompson, 2006). The current study extends those findings by specifying four areas which were found prone to lead to task overload: operations, finance, hiring, and administration. Time pressure resulting from deadlines amplified the stress experience of the interviewed entrepreneurs. A potential explanation can be derived from the job demand-control model which suggests that stress is a response to an imbalance between demands and control (Karasek & Theorell, 1990). Participants of this study expressed that they feel that they have often low control over

issues related to finance and hiring as they have to rely on others. Transferring this into the job demand-control model would constitute a state in which demands are high and control is low, resulting into elevated stress levels. However, this would not explain operations and administration as tasks in this area are not characterized by low control. Future research should focus on these aspects to illuminate underlying reasons. However, task overload constitutes a relevant stressor for entrepreneurs and was therefore integrated into the model.

Stress level. Results of the current study point to distinct stress levels among the current sample. However, this finding must be interpreted with caution since the qualitative approach of the study does not allow for a rigorous comparison of stress levels. However, the heterogeneity of stress levels is in line with prior researches which derived contradicting results in terms of entrepreneurial stress levels (Hessels et al., 2017). An underlying explanation for this finding is the heterogeneity of the entrepreneurial population (Shepherd & Patzelt, 2015). Additionally, Lazarus and Folkman (1984) argue that stress is dependent on perceptions of situations. Human perception is highly individual and differs from person to person (McAdams, 2001). Consequently, the stress level is affected by individual perceptions leading to diverse stress levels among founders. Also, contingency factors may play a role in this relation. They will be discussed in a later subsection.

Outcomes. Next to stressors, the current study extracted four outcomes on individual and one outcome on organizational level.

Increased productivity was mentioned by a considerable proportion of the current sample as a positive outcome of entrepreneurial stress. This is in line with the Yerkes-Dodson Law (Schiffirin & Nelson, 2010) which states that up to a certain level, stress yields beneficial outcomes. Although some scholars have linked entrepreneurial stress to venture performance (e.g. Hatak, 2015; Wincent et al., 2008), no study so far has linked stress to individual performance of the entrepreneur. Other research pointed to negative impacts of stress on individual performance (Schaufeli & Bakker, 2013). An underlying explanation for findings of this study can be derived from control theory, which assumes that stressed individuals utilize coping strategy to decrease the discrepancy between status quo and their goal state, which in turn, leads to improved performance (Edwards, 1992). The current data

did not reveal a clear-cut rule at which point stress leads to improved performance or when it results in negative outcomes. It seems arguable that the temporal duration of the stressful situation could impact this distinction. Therefore, short-term stress may lead to a boost in performance for some entrepreneurs while sustained stress may lead to disadvantageous consequences.

The current study identified weakened social relationships as a negative outcome of entrepreneurial stress. Established literature has found similar links for non-entrepreneurial samples (Cordes & Dougherty, 1993), but again, no study so far has investigated this aspect specifically for founders. A potential explanation for these findings can be found in social reciprocity, describing the social rule that people give back the kind of treatment that they have received from others (Siegrist, 2005). Since entrepreneurs tend to work long hours (Ayala & Manzano, 2014; Örtqvist et al., 2007) they may have less time for cultivating their social contacts which may lead to feeling neglected on the other side. On basis of social reciprocity, this may result in weakened social relationships.

A further negative outcome obtained in the current study is reduced health. This finding is supported by general stress research (Schaufeli & Bakker, 2013) as well as studies specifically focusing on entrepreneurs (Cardon & Patel, 2015). Specifically, this study identified sleeping problems and difficulties to relax as commonly described health problems resulting from stress. This is in line with prior research pointing to similar consequences for entrepreneurial samples (Volery, 2010).

Additionally, this research identified decreased creativity as result of entrepreneurial stress. In review of the literature, no research could be found which establishes this relationship for an entrepreneurial sample. This is surprising, since entrepreneurs must continuously fulfil tasks like opportunity recognition or strategic decision making for which creativity and strong problem-solving skills are urgently required (Civarella, Buchholtz, Riodan, Gatewood, & Stokes, 2004; McAdams, 2001). Prior research has found that the ability to think and act in a creative way is hampered by high levels of stress (Bakker, Demerouti, & Sanz-Vergel, 2014). Results of this study are in line with this argumentation as participants repeatedly pointed to their inability to make strategic decisions during stressful periods. An underlying explanation for this finding can be derived from empirical results

pointing to the significance of incubation, a temporary stage during which no deliberate thinking on a given problem takes place, for creative problem-solving (Dodds, Ward, & Smith, 2004). In their review, Dodds et al. (2004) found that creativity is positively related to incubation length. Since entrepreneurs are during stressful periods limited in their time, they might skip such breaks, which may lead to reduced creativity. Therefore, reduced creativity constitutes a harmful outcome of elevated entrepreneurial stress.

Next to the discussed individual consequences, decreased venture performance is an organizational consequence of entrepreneurial stress. However, results of the current study remain inconclusive and contradicting. While some entrepreneurs mentioned that stress can reduce their venture's performance, other denied this relationship, or even highlighted positive outcomes for their venture performance. Prior research showed that business success is highly dependent on the individual founder (Rauch & Frese, 2007) and that sustained entrepreneurial stress can lead to decreased operational performance (Hatak et al., 2016) and in extreme cases to business failure (Shepherd et al., 2010). Surprisingly, the current study delivered ambiguous results on this aspect. A potential explanation for this finding may be a time gap between performance and its consequences. Thus, entrepreneurs may simply have not been aware that elevated stress level may negatively influence firm performance because the effect on venture performance will manifest itself at a later point in time. However, also contingency factors may account for the heterogeneity of results. Those will be discussed in a later subsection.

Circularity. Findings of this study point to the potential impact of outcomes on the initial stressors, thereby inducing circularity into the resulting model. Such stress cycles have already been proposed for organizational behavior (Fay & Sonnentag, 2002) and entrepreneurship (Gorgievski-Duijvesteijn et al., 2000). This iterative process might even become a vicious circle, thereby reinforcing stressors, which leads to elevated stress reaction, which in turn may result in more extreme outcomes. For example, impaired social relationships may lead to private challenges, or decreased venture performance may lead to financial challenges entrepreneurs face. Through this reinforcing cycle, stress may become chronic, thereby leading to potential severe consequences for the entrepreneur, e.g. burnout (Schaufeli & Bakker, 2013). Such feedback loops are integrated into existing stress

theories, i.a. conservation of resources theory (Hobfoll, 1989), effort-recovery model (Meijman & Mulder, 1998) or control theory (Edwards, 1992) and supported by empirical evidence in the entrepreneurial context. For example, Shepherd et al. (2010) found that burnout symptoms among founders negatively impacted their commitment to their venture, which could result in e.g. lower individual performance (Rauch et al., 2016). Transferring this to the current model, burnout could be resembled by the stressor reduced health and low performance could be reflected through task overload or financial challenges, establishing the influence of outcomes on stressors. Thus, circularity is an important aspect of the derived model since it reflects the process-like and potentially reinforcing nature of entrepreneurial stress.

Contingencies. So far, stressors and outcomes were discussed. The interrelationships between those two categories are influenced by a set of contingencies. Analysis of the interviews revealed four individual, three organizational, and two environmental contingency factors.

Autonomy was identified as one important motivation to enter entrepreneurship. It provides them with flexibility in their daily life and the opportunity for self-realization. This finding is in line with prior research, highlighting autonomy as a crucial factor for distinct stress levels between entrepreneurs and employees and its ability to decrease stress (Benz & Frey, 2004; Eden, 1975; Prottas & Thompson, 2006; Stephan & Roesler, 2010). The job-demand control model as proposed by Karasek and Theorell (1990) states that stress results from an interaction between job demands and control over these demands. According to the theory, stress occurs when high demands meet low control. Entrepreneurs usually face high demands (Patzelt & Shepherd, 2011; Prottas & Thompson, 2006), but autonomy equips them with the necessary control over these demands. Following the logic of Karasek and Theorell (1990), this combination of high demands and high control would not lead to stress. Therefore, the job-demand control model delivers an explanation for findings of this study, pointing to buffering effects of autonomy on the impact of stressors on stress level.

Additionally, results of the current study indicated that coping constitutes a meaningful contingency for entrepreneurial stress, impacting the relationship between stress level and outcomes. A considerable amount of studies has highlighted coping

effectiveness as a relevant factor for stress in non-entrepreneurial samples (Schaufeli & Bakker, 2013) and Lazarus (1990) has integrated coping into his influential transactional model classifying coping as strategies to decrease stress experiences. Research on stress in the entrepreneurial context also points to its significance for the stress process (Byrne & Shepherd, 2015; Uy et al., 2013). Coping research usually differentiates between avoidance and active focused coping styles (Uy et al., 2013). This distinction was also found in the current sample and analysis showed that supplementing those coping strategies with each other led to most effective outcomes. This is in accord with other studies which came to consistent conclusions (Blonk et al., 2006; Byrne & Shepherd, 2015). Boyd and Gumpert (1983) pointed out, that entrepreneurs suffer from loneliness and absence of someone with whom to share experiences. Congruent with this finding, participants of the current explained that they seek to share thoughts and feelings with other entrepreneurs as they are in the same situation and therefore more understandable. Thus, the current research is in line with prior results on coping and classified it as an important contingency for the entrepreneurial stress process, helping entrepreneurs to deal with elevated stress levels, thereby buffering the effects of elevated stress levels on outcomes.

Another contingency, which may interact with coping, is personality. Analysis of the data revealed that it can buffer effects of stressors on stress level as well as stress level and outcomes. Results pointed out that hopefulness and optimism helped entrepreneurs in the current sample to buffer the impact of stress levels on outcomes. This is in line with prior research showing that psychological capital can decrease stress reactions among founders (Baron et al., 2016). While some studies investigated psychological capital as a whole (Baron et al., 2016; Hmieleski & Carr, 2008), other scholars focused on its components hope or optimism (Bradley & Roberts, 2004; Roche et al., 2014). All factors were found to decrease stress among entrepreneurs. In contrast, findings of this study also reveal a potential opposing effect of personality. Entrepreneurs expressed, that some of their characteristics make them especially vulnerable to stress, e.g. impatience. This would amplify the impact of stressors on stress levels. Accordingly, prior research has highlighted influences of other character traits on entrepreneurial stress, such as perfectionism or low level of self-efficacy (Dunkley et al., 2003), leading to increased stress levels. Concluding, personality is an

important contingency factor for entrepreneurial stress and was therefore integrated into the model.

Existent literature has pointed out that experience leverages coping effectiveness (Boyd & Gumpert, 1983; Corbett, 2005; Fritz & Sonnentag, 2005; Shane & Stuart, 2002; Uy et al., 2013). Results of this study are in line with those findings and extend it by highlighting that experience not only helps entrepreneurs to obtain more effective coping strategies, but also helps in acquiring novel and improving upon existent skills relevant for their daily work. Thus, experience influences entrepreneurial stress in two ways. First, it supports entrepreneurs in improving coping strategies, thereby buffering the effect of elevated stress levels on outcomes. Second, experience equips them with novel and/or more effective skills, which prevent stressful situations from occurring, thereby impacting the relation between stressors and outcomes.

Next to those individual factors, the current study revealed organizational contingencies.

Founder team interaction and expertise has been found to be a relevant contingency factor for the entrepreneurial stress process. Fauchart and Gruber (2011) argue that aligned visions and entrepreneurial identities within founder teams may prevent conflict (Fauchart & Gruber, 2011), which in turn may decrease stress levels. Furthermore, it is commonly acknowledged that a diverse and complementary set of skills among co-founders leads to increased performance (Ensley & Hmieleski, 2005), which in turn may decrease stress among founders. Results of this study are in line with both arguments as participants expressed that complementary expertise potentially prevents stress, thereby buffering effects of stressors on stress level, and that a functional interpersonal relationship is helpful in dealing with stressful situations, thereby weakening effects of elevated stress levels on outcomes.

There exists a notable stream of research on organizational culture and several studies pointed out that organizational culture can influence the stress experience of employees (Schaufeli & Bakker, 2013). This relationship was also established in a recent study), in which i.a. organizational climate was operationalized and found to amplify burn-out symptoms among entrepreneurs (Hatak et al., 2016). The current research elaborates on this finding, pointing out that an organizational culture which is experienced as positive and

supportive may buffer relationships between stressors and stress level as well as stress level and outcomes. A theoretical explanation for this finding can be found in the effort-reward imbalance model as proposed by Siegrist (1996). A positive company culture could be interpreted as an adequate reward on basis of social reciprocity (Siegrist, 2005). Siegrist (1996) argues that this combination of high efforts and high rewards would not lead to stress experiences, which would be in line with findings of this study.

Furthermore, analysis of the current data exposed firm age as a contingency for entrepreneurial stress. Prior research has pointed out that tasks entrepreneurs face differ with distinct phases of the business life cycle (Baron, 2007; Korunka et al., 2010). Scholars argue that entrepreneurs in early venture phases are especially prone to stress due to high levels of uncertainty (Patzelt & Shepherd, 2011; Shepherd et al., 2010; Rauch et al., 2016). Analysis of the current study did not result in a clear-cut conclusion. While some participants expressed that they experienced more stress in initial venture stages, others stated that stress decreased with firm age, and one group of participants again did not feel that stress has changed over the years. The number of employees tend to increase with firm age. Since HR problems have been shown to constitute a relevant stressor, firm age may have a mediating effect on stress level since more employees may tend to produce more stress for entrepreneur. However, firm age is considered relevant for entrepreneurial stress and integrated into the model. Obviously, its specific effect is individual for each person.

Another factor with no clear-cut conclusion is the industry a venture operates in. Prior studies argued that environmental complexity differs across industries (Kim, Song, & Koo, 2008), which in turn may influence entrepreneurial stress (Baron et al., 2016). Accordingly, Stephan and Roesler (2010) found better health among restaurant owners than among entrepreneurs operating in high-tech industries. Other scholars pointed out that the level of innovativeness of a firm may impact entrepreneurial satisfaction (Simon & Houghton, 2003). Hatak et al. (2016) argue that the industry life cycle also influences the stress process and point to increased stress levels of entrepreneurs operating in early and late life cycle stages. All those results and arguments indicate that the industry a venture operates in may influence entrepreneurial stress. However, the current sample expressed contradicting opinions regarding this aspect and therefore, no clear-cut conclusion can be

drawn. Future research should investigate this aspect to obtain a more precise understanding. Although the direction of its impact was not clear, results of this study support its relevance for entrepreneurial stress. Therefore, it was integrated into the model.

Next to industry, institutions were found to be another environmental contingency for entrepreneurial stress. Recent research has highlighted that institutional configurations influence entrepreneurial well-being (Annink et al., 2015; Cuellar-Molina et al., 2015). Participants in the current study lamented over bureaucratic hurdles imposed upon them by institutional organizations, such as the chamber of commerce. Therefore, institutions constitute a relevant contingency factor for entrepreneurial stress, potentially influencing the relationship between stressors and stress level. On the one hand, a country with few regulations and effective processes within institutional organizations may weaken stress experiences among entrepreneurs. In contrast, countries in which bureaucratic hurdles are high, may amplify stress levels. For example, entrepreneurs may face higher work load due to more tasks associated with administration which could amplify the impact of the stressor workload on stress level.

So far, stressors, consequences, and contingency obtained in the current studies have been discussed. Prior research has highlighted factors for which no relationship could be revealed by this study.

Due to the qualitative approach and the composition of the sample of the current study, no reliable insights could be gained on demographics. Scholars have shown that gender may influence entrepreneurial stress (Annink et al., 2015; de Smet et al., 2005; Vermeulen & Mustard, 2000), although others deny this relationship (Baron et al., 2016; Martocchio & O'Leary, 1989). The current sample is strongly biased towards male participants (see table 2). Although this is typical for the entrepreneurial population (Kollmann et al., 2016), the small number of female respondents did not allow to draw valid conclusions on gender differences. Additionally, age has been shown to be negatively correlated to stress (Bluedorn & Martin, 2008). This finding has been challenged as well (Baron et al., 2016). The vast majority of the current sample was relatively young (see table 2). Due to lacking variety among the respondents, no valid conclusions could be drawn on this aspect. However, age may correlate with entrepreneurial experience, which could make

a clear-cut distinction between both concepts problematic. Therefore, future research should conduct rigorous statistical analysis to distinguish both factors. A study by Parasuraman and Simmers (2001) found that strain increased among couples after one partner has entered entrepreneurship. Due to limitations in sample size and scope, this research did not gain insights on this point.

Next to that, one study has shown indirect links between the legal form of businesses and entrepreneurial stress (Toivanen et al., 2015). Due to limited scope of the current research, this aspect was not investigated.

Hatak et al. (2015) found that pessimistic expectations about general economic developments were positively related to burnout symptoms among an entrepreneurial sample. Due to lacking data, the current study did not gain insights on this point.

Due to the qualitative design and limitations in scope of this research its results must be interpreted with caution. They are not tested in a quantitative manner and therefore, no generalizability in statistical terms can be claimed.

5.2 Contributions to existing theory

While certain findings support existing literature, other results challenge established assumptions and thereby calling for further research. This work contributes to existing theory in several ways.

First, by applying a constructivist grounded theory approach in a field dominated by quantitative research, the current study obtained a more nuanced understanding of entrepreneurial stress. Scholars so far have predominantly compared stress levels among employees and entrepreneurs (e.g. Benz & Frey, 2004; Hessels et al., 2017; Hmieleski & Carr, 2008). Furthermore, the current study replies to recent calls by scholars (Rauch et al., 2016) and results in the first comprehensive framework explaining the entrepreneurial stress process. Thereby, results from prior research were confirmed, challenged, and entirely novel factors relevant for entrepreneurial stress were derived. This enhances the understanding of underlying processes and provides a starting point for a more aligned stream of research.

Second, this study took a broad view and set numerous components of entrepreneurial stress into relation to each other. Prior studies focused on specific factors,

thereby lacking a capacious understanding of entrepreneurial stress (Rauch et al., 2016). The model derived from the current study overcomes this shortcoming by highlighting links between numerous factors and setting them into relation. The circularity of the model illustrates that entrepreneurial stress is an ongoing and complex process which requires further academic attention.

Finally, this study paves the way for further research in two ways. On the one hand, scholars may examine the specific factors derived by this research (see Figure 1). On the other hand, the circular structure of this model and its integration of contingencies provides a framework for future research (see Figure 2). Scholars may use it to conduct research in a systematic way, thereby potentially obtaining novel factors or increasing the understanding of already identified aspects.

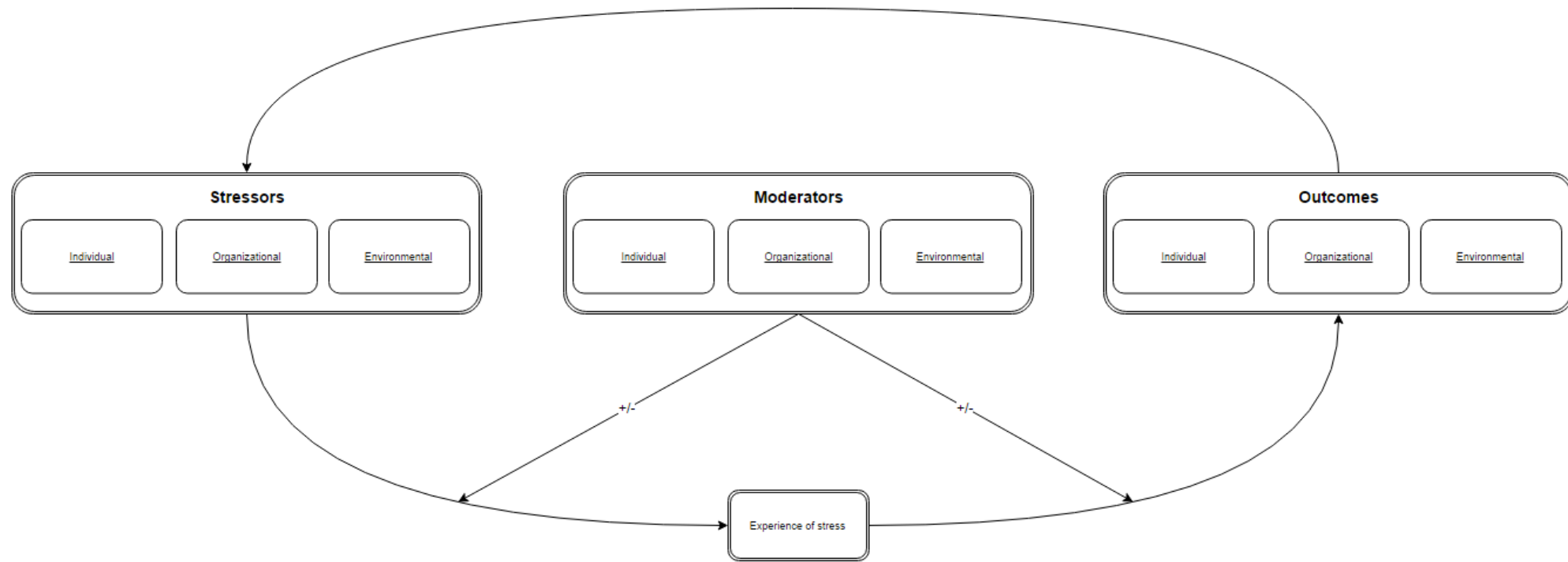


Figure 2. Framework for future research on entrepreneurial stress.

Existent stress models were designed for employees and may not necessarily fit entrepreneurial contexts (Rauch et al., 2016). The current model resembles traditional stressor-strain-outcome models (Koeske & Koeske, 1993), but differs in two crucial ways.

First, it introduces contingencies. Traditional stressor-strain models were repeatedly criticized for lacking such factors, thereby oversimplifying the stress process (Houdmont, 2012; Rauch et al., 2016; Schaufeli & Bakker, 2013). Analysis of the current data revealed, that contingencies play a highly significant role and potentially account for the heterogeneity of stress experiences among entrepreneurs. Therefore, they are especially relevant for the entrepreneurial context.

Second, by linking outcomes to stressors, the circularity of the entrepreneurial stress process is highlighted which represents experienced reality of entrepreneurs in a more accurate way (Rauch et al., 2016). Therefore, it is highly suited for the entrepreneurial context and may be a starting point for a more aligned stream of research.

5.3 Practical implications

Next to theoretical contributions, the current study also has several beneficial implications for practice.

First, research has shown that entrepreneurs tend to not be aware of the role of their own health for the success of their venture (Volery, 2010). This study's insights on the complexities of the development of entrepreneurial stress consisting of stressors, stress experience, contingencies, and outcomes, may help entrepreneurs to develop a sense for their health and raise awareness of stress' potentially severe implications. Specifically, they might develop more effective coping strategies to mitigate the adverse effects of increased stress levels. Additionally, more effective structuring of their work might be a result, thereby directly reducing task overload. In terms of external enhancements, creating a positive and supportive organizational culture may contribute to decrease stress levels.

Second, institutions such as health insurances firms and/or governmental agencies may profit from an enhanced understanding of stress among entrepreneurs. Findings of this study may aid in designing novel or more effective programs aimed at preventing or

decreasing stress of. In this domain, the collaboration of researchers and institutions is of great relevance to ensure a transfer of theoretical insights into real world applications.

Finally, society in general may benefit from the adoption of current findings by entrepreneurs and institutions, since entrepreneurship has been shown to constitute a relevant factor for rate of employment (de Wit & de Kok, 2014; Kollmann et al., 2016), innovativeness (van Praag & Versloot, 2007), and general economic developments (Acs et al., 2012; Fölster, 2000; Kollmann et al., 2016; Wong et al., 2005).

5.4 Limitations and future research

The main purpose of the current paper was to gain a more nuanced understanding of entrepreneurial stress and to provide a theoretical framework for a more aligned stream of research. The explorative nature of the study incurs several limitations.

First, no clear-cut relationships were obtained, rather results point to aspects which should be considered in the entrepreneurial stress process. This is especially relevant in interpreting the derived model. Partly, the categorization of factors into stressors, contingencies, and outcomes leaves room for discussion. For example, it may be arguable, that responsibility for employees constitutes a contingency factor instead of a stressor. Also, the allocation into individual, organizational, and environmental factor is not unambiguous. Economic developments may also be interpreted as individual factor since preliminary the personal assessment of economic trends influences entrepreneurial stress and not the economic development itself. Future research could help to clarify those details. Additionally, due to the qualitative design of the current study, no generalizability in statistical terms can be claimed (Dooley, 2001). Still, the explorative nature of this study required a qualitative approach since the current body of knowledge lacks a detailed understanding of underlying processes as well as an integrated framework for a more aligned stream of research (Rauch et al., 2016).

Further, the impact of outcomes on stressors is established, but no contingency factors were extracted which influence this relationship. However, it seems unreasonable that this particular relationship should be straightforward and left unaffected by other influences. Therefore, future research should focus on this aspect and identify contingencies

for this link.

Next to that, quantitative approaches are needed to test and challenge findings of the current study. Therefore, regression analysis and/or structural equation modeling constitute appropriate instruments for testing relationships between the obtained factors (Hair, Black, Babin, & Anderson, 2013). Additionally, between-group comparison techniques such as ANOVA or MANOVA should be conducted to obtain differences between specific groups such as demographics or entrepreneurial motivation (Hair et al., 2013). Therefore, the model proposed by this study guides as a framework as it allows conducting research in a process-oriented, yet flexible manner.

Furthermore, analysis of the data was conducted by only one researcher. Future research should involve more than one scholar to increase internal reliability by applying inter-coder tests (Mayring, 2014). Thereby, biases resulting from the individual person's beliefs, motivations, and personality can be decreased (Mayring, 2014). Additionally, the current sample has some limitations. First, most participants were recruited via the personal and professional networks of the researchers which limits the scope of the sample by itself. Further, the potential for socially desirable answers could be increased when the researcher personally knows the participants (Dooley, 2001). This problem was tackled by informing and ensuring the participants beforehand participants' identities and ventures will be anonymized and all data will be treated with confidentiality. Still, the potential for biased responses cannot be fully ruled out. Although theoretical saturation in a grounded theory sense has been reached, data collection with a broader sample may obtain further insights (Charmaz, 2014). The current study is not representative for the entrepreneurial population since it lacks necessity-driven entrepreneurs (Hatak et al., 2016) and in terms of average age and gender of participants (see table 2). Therefore, future research should involve more women and older entrepreneurs to gain further insights on their stress experience. Additionally, a sample with a more diverse set of nationalities could refine the results of the current study by investigating further environmental factors, such as culture, institutions, and economic developments.

Finally, the cross-sectional design of this study constitutes a limitation (Dooley, 2001). Longitudinal designs are required to obtain long-term effects and capture the

process-like nature of stress. It would be of immense value to illuminate how entrepreneurial stress evolves over time, thereby refining the understanding of underlying processes.

6. CONCLUSION

This paper developed an integrative model of entrepreneurial stress. Following a constructivist grounded theory approach, interviews with entrepreneurs were conducted and analyzed. Prior research focused on specific aspects of entrepreneurial stress or compared founders' with employees' stress levels (e.g. Benz & Frey, 2004; Hessels et al., 2017; Hmieleski & Carr, 2008). This study adopted a broader view and highlighted determinants and consequences of entrepreneurial stress at various levels, taking account of contingencies. The components of entrepreneurial stress were categorized into stressors, stress experience, outcomes, and contingencies and set into relation. Additionally, a framework for future research was provided to make this fragmented stream of research more aligned (Rauch et al., 2016). Here, further research is required to gain a deeper understanding of processes underlying the entrepreneurial stress circle.

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APPENDIX

Appendix A: The interview guide

1. Intro

Welcome participant, explain goal of the research (entrepreneurial well-being), getting consent.

- Tell them the interview will roughly take 30 minutes to 45 minutes. It would be nice if we could do this without interruptions
- The name of the entrepreneur and their venture name will be anonymized in any future publications
- Interviews will be recorded and transcribed
- We would be happy to share the results of the study
- Consent form too formal, but make sure you get (oral) consent
- Make sure you bring an audio recorder and pens and batteries
- Always say that the interviews are about 'entrepreneurial well-being' and not about stress
- Print the model or make sure you have it quickly available if interview is conducted online

Explain structure of interview: first open questions, then discussion of model, at the end quick questionnaire for demographic information.

2. Open questions

Now I would like to start with the open questions part. There are no right or wrong answers. I just would like to get a better impression of your experience as entrepreneur.

1. As I told you, this interview is about entrepreneurial wellbeing. From your experiences as entrepreneur, which are the most relevant factors for your personal wellbeing as an entrepreneur?

- a. Ask specifically about factors for stress experience. In which situations do you feel stressed in your work as entrepreneur?
2. What are consequences if you experience stress at work?
 - a. If distinction positive/negative stress is made, ask for factors influencing this distinction
3. You just described your experience of stress as entrepreneur and its consequences. Do you feel this has changed over the life time of your venture? If so, in what ways?
4. Does your private life impact your wellbeing at work? If so, in what ways?
5. Does your wellbeing at work influence your private life? If so, in what ways?

3. Model

Two fellow students have conducted similar interviews with entrepreneurs. Based on their answers, I developed this model which should describe the entrepreneurial stress process. I'd like to ask you to take a few minutes, go over the model and think about how accurately it represents the entrepreneurial stress experience from your point of view. Here is a pen. Feel free to cross anything which you could not confirm. Also, you can add factors or write comments. Again, there is no true or false. If you have any questions, please feel free to ask.

[Give her/him some minutes]

[engage in open discussion about model]

Potential questions:

- So, are there any points which are not true for you?
- To what extent do you also experience positive and negative stress at work? Which reasons may influence this distinction?
- Can you think of any other predictors?
- Can you think of any other stressors?
- Can you think of any other consequences?
- Can you think of any other factors which strengthen or weaken the relationship?

4. Collect demographics and thank participant

Thank you so much! Lastly, if I have a small questionnaire. I would like to ask you to fill it in.
Of course, it will be treated confidentially.

1. Age
2. Gender
3. Highest educational level
4. Entrepreneurial experience
 - a. years
 - b. Is this your first venture that you founded? Yes / No
 - c. If 4b = No, how many business have you founded before the current one:
 - d. Do you have any co-founders? If yes, how many?
5. Inception of the current business (mm/yy)
6. Number of employees
7. Industry of operation

Appendix B: Coding scheme

Extract from interview with R8:

Question: How would you describe a stressful situation in your work as entrepreneur?	Open code	Focused code	Theoretical code
Of course, we are only doing this for the first time so a lot of unplanned things will happen and continue to happen.	novel in entrepreneurship, therefore uncertain	experience	contingency
At first, it's like oh no, we have to do something! Haha, short moment of chaos, but then we find a solution.	chaos after unplanned event, but then focus on solution	/	/
Like last Monday there was a little problem with offering being stored improperly	Problem with offering not properly stored	operational problem	stressor
Some stress situation arises but I like to face them directly, because even within our team	facing stress directly	problem focused coping	contingency
We had a team meeting and we addressed stressful events and things that may not planned and can come up and give people a chance to bring them up and not quietly live with them.	team meeting to address stressful events, giving team chance to express their thoughts	company culture	contingency
At the moment, no stress is prolonged. But money in the future like paying rent could maybe stress me out or getting credit from a bank that could maybe stress me out more.	now no stress, but expects money to create stress	stress related to finance	stressor

8.3 Appendix C: List of derived categories

	Individual	Organizational	Environmental
Stressors	Private challenges; Identity/goals challenges	Task overload; HR challenges; Responsibility for employees;	/
Contingencies	Autonomy; Coping; Personality; Entrepreneurial experience	Organizational culture; Founder team interaction and expertise; Firm age	Industry; Institutions
Outcomes	Decreased creativity; Increased productivity; Weakened social relationships; Decreased health	Decreased venture performance	/