Individual motivation among entrepreneurs in the creative and cultural industries
Cnossen, Boukje; Loots, Ellen; van Witteloostuijn, Arjen

published in
Creativity and Innovation Management
2019

DOI (link to publisher)
10.1111/caim.12315

document version
Publisher's PDF, also known as Version of record
document license
Article 25fa Dutch Copyright Act

Link to publication in VU Research Portal

citation for published version (APA)

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain.
• You may freely distribute the URL identifying the publication in the public portal.

Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:
vuresearchportal.ub@vu.nl

Download date: 26. May. 2021
We aim to shed light on the deep mechanisms that keep individual entrepreneurs in the creative and cultural industries motivated in this insecure and fast-paced environment. We collect data through a survey of entrepreneurs working in the Dutch creative and cultural industries (CCI) and examine what motivates these professionals to work in an environment characterized by tough competition. Specifically, we analyse our respondents’ self-perceived (creative and entrepreneurial) competences and needs (for autonomy and relatedness) in relation to their motivation to execute creative work. We suggest a reading of our results through the lens of self-determination theory. Our results show that the need for competence is a consistent predictor of an individual’s motivation to work in the CCI. Furthermore, we find that although intrinsic motivation is very high among entrepreneurs working in the creative and cultural industries, those who have a relatively high esteem of their creative capabilities do expect external rewards as well. Our study suggests the existence of a trade-off between autonomy and commercial viability rather than one between intrinsic and extrinsic motivations.

1 INTRODUCTION

In recent decades, policymakers at all levels of government have endorsed the potential of the creative and cultural industries (hereafter: CCI) as a job creator (Finkel, Jones, Sang, & Stoyanova Russell, 2017; Haans & van Witteloostuijn, 2018). Combined with the expansion of the media, entertainment and design industries, the appeal of creative work in recent years has increased the number of people who do work and want to work in the CCI (Lena & Lindemann, 2014). In response to this trend, scholars have drawn attention to the precarious working conditions in the CCI (e.g., De Peuter, 2011; Gill & Pratt, 2008; Hesmondhalgh & Baker, 2010). The difficulty of making enough income, which has always typified artistic careers (Abbing, 2002; Menger, 2001), has now become a reality for many of those who engage in non-artistic work in the CCI as well (Alexander & Bowler, 2014; Hesmondhalgh & Baker, 2010; McRobbie, 2015). The challenging conditions that come with working in the CCI, and the many reasons why creative entrepreneurs have to quit this environment (Chen, Chang, Wang, & Chen, 2017), make it necessary to investigate why people choose to become individual entrepreneurs (meaning self-employed workers, or one-person firms) in this environment, and why they stay motivated.

With this study, we examine what motivates individual entrepreneurs to work in the strenuous working environment of the CCI. A widely held observation about this population is that they possess an ‘optimistic progressivism’; helping them deal with the insecure work circumstances of the CCI (Bourdieu, 1984). While psychological studies have looked at the role of motivation in creative behaviour of employees (e.g., Amabile, 1993, 1998; Amabile, Hill, Hennessey, & Tighe, 1994; Roskes, 2015), or the role of creativity in career success (e.g., Chen, Chang, & Lo, 2015), the link between motivation and creative activity itself is remarkably underexplored in the sector that has creativity at its core: the CCI (an important exception being Caniëls, De Stobbeleir, & De Clippeleer, 2014). Additionally, sociological research has pointed out how the contemporary adages to “do what you love” (Tokumitsu, 2015) and to “be creative” (Jeanes, 2006; McRobbie, 2015) push people to forego secure employment in search of creative careers, to the point of making their lifestyles subject to their artistic work (Eikhof & Haunschild, 2006). Yet, the microfoundations to such choices remain enigmatic.
We offer a contribution to the understanding of the deeper psychological mechanisms underlying the behaviour of creative professionals. We do so by turning to self-determination theory (SDT), a psychological need-satisfaction theory developed by Deci and Ryan (1985). In a survey design that uses two samples of creative professionals in the Netherlands \( n = 111 \), we identify possible factors that lead entrepreneurs in the CCI to be, and to remain, motivated. SDT’s three psychological needs—competence, autonomy and relatedness—may be appropriate candidates.

This article contributes to existing research in three ways. We (1) provide further micro-level insights into the organization of creative production, as well as (2) a new application of SDT by applying it to the CCI, something which has not been done before (for a notable exception, see De Jong, 1999). In so doing, we (3) expand and refine the psychometric toolbox of this theory for the empirical setting of the CCI.

2 | SELF-DETERMINATION THEORY

Put simply, “motivation produces” (Ryan & Deci, 2000, p. 69). Self-determination theory (SDT) is a theory of human motivation built on the assumption that people tend to move in directions of greater self-determination and competence. The theory addresses the types of motivation that influence individuals’ behaviour, wellbeing and achievements, as well as the social conditions that enhance or diminish these types of motivation. SDT stipulates that the quality of people’s motivation is affected by the degrees to which the fundamental psychological needs for competence, autonomy and relatedness are supported (Deci & Ryan, 1985; Ryan & Deci, 2000).

Although motivation is often treated as a singular construct, people are moved to act by very different factors (Ryan & Deci, 2000). Traditionally, the psychological literature, including SDT, distinguishes between intrinsic and extrinsic motivations as two broad types of motivation. Intrinsically motivated behaviours cohere with doing something for satisfaction or joy, in order to “seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn” (Ryan & Deci, 2000, p. 70). In contrast, extrinsically motivated behaviours are performed to satisfy an external demand or reap a reward, implying the engagement in an activity to obtain an outcome that is separable from the activity itself, and not for mere enjoyment (Deci, 1975). Within SDT, the initial separation of motivation into intrinsic and extrinsic has been further refined, just as it has in research on the psychology of creativity (Amabile, 1993; Frey, 1999).

Specifically, extrinsic motivation has been differentiated into types of regulation that vary in their levels of relative autonomy or self-determination, depending on the extent to which individuals have been successful in internalizing the initially external regulation of their behaviour (Ryan & Deci, 2000).

In SDT, this process of internalization is said to be energized by three basic psychological needs: the needs for competence, autonomy and relatedness. As opposed to some personality theories that consider needs as motives or desires that people hold to different degrees (e.g., McClelland, 1985), SDT takes psychological needs to be universal and innate (Ryan & Deci, 2008). First, the need for competence concerns the feeling of being effective in one’s actions (Ryan & Deci, 2008; White, 1959). Second, the need for autonomy refers to the need to have activity concordant with one’s integrated sense of self, as opposed to feeling controlled by forces alien to the self (Ryan & Deci, 2008). Third, the need for relatedness involves people’s desire to feel connected to others, and to have a sense of belonging within one’s group or community (Ryan & Deci, 2000, 2008).

A central tenet of SDT is that basic psychological needs feed into the underlying processes that explain how cultural values become part of personality and how needs are satisfied by the adoption and internalization of these values (Ryan & Deci, 2008). Each of these psychological needs is “a nutrient essential for psychological growth, integrity, and wellness” (Ryan & Deci, 2008, p. 567). Indeed, SDT maintains that psychological needs energize much of human behaviour and, yet, that people are not necessarily aware of them. As expressed by Ryan and Deci (2008, p. 659):

By assimilating the values of their group, individuals become more connected and related, and more competent and effective. Furthermore, the tendency for individuals to make ambient values their own—that is, to integrate them into their sense of self—allows them to experience enactment of these values as autonomous.

In sum, motivations and needs are essential to understand why people do what they do, and why they keep at it. Professional settings have become an arena for SDT-inspired studies, where the tenet is that employees’ experiences of the satisfaction of their needs for competence, autonomy and relatedness predict their performance and wellbeing at work (e.g., Gagné & Deci, 2005; Van den Broeck, Vansteenkiste, Lens, & De Witte, 2010). The mediating role of human motivation has been considered in studies of employee functioning and outcomes (Güntert, 2015), and of professional success (Krieger & Sheldon, 2015). Many creative entrepreneurs cannot rely on the external rewards or incentives that managers introduce for their employees, and therefore have to rely on their own motivation. This makes the empirical setting of the CCI highly suited to study the links between motivation and creative work. However, to the best of our knowledge, the study of creative work and SDT have not engaged one another (for an exception, see De Jong, 1999).

3 | THE CCI AS A SPACE FOR SELF-ACTUALIZATION

3.1 | Creative entrepreneurs’ motivation

Previous research has suggested that individuals striving for a creative career are intrinsically motivated (Abbing, 2002; Caniëls et al., 2014; Frey & Jegen, 2001; McRobbie, 2015). It has been suggested that intrinsic motivation can take two forms: enjoyment-based and obligation-based (Lindenberg, 2001). Enjoyment-based motivation refers to direct enjoyment, or “flow”—a state reached when activities are sufficiently new and challenging, yet also appealing to previous
knowledge (Csikszentmihalyi, 1996; Deci & Ryan, 1985; Osterloh, Frey, & Frost, 2001). As work in the CCI is generally pleasant, interesting, varied and challenging (Caves, 2000; Csikszentmihalyi, 1996; Hesmondhalgh & Baker, 2010), this environment may be particularly conducive to enjoyment-based intrinsic motivation. Obligation-based intrinsic motivation occurs when individuals pursue self-defined goals or social norms—for instance, those relating to identification with a group (Lindenberg, 2001; Osterloh et al., 2001).

Studies of the CCI reveal disappearing boundaries between work and private lives (Annik, 2016; Gandini, 2015; Hesmondhalgh & Baker, 2010), as informal ties often lay at the basis of professional collaborations (Daskalaki, 2010; Scott, 2012). The blending of work and social life accommodates particular lifestyle values within individuals' professional and social identities. For example, recent evidence suggests that a “bohemian lifestyle”, which often concords with a devotion to the arts for art’s sake, is a vital source of work motivation among creative entrepreneurs (Gundolf, Jaouen, & Gast, 2018), McRobbie (2015, p. 74) observes that “passion” is a key value in the creative economy, strong enough to lead workers to model their identity around it, and articulates that “the ethos of ‘passionate work’ [...] envelops the identity of the cultural entrepreneur and [...] decorates his or her publicity material as a kind of statement of intent and declaration of suitability for participation in this sector.” Here, the economic and institutional forces driving creative professionals to be independent workers, conveniently converge with a desire to self-actualize (see also Tokumitsu, 2015).

Empirical evidence on the behaviour of artists and creatives, particularly regarding their career commitment and persistence, shows that financial incentives are largely irrelevant (Abbing, 2002; Menger, 2001; Throsby, 1994). In the CCI, contrary to a fundamental economic principle, a raise in monetary incentives does not automatically increase supply, nor will individuals leave the industry because of a lack of financial rewards (Throsby, 1994). But intrinsic reward entails more than money alone, and particularly those other aspects may be both the drivers and expected outcomes of persistence in creative work. They may also jeopardize the enjoyment typically associated with intrinsically motivated creative activity (Deci, 1975). The CCI have been described as mediated “winner-take-all” markets in which resource mobilization processes are highly contingent upon support and selection by other parties (Frank & Cook, 2013; Scott, 2012). As such, creative entrepreneurs may not be entirely insensitive to attention from other people, as it may contribute to the viability of a creative career. As shown by Bhansing, Leenders, and Wijnberg (2012), theatre producers, for example, clearly attach importance to favourably impressing peer and expert evaluators. Also, in the final stages of creative processes, creative professionals and knowledge-workers consider external rewards to be an acknowledgement of their work and an incentive to continue. In contrast, in the initial idea generation and promotion phases, such external rewards are found to hinder creativity (Caniëls et al., 2014).

The few findings on the relation between intrinsic and extrinsic motivation in the CCI suggest that the antecedents and outcomes of extrinsic and intrinsic motivation are contingent on the stage of the creative process (Caniëls et al., 2014), or that extrinsic motivation may crowd out intrinsic motivation (Frey, 1994). By articulating the possible co-existence of either low or high levels of both intrinsic and extrinsic motivation in a given setting, SDT takes another perspective on the interaction between both types of motivation (Ryan & Deci, 2008). An SDT-inspired study on the career commitment of literary translators shows that both intrinsic and extrinsic motivation are positively correlated with career commitment, but that intrinsic motivation matters more (De Jong, 1999). Hence, we expect that those pertaining to their creative work may experience both intrinsic and extrinsic motivation, but that the former is stronger. We propose:

**Hypothesis 1a. In the CCI, entrepreneurs are more intrinsically than extrinsically motivated.**

It has been suggested that the passion and drive that were previously typical for artistic work, are now expected from highly skilled workers in general (Gielen, 2014; Tokumitsu, 2015). According to McRobbie (2015), the reason for this is that the uncertainty previously reserved for artists has currently become a reality for those performing other work in the CCI as well (e.g., in organization, production and marketing). This means that also these people need a strong motivation to do, and keep doing, this kind of work (McRobbie, 2015). Therefore:

**Hypothesis 1b. In the CCI, entrepreneurs who create (“makers”) and those who do not (“non-makers”) are similarly motivated.**

### 3.2 Creative entrepreneurs’ needs

In line with SDT, we advance the central proposition that three compatible and complementary needs positively relate to someone’s motivation to work in the CCI: the needs for autonomy, competence and relatedness (Ryan & Deci, 2000). Research has already suggested that workers and entrepreneurs in the CCI are differently motivated than workers in other sectors, because they are fuelled by “psychic rewards” (Menger, 1999).

First, the need for autonomy refers to the perceived experience of freedom (Ryan & Deci, 2000). Research in an organizational setting shows that the more independent employees feel, the more innovative they become (De Spiegelaere, Van Gyes, De Witte, Niesen, & Van Hootegem, 2014). This link between independence and innovative work behaviour, possibly mediated by an inherent passion for that work, can be expected in a creative setting as well. Following the typical image of the “autonomous” (Bourdieu, 1984), “unhindered” (Caves, 2000, p. 4) or “bohemian” (Eikhof & Haunschild, 2006) artist, today’s creative entrepreneurs are often attracted to the freedom that a career in the CCI promises, even when this freedom comes with economic uncertainty (Hesmondhalgh & Baker, 2010; McRobbie, 2015; Scott, 2012). Independent creative professionals have been found to be willing to forego several pay-offs that regular employees do seek in their work (Abbing, 2002; Menger, 1999). This seems indicative of
their commitment to creative work, which we translate into the following hypothesis:

**Hypothesis 2.** In the CCI, entrepreneurs’ perceived need for autonomy is positively associated with their intrinsic motivation.

Second, the arts and the CCI are typically described as intermediated markets, where formal and informal networks are key to the mobilization and conversion of individuals’ cultural and social capitals (Caves, 2000; Scott, 2012). The informal processes in this network sociality have been recognized to be barriers to entry in the CCI, leading to the inclusion or exclusion of creative entrepreneurs (McRobbie, 2015; Scott, 2012). Researchers have drawn attention to the ways in which individual entrepreneurs co-locate, such as in cultural clusters (Hitters & Richards, 2002) and co-working spaces (Gandini, 2015), as well as to the club culture (McRobbie, 2015) and the reliance upon favours of and to friends (Scott, 2012). Alliances between creative entrepreneurs have been found to strengthen individuals’ capabilities and to ensure survival (Gundolf et al., 2018). The difficult conditions under which creative work is carried out may lead to solidarity and friendships as well, which enable creative entrepreneurs to cope with insecure and precarious work conditions (Hesmondhalgh & Baker, 2010). Those liaisons with likeminded people could invoke feelings of psychological safety, which in the interpersonal work context have been found to affect individuals’ involvement in creative work (Kark & Carmeli, 2009).

In SDT, the need for relatedness refers to the desire of people to feel part of a community (Ryan & Deci, 2000). As a result, people adopt the values, beliefs and behaviours that are endorsed by the community. While SDT holds that this is the case for all human beings, the CCI may appeal to this desire particularly strongly. McRobbie (2015) uses the metaphor of the “guest list” to designate how strongly creative entrepreneurs are expected to display gratitude when offered work. Mathieu and Sandal Stjerne (2015) show how Danish filmmakers continuously adapt their personality to the conventions of their sector. Given the importance of personal styles, identities and reputations in the CCI, we believe that the need for relatedness may relate to obligation-based intrinsic motivation (Lindenberg, 2001). In line with SDT, individuals internalize the norms and codes from the community they feel they belong to and adopt attitudes that are commonplace. Therefore, we propose:

**Hypothesis 3.** In the CCI, entrepreneurs’ perceived need for relatedness is positively associated with their intrinsic motivation.

Third, the need for competence means the experience of being effective in one’s actions and able to use one’s capacities (Ryan & Deci, 2008). In line with both SDT and crowding-out theory, someone’s intrinsic motivation can be thwarted when s/he perceives her/his behaviour as unsatisfactory, or her/his competence as unappreciated (Deci & Ryan, 1985; Frey, 1994). Especially in an environment with few external rewards, such as the CCI, people may seek other justifications for the activities they perform (Frey, 1994). Because of the volatile and challenging work conditions in the CCI (Lena & Lindemann, 2014; Røyseng, 2019), people’s competences may be revealed only in the course of action (Menger, 2001). Therefore, someone’s belief in her/his competences may be the only pertinent predictor of her/his willingness to persist in creative work. Given the complexity of creative work and the multiple demands entrepreneurs face in this market (Hearn, Bridgstock, Goldsmith, & Rodgers, 2014), we expect a relationship between creative entrepreneurs’ perceived need for competence with both intrinsic and extrinsic motivation.

We furthermore argue that different types of competences relate differently to both types of motivation. In the CCI, both creative skills and entrepreneurial skills are important (Hearn et al., 2014; Townley & Beech, 2010). For instance, several socio-historical studies have portrayed the greatest artists of our times as innovative entrepreneurs (Alpers, 1988; FitzGerald, 1995). In current times, where most creative workers have to combine artistic and entrepreneurial work efforts (Eikhof & Haunschild, 2006, 2007; Lindkvist & Hjorth, 2015), the imperative to be creative vis-à-vis that to be entrepreneurial may differentially impart motivation. Specifically, a belief in one’s entrepreneurial skills may correlate with the prospect of external rewards, whereas a belief in one’s creative or artistic abilities may be associated with the joy derived from creative or artistic work. This leads to the following hypotheses:

**Hypothesis 4a.** In the CCI, entrepreneurs’ perceived need for competence is positively associated with their intrinsic motivation.

**Hypothesis 4b.** In the CCI, entrepreneurs’ perceived need for competence is positively associated with their extrinsic motivation.

**Hypothesis 4c.** In the CCI, entrepreneurs’ perceived need for creative competence is positively associated with their intrinsic motivation.

**Hypothesis 4d.** In the CCI, entrepreneurs’ perceived need for entrepreneurial competence is positively associated with their extrinsic motivation.

### 4 METHODS

#### 4.1 Participants and procedure

A survey was administered among the participants of two events organized in the Netherlands (in December 2015 in Amsterdam, and in September 2016 in Maastricht) aimed at self-employed professionals and entrepreneurs in the CCI. Distributing the survey among these participants guaranteed a high response rate, as they were asked to fill out the survey before they could take part in a workshop. As both targeted audiences were similar, we merged the samples, leading to a total number of 140 responses, of which 111 were complete. A
sample size of 111 is satisfactory in relation to the number of variables we include in our analyses (Hair, Black, Babin, Anderson, & Tatham, 1998).

It is quite common and effective to study the motivation and self-efficacy of entrepreneurs by means of self-completed questionnaires (e.g. Simoens & Tervaniemi, 2013) and current research on the psychology of artists and other creative professionals shows that surveys constitute a "satisfactory empirical approximation of individual utility" (Steiner & Schneider, 2013, p. 230). We developed our online questionnaire based on validated scales in the SDT and entrepreneurship literature that were translated from English to Dutch, backward and forward independently by two of the authors. To minimize the likelihood of common method variance (CMV), we took ex ante measures suggested in the literature such as including different types of answer categories and different Likert-scale lengths, randomizing the order of the scales, and providing solid anonymity guarantees (Chang, van Witteloostuijn, & Eden, 2010). In our analyses, we use and adjust three extant scales: the entrepreneurial self-efficacy scale of Weitzel, Urbig, Desai, Sanders, and Acs (2010), a scale measuring the needs for relatedness and autonomy derived from Sheldon and Bettencourt (2002), and the Sports Motivation Scale II adjusted to the CCI context, originally developed by Pelletier, Rocchi, Vallerand, Deci, and Ryan (2013) (Appendix A). The survey further contains items with regard to socio-demographic information, and the nature and commercial viability of the respondent's creative and other professional activities.

4.2 | Measures

4.2.1 | Creatives' Motivation Scale (CMS)

A secondary aim of our study was to develop reliable survey measures of SDT’s key constructs in relation to our setting of the CCI. The SMS-II scale for measuring sports motivation was developed in 2013, in collaboration with the founders of SDT (Pelletier et al., 2013). The SMS-II scale has been recommended as an alternative to the original SMS, as it is more theoretically aligned in its item content, performs better and is shorter, containing only 18 items instead of 28 (Pelletier et al., 2013). For these reasons, in the first stage of data collection (Amsterdam sample), we decided to adopt the SMS-II scale, adapting each item to creativity, creative behaviour and creative occupations. Overall, we replaced questions such as "Why do you practise sports?" with questions such as "Why do you practise a creative profession?" Answers such as "Because practising sports reflects the essence of whom I am" were replaced by answers such as "Because executing a creative profession reflects the essence of whom I am". We added two self-constructed items that reflect potential intrinsic and extrinsic motivational drivers for working in the creative industries ("Because of the passion I feel when I am creative" and "Because I can become rich by so doing", respectively), and removed one item of the extrinsic motivation subscale ("Because I think others would disapprove of me if I did not") due to its large similarity with other items. Answers were generated on a seven-point Likert scale, ranging from "Not agree at all" to " Entirely agree". The full list of adjusted items is available from the authors on request.

After an initial exploratory factor analysis on the 83 observations from our first 2015 sample, we reduced our motivation scale to a six-item measure for the second 2016 survey, reflecting intrinsic and extrinsic motivation (three items each). This more parsimonious instrument was developed based on the items’ face validity and performance in the factor analysis, as well as the specificities we drew from the CCI literature. Intrinsic motivation is measured by questions that relate to the pleasure respondents experience while doing their activity, and to their sense of self-realization. In this manner, it relates to the ideas of “flow” (Csikszentmihalyi, 1996) and “enjoyment-based motivation” (Lindenborg, 2001). Our measure of extrinsic motivation involves appraisal and reward by other people and monetary rewards, so as to include the ideas of Throsby (1994).

After pooling the data from both samples, exploratory factor analysis cleanly generated intrinsic and extrinsic motivation factors, with all items loading as expected (all above 0.70) (Appendix B). We constructed aggregate measures by averaging the item scores. We coin our adapted and condensed instrument the Creatives' Motivation Scale (CMS). The reliability of the intrinsic motivation subscale is good ($\alpha = 0.74$), and that of the extrinsic motivation subscale is moderate, yet satisfactory in a sample size of 70 respondents or more ($\alpha = 0.66$) (Hair et al., 1998). Additional replication work is needed, in other samples and domestic CCI settings, to further validate the CMS.

4.2.2 | Creatives' Need Scale (CNS)

In order to assess the psychological need satisfaction items as discussed by Ryan and Deci (2000), we use the parsimonious scales developed by Sheldon and Bettencourt (2002) in the context of group process research. They arrived at six items to assess the need for personal autonomy and interpersonal relatedness (three items each), which we adjusted from perceived need satisfaction in group processes to perceived need satisfaction within a professional group. We turned questions such as “How strongly do you feel related to the other group members?” into “How strongly do you feel related to people doing the same activity?”. In both samples, separately and with the pooled data, factor analysis cleanly produced two dimensions. The merged sample gives item loadings larger than 0.74, and reliability analysis demonstrates Cronbach’s alphas exceeding those calculated by Sheldon and Bettencourt (2002) for autonomy ($\alpha = 0.79$ versus 0.71) and interpersonal relatedness ($\alpha = 0.90$ versus 0.83). Scores were computed by averaging the responses. We refer to our measurement instrument as the Creatives’ Need Scale (CNS) (Appendix C).

4.2.3 | Creatives' Competences Scale (CCS)

In order to assess self-perceived competences, we use the 12-item entrepreneurial self-efficacy (ESE) scale developed by Weitzel et al. (2010). We believe that the ESE measure may be particularly useful to assess self-perceived competences, as self-efficacy refers to a
personal judgement of “how well one can execute courses of action required to deal with prospective situations” (Bandura, 1982, p. 122). Furthermore, the ESE scale may be well-suited for the CCI context, because it includes items that relate to both the creative and entrepreneurial competences necessary for developing a career (Eikhof & Haunschild, 2006, 2007). For the sake of the current study, we ran two analyses: first with an overall competence variable consisting of the 12 original ESE items (α = 0.83), and secondly with an entrepreneurial competence variable and a creative competence variable. Indeed, a factor analysis of the ESE scale generates three factors, as shown in Appendix D. Based on four face-valid items ("successfully identifying business opportunities", "commercializing an idea or new development", "raising funds for a new business", and "sell a new product or service"), the first one most clearly expresses a clean measure of entrepreneurial competences (with all item values above 0.70). A second factor contains two items related to creativity ("be creative" and "think creatively", with item values above 0.84). Reliability analysis demonstrates high Cronbach’s alphas for both scales (α = 0.86 and α = 0.83 for entrepreneurial and creative competences, respectively). Individual scores were computed by averaging individuals’ item responses. We refer to our measurement instrument as the Creatives’ Competence Scale (CCS), with its subscales of entrepreneurial (CeCS) and creative (CcCS) competences.

4.2.4 | (Non)-maker, gender and age

The survey instrument contained an open question regarding the respondents’ occupation, leading to answers as diverse as “visual artist”, “architect”, “theatre manager”, “cultural entrepreneur”, “art director” or “singer”. Some respondents listed multiple jobs or occupations. Independently, two of the authors coded the responses to this question into a maker/non-maker dummy variable, in order to distinguish those creating content (artistic goods or services) from those who do not. The rare inconsistencies were discussed and agreed upon. We included a gender dummy (male = 1; female = 0) and age in years as control variables. Table 1 provides the descriptive and correlation statistics.

5 | RESULTS

Pearson correlation coefficients suggest that intrinsic and extrinsic motivation are different constructs (Table 1). A paired samples t-test for intrinsic versus extrinsic motivation supports Hypothesis 1a: the mean of intrinsic motivation (M = 5.53; SD = 0.99) is significantly larger than the mean of extrinsic motivation (M = 3.17; SD = 1.20); t(106) = 16.71, p = 0.000. Results of the independent samples t-test performed to test Hypothesis 1b reveal no significant differences between makers and non-makers regarding their motivations. Specifically, there was no significant difference in intrinsic motivation between makers (M = 5.58, SD = 0.98) and non-makers (M = 5.44, SD = 1.01); t(105) = 0.712, p = 0.478, and no significant difference in extrinsic motivation between makers (M = 3.20, SD = 1.15) and non-makers (M = 3.11, SD = 1.28); t(105) = 0.373, p = 0.710, which confirms Hypothesis 1b (Table 2). Levene’s test indicates equal variances across makers and non-makers in relation to intrinsic (F = 0.145, p = 0.704) and extrinsic motivation (F = 0.367, p = 0.546).

Table 3 provides regression estimates in order to test Hypotheses 2–4. We start by examining creatives’ intrinsic motivation. Therefore, we ran two OLS regression analyses, including the socio-demographic variables gender and age, a maker dummy and the three needs, with a first model including a general competence variable, and a second model the split competence variable (with separate variables for entrepreneurial and creative competences). In Model 1, none of the independent variables are statistically significant. The overall F-test is also not statistically significant (F6,97 = 0.828, p = 0.551). The intercept indicates a relatively high average value for MOTI, and the models’ predictions (the independent variables jointly) are not an

**TABLE 1** Summary statistics and Pearson correlations

<table>
<thead>
<tr>
<th></th>
<th>Summary statistics</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1. Gender (male = 1)</td>
<td>0.34</td>
<td>0.48</td>
</tr>
<tr>
<td>2. Maker (yes = 1)</td>
<td>0.60</td>
<td>0.49</td>
</tr>
<tr>
<td>3. Age (in years)</td>
<td>41.59</td>
<td>13.45</td>
</tr>
<tr>
<td>4. Need for Autonomy</td>
<td>5.16</td>
<td>1.12</td>
</tr>
<tr>
<td>5. Need for Relatedness</td>
<td>4.43</td>
<td>1.22</td>
</tr>
<tr>
<td>6. Need for Competence</td>
<td>4.44</td>
<td>0.72</td>
</tr>
<tr>
<td>7. Creative Competence</td>
<td>4.97</td>
<td>0.99</td>
</tr>
<tr>
<td>8. Entrepreneurial Competence</td>
<td>3.84</td>
<td>1.13</td>
</tr>
<tr>
<td>9. Intrinsic Motivation</td>
<td>5.53</td>
<td>0.99</td>
</tr>
<tr>
<td>10. Extrinsic Motivation</td>
<td>3.17</td>
<td>1.20</td>
</tr>
</tbody>
</table>

n = 111.

**Correlation is significant at the 0.01 level (two-tailed).
Correlation is significant at the 0.05 level (two-tailed).
improvement. Hypotheses 2 (Need for Autonomy), 3 (Need for Relatedness) and 4a (Need for Competence) fail to receive support. However, in the second model, where we distinguish between entrepreneurial and creative competence, we observe that the value of Creative Competence is significant (\(F = 2.369\), \(p = 0.015\) for Model 4). Hence, we had hypothesized that in the CCI, entrepreneurs’ perceived need for entrepreneurial competence would be positively associated with their extrinsic motivation (Hypothesis 4d), while we proposed a significant association between creative competence and intrinsic motivation only (Hypothesis 4c). Here, Hypothesis 4d is rejected and we find an unhypothesized relationship between creativity and extrinsic motivation. While design control (and thus ex ante remedies) is generally preferred to eliminate method variance sources (Chang et al., 2010), we conducted two post hoc analyses to assert that our study is not pervasively affected by CMV. First, to discover if the variance in the data can be attributed to one factor, the Harman’s single factor test was applied (cf. Chang et al., 2010). Even if the test receives criticism because it is unlikely that a single factor model underlies the data (Spector, 2006), and there is no consensus on a useful guideline as to what would be an acceptable threshold value for the explained variance of such a model, it can be indicative for a possible bias due to CMV. An exploratory factor analysis of the principal multi-item measures included in our model (the three needs and two motivation variables) resulted in a two-factor solution, where neither of the factors accounted for the majority of the variance: a first factor accounts for 31.5% of the variance, and a second one for 25.7%. Second, the action of CMV can lead to inflated correlations between variables that are measured with the same method, a phenomenon often present in mono-method studies (Spector, 2006). An inspection of the correlations (Table 1) indicates that out of the ten correlation coefficients between the principal measures included in our model, only two (20%) are significant (at the 0.01 level with Pearson coefficients of 0.530 and 0.267). This casts doubt that our study method produces systematic variance in observations that inflate correlations to a significant degree (Spector, 2006). Taken together, both checks suggest that CMV does not significantly affect the validity of our conclusions.

### Discussion and Implications

The present study sought to investigate what motivates individual entrepreneurs to work in the strenuous working environment of the CCI, and, by so doing, to provide further micro-level insights into the organization of creative production. In line with recent literature

---

**TABLE 2** Descriptive statistics for the motivation variables and (non-)maker status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Motivation</td>
<td>Non-maker</td>
<td>5.44</td>
<td>1.01</td>
<td>3.00</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>Maker</td>
<td>5.58</td>
<td>0.98</td>
<td>2.67</td>
<td>7.00</td>
</tr>
<tr>
<td>Extrinsic Motivation</td>
<td>Non-maker</td>
<td>3.11</td>
<td>1.28</td>
<td>1.00</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>Maker</td>
<td>3.20</td>
<td>1.15</td>
<td>1.00</td>
<td>6.33</td>
</tr>
</tbody>
</table>

Note: \(n = 107\); maker = 65 and non-maker = 42.

**TABLE 3** Regression results of the effect of creative entrepreneurs’ needs on intrinsic and extrinsic motivation

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Intrinsic motivation</th>
<th>Extrinsic motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Constant</td>
<td>6.012***</td>
<td>5.094***</td>
</tr>
<tr>
<td>Maker</td>
<td>0.216</td>
<td>0.136</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.181</td>
<td>-0.100</td>
</tr>
<tr>
<td>Age</td>
<td>-0.011</td>
<td>-0.012</td>
</tr>
<tr>
<td>Need for Autonomy</td>
<td>-0.049</td>
<td>-0.038</td>
</tr>
<tr>
<td>Need for Relatedness</td>
<td>-0.044</td>
<td>0.022</td>
</tr>
<tr>
<td>Need for Competence</td>
<td>-0.009</td>
<td>0.459**</td>
</tr>
<tr>
<td>Creative Competence</td>
<td>0.264+</td>
<td>0.293*</td>
</tr>
<tr>
<td>Entrepreneurial Competence</td>
<td>-0.092</td>
<td>0.122</td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.049</td>
<td>0.116</td>
</tr>
<tr>
<td>Adjusted (R^2)</td>
<td>-0.010</td>
<td>0.050</td>
</tr>
<tr>
<td>(F)</td>
<td>0.828</td>
<td>1.760</td>
</tr>
</tbody>
</table>

Note: \(p < 0.10\), * \(p < 0.05\), ** \(p < 0.01\), and *** \(p < 0.005\).
(Hesmondhalgh & Baker, 2010; McRobbie, 2015), we find that in the CCI, entrepreneurs are more intrinsically than extrinsically motivated, and those entrepreneurs who create are similarly motivated as those who work in other occupations (confirmation of Hypotheses 1a and 1b). One of the self-determination needs clearly stands out in our results: the need for competence (self-efficacy), and specifically self-perceived creative competence, is a consistent predictor of an individual's motivation in the environment of the CCI. This finding holds for both women and men, and for makers and non-makers, adding to the well-established evidence regarding the connection between intrinsic motivation and creativity (e.g. Amabile et al., 1994; De Jong, 1999) by illuminating that when someone thinks s/he is creatively competent, s/he will be motivated to become and remain part of the creative workforce. Being a self-perceived measure, creative competence in relation to motivation suggests that people who experience pleasure in advancing their creativity will remain motivated within their activities, which reflects the notion of “flow” (Csikszentmihalyi, 1996). It showcases that creative activities that are at the same time challenging and appealing to extant knowledge are conducive to enjoyment-based intrinsic motivation (Lindenberg, 2001).

6.1 | Creative self-confidence and motivation

Results from our study not only affirm but also challenge the theories on creativity and motivation. First, we identify important associations between individuals' needs and motivations that are irregularly considered in the literature. Despite the stereotyped image of the intrinsically motivated creative who is driven by vocation and reluctant to receiving any mundane reward such as money, the present study shows that there is a clear link between someone's creative competence and extrinsic motivation as well. While the literature suggests that external rewards may actually demotivate people (e.g., Frey & Jegen, 2001), our finding is that those individuals with a creative self-confidence (measured by the CcCS-scale) expect rewards and attention, a finding that may not come as a complete surprise given that much creative work is outward-looking and many creatives do seek appreciation by an audience (Bhansing et al., 2012; Caniëls et al., 2014). Furthermore, whereas we hypothesized (in Hypothesis 2) that autonomy and freedom in work would fuel creatives' intrinsic motivation, which is in support of the premise of the "art for art's sake principle" in many creatives' work (Caves, 2000), our study highlights another mechanism. The negative relationship in our models between someone's need for autonomy and extrinsic motivation suggests that individuals who are high in feelings of autonomy and freedom of choices may have lower expectations of financial rewards and recognition. Inversely, appreciation in a market comes at the cost of forsaking freedom of action and expression. Taken together, these findings suggest the existence of a trade-off between autonomy and commercial viability rather than one between intrinsic and extrinsic motivations, at least in the minds of the subjects of our study. Our study proposes the narrative that, guided by lifestyle and hedonistic objectives (Gundolf et al., 2018), creative entrepreneurs experience a pleasure in doing what they want to be doing while trying to make a living out of those activities, which sometimes requires them to give up on total freedom of action. In this manner, our research supports the conclusion by Gundolf et al., (2018, p. 10) that in the specific context of the creative industries, "what may be considered a necessity from an economic perspective may be considered an opportunity for the creative entrepreneur pursuing the maintenance of his quality of life", by demonstrating that creatives are driven by both necessity (money) and opportunity (pleasure) factors.

6.2 | Self-determination in the creative work environment

We challenge the application of SDT to work environments, as our study does not corroborate the theory's premise that the support of three fundamental needs jointly affect the quality of people's motivation. For example, the inclusion of creatives' need for relatedness as a predictor of motivation in our study (Hypothesis 3) appeared redundant, while based on measurements that in previous studies had proven their usefulness and validity (Sheldon & Bettencourt, 2002). Even if we cannot tease out the possibility that the lack of significant relationships is due to our measurement instruments or sample, our findings could encourage researchers in (creative) entrepreneurship to provide more explanation for why so many individuals (including those that make a living out of creativity) stay motivated to work under insecure circumstances. By considering (perceived) needs' fulfilments as nutrients to psychological growth, SDT may be a suitable lens for the further empirical exploration of the underlying mechanisms of motivation, wellbeing and professional successes in work, in particular of self-employed, freelancers and entrepreneurs (cf. Krieger & Sheldon, 2015). Researchers that want to apply the theory to address why entrepreneurs stay motivated could consider studying a mediation effect of motivation on the relationship between needs and wellbeing outcomes (including self-actualization, cf. Tokumitsu, 2015) in a larger sample size. Research designs that include accounts for inter-group differences where groups can consist of a general workforce as well as subgroups of creative professions should improve our understanding of motivation in the CCI. While industries such as architecture, fashion, film and television feature intense teamwork during long days (circumstances that could satisfy the need for relatedness), other professions such as in the visual arts, graphic design and web development, are carried out in splendid isolation (which may affect the need for autonomy). Nevertheless, it has been noted that seemingly disparate creative practices are governed by the same conventions (McRobbie, 2015), which may, following SDT, be similarly internalized.

6.3 | Implications

The patterns that emerged from our data have clear implications for practice. We observed that creative entrepreneurs noticeably distinguish between creative and entrepreneurial competences, where only the former are associated with their motivation (elicited in the
confirmation of Hypothesis 4c). In other words, respondents ignore the role of entrepreneurial competences as a motivational factor that could advance their careers (elicited in the rejection of Hypothesis 4d). At the same time, they feel that rewards and recognition should come as a consequence of their self-perceived creativity (which we did not hypothesize, but find in Model 3). On the one hand, the recognition that creative efforts deserve credit is a positive trend because it opposes the idea of self-exploitation (Hesmondhalgh & Baker, 2010); on the other hand, the observation that creative professionals do not seem to recognize an association between entrepreneurial skills and motivation is worrisome. Contemporary adages that underline the role of the CCI in job creation and economic growth and push people away from secure employment into portfolio careers consisting of passionate work, seem to have an impact on creatives for whom the line between work and leisure time has longer been blurred (Finkel et al., 2017; Gandini, 2015; McRobbie, 2015). A better awareness of the precariousness of such work patterns and the competitive disadvantages that self-employed may face vis-à-vis larger firms operating in the CCI, could foster the need for entrepreneurial skills, and render creatives more resilient when taking part in those industries. Prioritizing art for art’s sake and lifestyle values only, may stand in the way of an attitude that nurtures, for example, firm growth and strategic alliances (Gundolf et al., 2018; Loots & van Witteloostuijn, 2018). That said, our findings hold challenges for policymakers and educators as well. Although the models tested and the available data do not offer enough grounds to propose a theory that relates quality to work quality, we do offer some thinking about the quality of the working environment, job security and earnings, being the major determinants of individuals’ wellbeing and also making up the principal dimensions of the recent framework on job quality by the Organization for Economic Co-operation and Development (OECD, 2014). Namely, we observed that in the working environment of the CCI, typified by insecure employment and earnings, (1) someone’s perceived core competences affect her/his ongoing commitment, and (2) positive feedback by other people is likely to increase the quality of the working life. Rather than new entry to the CCI, policy could facilitate collaborative practices among variously competent peers, which to some extent already occurs in co-working spaces and incubators (Garrett, Spreitzer, & Bacevice, 2017). Education could include a focus on employability and career self-management, in particular in vocational training programs (Bridgestock, 2009) but also in programs that seek to educate those that end up in supportive functions in the CCI. Inversely, as portfolio careers are becoming the standard rather than the exception (OECD, 2014), both policy and education could learn from creative practices where success in work is not just assessed in terms of economic performance but also entails indicators of creative quality and quality of life (Gundolf et al., 2018).

7 | CONCLUSION, LIMITATIONS AND FUTURE STUDIES

The question what motivates the creative entrepreneur is at the core of the present study. We examine what motivates creative entrepreneurs to function in the competitive environment of the CCI, focusing on psychological needs and motivations. We do so by developing a tailor-made survey and by applying self-determination theory. For the purpose of the current study, and for future research on the personality and behaviour of creatives, we adapted proper scales that attested to function relatively well. Our survey measurement instruments, albeit promising, must be validated further in follow-up work. This is particularly true for the Creatives’ Motivation Scale (CMS). Even though the SMS II scale, developed for a sports setting, seemed promising to capture the motivation of creatives, we had to reduce the fine-grained 19-item scale to a cruder six-item version to obtain reliable measures of intrinsic and extrinsic motivation. Research could continue to examine whether or not SDT’s distinction between different degrees of motivation is relevant in a CCI context. The Creatives’ Need Scale (CNS) has psychometrically sound measures for the needs for autonomy and relatedness, and also our distinction between the needs for creative (CcCs) and entrepreneurial (CeCS) competences seems to suit the current CCI context. In fact, our competence scale derived from the entrepreneurship literature (the entrepreneurial self-efficacy scale by Weitzel et al., 2010) clearly provides evidence of two underlying components (creative and entrepreneurial competences) for the CCI setting, suggesting that researchers should account for the peculiarities of the setting when employing it. Future studies could more effectively identify and control mono-method variance in questionnaires that include needs and motivations. To more conclusively address CMV, subsequent studies could follow the recent suggestions by Spector, Rosen, Richardson, Williams, and Johnson (2019) to, in a measure-specific manner, envision “at the level of the measured variable to first identify sources of method variance and then to devise informed strategies to control it” (p. 877). Also, adding complexity to our model, such as by including non-linear, mediating and moderating effects may reduce CMV, as mono-method bias is more likely to occur in simple models because those may address respondents’ theory-in-use (Chang et al., 2010). In addition, studies can anticipate more sophisticated ex post analyses, for example by actively including a “common method factor” in the questionnaire (Chang et al., 2010).

Overall, our set of findings seems to suggest the following narrative. In line with existing research and similar to artists, creative entrepreneurs are more intrinsically than extrinsically motivated (Hypothesis 1a), regardless of whether they count as producers or makers, or not (Hypothesis 1b). Creative entrepreneurs who have confidence in their creative skills and talent possess high levels of intrinsic motivation (Hypothesis 4c). At the same time, for these creative entrepreneurs, a high estimation of their abilities correlates with the expectation of some form of reward (Hypothesis 4b). The unsupported Hypotheses 2, 3 and 4a suggest that these creative entrepreneurs are not moved by intrinsic motivation only. Yet, in contrast to what we suspected, there is no association between possessing entrepreneurial skills and being oriented towards external rewards (Hypothesis 4d). Precisely because our results reveal creatives’ expectation of a reward, we contribute to the revelation made by several scholars (e.g., Gielen, 2014; Hesmondhalgh & Baker, 2010; McRobbie, 2015).
that young people join the CCI with hopes of fame and success, i.e. that they are not simply intrinsically motivated. Our study suggests the existence of a trade-off between autonomy and commercial viability rather than one between intrinsic and extrinsic motivations.

There are limitations to our study. First, a simple model (of needs affecting motivation) and cross-sectional data underlie our study, which does not allow us to draw conclusions about causality. Therefore, future work is needed to further examine the SDT roots of individuals’ motivation to (continue to) work in the CCI, as well as potential reverse causality of motivation affecting individuals’ perceptions of competences and self-determination at work. Combined with other recent work disentangling the micro-foundations of persistence and success in the CCI (e.g., Gundolf et al., 2018; Loots, Cnossen, & van Witteloostuijn, 2018), our study can inspire future research with quantitative data collection on a larger scale. In such studies, creativity can entail more than self-perceived creative competences, including creative dispositions, behaviours and activities, both in terms of self- and expert assessments. Additionally, we do not find any distinction between the poor artist (the epitome of the “maker”) and the perhaps more prosperous organizer or supporter of creative work (the “nonmaker”). An explanation for this may be that our sample suffers from a self-selection bias, as both events appealed to independent creative workers experiencing the challenges of their work. At the same time, empirical evidence from the Dutch creative industries suggests that those facilitators of creative and cultural production face increasing uncertainty and competition as well, mainly because the markets for cultural goods and services are becoming global (Franssen & Kuipers, 2013; Smits, 2016). Future qualitative studies could explore the motivational differences between creators and other workers in the CCI in greater depth, and jeopardize the general belief held in many creative circles, that bohemian and entrepreneurial lifestyles are incompatible.

ORCID
Boukje Cnossen https://orcid.org/0000-0003-3739-0308
Ellen Loots https://orcid.org/0000-0003-1317-1477

REFERENCES


AUTHOR BIOGRAPHIES
Boukje Cnossen is a Post-Doctoral Researcher at the Institute for Sociology and Cultural Organisation (ISKO), Leuphana University Lüneburg, Germany.

Ellen Loots is Assistant Professor in Cultural Economics at the Erasmus University in Rotterdam, the Netherlands.

Arjen van Witteloostuijn is Dean of the School of Business and Economics at the Vrije University in Amsterdam, the Netherlands.

Appendix A. Final survey instrument

Intrinsic motivation

I do my activity (seven-point Likert scale, from totally disagree to totally agree)

- because it is one of the best ways to develop other aspects of myself;
- because it gives me pleasure to learn more about it;
- because I thought that it would be a good way to develop aspects of myself that I value.

Extrinsic motivation

I do my activity (seven-point Likert scale, from totally disagree to totally agree)

- because people will praise me for what I do;
- because I can become rich by it;
- because people around me reward me when I do it.

Need for autonomy (five-point Likert scale, from not at all to extremely)

- To what extent do you have the feeling to do your activity because you really want to (and not because you are being controlled or under pressure)?
- To what extent do you feel choices and freedom of action in your activity?
- To what extent does your activity allow you to express your authentic self?

Need for relatedness (five-point Likert scale, from not at all to extremely)

- How close and connected do you feel with other people doing the same activity?
- How strongly do you feel related to people doing the same activity?
- To what extent do you experience a sense of friendship with other people doing the same activity?

Creative competence

How do you compare yourself to people with the same activity in your ability to (seven-point Likert-scale, from much worse to much better)

- be creative;
- think creatively.

Entrepreneurial competence

How do you compare yourself to people with the same activity in your ability to (seven-point Likert-scale, from much worse to much better)

- successfully identify new (business) opportunities;
- commercialize an idea or new development;
- raise funds for a new business;
- sell a new product or service.
### Appendix B. Creatives' Motivation Scale (CMS): Factor analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>Intrinsic motivation</th>
<th>Extrinsic motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I execute a creative profession because)</td>
<td>0.828</td>
<td>0.040</td>
</tr>
<tr>
<td>...it is one of the best ways to develop other aspects of myself</td>
<td>0.747</td>
<td>0.013</td>
</tr>
<tr>
<td>...I thought that it would be a good way to develop aspects of myself that I value</td>
<td>0.851</td>
<td>0.048</td>
</tr>
<tr>
<td>...it gives me pleasure to learn more about it</td>
<td>−0.042</td>
<td>0.753</td>
</tr>
<tr>
<td>...people around me reward me when I do it</td>
<td>−0.080</td>
<td>0.847</td>
</tr>
<tr>
<td>...people would praise me for what I do</td>
<td>0.309</td>
<td>0.697</td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in three iterations.

### Appendix C. Creatives' Needs Scale (CNS): Factor analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>Need for Relatedness</th>
<th>Need for autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do you have the feeling to do your activity because you really want to (and not because you are being controlled or under pressure)?</td>
<td>0.141</td>
<td>0.799</td>
</tr>
<tr>
<td>To what extent do you feel choices and freedom of action in your activity?</td>
<td>0.211</td>
<td>0.870</td>
</tr>
<tr>
<td>To what extent does your activity allow you to express your authentic self?</td>
<td>0.393</td>
<td>0.742</td>
</tr>
<tr>
<td>How close and connected do you feel with other people doing the same activity?</td>
<td>0.906</td>
<td>0.221</td>
</tr>
<tr>
<td>How strongly do you feel related to people doing the same activity?</td>
<td>0.903</td>
<td>0.214</td>
</tr>
<tr>
<td>To what extent do you experience a sense of friendship with other people doing the same activity?</td>
<td>0.837</td>
<td>0.282</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in three iterations.

### Appendix D. Creatives' Competences Scale (CCS): Factor analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>Entrepreneurial competence</th>
<th>2</th>
<th>Creative competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>(How do you compare yourself to people with the same activity in your ability to) Solve problems</td>
<td>0.176</td>
<td>0.745</td>
<td>−0.027</td>
</tr>
<tr>
<td>Solve problems</td>
<td>0.247</td>
<td>0.349</td>
<td>−0.389</td>
</tr>
<tr>
<td>Deal with money</td>
<td>−0.001</td>
<td>0.710</td>
<td>0.390</td>
</tr>
<tr>
<td>Get people to agree with me</td>
<td>0.115</td>
<td>0.751</td>
<td>0.267</td>
</tr>
<tr>
<td>Lead</td>
<td>0.180</td>
<td>0.819</td>
<td>−0.044</td>
</tr>
<tr>
<td>Make decisions</td>
<td>0.578</td>
<td>0.068</td>
<td>0.551</td>
</tr>
<tr>
<td>Create new products</td>
<td>0.037</td>
<td>0.162</td>
<td>0.854</td>
</tr>
<tr>
<td>Be creative</td>
<td>0.182</td>
<td>0.173</td>
<td>0.840</td>
</tr>
<tr>
<td>Think creatively</td>
<td>0.698</td>
<td>0.388</td>
<td>0.150</td>
</tr>
<tr>
<td>Successfully identify new (business) opportunities</td>
<td>0.844</td>
<td>0.210</td>
<td>−0.001</td>
</tr>
<tr>
<td>Commercialize an idea or new development</td>
<td>0.839</td>
<td>0.003</td>
<td>−0.066</td>
</tr>
<tr>
<td>Raise funds for a new business</td>
<td>0.854</td>
<td>0.123</td>
<td>0.159</td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in five iterations.