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**SELF-EMPLOYMENT AND SUBJECTIVE
WELL-BEING**

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Self-employment and Subjective Well-Being [☆]

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Abstract

Self-employment contributes to employment growth and innovativeness and many individuals want to become self-employed due to the autonomy and flexibility it brings. Using “subjective well-being” as a broad summary measure that evaluates an individual’s experience of being self-employed, the chapter discusses evidence and explanations why self-employment is positively associated with job satisfaction, even though the self-employed often earn less than their employed peers, work longer hours and experience more stress and higher job demands. Despite being more satisfied with their jobs, the self-employed do not necessarily enjoy higher overall life satisfaction, which is due to heterogeneity of types of self-employment, as well as motivational factors, work characteristics and institutional setups across countries.

Key words: self-employment, entrepreneurship, subjective well-being, job satisfaction, life satisfaction

JEL codes: L26, J24, J28

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1. Introduction

“One can be independent, or one can be subject to decisions made by others.” (Benz and Frey, 2008b, p. 362). For many individuals becoming their own boss seems very attractive, as evidenced by stated preferences for becoming self-employed (Blanchflower, 2004): while rates vary across nations, a preference for self-employment is voiced by at least one out of five and as many as three or four out of five individuals in some countries (from lowest: Sweden, 22%, Japan, 23%, to highest: Lithuania, 58%, Brazil, 63%, Turkey, 82%, see European Commission, 2012, p. 16).

But self-employment is also seen in a positive light from a societal perspective, and governments are interested in fostering it for several reasons (Storey, 1994; European Commission, 2013): for one, self-employment is seen as a path leading out of poverty and disadvantage for the individual entrepreneur, who might otherwise not be employed (Blanchflower and Meyer, 1994; Blanchflower, 2000). Secondly, small high-growth firms contribute to additional employment growth apart from the firm owner’s job (Henrekson and Johansson, 2010) and are important for the growth of a capitalist economy (Blanchflower and Meyer, 1994; Blanchflower, 2000, p. 473). Thirdly, new firms are seen as the driver of an economy’s innovativeness, trying out new inventions and transforming them into products consumers would want to buy (not all self-employment is “entrepreneurial” in this innovative Schumpeterian sense). And fourthly, firms are also increasingly recognized as being able to create “social wealth” when tackling social problems (poverty, discrimination, or exclusion) and can thus contribute to the enhancement of communities and societies (Zahra et al., 2009; Estrin et al., 2013).

It is no wonder thus that self-employment in Europe comprises a non-negligible amount of individuals: 32.6 million persons aged 15 to 74 in the European Union were self-employed in 2018 (which is 14% of total employment; see Eurostat, 2020). Numbers vary between countries, with Greece (30%) and Italy (28%) at the top and countries like Germany (9%), Sweden (9%), Denmark (8%), and Luxembourg (8%) making up the lower end of the distribution.

Taking for granted that self-employment is desirable to many, contributes to employment growth and innovativeness and is hence desirable on a societal level, the present chapter is interested in the well-being consequences of self-employment for the individual that actually

pursues it. While “self-employment presents an opportunity for the individual to set his or her own schedule, to work when they like, to answer to nobody and possibly even as a way to become rich” (Blanchflower, 2000, p. 472), empirical research on self-employment has also noted that, with a few exceptions of superstar self-employed, most of the self-employed earn less money than their employed counterparts (Hamilton, 2000; Acs et al., 2016; Moskowitz and Vissing-Jørgensen, 2002, Sec. 4), have higher earnings variability (van Praag and Versloot, 2007), are subject to a high risk of failure (Coad et al., 2013), and report longer working hours than their employed peers when working full-time (Ajayi-Obe and Parker, 2005; Hyytinen and Ruuskanen, 2007). And while the self-employed perceive their job security as higher (Hundley, 2001), they are not necessarily more dissatisfied with this perceived level of job security (Millán et al., 2013).

Add to this potential work-life-balance conflicts (Parasuraman and Simmers, 2001) and stress (the literature here is somewhat divided, see e.g. Stephan and Roesler, 2010; Baron et al., 2016; Hessels et al., 2017; Andersson, 2008; Schieman et al., 2006), and it can be conjectured that the well-being consequences of self-employment might be quite heterogeneous and ill-captured by solely relying on income as measure of entrepreneurial success (Cooper and Artz, 1995; Stephan, 2018; Baron et al., 2016, p. 746). For this reason, the present chapter adopts a broader view of well-being that can capture both monetary and non-monetary aspects of the self-employment experience. By focusing on “subjective well-being” (Helliwell et al., 2013; Fisher, 2010), individual responses of the self-employed to questions about how satisfied they are with their job and their life as a whole serve to provide a common currency to evaluate summarily the different facets of being self-employed. In addition, these measures put the individual center-stage in evaluating how they experience self-employment.

The chapter is structured in the following way: Section 2 presents a standard utility theory model of self-employment to provide a theoretical framework. The chapter then summarizes empirical findings on the well-being consequences of self-employment and their mechanisms, focusing first on a narrow measure of well-being, viz. job satisfaction (Section 3) and then on a broader notion of life satisfaction (Section 4). Both sections also provide explanations for the observed findings in the literature. The chapter concludes with open questions and unresolved issues (Section 5).

It should be noted that the literature often uses the terms “self-employment” and “entrepreneurship” interchangeably (Carter, 2011), but this chapter will stick with the term self-employment and will focus on all self-employed, including entrepreneurs, freelancers, own-account self-employed, etc. The term “entrepreneurship” often has connotations of the heroic, innovative Schumpeterian entrepreneur who sees innovations and brings them on the market (Schumpeter, 1934), whereas most self-employed would not necessarily be entrepreneurs according to such a definition (Ács et al., 2018, p. 1). As such, focusing on the self-employed is the most encompassing categorization, but it also lumps together quite heterogeneous groups of workers who likely enjoy varying degrees of well-being resulting from their different occupational profiles and circumstances (Williams et al., 2017; Binder, 2018). In addition, our chapter does not aim at providing a comprehensive survey of all that has ever been written on the topic, but rather focuses on the most relevant literature, and wherever possible, on those studies that are methodologically strongest.

2. Theoretical framework

2.1. Conceptual model

To model the relationship between self-employment and well-being, one could conceptualize an individual’s utility derived from self-employment like any worker’s utility function, where utility is derived from income y that results from work, whereas the effort expended e brings disutility (this assumes work effort is a nuisance compared to leisure and the resulting wage compensates for the disutility). In this model, where

$$u = u(\ln y, e), \tag{1}$$

utility positively depends on y ($u_y > 0$, but with a decreasing marginal utility of income, $u_{yy} < 0$, so that the logarithm of y is usually chosen) and negatively on effort ($u_e < 0$).

Such brand of model interprets the decision to become self-employed as result of a typical micro-economic utility maximization problem of the worker (e.g., Taylor, 1996). It is hard to square such a simple model with the observed empirical evidence on the self-employed earning less than comparable employed workers (Hamilton, 2000), which would suggest that either

individuals do not act rationally when choosing self-employment (viz. being uninformed or overoptimistic; [Block and Koellinger, 2009](#), p. 191), or that opting for lower incomes is part of a rational decision to engage in some form of tournament, where only a few winners will end up capturing the prize (i.e. entrepreneurial superstardom; this could be conceptualized as an intertemporal utility-maximization calculus with risky outcomes).

A simpler explanation could be that there are non-pecuniary factors z missing in the model which can explain why individuals would take up self-employment even in spite of earning less compared to becoming employed. In this model,

$$u = u(\ln y, e, z), \tag{2}$$

where $u_z > 0$. Such factors compensate for lower incomes and would include the autonomy associated with self-employment, the feeling of being one’s own boss, potentially more rewarding and holistic work tasks and so on ([Blanchflower and Oswald, 1998](#); [Benz and Frey, 2008a](#); [Parasuraman and Simmers, 2001](#)).

It is important to note that in every utility function, there is a certain ambiguity as to whether utility refers to individuals’ motivation (preferences) or their evaluation of their experience (the welfare-theoretic interpretation in a classical sense). The two types of utility are sometimes also labelled “decision utility” vs. “experienced utility” ([Kahneman et al., 1997](#)), and the latter is well captured by measures of subjective well-being (or colloquially “happiness”; see on this [Frey and Stutzer, 2002](#)). The above-mentioned literature interprets utility as a shorthand for individuals’ preferences and their decision to become self-employed (compared to remaining employed). In the following, the utility function above will be used as a convenient mathematical representation for individuals’ experience of being self-employed, i.e. not related to the motivational aspects of utility (the decision to become self-employed), but in its meaning of utility as welfare (but still in comparison to the reference group of being in employment and their welfare).

2.2. Measurement

The term “subjective well-being” refers to individuals’ assessments of their own subjective experience of their lives (e.g., [Diener and Suh, 1997](#), p. 191). Notions of subjective well-being

have a long tradition in psychology and are increasingly used in economics or sociology (for surveys, see [Dolan et al., 2008](#); [Graham, 2009](#); [Layard et al., 2012](#)). These measures have been shown to be both valid and reliable in a large body of literature ([Krueger and Schkade, 2008](#); [Lucas, 2018](#)), and they correlate well with observed behaviors such as suicide ([Koivumaa-Honkanen et al., 2001](#)) or biomarkers such as cortisol levels and hypertension ([Dockray and Steptoe, 2010](#); [Blanchflower and Oswald, 2008](#)).

Measures of subjective well-being can center on a cognitive-evaluative component, where individuals reflect and then judge (and approve) of their lives (e.g., [Helliwell et al., 2012](#)). These so-called “evaluative measures” of life satisfaction (elicited for instance via the question: “Overall, how satisfied are you with life as a whole these days?” [OECD, 2013](#)) show this element most strongly. Apart from global measures, satisfaction with certain life domains (such as work or leisure time) exist as well, and exhibit higher test-retest reliability due to a narrower focus ([Krueger and Schkade, 2008](#)).

But subjective well-being also includes an affective component, a reference to mood, emotions or affective states of the individual. “Affective” measures of well-being are usually elicited with questions such as “How happy are you?” or via questions on positive and negative affect (e.g. the “Positive Affect Negative Affect Scale”, PANAS, [Watson et al., 1988](#)).

While cognitive and affective measures overlap to some extent and usually correlate on the order of up to $r = .5$ in various empirical applications, they are conceptually distinct and differ in their determinants ([Schimmack et al., 2002](#); [Headey et al., 1984](#)). A well-known example is a study by [Kahneman and Deaton \(2010\)](#), who have shown that above a threshold of USD 75,000, income is no longer associated positively with affective well-being, while still maintaining a positive (log) relationship with life satisfaction.

Most of the research on self-employment and subjective well-being is focused on cognitive measures of subjective well-being (satisfaction with job and life), but where applicable, research centered on other measures of well-being will be presented (see also [Stephan, 2018](#), who surveys the literature on entrepreneurial mental well-being more broadly). A third category of “eudaimonic well-being” taps into notions of what it means to lead a good life. Those measures are less well-understood and play so far only a small role in the literature

on self-employment and subjective well-being (but see [Ryff, 2019](#); [Nikolaev et al., 2019](#)).

3. Self-employment and job satisfaction

Self-employment is robustly positively associated with job satisfaction throughout a large number of studies from different contexts ([Blanchflower and Oswald, 1998](#); [Benz and Frey, 2004](#); [Blanchflower, 2004](#); [Prottas and Thompson, 2006](#); [Benz and Frey, 2008a](#); [Andersson, 2008](#)). The evidence pertains to short-term gains from switching to self-employment, but can be found even for those who are self-employed for more than five years ([van der Zwan et al., 2018](#)). Similar gains in job satisfaction are found when switching to self-employment from being economically inactive, but not when switching from being unemployed ([Block and Koellinger, 2009](#); [Binder and Coad, 2016](#); [Justo et al., 2019](#)). Leads and lags of switching into self-employment are comparatively less well researched, but evidence points towards both anticipation effects (lower job satisfaction in the old job triggers switching) and habituation effects (decreasing job satisfaction after initial peaks when switching), both of which suggest that the job satisfaction gain from self-employment may be somewhat smaller and more transient than the literature assumes ([Hanglberger and Merz, 2015](#); [Georgellis and Yusuf, 2016](#); [Kautonen et al., 2017](#)).

Since early research by [Locke \(1969\)](#) and [Freeman \(1978\)](#), there has come to be a well-established body of literature in various research fields (economics, industrial and organizational psychology) analyzing the determinants of job satisfaction (for reviews see, for instance, [Judge and Klingler, 2007](#); [Fisher, 2010](#)), which can explain why self-employment should be positively related to job satisfaction.

While income, perhaps surprisingly given the above model, has been shown to only bear a moderate relationship with both job satisfaction in general ([Judge et al., 2010](#), provide a review), and also with regard to the self-employed specifically ([Bianchi, 2012](#)), three broad categories of other factors can be distinguished that are associated with job satisfaction of people at work, namely socio-demographic factors, characteristics of the work itself, as well as dispositional factors that pertain to an individual's personality, values and motivations ([Fisher, 2010](#), p. 395).

Irrespective of type of work, the most important socio-demographic factors related to job

satisfaction are age (u-shaped, see [Clark et al., 1996](#)), gender ([Clark, 1997](#)) and education ([Vila and Garcia-Mora, 2005](#)). Amongst work characteristics, a well-established model in the literature is the “job characteristics model” ([Hackman and Oldham, 1975, 1976](#)), suggesting five core motivational work characteristics as being central for job satisfaction. These are task identity, task significance, task variety, autonomy and work feedback (e.g., [Humphrey et al., 2007](#)). [Morgeson and Humphrey \(2006\)](#) extended these work characteristics into the knowledge domain (job complexity, specialization, skill variety, problem-solving etc.) and also identified social characteristics (e.g., social support, interdependence, feedback from others) as relevant factors (see also [Judge and Kammeyer-Mueller, 2012](#); [Humphrey et al., 2007](#)). In addition, job satisfaction is affected by further work characteristics, such as the number of hours worked (typically negative, [Clark et al., 1996](#)), the working time model (full-time vs. part-time work, [D’Addio et al., 2007](#)), the size of the firm ([Idson, 1990](#)) as well as the type of industry one works in (e.g., public vs private sector; [D’Addio et al., 2007](#)). Finally, dispositional factors cover personality traits (positive for Extraversion and less robustly so Conscientiousness, negative for Neuroticism; see [Judge et al., 2002](#)) as well as other factors such as occupational identity ([Binder and Blankenberg, 2020](#)). The existence of both work-related and person-related factors and their potential interdependence has given rise to the “Job demands-control(-support) model” (JDC/JDCS, [Karasek, 1979](#); [Häusser et al., 2010](#)), which posits that job demands, individuals’ control over their work as well as social support determine job satisfaction and psychological well-being. Empirical support is strong for this model, but its “buffer hypothesis” of multiplicative interactions between demands and control is empirically somewhat less well corroborated ([Häusser et al., 2010](#)).

While not specifically tailored to the job satisfaction of the self-employed ([Stephan, 2018](#), pp. 308-9), the three categories of determinants of job satisfaction mentioned above can help explain why job satisfaction is positively associated with self-employment. In the following, we will specifically focus on the areas of work characteristics and dispositional factors to explain the job satisfaction premium of the self-employed and also highlight specific factors and work characteristics related to being self-employed that have been analyzed in the literature.

3.1. *Work characteristics and job satisfaction*

It is especially the category of work characteristics that provides a good theoretical foundation to explain the relationship at hand, as the work environment of the self-employed is often characterized by specific work characteristics such as high levels of autonomy, as well as demanding and stressful work tasks (e.g., [Cardon and Patel, 2015](#)). In terms of the above model, work-related non-pecuniary factors z can generate “procedural utility” ([Benz and Frey, 2004, 2008a,b](#)). And while there is some evidence that income plays a stronger role for the job satisfaction of the self-employed in some non-Western countries ([Benz and Frey, 2008a](#)), the overall evidence indicates that it is not income differentials that can explain most of the variation in job satisfaction, but rather the non-pecuniary factors to be discussed in the following ([Bianchi, 2012](#)).

The extant premium in job satisfaction for the self-employed compared to similar employed individuals is likely due to many concurrent causes, but the literature has provided evidence for an important role of a number of work characteristics that are associated with many types of self-employment, viz. autonomy, flexibility, skill utilization and higher job security ([Hundley, 2001](#)). Similarly, [Parasuraman and Simmers \(2001\)](#) and [Álvarez and Sindre-Cantorna \(2014\)](#) find higher levels of autonomy and schedule flexibility for the self-employed in their samples and the latter study reports that differences in job satisfaction between self-employed and employees are fully explained by those two factors. [Hytti et al. \(2013\)](#) use the job characteristics model to show that in their sample, differences in job satisfaction between self-employed and employed professionals are mediated by the work characteristics autonomy, variety, task identity, task significance and feedback (compare similarly [Schjoedt, 2009](#), for autonomy, variety and feedback, in a sample comparing US self-employed to employed top managers). The consistency of the empirical evidence here provides vindication for the job characteristics model and its explanatory power when it comes to explaining differentials in job satisfaction. In addition, theoretical corroboration for the importance of autonomy for job satisfaction can be found in self-determination theory (e.g., [Deci and Ryan, 2000](#)), which identifies the need for autonomy as a human universal and links it robustly to mental well-being as well as psychological functioning. Lastly, as will be taken up below, higher autonomy might also function to offset some of the negative effects of time pressures and

uncertainty that the self-employed face ([Häusser et al., 2010](#); [Obschonka and Silbereisen, 2015](#)).

Evidence here also supports the idea that people on average value these dimensions of work enough so that jobs with higher autonomy, variety and other desirable job characteristics increase job satisfaction irrespective of employment type; however, most types of self-employment entail higher levels of these characteristics hence resulting in comparatively higher job satisfaction ([Schjoedt, 2009](#)). Add to this that there might also be some self-selection, when individuals with a stronger need for autonomy (or preference for independence) choose to become self-employed, alongside other personality dimensions to be discussed below ([Warr, 2017](#); [Feldman and Bolino, 2000](#), p. 57). Then, if self-employment does offer higher fulfilment of this need, it will in turn lead to even higher job and life satisfaction for such individuals ([Feldman and Bolino, 2000](#), p. 60). In this vein, [Fuchs-Schündeln \(2009\)](#) provides some evidence that individuals with a stronger need for independence are more satisfied with their being self-employed than comparable individuals, but even individuals with hierarchical preferences report higher job satisfaction when self-employed (see also [Benz and Frey, 2004](#)). Differences in job characteristics and individual factors may also explain why the job satisfaction of necessity self-employed is lower than that of other types of self-employment: necessity self-employed might often have lower degrees of autonomy in their specific occupations, show lower intrinsic motivation, and also may lack personality traits associated with an entrepreneurial personality and hence report lower job satisfaction ([Block and Koellinger, 2009](#); [Sevä et al., 2016b](#)).

Other work characteristics of self-employment which are not necessarily a specific part of the job characteristics model include higher time pressures and longer working hours, as well as an increased uncertainty, complexity and responsibility that the self-employed often have. All of these can translate into stress and lower job well-being. But none of these factors have to negatively influence job satisfaction, though, and from the perspective of the job demands-control(-support) model (JCDS; [Karasek, 1979](#); [Luchman and González-Morales, 2013](#)), it would be the relation between the demands of the specific type of self-employment in relation to the experienced levels of control and support the individual has that decides whether higher complexity or time pressures will translate into work-related stress and negatively impacted

well-being (Häusser et al., 2010; Obschonka and Silbereisen, 2015). For instance, Hessels et al. (2017) show that having employees can increase workplace demands and stress for the self-employed. It is an open question, however, whether this would also translate into lower job satisfaction, with potential confounds coming from the fact that having employees often is a sign of business success. Similarly, longer working hours might well be a sign of successfully meeting the demands of being self-employed and hence associated with higher job satisfaction (as shown in Bradley and Roberts, 2004; Millán et al., 2013).

In addition to the above, social work characteristics such as social support and positive feedback from customers, employees and society at large can shape how strong one's identification with the job is and can also determine job satisfaction (Morgeson and Humphrey, 2006; Luchman and González-Morales, 2013). On the negative side, the literature is rather consistent in finding negative well-being effects when work-life conflicts arise and self-employment bleeds into a person's private life (Nguyen and Sawang, 2016). And for many solo-self-employed, the lack of workplace communication and attendant loneliness can contribute to increased stress and lower job satisfaction, whereas positive social support increases well-being (Luchman and González-Morales, 2013; Nguyen and Sawang, 2016; Fernet et al., 2016; Totterdell et al., 2006).

3.2. Specific factors of being self-employed

Differentials in job satisfaction of the self-employed compared to similar individuals who are employed might also be traced to specific factors of the self-employment experience not covered in standard models of job satisfaction (Stephan, 2018). While no systematic model of entrepreneurial well-being has been developed so far, a number of studies to be discussed in the following have researched the extent to which factors such as firm and financial characteristics, personal resources and vulnerabilities as well as self-employment-specific work characteristics contribute to the well-being of the self-employed.

Financial aspects related to the business situation have been shown to be related to job satisfaction, but the effect of this seems to be largely asymmetrical in the sense that income itself is moderately associated with job satisfaction (e.g., Benz and Frey, 2008a; Bianchi, 2012; Dawson, 2017; Millán et al., 2013), yet the negative well-being effects are more pronounced for lack of income or a bad business situation (one study finds that the self-employed report

lower well-being when their firm is doing well, while, at the same time being more financially satisfied and less satisfied with their leisure time; see [Carree and Verheul, 2012](#)).

This also includes the own industry's downturns ([Jiang et al., 2017](#)) and recessions in general ([Cueto and Pruneda, 2017](#)), which may decrease job-related well-being. But the evidence here comes from scattered sources and it is difficult to judge whether this effect is due to own lack of business success or prospective fear of losing one's business or even yet other mechanisms. On the other hand, the level of financial development in a country has been shown to be positively related to job satisfaction (but negatively to profits) and been explained with regard to better developed countries offering larger shares of opportunity-type self-employment ventures, in which individuals pursue self-employment for reasons of procedural utility, and not out of economic necessity ([Bianchi, 2012](#)). However, where studies just focus on samples of self-employed and thus have no comparison group of similar employed individuals (e.g., [Jiang et al., 2017](#)), it becomes difficult to assess whether such specific factors can also account for the job satisfaction differential of the self-employed vis-à-vis their employed counterparts.

Other relevant factors include personal resources such as education and business skills, but research here is not very consistent. Non-business specific general education shows only mixed contributions to job satisfaction for the self-employed ([Millán et al., 2013](#); [Roche, 2014](#), p. 659), where on the one hand better education might provide better resources to deal with the job demands posed by self-employment ([Annink et al., 2016](#)), yet at the same time raising aspirations and also raising the opportunity cost of being self-employed ([Dawson, 2017](#); [Kwon and Sohn, 2017](#); [Stephan, 2018](#), p. 302). Mismatched education has smaller negative effects on job satisfaction for the self-employed (as compared to wage workers, see [Bender and Roche, 2013](#)). Training specifically tailored to self-employment has been mentioned as beneficial to mitigate stressors in interview studies ([Vaag et al., 2014](#)), but evidence from randomized trials is not very strong ([Berge et al., 2015](#); [Karlan and Zinman, 2011](#); [Blonk et al., 2006](#)).

While [Berge et al. \(2015\)](#), in a field experiment in the area of micro-finance, put training in perspective vis-à-vis financial resources available and show a comparatively higher effect for training compared to financial resources, the effect exists only for males and the dependent variable beside business success is happiness with being an entrepreneur. A related study from

the Netherlands found that time management and cognitive behavioural therapy positively impacted the time it took a sample of self-employed to come back to work after being on sick-leave due to burnout/mental illness, but the improvement in mental well-being over time was similar across both treatment and control groups (Blonk et al., 2006). In sum, both lack of funds and access to funds without appropriate training may well create additional strains and demands a self-employed person is not equipped to deal with. In general, negative effects of education on well-being are likely to follow from mismatch between job demands and personal human capital and not necessarily tied to absolute levels of human capital (compare Bender and Roche, 2013). Previous experience of failure is also negatively associated with well-being in one study (Zhang et al., 2016). This is consistent with evidence that the self-employed may learn less from previous failure(s) than one would prima facie expect (Frankish et al., 2013).

3.3. Dispositional factors

The job demands-control-support model already points to the fact that person-situation models better explain a person's job satisfaction than reference to characteristics of the job itself alone. While some of the evidence regarding individual factors is somewhat tentative, it would be mistaken to expect that they play no role in determining job satisfaction of the self-employed: an individual's motivations for becoming self-employed (Fuchs-Schündeln, 2009; Sevä et al., 2016b; Warr, 2017), their personality traits (such as optimism, self-efficacy, etc., see Frese and Gielnik, 2014; Lange, 2012) as well as their "psychological capital" (encompassing other personality factors such as resilience or hope; see Baron et al., 2016) have been shown not only to govern self-selection of individuals into self-employment, but also contribute to their well-being in turn (Berglund et al., 2015).

Stable personality traits such as optimism (Lange, 2012; Dawson, 2017), the need for achievement and beliefs of self-efficacy (Bradley and Roberts, 2004; Frese and Gielnik, 2014; Laguna et al., 2017) have been shown influential in determining the choice to become self-employed and well-being afterwards. Similarly, Berglund et al. (2015) find that all Big Five personality traits except Openness are more strongly related to the job satisfaction of the self-employed than compared to their employed counterparts (but this does not extend to life satisfaction in their study). It is of note, however, that general personality traits such

as the Big Five are correlated with business creation and business success less strongly than more narrow and specific personality characteristics such as the ones mentioned above (Frese and Gielnik, 2014, p. 416). These personality traits work in tandem with job characteristics (Lange, 2012) and may at times also act multiplicatively (although the literature is much less developed and consistent here): for instance, optimism has been shown to moderate the effects of autonomy on job satisfaction in a diary study of portfolio self-employed (Totterdell et al., 2006). In this context, it is of note that too much of a certain personality disposition might also be problematic, as shown in a study by Dawson (2017), who finds that higher optimism creates unrealistic success expectations for the self-employed and subsequent lower pay satisfaction, a mechanism through which optimism consequently decreases job satisfaction (compare also Odermatt et al., 2017).

3.4. Types of self-employment

It is important to note that the literature has not paid much attention to the kinds of self-employment analyzed and only quite recently, research has moved into more consciously distinguishing types of self-employment and the attendant well-being those different types of self-employment bring (Binder, 2018; Williams et al., 2017; van der Zwan et al., 2019; van der Zwan and Hessels, 2019). Occupational profiles of freelancers differ from those of other solo-self-employed and those in turn differ from those self-employed who have employees (e.g., Baitenizov et al., 2019). And with different occupational profiles, job satisfaction can differ between segments of the self-employed: for instance, in the above-mentioned study by Williams et al. (2017), solo-self-employment in the UK is segmented into different categories with regard to level of pay (low, mid, high), level of independence (dependent, regulated, independent) and security (insecure, secure). Job satisfaction of low pay, low independence and low security occupations (e.g. drivers and cleaners) in the UK has been on average at 5.04 (on a seven-point satisfaction scale), much lower compared to the average across all groups (5.73) and also lower than the job satisfaction of employees in this segment of the workforce. On the other hand, mid-pay, dependent and insecure solo-self-employed (e.g., building labourers, childminders, carers) have been found to have the highest job satisfaction of the sample at hand (5.95), which is a full point higher and surprisingly also somewhat higher than the job satisfaction of high-pay, independent and secure self-employed (such

as legal and business professionals, which at 5.71 is close to average). While most of the self-employed in this study report higher job satisfaction than their employed counterparts, the example of the lower end of the job segment distribution shows that there are factors that can reverse this relationship and a better understanding of the heterogeneity of types of self-employment and the associated well-being is still needed.

4. Self-employment and life satisfaction

The heterogeneity just mentioned extends also to the overall well-being of the self-employed, as captured via measures of life satisfaction. When different self-employment types have different occupational profiles, exhibit different work characteristics and attract different kinds of people, this can be expected to translate also into different levels of overall life satisfaction.

Consistently explaining the overall well-being differentials of the self-employed has proven difficult so far, likely due to a second type of heterogeneity that can play a role here: from the perspective of a “bottom-up approach” of subjective well-being (Van Praag et al., 2003; Schimmack, 2007; Erdogan et al., 2012), overall life satisfaction can be seen as the summary measure when an individual evaluates how well they do across *all* domains of their lives, not just the job domain. This means that higher job satisfaction could feed positively into an overall assessment of a self-employed person’s satisfaction with life overall. But even though Loewe et al. (2015) show that the job domain is of greater importance for the self-employed than other individuals, high job satisfaction does not have to translate into higher life satisfaction, if for instance a focus on the job domain leads to a neglect of other life domains and a focus on work life leads to deficits in social life or leisure time (on this see also Fisher et al., 2013). Higher job satisfaction is then counterbalanced by work-life balance conflicts, dissatisfaction with social life and leisure time and the overall net effect on life satisfaction could well be construed as non-existent or even negative (a form of “crowding out” taking place). While not yet systematically taken into account in the literature to be discussed below, this explanation in terms of a “life domain view” (Binder and Coad, 2016) could offer a theoretical framework to make sense of why some self-employed report higher life satisfaction. Understanding how self-employment impacts on well-being through different

life domains apart from the financial domain is also relevant for policy-makers when it comes to evaluating the desirability of different types of self-employment.

In consequence of this twofold heterogeneity, the evidence for a positive relationship between self-employment and life satisfaction is much weaker and more nuanced than the picture described for job satisfaction. Research on the life satisfaction of the self-employed provides mixed results, where for instance [Schjoedt and Shaver \(2007\)](#) find no evidence for an effect for those who recently became self-employed in the US, and [van der Zwan et al. \(2019\)](#) find no differences in life satisfaction between UK self-employed, freelancers and employees. But [Blanchflower and Oswald \(1998\)](#) and [Prottas and Thompson \(2006\)](#) find positive associations in their US cross-sections, as do [Stephan and Roesler \(2010\)](#) in a German sample. [Alesina et al. \(2004\)](#) do so too for data from 1981-1996 (US) and for Europe (1975-1992), with evidence again coming from cross-sections, and somewhat tempered by subgroup findings that locate these effects only for richer individuals and those of certain political persuasions (right-wing political preferences in the US, left-wing in the European data). A similar dependence on subgroups or methods and models used is found in [Blanchflower \(2004\)](#) and [Andersson \(2008\)](#).

Some studies indicate even negative effects in terms of life satisfaction after moving into self-employment in specific countries ([Graham and Felton, 2006](#); [Salinas-Jiménez et al., 2013](#); [Loewe et al., 2015](#); [Reuschke, 2019](#); [Bencsik and Chuluun, 2019](#)) or for some specific types self-employed such as those running a franchise branch ([Morrison, 1997](#); [van der Zwan et al., 2018](#)). Overall, the evidence here is rather complex, unsystematic and ill-explained ([El Harbi and Grolleau, 2012](#); [Cortes Aguilar et al., 2013](#); [Andersson, 2008](#); [de Neve and Ward, 2017](#), p. 148).

This has prompted researchers to better unpack the heterogeneity of self-employment with regard to life satisfaction and try to explain differences with regard to work characteristics, motivation for becoming self-employed and other factors. Some of these factors are the same as for job satisfaction, in which case an effect could either be direct, as argued for autonomy in [Shir et al. \(2019\)](#) and [Nikolaev et al. \(2019\)](#), or indirect and mediated via the effect on job satisfaction. Causal channels here are still not that well understood.

4.1. Opportunity vs. necessity self-employment

One of the comparatively well-researched areas is with regard to motivational factors such as becoming self-employed out of necessity or voluntarily to pursue entrepreneurial opportunities. Results consistently show that the group of self-employed who voluntarily leave employment to pursue entrepreneurial opportunities have higher life-satisfaction as a consequence (Stephan, 2018, p. 295): this was found for both a British and German sample (Binder and Coad, 2013, 2016) and has been confirmed in other studies for Germany (van der Zwan et al., 2018) and across many other countries (Zbierowski, 2014; Larsson and Thulin, 2019; Beutell et al., 2014). No such increase in well-being, or even a decrease in well-being can be found for those being pushed from unemployment into (necessity) self-employment (Bhuiyan and Ivlevs, 2019; Sevä et al., 2016a). As rates of necessity entrepreneurship tend to be much higher in countries that are less developed and less wealthy, such life satisfaction differences can be at the heart of an observed difference in positive or negative impact of self-employment in a recent cross-country comparison (de Neve and Ward, 2017, p. 152).

4.2. Business success

Business success (or lack thereof) has also been shown relevant for the life satisfaction of the self-employed, but unfortunately also in a rather unsystematic fashion: on the one hand, Przepiorka (2017) positively relates business success to life satisfaction, and Annink et al. (2016) plausibly relate financial hardship negatively to well-being in their European Social Survey (ESS) cross-sectional data set. In addition, in both a sample from Bangladesh (Bhuiyan and Ivlevs, 2019) and from Germany (Binder, 2017), a loss of life satisfaction for necessity self-employed has been related to increased worries about their business (and perceived probability of job loss decreases well-being more strongly for the self-employed Hetschko, 2016).

But on the other hand, a negative association between business success and well-being is found by Carree and Verheul (2012), and while their analysis reveals higher satisfaction with income of the self-employed in their sample, the opposite holds for leisure satisfaction. It has to be noted that with business success or income as potential control variable in a number of studies, one has to be careful how to interpret the coefficient for self-employment in

such regressions (if income is affected by the choice to become self-employed, post-treatment bias would not allow to interpret the self-employment coefficient as causal effect of self-employment on life satisfaction but an association between self-employment and well-being net of its income effects).

These mixed findings also extend to moderators in the business success and well-being relationship: for their European Social Survey (ESS) data set, [Annink et al. \(2016\)](#) find that education, social trust and a good unemployment benefit scheme act as moderators and decrease the negative coefficient of financial hardship on life satisfaction for the self-employed. Also shown with European Social Survey data, macroeconomic conditions such as country-level shared prosperity or the level of business freedom which is present within a specific country positively influence the self-employment life satisfaction relationship ([Wolfe and Patel, 2018](#)). But in their US sample, [Bencsik and Chuluun \(2019\)](#) find that education acts as negative moderator. Other moderators have been examined in individual studies, for instance age (late-changers into self-employment experience decreased income but increased quality of life in some samples, but not all; [Kautonen et al., 2017](#); [Nikolova and Graham, 2014](#)), gender ([Sevä et al., 2016b](#); [Bender and Roche, 2016](#)) or immigration status ([Sevä et al., 2016b](#)).

Potentially related to business success is the finding that those self-employed who employ other people seem more satisfied with their lives than other types in most studies, which has been shown in country-wide comparisons ([Sevä et al., 2016b](#); [Nikolaev et al., 2019](#)) and also for within-country panel analyses ([Falco et al., 2015](#); [Binder, 2017](#)). [Saarni et al. \(2008\)](#) also reports higher subjectively assessed quality of life, a broader measure than life satisfaction, for those self-employed in their Finnish sample who employ other people (but [van der Zwan and Hessels, 2019](#), do not find higher life satisfaction for employer self-employed in their Australian panel, and even find lower mental health for this group of self-employed). It remains unclear as of yet, whether this is due to having employees just being a (poor) proxy variable for business success or rather the well-being boost comes from different work characteristics associated with managing a firm that consists of more than oneself.

4.3. Types of self-employment

Differences in life satisfaction have also been traced to different types of self-employment, such as blue-collar, high-skilled self-employment (Hessels et al., 2018). For their segmented analysis of the solo-self-employed in the UK, Williams et al. (2017) also find that life satisfaction varies depending on the three segments (income, level of independence, security) in the UK and the highest levels of life satisfaction are reported by the mid and high pay and high job security segments of the solo-self-employed.

Similar differences may also extend to life satisfaction when comparing freelancers to other self-employed (Binder, 2018; van der Zwan et al., 2019): while freelancers, who tend to work fewer hours than other self-employed and report much higher satisfaction with their leisure time, are somewhat less satisfied with their lives in univariate analysis (Binder, 2018), no systematic difference have been reported in a more recent analysis. Using six waves of the “UKHLS Understanding Society” panel data set (2009–2015), van der Zwan et al. (2019) find freelancers’ levels of life satisfaction indistinguishable from other own-account workers, self-employed workers with employees, and wage workers. Freelancers remain significantly more satisfied with their leisure time, though.

4.4. Other factors

Apart from characteristics of the job, individual personality traits and other dispositional factors have also come to the fore in explaining life satisfaction differentials. Based on wave 6 of the European Social Survey, Nikolaev et al. (2019) show that psychological functioning mediates the relationship between entrepreneurship and subjective well-being at least in parts. In a similar analysis, Przepiorka (2017) links individuals’ hope to life satisfaction and Sherman et al. (2016) find intrinsic motivation and flow positively related to the life satisfaction of their sample, while extrinsic success criteria are negatively related to life satisfaction (Kibler et al., 2019, on the other hand, show that pro-social motivation can increase stress and hence decrease well-being, a relationship that is mitigated -once more- by autonomy).

Lastly, research on cultural and institutional differences has surfaced recently to make sense of the world-wide differences in the relationship between self-employment and subjective

well-being (de Neve and Ward, 2017): while evidence here is rather new and limited to cross-sectional correlations, the general freedom to do business and the entrepreneurial climate (as measured by institutions favoring entrepreneurship) have been shown to explain whether self-employment contributes positively or negatively to subjective well-being (Fritsch et al., 2019b,a; Brieger et al., 2019). Institutional differences (on a local level) could also explain the higher well-being of the self-employed in semi-urban regions of the UK (Abreu et al., 2019).

5. Summary and future directions for research

Does self-employment increase well-being? The answer is: it depends. Self-employment is associated with positive well-being for the self-employed when focusing narrowly on “well-being at work” (and measuring well-being as job satisfaction, not income or stress). Plausible explanations for this lie both in work characteristics of many types of self-employment (autonomy, flexibility, more holistic work tasks) and in individual preferences and personality traits (optimism, self-efficacy, preference for independence and intrinsic motivation). But self-employment does not necessarily increase subjective well-being when thought of in a broader way than “happiness at work”. The life satisfaction consequences of self-employment are less well understood and more heterogeneous. While some types of self-employment (especially opportunity-focused and voluntary self-employment) seem to bring a life satisfaction premium, other types do not, and even for the self-employed that are more satisfied overall, satisfaction in some life domains is lower (a similarly inconsistent picture also emerges with regard to the physical and mental health effects of self-employment more generally; compare, for instance Nikolova, 2019; Stephan et al., 2020).

Overall, there is still much to learn about the mechanisms that underlie both the relationship between self-employment and job satisfaction, as well as between self-employment and life satisfaction in general: while the relationship between self-employment and job satisfaction is comparatively better understood, even here, good causal designs, questions of lags- and lead-effects (over time effects), as well as paying more attention to the heterogeneity of types of self-employment are recommended. With life satisfaction, in addition, self-employment’s heterogeneous impact on other life domains (such as finances, health, work-life conflicts)

complicates the picture and necessitates even more a careful accounting for specific types of self-employment and the multiple channels through which these may influence subjective well-being.

Aside from a lack of focus on heterogeneity, endogeneity is an issue for large parts of the literature. Many studies draw on small specialized samples of self-employed or entrepreneurs and even where large nationally representative samples are used, cross-sectional analyses are predominant. This means that simultaneity is an issue in many studies despite explicit and implicit causal models that assume job characteristics shape well-being. But happier people have been shown to also be more successful in many different areas of life (Lyubomirsky et al., 2005) and this extends also to the self-employed, where for instance trait positive affect positively moderates the effects of stress on the health of the self-employed (Cardon and Patel, 2015). Similarly, reverse causality might be relevant in explaining why happier people in service industries do financially better (compare on this Graham et al., 2004). Indeed, it has been shown that those self-employed that are happier perceive their business to be more successful, even though this did not translate into objective business success in a study of entrepreneurs in the Netherlands (Dijkhuizen et al., 2018). A similar case pertains to job satisfaction, where Kawaguchi (2008) observes that job quitting tends to follow low job satisfaction, but it seems to be specifically dissatisfaction with one's income, not with the job overall that prompts transition into self-employment (Guerra and Patuelli, 2016).

A plausible explanation for reverse causality also pertains to necessity self-employment in poor countries: a negative association between self-employment and life satisfaction could mean that there is a “push” of poor and dissatisfied individuals into necessity driven self-employment. In line with this, Noorderhaven et al. (2004) find a positive association of the levels of “dissatisfaction with life” with self-employment observed in a society with high self-employment rates (but see the negative evidence for this in Schjoedt and Shaver, 2007). As poor societies have high rates of necessity self-employment, such negative correlation would be plausible (Bianchi, 2012; El Harbi and Grolleau, 2012; Naudé et al., 2014).

Related to this is also the issue of survivorship bias: when many firms go out of business early on (e.g., Coad et al., 2013; Frankish et al., 2013), mostly successful firms will remain, potentially confounding business success with other factors. If most of the research draws on

those self-employed who actually managed to stay in business for some time, positive effects on well-being might be too optimistic and a more conscious taking into account the different ages of firms in the analysis is called for.

Self-selection issues can also only imperfectly be controlled for, especially since most studies are cross-sectional and control only for few personality traits (if any). Even for longitudinal studies, where at least time-invariant person-specific heterogeneity can be accounted for via fixed-effects models or difference in difference designs, there is no reason to suspect that personality traits cannot change over time or as a result of the lifestyle of being self-employed (Boyce et al., 2013). In addition, fixed-effects analyses, by design, focus on the switch into self-employment and hence focus on the self-employed at the beginning of their business venture and hence only showing well-being effects at a specific point in time as opposed to uncovering well-being trajectories over the lifetime of a business venture. And where the few randomized trials mentioned above might have solved some of these issues, their lack of explicitly modelling contextual factors might well be a threat to external validity: for example, as most experimental evidence is in the context of micro-finance, this might not translate to opportunity self-employed in Western, educated, industrialized, rich and democratic nations.

Some of these issues of endogeneity are to be expected in a research field that has overall well-being as its focus and where true randomized experiments are difficult. Nevertheless, more studies with careful research designs seem desirable, not only regarding more explicit tests of mechanisms that explain the self-employment well-being relationship, but also with regard to better causal identification, for instance using natural experiments (e.g., Benz and Frey, 2004) or other exogenous variation (such as firm closures that lead to people taking up self-employment) so that a causal effect might more credibly be identified (Kassenboehmer and Haisken-De New, 2009; Hetschko, 2016; Binder, 2017; Coad and Binder, 2014).

Finally, from a policy perspective, one might argue that there may be a trade-off between individual well-being and what is deemed desirable on a societal level: policy-makers favor self-employment because of its many benefits, such as its innovative potential, its impact on economic growth and on job creation (de Wit and de Kok, 2014). The job creation aspect is particularly important also with regard to the fact that self-employment can be a way

out of unemployment and reduce strain on government welfare and social security payments in such cases. And while large rates of failing businesses are certainly unpleasant for those that fail with their business, from this point of view it would be considered a necessary price for a society's level of innovativeness. In this argument, as with higher rates of necessity self-employment in poorer countries (Noorderhaven et al., 2004), it might well be necessary to accept temporary dissatisfaction in order to achieve long-term better development (and improved well-being). Specifically from such a policy perspective, and without espousing this last argument, it then would be more desirable to better understand which institutional and cultural factors could mitigate such dissatisfaction.

To end on a cautionary note: the current chapter contributes to clarifying that, while most self-employed might be more satisfied with what they are doing for work, self-employment is not a panacea for a happy life overall.

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References

- Abreu, M., Oner, O., Brouwer, A., and [van Leeuwen], E. (2019). Well-being effects of self-employment: A spatial inquiry. *Journal of Business Venturing*, 34(4):589 – 607.
- Acs, Z., Åstebro, T., Audretsch, D., and Robinson, D. T. (2016). Public policy to promote entrepreneurship: a call to arms. *Small Business Economics*, 47(1):35–51.
- Ács, Z. J., Szerb, L., Lafuente, E., and Lloyd, A. (2018). *Global entrepreneurship and development index 2018*. Springer Briefs in Economics.
- Ajayi-Obe, O. and Parker, S. C. (2005). The changing nature of work among the self-employed in the 1990s: Evidence from Britain. *Journal of Labor Research*, 26(3):501–517.
- Alesina, A., Di Tella, R., and MacCulloch, R. (2004). Inequality and happiness: are Europeans and Americans different? *Journal of Public Economics*, 88(9-10):2009–2042.
- Álvarez, G. and Sinde-Cantorna, A. I. (2014). Self-employment and job satisfaction: an empirical analysis. *International Journal of Manpower*, 35(5):688–702.
- Andersson, P. (2008). Happiness and health: Well-being among the self-employed. *The Journal of Socio-Economics*, 37(1):213–236.
- Annink, A., Gorgievski, M., and Den Dulk, L. (2016). Financial hardship and well-being: a cross-national comparison among the European self-employed. *European Journal of Work and Organizational Psychology*, 25(5):645–657.

- Baitenizov, D. T., Dubina, I. N., Campbell, D. F. J., Carayannis, E. G., and Azatbek, T. A. (2019). Freelance as a creative mode of self-employment in a new economy (a literature review). *Journal of the Knowledge Economy*, 10(1):1–17.
- Baron, R. A., Franklin, R. J., and Hmieleski, K. M. (2016). Why entrepreneurs often experience low, not high, levels of stress: The joint effects of selection and psychological capital. *Journal of management*, 42(3):742–768.
- Bencsik, P. and Chuluun, T. (2019). Comparative well-being of the self-employed and paid employees in the USA. *Small Business Economics*.
- Bender, K. A. and Roche, K. (2013). Educational mismatch and self-employment. *Economics of Education Review*, 34:85–95.
- Bender, K. A. and Roche, K. (2016). Self-employment and the paradox of the contented female worker. *Small Business Economics*, 47(2):421–435.
- Benz, M. and Frey, B. S. (2004). Being independent raises happiness at work. *Swedish Economic Policy Review*, 11(2):95–134.
- Benz, M. and Frey, B. S. (2008a). Being independent is a great thing: Subjective evaluations of self-employment and hierarchy. *Economica*, 75(298):362–383.
- Benz, M. and Frey, B. S. (2008b). The value of doing what you like: Evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization*, 68(3-4):445–455.
- Berge, L. I. O., Bjorvatn, K., and Tungodden, B. (2015). Human and financial capital for microenterprise development: Evidence from a field and lab experiment. *Management Science*, 61(4):707–722.
- Berglund, V., Johansson Sevä, I., and Strandh, M. (2015). Subjective well-being and job satisfaction among self-employed and regular employees: does personality matter differently? *Journal of Small Business & Entrepreneurship*, 28(1):55–73.
- Beutell, N. J., Schmeer, J. A., and Alstete, J. W. (2014). Comparing self-employment aspirants with the presently self-employed. *Journal of Small Business & Entrepreneurship*, 27(5):407–425.
- Bhuiyan, M. F. and Ivlevs, A. (2019). Micro-entrepreneurship and subjective well-being: Evidence from rural bangladesh. *Journal of Business Venturing*, 34(4):625 – 645.
- Bianchi, M. (2012). Financial development, entrepreneurship, and job satisfaction. *Review of Economics and Statistics*, 94(1):273–286.
- Binder, M. (2017). Entrepreneurial success and subjective well-being: Worries about the business explain one’s well-being loss from self-employment. SOEPpapers on Multidisciplinary Panel Data Research 947, DIW Berlin, The German Socio-Economic Panel (SOEP).
- Binder, M. (2018). The way to wellbeing. CRSE Policy Report, accessible at: <http://www.crse.co.uk/research/way-wellbeing-0> (last accessed: 26.07.2018).

- Binder, M. and Blankenberg, A.-K. (2020). Identity and well-being in the skilled crafts and trades. Mimeo.
- Binder, M. and Coad, A. (2013). Life satisfaction and self-employment: a matching approach. *Small Business Economics*, 40(4):1009–1033.
- Binder, M. and Coad, A. (2016). How satisfied are the self-employed? a life domain view. *Journal of Happiness Studies*, 17(4):1409–1433.
- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour economics*, 7(5):471–505.
- Blanchflower, D. G. (2004). Self-employment: More may not be better.
- Blanchflower, D. G. and Meyer, B. D. (1994). A longitudinal analysis of the young self-employed in australia and the united states. *Small Business Economics*, 6(1):1–19.
- Blanchflower, D. G. and Oswald, A. J. (1998). What makes an entrepreneur? *Journal of labor Economics*, 16(1):26–60.
- Blanchflower, D. G. and Oswald, A. J. (2008). Hypertension and happiness across nations. *Journal of Health Economics*, 27(2):218 – 233.
- Block, J. and Koellinger, P. (2009). I can’t get no satisfaction—necessity entrepreneurship and procedural utility. *Kyklos*, 62(2):191–209.
- Blonk, R. W., Brenninkmeijer, V., Lagerveld, S. E., and Houtman, I. L. (2006). Return to work: a comparison of two cognitive behavioural interventions in cases of work-related psychological complaints among the self-employed. *Work & Stress*, 20(2):129–144.
- Boyce, C. J., Wood, A. M., and Powdthavee, N. (2013). Is personality fixed? personality changes as much as “variable” economic factors and more strongly predicts changes to life satisfaction. *Social Indicators Research*, 111(1):287–305.
- Bradley, D. E. and Roberts, J. A. (2004). Self-employment and job satisfaction: investigating the role of self-efficacy, depression, and seniority. *Journal of Small Business Management*, 42(1):37–58.
- Brieger, S. A., De Clercq, D., Hessels, J., and Pfeifer, C. (2019). Greater fit and a greater gap: How environmental support for entrepreneurship increases the life satisfaction gap between entrepreneurs and employees. *International Journal of Entrepreneurial Behavior & Research*, 26(4):561–594.
- Cardon, M. S. and Patel, P. C. (2015). Is stress worth it? stress-related health and wealth trade-offs for entrepreneurs. *Applied Psychology*, 64(2):379–420.
- Carree, M. A. and Verheul, I. (2012). What makes entrepreneurs happy? Determinants of satisfaction among founders. *Journal of Happiness Studies*, 13(2):371–387.

- Carter, S. (2011). The rewards of entrepreneurship: Exploring the incomes, wealth, and economic well-being of entrepreneurial households. *Entrepreneurship Theory and Practice*, 35(1):39–55.
- Clark, A., Oswald, A., and Warr, P. (1996). Is job satisfaction u-shaped in age? *Journal of Occupational and Organizational Psychology*, 69(1):57–81.
- Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? *Labour economics*, 4(4):341–372.
- Coad, A. and Binder, M. (2014). Causal linkages between work and life satisfaction and their determinants in a structural var approach. *Economics Letters*, 124(2):263–268.
- Coad, A., Frankish, J., Roberts, R. G., and Storey, D. J. (2013). Growth paths and survival chances: An application of gambler’s ruin theory. *Journal of Business Venturing*, 28(5):615–632.
- Cooper, A. C. and Artz, K. W. (1995). Determinants of satisfaction for entrepreneurs. *Journal of Business Venturing*, 10(6):439–457.
- Cortes Aguilar, A., Garica Munoz, T. M., and I., M.-E. A. (2013). Heterogeneous self-employment and satisfaction in latin america. *Journal of Economic Psychology*, 39:44–61.
- Cueto, B. and Pruneda, G. (2017). Job satisfaction of wage and self-employed workers. do job preferences make a difference? *Applied Research in Quality of Life*, 12(1):103–123.
- D’Addio, A. C., Eriksson, T., and Frijters, P. (2007). An analysis of the determinants of job satisfaction when individuals’ baseline satisfaction levels may differ. *Applied Economics*, 39(19):2413–2423.
- Dawson, C. (2017). Financial optimism and entrepreneurial satisfaction. *Strategic Entrepreneurship Journal*, 11(2):171–194.
- de Neve, J.-E. and Ward, G. (2017). Happiness at work. In Helliwell, J. F., Layard, R., and Sachs, J., editors, *World Happiness Report 2017*, chapter 6, pages 144–177. Sustainable Development Solutions Network, New York.
- de Wit, G. and de Kok, J. (2014). Do small businesses create more jobs? New evidence for europe. *Small Business Economics*, 42(2):283–295.
- Deci, E. L. and Ryan, R. M. (2000). The” what” and” why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4):227–268.
- Diener, E. and Suh, E. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research*, 40:189–216.
- Dijkhuizen, J., Gorgievski, M., van Veldhoven, M., and Schalk, R. (2018). Well-being, personal success and business performance among entrepreneurs: A two-wave study. *Journal of Happiness Studies*, 19(8):2187–2204.

- Dockray, S. and Steptoe, A. (2010). Positive affect and psychobiological processes. *Neuroscience & Biobehavioral Reviews*, 35(1):69–75.
- Dolan, P., Peasgood, T., and White, M. (2008). Do we really know what makes us happy? a review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29(1):94–122.
- El Harbi, S. and Grolleau, G. (2012). Does self-employment contribute to national happiness? *The Journal of Socio-Economics*, 41(5):670–676.
- Erdogan, B., Bauer, T. N., Truxillo, D. M., and Mansfield, L. R. (2012). Whistle while you work. *Journal of Management*, 38(4):1038–1083.
- Estrin, S., Mickiewicz, T., and Stephan, U. (2013). Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. *Entrepreneurship Theory and Practice*, 37(3):479–504.
- European Commission (2012). Entrepreneurship in the EU and beyond. Flash Eurobarometer 354 Report; https://ec.europa.eu/commfrontoffice/publicopinion/flash/fl_354_en.pdf (accessed: 25.11.2020).
- European Commission (2013). Entrepreneurship 2020 Action Plan. Reigniting the entrepreneurial spirit in Europe. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF> (accessed: 08.04.2018).
- Eurostat (2020). Eurostat news: Self-employed persons. Retrieved from <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20190430-1> (accessed, 26.06.2020).
- Falco, P., Maloney, W. F., Rijkers, B., and Sarrias, M. (2015). Heterogeneity in subjective wellbeing: An application to occupational allocation in africa. *Journal of Economic Behavior & Organization*, 111:137 – 153.
- Feldman, D. C. and Bolino, M. C. (2000). Career patterns of the self-employed: Career motivations and career outcomes. *Journal of Small Business Management*, 38(3):53–68.
- Fernet, C., Torrès, O., Austin, S., and St-Pierre, J. (2016). The psychological costs of owning and managing an sme: Linking job stressors, occupational loneliness, entrepreneurial orientation, and burnout. *Burnout Research*, 3(2):45–53.
- Fisher, C. D. (2010). Happiness at work. *International Journal of Management Reviews*, 12(4):384–412.
- Fisher, R., Maritz, A., and Lobo, A. (2013). Obsession in entrepreneurs—towards a conceptualisation. *Entrepreneurship Research Journal*, 3(2):207–237.
- Frankish, J. S., Roberts, R. G., Coad, A., Spears, T. C., and Storey, D. J. (2013). Do entrepreneurs really learn? or do they just tell us that they do? *Industrial and Corporate Change*, 22(1):73–106.

- Freeman, R. B. (1978). Job satisfaction as an economic variable. *American Economic Review*, 68(2):135–141.
- Frese, M. and Gielnik, M. M. (2014). The psychology of entrepreneurship. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1):413–438.
- Frey, B. S. and Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic literature*, 40(2):402–435.
- Fritsch, M., Sorgner, A., and Wyrwich, M. (2019a). Self-employment and well-being across institutional contexts. *Journal of Business Venturing*, 34(6):105946.
- Fritsch, M., Sorgner, A., and Wyrwich, M. (2019b). Types of institutions and well-being of self-employed and paid employees in europe. *Small Business Economics*, pages 1–25.
- Fuchs-Schündeln, N. (2009). On preferences for being self-employed. *Journal of Economic Behavior & Organization*, 71(2):162–171.
- Georgellis, Y. and Yusuf, A. (2016). Is becoming self-employed a panacea for job satisfaction? longitudinal evidence from work to self-employment transitions. *Journal of Small Business Management*, 54:53–76.
- Graham, C. (2009). *Happiness around the world*. Oxford University Press, Oxford/New York.
- Graham, C., Eggers, A., and Sukhtankar, S. (2004). Does happiness pay? An exploration based on panel data from Russia. *Journal of Economic Behavior & Organization*, 55:319–342.
- Graham, C. and Felton, A. (2006). Inequality and happiness: Insights from Latin America. *Journal of Economic Inequality*, 4:107–122.
- Guerra, G. and Patuelli, R. (2016). The role of job satisfaction in transitions into self-employment. *Entrepreneurship Theory and Practice*, 40(3):543–571.
- Hackman, J. R. and Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2):159.
- Hackman, J. R. and Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational behavior and human performance*, 16(2):250–279.
- Hamilton, B. H. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political Economy*, 108(3):604–631.
- Hanglberger, D. and Merz, J. (2015). Does self-employment really raise job satisfaction? Adaptation and anticipation effects on self-employment and general job changes. *Journal for Labour Market Research*, 48(4):287–303.

- Häusser, J. A., Mojzisch, A., Niesel, M., and Schulz-Hardt, S. (2010). Ten years on: A review of recent research on the job demand–control (-support) model and psychological well-being. *Work & Stress*, 24(1):1–35.
- Headey, B., Holmstrom, E., and Wearing, A. (1984). The impact of life events on changes in domain satisfactions on well-being. *Social Indicators Research*, 15:203–227.
- Helliwell, J., Layard, R., and Sachs, J. (2012). World happiness report.
- Helliwell, J. F., Layard, R., and Sachs, J., editors (2013). *World Happiness Report*. UN Sustainable Development Solutions Network, New York.
- Henrekson, M. and Johansson, D. (2010). Gazelles as job creators: a survey and interpretation of the evidence. *Small Business Economics*, 35(2):227–244.
- Hessels, J., Arampatzi, E., van der Zwan, P., and Burger, M. (2018). Life satisfaction and self-employment in different types of occupations. *Applied Economics Letters*, 25(11):734–740.
- Hessels, J., Rietveld, C. A., and van der Zwan, P. (2017). Self-employment and work-related stress: The mediating role of job control and job demand. *Journal of Business Venturing*, 32(2):178–196.
- Hetschko, C. (2016). On the misery of losing self-employment. *Small Business Economics*, 47(2):461–478.
- Humphrey, S. E., Nahrgang, J. D., and Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: a meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92(5):1332–1356.
- Hundley, G. (2001). Why and when are the self-employed more satisfied with their work? *Industrial Relations: A Journal of Economy and Society*, 40(2):293–316.
- Hytti, U., Kautonen, T., and Akola, E. (2013). Determinants of job satisfaction for salaried and self-employed professionals in finland. *The International Journal of Human Resource Management*, 24(10):2034–2053.
- Hyytinen, A. and Ruuskanen, O.-P. (2007). Time use of the self-employed. *Kyklos*, 60(1):105–122.
- Idson, T. L. (1990). Establishment size, job satisfaction and the structure of work. *Applied Economics*, 22(8):1007–1018.
- Jiang, C., Lu, L., and Lu, J. J. (2017). Socioeconomic factors affecting the job satisfaction levels of self-employed container truck drivers: a case study from shanghai port. *Maritime Policy & Management*, 44(5):641–656.
- Judge, T. A., Heller, D., and Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3):530.

- Judge, T. A. and Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology*, 63:341–367.
- Judge, T. A. and Klinger, R. (2007). Job satisfaction: Subjective well-being at work. In Eid, M. and Larsen, R. J., editors, *The Science of Subjective Well-Being*, chapter 19, pages 393–413. Guilford Press, New York/London.
- Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., and Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*, 77(2):157–167.
- Justo, R., Congregado, E., and Román, C. (2019). Becoming self-employed from inactivity: an in-depth analysis of satisfaction. *Small Business Economics*, pages 1–43.
- Kahneman, D. and Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences*, 107(38):16489–16493.
- Kahneman, D., Wakker, P. P., and Sarin, R. K. (1997). Back to Bentham? Explorations of experienced utility. *Quarterly Journal of Economics*, 112(2):375–405.
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2):285–308.
- Karlan, D. and Zinman, J. (2011). Microcredit in theory and practice: Using randomized credit scoring for impact evaluation. *Science*, 332(6035):1278–1284.
- Kassenboehmer, S. C. and Haisken-De New, J. (2009). You’re fired! The causal negative effect of entry unemployment on life satisfaction. *The Economic Journal*, 119:448–462.
- Kautonen, T., Kibler, E., and Minniti, M. (2017). Late-career entrepreneurship, income and quality of life. *Journal of Business Venturing*, 32:318–333.
- Kawaguchi, D. (2008). Self-employment rents: Evidence from job satisfaction scores. *Hitotsubashi Journal of Economics*, pages 35–45.
- Kibler, E., Wincent, J., Kautonen, T., Cacciotti, G., and Obschonka, M. (2019). Can prosocial motivation harm entrepreneurs’ subjective well-being? *Journal of Business Venturing*, 34(4):608–624.
- Koivumaa-Honkanen, H., Honkanen, R., Viinamaeki, H., Heikkilae, K., Kaprio, J., and Kosenvuo, M. (2001). Life satisfaction and suicide - a 20-year follow-up study. *American Journal of Psychiatry*, 158:433–439.
- Krueger, A. B. and Schkade, D. A. (2008). The reliability of subjective well-being measures. *Journal of Public Economics*, 92(8-9):1833–1845.
- Kwon, I. and Sohn, K. (2017). Job dissatisfaction of the self-employed in indonesia. *Small Business Economics*, 49(1):233–249.

- Laguna, M., Razmus, W., and Żaliński, A. (2017). Dynamic relationships between personal resources and work engagement in entrepreneurs. *Journal of Occupational and Organizational Psychology*, 90(2):248–269.
- Lange, T. (2012). Job satisfaction and self-employment: autonomy or personality? *Small Business Economics*, 38(2):165–177.
- Larsson, J. P. and Thulin, P. (2019). Independent by necessity? The life satisfaction of necessity and opportunity entrepreneurs in 70 countries. *Small Business Economics*, 53:921–934.
- Layard, R., Clark, A. E., and Senik, C. (2012). The causes of happiness and misery. In Helliwell, J., Layard, R., and Sachs, J., editors, *World Happiness Report*, chapter 3, pages 58–90. The Earth Institute.
- Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance*, 4(4):309–336.
- Loewe, N., Araya-Castillo, L., Thieme, C., and Batista-Foguet, J. M. (2015). Self-employment as a moderator between work and life satisfaction. *Academia Revista Latinoamericana de Administración*, 28(2):213–226.
- Lucas, R. E. (2018). Reevaluating the strengths and weaknesses of self-report measures of subjective well-being. In Diener, E., Oishi, S., and Tay, L., editors, *Handbook of well-being*. DEF Publishers, Salt Lake City, UT.
- Luchman, J. N. and González-Morales, M. G. (2013). Demands, control, and support: A meta-analytic review of work characteristics interrelationships. *Journal of Occupational Health Psychology*, 18(1):37.
- Lyubomirsky, S., King, L., and Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6):803.
- Millán, J. M., Hessels, J., Thurik, R., and Aguado, R. (2013). Determinants of job satisfaction: a european comparison of self-employed and paid employees. *Small Business Economics*, 40(3):651–670.
- Morgeson, F. P. and Humphrey, S. E. (2006). The work design questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6):1321.
- Morrison, K. A. (1997). Personality correlates of the five-factor model for a sample of business owners/managers: Associations with scores on self-monitoring, type a behavior, locus of control, and subjective well-being. *Psychological Reports*, 80(1):255–272.
- Moskowitz, T. J. and Vissing-Jørgensen, A. (2002). The returns to entrepreneurial investment: A private equity premium puzzle? *American Economic Review*, 92(4):745–778.
- Naudé, W., Amorós, J. E., and Cristi, O. (2014). “Surfeiting, the appetite may sicken”: Entrepreneurship and happiness. *Small Business Economics*, 42(3):523–540.

- Nguyen, H. and Sawang, S. (2016). Juggling or struggling? Work and family interface and its buffers among small business owners. *Entrepreneurship Research Journal*, 6(2):207–246.
- Nikolaev, B., Boudreaux, C. J., and Wood, M. (2019). Entrepreneurship and subjective well-being: The mediating role of psychological functioning. *Entrepreneurship Theory and Practice*, page 1042258719830314.
- Nikolova, M. (2019). Switching to self-employment can be good for your health. *Journal of Business Venturing*, 34(4):664 – 691.
- Nikolova, M. and Graham, C. (2014). Employment, late-life work, retirement, and well-being in europe and the united states. *IZA Journal of European Labor Studies*, 3(1):5.
- Noorderhaven, N., Thurik, R., Wennekers, S., and Van Stel, A. (2004). The role of dissatisfaction and per capita income in explaining self-employment across 15 European countries. *Entrepreneurship Theory and Practice*, 28(5):447–466.
- Obschonka, M. and Silbereisen, R. K. (2015). The effects of work-related demands associated with social and economic change on psychological well-being. *Journal of Personnel Psychology*, 14(1):8–16.
- Odermatt, R., Powdthavee, N., and Stutzer, A. (2017). Overoptimistic entrepreneurs: Predicting wellbeing consequences of self-employment. IZA Discussion Paper No. 11098.
- OECD (2013). OECD guidelines on measuring subjective well-being. OECD Report.
- Parasuraman, S. and Simmers, C. A. (2001). Type of employment, work–family conflict and well-being: a comparative study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 22(5):551–568.
- Prottas, D. J. and Thompson, C. A. (2006). Stress, satisfaction, and the work-family interface: a comparison of self-employed business owners, independents, and organizational employees. *Journal of Occupational Health Psychology*, 11(4):366.
- Przepiorka, A. M. (2017). Psychological determinants of entrepreneurial success and life-satisfaction. *Current Psychology*, 36(2):304–315.
- Reuschke, D. (2019). The subjective well-being of homeworkers across life domains. *Environment and Planning A: Economy and Space*, 51(6):1326–1349.
- Roche, K. (2014). Job satisfaction and the educated entrepreneur. *Journal of Small Business & Entrepreneurship*, 27(4):353–368.
- Ryff, C. D. (2019). Entrepreneurship and eudaimonic well-being: Five venues for new science. *Journal of Business Venturing*, 34(4):646 – 663.
- Saarni, S. I., Saarni, E. S., and Saarni, H. (2008). Quality of life, work ability, and self employment: a population survey of entrepreneurs, farmers, and salary earners. *Occupational and Environmental Medicine*, 65(2):98–103.

- Salinas-Jiménez, M. M., Artés, J., and Salinas-Jiménez, J. (2013). How do educational attainment and occupational and wage-earner statuses affect life satisfaction? a gender perspective study. *Journal of Happiness Studies*, 14(2):367–388.
- Schieman, S., Whitestone, Y. K., and Van Gundy, K. (2006). The nature of work and the stress of higher status. *Journal of Health and Social Behavior*, 47(3):242–257.
- Schimmack, U. (2007). The structure of subjective well-being. In Larsen, R. and Eid, M., editors, *Subjective Well-Being*, pages 97–123. Oxford University Press, Oxford/UK.
- Schimmack, U., Diener, E., and Oishi, S. (2002). Life-satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources. *Journal of Personality*, 70(3):345–384.
- Schjoedt, L. (2009). Entrepreneurial job characteristics: An examination of their effect on entrepreneurial satisfaction. *Entrepreneurship Theory and Practice*, 33(3):619–644.
- Schjoedt, L. and Shaver, K. G. (2007). Deciding on an entrepreneurial career: A test of the pull and push hypotheses using the panel study of entrepreneurial dynamics data. *Entrepreneurship Theory and Practice*, 31(5):733–752.
- Schumpeter, J. A. (1912/1934). *The Theory of Economic Development*. Harvard University Press.
- Sevä, I. J., Larsson, D., and Strandh, M. (2016a). The prevalence, characteristics and well-being of ‘necessity’ self-employed and ‘latent’ entrepreneurs: findings from sweden. *International Journal of Entrepreneurship and Small Business*, 28(1):58–77.
- Sevä, I. J., Vinberg, S., Nordenmark, M., and Strandh, M. (2016b). Subjective well-being among the self-employed in europe: macroeconomy, gender and immigrant status. *Small Business Economics*, 46(2):239–253.
- Sherman, C. L., Randall, C., and Kauanui, S. K. (2016). Are you happy yet? Entrepreneurs’ subjective well-being. *Journal of Management, Spirituality & Religion*, 13(1):7–23.
- Shir, N., Nikolaev, B. N., and Wincent, J. (2019). Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, 34(5):105875.
- Stephan, U. (2018). Entrepreneurs’ mental health and well-being: A review and research agenda. *Academy of Management Perspectives*, 32(3):290–322.
- Stephan, U., Li, J., and Qu, J. (2020). A fresh look at self-employment, stress and health: accounting for self-selection, time and gender. *International Journal of Entrepreneurial Behavior & Research*, pages 1–45.
- Stephan, U. and Roesler, U. (2010). Health of entrepreneurs versus employees in a national representative sample. *Journal of Occupational and Organizational Psychology*, 83(3):717–738.

- Storey, D. J. (1994). *Understanding the Small Business Sector*. Routledge, London.
- Taylor, M. P. (1996). Earnings, independence or unemployment: why become self-employed? *Oxford Bulletin of Economics and Statistics*, 58(2):253–266.
- Totterdell, P., Wood, S., and Wall, T. (2006). An intra-individual test of the demands-control model: A weekly diary study of psychological strain in portfolio workers. *Journal of Occupational and Organizational Psychology*, 79(1):63–84.
- Vaag, J., Giæver, F., and Bjerkeset, O. (2014). Specific demands and resources in the career of the Norwegian freelance musician. *Arts & Health*, 6(3):205–222.
- van der Zwan, P. and Hessels, J. (2019). Solo self-employment and wellbeing: An overview of the literature and an empirical illustration. *International Review of Entrepreneurship*, 17(2):169–188.
- van der Zwan, P., Hessels, J., and Burger, M. (2019). Happy free willies? investigating the relationship between freelancing and subjective well-being. *Small Business Economics*, pages 1–17.
- van der Zwan, P., Hessels, J., and Rietveld, C. A. (2018). Self-employment and satisfaction with life, work, and leisure. *Journal of Economic Psychology*, 64:73–88.
- Van Praag, B. M., Frijters, P., and Ferrer-i Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, 51(1):29–49.
- van Praag, M. C. and Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29:351–382.
- Vila, L. E. and Garcia-Mora, B. (2005). Education and the determinants of job satisfaction. *Education Economics*, 13(4):409–425.
- Warr, P. (2017). Self-employment, personal values, and varieties of happiness–unhappiness. *Journal of Occupational Health Psychology*, 23(3):388.
- Watson, D., Clark, L. A., and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54(6):1063–1070.
- Williams, M., Broughhton, A., Meager, N., Spiegelhalter, K., Johal, S., and Jenkins, K. (2017). The true diversity of self-employment - uncovering the different segments of the UK's self-employed workforce. Retrieved: <http://www.crse.co.uk/research/true-diversity-self-employment> (accessed: 08.04.2018).
- Wolfe, M. T. and Patel, P. C. (2018). Satisfaction guaranteed? Life satisfaction, institutional factors, and self-employment. *Journal of Business Venturing Insights*, 9:45–52.
- Zahra, S. A., Gedajlovic, E., Neubaum, D. O., and Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5):519–532.

Zbierowski, P. (2014). Well-being of entrepreneurs-international comparison based on gem data. *Journal of Positive Management*, 5(4):89–100.

Zhang, C., Chen, C., Li, J., and Zhou, X. (2016). Entrepreneurs' failure times and their well-being, moderated by entrepreneurial environment. In *2016 Portland International Conference on Management of Engineering and Technology (PICMET)*, pages 1358–1364. IEEE.