

Work engagement and workaholism: comparing the self-employed and salaried employees

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This study among a Dutch convenience sample of self-employed individuals ($n=262$) and salaried employees ($n=1900$) tested to what extent workaholism and work engagement relate to self-reported work performance. After controlling for measurement inequivalence, results of structural equation modeling showed that the self-employed score higher on engagement and working excessively than employees, but not on working compulsively. In addition, work engagement related positively to task performance and innovativeness for both groups. However, engagement only related to contextual performance (performance beyond role requirements) for employees. Workaholism had positive *and* negative relationships with self-reported performance. Working excessively related positively to innovativeness for both groups, and to contextual performance for the self-employed. Working compulsively suppressed this positive relationship between excessive working and innovativeness in both groups, and between excessive working and contextual performance for the self-employed. In contrast to our expectations, working compulsively related positively to contextual performance for employees.

Keywords: workaholism; work engagement; job performance; measurement equivalence; self-employed

Introduction

The question of what predicts good performance at work remains relevant both in occupational and organizational psychology, and in the entrepreneurship literature. Recently, entrepreneurship researchers have emphasized the importance of motivational concepts labeled ‘passionate, selfish love of the work’ as key to understanding entrepreneurial behavior (Shane, Locke, & Collins, 2003). This ‘passion for work’ has been proposed as a key characteristic of entrepreneurs (Smilor, 1997). There is indeed some empirical evidence among the self-employed showing positive relationships between passion for work and performance (Baum & Locke, 2004), and between related motivational constructs such as the job involvement component of Type-A behavior and performance (Begley & Boyd, 1987). However, the topic of passion for work and performance has not received much attention in quantitative entrepreneurship research, yet.

The focus of the current study is on two motivational concepts that have recently gained interest as predictors of employee performance, namely work engagement and workaholism. The goal of the study is to investigate whether high levels of work engagement and workaholism are indeed characteristic of the self-employed as compared to salaried employees,

and whether both states relate to self-reported performance (task performance, contextual performance, and innovativeness) to an equal extent for both groups. Before we turn to these questions, we will examine the cross-occupational equivalence of the motivational and self-reported performance constructs. This is important, because in order to compare average scores meaningfully across groups, at least conditions of partial metric and scalar invariance should be met.

Cross-occupational equivalence

Many researchers have compared the self-employed and salaried employees concerning their responses to tests measuring a variety of personality constructs and competencies (e.g. Rauch & Frese, 2007; Zhao & Seibert, 2006). However, one may question whether such group comparisons are meaningful. Arguably, self-employed individuals and employees are members of two qualitatively different sub-cultures, which raises the question of whether constructs are equivalent across both groups (cf. cross-cultural equivalence; Steenkamp & Baumgartner, 1998; Van Herk, Poortinga, & Verhallen, 2005). Without indications that concepts are indeed equivalent across groups,

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conclusions based on comparisons of scale means are ambiguous at best, because differences in raw scale means may reflect systematic biases in the way individuals respond to certain items. For example, previous research has shown that people tend to evaluate themselves slightly too positive on competency scales (Morgeson, Delaney-Klinger, Mayfield, Ferrara, & Campion, 2004). It is our contention that people will be more biased when answering questions concerning traits and characteristics that are considered typical for their jobs, and are 'cultivated' in their peer group. Passion for work, creativity, and innovativeness may be such typical characteristics that many people would agree entrepreneurs should possess (e.g. Sexton & Bowman, 1985). In line with this contention, entrepreneurship researchers have argued that entrepreneurs may have different reference points or anchors than employees have when rating their own qualities, which may explain why certain personality differences between entrepreneurs and employees, such as differences in risk taking propensity, might not be found in survey research (e.g. Shane et al., 2003).

Likewise, one may wonder whether 'contextual performance' could ever have the same meaning for the self-employed and employees. Contextual performance can be defined as individuals' behavior that is not part of their formal job requirements, but which either help in the smooth functioning of the organization as it is now, or help change and improve work procedures and organisational processes (Sonnentag & Frese, 2002). Based on this definition, one might expect that the self-employed consider the tasks identified as contextual performance for employees to be task performance as well. Therefore, before performing comparisons between self-employed individuals and employees, we will investigate the level of equivalence of work engagement, workaholism, and self-reported work performance constructs for these two groups. Because our aim is to compare the self-employed to salaried employees, and hence measures need to be at least partially equivalent, we formulate:

Hypothesis 1: Measures of work engagement, workaholism, and self-reported job performance will meet the requirement of partial equivalence for the self-employed and employees.

Work engagement and workaholism

The term 'passion for work' emerged from qualitative research on entrepreneurs' motivation (Locke, 2000) and has been defined as a passionate love for the work (Shane et al., 2003). Passion is '... the enthusiasm, joy, and even zeal that come from the energetic and unflagging pursuit of a worthy, challenging and uplifting purpose' (Smilor, 1997, p. 342). In the psychological literature, two well-validated concepts

have been studied that show strong similarities with this concept of 'passion for work'. The first concept is the recently introduced concept of work engagement (Schaufeli & Bakker, in press; Schaufeli, Salanova, González-Romá, & Bakker, 2002). People high in work engagement have a sense of energetic and affective connection with their work activities. More specifically, work engagement refers to a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli et al., 2002).

Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. Dedication refers to being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption is characterized by being fully concentrated on and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work. In short, engaged individuals work hard (vigor), are involved (dedicated), and feel happily engrossed (absorbed) in their work (Bakker, Schaufeli, Leiter, & Taris, 2008).

The second concept is workaholism. Different conceptualizations of workaholism exist, some of which match more closely the concept of 'passion' than others. For example, some authors define workaholism as a behavioral and cognitive tendency alone, such as 'an individual's steady and considerable allocation of time to work related activities and thoughts, which does not derive from external necessities' (Snir & Harpaz, 2004, p. 522). Other authors have added to their definition affective components and attitudes towards work that explain the behavioral and cognitive tendency. According to Cantarow (1979), the hallmark of the workaholic personality is the joy of creativity, and workaholics would seek passionate involvement and gratification through work. This agrees with Peiperl and Jones (2001, p. 388) who see workaholics as 'hard workers who enjoy and get a lot out of their work'. However, the term 'workaholic' as coined in 1971 by Wayne E. Oates originally had a less favorable meaning. According to Oates (1971, p. 11), workaholism is 'the compulsion or the uncontrollable need to work incessantly' because it is an addiction akin to alcoholism. For workaholics, the need to work is so exaggerated that it endangers their health, reduces their happiness, and deteriorates their interpersonal relations and social functioning. Many other scholars agree with this negative view on workaholism (Cherrington, 1980; Killinger, 1991; Robinson, 1989; Schaeff & Fassel, 1988; Taris, Geurts, Schaufeli, Blonk, & Lagerveld, 2008).

For the sake of conceptual clarity, an innate tendency to excessively allocate time and thoughts to work alone is not considered a sufficient criterion for workaholism. In addition, instead of discriminating

between 'good' and 'bad' forms of workaholism, in the current study we discriminate between work engagement (being intrinsically good) and workaholism (being intrinsically bad; cf. Schaufeli, Taris, & Bakker, 2006). We distinguish two aspects that together form workaholism: working excessively and working compulsively. With this definition of workaholism, we follow the lead of Scott et al. (1997), who summarize three features of workaholism after critically reviewing the literature. First, workaholics spend a great deal of time in work activities when given the discretion to do so: they are excessively hard workers. 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. Recent empirical evidence among two different employee samples shows evidence for the contention that the fundamental difference between workaholism and work engagement is that workaholism lacks the positive affective (fun) component of work engagement, whereas work engagement does not comprise the compulsive element of workaholism. Moreover, work engagement related only moderately to excessive working and not to compulsive working, whereas the relationship between excessive and compulsive working was extremely high (Taris, Schaufeli, & Shimazu, 2009). Hence, excessive working is considered a correlate but not a component of work engagement.

Comparing the self-employed and salaried employees

In line with the literature on entrepreneurial motivation (Locke, 2000; Shane et al., 2003; Smilor, 1997), we assert that the self-employed (entrepreneurs) will score higher than employees on both work engagement and workaholism. There are two main reasons for this. First, there may be dispositional individual differences between both groups that are responsible for the proposed differences in engagement and workaholism. Individuals in entrepreneurial jobs are more often characterized by achievement-related traits, such as need for achievement, self-efficacy, and internal locus of control than those working on payroll (Rauch & Frese, 2007). Achievement-related traits have been found predictive of work engagement and workaholism (Bakker, 2009; Hallberg, Johansson, & Schaufeli, 2007; Ng, Sorensen, & Feldman, 2007).

Second, many specific aspects of self-employed individuals' job content are highly motivational and can be expected to lead to higher workaholism and engagement. A central element of self-employment is creating, gaining, and rearranging resources (Morris, Kuratko, & Schindehutte, 2001), which can be considered the core of gain spirals of resources and

engagement (Gorgievski & Hobfoll, 2008). In addition, job analyses show that the self-employed engage in managerial and leadership tasks (e.g. Aarts, Hoekstra, & Serlie, 2004; Born & Altink, 2003; Nandram & Samson, 2000) that have been shown to be motivational for employees, because they involve bearing responsibility and decision-making latitude (Campion, Mumford, Morgeson, & Nahrgang, 2005). An indicator that the self-employed are a risk-group for workaholism is the finding that a quantitative work overload and working excessive long hours are highly prevalent among the self-employed (Chay, 1993; Harris, Saltstone, & Fraboni, 1999; Snir & Harpaz, 2004; Tetrick, Slack, Da Silva, & Sinclair, 2000). On the basis of this literature review, we hypothesize that:

Hypothesis 2: The self-employed score higher on (a) work engagement and (b) workaholism than employees.

Work engagement and workaholism as predictors of job performance

Theoretically, there are several reasons why work engagement would stimulate good individual job performance (Bakker, 2009). First, work engagement is accompanied by positive emotions. Positive emotions have been related to a broader scope of attention and ability to build up one's resources (cf. broaden-and-build theory; Frederickson, 2001). Thus, engaged workers and business owners may be more open to new opportunities, be more helpful towards other people (cf. Cropanzano & Wright, 2001), and may be better able to build social network resources, job resources, and personal resources, such as self-confidence and optimism, than less engaged individuals. Second, work engagement has been found predictive of good health (for an overview see Schaufeli & Salanova, 2007), because of which more engaged people may be better able to perform well. Some preliminary evidence indeed shows that engaged employees perform better than their less engaged colleagues (Demerouti & Bakker, 2006). For example, several studies related work engagement to both higher task and contextual performance (e.g. Bakker, Demerouti, & Verbeke, 2004).

In addition, work engagement has been shown to predict more specific performance measures. For example, Salanova, Agut, and Peiro (2005) showed that levels of work engagement of contract employees in hotels and restaurants were positively related to service quality, as perceived by customers. On a more aggregate level, and using a different measure of work engagement, Harter, Schmidt, and Hayes (2002) demonstrated that employees' levels of engagement are positively related to business-unit performance (for example, customer loyalty, profit, and productivity). Finally, in a diary study among Greek employees

working in a fast-food restaurant, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) found that employees were more engaged on days that were characterized by many job resources, including supervisor coaching and a favorable team climate. Daily engagement, in turn, had a positive effect on same and next day's objective financial returns.

Concerning workaholism, results are more equivocal. Some authors maintain that workaholics are extremely productive (e.g. Korn, Pratt, & Lambrou, 1987; Machlowitz, 1980; Peiperl & Jones, 2001). Others, however, have claimed the opposite (Flowers & Robinson, 2002; Oates, 1971; Porter, 2001). These researchers argue that workaholics work hard rather than smart. They create difficulties for their co-workers, suffer from perfectionism, are rigid and inflexible, and do not delegate.

Unfortunately, virtually no empirical research has been carried out on the relationship between workaholism and job performance. In a qualitative interview study, Machlowitz (1980) found workaholics to be both satisfied and productive. In contrast, Burke (2001) found some indirect evidence suggesting that workaholics do not perform particularly well: workaholic behaviors were *not* associated with salary increases. It has been proposed that different results could be attributed to differential effects of two workaholism components: working excessively and working compulsively (Schaufeli, Taris, & Bakker, 2006). It can be expected that working excessively increases output. However, working compulsively might impair performance outcomes, especially outcomes that typically relate to positive emotions, such as creativity and innovativeness.

To our knowledge, no empirical evidence exists that relates work engagement and workaholism to performance among the self-employed, and hence our aim is to validate results found among salaried employees for the self-employed. We hypothesize that:

Hypothesis 3: Work engagement is positively related to self-reported job performance (task performance, contextual performance, and innovativeness) for both the self-employed and for employees.

Hypothesis 4: The workaholism component 'working excessively' is positively related to self-reported job performance (task performance, contextual performance, and innovativeness) for both the self-employed and for employees.

Hypothesis 5: The workaholism component 'working compulsively' is negatively related to self-reported job performance (task performance, contextual performance, and innovativeness) for both the self-employed and for employees.

Method

Participants

Participants in this study are Dutch workers from a wide range of companies and occupations, who participated in an Internet survey ($N=2164$). Table 1 compares several characteristics of the current sample with those of the Dutch workforce as a whole (Statistics Netherlands, 2009). The chi-square tests reported in Table 1 show that males, workers between 25 and 44 years of age, and individuals with higher education are overrepresented in our sample, compared to the Dutch workforce. This is a frequently recurring phenomenon in Internet surveys

Table 1. Sample characteristics compared with the Dutch workforce.^a

Sample characteristic	Current sample (%) ($N=2164$)	Dutch workforce (%) [*] ($N=8,202,000$)	χ^2	df
<i>Gender</i>			70.99***	1
Men	64	55		
Women	36	45		
<i>Age</i>			127.87***	2
15–24	12	16		
25–44	55	61		
45–65	33	23		
<i>Employment status</i>			7.09*	1
Company employed	88	86		
Self-employed	12	14		
<i>Educational level</i>			630.95***	2
Low	12	23		
Medium	31	45		
High	57	32		

Notes: * $p < 0.05$.

*** $p < 0.001$.

^aSource: Statistics Netherlands (2009).

(e.g. Bandilla, Bosnjak, & Altdorfer, 2003). There is also a marginal difference in employment status.

Procedure

A survey was published on the website of a Dutch psychology magazine in 2004 and 2005 for a period of 1.5 years. Visitors to its homepage were invited to learn more about their work-related well-being (specifically work engagement and workaholism) by filling out a questionnaire that included socio-biographical background variables, questions about their employment status, and the questionnaires discussed below. The confidentiality and anonymity of the data was emphasized. Immediately after filling out the survey, participants were informed about their engagement and workaholism scores and received feedback that was customized to their own engagement and workaholism scores. The data were automatically written to an external file. The data of 64 persons (3%) were excluded from the analyses, because a closer look at the time of questionnaire completion, gender, age, profession, and the response pattern suggested that they had filled out the web survey more than once.

Instruments

Work engagement was assessed with the nine-item version of the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006). 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'. Cronbach's $\alpha = 0.93$.

Workaholism was measured with two subscales based on Flowers and Robinson (2002) and Spence and Robbins (1992), respectively. Seven items measured *Working Excessively* (Cronbach's $\alpha = 0.84$), for example 'I find myself continuing to work after my co-workers have called it quits'. Ten items measured *Working Compulsively*, such as 'I feel obliged to work hard, even when it's not enjoyable' (Cronbach's $\alpha = 0.86$). All items were scored on a four-point rating scale, ranging from 1 'totally disagree' to 4 'totally agree'.

Self-reported job performance was assessed with three sub scales. *Task performance* was measured with three items from Goodman and Svyjantec (1999). Participants were asked to indicate the extent to which they found statements characteristic of themselves on a six-point scale ranging from 0 'not at all characteristic' to 6 'totally characteristic', e.g. 'Achieves the objectives of the job'. Cronbach's $\alpha = 0.86$. *Contextual performance* was also measured

by three items of Goodman and Svyjantec (1999) (e.g. 'Willingly attends functions that are not part the job, but help in the overall image of the organization', and 'Helps colleagues with their work when they have been absent'). The response format is similar to that used for task performance. Cronbach's $\alpha = 0.74$. Finally, the employee's level of *innovativeness* at work was measured by six items developed by Janssen (2003). For example, 'I invent new solutions for problems at work'. A five-point response format was used, ranging from 1 'never' to 5 'very often'. Cronbach's $\alpha = 0.90$. Respondents were categorized into self-employed versus employees based on their answer to the question: 'Are you a salaried employee, or are you self-employed?'

Analyses

The current study uses multi group structural equation modeling methods using Amos (Arbuckle, 2005). Prior to testing means differences and relationships between constructs, we investigated six types of measurement invariance across the sub-samples: (1) configural invariance (similar pattern of significant and non-significant factor loadings), (2) metric invariance (similar factor loadings), (3) scalar invariance (similar intercepts of the items, implying that differences in observed means reflect differences in means of the latent underlying construct), similarity of (4) covariances among latent factors, (5) of variances of latent factors, and (6) of the variances of the error terms of the individual items (cf. Steenkamp & Baumgartner, 1998). In order to compare the scores of the *observed* (raw) scores meaningfully, results need to show full measurement invariance. In order to compare average scores of *latent* constructs meaningfully across groups, at least conditions of partial configural, metric, and scalar invariance should be met. The term 'partial' refers to at least two observed indicators of a latent construct showing invariance. Further, in order to compare relationships across groups meaningfully, the measurement of constructs need to show configural and scalar invariance, and the variances of the outcome variables would need to be similar.

The goodness-of-fit of the models was evaluated using the χ^2 goodness-of-fit statistic, the Non-Normed Fit Index (NNFI) and the Comparative Fit Index (CFI). For both relative fit-indices, as a rule of thumb, values greater than 0.90 are considered as indicating a good fit (Byrne, 2001, pp. 79–88). In addition, the Root Mean Square Error of Approximation (RMSEA) is computed for which values up to 0.08 indicate a reasonable fit of the model to the data (Browne & Cudeck, 1993).

Results

Measurement equivalence across sub-samples

In order to investigate measurement equivalence across the groups of self-employed individuals and employees (*Hypothesis 1*), we performed separate confirmatory factor analyses on the motivational constructs (work engagement and workaholism) and the self-reported performance measures. Results are shown in Tables 2 and 3. We used the factorial structure of work engagement (one factor) and workaholism (2 factors) as found in an earlier study of Schaufeli, Taris, and Bakker (2006) as the basic model¹ (see Figures 1 and 2). Factor loadings that are not significant for the employee sample are also not significant for the sample of self-employed individuals, indicating configural invariance.

Second, regarding metric invariance, constraining factor-loadings of the items to be equal across the sub-samples shows no significant deterioration of model fit for work engagement and workaholism (M2 in Table 2), $\Delta\chi^2(23) = 29.60, n.s.$, but the model fit for the self-reported performance measures deteriorates significantly, $\Delta\chi^2(11) = 207.12, p < 0.001$ (M2 in Table 3). This finding can be attributed to the item ‘I am innovative’, which has stronger factor loadings on innovativeness for the self-employed (0.82, $p < 0.001$)

than for employees (0.75, $p < 0.001$). Hence, this parameter needs to be freely estimated across groups (M3 in Table 3).

Third, we tested scalar invariance (M4, Table 2). For both work engagement and workaholism, results

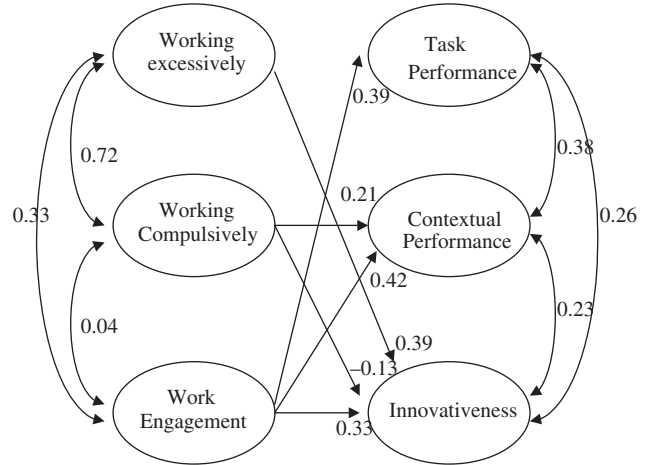


Figure 1. Standardized results for the relationships between work engagement, workaholism, and self-reported job performance for employees ($n = 1900$). Only significant paths are shown. Model Fit for the multi-group analysis is: $\chi^2(1304 df) = 5102.45, p < 0.001, CFI = 0.91, NFI = 0.88, TLI = 0.90, RMSEA = 0.04$.

Table 2. Test of different types of measurement equivalence of a three-factor model of work engagement, working excessively and working compulsively for self-employed individuals ($n = 262$) as compared to salaried employees ($n = 1900$).

Model description	χ^2	df	NFI	TLI	CFI	RMSEA
M1 Original Model, no measurement invariance assumed	3171.48	584	0.89	0.90	0.91	0.05
M2 Full metric invariance assumed	3199.93	607	0.89	0.90	0.91	0.04
M3 Full scalar invariance assumed	3357.79	633	0.88	0.90	0.90	0.05
M4 Partial scalar invariance assumed	3237.82	621	0.89	0.90	0.91	0.04
M5 Equal factor covariances assumed	3211.60	624	0.89	0.90	0.91	0.04
M6 Equal factor variances assumed	3242.28	627	0.89	0.90	0.91	0.04
M7 Equal error variances assumed	3275.56	653	0.88	.91	0.91	0.04

Note: For M1–M7 see text.

Table 3. Test of measurement equivalence of a three factor model specifying self-reported task performance, contextual performance and creativity for self employed people ($N = 262$) as compared to salaried employees ($N = 1900$).

Model description	χ^2	df	NFI	NNFI	CFI	RMSEA
M1 Original model, no measurement invariance assumed	635.91	102	0.94	0.95	0.96	0.05
M2 Full metric invariance assumed	654.63	111	0.95	0.96	0.96	0.05
M3 Partial metric invariance assumed	645.92	110	0.95	0.95	0.96	0.05
M4 ^a Full scalar invariance assumed	730.23	122	0.94	0.95	0.95	0.05
M5 Equal factor covariances assumed	646.97	113	0.95	0.95	0.96	0.05
M6 Equal factor variances assumed	649.26	116	0.95	0.95	0.96	0.05
M7 Equal error variances assumed	666.91	127	0.95	0.96	0.96	0.04

Note: For M1–M8 see text.

^aScalar invariance was not included in models M5 to M7.

show partial scalar invariance: 12 of the 26 items are systematically ‘biased’ across groups ($\Delta\chi^2(26) = 156.3$, $p < 0.001$), meaning that the intercepts of these items do not reflect the latent factor means. Concerning self-reported performance indicators, results show that only four intercepts can be constrained to be equal across groups, without significantly deteriorating model fit. Two of these items are from the task performance scale, indicating partial scalar invariance. The other two scales (contextual performance and innovativeness) show *no* scalar invariance.

Finally, we tested whether the covariances among the latent factors (M5, Tables 2 and 3), the variances of the latent factors (M6), and the variances of the error terms of the individual items (M7) differed across the two groups. No significant differences are found, which indicates that the correlations between work engagement, working excessively, and working compulsively are similar across groups, namely $r = 0.33$ between work engagement and working excessively ($p < 0.001$), $r = 0.06$ ($p < 0.05$) between work engagement and working compulsively, and $r = 0.66$ between working excessively and working compulsively ($p < 0.001$). Correlations between self-reported task performance, contextual performance, and innovativeness are also similar across groups, namely $r = 0.46$ between task and contextual performance, $r = 0.38$ between task performance and innovativeness, and $r = 0.36$ between contextual performance and innovativeness (all $ps < 0.001$). In addition, the items are equally reliable indicators of the latent constructs for the self-employed and employees, which is indicated by a similar percentage of variance in observed indicators that was explained by the underlying constructs.

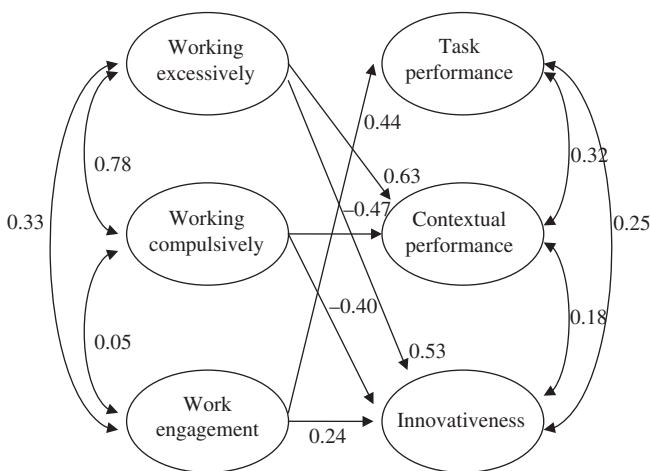


Figure 2. Standardized results for the relationships between work engagement, workaholism, and self-reported job performance for self-employed workers ($n = 262$). Only significant paths are shown. Model Fit for the multi-group analysis is: $\chi^2(1304\text{ df}) = 5102.45$, $p < 0.001$, CFI = 0.91, NFI = 0.88, TLI = 0.90, RMSEA = 0.04.

In sum, supporting Hypothesis 1, measures of work engagement, workaholism, and self-reported job performance are partially invariant. Conditions for comparing *relationships* between occupational groups are met. In addition, the means of the *latent* factors of work engagement and workaholism, but *not* the means on the *raw* scores, can be compared meaningfully across groups. Note that contextual performance and innovativeness as self-reported by self-employed people versus employees do not show scalar invariance at all, indicating that even on the level of latent variables the interpretation of mean differences would be ambiguous.

Group differences in work engagement and workaholism

Hypotheses 2a and 2b read that self-employed will score higher than employees on work engagement and workaholism. Model 7 (M7) from Table 2 was used as the baseline model, to which a model with estimated differences in factor means was compared. Results show full support for Hypothesis 2a, and partial support for Hypothesis 2b. For engagement, the self-employed score on average 0.43 points higher than employees ($SE = 0.088$, $p < 0.001$), and 0.07 points higher on working excessively ($SE = 0.034$, $p < 0.05$). No differences are found concerning working compulsively ($\Delta\chi^2(1) = 0.66$, *n.s.*). Note that means and standard deviations of the raw scores are shown in Table 4. If the constraint of equal means across groups is released, the model fit improves significantly for work engagement, $\Delta\chi^2(1) = 234.04$, $p < 0.001$, and for working excessively $\Delta\chi^2(1) = 188.94$, $p < 0.001$.

Work engagement, workaholism, and self-reported performance

To test Hypotheses 3–5, we examined the relationships between work engagement and workaholism on the one hand, and the self-reported performance criteria on the other hand, for both self-employed individuals and employees. For this purpose, the latent factors of work engagement, working excessively, and working compulsively, and self-reported task performance, contextual performance, and innovativeness were all put together in one model (see Figures 1 and 2). All constraints for measurement invariance were released, and paths leading from the latent variables ‘work engagement’, ‘working excessively’, and ‘working compulsively’ to self-reported performance outcomes were added. Table 4 presents correlation coefficients between latent variables. Note that all bivariate correlations between engagement and workaholism on the one hand, and self-reported performance indicators on the other hand, are positive.

Table 4. Means and standard deviations of the raw scores on motivational constructs and self-reported performance outcomes, and standardized covariances between latent factors, for self employed people ($N = 262$; left diagonal) as compared to Dutch employees ($N = 1900$; right diagonal).

	Self employed ^a		Employees ^a		Work engagement	Working excessively	Working compulsively	Self-reported task performance	Self-reported contextual performance	Self-reported innovativeness
	M	SD	M	SD						
Work engagement	4.08	1.12	3.71	1.16	–	0.34	0.05	0.40	0.43	0.46
Working excessively	2.36	0.55	2.24	0.52	0.32	–	0.72	0.11	0.31	0.40
Working compulsively	2.07	0.61	2.04	0.57	0.03	0.78	–	0.02	0.22	0.16
Self-reported task performance	4.27	1.81	4.30	1.16	0.44	0.22	0.04	–	0.48	0.38
Self-reported contextual performance	3.56	1.30	3.76	1.22	0.21	0.28	0.03	0.39	–	0.40
Self-reported innovativeness	3.60	0.73	3.35	0.72	0.40	0.32	0.02	0.37	0.32	–

Note: ^aNote that the mean differences of the raw scores need to be interpreted with caution, because the measures are only partially equivalent across occupations.

Figures 1 and 2 show the final model for both groups, which fit reasonably well to the data: $\chi^2(1304) = 5102.18$; $p < 0.001$; GFI = 0.89; NFI = 0.88; NNFI = 0.90; CFI = 0.91; RMSEA = 0.04. All parameters in Figures 1 & 2 differ significantly from zero, and the model explains 15%, 23%, and 30% of the variance in self-reported task performance, contextual performance, and innovativeness for employees, and 19%, 15%, and 24% of the variance in self-reported task performance, contextual performance, and innovativeness for self-employed people².

Partial support is found for Hypothesis 3, which predicts a positive relationship between work engagement and self-reported performance. Engagement relates positively to both task performance and innovativeness for both groups. Engagement also relates to contextual performance quite strongly for employees. However, in contrast to our hypothesis, it does not relate to contextual performance at all for self-employed individuals.

Concerning workaholism, partial support is found, too, for Hypothesis 4, according to which working excessively would be positively related to self-reported job performance for both the self-employed and for salaried employees. Working excessively is strongly related to self-reported innovativeness for both self-employed workers and employees. In addition, for the self-employed but not for employees, it strongly and positively related to self-reported contextual performance.

Finally, results are in line with Hypothesis 5 that predicts negative relationships between workaholism and self-reported performance. For the self-employed, working compulsively *negatively* related to both self-reported contextual performance and innovativeness. For employees, results show partial support. Working compulsively related negatively to self-reported innovativeness, but positively to self-reported contextual performance.

Discussion

This study shows that self-employed individuals score higher on work engagement and on working excessively than salaried employees. In addition, results show that positive relationships between these motivational constructs and the self-reported criterion variables task performance and innovativeness that had been found for employees generalize to self-employed individuals. Moreover, the proposed negative relationship between working compulsively and self-reported performance was found to be clearly stronger for the self-employed than for salaried employees. Working compulsively and working excessively are strongly related and together constitute workaholism.

Group differences in work engagement and workaholism

The self-employed in this study reported higher work engagement and working excessively long hours than salaried employees, but they did *not* report working more compulsively. This indicates that the self-employed may be going the extra mile as compared to employees out of positive motivation. The finding is consistent with results of studies investigating entrepreneurial job characteristics and stress, which have labeled entrepreneurial jobs as motivational rather than stressful. These studies have found that entrepreneurial jobs were high in work demands, such as quantitative work overload (having too much to do in too little time), but also provide resources that are highly valued by entrepreneurs, such as job control, feedback, social recognition, and ample opportunities for learning and growth (e.g. Gorgievski & Laguna, 2008; Stephan & Roessler, in press). Results of the current study also partly line up with results of studies on entrepreneurial personality (Rauch & Frese, 2007). Some evidence exists that entrepreneurs would score higher on personality traits predictive of workaholism, such as achievement motivation (Ng et al., 2007). However, more evidence points at predictors of work engagement, such as self-efficacy and optimism (Bakker, 2009). Moreover, some personality traits that have been found predictive of workaholism do not seem to fit the picture of entrepreneurs at all, such as low self-esteem (Ng et al., 2007).

Note that prior to testing hypotheses regarding mean differences, measurement equivalence of the constructs was scrutinized. Results showed there is only partial metric and scalar invariance across the two occupational groups. For this reason, raw scores were not compared, but means differences were tested using latent factor structural equations modeling. This is a very conservative test of mean differences; because of which it is even more meaningful these differences have been identified, although they appear to be very small in our analyses.

Work engagement, workaholism, and self-reported performance

The next question that was addressed concerned the relationships between, on the one hand, work engagement and workaholism and, on the other hand, self-reported job performance. In line with our expectations, work engagement related positively to self-reported task performance and innovativeness for both groups. However, it related to self-reported contextual performance only for salaried employees. An explanation may be that the items defining contextual performance have a qualitatively different meaning for self-employed individuals as compared to

salaried employees. More specifically, the implicit assumption is that contextual performance is something positive. For example, employees have been found to voluntarily engage in contextual tasks, such as helping colleagues, in order to replenish their social and energetic resources (Halbesleben, 2006). However, for the self-employed, 'helping colleagues' might be less voluntarily, and relate to problems with delegating tasks, which has been identified as a resource depleting entrepreneurial stressor (Gorgievski & Laguna, 2008). Problems with delegating tasks may be driven by perfectionism, which has been found to be characteristic for workaholics (Ng et al., 2007).

Partial support was found for the prediction that working excessively relates to good self-reported performance. Working excessively related to self-reported innovativeness for both groups. This lines up with theoretical insights and research on creativity showing that there are two pathways to creativity and innovativeness, namely through positive affect (work engagement), but also through persistence (De Dreu, Baas, & Nijstad, 2008). According to the dual pathway model, it is not only the positive valence of affect, but also activation and effort that enhances creativity. Working excessively also related positively to self-reported contextual performance for the self-employed. This finding once more underscores the possibility that, for self-employed individuals, contextual performance may be a qualitatively different concept. In combination with innovativeness and working excessively, the idea easily comes to mind that activities that are not 'part of the job that help the organization run smoothly' might constitute boundary-spanning activities. Such activities involve communications between the organization and the organization's external environment, which are crucial for successful innovation.

In line with our hypotheses that working compulsively would relate negatively to self-reported performance, working compulsively related to less self-reported innovative behavior for both groups, and less self-reported contextual performance for self-employed individuals. However, it did not relate to self-reported task performance for either group. In contrast to our expectations, working compulsively predicted self-reported contextual performance positively for employees. This relationship is difficult to interpret, and should probably be seen in relationship to working excessively. Working compulsively appears to suppress the positive relationship between working excessively and self-reported performance (Maassen & Bakker, 2001). For employees, working excessively did not relate to self-reported contextual performance. It is remarkable that also for working compulsively, the main differences between self-employed workers and salaried workers involve self-reported contextual performance. Once again this finding calls for more detailed research on contextual performance for the

self-employed. We concur with Motowidlo (1999) that there are good reasons for trying to identify broad categories of performance, but that the behavioral content of performance constructs is more important than their labeling. As our results show, it is important to remain aware of the possible differences in behavioral content across samples. Specifically, this could be achieved through qualitative studies on the operationalization and contextualization of the contextual performance construct, and diary studies on the relationship between tasks performed during the day and the motivation people feel for doing these activities.

Limitations of the study

This study has some shortcomings. Most importantly, because of its cross-sectional design it is not possible to demonstrate the temporal order and causality of relationships. Concerning the relationship between motivation and performance, bi-directional relationships are plausible. For example, building on the 'Cognitive Activation Theory of Stress', Andreassen, Ursin, and Eriksen (2007) proposed that 'enthusiastic' workaholism, a construct close to work engagement characterized by high drive and high enjoyment, would result from high expectancies of success. In contrast, 'non-enthusiastic' workaholism, characterized by high drive and low enjoyment, might result from low performance expectancies (helplessness and hopelessness). Outcome expectancies may result from prior success, or failure to achieve success. Relationships between motivation and performance may also partly be due to third variables, such as personality traits, which have both been linked to motivation (e.g. Bakker, 2009; Ng et al., 2007) and job performance (e.g. Barrick, Mount, & Judge, 2001; Rauch & Frese, 2000, 2007).

In addition, the study compared a relatively large group of salaried employees to only a relatively small group of business owners. For this reason, we did not further discriminate between different types of businesses the self-employed in our study managed, such as business size and the branches they worked in. More research is needed that can provide insight into the mechanisms behind our findings. This way, we could gain more insight into why different relationships were found for the self-employed as compared to employees. Possible reasons may be differences in job content, job exposure, job duration, job security, or personality characteristics. More detailed information concerning the active moderator ingredient that could explain the differences between the self employed and employees would enable us to derive more detailed practical implications.

Third, this study may suffer from biases related to relying on only self-report measures. In order to measure motivational states accurately, it is difficult to think of a method more appropriate than self-reports. However, job performance lends itself well for multiple measurement methods, such as more objective measures and non-incumbent ratings (Spector, 2006). The question as to what extent self-reported performance reflects objective performance success remains relevant. Empirical evidence among school teachers shows that the self-report measures of task and contextual performance that were used in the current study related strongly to supervisor ratings of performance ($r = 0.46$, $p < 0.001$; Bakker & Bal, in press), which may indicate that these measures are rooted in reality. However, self-report measures have been found inaccurate because of self-presentation bias, which is influenced by social desirability and sensitivity of the topic (Tourangeau, Rips, & Rasinski, 2000). One could argue that job performance is a sensitive topic for everyone, and hence self-reported job performance will be inflated to an equal extent for every individual. However, it seems more plausible that good job performance is even more crucial for individuals who work excessively hard, and who have made significant sacrifices for their jobs. This would mean that the strong positive relationship between excessive working and self-reported performance may not be in accordance with relationships between excessive working and more objective performance measures. Including different types of performance measures might provide valuable additional insights into the motivation–performance relationship, even though other measurement methods may come with other biases (Spector, 2006).

Finally, although we investigated measurement equivalence in a more technical sense, the possibility that constructs may have a qualitatively different meaning can still not completely be excluded. Future research would gain from using a longitudinal design and multiple measurement methods. Research methods could further be enriched using qualitative techniques, for example to investigate the meaning of different constructs in more detail. Furthermore, it would be interesting to include explanatory variables, such as job characteristics and individual differences.

Theoretical and practical implications

In spite of these limitations, our findings have important theoretical and practical implications. Testing measurement equivalence across occupational groups is not common practice in occupational and entrepreneurship research to date. The finding in this study that construct measurement is only partially equivalent has important scientific implications. It is common practice

in both personnel and entrepreneurship research to compare people from different occupational groups on traits, skills, and competencies reported by job-incumbents (e.g. Morgeson et al., 2004; Rauch & Frese, 2000, 2007). In personnel psychology there is a growing awareness that such results may be biased across gender and culture. Results of our study show that it is also imperative to ascertain that measures are equivalent across groups when addressing sub-cultures. It is important to know whether differences truly reflect differences in traits, skills, and abilities, or whether they could be attributable to systematic biases.

Second, for self-employed individuals as compared to employees we found different predictors for self-reported innovativeness and contextual performance, but not for task performance. This finding once more shows that it is important to include multiple indicators of the same construct. Close attention needs to be paid to a fit between predictor and criterion variables on important characteristics, such as the level of generality versus specificity. In addition, relationships need to be predicted based on well-defined theory (cf. Tett, Steele, & Beauregard, 2003). Concerning research on workaholism and work engagement, it may be especially fruitful to focus on the issue of contextual performance. People typically have more freedom concerning whether they engage in contextual behavior or not than they have regarding task related behavior. Additionally, people also have a certain amount of freedom concerning the kind of tasks they perform outside their prescribed roles. In other words, contextual performance may strongly relate to the way people craft their own jobs. This may be a fruitful avenue of further research.

Concerning practical implications, results show that especially the self-employed may need to be encouraged to work smart rather than hard, and maintain a positive motivation to work. This may enable them to reach more creative and innovative solutions with less effort. Here lies an important role for entrepreneurship training programs, which should focus on developing competencies that are predictive of work engagement, such as psychological capital (Luthans & Youssef, 2004).

Finally, several authors discussed as to whether different cut off points might be needed to identify workaholics from different occupational groups (e.g. managers versus clerical officers; McMillan & O'Driscoll, 2004; Ng et al., 2007). The results of this study indicate that this might indeed be the case, because self-employed individuals score higher on scales measuring such motivational constructs than people in other occupations, which did not directly reflect differences in the underlying construct.

Conclusions

Our study showed that self-employed individuals indeed have more 'passion for work' than salaried employees. They work more excessively and report higher work engagement, which relate to better self-reported performance. They do not work more compulsively. Working compulsively may be the sting of workaholism. It was shown to curb the positive relationship between excessive working and self-reported innovative and contextual performance, especially for the self-employed. Hence, excessive working may pay off less for workaholics than for engaged individuals. Therefore, encouraging and cultivating the maintenance of a positive outlook seems especially important for self-employed people during hard times, when market orientation and innovation are a key source of momentum by which to sustain the business (e.g. Zahra & Nielsen, 2002). Based on this finding it can also be argued that excessive working alone is not enough to define workaholism. Excessive working as a non-persistent tendency may also to some extent indicate work engagement, and may be provoked by certain characteristics of the job environment in people who show no disposition towards workaholism (Ng et al., 2007). Therefore, researchers are advised to use a definition of workaholism as a syndrome including both working excessively and working compulsively. Otherwise, it will not capture the addictive nature of the phenomenon (Schaufeli et al., 2008).

Notes

1. Schaufeli et al. (2006) also allowed four pairs of error terms to correlate. The rationale for this decision lies in the overlapping item content. In addition, they reported two significant but low cross-loadings that were not modeled. In our analyses we found that correlated error terms and cross loadings occurred in both sub-samples, which is another indication of configural invariance. We allowed these error terms to correlate.
2. The same analyses have been performed on two subsamples of entrepreneurs, one group with and one without employees. The pattern of relationships in the final model was similar for the two groups, and constraining the structural relationships to be equal across the two groups of self-employed people only slightly deteriorated model fit ($\Delta\chi^2_{(9,df)} = 7.58, p n.s.$). For reasons of parsimony, we decided to present the results of the analyses without further differentiation.

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