

Schummer, Steffen E.; Otto, Kathleen; Hünefeld, Lena; Kottwitz, Maria U.

Article

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The role of need satisfaction for solo self-employed individuals' vs. employer entrepreneurs' affective commitment towards their own businesses

Steffen E. Schummer^{1*} , Kathleen Otto¹, Lena Hünefeld² and Maria U. Kottwitz¹

* Correspondence: steffen.schummer@staff.uni-marburg.de

¹Faculty of Psychology, Work and Organizational Psychology, Philipps University of Marburg, Gutenbergstraße 18, 35032 Marburg, Germany
Full list of author information is available at the end of the article

Abstract

Persistence in self-employment is crucial for entrepreneurial activities to generate long-term economic benefits. Consequently, this research examined the commitment of the self-employed towards their business as an important determinant of persistence. However, this research treats the self-employed as one entity. Yet we assume that especially for the research on commitment the differentiation of the self-employed into solo self-employed individuals (self-employed individuals without employees) and employer entrepreneurs (self-employed individuals with employees) provides seminal insights. Thus, this study examined differences in affective commitment to (emotional attachment to and identification with) one's business and its antecedents between these self-employment forms. We used data of German solo self-employed individuals ($n = 117$) and employer entrepreneurs ($n = 103$) from the European Working Condition Survey (EWCS 2010). A simple t test revealed that the solo self-employed individuals report lower levels of affective commitment to their business than employer entrepreneurs. Moreover, regression analyses revealed that satisfaction of the needs for autonomy and competence was more strongly related to affective commitment for the solo self-employed than that for employer entrepreneurs, whereas satisfaction of the need for relatedness was more weakly related among the solo self-employed than that the employer entrepreneurs. These results suggest that solo self-employed individuals and employer entrepreneurs not only differ in affective commitment to their businesses but also in their antecedents. Implications for research on motivational processes of the self-employed and for fostering persistence in self-employment are discussed.

Keywords: Entrepreneurship, Small business owners, Self-employment, Social identity, Self-determination theory, Need satisfaction, Autonomy, Competence, Relatedness, Affective commitment

Introduction

Self-employment is an important driver of economic development. Entrepreneurial activities create new workplaces (Wolff & Nivorozhkin, 2012) and contribute to economic resilience and growth (Skriabikova, Dohmen, & Kriechele, 2014; Valliere & Peterson, 2009). However, in order to profit from the economic benefits of self-employment, the self-employed should be able to stay in business (Patel & Thatcher,

2014). Yet financial and existential uncertainties, high workload (Müller, 2015), and long working hours (Uy, Foo, & Song, 2013) make persistence in self-employment difficult. Research examining possible determinants of persistence in self-employment has mostly focused on country or regional factors and sociodemographic variables (Fritsch & Wyrwich, 2014; Millán, Congregado, & Román, 2012). The psychological concept of organizational commitment, a psychological state binding one to the organization (Meyer & Allen, 1991), has been applied to self-employment (Felfe, Schmook, Schyns, & Six, 2008). This approach offers promising implications for research on persistence in self-employment, since organizational commitment is one of the central determinants of turnover intentions and actual turnover (Meyer & Allen, 1997).

However, research on the organizational commitment of the self-employed neglects that self-employment comprises different sub-forms. Thus, the generalizability of previous findings on the different sub-forms remains unclear. Building on *self-determination theory* (SDT; Gagné & Deci, 2005), we assume in the present study that the solo self-employed (i.e., self-employed without employees) are less affectively committed (i.e., emotionally attached) to their businesses than employer entrepreneurs (i.e., self-employed with employees) because they are less intrinsically motivated to run (i.e., interested in running) their businesses and because they are less likely to experience need satisfaction through their work. Moreover, applying the categorization of psychological needs developed by Haslam, Powell, and Turner (2000) to the needs of the SDT (Gagné & Deci, 2005), we propose that the needs for autonomy and competence are personal needs whereas the need for relatedness is a social need. Based on this idea, we posit that for the solo self-employed the personal needs of autonomy and competence are more activated and the social need of relatedness is less activated than that for employer entrepreneurs in the work context, because the solo self-employed can only define themselves on a personal level whereas employer entrepreneurs can also define themselves on the social level through the (ir) membership in an organization. Consequently, we assume that the solo self-employed individuals are more determined in their affective commitment by the needs for autonomy and competence and less by the need for relatedness than employer entrepreneurs. The remainder of this article is organized as follows: we briefly discuss the literature on (solo) self-employment, organizational commitment, self-determination theory, and the social identity approach. We then outline the present study and its findings and conclude with a discussion of the theoretical and practical implications of these findings.

Self-employment and organizational commitment

Extant literature shows that *affective organizational commitment* is one of the major determinants of turnover intentions and actual turnover (Meyer & Allen, 1997; Meyer & Herscovitch, 2001; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). With respect to self-employment, actual turnover implies that the owner/one of the owners leaves the business, often leading to the close-down of the business. Thus, the self-employed's affective commitment to their business is crucial for persistence of the business and therefore for realizing the economic benefits of self-employment (Baluku & Otto, 2017). This might apply in particular to the solo self-employed, since their

businesses are totally dependent on them. In their *three-component model* (TCM), Meyer and Allen (Allen & Meyer, 1990; Meyer & Allen, 1991, 1997) defined affective organizational commitment as an affective attachment to, identification with, and involvement in the organization (Meyer & Allen, 1991).

Recently, Felfe et al. (2008) applied the concept of organizational commitment to self-employment. They assumed that the self-employed are more committed to their organization because their working conditions (e.g., task content) better fit their personal needs. The authors found that self-employed freelancers indeed report a higher organizational commitment than traditional employees. However, it is questionable whether these findings are applicable to all self-employed individuals, since self-employment comprises several forms of employment. These forms can be categorized into the solo self-employed (self-employed individuals without employees) and employer entrepreneurs (self-employed individuals with employees; Brenke, 2013; Van Stel, Wennekers, & Scholman, 2014). For example, a business consultant working as a freelancer could run her business completely on her own without additional personnel. However, she could also hire a secretary or work with other consultants besides her. These two self-employment forms differ in working conditions, and people employed in these forms differ in individual variables (for an overview see Conen, Schippers, & Buschoff, 2016), of which some should determine the affective commitment of solo self-employed and employer entrepreneurs.

Motives and precarity in (solo) self-employment

Particularly *motivational differences* to run a business and differences in financial and existential insecurity of the solo self-employed and employer entrepreneurs should have an impact on their affective commitment. People have various motives for becoming an entrepreneur. These motives can be categorized in terms of “push” factors and “pull” factors (Gilad & Levine, 1986; Hakim, 1989; Kirkwood, 2009; Segal, Borgia, & Schoenfeld, 2005). Push factors are defined as personal or external factors forcing people to start a business, such as escaping unemployment, whereas pull factors are defined as those drawing people to start a business, such as expectation of autonomy (Hakim, 1989). Conen et al. (2016) found in their Survey Solo Self-employment that about 40% of German solo self-employed individuals report to be motivated by push factors, whereas only 20% of all German self-employed in the Global Entrepreneurship Monitor 2014 report being motivated by push factors. This indicates that push factors are more prevalent in solo self-employed than those in employer entrepreneurs. Similarly, Van der Zwan, Hessels, Hoogendoorn, and de Vries (2013) found that a higher percentage of Dutch solo self-employed individuals report push factors than Dutch employer entrepreneurs. Moreover, in the literature, solo self-employed individuals are considered to be precariously employed, facing high employment insecurity, economic deprivation, and existential insecurity (Benach et al., 2014). Research showing that solo self-employed individuals on average earn less and are more likely to transfer into unemployment than employer entrepreneurs confirms this notion (Brenke, 2013). Using our earlier example, the solo self-employed business consultant is more likely than the business consultant with employees to have started her business because she did not

find a job in an organization, whereas the business consultant with employees has more likely been attracted by envisaged opportunities of autonomy or self-actualization. Additionally, the solo self-employed business consultant may have a lower and less secure income. From a SDT perspective, the higher probability of solo self-employed individuals being pushed into self-employment and to be precariously employed should cause solo self-employed individuals to be less autonomously motivated at work than employer entrepreneurs.

Autonomous motivation in (solo) self-employment

SDT postulates that people either are motivated to initiate activities such as business ventures out of an interest in the activity itself (*intrinsic motivation*) or because they expect external rewards, such as higher revenues, from this activity (*extrinsic motivation*) (Ryan & Deci, 2000). Accordingly, pull factors constitute drivers of intrinsic motivation, whereas push factors constitute drivers of extrinsic motivation. Hence, the finding that solo self-employed individuals are more likely to be pushed into self-employment than employer entrepreneurs indicates that they are more extrinsically motivated to run their businesses. However, SDT also posits that interpersonal contexts while engaging in an activity, like one's work environment, that facilitate satisfaction of basic psychological needs determine motivational processes (Gagné & Deci, 2005). SDT identifies three basic psychological needs that all humans have: the need for *autonomy*, defined as a need to feel self-determined or free from control (Deci & Ryan, 1985); the need for *competence*, defined as a need to feel competent, which results from effective action; and the need for *relatedness*, defined as a need to feel connected to others (Gagné & Deci, 2005). The satisfaction of these needs while engaging in activities enhances intrinsic motivation, or if this activity was mainly initialized due to extrinsic motivation the internalization of extrinsic motivation, that is the identification with the value of the activity and integration of the value in the self (Deci & Ryan, 2000, 2008b). This means that when people feel autonomous, competent, and related while working, they become more interested in their work itself or they assign their work a higher significance.

In the SDT literature, self-employment is considered to provide more autonomy and chances for skill development and self-actualization and therefore higher satisfaction of the needs for autonomy and competence than traditional employment (Benz & Frey, 2008a, 2008b). However, as previously outlined, solo self-employed individuals are more likely precariously employed and facing employment insecurity and economic deprivation (Brenke, 2013). We posit that due to this higher likelihood of economic insecurity, solo self-employed individuals are more likely to experience strong economic dependence on their customers and therefore are more likely to be forced to engage in activities, constraining their feelings of autonomy, and/or hampered in the effectiveness of their work, constraining their feelings of competence. Hence, we assume that solo self-employed individuals perceive less satisfaction of the needs for autonomy and competence because they are more likely to face economic insecurity. As a result, intrinsic motivation and internalization of extrinsic motivation should be less fostered at work for the solo self-employed than those for employer entrepreneurs. Employing our initial example, the solo self-employed business consultant is more likely to struggle to keep her

business running than the business consultant with employees. Consequently, her customers have more influence on her work than the customers of the business consultant with employees. Therefore, the solo self-employed business consultant can more easily be forced to perform tasks which she is not comfortable with, such as firing employees of the customer. Thus, she would experience less autonomy and competence than the business consultant with employees. Consequently, her interest in and her perception of the importance of her work would be less fostered while engaging in her work. Both the higher initial extrinsic motivation and lower promotion of intrinsic motivation and internalized extrinsic motivation indicate that solo self-employed individuals are less driven by autonomous and more by controlled motivation at work.

Gagné and Deci (2005) define autonomous motivation as “acting with a sense of volition and having the experience of choice” (p. 333), whereas controlled motivation is defined as “acting with a sense of pressure, a sense of having to engage in the actions” (p. 334). While both intrinsic motivation and internalized extrinsic motivation are forms of autonomous motivation, extrinsic motivation is a form of controlled motivation (Deci & Ryan, 2008a). Hence, employed individuals who work due to a strong interest in their occupation or work because they acknowledge the significance of their occupation are autonomously motivated and perceive volition and self-determination while engaging in their work. Accordingly, as intrinsic motivation and internalized extrinsic motivation are facilitated by work conditions promoting need satisfaction, so is autonomous motivation (De Cooman, Stynen, van den Broeck, Sels, & de Witte, 2013). In contrast, controlled motivated employed individuals are pushed to engage in their occupation by external regulations and act with a sense of coercion (e.g., one may feel obligated to carry on the family business, even though one has no interest in this business). Hence, if solo self-employed individuals are indeed initially more extrinsically motivated to run a business and their intrinsic motivation or internalized extrinsic motivation is indeed less fostered through the satisfaction of the need for autonomy and competence at work, then they should, as a result, be less autonomously and more controlled motivated than employer entrepreneurs. This should have important implications for their affective commitment. Autonomous motivation is considered to promote positive work outcomes, one of which is organizational commitment (Deci, Olafsen, & Ryan, 2017). In line with this, studies show that work conditions facilitating need satisfaction, such as job resources or transformational leadership, enhance autonomous motivation which in turn facilitates organizational commitment (Fernet, Austin, & Vallerand, 2012; Gözükarar & Şimşek, 2015). Thus, if solo self-employed individuals are less driven by autonomous and more by controlled motivation then they should be less affectively committed to their businesses than employer entrepreneurs. Thus, if we assume that the solo self-employed business consultant was rather forced to start a business and develops less interest or perceives less the significance of her work because she feels less autonomous and competent at work than the business consultant with employees, then she acts with a lower sense of volition and a higher sense of pressure than her employer entrepreneur counterpart. Due to this, she should be less emotionally attached and identified with her business.

Hypothesis 1: Solo self-employed individuals are less affectively committed to their businesses than employer entrepreneurs.

Forms of self-employment and the effects of need satisfaction

Irrespective of whether these two self-employment forms differ in affective commitment, they should differ in antecedents of affective commitment. Haslam et al. (2000) developed a categorization of motives based on the social identity approach, comprising *social identity theory* (SIT) and *self-categorization theory* (SCT). According to SCT (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), individuals categorize themselves based on perceived similarities to and differences from others. These self-categorizations are cognitive representations and are incorporated into the self-concept. Self-categorizations can be divided into personal self-categorizations defining oneself as a unique individual, hence defining one's *personal identity*, and social self-categorization (ingroup-outgroup categorizations) defining oneself as a member of a certain group, hence defining one's *social identity*.

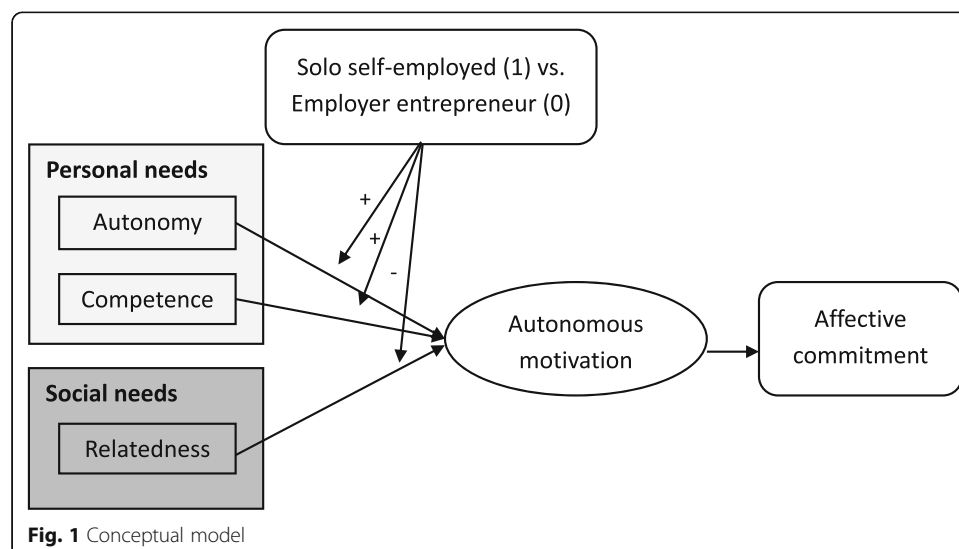
Furthermore, SCT posits that the salience of a specific self-categorization causes self-definition through this categorization (Turner et al., 1987). Under certain conditions, social self-categorizations are more salient than personal self-categorizations (Hogg & Abrams, 1988), leading to definition through the salient social self-categorization. Social self-categorization in turn causes depersonalization, the process “whereby people come to perceive themselves more as the interchangeable exemplars of a social category than as unique personalities defined by their individual differences from others” (Turner et al., 1987, p. 50). Thus, through self-categorization, people incorporate prototypical attributes of the group into their self (Turner et al., 1987). Whether social or personal self-categorizations are salient and therefore whether one defines oneself on a personal or on a social level should determine the relative motivational power of the needs for autonomy, competence, and relatedness. Needs and motivation can be seen as aspirations of the self (Haslam et al., 2000). Thus, they can be considered to arise from norms and goals associated with a salient self-categorization. In particular, Haslam et al. (2000) assume that “when a particular self-categorization is salient this creates needs and motivation to (a) embody norms associated with the category (b) be perceived as embodying those norms by other members of the category, and (c) engage in activities which promote or maintain the interests of the category” (p. 326).

Accordingly, people categorizing themselves at a personal level should be motivated to satisfy personal needs that promote their personal identity as individuals. Thus, in this instance, people should be motivated by needs to self-actualize and to promote personal self-esteem through personal growth (Haslam et al., 2000). In contrast, people categorizing themselves at a social level should be driven to satisfy social needs that promote their social identity as a group member. Thus, in this instance, people should be motivated by the needs to enhance group-based self-esteem (Haslam et al., 2000). We propose that the needs for autonomy and competence take place at a personal level of self-categorization whereas the need for relatedness takes place at a social level of self-categorization since conceptually similar motives of classic motivation theory have been categorized accordingly (Haslam et al., 2000). Particularly, Alderfer's (1972) need for personal development and growth (defined as the desire to have creative and

productive effects upon him/herself and his/her environment) is considered to be a need on the personal level and Alderfer's (1972) need for relatedness (defined as the desire to maintain important relations) is considered to be a need on the social level (Haslam et al., 2000). The needs for autonomy and competence of the SDT (Deci & Ryan, 2000) have strong conceptual overlaps with Alderfer's (1972) need for personal development and growth and the need for relatedness a strong conceptual overlap with Alderfer's (1972) need for relatedness. Therefore, we assume that the needs for autonomy and competence concern the self as an individual in contrast to other individuals, whereas the need for relatedness concerns the self as ingroup member in contrast to outgroup members.

Consequently, if people categorize themselves on a personal level, autonomous motivation should depend on perceived satisfaction of the needs for autonomy and competence, whereas if people categorize themselves on a social level, autonomous motivation should depend on perceived satisfaction of the need for relatedness. Work contexts in organizations provide people with personal self-categorizations through differences and similarities with members of the organization as well as social self-categorizations through differences and similarities of their organization with outgroups (Haslam et al., 2000). Hence, in the work context, people can define themselves as individuals or as members of an organization (Hogg & Terry, 2000). The importance of the satisfaction of the needs for autonomy, competence, and relatedness through work conditions for autonomous motivation and therefore for affective commitment should depend on whether one defines oneself on a personal or on a social level. For example, the autonomous motivation and affective commitment of an employee who defines himself as an individual will be determined by feelings of autonomy and competence. In contrast, the autonomous motivation and affective commitment of an employee who defines himself as a member of an organization will be determined by feelings of relatedness (see Fig. 1).

As already mentioned, the defining difference between employer entrepreneurs and solo self-employed individuals is that the former are not alone but the latter are alone in their businesses (van Stel et al., 2014). Consequently, we assume that employer



entrepreneurs can either define themselves as individuals or as members of an organization, whereas solo self-employed individuals can only define themselves as individuals in the work context. Thus, work contexts of employer entrepreneurs provide them with personal self-categorizations through differences and similarities with members of the organization as well as social self-categorizations through differences and similarities of their organization with outgroups. Hence, in the work context, they can define themselves as individuals or as members of the organization. In contrast, the work contexts provide solo self-employed individuals only with personal self-categorizations through differences and similarities with other individuals they encounter. Hence, within the scope of their businesses, they can only define themselves as individuals. Therefore, since solo self-employed individuals define themselves as individuals, they are only influenced in their autonomous motivation and affective commitment to their businesses by the satisfaction of the needs promoting self-actualization and personal growth, hence by autonomy and competence. In contrast, since employer entrepreneurs can also define themselves as members of their organization they are also influenced by the satisfaction of the needs promoting their group-based self-esteem, hence by relatedness. Thus, the overall influence on autonomous motivation and affective commitment of the satisfaction of the needs for autonomy and competence should be higher, whereas the overall influence of the satisfaction of the need for relatedness should be lower for solo self-employed than that for employer entrepreneurs (see Fig. 1). Hence, to employ our example, compared with the business consultant with employees, the solo self-employed business consultant's perception of volition and consequently her emotional attachment and identification with her business should be more promoted by feelings of autonomy and competence and less by feelings of relatedness.

Hypothesis 2a: Perceived satisfaction of the need for competence is more positively related to affective commitment for solo self-employed than that for employer entrepreneurs.

Hypothesis 2b: Perceived satisfaction of the need for autonomy is more positively related to affective commitment for solo self-employed than that for employer entrepreneurs.

Hypothesis 2c: Perceived satisfaction of the need for relatedness is less positively related to affective commitment for solo self-employed than that for employer entrepreneurs.

Methods

Database and participants

We used the German data from the fifth European Working Condition Survey (EWCS), which was commissioned by the European Foundation for the Improvement of Living and Working Conditions, 2010b. The target population of the EWCS 2010 for Germany is all residents aged 15 years or older who worked for pay or profit for at least an hour in the week prior to the survey. A multi-stage, stratified, random sampling method of all pre-collected addresses was used to identify participants. In the first stage, primary sampling units were sampled, stratifying according to geographic regions and level of

urbanization. Subsequently, in each primary sampling unit, households were sampled. Only one of the eligible respondents (the one with the most recent birthday) per household was selected (The European Foundation for the Improvement of Living and Working Conditions, 2010a). Since to our knowledge no study on the differences between solo self-employed's and employer entrepreneurs' need satisfaction exists, we assumed mediocre effects sizes for the moderation effects of H2. Based on an effect size of $r = .30$, an α -level (two-tailed) of .05, and an intended power of .80, a minimum sample size of $n = 41$ is recommended for each group, i.e., a total of $N = 82$. For the German sample overall, 2133 participants were questioned in face-to-face interviews. For our research purposes, we included only employer entrepreneurs ($n = 103$) and solo self-employed individuals ($n = 117$), so in total 220 participants. Employer entrepreneurs' (female = 35, male = 68) age ranged from 19 to 70 years ($M = 46.81$, $SD = 10.53$). Most of them worked as managers (53.4%), followed by service and sales workers (12.6%) and professionals (11.7%). Employer entrepreneurs' duration in their current organization ranged from less than 1 to 46 years ($M = 12.59$, $SD = 9.48$). Solo self-employed individuals' (female = 54, male = 63) age ranged from 22 to 77 years ($M = 44.58$, $SD = 11.10$). Most of them worked as managers (23.1%), followed by professionals (20.5%) and service and sales workers (17.9%). Their duration in their current organization ranged from less than 1 to 44 years ($M = 10.35$, $SD = 9.36$). Solo self-employed and employer entrepreneurs did not significantly differ in age, $t(218) = 1.52$, $p = .13$, sex, $\chi^2(1) = 3.37$, $p = .07$, and duration in their current organization, $t(214) = 1.74$, $p = .08$. However, the two self-employment forms differed in their distribution among different occupations, $\chi^2(8) = 25.45$, $p < .01$. Post hoc tests revealed that employer entrepreneurs were significantly more likely to work as managers, $\chi^2(1) = 21.53$, p (adjusted) $< .01$.

Measures

A detailed description of the standardized questionnaire has been published by the European Foundation for the Improvement of Living and Working Conditions (2010b). The survey covered multiple aspects of work classified into different topics. As it is common in large surveys, the EWCS 2010 assessed those various work topics with single items, in order to minimize survey length. This is important since shortening survey length facilitates response rate, reduces nonresponse bias (Crawford, Couper, & Lamias, 2001), and increases the types of subsamples that can be accessed (Fisher, Matthews, & Gibbons, 2016). Especially because of the latter, we choose to analyze the EWCS 2010, since it allowed us to access the subsamples of solo self-employed individuals and employer entrepreneurs. However, single items are criticized due to having criterion deficiency and because their reliability cannot be calculated (Fisher et al., 2016). To lessen criterion deficiency and therefore increase content validity, we selected single items based on the overlap of their content to the conceptualization of need satisfaction in the SDT (Deci & Ryan, 2000) or to the conceptualization of affective commitment according to Allen and Meyer (1990).

Perceived need satisfaction

The satisfaction of the three basic psychological needs was operationalized as follows. Self-reported satisfaction of the need for competence was indicated by a single item

assessing the extent to which participants feel that they are doing useful work (“For each of the following statements, please select the response which best describes your work situation” – “You have the feeling of doing useful work”). Self-reported satisfaction of the need for autonomy was indicated by a single item assessing the extent to which participants perceive that they can influence decisions that are important for their work (“For each of the following statements, please select the response which best describes your work situation” – “You can influence decisions that are important for your work”). Both single items were rated on a 5-point Likert scale ranging from 1 = always to 5 = never and reversed coded before data analyzing. Self-reported satisfaction of the need for relatedness was indicated by a single item assessing the extent to which participants perceive that they have good friends at work (“How much do you agree or disagree with the following statements describing some aspects of your job” – “I have very good friends at work”). The single item was rated on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Affective commitment

To indicate self-reported affective commitment, we used in our analyses a single item which assesses the extent to which participants feel at home in their organization (“How much do you agree or disagree with the following statements describing some aspects of your job” – “I feel ‘at home’ in this organization”). The single item was rated on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Statistical analyses

Data were analyzed using SPSS (version 22.0) statistical software package (SPSS Inc., Chicago, IL, USA). All tests were two-tailed with the level of significance set at $^+p < .10$, $^*p < .05$, $^{**}p < .01$. First, to test differences in affective commitment between both forms of self-employment, an independent t test was conducted. Second, to test whether the relation between need satisfaction and affective commitment differs between employment types, stepwise multiple linear regressions on affective commitment separated for the satisfaction of each need were conducted. In the first step, the control variables gender and age, in the second step the respective need (competence, autonomy, or relatedness) and type of employment (employer entrepreneurs vs. solo self-employed), and in the third step the cross-product need \times type of employment were included. In order to reduce the effects of extreme collinearity, the cross-products were computed with the z-standardized constituents (Dalal & Zickar, 2011).

Results

Means, standard deviations, and inter-correlations of the study variables are presented in Table 1. In H1, we assumed that solo self-employed individuals are less affectively committed to their businesses than employer entrepreneurs. Supporting H1, solo self-employed individuals were significantly less affectively committed to their businesses than employer entrepreneurs, $t(177.47) = -2.54$, $p < .05$. The results of the regressions are presented in Table 2.

The satisfaction of all needs was positively correlated with affective commitment. Furthermore, the cross-product Competence \times Form of self-employment and

Table 1 Descriptive findings and correlation of the study variables

	Employer entrepreneurs			Solo self-employed			(A)	(B)	(C)	(D)
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>				
Competence	102	4.53	0.69	116	4.47	0.72	(A)	1		
Autonomy	103	4.35	0.95	117	4.44	0.89	(B)	.25**	1	
Relatedness	98	3.82	0.92	93	3.13	1.24	(C)	.19**	.18*	1
AC	99	4.63	0.65	108	4.31	1.08	(D)	.31**	.47**	.15* 1

All constructs varied on scales from 1 to 5 with 5 indicating strong endorsement to the construct. AC, affective commitment. * $p < .05$, ** $p < .01$; two-tailed

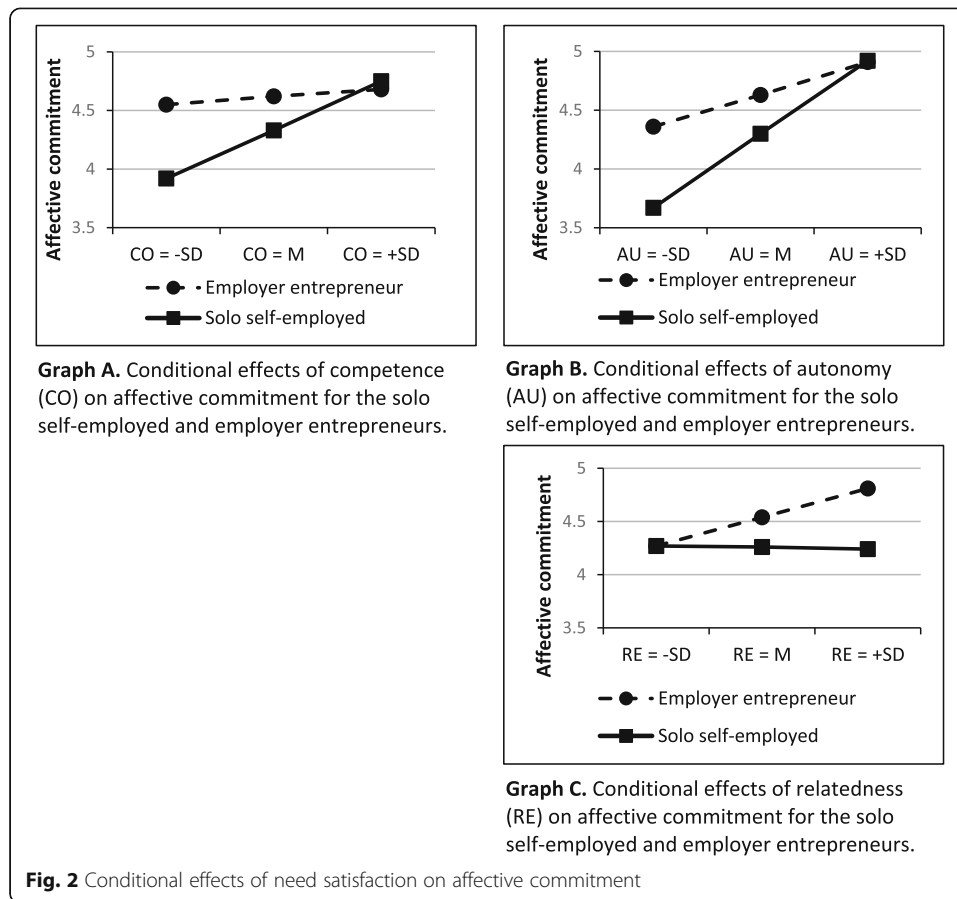
Autonomy \times Form of self-employment were negatively and Relatedness \times Form of self-employment was positively correlated with affective commitment. Simple slopes were tested with the PROCESS macro (Hayes, 2013). In H2a, we assumed that perceived satisfaction of the need for competence is more positively related to affective commitment for solo self-employed than that for employer entrepreneurs. Supporting H2a, we found that competence was more positively correlated with affective commitment for solo self-employed, $B = 0.66$, $SE = 0.17$, $t(205) = 3.92$, $p < .01$ than that for employer entrepreneurs, $B = 0.11$, $SE = 0.13$, $t(205) = 0.85$, $p = .40$ (see Fig. 2, graph A). In H2b, we assumed that perceived satisfaction of the need for autonomy is more positively related to affective commitment for solo self-employed than that for employer entrepreneurs. Supporting H2b, we found that autonomy was more positively correlated with affective commitment for solo self-employed, $B = 0.70$, $SE = 0.14$, $t(206) = 4.94$, $p < .01$, than that for employer entrepreneurs, $B = 0.31$, $SE = 0.10$, $t(206) = 3.21$, $p < .01$ (see Fig. 2, graph B). Furthermore, in H2c, we assumed that perceived satisfaction of the need for relatedness is less positively related to affective commitment for solo self-employed than that for employer entrepreneurs. Supporting H2c, we found that relatedness was less positively correlated with affective commitment for solo self-employed, $B = -0.01$, $SE =$

Table 2 Regression analyses of moderator effects of self-employment form on the effects of need satisfaction on affective commitment

Predictors	Needs								
	Competence			Autonomy			Relatedness		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Step 1									
Gender	0.08	0.13	.04	0.08	0.13	.04	0.06	0.14	.03
Age	0.00	0.01	.01	0.00	0.01	.01	0.00	0.01	0.00
ΔR^2	.00			.00			.00		
Step 2									
Need satisfaction	0.43	0.10	.30**	0.50	0.06	.49**	0.08	0.06	.10
SeF	−0.28	0.12	−.15*	−0.34	0.11	−.19**	−0.31	0.14	−.17**
ΔR^2	.12			.26			.05		
Step 3									
Need satisfaction \times SeF	0.19	0.07	.19**	0.18	0.06	.19**	−0.14	0.07	−.14 [†]
ΔR^2	.04			.04			.02		
Total R^2	.15			.30			.07		
<i>N</i>	206			207			184		

Gender (0 = female, 1 = male). SeF, self-employment form (0 = employer entrepreneurs, 1 = solo self-employment).

[†] $p < .10$, * $p < .05$, ** $p < .01$; two-tailed



0.10, $t(183) = -0.10$, $p = .92$ than that for employer entrepreneurs, $B = 0.24$, $SE = 0.10$, $t(183) = 2.42$, $p = .02$ (see Fig. 2, graph C).

Discussion

Atypical employment forms, such as solo self-employment, are a growing global phenomenon (Keller & Seifert, 2013). However, up to now, little is known about the long-term sustainability of these forms. The present study extends existing research by (i) analyzing differences in affective organizational commitment and (ii) the impact of need satisfaction on affective organizational commitment in solo self-employed individuals compared with employer entrepreneurs. To this end, we analyzed data from 117 solo self-employed and 103 employer entrepreneurs from the German European Working Condition Survey in 2010 (EWCS).

Differences in affective commitment

As proposed, solo self-employed individuals were less affectively committed to their businesses than employer entrepreneurs. Hence, our solo self-employed business consultant is rather less emotionally attached to her business than the business consultant with employees. This result extends former research which found that self-employed individuals have a higher organizational commitment than traditional employees (Felfe et al., 2008). Particularly, by indicating that there exist differences in affective

commitment among self-employment forms, the present findings imply that the previous findings on affective commitment of self-employed cannot be generalized to all self-employment forms. Thus, future research on affective commitment and other work attitudes should differentiate between these self-employment forms. Moreover, our findings also extend research on differences between solo self-employed and employer entrepreneurs. Comparative research on these self-employment forms mainly focuses on differences in income and financial and occupational insecurity (e.g., Brenke & Beznoska, 2016; Conen et al., 2016; Fritsch, Kritikos, & Sorgner, 2015). We extend this research by showing that these self-employment forms differ not only in financial parameters but also differ in the work attitudes of the self-employed individuals. This indicates that solo self-employment and employer entrepreneurship, which are somewhat artificial categories of self-employment, resample real-life differences not only in financial parameters but also in psychological states. Thus, the differentiation between solo self-employed and employer entrepreneurs is also meaningful from a psychological viewpoint.

Our assumption that solo self-employed individuals are less affectively committed to their businesses than employer entrepreneurs is based on a series of propositions inspired by self-determination theory (Deci et al., 2017). These propositions should be examined in future research. In particular, we posited that solo self-employed individuals are less affectively committed to their businesses than employer entrepreneurs because they are less autonomously motivated to their businesses which is an antecedent of affective commitment (Deci et al., 2017). Furthermore, we proposed that solo self-employed individuals are less autonomously motivated than employer entrepreneurs, because we assumed them to be initially more extrinsic motivated to start their businesses and less likely enhanced in their intrinsic and internalized extrinsic motivation in the course of running their businesses due to lower feelings of autonomy and competence. These propositions should be tested in future research comparing solo self-employed individuals' and employer entrepreneurs' need satisfaction, initial extrinsic, intrinsic, internalized extrinsic, and autonomous motivation. This research is important, since these proposed determinants of the differences in affective commitment between solo self-employed individuals and employer entrepreneurs also have strong influences on other work-related attitudes and behavior. For example, autonomous motivation promotes besides organizational commitment also effective performance, job satisfaction, and psychological well-being (Baard, Deci, & Ryan, 2004; Deci et al., 2001; Ilardi, Leone, Kasser, & Ryan, 1993). Hence, by examining motivational processes in these self-employment forms, research can develop an important empirical background on which assumptions about differences in work-related outcomes between solo self-employed and employer entrepreneurs can be built.

The levels of need satisfaction and self-employment forms

Next, as proposed, the satisfaction of the needs for competence and autonomy was more and the satisfaction of the need for relatedness was less positively related to affective commitment for solo self-employed individuals than that for employer entrepreneurs. This indicates that for solo self-employed individuals, the satisfaction of the needs for competence and autonomy more strongly determines whereas the satisfaction

of the need for relatedness more weakly determines affective commitment than that for employer entrepreneurs. Applied to our example, this suggests that feeling self-determined and competent is especially important for the solo self-employed business consultant whereas feeling connected to other organization members is especially important for the business consultant with employees to develop emotional attachment and identification with his business.

The present study contributes to the research in three ways. First, the findings indicate that solo self-employed and employer entrepreneurs not only differ in their affective commitment but also that they differ in the importance of the satisfaction of basic psychological needs for their affective commitment. Second, in the present study, we considered self-determination theory in light of the categorization of psychological needs into personal and social needs proposed by Haslam et al. (2000) and inferred that the needs for autonomy and competence are personal needs whereas the need for relatedness is a social need. Moreover, we proposed that solo self-employed individuals can only define themselves as individuals at work because they are, in contrast to employer entrepreneurs, alone in their businesses whereas employer entrepreneurs can also define themselves as members of an organization. Based on this theoretical work, we assumed that the personal needs for autonomy and competence should be more and the social need for relatedness should be less important for solo self-employed than those for employer entrepreneurs. Thus, we developed a theoretical framework for differences in the importance of need satisfaction between these two self-employment forms, which can be applied to other important work-related outcomes. In detail, the satisfaction of these needs, for example through autonomy-supportive work environments or leadership, has been linked to effective performance, job satisfaction, and psychological well-being (Baard et al., 2004; Deci et al., 2001; Ilardi et al., 1993). Hence, future research should examine whether the satisfaction of the needs for autonomy and competence is also more and the satisfaction of the need for relatedness is also less important for these other desired work outcomes for solo self-employed than for employer entrepreneurs. Third, this framework contributes to the theoretical development of work motivation by categorizing the needs of the self-determination theory into the categories personal needs and social needs suggested by Haslam et al. (2000). The present findings provide some preliminary evidence for this framework. However, an alternative explanation comes to mind. As previously mentioned, solo self-employed individuals earn less than employer entrepreneurs and are more likely to face financial and existential insecurity (Brenke, 2013). According to the conservation of resources theory (Hobfoll, 1989), the loss of resources leads to stress. If people are threatened by a perceived loss of resources, they use strategies to cope with this loss in order to prevent or reduce stress. One of these strategies is the reevaluation of the remaining resources. In the process of reevaluating, people ascribe the available resources a higher value, thereby compensating for the loss of other resources. Since solo self-employed individuals have less money and face more insecurity than employer entrepreneurs, they may be more likely to experience their work situation as a loss of resources. Moreover, irrespective of their financial situation, solo self-employed individuals would still experience resources which facilitate the satisfaction of the needs for autonomy and competence through their self-employment. Thus, solo self-employed individuals could be more likely to assign these remaining resources a higher value since they are more

likely to reevaluate their resources than employer entrepreneurs. Thus, the higher impact of the satisfaction of the need for autonomy and competence on affective commitment for solo self-employed than that for employer entrepreneurs could be determined by higher importance of these needs for solo self-employed individuals due to a reevaluation of their resources.

Limitations

Our study has several shortcomings. Since it is cross-sectional in nature, no causal conclusions can be drawn. Furthermore, only single-item measures were used. Thus, the reliability of these measures is unknown and the conceptual validity of these measures is questionable, as the measures did not assess all facets of the concepts. In addition, measures of need satisfaction were chosen by means of questionnaires developed by Deci et al. (2001). This questionnaire was criticized by other authors (e.g., Van den Broeck, Lens, de Witte, & van Coillie, 2013), as it includes not only need satisfaction but also partly antecedents and consequences of need satisfaction. Thus, these criticisms also concern our measures of need satisfaction. For example, relatedness was measured with the item “I have very good friends at work.” which clearly resamples an antecedent of the satisfaction of relatedness instead of measuring the perceived satisfaction of relatedness itself. Future research should replicate our study with measures of need satisfaction that comprise more than one item and directly tap need satisfaction.

Practical implications

The present findings have implications for solo self-employed or employer entrepreneurs and for institutions supporting self-employment alike. Affective commitment is one of the central work attitudes and has positive consequences for the business as well as the individual (Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017). Thus, all self-employed individuals, irrespective of the forms of self-employment, should be eager to enhance their affective commitment. Solo self-employed individuals are solely responsible for their business success. Thus, their business success and persistence are especially determined by their work attitudes, such as affective commitment. Thus, solo self-employed individuals and institutions supporting them should particularly be interested in enhancing their affective commitment. The result that solo self-employed individuals are less affectively committed than employer entrepreneurs suggests that especially for solo self-employment individuals there is room for improvement. Our results also indicate which specific factors should be addressed to enhance the affective commitment of solo self-employed and employer entrepreneurs. Solo self-employed and institutions supporting them should focus on establishing work conditions that enhance the satisfaction of the needs for competence and autonomy to enhance well-being and business success. So, for example, when thinking about starting a business, one should not only consider the income opportunities but also one's perception of the meaningfulness of the intended work. In contrast, employer entrepreneurs and institutions supporting them should focus on establishing work conditions that enhance the satisfaction of the need for relatedness. So, employer entrepreneurs should put strong effort into establishing strong relationships with their employees, for example by team building activities.

Conclusions

This study indicates that solo self-employed and employer entrepreneurs are affected differently by the satisfaction of personal needs, e.g., competence and autonomy, and social needs, e.g., relatedness. Affective commitment seems to be more strongly impacted by feelings of competence and autonomy and less by feelings of relatedness for solo self-employed than that for employer entrepreneurs. This study sets the cornerstone for the research of differences between the two self-employment forms, i.e., solo self-employed and employer entrepreneurs, by providing a theoretical framework for differences in the self-definition and motivation of these distinct forms of self-employment. Moreover, it provides first evidence of this framework and insights about fostering affective commitment of solo self-employed and employer entrepreneurs.

Abbreviations

EWCS: European Working Conditions Survey; SCT: Self-categorization theory; SDT: Self-determination theory; SIT: Social identity theory; SSE: Survey solo self-employment; TCM: Three-component model

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Authors' contributions

SS drafted the manuscript and analyzed the data. MK helped in analyzing the data and substantially revised the manuscript. KO and LH substantially revised the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

The datasets analyzed during the current study are available in the UK Data Service repository, <https://discover.ukdataservice.ac.uk/series/?sn=200014#access>.

Competing interests

The authors declare that they have no competing interests.

Author details

¹Faculty of Psychology, Work and Organizational Psychology, Philipps University of Marburg, Gutenbergstraße 18, 35032 Marburg, Germany. ²German Federal Institute for Occupational Safety and Health (BAuA), Dortmund, Germany.

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