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Self-employment and satisfaction with life, work, and leisure

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ABSTRACT

The aim of this study is to provide an explanation for the finding in earlier studies that the self-employed are, on average, more satisfied with their work than the paid employed are, although they are not more satisfied with their life in general. Fixed-effects regressions are performed with German Socio-Economic Panel data (1984–2012) to investigate how a labor market switch from paid employment to self-employment influences life, work, and leisure satisfaction. The results indicate that switching to self-employment benefits work satisfaction but not life satisfaction. The benefits for work satisfaction are pronounced and relatively persistent but accompany large and persistent decreases in leisure satisfaction. Life satisfaction for the switchers to self-employment is consequently on par with the life satisfaction of the non-switchers. Contrasting the switch to self-employment (out of paid employment) with the switch to paid employment (out of self-employment) shows that the detrimental effect on leisure satisfaction distinguishes a switch to self-employment from a switch to paid employment. In conclusion, the results explain why increases in life satisfaction are generally absent for individuals switching to self-employment and why undetermined evidence has been found in previous studies in terms of gains in life satisfaction.

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1. Introduction

The number of people choosing self-employment over paid employment as a career has steadily increased in industrialized countries since the late 1990s (Carrasco & Ejrnæs, 2012; Fairlie & Meyer, 2000). Currently, self-employed individuals represent a considerable share of the total labor force at approximately 16% in the European Union (Eurostat, 2015), and they are responsible for a large portion of employment and job creation (De Wit & De Kok, 2014). Many governments attempt to stimulate self-employment and start-ups (European Commission, 2013; Gilbert, Audretsch, & McDougall, 2004) because of the presumed positive link with economic development (Audretsch & Keilbach, 2004; Carree & Thurik, 2010; Koellinger & Thurik, 2012).

Self-employment is associated with job characteristics such as a high level of autonomy (Benz & Frey, 2008; Hundley, 2001), flexibility (Parasuraman & Simmers, 2001), and rewarding work content (Millán, Hessels, Thurik, & Aguado, 2013).

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Such job characteristics translate into higher levels of work satisfaction for the self-employed compared with the paid employed (Benz & Frey, 2004, 2008; Bianchi, 2012; Blanchflower, 2000; Blanchflower & Oswald, 1998; Hundley, 2001; Millán et al., 2013). Clearly, there is consistent evidence of a positive relationship between work satisfaction and self-employment. The findings of previous studies on *life satisfaction* and self-employment are, however, much less consistent (Andersson, 2008; Binder & Coad, 2013; Salinas-Jiménez, Artès, & Salinas-Jiménez, 2013).

Understanding the origins of life satisfaction is important because “there is probably no other goal in life that commands such a high degree of consensus” (Frey & Stutzer, 2010, p. vii). Studies with longitudinal or experimental designs suggest that life satisfaction may precede positive outcomes such as productivity (Lyubomirsky, King, & Diener, 2005; Oswald, Proto, & Sgroi, 2015). Hence, the aim of the present paper is to contribute to our understanding of the origins of life satisfaction and to provide an explanation for the counter-intuitive discrepancy between a well-established positive relationship between self-employment and work satisfaction and an undetermined relationship between self-employment and life satisfaction.

The contribution of the present study to the literature is threefold. First, we address an under-researched topic: the consequences of switching to self-employment for individual well-being. Although an extensive body of research has examined who becomes self-employed (Caliendo, Fossen, & Kritikos, 2012; Kautonen, Hatak, Kibler, & Wainwright, 2015; Verheul, Thurik, Grilo, & Van der Zwan, 2012) or the success of the self-employed (Ayala & Manzano, 2014), little is known about how a switch to self-employment influences satisfaction with life or subdomains of life, such as work and leisure, at the individual level. Hence, we focus on transitions within the labor market between paid employment and self-employment, which can help individuals to attain better job opportunities (Postel-Vinay & Robin, 2002), achieve career and personal objectives, and realize personal fulfillment. These transitions within the labor market are important for individual worker mobility and may prevent unemployment and its severely negative effects on life satisfaction. At the national level, labor mobility is crucial for improving competitiveness because, for example, it facilitates the economy’s adaptation to rapid changes in supply and demand across sectors and may enhance technological progress through information externalities (Cooper, 2001). People are the main carriers of knowledge, and when they move from one firm to another, this creates opportunities for knowledge exchange between firms (Song, Almeida, & Wu, 2003; Oettl and Agrawal, 2008).

The second contribution is that the current study delves deeper into the relationship between self-employment and life satisfaction. The few studies that have focused on the link between self-employment and life satisfaction (e.g., Andersson, 2008; Binder & Coad, 2013; Salinas-Jiménez et al., 2013) have not thoroughly investigated the mechanisms through which self-employment influences life satisfaction. As noted above, the mere fact that the self-employed are more satisfied with their work does not imply that their life satisfaction is also greater (Binder & Coad, 2013). Using the two-layer model (Van Praag, Frijters, & Ferrer-i-Carbonell, 2003) and the “bottom-up approach” (Erdogan, Bauer, Truxillo, & Mansfield, 2012) to life satisfaction, which suggests that life satisfaction is a function of satisfaction with other domains in life, we use satisfaction with work and leisure to understand the undetermined relationship between self-employment and life satisfaction.

The third contribution of our study is the use of a longitudinal approach, which allows us to understand the persistence of the effects of switching from paid employment to self-employment on life, work, and leisure satisfaction. Our approach is novel in the research area of satisfaction and self-employment because of the current predominance of cross-sectional studies. For example, the existing research fails to address whether increases in work satisfaction after entering self-employment are persistent or only temporary. According to “adaptation theory” (Frey & Stutzer, 2002), individuals adjust to prior levels of satisfaction after some change has occurred, such as marrying (Clark, Diener, Georgellis, & Lucas, 2008) or winning the lottery (Kuhn, Kooreman, Soetevent, & Kapteyn, 2011). Similarly, individuals who switch from paid employment to self-employment and who subsequently experience an increase in work satisfaction may adjust to their prior levels of work satisfaction after some time. In the context of our research topic, a proper test for adaptation has not been performed yet in the existing literature.

Our study uses data from the German Socio-Economic Panel (SOEP) and follows self-employed and paid employed individuals in Germany over a period of almost 30 years (from 1984 to 2012). The empirical results show that switching from paid employment to self-employment does not lead to an increase in life satisfaction (switchers do not attain a significantly higher level of life satisfaction than non-switchers), whereas it does lead to a large increase in work satisfaction. These work satisfaction gains are even observed for switchers who have been in self-employment for five years. By contrast, we find a large and persistent decrease in leisure satisfaction after switching to self-employment. This pattern becomes more pronounced for switchers who spend a longer period in self-employment.

This paper is structured as follows. Section 2 provides the literature background. Section 3 describes the data, measures and the statistical methods used. The empirical results are reported in Section 4, and Section 5 concludes the paper.

2. Literature background

Although many insights about what makes individuals and societies satisfied with life have been offered (Dolan, Peasgood, & White, 2008), the role of occupational choice, particularly self-employment, is underrepresented in this stream of research. The literature reviews by Dolan et al. (2008) and Erdogan et al. (2012) only mention a limited set of studies on this topic. The few studies that have focused on the link between self-employment and life satisfaction (e.g., Andersson, 2008; Binder & Coad, 2013; Salinas-Jiménez et al., 2013) have provided undetermined results. The two-layer model (Van

Praag et al., 2003) and the “bottom-up approach” (Erdogan et al., 2012) to life satisfaction suggest that life satisfaction is a function of satisfaction with other domains in life, such as work and leisure. What people report about their life satisfaction is a function of their satisfaction with these different life domains. Hence, to understand the undetermined relationship between self-employment and life satisfaction, we should focus on these life domains instead of on life in general.

In the standard labor market model (Borjas, 2016, Ch. 2), the overall utility function expresses trade-offs in preference between leisure time and income from time used for work. People are constrained by the hours available to them. Whereas leisure directly yields satisfaction for the individual, income represents general purchasing power that is capable of being used to buy goods and services to satisfy various wants. However, people may also derive satisfaction from other aspects of work than income, such as having fulfilling work or flexibility at work (Millán et al., 2013). Income can only be obtained by sacrificing leisure. According to the theory of time allocation, income-producing activities (i.e., work) and leisure are the two components that determine individuals' levels of utility and well-being (Becker, 1965; Lévesque & Minniti, 2006). Moreover, both work satisfaction and leisure satisfaction are known to influence life satisfaction positively (Van Praag et al., 2003). Therefore, in line with the labor market model and the theory of time allocation as well as the two-layer model or bottom-up approach, we expect that satisfaction in the work and leisure domains contributes additively to life satisfaction. Below, we discuss the existing literature on the relation between self-employment and satisfaction with work and leisure.

Several studies have convincingly shown that the self-employed enjoy higher work satisfaction than paid employees do (Benz & Frey, 2004, 2008; Bianchi, 2012; Blanchflower, 2000; Blanchflower & Oswald, 1998; Hundley, 2001; Millán et al., 2013). The main explanation given for this difference is the “procedural utility” the self-employed enjoy from operating independently in markets and having high decision authority (Benz & Frey, 2008; Hamilton, 2000; Hundley, 2001). However, adaptation theory (Frey & Stutzer, 2002) predicts that this relationship will become weaker the longer people are in self-employment. Therefore, although we expect a positive relationship between self-employment and work satisfaction, we also expect this relationship to weaken as individuals remain self-employed for a longer time. Hence, we pay particular attention to the degree of persistence of the relationship between self-employment and work satisfaction in our empirical analyses.

Leisure satisfaction has largely been neglected in prior research on self-employment (Binder and Coad (2016) is an exception).¹ Due to the autonomy and flexibility available to the self-employed, they are less constrained by traditional office hours and may perform their work tasks at a time and location that they consider convenient. This flexibility can make it easier for self-employed individuals to meet their family demands and can positively affect their non-working life in general (Loscocco, 1997; Parasuraman & Simmers, 2001). However, it may be more difficult for the self-employed to detach from work during their off-time because their more flexible office hours and their freedom in choosing their work location may make the boundaries between their working and private lives less clear. Furthermore, the greater job involvement of the self-employed in terms of longer working hours relative to those of the paid employed (Ajayi-Obe & Parker, 2005; Hyytinen & Ruuskanen, 2007) leaves self-employed individuals with less (quality) time for non-work activities. Consequently, overall, we expect that self-employed individuals experience more difficulties in balancing their working life with their non-working life than paid employed individuals do. This implies that the higher level of work satisfaction of the self-employed may be counterbalanced by a lower level of satisfaction with non-work (leisure) activities. Furthermore, the psychological mechanism of coping suggests that individuals learn to overcome adverse circumstances and that the decreased satisfaction levels that result from adverse conditions over time change to previous higher levels (Frey & Stutzer, 2002). Hence, we expect that the negative relation between self-employment and leisure satisfaction becomes weaker the longer individuals stay in self-employment.

To conclude, prior studies on self-employment and life satisfaction have provided undetermined results (Andersson, 2008; Binder & Coad, 2013; Salinas-Jiménez et al., 2013), and these studies have only speculated about why the self-employed would be more or less satisfied with their lives without empirically testing explanations for their findings. Three earlier studies analyze how *transitions* from paid employment to self-employment influence life satisfaction. Andersson (2008) does not find a significant relationship between self-employment and life satisfaction in a two-period fixed-effects regression. Binder and Coad (2013) find that individuals who move from paid employment to self-employment (an “opportunity-based” move) experience increases in life satisfaction, whereas individuals who move from unemployment to self-employment (a “necessity-based” move) do not experience such increases. Similar results are reported by Binder and Coad (2016). Compared to these three studies, we incorporate the role of work and leisure satisfaction to understand how life satisfaction is affected by the switch to self-employment. In addition, by exploiting our longitudinal dataset we analyze to what extent the influence of switching to self-employment on life, work, and leisure satisfaction is persistent over time. We expect a positive relationship between switching to self-employment and work satisfaction, although it may be weaker for individuals staying in self-employment for a long time compared to individuals who have just switched. For leisure satisfaction, we expect a negative relationship with self-employment that may also be weaker for individuals staying in self-employment for several years.

¹ Earlier studies have, for example, investigated leisure satisfaction in relation to workers versus non-workers (Van Praag et al., 2003) and to particular subgroups in the population such as older people (Ragheb & Griffith, 1982) and students (Misra & McKean, 2000).

3. Data and methodology

In our analyses, we use annual data from 1984, the first year of data collection, to 2012 from the German Socio-Economic Panel (SOEP; Frick, Jenkins, Lillard, Lipps, & Wooden, 2007; Wagner, Frick, & Schupp, 2007). The SOEP is administered by the German Institute for Economic Research, DIW Berlin. This longitudinal dataset is suitable for the present study because it contains information regarding individuals' self-employment status and life satisfaction, work satisfaction, and leisure satisfaction scores for each of the 29 years for which we have data. The analyses are restricted to individuals between 18 and 65 years old.

3.1. Transition from paid employment to self-employment

In the SOEP, individuals self-report their main occupational status at the time of the survey. We distinguish between self-employed individuals (either with or without employees; farmers and individuals who help on a family firm are excluded) and individuals in paid employment (which includes blue-collar, white-collar, and civil-service workers). Self-employment is a frequently used proxy for entrepreneurship in empirical work (Parker, 2009). Note that we focus on paid employed and self-employed individuals only and do not consider individuals who do not work or who seek employment.

For our study, it is essential to determine an individual's switch from paid employment to self-employment. Such a switch is identified when an individual is in paid employment at time $t-1$ and in self-employment at time t . Our variable *switch self-employment* (S_t) takes the value 1 when this occurs and the value 0 when no switch has taken place. Implicitly, there is a time lag between the switch variable and satisfaction in our models, because the occupational switch occurs at some point in time during the period between $t-1$ and t and the satisfaction levels are measured at time t .²

In addition to the immediate influence of switching to self-employment on satisfaction, we investigate the *persistence* of this influence. By the inclusion of five additionally generated variables (S_{t+j} ($j = 1, 2, 3, 4, 5$)), that denote how long switchers stay in self-employment after switching from paid employment to self-employment at time t , our models enable to directly test whether any adaptation occurs after switching to self-employment in terms of returning to the pre-switch levels of satisfaction. This methodology is consistent with the empirical strategy of Clark et al. (2008). Specifically, if S_{t+j} takes the value 1, then an individual has switched to self-employment at time t and is still self-employed (value 0 otherwise). Hence, the variables S_{t+j} reflect groups of individuals who stay in self-employment for 0 to 1 year (S_t), 1 to 2 years (S_{t+1}), 2 to 3 years (S_{t+2}), 3 to 4 years (S_{t+3}), 4 to 5 years (S_{t+4}), or more than 5 years (S_{t+5}). The number of individuals receiving a value of 1 for S_{t+j} thus decreases as j increases.

3.2. Transition from self-employment to paid employment

In our empirical analysis, we compare individuals who switch to self-employment with those who do not switch. We also compare this self-employment switch with the transition to paid employment. This comparison benchmarks the switch to self-employment against the labor market switch in the other direction and is necessary for the interpretation of the results from the first analysis. In this manner, we are able to distinguish a pure *switching effect* from a *switching to self-employment effect*. For this purpose, we generate the variable *switch paid employment* (P_t) that takes the value 1 when an individual is in self-employment at time $t-1$ and in paid employment at time t and the value 0 when no switch has taken place. Again, we generate five additional variables, P_{t+j} ($j = 1, 2, 3, 4, 5$), that denote individuals who stay in paid employment for 0 to 1 year (P_t), 1 to 2 years (P_{t+1}), 2 to 3 years (P_{t+2}), 3 to 4 years (P_{t+3}), 4 to 5 years (P_{t+4}), or more than 5 years (P_{t+5}).

3.3. Measures of satisfaction

Our measures of life, work, and leisure satisfaction are self-reported single-item measures. The following questions are asked on a scale from 1 (completely dissatisfied) to 10 (completely satisfied): "All things considered, how satisfied are you with your life?" for *life satisfaction*, "All things considered, how satisfied are you with your work?" for *work satisfaction*, and "All things considered, how satisfied are you with your leisure?" for *leisure satisfaction*. While the original scales in the SOEP range from 0 to 10, we decided to merge the two lowest categories because of the relatively low number of zero values for the satisfaction variables. Hence, satisfaction with life, work, and leisure are measured in an equivalent manner, representing proxies for derived utility from life, work and leisure.

The direct measurement of life satisfaction has been frequently used in recent economics literature (e.g., Aguilar, Muñoz, & Moro-Egido, 2013; Frijters, Haisken-DeNew, & Shields, 2004; Proto & Rustichini, 2015). Single-item satisfaction measures for the work domain (Aguilar et al., 2013; Binder & Coad, 2015; Borjas, 1979) and the leisure domain (Binder & Coad, 2015; Demoussis & Giannakopoulos, 2008; Van Praag et al., 2003) have also been used in the economics literature. The single-item measure of life satisfaction has been demonstrated to be valid and to perform very well when compared to the more psy-

² In practice, the total period in self-employment can vary from under a month to one year. Note that multiple switches from paid employment to self-employment are possible for the same individual within one year. Although we cannot exclude the possibility that an individual switches employment statuses multiple times during the period between $t-1$ and t , such back and forward switching behavior does not occur often in our dataset. Therefore, we assume that we adequately capture employment switches.

psychometrically established Satisfaction with Life Scale of Diener, Emmons, Larsen, and Griffin (1985) (Cheung & Lucas, 2014; Schimmack & Oishi, 2005). Single-item measures of work satisfaction have been shown to have high correlations with scale measures of work satisfaction (Wanous, Reichers, & Hudy, 1997). The psychometric properties of single-item measures of leisure satisfaction have not been previously assessed, but we proceed with this measure because of the favorable properties of similar measures for life and work satisfaction.

3.4. Control variables

We base the list of individual-level control variables on Dolan et al. (2008), who provide a summary of the most relevant variables associated with life satisfaction. Given that studies have also included these determining factors to explain work and leisure satisfaction, we draw on the same set of control variables for our work and leisure regressions. A number of variables mentioned by Dolan et al. (2008) cannot be considered in our research framework. On some occasions (such as the contexts of commuting, caring for others, or trust), the SOEP dataset limits us in the availability of a certain variable for 29 consecutive years. Naturally, unemployment is not included in our analyses because our analysis is restricted to paid employed and self-employed workers. The control variables described below are measured every year.

Regarding the individual characteristics, we include educational attainment, which refers to the sum of years of schooling and years of occupational training (generated by the SOEP) and is a continuous variable from 7 to 18.³ Marital status is also included in the list of control variables. We distinguish between married people; a category consisting of divorced, separated, and widowed people; and a category of people who have never been married (reference category in regressions).

Furthermore, we include the number of children in the household,⁴ gross hourly earnings (log transformed) in euros per hour, the number of weekly working hours (log transformed), and the weekly number of hours devoted to leisure and hobbies (again in logs). Gross hourly earnings are defined by dividing annual earnings in euros by annual hours worked. The bottom percentile of the earnings distribution is not considered because of some unrealistically low values, and zero values are not included because of our focus on workers only. Note that satisfaction with work (one of our dependent variables) also depends on the number of hours devoted to work and that satisfaction with leisure (also a dependent variable) depends on the number of hours devoted to leisure. The results of the other independent and control variables in these regressions should thus be interpreted conditional on an important input of both satisfaction measures, which is the amount of time spent in work and leisure. Hence, the two satisfaction measures reflect more general aspects of one's job and leisure rather than satisfaction with hours worked and satisfaction with the amount of leisure, respectively.⁵

Year dummies are also included in all regressions. Because we employ linear Fixed Effects (FE) regressions, these year dummies capture time-specific influences on satisfaction and individual (linear) age effects. Hence, age is not included as a determinant of satisfaction. Importantly, our FE regressions control for unobserved, time-invariant individual characteristics such as an individual's personality (DeNeve & Cooper, 1998), religious conviction, or ethnicity and exclude gender as a control variable.

3.5. Empirical model

We perform linear (FE) regressions to determine the relationship between switching to self-employment (S_{t+j} , $j = 0, \dots, 5$, are the independent variables) and life, work, and leisure satisfaction (the dependent variables). The FE results show how changes in self-employment status are related to changes in satisfaction within individuals by controlling for unobserved, time-invariant individual characteristics. Standard errors robust to heteroskedasticity are calculated. To interpret our results in an unbiased manner, we add the P_{t+j} ($j = 0, \dots, 5$) variables, which denote switches from self-employment to paid employment, to the model formulation.

The dependent variables in our analyses are ordered variables, and an ordered logit or probit model would therefore be more suitable to respect the ordinal nature of these variables. Our cardinal interpretation and, hence, the use of linear FE regressions have been favored by numerous scholars (e.g., Di Tella, MacCulloch, & Oswald, 2001; Wunder & Heineck, 2013). In practice, the results from research designs that assume cardinality or ordinality show few differences (Ferrer-i-Carbonell & Frijters, 2004). The advantage of our linear regression models is that the interpretation of coefficients is straightforward because they reflect an absolute increase or decrease in satisfaction on the 10-point scales. In addition, FE equivalents in the ordinal case are difficult to implement (Greene, 2004). We show the results of a recently implemented consistent FE ordered logit estimator as a robustness check in Section 4.

By adopting an FE approach, we ensure that our results are not distorted by the selection of individuals with particular personality characteristics in self-employment. Results from cross-sectional studies could be biased toward a one-period

³ Years of schooling: no degree = 7 years, lower degree = 9 years, intermediary schooling = 10 years, degree from a professional college = 12 years, higher education degree = 13 years. Years of occupational training: apprenticeship = 1.5 years, technical schools (incl. health) = 2 years, civil servant apprenticeship = 1.5 years, higher technical college = 3 years, university degree = 5 years.

⁴ If more than 5 children are in the household, the value 5 is assigned to these observations.

⁵ Particularly for leisure satisfaction, we observe "indirect effects" of switching to self-employment that run via the number of hours of work and leisure. That is, when the coefficients for the switch variables in Table 2 are treated as "direct effects", the "total effects" become 0.33, 0.43, 0.42, 0.46, 0.53, and 0.44 (all p -values < 0.001) when the number of hours devoted to work and leisure are excluded from the model formulation.

instantaneous “shock” in terms of individual satisfaction levels. For example, the positive relationship between self-employment and work satisfaction that is typically found in earlier works could result from an individual’s dissatisfaction prior to switching. Our longitudinal approach departs from this instantaneous view and observes whether switching from paid employment to self-employment has some longer-lasting, *persistent*, benefits. This approach eliminates the possibility that a significant relationship results from dissatisfaction prior to the self-employment switch. Moreover, our fixed-effects (FE) estimation approach reveals how changes in self-employment status are related to changes in satisfaction *within* individuals while controlling for unobserved time-invariant individual characteristics.⁶

Concerns regarding multicollinearity among the S_{t+j} and P_{t+j} variables may arise. We investigated the corresponding Spearman correlation coefficients and variance inflation factors (VIFs) in a model with all S_{t+j} and P_{t+j} variables included. The correlations are below 0.05 in all cases, and all VIF values are below 1. Hence, there are no concerns regarding multicollinearity (Hill & Adkins, 2001). Additionally, for our control variables (for a description of these variables, see below), the correlations and VIF values do not lead to multicollinearity concerns.

4. Results

Descriptive statistics of our analysis sample are reported in Table 1. Means and standard deviations are shown for the subsample of individuals who switched from paid employment to self-employment less than a year earlier. The analysis is repeated for the samples of workers who stayed in self-employment for 1 to 2 years, 2 to 3 years, 3 to 4 years, 4 to 5 years, or at least 5 years after their switch to self-employment. Furthermore, we show descriptive statistics for individuals who did not experience a switch during the analysis period. Hence, we compare (partly overlapping) subgroups of individuals who stay in self-employment for different time periods. The number of observations in each subgroup is also shown in Table 1. Life and work satisfaction are higher, and leisure satisfaction is lower, among individuals who have been in self-employment for 0–1 year compared to the group of non-switchers. Higher values for work satisfaction and lower values for leisure satisfaction on average can also be observed among subgroups of individuals who stay in self-employment for longer periods of time compared to the non-switchers. Another noteworthy observation is that the average number of children is higher among any group of individuals switching from paid employment to self-employment compared to the non-switchers, indicating that self-employment may be a deliberate choice for those who want to combine their working life with their family life. Decreases in hourly earnings in the very short term but increases in the longer term for those who switch to self-employment can be deduced from Table 1. Furthermore, working hours are higher and leisure hours are lower among individuals who switch from paid employment to self-employment (any switching group) than among individuals who do not switch.

A graphical representation of how life, work, and leisure satisfaction are affected by switching from paid employment to self-employment is provided in Fig. 1. The graphs in Fig. 1 (solid lines) show differences in levels of life, work, and leisure satisfaction between individuals who switch from paid employment to self-employment (value 1 for S_t) and individuals who do not switch (value 0 for S_t). The benefits of switching are also depicted for other groups of switching individuals (value 1 versus 0 for S_{t+1}, \dots , value 1 versus value 0 for S_{t+5}); each graph shows 95% confidence intervals, which are based on simple t -tests for satisfaction differences between switchers (value 1) and non-switchers (value 0). Clearly, switching to self-employment does not have significant benefits in terms of life satisfaction. Furthermore, each subgroup of switchers experiences an increase in work satisfaction, and a decrease in leisure satisfaction. These results could be attributed to the act of switching rather than to the newly attained self-employment status. Hence, we also show the change in life, work, and leisure satisfaction for the groups of individuals who switch from self-employment to paid employment (the P_{t+j} variables as represented by the dashed lines) in Fig. 1. Again, no benefits are found for life satisfaction, the benefits for work satisfaction are significant in the very short term only, and the losses in terms of leisure satisfaction are significantly smaller in an absolute sense than for those who switch to self-employment.

Our long time horizon of almost thirty years is necessary to draw reliable conclusions regarding the influence of self-employment on satisfaction, given the relatively small number of individuals who switch from paid employment to self-employment. For example, 34,629 individuals are included in our regressions with life satisfaction as the dependent variable, and these individuals experience 1455 switches from paid employment to self-employment in total. Additionally, 1203 opposite switches from self-employment to paid employment are observed. Given that multiple switches for an individual are rarely recorded, approximately 8% of individuals experience such a switch within the labor market.

Table 2 shows the FE results for the entire sample of individuals between 18 and 65 years old. The results are displayed for life satisfaction (column 1), work satisfaction (column 2), and leisure satisfaction (column 3). Note again that we control for the number of hours devoted to work and leisure in our regressions. The results for the S_t variable show that switching from paid employment to self-employment is significantly positively related to work satisfaction directly after making the switch and is unrelated to life satisfaction ($p > 0.05$). Interestingly, switchers to self-employment have significantly lower

⁶ Our dataset has the advantage that it measures the switch to self-employment in the year preceding the moment satisfaction is measured. Hence, only a very subtle form of reverse causality could be present in our analyses. The change in satisfaction is (partly) the result of satisfaction levels prior to the switch. For example, after years of becoming decreasingly satisfied with a job, an individual may decide to start his or her own business. This switch gives this person a boost in satisfaction because (s)he can finally quit the job. This is a further argument for investigating the persistence of the switching effect, which we do in our study.

Table 1
Descriptive statistics analysis sample.

	No switch		0–1 year after switch		1–2 years after switch		2–3 years after switch		3–4 years after switch		4–5 years after switch		At least 5 years after switch	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Life satisfaction	7.15	1.63	7.22	1.67	7.17	1.62	7.13	1.66	7.07	1.63	7.10	1.59	7.10	1.57
Work satisfaction	7.10	1.98	7.51	1.98	7.56	1.80	7.47	1.87	7.35	1.89	7.35	1.81	7.32	1.82
Leisure satisfaction	6.52	2.21	5.74	2.53	5.50	2.52	5.43	2.47	5.27	2.55	5.33	2.45	5.37	2.41
Education	12.22	2.73	13.13	2.98	13.15	2.96	13.22	2.97	13.32	3.02	13.31	2.99	13.39	3.07
Married	0.67	0.47	0.65	0.47	0.68	0.47	0.68	0.47	0.69	0.46	0.70	0.46	0.69	0.46
Single	0.22	0.42	0.25	0.43	0.22	0.41	0.19	0.39	0.19	0.39	0.18	0.39	0.17	0.38
Widowed/divorced	0.11	0.31	0.10	0.30	0.10	0.30	0.13	0.34	0.12	0.33	0.11	0.32	0.13	0.34
Children	0.69	0.95	0.80	0.99	0.81	0.98	0.83	0.99	0.83	0.99	0.83	0.98	0.74	0.95
Ln(hourly earnings)	2.47	0.59	2.39	0.77	2.37	0.79	2.47	0.77	2.52	0.80	2.55	0.77	2.65	0.74
Ln(work hours)	3.53	0.56	3.57	0.68	3.76	0.54	3.81	0.50	3.83	0.47	3.87	0.40	3.84	0.43
Ln(leisure hours)	1.83	0.98	1.64	1.08	1.57	1.07	1.53	1.07	1.53	1.05	1.53	1.06	1.59	1.08
Observations	216,641		1,455		909		676		534		422		343	

Notes: SD = standard deviation. The number of observations refers to the number of observations for which life satisfaction is available (220,980 in total).

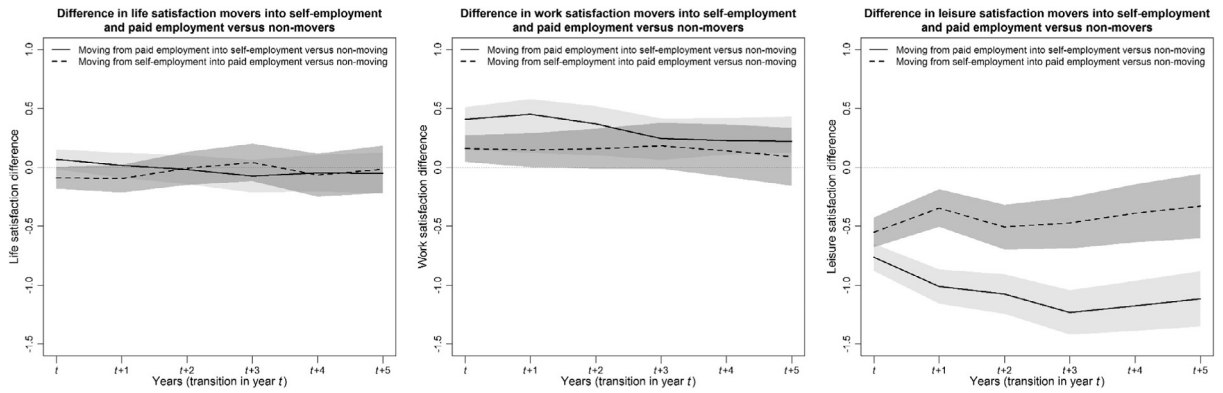


Fig. 1. Summary statistics: differences in satisfaction levels between movers into self-employment and paid employment, and non-movers. *Note:* The shaded areas represent the 95% confidence intervals.

Table 2

Coefficients of fixed-effects regressions. Dependent variables: life satisfaction, work satisfaction, leisure satisfaction. Independent variable: switching from paid employment to self-employment.

	(1) Life	(2) Work	(3) Leisure
S_t	0.071 (0.039)	0.335*** (0.053)	-0.280*** (0.057)
S_{t+1}	0.075 (0.046)	0.428** (0.062)	-0.332*** (0.070)
S_{t+2}	0.047 (0.054)	0.299** (0.068)	-0.339*** (0.081)
S_{t+3}	0.019 (0.058)	0.200** (0.075)	-0.396*** (0.093)
S_{t+4}	0.003 (0.066)	0.178 [*] (0.081)	-0.411*** (0.101)
S_{t+5}	-0.018 (0.066)	0.131 (0.087)	-0.390*** (0.098)
Education	0.002 (0.007)	0.019 (0.010)	-0.014 (0.011)
Married	0.092** (0.022)	0.064 (0.029)	-0.160** (0.030)
Widowed/divorced/separated	-0.087** (0.033)	0.100 (0.041)	-0.088 [*] (0.042)
Children	-0.000 (0.007)	0.037** (0.009)	-0.145*** (0.010)
Ln(hourly earnings)	0.182*** (0.011)	0.171*** (0.015)	0.050*** (0.014)
Ln(work hours)	0.104*** (0.010)	0.084*** (0.015)	-0.276*** (0.014)
Ln(leisure hours)	0.043*** (0.004)	0.025*** (0.005)	0.244*** (0.006)
Intercept	7.003*** (0.101)	6.963*** (0.141)	7.985*** (0.143)
Observations	220,980	217,060	220,839
R^2 (within)	0.023	0.018	0.031
Number of individuals	34,629	34,157	34,622

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is "never married".

*** p -value ≤ 0.001 .

** p -value ≤ 0.01 .

* p -value ≤ 0.05 .

levels of leisure satisfaction than non-switchers. This finding suggests that switching to self-employment poses challenges for individuals who switch and increases the difficulty of combining working life with non-working life in terms of leisure. Clearly, leisure is threatened by individuals' engagement in self-employed work, even when we control for weekly hours devoted to leisure.

By focusing on the coefficients of the S_{t+j} variables for $j = 1, \dots, 5$ in Table 2, we retrieve information about the persistence of the influence of switching to self-employment on life, work, and leisure satisfaction. Regarding life satisfaction, we observe that the coefficients of the variables S_{t+j} ($j = 1, \dots, 5$) are statistically insignificant. The influence on work satisfaction is persistent, but the coefficients (apart from a satisfaction “shock” at time $t + 1$) reveal a decreasing pattern. Hence, despite decreasing coefficients for S_{t+j} ($j = 1, \dots, 5$), each group of switching individuals (until time $t + 4$, 4 to 5 years after switching to self-employment) has significantly higher work satisfaction levels compared with the non-switchers. For leisure satisfaction, the negative coefficients are large in an absolute sense for each switching group. Interestingly, an individual's decrease in satisfaction with leisure outweighs his/her increase in satisfaction with work from time $t + 2$ onward. Rather than adapting to the new situation, individuals seem to become increasingly dissatisfied with leisure after switching to self-employment.

4.1. Switching from self-employment to paid employment

We compare people who switch from paid employment to self-employment (see above) with those who make the opposite switch. For this purpose, we add the P_{t+j} variables denoting switches from self-employment to paid employment to the

Table 3

Coefficients of fixed-effects regressions. Dependent variables: life, work, and leisure satisfaction. Independent variables: switching from paid employment to self-employment and from self-employment to paid employment.

	(1) Life	(2) Work	(3) Leisure
S_t	0.075 (0.041)	0.375*** (0.054)	-0.295*** (0.059)
S_{t+1}	0.078 (0.047)	0.462*** (0.063)	-0.345*** (0.071)
S_{t+2}	0.050 (0.054)	0.331*** (0.069)	-0.352*** (0.082)
S_{t+3}	0.022 (0.058)	0.229** (0.076)	-0.407*** (0.093)
S_{t+4}	0.006 (0.067)	0.204* (0.082)	-0.421*** (0.102)
S_{t+5}	-0.015 (0.067)	0.155 (0.087)	-0.399*** (0.098)
P_t	-0.031 (0.046)	0.201** (0.062)	-0.147* (0.061)
P_{t+1}	-0.037 (0.056)	0.186* (0.074)	0.015 (0.080)
P_{t+2}	0.118 (0.058)	0.247** (0.077)	-0.098 (0.091)
P_{t+3}	0.177** (0.068)	0.246** (0.087)	-0.065 (0.092)
P_{t+4}	0.078 (0.075)	0.208* (0.088)	0.019 (0.109)
P_{t+5}	0.199 (0.083)	0.243* (0.107)	0.053 (0.119)
Education	0.002 (0.007)	0.018 (0.010)	-0.014 (0.011)
Married	0.092*** (0.022)	0.063* (0.029)	-0.160*** (0.031)
Widowed/divorced/separated	-0.088** (0.033)	0.097* (0.041)	-0.088* (0.042)
Children	-0.000 (0.007)	0.036*** (0.009)	-0.145*** (0.010)
Ln(hourly earnings)	0.181*** (0.011)	0.172*** (0.015)	0.049*** (0.014)
Ln(work hours)	0.103*** (0.010)	0.083*** (0.015)	-0.276*** (0.014)
Ln(leisure hours)	0.043*** (0.004)	0.025*** (0.005)	0.244*** (0.006)
Intercept	7.007*** (0.101)	6.974*** (0.141)	7.983*** (0.143)
Observations	220,980	217,060	220,839
R^2 (within)	0.023	0.018	0.031
Number of individuals	34,629	34,157	34,622

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is “never married”.

*** p -value ≤ 0.001 .

** p -value ≤ 0.01 .

* p -value ≤ 0.05 .

previous regression. The corresponding results presented in Table 3 are interesting: they do not reveal a significant, persistent influence of switching to paid employment on leisure satisfaction. In addition, benefits in terms of increased work satisfaction levels arise from switching from self-employment to paid employment. However, for $j = 0, 1, 2$, the P_{t+j} coefficients are smaller than are the S_{t+j} coefficients, and they are similar in size for $j = 3$ and 4. Several significant positive P_{t+j} coefficients (for $j = 2, 3, 5$) can be observed for life satisfaction, which indicates that switching to paid employment has more benefits for individual well-being in general than does switching to self-employment. This result could be caused by the lack of detrimental effects in terms of lower leisure satisfaction levels observed for switches to paid employment in Table 3.

Fig. 2 provides a graphical representation of the influences of switching to self-employment (the solid lines represent the S_{t+j} coefficients from Table 3) and switching to paid employment (the dashed lines represent the P_{t+j} coefficients from Table 3) on life, work, and leisure satisfaction. As observed, the 95% confidence intervals show considerable overlap for life and work satisfaction, but not for leisure satisfaction. Hence, the detrimental effect on leisure satisfaction largely distinguishes a switch to self-employment (out of paid employment) from a switch to paid employment (out of self-employment). Furthermore, the short-term benefits (until three years after switching) in terms of work satisfaction appear to be stronger for the switch to self-employment than for the switch to paid employment.

4.2. Bottom-up approach

To assess the importance of work and leisure satisfaction in determining one's life satisfaction level, we add these two domain satisfaction variables to the regressions with life satisfaction as the dependent variable. This approach is consistent with the two-layer model and the bottom-up approach to life satisfaction described in Section 2. The results are shown in Table 4 for the entire sample. Both domain satisfaction variables have significant, positive coefficients. Columns 1 (with only the S_t variables as in Table 2) and 2 (with both the S_t and P_t variables as in Table 3) of Table 4 reveal that satisfaction with work weighs more heavily in the determination of life satisfaction than does satisfaction with leisure. That is, Wald tests comparing the coefficients of both variables reveal that the coefficients of work satisfaction are significantly larger than are the coefficients of leisure satisfaction (p -values < 0.001).

4.3. Development of satisfaction variables for same group of switchers

Observed changes over time in satisfaction levels could be explained by differences over time in the composition of the group of switchers rather than the effect of time itself. To isolate the effect of time, we focus on the group of 343 switchers as displayed in the final column of Table 2. These individuals experienced a switch from paid employment to self-employment at least 5 years ago and are still in self-employment. Table 5 shows the estimates of the S_{t+j} coefficients where each switching variable is identified on the basis of this group of 343 individuals that switches to self-employment and remains in self-employment for at least 5 years. Table 5 thus shows how the satisfaction levels evolve over time for a group of switchers whose composition does not change over time. Importantly, Table 5 does not reveal noteworthy differences in terms of the coefficients and significance of the switching variables compared to Table 2. Hence, our results indicate temporal influences that are not explained by changing characteristics of the various switching groups over time.

4.4. Gender stratified results

We repeat the analyses for men and women separately because women may have different reasons for switching to self-employment than men do, such as the desire to combine their work with household or childcare responsibilities (Boden, 1999; Carr, 1996; Carrasco & Ejrnæs, 2012). The results are shown in Table 6. For men, the findings are generally consistent

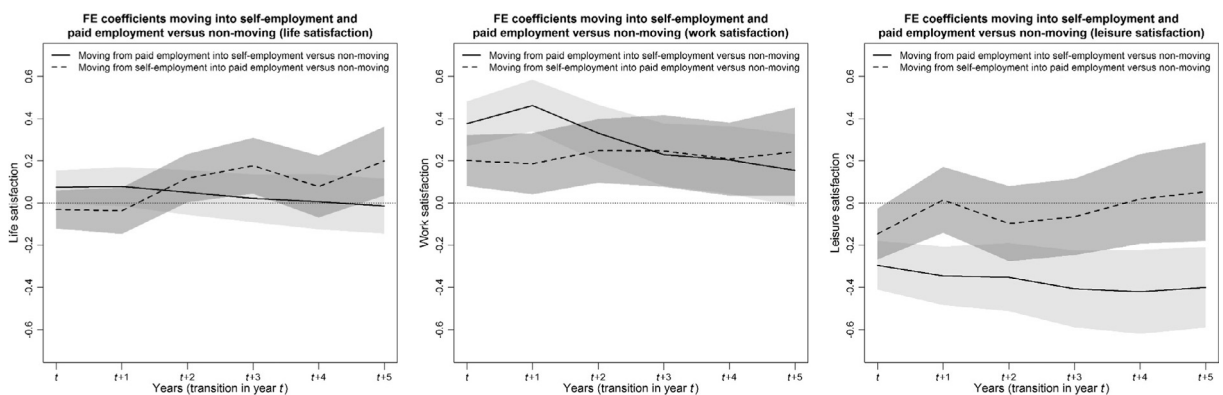


Fig. 2. FE regression coefficients for moving into self-employment and paid employment (graphical representation Table 2), versus non-moving. Notes: The shaded areas represent the 95% confidence intervals.

Table 4

Coefficients of fixed-effects regressions with domain satisfactions added. Dependent variable: life satisfaction.

	(1) Life + domain satisfactions	(2) Life + domain satisfactions
Work satisfaction	0.201 ^{***} (0.002)	0.200 ^{***} (0.002)
Leisure satisfaction	0.116 ^{***} (0.002)	0.116 ^{***} (0.002)
S_t	0.031 (0.036)	0.031 (0.038)
S_{t+1}	0.033 (0.043)	0.032 (0.044)
S_{t+2}	0.030 (0.049)	0.030 (0.050)
S_{t+3}	0.024 (0.054)	0.024 (0.054)
S_{t+4}	0.011 (0.061)	0.011 (0.062)
S_{t+5}	-0.003 (0.061)	-0.003 (0.061)
P_t		-0.053 (0.042)
P_{t+1}		-0.045 (0.051)
P_{t+2}		0.087 (0.054)
P_{t+3}		0.139 [*] (0.061)
P_{t+4}		0.031 (0.073)
P_{t+5}		0.154 [*] (0.076)
Education	0.001 (0.007)	0.001 (0.007)
Married	0.092 ^{***} (0.020)	0.092 ^{***} (0.020)
Widowed/divorced/separated	-0.100 ^{***} (0.030)	-0.101 ^{***} (0.030)
Children	0.007 (0.007)	0.007 (0.007)
Ln(hourly earnings)	0.145 ^{***} (0.010)	0.144 ^{***} (0.010)
Ln(work hours)	0.114 ^{***} (0.010)	0.113 ^{***} (0.010)
Ln(leisure hours)	0.010 ^{**} (0.004)	0.010 ^{**} (0.004)
Intercept	4.676 ^{***} (0.097)	4.678 ^{***} (0.097)
Observations	216,409	216,409
R ² (within)	0.128	0.128
Number of individuals	34,135	34,135

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is "never married".

^{***} p-value ≤ 0.001.^{**} p-value ≤ 0.01.^{*} p-value ≤ 0.05.

with the results for the entire sample in Table 2. The results for women show a noteworthy difference: no significant, negative impact of switching to self-employment on leisure satisfaction is observed for any of the S_{t+j} variables. As a likely consequence, switching to self-employment has some immediate benefits in terms of life satisfaction for women, given the significant, positive coefficient of S_t . Furthermore, the results for work satisfaction are more pronounced for women than they are for men.

4.5. Fixed-effects ordered logit regressions

In Section 3.5, we discussed the difficulties of implementing FE equivalents of ordered logit or probit models. The literature has offered some suggestions for consistent estimators for ordered logit or probit models with fixed effects. Essentially,

Table 5

Coefficients of fixed-effects regressions for the subgroup of switchers that stay in self-employment at least five years (343 switching individuals). Dependent variables: life satisfaction, work satisfaction, leisure satisfaction. Independent variable: switching from paid employment to self-employment.

	(1) Life	(2) Work	(3) Leisure
S_t	0.118 (0.075)	0.483 ^{***} (0.096)	-0.335 ^{**} (0.119)
S_{t+1}	0.137 (0.074)	0.531 ^{***} (0.090)	-0.287 ^{**} (0.111)
S_{t+2}	0.112 (0.074)	0.443 ^{***} (0.086)	-0.322 ^{**} (0.120)
S_{t+3}	0.122 (0.070)	0.341 ^{***} (0.085)	-0.386 ^{***} (0.113)
S_{t+4}	0.030 (0.072)	0.203 [*] (0.089)	-0.464 ^{***} (0.114)
S_{t+5}	0.004 (0.068)	0.165 (0.089)	-0.386 ^{***} (0.100)
Education	0.002 (0.007)	0.019 (0.010)	-0.014 (0.011)
Married	0.092 ^{***} (0.022)	0.064 (0.029)	-0.161 ^{***} (0.031)
Widowed/divorced/separated	-0.087 ^{**} (0.033)	0.100 (0.041)	-0.089 [*] (0.042)
Children	-0.000 (0.007)	0.037 ^{***} (0.009)	-0.145 ^{***} (0.010)
Ln(hourly earnings)	0.181 ^{***} (0.011)	0.170 ^{***} (0.015)	0.050 ^{***} (0.014)
Ln(work hours)	0.103 ^{***} (0.010)	0.085 ^{***} (0.015)	-0.278 ^{***} (0.014)
Ln(leisure hours)	0.043 ^{***} (0.004)	0.024 ^{***} (0.005)	0.244 ^{***} (0.006)
Intercept	7.004 ^{***} (0.101)	6.957 ^{***} (0.141)	7.997 ^{***} (0.143)
Observations	220,980	217,060	220,839
R ² (within)	0.023	0.018	0.031
Number of individuals	34,629	34,157	34,622

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is "never married".

*** p -value ≤ 0.001 .

** p -value ≤ 0.01 .

* p -value ≤ 0.05 .

these estimators largely involve a dichotomization of the dependent variable (Das & Van Soest, 1999; Ferrer-i-Carbonell & Frijters, 2004). To assess the robustness of our main results in Table 2, we apply a recently developed consistent estimator for the ordered logit model with fixed effects, as outlined by Baetschmann, Staub, and Winkelmann (2015); see also Brown and Gray (2016). The results displayed in Table 7 are qualitatively similar to those in Table 2.

5. Discussion

Our analyses show that switching from paid employment to self-employment is significantly positively related to work satisfaction. The benefits in terms of work satisfaction decline after being in self-employment for more years, but the increase remains significantly positive for the group of individuals that stays in self-employment for five years after the switch. Furthermore, we find that individuals who switched to self-employment have significantly lower levels of leisure satisfaction than individuals who do not experience a switch, even those who stay in self-employment for at least five years after the switch. Work satisfaction levels are also higher for individuals who leave self-employment and switch to paid employment, but the increase is smaller than that observed for the switch from paid employment to self-employment during the first three years after switching. Furthermore, individuals who switched to paid employment do not have substantially lower leisure satisfaction levels than the non-switchers.

These results suggest that self-employed individuals, especially self-employed men, struggle with finding a balance between work and leisure. Their satisfaction with work increases at the cost of decreased leisure satisfaction, and these effects are enduring. Hence, the pressure that self-employment places on leisure—as a result of one's responsibility for all aspects of the business, the strong job involvement associated with self-employment, and the limited boundaries between work and leisure—should not be underestimated.⁷ Experiencing work-life imbalance may have severe consequences (Allen,

⁷ We do not find evidence of positive benefits for leisure, as previously been proposed in the literature (that is, that the autonomy and flexibility provided by self-employment enhances work-life balance; see also Binder and Coad (2016) for a negative relationship between self-employment and leisure satisfaction).

Table 6

Coefficients of fixed-effects regressions for men and women. Dependent variables: life satisfaction, work satisfaction, leisure satisfaction. Independent variable: switching from paid employment to self-employment.

	Men			Women		
	(1) Life	(2) Work	(3) Leisure	(4) Life	(5) Work	(6) Leisure
S_t	0.029 (0.049)	0.288*** (0.066)	-0.406*** (0.072)	0.148 [†] (0.065)	0.424*** (0.089)	-0.048 (0.092)
S_{t+1}	0.040 (0.056)	0.367*** (0.073)	-0.470*** (0.089)	0.143 (0.080)	0.550*** (0.113)	-0.028 (0.110)
S_{t+2}	0.026 (0.062)	0.214** (0.081)	-0.374*** (0.098)	0.098 (0.106)	0.501*** (0.121)	-0.266 (0.142)
S_{t+3}	-0.035 (0.069)	0.148 (0.090)	-0.516*** (0.108)	0.162 (0.102)	0.337 (0.134)	-0.077 (0.182)
S_{t+4}	0.029 (0.078)	0.124 (0.094)	-0.516*** (0.126)	-0.077 (0.128)	0.296 (0.159)	-0.143 (0.164)
S_{t+5}	-0.036 (0.076)	0.062 (0.098)	-0.444*** (0.111)	0.018 (0.137)	0.301 (0.179)	-0.248 (0.201)
Education	-0.022 [†] (0.010)	-0.002 (0.013)	-0.024 (0.014)	0.034** (0.012)	0.043** (0.016)	0.009 (0.016)
Married	0.094** (0.029)	0.031 (0.038)	-0.132* (0.041)	0.078 (0.034)	0.081 (0.045)	-0.181*** (0.045)
Widowed/divorced/separated	-0.179*** (0.045)	0.072 (0.055)	-0.072 (0.057)	-0.004 (0.048)	0.117 (0.060)	-0.086 (0.062)
Children	-0.005 (0.009)	0.019 (0.012)	-0.088*** (0.013)	-0.007 (0.012)	0.051** (0.015)	-0.229*** (0.017)
Ln(hourly earnings)	0.235*** (0.016)	0.263*** (0.022)	0.049 (0.021)	0.133*** (0.015)	0.099*** (0.021)	0.021 (0.020)
Ln(work hours)	0.150*** (0.017)	0.190*** (0.024)	-0.379*** (0.023)	0.072** (0.013)	0.031 (0.018)	-0.248*** (0.018)
Ln(leisure hours)	0.040*** (0.005)	0.028*** (0.007)	0.222*** (0.008)	0.047*** (0.007)	0.021*** (0.009)	0.271*** (0.009)
Intercept	6.974*** (0.136)	6.566*** (0.192)	8.562*** (0.193)	6.876*** (0.158)	7.130*** (0.218)	7.535*** (0.217)
Observations	122,771	121,164	122,710	98,209	95,896	98,129
R ² (within)	0.026	0.021	0.031	0.021	0.016	0.034
Number of individuals	18,418	18,228	18,411	16,211	15,929	16,211

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is "never married".

*** p-value ≤ 0.001 .** p-value ≤ 0.01 .* p-value ≤ 0.05 .

Herst, Bruck, & Sutton, 2000), particularly in terms of one's (mental) health (Leineweber, Baltzer, Hanson, & Westerlund, 2013; Lunau, Bambra, Eikemo, Van der Wel, & Dragano, 2014). Policies may be developed to improve work-life balance (Abendroth & Den Dulk, 2011). Future research should include validated measures of work-life balance in a longitudinal context and verify whether this is indeed the mechanism explaining our results.

Whereas our results suggest a tendency toward adaptation in terms of work satisfaction (in terms of decreasing coefficients) after switching to self-employment, there is a clear absence of adaptation for leisure satisfaction. People who switch from paid employment to self-employment may have difficulty adapting to their pre-switch values or coping with their newly obtained self-employed status in terms of balancing work and non-work life. One explanation for this persistent negative impact on leisure satisfaction after switching to self-employment may be that entering self-employment and establishing a business involve extensive time, energy, and effort to prevent the possible threat of business failure for several years after business entry (Evans & Leighton, 1989). Additionally, leisure is valued highly by individuals, as indicated by the inclusion of leisure in time allocation models (Becker, 1965; Lévesque & Minniti, 2006), and difficulty may arise in coping with worse leisure circumstances resulting from life events such as a self-employment switch.

The gender-stratified analyses showed that for women, there is no significant, negative impact of switching to self-employment on leisure satisfaction. Self-employment has some immediate benefits in terms of life satisfaction for women, and the positive relation of self-employment with work satisfaction is stronger for women than for men. Clark (1997) explains gender differences in work satisfaction by citing women's lower expectations. Women could also start from lower work satisfaction levels because they tend to have less well-paid jobs and experience fewer promotion opportunities than men. Future research should test whether Clark's (1997) mechanism also explains our results for leisure satisfaction. Another possible explanation for the finding that the disadvantages in terms of leisure satisfaction are less severe for women is that women more strongly value the flexibility between home and work that self-employment offers (Bender, Donohue, & Heywood, 2005). In addition, women may suffer less from an intense focus on work because they tend to be less committed to their self-employed ventures than men are (Parasuraman, Purohit, Godshalk, & Beutell, 1996).

Table 7

Coefficients of fixed-effects ordered logit regressions. Dependent variables: life satisfaction, work satisfaction, leisure satisfaction. Independent variable: switching from paid employment to self-employment.

	(1) Life	(2) Work	(3) Leisure
S_t	0.109 (0.064)	0.424*** (0.065)	-0.292*** (0.059)
S_{t+1}	0.116 (0.076)	0.522** (0.075)	-0.327*** (0.072)
S_{t+2}	0.068 (0.088)	0.400*** (0.086)	-0.337*** (0.083)
S_{t+3}	0.043 (0.094)	0.274** (0.093)	-0.382*** (0.096)
S_{t+4}	0.027 (0.111)	0.243* (0.103)	-0.383*** (0.106)
S_{t+5}	-0.022 (0.111)	0.177 (0.109)	-0.406*** (0.098)
Education	0.001 (0.013)	-0.015 (0.012)	-0.019 (0.012)
Married	0.147** (0.038)	0.063 (0.036)	-0.193*** (0.035)
Widowed/divorced/separated	-0.064 (0.052)	0.114* (0.049)	-0.118* (0.047)
Children	-0.005 (0.012)	0.042*** (0.012)	-0.167*** (0.011)
Ln(hourly earnings)	0.278*** (0.017)	0.095*** (0.017)	0.055*** (0.016)
Ln(work hours)	0.154*** (0.016)	-0.114*** (0.016)	-0.308*** (0.016)
Ln(leisure hours)	0.064*** (0.007)	0.033*** (0.006)	0.263*** (0.007)
Observations	220,980	217,060	220,839
Pseudo R^2	0.019	0.015	0.023
Number of individuals	34,629	34,157	34,622

Notes: Robust standard errors in parentheses. Year dummies are included. Reference category for marital status is "never married".

*** p -value ≤ 0.001 .

** p -value ≤ 0.01 .

* p -value ≤ 0.05 .

Our results help to explain why the findings of earlier studies on life satisfaction and self-employment are not as consistent as the findings on work satisfaction and self-employment. Namely, we find non-significant increases in life satisfaction and convincing influences of work and leisure satisfaction in opposite directions. The increase in work satisfaction for those who become self-employed is clearly outweighed by their leisure dissatisfaction, placing pressure on their work-life balance and, ultimately, their life satisfaction. Hence, the inclusion of leisure satisfaction in addition to work satisfaction helps to provide a more balanced picture of how the choice of self-employment affects work-life balance and life satisfaction. Furthermore, we find that increased levels of work satisfaction tend to adjust to pre-switch levels for groups of individuals staying in self-employment for longer periods. This suggests a new perspective on claims that self-employment increases work satisfaction because this work satisfaction effect is valid until five years after making the switch from paid employment to self-employment. In addition, we demonstrate that the immediate benefits in terms of work satisfaction are stronger for the switch to self-employment than they are for the switch to paid employment. This result indicates that the positive effects of self-employment on work satisfaction found in some prior studies do not result simply from switching as such.

6. Conclusion

Many governments have implemented policies to stimulate the choice of self-employment (European Commission, 2013; Gilbert et al., 2004). These policies may help to stimulate economic growth, given the positive link between measures of entrepreneurship and economic development that is found in some earlier studies. However, much less is known about the benefits of self-employment at the individual level, and our results suggest that individual-level benefits may be less clear than previous studies suggest. That is, our results offer the following nuanced view (Hanglberger & Merz, 2015): few or no benefits in terms of life satisfaction arise, and the benefits for work satisfaction may come at the cost of decreased individual satisfaction in the important life domain of leisure. The negative consequences experienced in declining leisure satisfaction could hamper entrepreneurial endeavors because of the potential for demotivation and a higher likelihood of entrepreneurial exit. Hence, people who switch to self-employment should be prepared to encounter possible difficulties

in balancing work and non-work life. Importantly, the health consequences could be substantial given the fact that a poor balance between work and non-work leads to stress in the workplace and other unfavorable health-related outcomes (Allen et al., 2000; Leineweber et al., 2013; Lunau et al., 2014). Existing flexible work policies should therefore be extended and should target the self-employed to prevent deterioration in terms of work-life balance and health and an increased prevalence of entrepreneurial exit.

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