Abstract

Purpose – Building on the dualistic approach to passion, the aim of this paper was to examine how work engagement and workaholism relate to entrepreneurs’ performance (innovative behavior, business growth, and subjective business performance).

Design/methodology/approach – Cross-sectional survey data of 180 Spanish entrepreneurs were analyzed using partial least squares modeling.

Findings – Evidence was found for a dual affective pathway to performance. Work engagement related favorably to performance through its relationship with more positive affect and less negative affect. Workaholism related to more negative affect, which in turn related negatively to performance. After controlling for affective states, both work engagement and workaholism still had a direct and positive association with innovative behavior.

Research limitations/implications – Limitations are the cross-sectional design and the reliance on self-report measures; although self-reports of business growth can be considered indicative of objective business performance. Bi-directional relationships between the study variables seem plausible. The dualistic approach to passion is a sound theoretical basis for future research on drivers and consequences of work engagement and workaholism.

Practical implications – The findings imply that entrepreneurial success can be enhanced by improving entrepreneurs’ emotion-regulation strategies to manage their affective states. Workaholics especially would benefit from such strategies.

Social implications – Improving entrepreneurial performance has value for society via countering economic decline and creation of wealth and jobs.

Originality/value – This study adds to our limited understanding of the consequences of work engagement and workaholism. It addresses entrepreneurs, who are an under researched occupational group.

Keywords Entrepreneurship, Business performance, Work engagement, Motivation (psychology), Affective psychology, Workaholism

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Relating work engagement and workaholism to entrepreneurial performance

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The question of what predicts good performance at work remains relevant, especially for entrepreneurs who are critical for the development and well-being of society, who play a crucial role in counteracting economic decline, and are major agents of economic growth, innovation and employment (Kelley et al., 2010). Entrepreneurship researchers have emphasized the importance of motivational concepts labeled “passionate, selfish love of the work” as key to understanding entrepreneurial behavior (Locke, 2000; Shane et al., 2003), and indeed, empirical research has shown positive relations between passion for work and entrepreneurial performance (Baum and Locke, 2004). However, building on the dualistic approach to passion (Vallerand, 2008), it can be expected there are two different sides of the coin. According to this approach, passion can be either “harmonious” or “obsessive”, and performance outcomes are assumed to differ depending on the type of passion people have. Focusing on work engagement and workaholism as two motivational concepts closely related to “passion for work”, researchers have found evidence for this assumption as well (Gorgievski et al., 2010). The question was put forward as to what different mechanisms may underlie the relationships between the two motivational concepts and performance outcomes.

The goal of the present study among Spanish entrepreneurs is to expand our knowledge on the difference between work engagement and workaholism by testing a model that proposes differential affective pathways to performance. We will first outline the dual approach to passion for work and clarify why the concepts of work engagement and workaholism are close to harmonious and obsessive passion. Then we will argue that hard-working entrepreneurs driven by work engagement versus workaholism experience different types of affect, and thus show different performance outcomes.

**Passion for work, work engagement and workaholism**

In the entrepreneurship literature, the term “passion for work” emerged from qualitative research on entrepreneurs’ motivation (Locke, 2000). Since then, few attempts have been made to conceptualize the construct in either entrepreneurship research, or work and organizational psychology. Research on passion and performance is scarce and fragmented. One exception is a theoretical entrepreneurship article that defined entrepreneurial passion as “consciously accessible, intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur” (Cardon et al., 2009, p. 517). According to this definition, passion would only be related to positive feeling and meaning. Therefore this conception is less useful when studying the consequences of passion from a dualistic perspective.

In the field of sports, performing arts and gambling, passion towards activities has received more attention than in entrepreneurship and work and organizational psychology. Passion towards activities has been defined as “a strong inclination toward an activity that people like, find important and in which they spend time and energy on a regular basis” (Vallerand, 2008; Vallerand et al., 2003, p. 757). Two forms of passion have been identified: “harmonious passion” and “obsessive passion”. In the case of harmonious passion, the person controls the activity, and the activity occupies a significant, but not overpowering space in the person’s life. People who have developed a harmonious passion for an activity are theorized to feel positive affect before, during, and after performing the activity. Empirical research has supported this notion (Vallerand et al., 2003). In the case of “obsessive” passion, the activity controls the person, because of
which this activity eventually takes disproportionate space in the person’s identity and causes conflicts with other life domains. Obsessive passion relates to negative feelings when not engaging in the activity (e.g., frustration and agitation), but also while engaging in the activity (e.g., shame and guilt). The passion literature shows that different developmental processes lead to the development of either obsessive or harmonious passion among children and teenagers. Young people whose environments supported their autonomy were more likely to develop harmonious passion. In contrast, young people who highly valued activity specialization, who relied heavily on the activity for self-definition, and whose parents highly valued the activity were more likely to develop obsessive passion. This indicates the two forms of passion are qualitatively different constructs rather than two points on the same continuum on which obsessive passion would be a more extreme level of passion than harmonious passion (Mageau et al., 2009).

Recent research has verified that the dual theory of passion is applicable to the work setting. This research shows that harmonious and obsessive passion towards work relate differently to cognitive, affective, and behavioral outcomes (Forest et al., 2011). Harmonious passion related positively to flow, affective commitment, vitality, mental health, fulfillment of psychological needs, control over one’s professional life, and having fun while working. In contrast, obsessive passion, related positively to distress, taking work home, and thinking about work when outside the workplace.

Strong analogies exist between harmonious and obsessive passion toward work and two other well-validated concepts in work and organizational psychology, namely work engagement and workaholism. Harmonious versus obsessive passion could perhaps best be regarded as precursors of work engagement and workaholism, respectively (cf. Vallerand et al., 2003). Theoretical insights from the passion literature inspired a new outlook on the study of those constructs.

Work engagement refers to a “positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (Schaufeli et al., 2002, p. 74). People high in work engagement have a sense of energetic and affective connection with their work activities. In other words, “engaged individuals work hard (vigor), are involved (dedicated) and feel happily engrossed (absorbed) in their work” (Bakker et al., 2008; p. 190). Engaged employees experience vitality, flow, and fun while working and work fulfills important psychological needs. Engaged workers exercise influence over events that affect their lives – they are self-efficacious, just as harmoniously passionate employees (Xanthopoulou et al., 2009).

Concerning workaholism, different conceptualizations exist, some of which match more closely to the concept of “passion” than others (Cantarow, 1979; Oates, 1971; Peiperl and Jones, 2001; Scott et al., 1997). We follow the lead of Scott et al. (1997), who summarize three key features of workaholism based on a critical review of the literature. First, workaholics work excessively hard. Second, workaholics are reluctant to disengage from work and they persistently and frequently think about work when they are not at work. Third, workaholics work beyond what is reasonably expected from them to meet organizational or economic requirements. These features are similar to the behavioral outcomes of obsessive passion mentioned above.

A final parallel with the passion literature is that the recent research on work engagement and workaholism has demonstrated these two constructs to be largely independent, with qualitatively different drivers and consequences (Van Beek et al., 2011). Compared to workaholism, work engagement shows more daily fluctuations and
seems more easily triggered by environmental characteristics, such as having job resources. Additionally, work engagement has been positively associated with psychological resources (such as general self-efficacy), life satisfaction, and good social relationships at work (Taris et al., 2009). Workaholism has been related positively to personality constructs with a less positive connotation, such as perfectionism, Type A behavior, dominance obstinacy and rigidity. Workaholism has been linked to high levels of job strain, mental and physical health complaints and low levels of life satisfaction (Taris et al., 2009), impaired relationship quality and social functioning, reduced happiness and poorer well-being (Bakker et al., 2009).

Work engagement and workaholism as predictors of job performance

Previous research has shown that both work engagement and workaholism may relate to good performance, but findings are more robust for work engagement than for workaholism (Gorgievski and Bakker, 2010; Gorgievski et al., 2010a). Ample empirical evidence shows that engaged employees and self-employed people perform better than their less engaged counterparts. Several studies related work engagement to both higher in-role and extra-role performance (e.g. Bakker and Bal, 2010; Bakker and Xanthopoulou, 2009; Halbesleben and Wheeler, 2008). Concerning workaholism, results are more equivocal. Some authors have asserted that workaholics are extremely productive “hyper-performers” (e.g. Korn et al., 1987; Machlowitz, 1980; Peperl and Jones, 2001). Others have claimed the opposite (e.g. Flowers and Robinson, 2002; Oates, 1971; Porter, 2001; Schaufeli, Taris and Bakker, 2006a), and suggested that workaholics may work hard, but not particularly smart. More specifically, they may be investing a lot of time and effort. For the self-employed, working long hours may mean competitive business advantage, which is good (Burke, 2006). However, the compulsive element or, “the sting of workaholism”, would at the same time counterbalance the positive effect of hard work (Gorgievski and Bakker, 2010; Gorgievski et al., 2010a; Wijbe et al., 2011). The possibility of a conflicted relationship between workaholism and performance will be investigated further in the current study, but the starting point is that workaholism relates positively to performance, as does work engagement. Workaholics aim for good performance and it can be expected that workaholics spend as much time and effort as needed to meet their own, typically high, performance standards (Clark et al., 2010; Ng et al., 2007).

This study will focus on three important entrepreneurial success criteria commonly used in the business literature: innovative behavior, business growth, and subjective business performance (Gorgievski et al., 2011). Innovativeness, such as finding applications for new ideas, is both seen as an entrepreneurial end goal as well as means to an end (financial success and growth). Business growth has value for society via creation of wealth and jobs. Finally, subjective business performance is the extent to which entrepreneurs themselves are satisfied with the financial and overall performance of their business. Subjective business success is rooted in actual economic performance (Dej, 2011), and is an important predictor of entrepreneurs” decisions:

H1. Work engagement is positively related to job performance (innovative behavior, business growth and subjective business performance).

H2. Workaholism is positively related to job performance (innovative behavior, business growth and subjective business performance).
Affective routes to job performance
Next, building on the dual model of passion, this study will investigate whether there may be affective routes to performance that either add to performance — in the case of positive affect — or counterbalance good performance — in the case of negative affect. Positive affect and positive emotions have been related to a broader scope of attention and an ability to build up one’s resources (cf. broaden-and-build theory; Frederickson, 2001). Entrepreneurs who experience positive affect may be better able to fulfill typical entrepreneurial tasks (Gartner et al., 1999). They may be more open to identify, create and seize new opportunities, make better decisions, be more helpful towards other people, be more convincing in negotiations, and better able to build social networks, job resources and personal resources (Baron, 2008). Engaged employees have been found to experience active, positive emotions at work, which appears to be one of the major ingredients of the link between work engagement and job performance (Bakker, 2010; Bakker and Oerlemans, 2011). Based on this reasoning the following hypothesis is put forward:

H3. Work engagement relates to experiencing more positive affect, which in turn is positively related to job performance (innovative behavior, business growth and subjective business performance).

For workaholics, working has been found to lack a positive emotional component, presumably because of the compulsive drive to do so. Empirical results show that workaholism relates to active, negative affective states (Bakker and Oerlemans, 2011; Wijhe et al., 2011) and trait negative affect (e.g., Clark et al., 2010), which can be expected to relate negatively to performance. This negative affective route thus counterbalances a possible positive effect of workaholism on performance through other mechanisms, such as working many hours. In contrast to positive emotional states, negative emotional states have been related to a narrower thought-action repertoire (Frederikson, 2001; Frederickson and Branigan, 2005). Especially entrepreneurial performance outcomes that typically benefit from a broader scope of attention, such as innovativeness, networking and resource acquisition, may be impaired by experiencing negative affect. Entrepreneurs experiencing more negative affect may also be less able to cope effectively with stress. Positive affect enhances the use of more effective coping strategies, such as direct efforts to solve problems, whilst negative affect relates to less effective, avoidant coping strategies for dealing with stress (Baron, 2008). Longitudinal studies among agricultural entrepreneurs showed that poor mental health, accompanied by feeling strain, unhappiness and depressed mood, indeed predicted poor economic business performance over time (Gorgievski et al., 2000; Gorgievski, Bakker, Schaufeli, van der Veen and Giesen, 2010). Therefore, we hypothesize that:

H4. Workaholism is positively related to negative affect, which in turn relates negatively to job performance (innovative behavior, business growth and subjective business performance).

Method
Participants and procedure
A sample of 180 Spanish entrepreneurs was recruited to participate in the study using a “snowballing” technique with the assistance of psychology students following a research master at the Spanish University for Distance Education (UNED).
Entrepreneurs were self-employed business owners (cf. the definition of Rauch and Frese, 2000), 84 percent of which had at least one employee. Firms had on average six employees (SD = 9.12) from various branches of industry (e.g. financial services, consumer services, software and computer services, or transportation and communication). Most of the participants were male (59.1 percent), held a college or university degree (41.3 percent), had a mean age of 42 years (SD = 10.25) and 18.23 years (SD = 10.73) of work experience. All variables were measured using a paper and pencil questionnaire. Entrepreneurs were informed in a cover letter that their participation was voluntary and all information would be strictly confidential and used only for research purposes.

**Measures**
In addition to background data (gender, age, education from elementary school (1) to doctorate (6), number of hours worked, and business size in number of employees), the questionnaire contained the following scales to measure the study variables. Composite reliability, $r_c$ of the scales are presented in Table I.

- Work engagement was assessed with the Spanish, nine-item version of the Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker and Salanova, 2006b). Example items are: “At my job I feel strong and vigorous” and “I am immersed in my work”. All items were scored on a seven-point rating scale ranging from 0 “never” to 6 “always/daily”.

- Workaholism was measured with the Spanish version of the ten-item DUWAS (Dutch Workaholism Scale; Libano et al., 2010). Example items are: “I overly commit myself by biting off more than I can chew”, and “I feel obliged to work hard, even when it’s not enjoyable.” Responses were given on a seven-point frequency scale ranging from 0 “never” to 6 “always / daily”.

- Affective state was assessed with the Spanish version of 20-item PANAS, which asked respondents to indicate how often they had felt certain emotional states during the past week (Positive and Negative Affect Scale, Watson et al., 1988). Responses were given on a five-point agreement scale ranging from 1 “not at all” to 5 “extremely”.

- Innovative behavior at work was measured with a Spanish translation of the six-item scale of individual innovative behavior (Janssen, 2003). For example, “I invent new solutions for problems at work” and “I transform innovative ideas into useful applications” (1 = never, 5 = very often).

- Business growth was measured using three items referring to business growth during the past 12 months in number of employees, profit and business turnover (Stephan and Richter, 2006). For example: “how did the number of employees change over the past twelve months?” Responses were given on a five-point scale ranging from 1 “has declined” to 5 “has grown”.

- Subjective business performance was measured with five items worded: “How satisfied are you with...?” followed by different facets of financial business performance, such as “your personal income”, “your business profit” and “turnover rates of your business” (Stephan and Richter, 2006). Responses were given on a seven-point Kunin faces scale (Kunin, 1955) ranging from 1 “very dissatisfied” to 7 “very satisfied”.

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Table 1. Means, standard deviations, composite reliabilities, (square root of AVE) and correlation coefficients of the study variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>Sd</th>
<th>Sex</th>
<th>Age</th>
<th>Edu</th>
<th>Hours per week</th>
<th>Business size</th>
<th>WE</th>
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<th>Pos affect</th>
<th>Neg affect</th>
<th>Inno. behavior</th>
<th>Business growth</th>
<th>Subj. business performance</th>
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<td>1. Sex (1 = male)</td>
<td>0.59</td>
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<td>3. Education</td>
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<td>4. Hours per week</td>
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<td>6. Work engagement</td>
<td>4.44</td>
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<td>7. Workaholism</td>
<td>2.28</td>
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<td>8. Positive affect</td>
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<td>9. Negative affect</td>
<td>2.18</td>
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<td>10. Innovative behavior</td>
<td>3.40</td>
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<td>11. Business growth</td>
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<td>12. Subj. business</td>
<td>4.90</td>
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Notes: \*p < 0.05; \**p < 0.01. For discriminant validity, \sqrt{AVE} should be greater than off-diagonals elements in the same row and column. n = 180 Spanish entrepreneurs.
Data analysis

Data were analyzed using the Partial Least Squares (PLS) approach with the SmartPLS program (Ringle et al., 2005). The objective of the PLS approach is predicting dependent variables, latent and manifest, by maximizing the explained variance (R^2) of the dependent variables and minimizing the residual variance of endogenous variables in any regression run by the model (Wold, 1985). An iterative procedure fits observed measures to corresponding latent variables, and then estimates relationships among the latent variables. At each stage of the iteration, a least squares fit between observed and modeled parameters is computed, and the model is considered as a best-fit solution when the least squares function stabilizes between iterations.

PLS has two strengths that make it well suited to this study. Similar to structural equation modeling (e.g. AMOS, EQS, Lisrel), PLS accounts for measurement error and should provide more accurate estimates of mediation effects than regression analyses (Chin, 1998). Moreover, PLS was developed to avoid the necessity of large sample sizes and normal distribution of the data (Falk and Miller, 1992).

Standardized data were used in the analysis and missing data (n = 9) were excluded list-wise. Significance was evaluated using bootstrapping of 500 samples of 171 cases, which led to a critical t-value of 1.96 for \( p < 0.05 \). PLS analyses follow a two-step approach. Before hypotheses are tested (inner model), reliability and validity of the measures, in other words, how well manifest indicators predict the latent variables is tested first (outer model).

Results

Descriptive statistics

PLS shows good results for the outer model, which has 63 manifest indicators loading on seven latent constructs. With the exception of one item, all latent variables explained each indicator’s variance from sufficient to very well, with outer (factor) loadings ranging between 0.57 and 0.95. The standardized outer loading of one workaholism construct was much lower than the recommended 0.60 (Hair et al., 2006), namely 0.44, and hence this item was excluded from further analyses. PLS calculates a composite reliability (\( \rho_c \)) for all latent constructs, which is a preferred alternative to Cronbach’s \( \alpha \) as a measure of internal consistency reliability. While Cronbach’s \( \alpha \) assumes that all indicators are equally reliable, PLS prioritizes indicators according to their reliability, resulting in a more reliable composite (Henseler et al., 2009). For each scale, \( \rho_c \) was well above the recommended 0.70 (see Table I).

Besides reliability of the constructs, PLS calculates the average variance extracted (AVE), indicating convergent and discriminant validity (see Table I). For all constructs, the common variance between the indicators and their constructs was well above 0.50 (Fornell and Larcker, 1981) and per scale, the square roots of the AVE were higher than the squared correlations with all other constructs (Fornell and Larcker, 1981). This means both convergent and discriminant validity was satisfactory. This is particularly noteworthy for the workaholism and workload measures, which may appear to have conceptual overlap.

In line with previous studies (e.g. Harris et al., 1999; Gorgievski et al., 2010a; Snir and Harpaz, 2004; Tetrick et al., 2000), descriptive statistics show that the entrepreneurs in the sample score high on work engagement (M = 4.44, SD = 1.18) and work long hours per week (M = 48.76, SD = 10.77). Few relationships are found between the demographics and the study variables. Finally, workaholism did, but
work engagement did not relate significantly to working more hours per week and number of working hours did not relate to performance.

**Hypotheses testing**

The first inner model we tested was a direct effects model, which fully supported $H1$: work engagement positively predicted business growth ($\beta = 0.34, p < 0.001$), subjective business success ($\beta = 0.33, p < 0.001$) and innovative behavior ($\beta = 0.54, p < 0.001$). The model showed only partial support for $H2$: Workaholism did not relate significantly to business growth and subjective business success, but it did relate positively to more innovative behavior ($\beta = 0.17, p < 0.05$).

Next, an indirect effects model was tested. The hypothesized indirect paths were modeled over and above the direct paths leading from work engagement and workaholism to the performance measures. Figure 1 shows the significant relationships. As Figure 1 shows, $H3$ was supported. Work engagement related to more positive affect ($\beta = 0.66, p < 0.001$), which in turn related to more innovative behavior ($\beta = 0.35, p < 0.001$), higher business growth ($\beta = 0.26, p < 0.001$) and more subjective business success ($\beta = 0.34, p < 0.001$). The significance of the indirect effects was assessed using the Sobel test (Sobel, 1982), which confirmed that the indirect effects were significant for innovative behavior ($Z = 4.15, p < 0.01$), business growth ($Z = 3.33, p < 0.01$), and subjective business success ($Z = 4.32, p < 0.01$).

In line with $H4$, workaholism related significantly to negative affect ($\beta = 0.56, p < 0.001$), which in turn related negatively to business growth ($\beta = 0.26, p < 0.05$) and subjective business performance ($\beta = 0.34, p < 0.05$), but not to less innovative behavior ($\beta = -0.03, p = 0.73$). The results of the Sobel test confirmed that the indirect effect was significant for business growth ($Z = -2.56, p < 0.01$) and subjective business success ($Z = -2.30, p < 0.05$).

**Figure 1.**

Standardized results for the relations between work engagement, workaholism, and performance for Spanish self-employed workers

Note: $N = 180$
As a final note, after modeling indirect effects through affective state, both work engagement and workaholism still directly and positively related to more innovative behavior ($\beta = 0.26$, $p < 0.001$; $\beta = 0.17$, $p < 0.05$, respectively). In addition, further exploratory analyses showed a significant negative relationship between work engagement and negative affect, which means work engagement related positively to job performance both through experiencing more positive and through less negative affect. Workaholism did not relate (negatively) to positive affect.

Discussion
The aim of the present study was to investigate unique pathways between passion for work, defined as work engagement and workaholism, and entrepreneurial performance. Evidence was found for a dual affective pathway. Work engagement related to experiencing more positive affect, which in turn related to more innovative behavior, business growth, and subjective business success. In contrast, workaholism related to experiencing more negative affect, which related negatively to business growth and subjective business success.

Our results among entrepreneurs underline the notion that experiencing more positive and less negative affective states play an important role in explaining high performance. This lines up with the dualistic model of passion, according to which two forms of passion – harmonious passion and obsessive passion – relate differentially to expert performance through different pathways. In sports and performing arts, harmonious passion has been related to positive affective states and better performance. In contrast, obsessive passion has been associated with negative affective states, whilst the association with performance was rather complex (Vallerand, 2008). The current study identified affective states as part of mediating pathways. One possible process that may be involved is that positive affective states lead to broader cognitive and behavioral responses and resource building, whereas negative affect leads to cognitive tunneling and narrower action repertoires (Frederickson, 2001; Frederickson and Branigan, 2005). Openness is an important requisite for performing entrepreneurial activities. Another possibility is that different types of affective states relate to different types of goal setting. Vallerand et al. (2008) have shown that harmonious passion relates to setting mastery goals, which predict deliberate practice and high performance. Setting mastery goals has been associated with sensitivity to absence or presence of positive emotions, and feelings along the cheerfulness – dejection axis (Higgins, 1997). In contrast, obsessive passion not only related to mastery goals, but also to performance avoidance goals, which negatively influenced performance. Performance avoidance goals have been associated with sensitivity to presence or absence of negative emotions, and the experience of affective states along the quiescence – agitation axis (Higgins, 1997).

In addition to the pathways identified in this study, both work engagement and workaholism related directly to more innovative behavior. What mechanisms underlie these relationships is interesting for further investigations. The answer to this question may be found in creativity research, which shows that affect may foster creativity through the activation component irrespective of a positive or a negative valence (De Dreu et al., 2008; George and Zhou, 2002). Work engagement and workaholism share an increased state of arousal, activation, persistence, alertness and readiness for action. In an entrepreneurial environment, where innovativeness is generally recognized to be crucial for success; this can be expected to increase innovative behavior (George and Zhou, 2002).
In this study, working long hours per week did not relate to good entrepreneurial performance. This contrasts with the common sense supposition in business that hard work means competitive business advantage and thus business success (Burke, 2006). As yet, there is little evidence that working many hours relates to good performance, but there is abundant evidence relating these concepts to adverse effects, such as work-family conflict and relationship problems (Bakker et al., 2009), poor health and well-being (Shimazu et al., 2011), and increased errors and inefficiency (Menzies, 2005). The relationship between working time and performance is not a straightforward one. The question comes up as to whether certain conditions can be identified under which working long hours enhances entrepreneurial performance. Answers may lie, for example, in the combination with having sufficient resources to meet the demands or non-linear relationships.

Limitations and future research
This study has several limitations. Because the sample was restricted to Spanish entrepreneurs, the question remains as to whether results would generalize to entrepreneurs from different cultures, or to what extent results would apply to employees on pay role. Second, this study has a cross-sectional design. It seems likely that the relationship between performance and affective states is bi-directional. In order to investigate bi-directional relationships, longitudinal research designs are needed. Finally, this study relies on self-report measures. Self-reported business growth can be considered highly indicative of objective business growth, and in earlier research, subjective business performance turned out to be strongly rooted in the objective economic situation of the business (Dej, 2011). Nevertheless, a next study might benefit from including more objective performance measures.

There are still mechanisms left unexplained, as is indicated by the direct pathways in our final outcome model between work engagement, workaholism and innovative behavior. For future research, we suggest a focus on the activation component of affect in addition to valence, or peoples’ interpretation of the meaning of affective states (c.f. George and Zhou, 2002; Wijhe et al., 2011). Other constructs that could additionally be included as mediators are persistence and focus, or vice versa role conflicts (Schaufeli et al., 2009). Including well-being related outcome variables in addition to performance outcome variables may help reveal a possible tradeoff between high performance and well-being. Finally, research on the topic of work engagement, workaholism and performance may benefit from further integration with passion research. One direction this research could take would be to focus on passion for specific entrepreneurial roles, such as the inventor, the founder or the developer role (c.f. Cardon et al., 2009), or passion for specific entrepreneurial tasks instead of passion for work in general. Depending on the object of passion, relationships with role relevant outcomes may be stronger. Research using the idea of performance episodes, such as diary research or day-reconstruction methods (Beal et al., 2005) could be used to identify what tasks and roles people are most passionate about and to study the effects of different patterns of time and energy investment.

Theoretical and practical implications
Our study has interesting theoretical implications. It shows that research on work engagement, workaholism and job performance can gain considerably from building...
on the dualistic model of passion (Vallerand, 2008; Vallerand et al., 2003). With some exceptions, many studies to date have focused on workaholism or work engagement separately. The dualistic model of passion provides a sound theoretical basis allowing researchers to study both concepts in an integrated manner.

Concerning practical implications, this study indicates it is important for entrepreneurs, and specifically for workaholic entrepreneurs, to use emotion regulation strategies, such as cognitive reappraisal. This will help them deal effectively with the negative cognitive and behavioral consequences of negative emotions and affective states (Gross and Thompson, 2007). This study showed no evidence for a positive relationship between excessive working and business performance. Leisure time seems better spent on fun activities that increase psychological and social resource pools, such as self-efficacy, mastery, hope, optimism, vitality and supportive social networks.

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Further reading


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