

# The cost of injustice: overall justice, emotional exhaustion, and performance among entrepreneurs: do founders fare better?

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**Abstract** In this paper, we build on the allostatic load model, developed in stress research, to explore the impact of entrepreneurs' overall justice perceptions on emotional exhaustion and firm performance. Results revealed that the relationship between overall justice and emotional exhaustion was mediated by rumination about work. Further, building on recent work by Baron et al. (*Journal of Management*, 42(3), 742–768, 2016), which highlighted that company founders have more resources to deal with stress, we hypothesized that the relationship between rumination about work and emotional exhaustion was moderated by whether the entrepreneur was the founder of the venture or not. Results revealed that indeed founders appeared to be immune to

the consequences of rumination about work elicited by injustice at work, while non-founders suffered from it. Moreover, emotional exhaustion was related to the monthly firm performance. Implications for research and practice are discussed.

**Keywords** Entrepreneurs · Small businesses · Emotional exhaustion · Rumination · Founder

**JEL classifications** G32 · I30 · L25 · L26 · M13

Individuals strive for justice and their well-being suffers when exposed to injustice—entrepreneurs do too. Yet, as Sevä et al. (2016) recently pointed out: “Our knowledge of subjective well-being among the self-employed, the differences between various groups of self-employed, and the potential influence of contextual factors is somewhat limited” (p. 239). There is a long tradition of research on justice perceptions in management (Colquitt et al. 2005; Folger and Greenberg 1985). Justice perceptions refer to subjective perceptions of fairness at the workplace (Byrne and Cropanzano 2001). Individuals care about justice for a variety of reasons: (a) it makes the attainment of personal and economic gains more likely; (b) being treated fairly provides individuals with feelings of self-worth and self-esteem, which satisfies their psychological need for belonging; and (c) justice perceptions can satisfy the need of people to live in an ethical social system, as people tend to have the fundamental drive to respect human worth and dignity (Cropanzano et al. 2001). All

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individuals care about justice, and this also extends to the workplace (Ambrose 2002). Traditionally, research on justice perceptions is directed towards employees, such that employees want to be fairly treated by their supervisors and their colleagues. Likewise, managers want to be treated fairly by their superiors and subordinates. Similarly, we argue that entrepreneurs also strive for perceiving justice. Yet, this important population has not been studied with regard to justice perceptions. More generally, with some exceptions (Barnett and Kellermanns 2006; Barnett et al. 2012; Lubatkin et al. 2007; Sapienza and Korsgaard 1996), justice perceptions have not been mobilized much in the entrepreneurship literature because the measurement of organizational justice is commonly made with reference to “my organization” or “my supervisor.” While entrepreneurs may not have relations to an authority like employees do, they nonetheless have justice perceptions. Instead of being directed at one’s employer, justice perceptions are established on the basis of how fairly the entrepreneur is treated by the stakeholders, such as bankers or employees, that he or she interacts with.

In this paper, we build on the allostatic load model developed in stress research (McEwen 1998) to argue that entrepreneurs who feel unfairly treated experience negative ruminative thoughts about work and are at greater risk of emotional exhaustion as a result. Recently, Baron et al. (2016) revealed that among entrepreneurs, those who are founders of their company have more resources to deal with stress. In line with this, we hypothesize that the stressor–strain process works differently for founders: because of their greater resources, they suffer less from ruminative thoughts elicited by perceptions of unfair treatment. Finally, building on the conservation of resources model (Hobfoll 1989) and research on human capital in the resource-based view of the firm tradition (Hitt et al. 2001), we argue that entrepreneurs’ emotional exhaustion has a negative impact on firm performance. Hypothesized relationships are depicted in Fig. 1.

## 1 Justice perceptions and emotional exhaustion

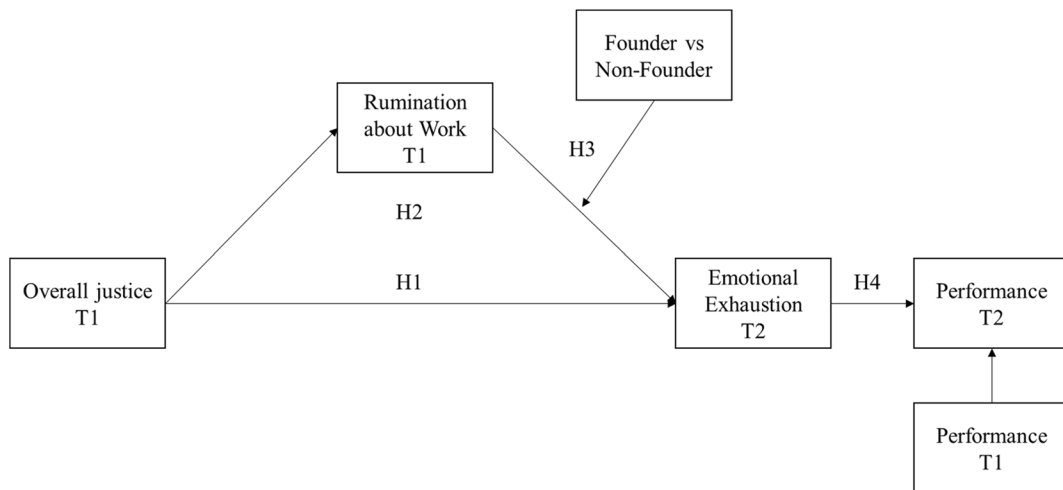
A British study found that compared to individuals who experience high levels of justice perceptions, those experiencing low levels had increased risks of long term of sickness absence—specifically, 14% more for men and 28% more for women, while controlling for age,

employment grade, and baseline health (Head et al. 2007).

Justice perceptions have historically been conceptualized along four dimensions: distributive justice (fairness of allocation of resources), procedural justice (fairness of procedures to determine outcome allocations), informational justice (adequacy of the explanations), and interpersonal justice (respect and dignity of treatment) (Colquitt 2001). In addition to these specific perceptions, when individuals form impressions of justice, they are making a holistic judgment (Lind 2001). In recent years, overall justice has gained more attention. It arguably represents the core concept of justice perceptions in a better and more parsimonious manner and is a stronger predictor of generic behavioral outcomes than the different sub-dimensions (Ambrose and Schminke 2009; Holtz and Harold 2009).

It also makes sense to study overall justice when focusing on entrepreneurs and emotional exhaustion. Indeed, traditional justice dimensions have been conceived and operationalized with reference to an authority figure (my organization, my supervisor) or an event (a salary negotiation, a merger). It would be empirically challenging to measure the four traditional justice dimensions as perceptions of entrepreneurs, who are themselves authority figures, and who interact with many stakeholders. Furthermore, given our focus on emotional exhaustion, overall justice offers more promise. According to bandwidth fidelity theory (Cronbach and Gleser 1965), stronger relationships occur when there is a match between the specificity of antecedents and the specificity of outcomes to which they are related. In other words, specific outcomes are better predicted by narrower predictors, while general outcomes, such as emotional exhaustion, are more closely related to broader antecedents.

Research has largely focused on work-related consequences of employees’ justice perceptions. Justice perceptions have been related to outcomes like organizational commitment, job satisfaction, organizational citizenship, turnover, and performance (Colquitt et al. 2013). An emergent stream of research has examined the role of justice perceptions for the prediction of health-related outcomes, such as mental health, physical health, absenteeism, and burnout (Greenberg 2010; Robbins et al. 2012). The relationship between organizational justice and indicators of health and well-being such as sickness, absence, or mental health has also been supported empirically by longitudinal and prospective



**Fig. 1** Theoretical model with hypothesized relationships

studies (Elovainio et al. 2009; Kivimäki et al. 2003; Ndjaboué et al. 2012).

The conception that justice perceptions at work would predict health outcomes can be traced back to the early theories in justice research. In equity theory, Adams (1965) claimed that those who believe they are paid less to comparable others feel angry and distressed. Conceptual work by Vermunt and Steensma (2001) portrayed injustice as a work stressor, and injustice has been theorized to undermine individuals' psychological and physical functioning (Cropanzano et al. 2005).

In this study, we focus on emotional exhaustion as important indicator of health and well-being of the entrepreneurs. Emotional exhaustion can be described as a state of prolonged strain at work, which can be a result of cognitive, emotional, or physical stressors at work (Demerouti et al. 2001). Emotional exhaustion is considered the core dimension of burnout next to the depersonalization (cynical, negative attitudes towards others) and reduced personal accomplishment (tendency to view oneself in a negative way) (Diestel et al. 2013; Schaufeli and Van Dierendonck 1993; Maslach 1982). Emotional exhaustion is generally seen as close indicator of traditional stress reactions and has been related to both job stressors and to negative work and health outcomes (Lee and Ashforth 1990; Demerouti et al. 2001). Recent works have suggested that burnout is a significant concern for entrepreneurs (Wincent and Örtqvist 2009b; Wincent et al. 2008; Fernet et al. 2016; Shepherd et al. 2010). There is increasing evidence that entrepreneur's well-being is positively related to their companies' performance (Foo et al. 2009;

Gorgievski et al. 2010). Moreover, emotional exhaustion is related to deficits in cognitive functioning (Kleinsorge et al. 2014). It is likely that entrepreneurs who suffer from emotional exhaustion not only reduce their work effort but also have limited cognitive and emotional resources to deal effectively with relevant stakeholders. Building on the above line of research, we hypothesize that entrepreneurs whose overall justice perceptions are negative are more prone to emotional exhaustion.

Hypothesis 1: Overall justice is negatively associated with emotional exhaustion.

## 2 Allostatic load model: rumination about work as mediator

To explain the process by which justice perceptions may affect emotional exhaustion, we construe the lack of overall justice as a work stressor (Vermunt and Steensma 2001). Work stressors are attributes of the work itself, or the work environment, requiring sustained cognitive, emotional, or physical effort (De Jonge and Dormann 2006). Elovainio and colleagues suggested that prolonged stress is likely a mediator for the relationship between justice perceptions and health outcomes (Elovainio et al. 2009; Elovainio et al. 2010). Not all stressors, though, translate into actual strain. Our understanding of the stressor–strain dynamic is based on the allostatic load model

(McEwen 1998; McEwen and Seeman 1999; Ganster and Rosen 2013). The allostatic load model is a theoretical framework that bridges biological and psychological stress models (Ganzel et al. 2010). When a stressor is perceived, the cognitive, emotional, and physiological body systems are activated to achieve “allostasis,” a balance achieved by regulating the different body systems. Iterative adaptations involving cognitive, emotional, and physiological body systems, steered by the core emotional regions of the brain (McEwen 2000), are common and done on an everyday basis. Allostatic load refers to the cumulative cost to the body of allostasis, a state in which serious health issues can occur. Allostatic load, which is described as the “wear and tear” of the body (von Thiele et al. 2006) may stem from repeated experience of stressors or prolonged mental representation of stressors which undermines recovery. Over time, excessive allostatic may lead to cardiovascular disorders, depression, and anxiety (Juster et al. 2011; Ganzel et al. 2010).

Injustice perceptions have a tendency to remain salient in individuals’ minds for prolonged periods of time (Eib et al. 2015), therefore contributing to allostatic load. Evidence suggests that injustice events can elicit cognitions and emotions that can last for a long time (Barclay and Skarlicki 2009; Gilliland 2008). The allostatic load model proposes that it is not the stressor per se that is related negatively to health, but that mental processes, worrying and ruminating about the stressor, can prolong the mental representation and exposure to the stressor (McEwen and Seeman 1999; McEwen 1998; Brosschot et al. 2005). When a stressor like injustice perceptions is prolonged due to the cognitive process of rumination, a state characterized by ongoing work-related thoughts is likely to be elicited (Siegrist 1996; von Thiele Schwarz 2011). Ongoing work-related thoughts are related to impaired sleep and recovery (Kudielka et al. 2004; von Thiele Schwarz 2011) and other negative health indicators (Vrijkotte et al. 2004). Similarly, Brosschot and colleagues argued that a state of ruminating can function as the mediator that prolongs a stressor and extends the physiological activation of the bodily systems (Brosschot et al. 2005). Several scholars studying recovery add that if stressors affecting an individual negatively are prolonged and fail to be met with adequate resources and recovery activities, they may lead to strain such

as emotional exhaustion (Meijman and Mulder 1998; Sonnentag 2015). Based on the above line of reasoning, we hypothesize the following:

Hypothesis 2: Rumination about work mediates the relationship between overall justice and emotional exhaustion.

### 3 Entrepreneurs’ status: founders versus non-founders

In their seminal work, Carland et al. (1984) established the importance of distinguishing founders and non-founders for entrepreneurship research. A number of differences exist between founders and non-founders. Early work by Begley and Boyd (1987) reported that founders and non-founders vary on important psychological traits such as need for achievement, risk-taking propensity, and tolerance of ambiguity. These results have been replicated and extended to include personality traits like openness to experiences, self-efficacy, optimism, and dispositional positive affect, which all tend to relate positively to entrepreneurial intention and success, and these tend to be stronger among founders (Zhao et al. 2010; Rauch and Frese 2000; Baron et al. 2012).

Further, founders have been reported to be more innovative in their problem-solving than non-founders (Walsh and Anderson 1995), to work harder (Palia and Ravid 2002), to react more positively to setbacks (Carland et al. 1984), and to be more likely to view business situations as opportunities that have potential (Palich and Ray Bagby 1995). Finally, evidence also suggests companies with founders as managers have a higher profitability (Willard et al. 1992; He 2008). Taken together, these findings indicate that founders may have more psychological resources than non-founders to cope with work stressors. Baron et al. (2016) suggested that entrepreneurs’ greater ability to cope with stress may be the result of typical ecological processes consistent with attraction-selection-attrition theory. Individuals attracted by business creation and who are successful at it may have greater stress management skills (Fine et al. 2012). In addition, compared to non-founders, founders may also command more financial resources and more legitimacy. Thus, in terms of financial resources, legitimacy as well as personality traits, founders should be able to better cope with work

stressors in general, and with injustice perceptions in particular. Yet, founders and non-founders alike are expected to ruminate about unfair treatments. The difference lies in the way founders and non-founders react to rumination with their greater resources founders are able to interrupt the ruminating cycle quicker than non-founders. In statistical terms, this is equivalent to hypothesizing a stage 2-moderated mediation. We make the following hypothesis:

Hypothesis 3: Founder status moderates the mediated relationship between overall justice, rumination about work, and emotional exhaustion. Specifically, founders have a weaker relationship between rumination about work and emotional exhaustion than non-founders.

#### 4 Emotional exhaustion and performance

It has been argued that the capacity of entrepreneurs to cope with stressors is related to the company's success (Baron et al. 2016). The association between burnout and performance has been thoroughly studied and empirically established (Halbesleben and Wheeler 2011; Taris 2006). Evidence suggests in particular that the relationship to performance is stronger for the sub-dimension emotional exhaustion than for other sub-dimensions (Taris 2006; Wright and Bonett 1997). The conservation of resources model (COR) (Hobfoll 1989), one of the prominent theories to explain processes of emotional exhaustion, proposes that strain is a result of the loss of resources, a threat to resources, or an insufficient gain of resources after a resource investment. Resources can be conditions or personal characteristics that are valued to attain goals. In the terms of COR, emotional exhaustion has been described as a state in which individuals' resources are diminished and the likelihood of gaining new resources is seen as minimal (Wright and Cropanzano 1998). As a result, individuals are less likely to invest in gaining new resources, and instead, are more interested in protecting the resources they have. An individual with depleted resources is less likely to complete the duties of the job which impairs performance (Halbesleben and Wheeler 2011). Moreover, emotional exhaustion is associated with reduced executive control, which impairs the adaptation to difficult, complex, and novel tasks (Diestel et al. 2013).

The association between emotional exhaustion and performance may even be more significant considering the centrality of entrepreneurs in their ventures, and their contribution to the firm's human capital. Human capital is a critical resource in most firms (Pfeffer 1994), and its impact on performance has been established empirically in strategy research (Gimeno et al. 1997; Hitt et al. 2001). Theoretically and empirically, human capital has been defined as relating to education, experience, and skills. It has been argued that it is the characteristics of top managers that may have the strongest impact on firm outcomes (Pennings et al. 1998; Huselid 1995). Still, research on the antecedents and consequences of burnout in the entrepreneurial context remain scarce, and Shepherd et al. (2010) and Fernet et al. (2016) called for further research in this area. In order for experience and skills to influence firm outcomes, individuals need to perform at or close to their maximum ability. Individuals who experience emotional exhaustion are unlikely to effectively mobilize their resources, be those cognitive or relational. It has been argued that emotional exhaustion as an indicator of psychological ill-health can hinder the ability to decide and act, and to make a venture successful and sustainable (Fernet et al. 2016). In fact, emotional exhaustion may significantly undermine company's human capital, which may affect performance negatively. Thus, we predict:

Hypothesis 4: Emotional exhaustion is negatively associated with performance.

## 5 Method

### 5.1 Participants

Multi-wave data were collected from a national sample of entrepreneurs located in continental France. To be eligible, participants had to own and be actively engaged in the management of a firm employing at least 1 employee and no more than 250. A total of 384 entrepreneurs belonging to a business network (*Centre des Jeunes Dirigeants*) comprising 3500 members representative of France business sectors (excluding the agricultural sector) were contacted—297 completed a short phone questionnaire at time 1 (response rate = 71%) and 236 responded another phone questionnaire 2 months later (attrition rate = 21%, overall response rate = 61%). Respondents were on



average 44 years old, and 21% of them were female. On average, they controlled 67% of the shares in the company and the average size of the workforce of the companies was 17. Founders represented 50.3% of the respondents.

## 5.2 Measures

### 5.2.1 Overall justice

Owner-managers' overall justice was measured at time 1 with the shortened three items measure of overall justice (Ambrose and Schminke 2009). The original scale made reference to "employee;" instead, we referenced the scale to "business owners." The following items were included: "Overall, as a business owner are you treated fairly?," "In general, can you count on being treated fairly as a business owner?," and "In general, is treatment you receive as a business owner fair?". Participants answered on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. In this study, Cronbach's alpha for the scale was .89.

### 5.2.2 Rumination about work

Rumination about work was assessed, at time 1, with three items from the inability to withdraw from work scale (Siegrist et al. 2004). The items included were the following: "As soon as I get up in the morning, I start thinking about work problems;" "When I get home, I can easily relax and 'switch off' work;" and "I can rarely let go of thoughts concerning my work." Participants answered on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. In this study, Cronbach's alpha for the scale was .76.

### 5.2.3 Emotional exhaustion

We measured the dimension emotional exhaustion, at time 2, with three items from the BMS (Malach-Pines 2005). The items were as follows: "Do you feel tired/hopeless/depressed?" Participants answered on a 7-point scale ranging from 1 = never to 7 = always. In this study, Cronbach Alpha for the scale was .79.

### 5.2.4 Performance

Obtaining reliable data on SME financial performance is a challenging task. We opted for a simple single measure: "This past month, did your company make a

profit?" Participants answered on the following scale: 1 = a large loss, 2 = a minor loss, 3 = neither loss nor profit, 4 = a minor profit, and 5 = a large profit. Performance was measured at both time 1 and time 2.

### 5.2.5 Status

Entrepreneurs' status was measured at time 1 with a single question: "Are you a founder of the company?" (0 = no; 1 = yes).

## 6 Results

Means, standard deviations, reliabilities, and bivariate correlations for all study variables appear in Table 1. To avoid the introduction of bias (Ployhart and Vandenberg 2010), we used the full information maximum likelihood method (FIML) to treat missing values. FIML has been suggested to be a superior method for hypothesis testing with missing data in longitudinal designs (Enders and Bandalos 2001).

We analyzed data using structural equation modeling. Following the two-step approach, we first assessed the quality of the measurement model, and then proceeded to structural analyses using Mplus (Anderson and Gerbing 1988). A confirmatory factor analysis including the three latent variables (overall justice, rumination about work, and emotional exhaustion) and their interrelations demonstrated excellent fit to the data ( $\chi^2 = 27.33$ ,  $df = 24$ ; CFI = .99; RMSEA = .026). We then tested the model including the hypothesized relationships between overall justice, rumination about work, emotional exhaustion, and performance. This model (model 1) demonstrated excellent fit to the data ( $\chi^2 = 44.71$ ,  $df = 40$ ; CFI = .99; RMSEA = .021).

Overall justice at time 1 was negatively associated with emotional exhaustion at time 2 ( $b = -.19$ ,  $p = .025$ ), which supports Hypothesis 1. Overall justice at time 1 was negatively related to rumination about work at time 1 ( $b = -.36$ ,  $p = .000$ ). The association between rumination about work at time 1 and emotional exhaustion at time 2 was significant ( $b = .19$ ,  $p = .042$ ). The indirect effect of overall justice on emotional exhaustion via rumination about work was tested with a bootstrapping procedure with 5000 iterations, and was found significant ( $b = -.071$ , 95%CI [-.163; -.010]), supporting Hypothesis 2.

**Table 1** Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6
1. Overall justice (T1)	4.69	1.37	(.87)					
2. Rumination about work (T1)	4.34	0.88	-.26***	(.75)				
3. Emotional exhaustion (T2)	2.21	1.21	-.29***	.32***	(.79)			
4. Founder status (T1)	.59	.49	-.08	.03	-.18**	\		
5. Firm performance (T2)	3.24	.89	-.06	.11	-.19**	-.03	\	
6. Firm performance (T1)	3.30	.85	-.12+	-.07	-.31***	.08	.32***	

Reliabilities (coefficient alpha) are in parentheses, when applicable

<sup>+</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

To probe the moderated mediation (Hypothesis 3), we created a latent interaction term between rumination about work and status, and tested the conditional indirect effect of overall justice on emotional exhaustion via rumination about work, contrasting founders, and non-founders. We first assessed whether adding the interaction term in the model was acceptable, by comparing the fit indices of a model including the main effect of founder status but excluding the interaction term (model 2) (AIC = 8722.789; Sample-Size Adjusted BIC = 8738.622) to the fit indices of a model including the interaction term (model 3) (AIC = 8723.968; Sample-Size Adjusted BIC = 8740.218). Given that the difference in the level of AIC (1.179) and the level of adjusted BIC (1.596) were minimal (there are no formal tests for gauging this difference, but the difference should be smaller than 2), we concluded that the analysis of interaction was justified. Results of a bootstrapping procedure<sup>1</sup> with 5000 iterations supported Hypothesis 3; for founders, the conditional indirect effect had a coefficient of  $b = -.043$ , with 95% CI  $[-.155; .042]$ , indicating that rumination did not mediate the relationship between overall justice and emotional exhaustion (as the confidence interval spans 0). For non-founders, the coefficient of the conditional indirect effect was  $b = -.100$ , with 95% CI  $[-.234; -.001]$ , indicating that rumination about work significantly mediated the relationship of overall justice and emotional exhaustion. This analysis is displayed in Fig. 2 through a two-way interaction plot.

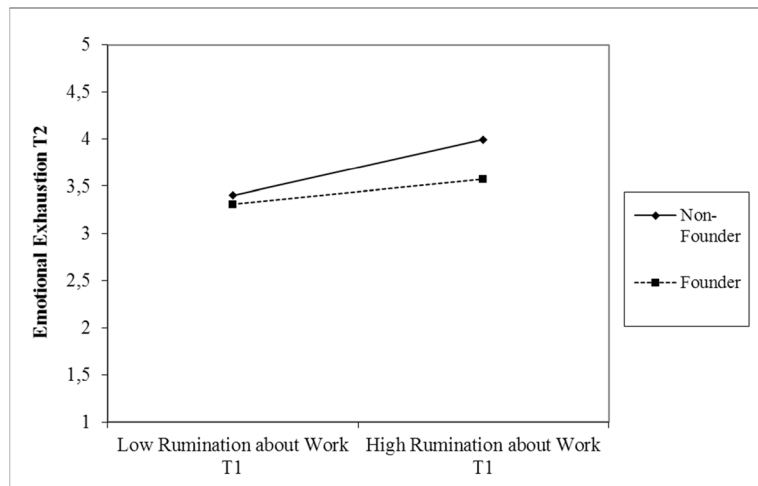
<sup>1</sup> Resampling procedures allow for better estimation of confidence intervals and overall better assessment of mediation effects than the traditional Baron and Kenny approach and Sobel test (MacKinnon et al. 2004).

Finally, emotional exhaustion at time 2 was negatively associated with firm performance at time 2 (estimates from model 1:  $b = -.26$ ,  $p = .000$ ; controlling for performance at time 1). This result supports Hypothesis 4. The estimates are displayed in Fig. 3.

## 7 Discussion

In this study, we examined the impact of entrepreneurs' justice perceptions on emotional exhaustion and firm performance over the course of 3 months. Results revealed that the relationship between overall justice and emotional exhaustion was mediated by rumination about work. Further, the relationship between rumination about work and emotional exhaustion was moderated by whether the entrepreneur was the founder of the venture or not: founders appeared to be immune to the consequences of rumination elicited by injustice at work, while non-founders suffered from it. Moreover, emotional exhaustion was related to the monthly firm performance (even after controlling for the monthly performance at time 1). We now discuss the contributions to extant research.

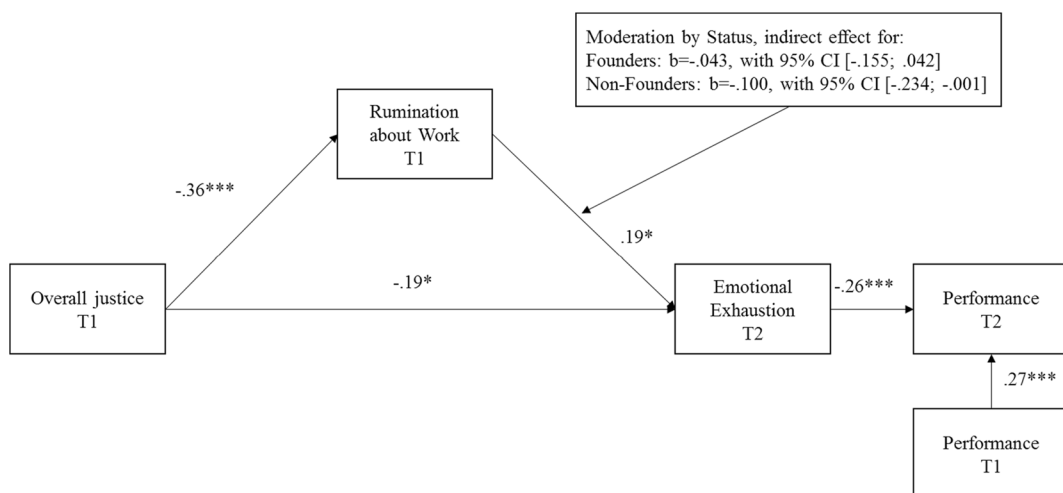
First, we contribute to occupational stress research by explicating one of the mechanism—rumination about work—linking overall justice and health hazards. There is strong evidence that injustice perceptions are associated with increased strain and impaired health and well-being (Ndjaboué et al. 2012; Robbins et al. 2012). The underlying causal mechanism has not often been studied yet (Manville et al. 2016; Eib et al. 2015). As pointed out by Ganster and Rosen (2013), the interplay between

**Fig. 2** The moderating effect of founder status

psychological and physiological processes is not explicated by typical work stress theorists. Based on the allostatic load model, we described a cognitive process, rumination about work, which explicitly addresses the “how” question, that is how a given stressor triggers physiological mechanisms that are related to impaired health. Studying these interplays in greater detail has the potential to shed additional light on the antecedents and consequences of work stressors. We believe the allostatic load model could serve as a platform to further explore these questions; in particular, the use of the concepts of allostasis and allostatic (over)load could be a way to stimulate research on coping, allowing to integrate external/social coping mechanism (such as seeking support) and internal/physiological regulatory mechanisms (for instance by considering the role of

physical activities, meditation, etc.). For instance, in a recent meta-analysis, Cheng et al. (2014) assert that “intraindividual variability in the deployment of diverse coping strategies and, more important, the capacity to exhibit such variability in a way that fosters adjustment to life changes” (p. 1582) contributes positively to adapting to stressors and life changes. Using the allostatic load model, one could study how variation in coping flexibility relates to allostatic load. We suspect that the repertoire of coping strategies accessible to an individual, which is one aspect of flexibility, is reduced as the allostatic load increases.

Second, our paper contributes to justice scholarship by illustrating the role of rumination about work in the stressor–strain process with a particular stressor, lack of overall justice. It extends studies on the health

**Fig. 3** Model with estimates (standardized estimates displayed, model 1; unstandardized estimate displayed for interaction effect, model 3)



consequences of injustice by investigating the relationship between overall justice and health among a new population—among entrepreneurs. To the best of our knowledge, this is the first study to do so. At the same time, studying justice perceptions among entrepreneurs might also advance justice research by documenting some of the moderators, or boundary conditions, of justice effects, i.e., our study shows that injustice is unlikely to produce significant effect on health unless it triggers rumination. Further, this research also demonstrates the value of using overall justice. As indicated by Ambrose and Schminke (2009), overall justice seems particularly suited to explain broad outcomes such as health. Our study provides an empirical test of this assertion. However, at the conceptual level, the definition of entrepreneurs' justice perceptions warrants further attention. Further research is needed to study what justice rules entrepreneurs use to assess whether or not they are fairly treated (Scott et al. 2009). Focusing on rumination about work as a mediating process also opens up a number of new avenues for future justice research. For example, investigations of the individual and contextual factors that affect when injustice perceptions trigger ruminative thoughts may shed new light on important issues such as justice sensitivity. Understanding why certain people ruminate more than other about injustice may help predict between-person variance in justice sensitivity. Also, understanding when people are more or less prone to rumination may lead to a better understanding of within-person variance in justice sensitivity. Other justice-related concepts, such as coping with injustice, may also be better explained when considering the role of rumination.

Third, our analysis of the moderating role of the founder versus non-founder dichotomy contributes to the entrepreneurship literature and in particular to the psychology of entrepreneurship (Obschonka and Stuetzer 2017). While the advantages of ownership like financial rewards, independence, and achievement are often praised (Boyd and Gumpert 1983), it has long been argued that entrepreneurs face many different and difficult stressors to the extent that entrepreneurial stress is considered a given (Buttner 1992). Evidence is increasing that entrepreneurs might be better at dealing with their stressors, as indicated in better health and well-being (Stephan and Roesler 2010; Baron et al. 2016). Yet, this study confirms previous research on entrepreneurs' emotional exhaustion, that is, emotional exhaustion is a very real concern for entrepreneurs

(Fernet et al. 2016; Shepherd et al. 2010; Wincent and Örtqvist 2009a).

### 7.1 Limitations and future research

This study has a number of limitations. First, as all our measures are assessed by self-report, the risk of common method bias exists. Self-reports are appropriate for measures like overall justice, rumination about work, and emotional exhaustion because these are concepts that are perceptual by nature. The measures we used in this study stem from carefully constructed and validated scales. Also, the items of the measures tap into different constructs (Conway and Lance 2010). However, we measured firm performance only with one self-report item. We invite future research to considerably expand on the diversity and completeness of the performance measure and would welcome objective performance measures. Secondly, mediation designs are best tested with three time points. Improving this feature would require to use different, and probably shorter, time periods between measures. Justice perceptions should have stronger immediate effects on rumination about work than delayed effects. On the contrary, firm performance could be measured over a longer time frame. One difficulty of such designs is to keep entrepreneurs motivated enough throughout a lengthy and sometimes repetitive research protocol. We would also like to encourage scholars to test various affective and behavioral mechanisms in addition to the cognitive one we have tested in this study. For instance, negative affect, sleep disorders, and alcohol consumption may be worth investigating. Lastly, though we thoroughly investigated the consequences of overall justice in an entrepreneurial context, we have not explained how overall justice is determined for entrepreneurs and owner–managers. In organizational research, justice items are asked with reference to a specific supervisor or to the organization. A simple reference to the source of justice for entrepreneurs and owner–managers is less clear. A productive avenue for future research would be to explore the antecedents of justice perceptions for entrepreneurs and small business owners. Justice is subjectively perceived and endogenous; suggesting it can be affected by aspects related to the firm, the people associated with the firm, and the environment (Luo 2007). One specific area to explore further might be related to stakeholder theory (Bosse et al. 2009), such that justice perceptions of entrepreneurs and owners are impacted, at different time

points with different strengths, by various stakeholders, including employees, business associates, government, suppliers, customers, etc.

Future research is needed to understand how entrepreneurs can better cope with work stressors (Shepherd et al. 2010). This seems important when considering that worldwide, small-, and medium-sized companies account for over 95% of all companies of all OECD countries, and for 99.7% in the USA, and create around two-thirds of all employment in Europe (European Commission 2016). This study sheds some light on this topic. We argued that entrepreneurs who are founders may have better ways of dealing with stress, as their resources and personality characteristics may be better suited to deal with stress. One of the dominant personality characteristics of entrepreneurs is dispositional positive affect (Baron et al. 2012). Dispositional positive affect of entrepreneurs has many positive consequences like increased creativity, stronger goal commitment, and adoption of challenging goals. Yet, dispositional positive affect may have certain downsides such as the tendency to make cognitive errors, reliance on heuristic thoughts, reduced attention to negative information, reduced effort on current tasks, and more impulsivity and reduced attention to own limitations. If indeed dispositional positive affect is higher in founders than in non-founders, more studies are needed to investigate the long-term effects of stressors, mistakes, and failures on entrepreneurial activity of founders and non-founders. Particularly, it might be that founders may ignore certain facts of the environment, which might lead to venture failure. Also, it is important to investigate how founders, compared to non-founders, deal with setbacks, and how setbacks impact their health and psychological well-being. While Baron et al. (2012) showed that too much dispositional positive affect impacts performance negatively, it may also be that entrepreneurs with high positive affect have more support than entrepreneurs with less positive affect. Positive affect may create likeability and a supportive culture in the venture team, something that can be drawn upon in times of uncertainty or setbacks. For instance, it has been proposed that founders can act like catalysts for the venture team (Agarwal et al. 2016). Furthermore, since ventures managed by founders are more profitable (Willard et al. 1992; He 2008), founders have more capital to deal with setbacks than non-founders. As founders seemed to be able to recover better from ruminating about work, future research should study what founders do differently so that

research can inform practice on what owner–managers can do to stay healthy.

## 7.2 Practical implications

As the health of the entrepreneurs is central to the performance of the firm, and by extension to employees and the society at large, one practical conclusion of this study is that academics and policy-makers should embrace the issue vigorously. While many reports that are published try to estimate the costs of ill-health among employees (National Institute for Occupational Safety and Health 1999; European Foundation 2009; Black and Drost 2011; Hoel et al. 2001), one population that is often forgotten is the population of independent small business owners.

Because facing stressors at work when owning and managing a business is unavoidable, the question is how to deal with these stressors better. One intervention on dealing with injustice has shown that writing down the thoughts and emotions associated with the injustice helps recovering quicker from it (Barclay and Skarlicki 2009). There is also one intervention that uses simple stop instructions in order to stop worrying about stressors during the day (Brosschot and Van Der Doef 2006). Moreover, Shepherd (2004) discussed his approach to teaching students about grief and recovery from business failure<sup>2</sup>. Clearly, we need more applied research in actual startups and SMEs to expand the range of solutions to be offered to entrepreneurs and better specify under which conditions a given approach has a better chance of success.

## 7.3 Conclusions

Entrepreneurs face many different stressors, yet recent evidence suggests that they seem to be able to manage them better than employees. However, stressor–strain relationships do exist for entrepreneurs and the knowledge about the psychology in the entrepreneurial context is still scarce when it comes to predicting specific stressor–strain relationships. This study showed that entrepreneurs are affected by justice perceptions, similar to how employees are affected. Injustice perceptions elicit a state of ruminating negatively about work, which is associated with higher emotional exhaustion. Ruminating about work had a weaker impact on emotional

<sup>2</sup> We thank an anonymous reviewer for this suggestion.

exhaustion for founders and a stronger impact for non-founders. This study also confirms prior research that when an entrepreneur experiences emotional exhaustion the performance of his or her firm suffers.

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