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# **The Role of Job Satisfaction in Transitions into Self-Employment**

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## **Abstract**

Self-employment is often seen as an attractive alternative to wage employment, despite lower welfare protection, higher risks, and more required effort than in the latter. It is then important to investigate why individuals choose self-employment. In addition to potential earnings, other factors may be considered, including displacement, uncertainty, unemployment risk, and dissatisfaction. Building on a job quits model, we propose an empirical representation of transitions to self-employment which includes subjective evaluations of pecuniary and nonpecuniary satisfaction on the previous job. Additionally, we focus on the dynamics of job satisfaction, highlighting the role played by shocks in subjective evaluations.

Keywords: self-employment, job satisfaction, job transition, Switzerland

JEL codes: C25, J62, M13

## 1. Introduction

Several studies have shed light on the role played by small-business owners in economic growth (e.g., Lucas, 1978; Kihlstrom and Laffont, 1979; Blau, 1985; Brock et al., 1986; Rees and Shah, 1986; Evans and Leighton, 1989; Carree and Thurik, 2005; Goetz et al., 2012), and on their ability to create new jobs (Birch, 1979; Wagner, 1995; Davis et al., 1996a; 1996b; Neumark et al., 2010; Malchow-Møller et al., 2011). Existing studies on transitions from wage- to self-employment identify start-ups as an important source of business dynamics and innovation (Jovanovic, 1982; Dunne et al., 1987; Evans, 1987a, 1987b; Audretsch and Feldman, 1996; Pakes and Ericson, 1998). At the same time, many policy interventions aiming to encourage self-employment have been implemented by national and regional governments in order to stimulate new employment opportunities and reduce unemployment (Blanchflower, 2000), the feasibility of the latter objective having been tested (e.g., by Thurik et al., 2008; Gohmann and Fernandez, 2014) with generally confirmatory results. Most governments offer assistance to small businesses, providing subsidies for individual start-ups. Universities often contribute as well, establishing start-up centres and incubators, with the dual aim of supporting newly-formed businesses and conducting related research. From a regional development perspective, filling up the gap between wage and self-employment earnings may contribute to the convergence of less dynamic and peripheral areas towards more successful and innovative regions (Reynolds, 1994; 1999; Acs and Armington, 2004).

Consistently with previous work in the field (see, e.g., Douglas and Shepherd, 2002; Cullen et al., 2014), this paper deals with self-employment as a form of entrepreneurship, despite the well-known fact that the former is only a possible declination of the latter.<sup>1</sup> Self-employment attitudes and motivations have been largely investigated at the macro level (Aldrich, 1999). In addition to working conditions and wages, the size of the market, the stage of economic development, but also more dynamic factors such as the business cycle and unemployment (Evans and Leighton, 1990; Taylor, 1996; Blanchflower and Oswald, 1998; Ritsilä and Tervo, 2002), structural characteristics like social security, pension benefits (Quinn, 1980) and taxation (Long, 1982; Blau, 1987; Schuetze, 2000), as well as institutional and cultural conditions (Cullen et al., 2014), have been found to influence self-employment propensity. Moreover, socio-economic phenomena, such as immigration (Borjas and Bronars, 1989) and urbanization, have been pointed out as important factors affecting self-employment at the country level (Acs et al., 1994; Blanchflower, 2000).

However, it is not always clear why individuals choose to start their own business and why they do it, despite this choice generally involving lower protection, higher risks and more effort than what is required in a comparable paid position. Economic models of career choice suggest a process of utility maximization, leading individuals to choose self-employment if the utility associated with this option exceeds the one of an equivalent paid position (Douglas and Shepherd, 2000). Better prospects of income from self-employment relative to wages are therefore traditionally regarded as a major stimulus towards self-employment (Rees and Shah, 1986). However, in addition to pecuniary reasons, other factors need to be considered. Emotional aspects such as displacement or insecurity often precede the formation of a company (Shapiro and Sokol, 1982). At the same time, the risk (or threat) of falling into unemployment, as well as boredom or frustration, seem to positively affect the likelihood to set up a businesses (Wennekers et al., 2001; Hofstede et al., 2004). Moreover, people expect to gain utility from work effort, risk bearing, independence, and other working conditions (Douglas and Shepherd, 2002). Finally, as outlined by Brockhaus (1982), self-employed individuals generally evaluate previous jobs as ‘unsatisfactory’, in terms of both the

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<sup>1</sup> The Global Entrepreneurship Monitor (GEM) defines entrepreneurship as ‘any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business’ (Bosma et al., 2012: 9). It should be noted that individuals who establish a legal entity in which they work as employees are not counted as self-employed. On the other hand, artists are self-employed, but are not commonly regarded as being entrepreneurs.

job itself, and of supervision and career opportunities. However, all such *ex post* evaluations (i.e., collected once the transition has already been made) may be influenced by the opportunities offered in the new working position.

Using the information derived from a sample of individuals continuously surveyed during their work experience, we look at the *ex ante* factors that are expected to influence the probability of choosing self-employment. In particular, we propose a representation of transition behaviour from wage to self-employment which includes (previous) subjective evaluations of job satisfaction and other personal and job-related characteristics. Rather than including the level of satisfaction in the current job or assessments regarding past jobs characteristics, we rely on subjective levels of satisfaction that were reported *before* the choice was made, so as to measure real/actual perceptions about past working conditions. Among the satisfaction variables we include some that specifically account for pecuniary and nonpecuniary job aspects, so as to capture differences in individuals' reactions with respect to both forms of labour outcomes. By also including decisions about job change, which we regard as the 'soft', or less risky, alternative with respect to self-employment, we are able to test whether the reactions to a low level of satisfaction are different for the two alternatives. Finally, we aim to show the effects of short-term variations in the degree of satisfaction.

In this paper, we aim to contribute to the empirical evidence on self-employment choices in two ways. First, by explicitly addressing both pecuniary and nonpecuniary causes of transitions, we show that individuals react differently to low satisfaction levels with regard to income or to working conditions (i.e. pecuniary and nonpecuniary factors). Second, we study transitions to self-employment together with those to new paid jobs, to investigate whether the push factors that are mentioned as leading to self-employment could also lead to job switches into new paid employment. By disentangling the antecedents of self-employment from those of new paid employment, we aim to provide a better understanding of the former.

Our results, computed over an extensive data set of Swiss individual data (described in Section 3), suggest that pecuniary and nonpecuniary job satisfaction significantly affects transitions to self-employment and job changes. However, their effects are differentiated. While those who change job are more reactive to nonpecuniary dissatisfaction, those who choose self-employment tend to do so in reaction to low levels of pecuniary satisfaction. Variations in job satisfaction are also found to significantly influence transition probabilities.

The remainder of the paper is structured as follows. In Section 2, we discuss the literature on the determinants of self-employment transitions and we present the empirical model proposed in this paper. In Section 3, we briefly describe our data. In Section 4, we present empirical estimates for our model of self-employment transitions. In Section 5, we summarize and discuss our findings.

## **2.Literature Review and Model**

Existing research on self-employment transitions makes a wide use of rational agent-based models assuming that individuals choose self-employment if the expected utility of this option exceeds the one associated with wage employment (Casson, 1982; Baumol, 1990). Better prospects of earnings from self-employment activities as compared to wages are, according to the greater part of this literature, a major stimulus towards self-employment (Rees and Shah, 1986; Fujii and Hawley, 1991; Taylor, 1996).

However, besides pecuniary motivations, other factors come into consideration when it comes to occupational choice. Recently, the assumption that earnings act as a proxy for utility has been

relaxed. Hamilton (2000) shows that the nonpecuniary benefits of self-employment are substantial, with most individuals entering – and staying in – business despite lower initial earnings and lower earnings growth with respect to wage employment (for a discussion of the trade-off between independence and wage, see Croson and Minniti, 2012). Although there are other plausible explanations for this kind of stickiness (e.g., barriers to exit or the inability to rejoin paid work easily, as well as an (irrational) rise of commitment to self-employment), nonpecuniary aspects need to be addressed. Evans and Leighton (1990) and Taylor (1996) find that, besides higher expected earnings, the independence offered by self-employment positively influences individual decisions towards business ownership. Moreover, several personality traits have been found to influence the self-employment process (Shane et al., 2003). Individuals who have a marked need for achievement are more likely to become self-employed and to succeed (Collins et al., 2004). The same appears to happen for risk-taking individuals, even if they generally do not perceive their actions as risky (Corman et al., 1988). Firm founders also appear to differ from the general population in terms of locus of control (Shapiro, 1975; Bowen and Hisrich, 1986), self-efficacy (Baum, 1994), and in cultural-cognitive terms (Knörr et al., 2013). Moreover, socioeconomic characteristics have been found to (positively) influence self-employment choices, especially during favourable economic cycles: access to technology, financial means, demand for goods and services, market opportunities and innovation (Mason, 1989; Giacomini et al., 2011).

A nonpecuniary aspect which is often advocated as a major driving force in self-employment is the one associated with (dis-)satisfaction. Brockhaus (1982) finds self-employed workers to be relatively strongly dissatisfied with their previous (dependent) work, supervision and career opportunities. More generally, emotional factors such as feeling inappropriate/displaced and uncertainty often precede the formation of a company (Shapiro and Sokol, 1982), and self-employment can allow individuals to cope with negative emotions better (Patzelt and Shepherd, 2011). Indeed, at the macro level, countries with lower rates of satisfaction with life and society in general have been shown to experience higher self-employment rates (Noorderhaven et al., 2004). Moreover, (the threat of) unemployment, as well as being bored or angered, has been shown to positively affect self-employment choices (Wennekers et al., 2001; Hofstede et al., 2004). Thus, individuals dissatisfied with their job may be expected to be more inclined to enter self-employment. As a result, self-employed individuals generally report higher satisfaction with their job than employees (Blanchflower and Freeman, 1997; Blanchflower and Oswald, 1998; Blanchflower, 2000; Taylor, 2004). These kinds of *ex post* assessments, however, could be influenced by the opportunities offered in the new position, or by the need for self-justification.

A promising representation of the choice problem faced by individuals addressing the question of whether or not to leave a paid position for venturing into self-employment is the one provided by the job quits literature (Flanagan et al., 1974; Freeman, 1978; McEvoy and Cascio, 1985; Akerlof et al., 1988; Clark et al., 1999). Within this framework, it is assumed that individuals consider the opportunity of voluntarily leaving their job as a function of their expectations regarding pecuniary and nonpecuniary benefits outside of the current employer compared to those offered inside, in addition to mobility costs (Lévy-Garboua et al., 2007). Job quits are observed among individuals reporting a positive difference between the sums of pecuniary and nonpecuniary benefits and costs of current and future positions, where job satisfaction is a monotonic, discrete function of these sums (Akerlof et al., 1988). Dissatisfied workers have higher quit rates than satisfied workers because the former perceive the expected present value of their job as being lower with respect to the one offered by outside opportunities. Alternatively, mobile workers experience greater increases in satisfaction if they were willing to leave than if they were not (Bartel and Borjas, 1981; Gottschalk and Maloney, 1985; Clark, 2001). As a result, quitters report higher satisfaction levels in their new job than in their old one (Akerlof et al., 1988).

We propose a representation of transition behaviour from wage to self-employment (see **Figure 1**) which includes (previous) subjective evaluations of job satisfaction. We assume that transitions to self-employment are taken into consideration if the expected pecuniary and nonpecuniary (net) benefits of self-employment are greater than those in paid work. However, since individuals do not have complete and adequate information on these potential benefits *before* entering self-employment, and since they are likely to estimate them on the basis on their experience, their level of education and existing opportunities, job satisfaction variables can be seen as an indicator summing up perceptions about the comparative advantage of remaining in the current job against the alternatives (Clark and Oswald, 1996; Taylor, 2004). Moreover, we assume that there are differences between workers’ reactions with respect to pecuniary and nonpecuniary job aspects, and thus we include satisfaction variables regarding both. Unlike most of the studies cited above, we are able to discriminate between the evaluations regarding pecuniary and nonpecuniary benefits, and to address the question of whether the inclusion of subjective variables and their variations in time matter in modelling self-employment transitions and job changes.

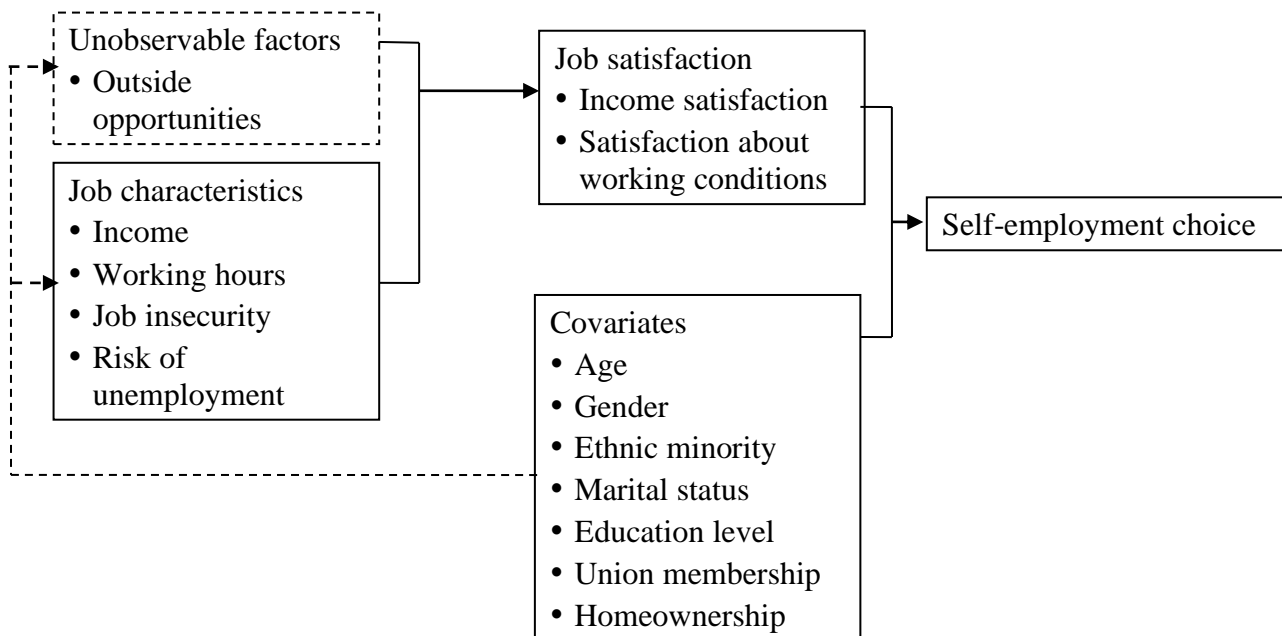


Figure 1: Our model of self-employment choice

In order to facilitate a comparison with the existing literature on job quits, and to investigate whether job satisfaction affects the latter and self-employment transitions differently (as we might expect, since the former decision might be more conservative and less risky), we consider also those who quit their job but remain in paid employment.

Given the existence of self-selection bias in models explaining individual choices towards self-employment (Dennis, 1996; Hughes, 2003; Benz and Frey, 2008; Dawson et al., 2009) – optimistic individuals may choose to enter self-employment or to simply evaluate differently the costs that the more heterodox option (self-employment) implies in terms of mobility and risks – we include controls for objective job characteristics, so as to regard job satisfaction as the ‘excess’ reward in the current paid job with respect to average rewards potentially available to the worker in self-employment.

Moreover, given the (relatively) high persistence of job satisfaction levels and the reduced propensity to react to dissatisfaction with longer tenure and greater age (Cornelißen, 2009), we propose to look not only at the level of job satisfaction, but also at its variation. Variations in this variable may hide recent changes in working conditions and serious concerns about the current and future job position. Moreover, since it is likely that, when assessing their satisfaction, workers also include general assessments regarding available alternatives, changes in job satisfaction may reveal the opening of new opportunities against which a comparison is made, or improvements in the pre-existing alternatives.

Our empirical strategy is as follows. For a cross-section of individuals reporting a working status as employee at time  $t - 1$  and  $t - 2$ , we estimate the effects of (dis-)satisfaction and other determinants on transition probabilities by means of a multinomial logit model (MNL; McFadden, 1974; Greene, 2007) taking the form:

$$\Pr(y_t = i) = \frac{e^{X_{t-1,t-2}\beta^{(i)}}}{\sum_i e^{X_{t-1,t-2}\beta^{(i)}}}, \quad (1)$$

where  $i$  represents the outcomes of the transition function  $y$ , evaluated at time  $t$ , and  $X$  are the explanatory variables evaluated at time  $t - 1$  and  $t - 2$ . In our model, we assume three possible outcomes: “staying in the current (paid) job”, “changing job/employer”, and “changing status from wage- to self-employed”. We thus estimate two sets of coefficients,  $\beta^{(2)}$  and  $\beta^{(3)}$ , corresponding to the second and third outcomes, respectively, where  $\beta^{(1)}$  is set to zero for identification purposes.  $\Pr(y_t = i)$  is the probability that the worker will choose the outcome  $i$  at time  $t$ . Probabilities of transition are linked to the individual and job characteristics, including job satisfaction levels evaluated at time  $t - 2$  and recent variations in job satisfaction.<sup>2</sup> The matrix of covariates  $X$  includes standard socioeconomic variables (see below) evaluated at time  $t - 1$ . Time fixed effects, controlling for the influence of the business cycle on transition decisions, are incorporated in the model as well.

Job satisfaction is evaluated on a 0–10 scale, where 0 corresponds to the answer “not at all satisfied” and 10 is “completely satisfied”. Dynamic effects of satisfaction on transition probabilities are accounted for through the inclusion of the percentage change between the individual’s satisfaction level at time  $t - 1$  and the level of satisfaction expressed in the year before, divided by the latter:

$$\frac{\Delta x_{t-1}}{x_{t-2}} = \frac{x_{t-1} - x_{t-2}}{x_{t-2}}. \quad (2)$$

In addition to satisfaction measures, we control for objective job characteristics. The log of personal income is used as a measure of pecuniary rewards, while in order to control for nonpecuniary aspects, we include variables measuring the number of weekly worked hours, and variables regarding the self-assessed feeling of job insecurity (ranged 1–5), which is found by Cornelißen (2009) to exacerbate the effects of dissatisfaction, and the risk of falling into unemployment (on a 0–10 scale). As for the satisfaction variables, we include both levels and percentage changes (as in Equation (2)).

A set of additional variables is used to control for differences in human and financial capital: the level of education (distinguishing between individuals with a vocational or a university degree against the reference of those with basic education), union membership, and homeownership. The

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<sup>2</sup> We select satisfaction levels at time  $t - 2$  in order to interpret them, in our model specification, as initial levels, while variations in job satisfaction measure changes from the satisfaction level evaluated at time  $t - 2$  to the level in  $t - 1$ .



latter variable is included since previous studies have shown that both self-employment probabilities and earnings are strongly influenced by liquidity constraints (Evans and Jovanovic, 1989; Holtz-Eakin et al., 1994; Black et al., 1996; Lindh and Ohlsson, 1996; Blanchflower and Oswald, 1998). Moreover, financial capital, and in particular real estate, is an important source of collateral for self-employed individuals, and is expected to reduce the default premia (Henley, 2005).<sup>3</sup>

Furthermore, we control for age (which is expected to capture both work experience and wealth accumulation possibilities), nationality, marital status,<sup>4</sup> and gender. In addition to their specific effect, some of these characteristics may be expected to capture differences in individual perceptions of, and attitudes towards, risk (risk aversion): individuals may be differently aware of the risk of failure in self-employment or of unemployment in paid work, or be more prone to leave wage employment if, for example, visa issues are not a concern or if they are single (for an overview of the factors influencing the probability of entering self-employment, see Georgellis et al., 2005).

### 3.Data

About 650,000 individuals operate as self-employed agents in Switzerland, including incorporated self-employed (i.e., employed by their own company) and family workers (FSO, 2011a).<sup>5</sup> Comprising more than 15 per cent of all economically active individuals, they run businesses in the retail, trade, manufacturing, financial and insurance sectors, as well as in accommodation and food services (FSO, 2000, 2011a).

Despite the recent rise in numbers – the Swiss self-employment rate peaked at 18 per cent in 1997 – Switzerland has a relatively low proportion of self-employed individuals in comparative terms (OECD, 2011).<sup>6</sup> The fact that earnings differentials between self-employed and dependent workers still play in favour of the latter could be a reason (FSO, 2011a, 2011b). Moreover, Switzerland has historically low unemployment rates and good working conditions, which may have prevented individuals from taking unnecessary risks.

The combination of higher wages and low unemployment, along with the recent removal of restrictions on EU citizens wishing to live or work in Switzerland, have made the country particularly attractive for immigrants (both resident immigrants and cross-border commuters). As a result, Switzerland is experiencing a flourishing labour market trend. In 2011, the number of employed individuals rose by 2.6 per cent, while in the European Union and the Euro zone employment stagnated (FSO, 2011a). The small but performing Swiss labour market is particularly well suited to study labour market outcomes, because of the intensifying competition and the resulting changes in employment behaviour, even with substitution effects among resident and non-resident workers being observed in border regions (Losa et al., 2012). In this framework, self-employment may be seen as a way to escape unemployment risk and unsatisfactory working conditions. These recent developments, rather specific to the Swiss case, were accompanied by accelerated structural changes common to most industrialized economies, such as increased labour

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<sup>3</sup> It would be worth to address parental background as well, and more specifically the example (familiar role models) provided by the parents, which has been shown to represent a powerful predictor of the propensity towards business ownership. Although our data set would allow to control for parental occupation, unfortunately the number of cases recorded is too small to provide significant insights.

<sup>4</sup> Data on registered (and dissolved) partnership have been introduced only in more recent waves (2007).

<sup>5</sup> FSO stands for the Swiss Federal Statistical Office.

<sup>6</sup> In 2010, Switzerland was the 29th country in the OECD ranking, far below the leading countries – Turkey, Greece, Mexico, Korea, Chile and Italy, each displaying more than 25 per cent of self-employed people on total employment – and also lower than the OECD average (15.9 per cent).

mobility, part-time work, and youth entrepreneurship. In this view, our results can be extended in particular to other small countries in Europe (Luxembourg, Denmark, Belgium, the Netherlands), as well as to (cross-border) urban contexts in larger countries.

Our empirical analysis makes use of waves 1–10 of the Swiss Household Panel (SHP), a unique longitudinal database for Switzerland, for the time period 1999–2008. We select men and women above age 18 in the first wave and under age 65 in the last wave, obtaining a sample of over 38,000 observations regarding economically active and inactive individuals who are tracked during the ten years of the survey.

Transitions between four possible employment status categories across all panel waves are summarized in Table 1. As it can be seen from it, the majority of the individuals in wage employment stay in that category from one year to another (more than 92 per cent). Only a small proportion of employees at any time turn to self-employment in the following year (1.9 per cent). Nearly 4 per cent quit wage employment and exit the labour force (presumably retiring, for the most part), and very few become unemployed (1.2 per cent). Among those who were self-employed at  $t - 1$ , more than 78 per cent remain self-employed in the following year, whereas a considerable minority transits into wage employment (15.7 per cent) or exit the labour force (5.1 per cent), suggesting that, on average, the self-employed are older than wage employees. In general, self-employment is less stable than wage employment, although transition rates into unemployment and inactivity do not differ much for these two categories. Finally, among those who were unemployed in year  $t - 1$ , the most frequent occurrence is to become either employed or inactive (54.9 and 19.7 per cent respectively) or to remain in unemployment (22.8 per cent). Few individuals enter self-employment (2.6 per cent), although this probability is higher than for those in wage employment, supporting the expectation of a ‘push’ effect of unemployment towards self-employment (Thurik et al., 2008; Gohmann and Fernandez, 2014). Among those recorded as inactive, the majority remains inactive in the following year (76.4 per cent) or enters wage employment (18.1 per cent). Transitions into self-employment or unemployment are again rare.

Table 1: Transitions between employment categories

Year $t - 1$	Year $t$				Total cases
	Employed	Self-employed	Unemployed	Inactive	
Employed	25,419 (92.6)	511 (1.9)	316 (1.2)	1,207 (4.4)	27,453 (100.0)
Self-employed	524 (15.7)	2,626 (78.6)	19 (0.6)	171 (5.1)	3,340 (100.0)
Unemployed	387 (54.9)	18 (2.6)	161 (22.8)	139 (19.7)	705 (100.0)
Inactive	1,208 (18.1)	192 (2.9)	173 (2.6)	5,105 (76.4)	6,678 (100.0)
Total cases	27,538 (72.1)	3,347 (8.8)	669 (1.8)	6,622 (17.3)	38,176 (100.0)

Note: Transition probabilities between brackets. Transitions refer to the occupational status of individuals observed at any time  $t$  in relation to their status at time  $t - 1$ . Individuals aged 18–65 and living in Switzerland are considered for the years 1999–2008.

In order to analyse transitions from wage- to self-employment, we restrict the data to only the cases in which individuals were employed at times  $t - 1$  and  $t - 2$  and either (1) stayed in wage employment without changing their job/employer (henceforth, the ‘stayers’), (2) voluntarily quit their job and switched to a new employer (‘job changers’) or (3) became self-employed<sup>7</sup> (‘self-

<sup>7</sup> Unfortunately, our SHP data set does not allow us to distinguish between self-employed individuals with or without employees.

employed') at time  $t$ . The information is drawn from the pooled sample of observations from 2001 (Wave 3) to 2008 (Wave 10), which has been further restricted in order to select cases where information on all the listed covariates was available. We reduce our panel data set to a cross-section, where each (employed) individual is observed only once and for three consecutive years. For individuals changing job or entering self-employed, the years selected are the one where the change appears for the first time and the two preceding years (i.e., until  $t - 2$ ), while for each of the individuals who never change job during the observation period, we randomly choose a three-year period. The selection of the per-individual observation period is taken into account by means of year dummies. This procedure confines our analysis to a sample of 4,713 individuals among which 3,004 stay in the previous job (63.7 per cent), 1,266 change jobs (26.9 per cent) and 443 (9.4 per cent) enter self-employment at some time.

In order to investigate the drivers of transitions we consider the variables listed in Table 2. They account for the level of satisfaction regarding pecuniary and nonpecuniary job aspects, human and financial endowments, as well as for other demographic and job characteristics. Correlation matrices for all variables are provided in Appendix A.

Table 3 provides separate descriptive statistics for the samples of the stayers, job changers, and the self-employed. We test differences in the means with  $t$ -tests against the null hypothesis of equality in the means in the tested groups, and report our findings in Table 4.

The level of satisfaction with income in the sample of job changers and in the one of self-employed is on average lower than the one of the stayers (6.9, 7.0 and 7.3, respectively, see Table 3), suggesting that dissatisfaction linked to pecuniary aspects may act as a push factor. On the other hand, although percentage changes in income satisfaction are slightly higher among the former two groups than in the control group of the stayers, all values are very close to zero and heterogeneity is high.

The level of satisfaction with working conditions is on average higher among individuals who choose self-employment than in the reference group of stayers (8.2 and 7.9, respectively), while the job changers are the least satisfied (7.5). This evidence suggests that the self-employed benefit from more advantageous job conditions in their previous job, or they assess them in a more optimistic way than the ones deciding to stay in wage employment (either changing their job/employer or not). Variations in job satisfaction regarding nonpecuniary aspects are also higher among the group of those that turn to self-employment than among individuals deciding to stay in wage employment, either changing their job or not, but again average variations are small and heterogeneity is high.

In general, in all samples there is less heterogeneity for assessments regarding the level of satisfaction with working conditions than with income. Moreover, in all samples the percentage change in income satisfaction is on average higher than the one in nonpecuniary satisfaction, which may indicate that improvements in the perceptions regarding pecuniary job aspects are more likely to occur (consistently with the underlying distribution of income, that is expected to be more linear in time), even if the high heterogeneity observed suggests that there are many winners and losers.

Table 2: Variable definitions

<i>Variable Name</i>	<i>Definition</i>
<b>Satisfaction</b>	
Satisfaction: income	Self-evaluated degree of satisfaction for income of current main job (from 0 'not at all satisfied' to 10 'completely satisfied')
% change in satisfaction: income	As in Equation (2)
Satisfaction: job conditions	Self-evaluated degree of satisfaction for work conditions of current main job (from 0 'not at all satisfied' to 10 'completely satisfied')
% change in satisfaction: job conditions	As in Equation (2)
<b>Demographics</b>	
Age	Age in the year of interview
Male	Gender of the respondent: male 1; female 0
Ethnic minority	First nationality of the respondent: foreign 1; Swiss 0
Not married	Civil status in year of interview: not married 1; married 0
<b>Human and financial capital</b>	
Education2	Highest level of education achieved: secondary education 1; elementary education 0
Education3	Highest level of education achieved: tertiary education 1; elementary education 0
Union membership	Syndicate/employees association membership: member (active/passive) 1; not a member 0
Homeownership	Home property: owner/co-owner 1; tenant 0
<b>Objective work characteristics</b>	
Income (CHF/1,000)	Yearly total personal income, net
% change in income	As in Equation (2)
Working hours	Number of hours worked per week
% change in working hours	As in Equation (2)
Job (in-)security	Self-evaluated feeling of job security: very secure 1; quite secure 2; a bit insecure 3; very insecure 5
% change in job (in-)security	As in Equation (2)
Risk of unemployment	Self-evaluated risk of becoming unemployed in the next 12 months: from 0 'no risk at all' to 10 'a real risk'
% change in risk of unemployment	As in Equation (2)

Note: all variables are extracted from the SHP and relate to workers living in Switzerland in the time period 1999–2008.

Table 3: Descriptive statistics, by group

	<i>Stayers</i>					<i>Job changers</i>					<i>Self-employed</i>				
	Mean	Median	S.D.	Min	Max	Mean	Median	S.D.	Min	Max	Mean	Median	S.D.	Min	Max
Satisfaction															
Satisfaction:															
Income	7.30	8.00	1.99	0.00	10.00	6.86	7.00	2.19	0.00	10.00	6.97	7.00	2.25	0.00	10.00
% change in satisfaction:															
Income	0.03	0.00	0.39	-1.00	9.00	0.06	0.00	0.59	-1.00	9.00	0.05	0.00	0.49	-1.00	7.00
Satisfaction:															
job conditions	7.91	8.00	1.72	0.00	10.00	7.50	8.00	1.87	0.00	10.00	8.25	8.00	1.62	2.00	10.00
% change in satisfaction:															
job conditions	0.03	0.00	0.31	-1.00	7.00	0.00	0.00	0.36	-1.00	3.00	0.04	0.00	0.36	-1.00	3.50
Demographics															
Age	43.75	45.00	11.22	19.00	64.00	36.25	36.00	11.04	19.00	64.00	45.54	46.00	10.19	20.00	64.00
Male	0.49	0.00	0.50	0.00	1.00	0.47	0.00	0.50	0.00	1.00	0.55	1.00	0.50	0.00	1.00
Ethnic minority	0.11	0.00	0.31	0.00	1.00	0.11	0.00	0.31	0.00	1.00	0.08	0.00	0.27	0.00	1.00
Not married	0.36	0.00	0.48	0.00	1.00	0.54	1.00	0.50	0.00	1.00	0.25	0.00	0.43	0.00	1.00
Human and financial capital															
Education2	0.14	0.00	0.34	0.00	1.00	0.16	0.00	0.37	0.00	1.00	0.20	0.00	0.40	0.00	1.00
Education3	0.13	0.00	0.34	0.00	1.00	0.17	0.00	0.37	0.00	1.00	0.21	0.00	0.41	0.00	1.00
Union membership	0.24	0.00	0.43	0.00	1.00	0.19	0.00	0.39	0.00	1.00	0.15	0.00	0.36	0.00	1.00
Homeownership	0.51	1.00	0.50	0.00	1.00	0.45	0.00	0.50	0.00	1.00	0.65	1.00	0.48	0.00	1.00
Objective work characteristics															
Income (CHF/1,000)	62.45	58.50	42.58	0.00	425.30	55.75	49.95	57.79	0.00	1,620.00	72.28	49.25	99.58	0.00	1,620.00
% change in income	0.31	0.03	3.55	-1.00	119.00	0.34	0.03	3.44	-1.00	85.93	0.22	0.00	1.21	-1.00	11.76
Working hours	31.35	35.00	11.98	0.00	85.00	32.58	35.00	11.52	0.00	80.00	32.66	35.00	15.41	0.00	80.00
% change in working hours	0.19	0.00	1.98	-1.00	49.00	0.24	0.00	2.05	-1.00	41.00	0.08	0.00	0.63	-1.00	6.00
Job (in-)security	1.70	2.00	0.73	1.00	5.00	2.02	2.00	0.98	1.00	5.00	1.82	2.00	0.85	1.00	5.00
% change in job (in-)security	0.09	0.00	0.50	-0.80	4.00	0.21	0.00	0.72	-0.80	4.00	0.11	0.00	0.59	-0.80	4.00
Risk of unemployment	1.59	1.00	2.22	0.00	10.00	2.90	2.00	3.02	0.00	10.00	1.68	0.00	2.60	0.00	10.00
% change in risk of unemployment	-0.13	-0.29	0.99	-1.00	9.00	0.22	0.00	1.42	-1.00	9.00	-0.07	-0.20	1.21	-1.00	9.00
Cases	1,572					780					218				

Note: The data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008.

Table 4: *t*-tests on mean equality of explanatory variables

	<i>t</i> (job changers vs stayers)	<i>t</i> (self-employed vs stayers)	<i>t</i> (self-employed vs job changers)
Satisfaction			
Satisfaction:	7.13***	3.42***	-1.01
income			
% change in satisfaction:	-1.75*	-1.28	0.05
income			
Satisfaction:	7.68***	-4.11***	-8.03***
job conditions			
% change in satisfaction:	2.73***	-0.77	-2.17**
job conditions			
Demographics			
Age	22.23***	-3.40***	-16.76***
Male	1.27	-2.30**	-2.89***
Ethnic minority	0.15	2.05**	1.85*
Not married	-12.54***	4.76***	11.77***
Human and financial capital			
Education2	-2.42**	-3.71***	-1.88*
Education3	-3.22***	-4.45***	-2.04**
Union membership	3.93***	4.43***	1.90*
Homeownership	4.28***	-5.67***	-7.89***
Objective work characteristics			
Income (CHF/1,000)	4.30***	-3.62***	-4.30***
% change in income	-0.26	0.49	0.67
Working hours	-3.12***	-2.15**	-0.12
% change in working hours	-0.66	1.21	1.61
Job (in-)security	-11.65***	-3.21***	3.89***
% change in job (in-)security	-6.31***	-0.70	2.81***
Risk of unemployment	-15.89***	-0.78	7.94***
% change in risk of unemployment	-7.11***	-0.87	2.79***

Note: \* denotes means significantly differing from the reference group at 10% significance level, \*\* 5%, \*\*\* 1%. Data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008.

The average age in the self-employed sample is 45.5, which is significantly higher than the average age of 43.8 in the stayers sample. Job changers are on average much younger (36.2). Consistently with the evidence collected elsewhere (see, e.g., Wilson et al., 2007), our data show a gender gap: there is a higher share of males in the self-employed sample than in the stayers and changers ones (55 per cent, compared to 49 and 47 per cent, respectively). The self-employed sample has a significantly lower proportion of foreigners than the other samples, which reflects a peculiarity of the Swiss labour market, where immigrants are less likely than natives to become self-employed (Guerra et al., 2012). The percentage of non-married individuals (single, divorced or widow) is considerably higher among the job changers (54 per cent) than among the stayers and the self-employed (36 and 25 per cent).

With regard to the proxies for human and financial endowments, self-employment candidates seem to be more likely to have attained a vocational (20 per cent) or university degree (21 per cent) than those staying in wage employment (16 and 17 per cent among the job changers; 14 and 13 per cent among the stayers). There are significant differences between the shares of those who are members of a union in the three groups (24 per cent among the stayers, 19 among the changers and only 15 among the self-employed). Homeownership rates are higher among the self-employed than among the stayers and the changers (65 per cent, against 51 and 45 per cent, respectively). This preliminary evidence suggests that the probability of transition towards self-employment is, as expected, associated positively with the level and quality of both human and financial capital, and negatively with union membership, this latter result possibly being related to the different work functions of individuals belonging to the two groups.

Self-employed candidates earn much more (CHF9,830 more per year, +15.7 per cent), in their previous job (at time  $t - 2$ ), than the average stayer, while prospective job changers report on average significantly lower earnings (CHF6,700 less per year, -10.7 per cent). Differences among the three averages are significant at the 1 per cent level. However, heterogeneity in the self-employed sample is particularly high.<sup>8</sup> There are little, although significant, differences between the working hours reported in the three samples, with a higher number of hours dedicated by the job changers and the self-employed to their working activity. Similarly, differences between those deciding to stay in the current job, the job changers and those turning to self-employment can be found with regard to the level of job insecurity, with an average level of 1.7, 2.0 and 1.8, respectively. Finally, there is little exposure to unemployment risk in both the stayers and the self-employed samples (1.6 and 1.7, respectively), while job changers are significantly more exposed (2.9).

We abstain from considering the industrial and professional composition of our sample, since the inclusion of these characteristics was found to capture objective work conditions, without increasing goodness of fit. Furthermore, the high number of missing values for these variables would considerably reduce our sample size. Similarly, the inclusion of regional dummies was found not to affect our results.

#### 4. Empirical Results

Our MNL model, consistently with Equation (1), is estimated by maximum likelihood (ML) using the covariates discussed in Section 3, and using the subsample of the stayers as the reference category. Table 5 reports a first set of estimates: the first column shows the vector of regression coefficients and standard errors for the job changers, while the second column reports estimation results for the individuals who choose self-employment.

The inclusion of satisfaction variables improves the goodness of fit (with respect to a base model including only objective job and personal characteristics, not shown), without affecting sign and significance of other coefficient estimates (McFadden's pseudo- $R^2$  of 0.17 against 0.15 in the base model; AIC 1,751.74 against 3,198.98; BIC 2,023.60 against 3,470.62 in the base model). A  $\chi^2$ -based likelihood ratio (LR) test confirms that the inclusion of subjective variables leads to a highly significant model improvement.

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<sup>8</sup> In fact, the median income among the stayers (CHF58, 500) is higher than for the job changers (CHF49, 950) and the self-employed candidates (CHF49,250), which is consistent with FSO data (FSO, 2011a).

Table 5: MNL estimates for the transition probability of choosing a new job or becoming self-employed

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
<b>Satisfaction</b>				
Satisfaction: income	-0.023	0.037	-0.213***	0.061
% change in satisfaction: income	0.229	0.156	-0.373	0.297
Satisfaction: job conditions	-0.172***	0.043	0.255***	0.079
% change in satisfaction: job conditions	-0.821***	0.213	0.426	0.353
<b>Objective work characteristics</b>				
Income (CHF, log)	-0.158	0.098	-0.686***	0.152
% change in income	-0.654	1.106	-1.331	2.064
Working hours	0.007	0.006	0.019*	0.010
% change in working hours	-0.034	0.033	-0.032	0.072
Job (in-)security	0.231**	0.091	0.139	0.163
% change in job (in-)security	0.059	0.127	-0.216	0.234
Risk of unemployment	0.084***	0.030	0.003	0.053
% change in risk of unemployment	0.056	0.058	0.088	0.105
<b>Demographics</b>				
Age	-2.183***	0.229	0.174	0.407
Male	-0.069	0.130	0.599**	0.247
Ethnic minority	-0.085	0.176	-0.216	0.322
Not married	0.202	0.123	-0.308	0.225
<b>Human and financial capital</b>				
Education2	0.756***	0.144	0.618**	0.247
Education3	0.740***	0.155	1.326***	0.254
Union membership	-0.205	0.129	-0.628**	0.257
Homeownership	-0.037	0.115	0.201	0.200
(Intercept)	9.016***	1.119	2.377	1.914
Observations	4,301			
LR $\chi^2$ (dof)	2,085			
McFadden's pseudo- $R^2$	567.91 (54)			
AIC	0.16			
BIC	3118.52			
Log-likelihood	3434.50			

Note: ML estimates of the probability to transit from a current paid job to either a new one or self-employment. Year dummy variables are included but not shown. Data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.

According to our results, job satisfaction significantly affects transition probabilities, although its effects are different for job changers and self-employed. On the one hand, the level of satisfaction regarding pecuniary job rewards (i.e., income) negatively affects the probability of entering self-employment, whereas the effect on the chances of changing job is not statistically significant. Thus, income dissatisfaction represents a push factor for choosing self-employment, while it does not affect job quits. Variations in income satisfaction do not seem to affect neither self-employment probabilities, nor job changes. After converting the log-odds-ratio coefficients estimated against the



reference category (see Table 6), we can see that an increase of one unit in satisfaction over income decreases by 19 per cent the probability of becoming self-employed against the one of staying in the current job ( $e^{-0.21} = 0.81$ ). The effect of recent shocks is instead more limited, as the 0.69 marginal effect (–21 per cent) on the odds-ratio refers to a considerable variation (100 per cent increase) of satisfaction. On the other hand, the level of satisfaction about nonpecuniary job aspects (i.e., work conditions) negatively influences the relative probability of job quits ( $e^{-0.17} = 0.84$ ) (versus staying), but positively the one of moving towards self-employment ( $e^{0.26} = 1.30$ ). These results are reinforced by the effects of the same sign found for the variation variable.

Table 6: Converted (odds-ratio) MNL coefficients for satisfaction variables (vs the reference category)

	<i>Job changers</i>	<i>Self-employed</i>
Satisfaction: income	0.98	0.81***
% change in satisfaction: income	1.26	0.69
Satisfaction: job conditions	0.84***	1.30***
% change in satisfaction: job conditions	0.44***	1.54

Note: See Table 5 for the original estimated coefficients. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.

We argue that individual perceptions regarding pecuniary and nonpecuniary job rewards do matter when deciding to take the risk of quitting an existing job for a new career (possibly in self-employment). According to our results, job changers do not change for money but to improve their working conditions (e.g., to get away from annoying colleagues/boss or to get a more satisfying job), whereas self-employment candidates are generally more satisfied with their working conditions (most likely because of different job functions) but change mostly in hopes of increasing their income. Consistently with these findings, recent shocks to satisfaction were found to reinforce individual choices, especially for those who seek another job.

The opposite signs found for the effects of our two measures of job satisfaction on transition probabilities towards self-employment may reflect differences in the workers' reactions between subjective evaluations of pecuniary and nonpecuniary aspects. Such differences may arise because of the different nature and distribution of the underlying work characteristics (income and job conditions, respectively). Moreover, one might argue that it is easier, for the worker, to assess satisfaction with current earnings (by comparing them with what was earned in the past, with earnings in comparable positions and with expectations regarding future earnings, thanks to an underlying variable – i.e., income – that is generally increasing over time) than with work conditions (which are more subject to favourable and unfavourable changes and less easily comparable with what is offered by the alternatives). Finally, problems of self-selection may arise, where more optimistic workers may choose to become self-employed.

As for the effects of the objective job characteristics, we find a negative effect for the level of (log) income on self-employment probabilities, which suggests that higher wages provide a disincentive for transitions into self-employment, while there are no apparent effects on job quits. The number of hours worked is positively associated to transition probabilities for self-employment candidates, suggesting that there is a certain degree of self-selection of the most active/assiduous workers for

more challenging outcomes.<sup>9</sup> As for the effects of the other measures of objective working conditions, both the level of self-reported job insecurity and risk of unemployment do not seem to significantly influence transitions to self-employment, but they positively affect job quits. This result is consistent with the expectation stated in Section 2 that the feeling of job insecurity exacerbates satisfaction (Cornelißen, 2009). Self-employed can be expected to be less sensitive to this factor, as they (presumably) accepted the risk associated with an independent job, while the career of wage employees depend on the employer's choices. Differences in job conditions also do not seem to affect outcomes.

With regard to our control variables, the probability of quitting appears to be negatively influenced by the age of the respondent, as well as by gender (i.e., males are less likely to quit, consistently with previous evidence on income penalties; see, e.g., Judiesch and Lyness, 1999; Schmeer and Reitman, 2006), whereas the opposite holds for the probability to enter self-employment,<sup>10</sup> although the effect of age is not significant in this case. Nationality does not seem to affect transition probabilities (most likely because of the very few foreigners in our sample), whereas being single or divorced decreases the probability of entering self-employment, because of the inability of singles to draw on the partners' pecuniary and nonpecuniary contributions (which may be crucial, especially in the early times of self-employment).

Transition probabilities are positively affected by the level of education, suggesting that higher levels of human capital – as expected – increase knowledge regarding the alternatives,<sup>11</sup> whereas unionized workers are more reluctant to change their job/status. Education may then actually reinforce the effect of job dissatisfaction, as suggested by Cornelißen (2009). Homeownership is seen as a factor positively influencing self-employment transitions, consistently with Henley (2005), since it reflects wealth accumulation and because of the fact that housing wealth usually represents a source of collateral for business ownership. Finally, time dummies are mostly significant, reflecting business cycle dynamics.

## 5. Conclusions

The recent increase of self-employment in Switzerland (in a trend consistent with the rest of the world) has raised the attention of the academic community and of the public on the effects of small business growth on economic development. The strong belief that small businesses foster innovation and competitiveness has led to a number of policy interventions aiming to encourage start-up activities, although their effects are often disputed. In this framework, it is important to investigate the reasons why individuals choose self-employment, and why they do it despite lower protection, higher risks, and often more effort than what is offered in a comparable wage employment position.

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<sup>9</sup> This hypothesis is somehow related to the surprising results found by Taylor (2004) for job satisfaction levels of the self-employed, which report higher levels of job satisfaction with hours of work than employees, despite the well-documented fact that the former work in general harder than the latter (Blanchflower, 2004).

<sup>10</sup> Given the different underlying probabilities of changing job or entering self-employment observed for males and females, we carried out a sensitivity analysis in order to investigate the robustness of our findings on the two subsamples. The regression results given in Appendix B show that the findings for our variables of interest (i.e., job satisfaction) hold. Therefore, we choose to present in the main text only the pooled results.

<sup>11</sup> In fact, education emerges as a powerful estimator of both job changes and self-employment entries in all the sensitivity analyses we carried out. In one of these analyses (see Table C.1 in Appendix C, tertiary education is found to significantly interact with the level of income. We interpret this result as the (positive) moderating effect of education on the (negative) effect of income on transition probabilities. In comparison to their less educated colleagues, workers with higher education assess in a less dramatic way the opportunity cost of leaving a job, which is given by the current level of income. In other words, highly educated workers feel freer to decide on their future, for example because they have more opportunities available.

Using microdata from a panel of Swiss individuals for the years 1999–2008, we investigate the factors that are expected to affect the probability of choosing self-employment (or, alternatively, of just quitting a job for another), given a previous employment position. The availability of panel data allows us to observe the occupational dynamics of each individual, as well as his/her self-assessed satisfaction over pecuniary and nonpecuniary job characteristics, and the actual working conditions, along both dimensions. Such a data setting enables us to condition observed changes in terms of occupational status on the *status quo* (in terms of job satisfaction and objective working conditions) recorded *before* the change, differently from most of the related literature. Also, we are able to discriminate between the drivers of job change and of transitions towards self-employment.

We show that job satisfaction significantly affects transition probabilities towards self-employment or just new jobs. However, its effects are different for the two cases examined. Those who choose self-employment over a paid job tend to do so in reaction to low levels of pecuniary satisfaction, amid the fact that their level of nonpecuniary satisfaction is higher than for the reference group of the stayers). On the other hand, job changers are more reactive to nonpecuniary dissatisfaction. Therefore, the distinction between pecuniary and nonpecuniary satisfaction allows us to uncover different effects of subjective job assessments on transition probabilities that a single satisfaction measure would not capture. Variations in job satisfaction are also found to influence transition probabilities (e.g., shocks to income satisfaction may actually push individuals towards a job change).

The limitations of our study could be addressed in several directions. From a theoretical viewpoint, a microeconomic model describing the relationship between satisfaction (in levels and variations) and occupational choice should ideally be developed to improve the economic identification and interpretation of the effects commented upon in this paper. From a methodological viewpoint, our analysis could be enhanced by considering a specific order or nesting between the occupational choices considered here. Consequently, ordered or nested logit approaches could be tested in further studies, although our diverging results on the effects of pecuniary and nonpecuniary satisfaction on job changers and self-employed seem to suggest that the two occupational choices should be seen as alternative and motivated by opposite factors (dissatisfaction with working conditions and income, respectively). Moreover, nested logit estimation would require information on the characteristics of the alternative job opportunities. From an empirical viewpoint, it should be pointed out that our analysis did not include, among the transition determinants, the size of the employing firm, therefore not allowing us to evaluate the potential efforts of personnel management offices. Additionally, logit analyses for the decision of entering self-employment (from wage employment) could be compared to similar ones on the decision of leaving self-employment for wage employment, in order to evaluate a possible dual effect of satisfaction over pecuniary and nonpecuniary factors. Finally, it would be interesting to test whether our findings are confirmed for other developed and developing economies and large commuting areas, in particular in the presence of different regulation in support of self-employment (such as bankruptcy laws; see, e.g., Armour and Cumming, 2008). It also seems interesting, in perspective, to investigate if the job changers and self-employed studied in this paper have actually found better conditions in their new occupation once the choice been made.

Some policy considerations may be attempted, on the basis of our findings. The divergent reactions of the job changers and self-employed with respect to (time and cross-sectional) differences in pecuniary and nonpecuniary satisfaction suggest that, on the one hand, if they want to reduce turnover, managers should pay attention to employees who are dissatisfied with actual working conditions (since job changers have been found to be particularly exposed to such issues). Paying more attention to the employees' personal needs, offering flexibility and social interaction opportunities, are some of the measures that could be considered. On the other hand, if their aim is to reduce the risks of future competition, managers should care about pecuniarily dissatisfied

workers, given their higher probability of switching to self-employment. In this case, specific incentives and bonus structures, along with a challenging position, could be well suited. Moreover, it is likely that, given the dominance of levels over variations in job satisfaction, workers will tend to absorb temporary shocks in job satisfaction without changing their perception about the available alternatives. Therefore, more attention is needed for those individuals that show persistently low satisfaction levels.

Finally, considering our results, it might be worth asking ourselves why an individual would express a different level of satisfaction over income than another individual receiving the same income. It seems reasonable to assume that self-employment candidates are somehow ‘predestined’ to start a business (e.g., they might have been self-employed before). Indeed, in their preceding job they are among the most active workers and they are generally less sensitive with respect to working conditions. This process of (self-)selection of less satisfied workers into more suitable jobs is expected to favour the job matching process, allowing for a more effective match between the needs of the workers and of businesses. Moreover, the competition generated by employees-turned-self-employed, if in the same business field, may foster growth and economic development. Therefore, from a general perspective, these choices – though they often reflect objective and/or subjective problems – should be favoured rather than deterred. Facilitating them (e.g., by means of specific start-up programs, youth employment measures, micro- and facilitated credit) could give rise to efficiency and productivity gains in labour markets, thanks to an improved distribution of skills and aspirations between employees and independent workers.

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## References

- Acs Z and Armington C (2004) Employment Growth and Entrepreneurial Activity in Cities. *Regional Studies* 38: 911-927.
- Acs ZJ, Audretsch DB and Evans DS (1994) Why Does the Self-Employment Rate Vary Across Countries and Over Time? CEPR Discussion Papers 871. London: CEPR.
- Akerlof GA, Rose AK, Yellen JL, et al. (1988) Job Switching and Job Satisfaction in the U.S. Labor Market. *Brookings Papers on Economic Activity* 1988: 495-594.
- Aldrich H (1999) *Organizations Evolving*, London Thousand Oaks: Sage Publications.
- Armour J and Cumming D (2008) Bankruptcy Law and Entrepreneurship. *American Law and Economics Review* 10: 303-350.
- Audretsch DB and Feldman MP (1996) R&D Spillovers and the Geography of Innovation and Production. *The American Economic Review* 86: 630-640.
- Bartel AP and Borjas GJ (1981) Wage Growth and Job Turnover: An Empirical Analysis. In: Rosen S (ed) *Studies in labor markets*. Chicago London: The University of Chicago Press, 65-90.

- Baum R (1994) The Relation of Traits, Competencies, Vision, Motivation, and Strategy for Venture Growth. Unpublished Ph.D. Thesis., University of Maryland, College Park.
- Baumol WJ (1990) Entrepreneurship: Productive, Unproductive, and Destructive. *Journal of Political Economy* 98: 893-921.
- Benz M and Frey BS (2008) Being Independent is a Great Thing: Subjective Evaluations of Self-Employment and Hierarchy. *Economica* 75: 362-383.
- Birch DL (1979) *The Job Generation Process*, Cambridge: M.I.T. Program on Neighborhood and Regional Change.
- Black J, Meza Dd and Jeffreys D (1996) House Prices, The Supply of Collateral and the Enterprise Economy. *The Economic Journal* 106: 60-75.
- Blanchflower DG (2000) Self-Employment in OECD Countries. *Labour Economics* 7: 471-505.
- Blanchflower DG (2004) Self-Employment: More May not Be Better. *Swedish Economic Policy Review* 11: 15-74.
- Blanchflower DG and Freeman RB (1997) The Attitudinal Legacy of Communist Labor Relations. *Industrial and Labor Relations Review* 50: 438-459.
- Blanchflower DG and Oswald AJ (1998) What Makes an Entrepreneur? *Journal of Labor Economics* 16: 26-60.
- Blau DM (1985) Self-Employment and Self-Selection in Developing Country Labor Markets. *Southern Economic Journal* 52: 351-363.
- Blau DM (1987) A Time-Series Analysis of Self-Employment in the United States. *Journal of Political Economy* 95: 445-467.
- Borjas GJ and Bronars SG (1989) Consumer Discrimination and Self-Employment. *Journal of Political Economy* 97: 581-605.
- Bosma N, Wennekers S and Amorós JE (2012) Global Entrepreneurship Monitor 2011 Extended Report: Entrepreneurs and Entrepreneurial Employees across the Globe. London: Global Entrepreneurship Monitor.
- Bowen DD and Hisrich RD (1986) The Female Entrepreneur: A Career Development Perspective. *The Academy of Management Review* 11: 393-407.
- Brock WA, Evans DS and Phillips BD (1986) *The Economics of Small Businesses: Their Role and Regulation in the U.S. Economy*, New York: Holmes & Meier.
- Brockhaus RH (1982) The Psychology of the Entrepreneur. In: Kent CA, Sexton DL and Vesper KH (eds) *Encyclopedia of entrepreneurship*. Englewood Cliffs: Prentice-Hall, Inc., 39-56.
- Carree MA and Thurik AR (2005) The Impact of Entrepreneurship on Economic Growth. In: Acs ZJ and Audretsch DB (eds) *Handbook of Entrepreneurship Research*. Boston Dordrecht London: Kluwer Academic Publishers, 437-471.
- Casson M (1982) *The Entrepreneur: An Economic Theory*, Totowa: Barnes & Noble Books.
- Clark A, Georgellis Y and Sanfey P (1999) Job Satisfaction, Wage Changes and Quits: Evidence from Germany. *Research in Labor Economics* 17: 95-121.
- Clark AE (2001) What Really Matters in a Job? Hedonic Measurement Using Quit Data. *Labour Economics* 8: 223-242.
- Clark AE and Oswald AJ (1996) Satisfaction and Comparison Income. *Journal of Public Economics* 61: 359-381.
- Collins CJ, Hanges PJ and Locke EA (2004) The Relationship of Achievement Motivation to Entrepreneurial Behavior: A Meta-Analysis. *Human Performance* 17: 95-117.
- Corman J, Perles B and Vancini P (1988) Motivational Factors Influencing High-Technology Entrepreneurship. *Journal of Small Business Management* 26: 36-42.
- Cornelißen T (2009) The Interaction of Job Satisfaction, Job Search, and Job Changes. An Empirical Investigation with German Panel Data. *Journal of Happiness Studies* 10: 367-384.
- Crosan DC and Minniti M (2012) Slipping the Surly Bonds: The Value of Autonomy in Self-Employment. *Journal of Economic Psychology* 33: 355-365.

- Cullen JB, Johnson JL and Parboteeah KP (2014) National Rates of Opportunity Entrepreneurship Activity: Insights from Institutional Anomie Theory. *Entrepreneurship Theory and Practice* (forthcoming).
- Davis SJ, Haltiwanger J and Schuh S (1996a) Small Business and Job Creation: Dissecting the Myth and Reassessing the Facts. *Small Business Economics* 8: 297-315.
- Davis SJ, Haltiwanger JC and Schuh S (1996b) *Job Creation and Destruction*. Available at: URL|.
- Dawson CJ, Henley A and Latreille PL (2009) Why Do Individuals Choose Self-Employment? IZA Discussion Paper 3974.
- Dennis WJ (1996) Self-Employment: When Nothing Else Is Available? *Journal of Labor Research* 17: 645-661.
- Douglas EJ and Shepherd DA (2000) Entrepreneurship as a Utility Maximizing Response. *Journal of Business Venturing* 15: 231-251.
- Douglas EJ and Shepherd DA (2002) Self-employment as a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization. *Entrepreneurship Theory and Practice* 26: 81-90.
- Dunne T, Roberts M and Samuelson L (1987) The Impact of Plant Failure on Employment Growth in the US Manufacturing Sector. Unpublished manuscript. University Park: Pennsylvania State University.
- Evans DS (1987a) The Relationship Between Firm Growth, Size, and Age: Estimates for 100 Manufacturing Industries. *The Journal of Industrial Economics* 35: 567-581.
- Evans DS (1987b) Tests of Alternative Theories of Firm Growth. *Journal of Political Economy* 95: 657-674.
- Evans DS and Jovanovic B (1989) An Estimated Model of Entrepreneurial Choice under Liquidity Constraints. *Journal of Political Economy* 97: 808-827.
- Evans DS and Leighton LS (1989) Some Empirical Aspects of Entrepreneurship. *The American Economic Review* 79: 519-535.
- Evans DS and Leighton LS (1990) Small Business Formation by Unemployed and Employed Workers. *Small Business Economics* 2: 319-330.
- Flanagan RJ, Strauss G and Ulman L (1974) Worker Discontent and Work Place Behavior. *Industrial Relations: A Journal of Economy and Society* 13: 101-123.
- Freeman RB (1978) Job Satisfaction as an Economic Variable. *The American Economic Review* 68: 135-141.
- FSO (2000) *Federal Population Census*. Database available at: <http://www.bfs.admin.ch/bfs/portal/en/index.html>.
- FSO (2011a) *Statistical Yearbook 2011*, Zurich: Verlag Neue Zürcher Zeitung.
- FSO (2011b) *Statistisches Jahrbuch der Schweiz 2011 - Digital*. CD-Rom.
- Fujii ET and Hawley CB (1991) Empirical Aspects of Self-Employment. *Economics Letters* 36: 323-329.
- Georgellis Y, Sessions JG and Tsitsianis N (2005) Self-Employment Longitudinal Dynamics: A Review of the Literature. *Economic Issues* 10: 51-84.
- Giacomin O, Janssen F, Guyot J-I, et al. (2011) Opportunity and/or Necessity Entrepreneurship? The Impact of the Socio-Economic Characteristics of Entrepreneurs. MPRA Paper 29506.
- Goetz SJ, Fleming DA and Rupasingha A (2012) The Economic Impacts of Self-Employment. *Journal of Agricultural and Applied Economics* 44: 315-321.
- Gohmann SF and Fernandez JM (2014) Proprietorship and Unemployment in the United States. *Journal of Business Venturing* 29: 289-309.
- Gottschalk P and Maloney T (1985) Involuntary Terminations, Unemployment, and Job Matching: A Test of Job Search Theory. *Journal of Labor Economics* 3: 109-123.
- Greene WH (2007) *Econometric Analysis*, Upper Saddle River: Prentice-Hall.

- Guerra G, Patuelli R and Maggi R (2012) Ethnic Concentration, Cultural Identity and Immigrant Self-Employment in Switzerland. In: Nijkamp P, Poot J and Sahin M (eds) *Migration Impact Assessment: New Horizons*. Cheltenham Northampton: Edward Elgar, 147-171.
- Hamilton Barton H (2000) Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self - Employment. *Journal of Political Economy* 108: 604-631.
- Henley A (2005) Job Creation by the Self-employed: The Roles of Entrepreneurial and Financial Capital. *Small Business Economics* 25: 175-196.
- Hofstede G, Noorderhaven NG, Thurik AR, et al. (2004) Culture's Role in Entrepreneurship: Self-Employment out of Dissatisfaction. In: Brown TE and Ulijn J (eds) *Innovation, Entrepreneurship and Culture: The Interaction between Technology, Progress and Economic Growth*. Cheltenham Northampton: Edward Elgar Publishing, 162-203.
- Holtz-Eakin D, Joulfaian D and Rosen HS (1994) Entrepreneurial Decisions and Liquidity Constraints. *The RAND Journal of Economics* 25: 334-347.
- Hughes KD (2003) Pushed or Pulled? Women's Entry into Self-Employment and Small Business Ownership. *Gender, Work & Organization* 10: 433-454.
- Jovanovic B (1982) Selection and the Evolution of Industry. *Econometrica* 50: 649-670.
- Judiesch MK and Lyness KS (1999) Left Behind? The Impact of Leaves of Absence on Managers' Career Success. *Academy of Management Journal* 42: 641-651.
- Kihlstrom RE and Laffont J-J (1979) A General Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion. *Journal of Political Economy* 87: 719-748.
- Knörr H, Alvarez C and Urbano D (2013) Entrepreneurs or Employees: A Cross-Cultural Cognitive Analysis. *International Entrepreneurship and Management Journal* 9: 273-294.
- Lévy-Garboua L, Montmarquette C and Simonnet V (2007) Job Satisfaction and Quits. *Labour Economics* 14: 251-268.
- Lindh T and Ohlsson H (1996) Self-Employment and Windfall Gains: Evidence from the Swedish Lottery. *The Economic Journal* 106: 1515-1526.
- Long JE (1982) Income Taxation and the Allocation of Market Labor. *Journal of Labor Research* 3: 259-276.
- Losa FB, Bigotta M and Gonzalez O (2012) Libera Circolazione: Gioie o Dolori? Valutazione degli Impatti sul Mercato del Lavoro Svizzero dell'Abolizione della Priorità d'Impiego ai Lavoratori Indigeni. Bellinzona: Ustat.
- Lucas RE, Jr. (1978) On the Size Distribution of Business Firms. *The Bell Journal of Economics* 9: 508-523.
- Malchow-Møller N, Schjerning B and Sørensen A (2011) Entrepreneurship, Job Creation and Wage Growth. *Small Business Economics* 36: 15-32.
- Mason CM (1989) Explaining Recent Trends in New Firm Formation in the UK: Some Evidence from South Hampshire. *Regional Studies* 23: 331-346.
- McEvoy GM and Cascio WF (1985) Strategies for Reducing Employee Turnover: A Meta-Analysis. *Journal of Applied Psychology* 70: 342-353.
- McFadden D (1974) Conditional Logit Analysis of Qualitative Choice Behavior. In: Zarembka P (ed) *Frontiers in Econometrics*. New York: Academic Press, 105-142.
- Neumark D, Wall B and Zhang J (2010) Do Small Businesses Create More Jobs? New Evidence for the United States from the National Establishment Time Series. *Review of Economics and Statistics* 93: 16-29.
- Noorderhaven N, Thurik R, Wennekers S, et al. (2004) The Role of Dissatisfaction and per Capita Income in Explaining Self-Employment across 15 European Countries. *Entrepreneurship Theory and Practice* 28: 447-466.
- OECD (2011) *OECD Factbook 2011: Economic, Environmental and Social Statistics*. Database available at: <http://www.credreference.com/book/oecdfactbook>.
- Pakes A and Ericson R (1998) Empirical Implications of Alternative Models of Firm Dynamics. *Journal of Economic Theory* 79: 1-45.

- Patzelt H and Shepherd DA (2011) Negative Emotions of an Entrepreneurial Career: Self-Employment and Regulatory Coping Behaviors. *Journal of Business Venturing* 26: 226-238.
- Quinn JF (1980) Labor-Force Participation Patterns of Older Self-Employed Workers. *Soc Secur Bull* 43: 17-28.
- Rees H and Shah A (1986) An Empirical Analysis of Self-Employment in the U.K. *Journal of Applied Econometrics* 1: 95-108.
- Reynolds P (1994) Autonomous Firm Dynamics and Economic Growth in the United States, 1986–1990. *Regional Studies* 28: 429-442.
- Reynolds PD (1999) Creative Destruction: Source or Symptom of Economic Growth? In: Acs ZJ, Carlsson B and Karlsson C (eds) *Entrepreneurship, Small & Medium-Sized Enterprises and the Macroeconomy*. Cambridge New York Melbourne: Cambridge University Press, 97-136.
- Ritsilä J and Tervo H (2002) Effects of Unemployment on New Firm Formation: Micro-Level Panel Data Evidence from Finland. *Small Business Economics* 19: 31-40.
- Schneer J and Reitman F (2006) Time out of Work: Career Costs for Men and Women US Managers. *Equal Opportunities International* 25: 285-298.
- Schuetze HJ (2000) Taxes, Economic Conditions and Recent Trends in Male Self-Employment: A Canada–US Comparison. *Labour Economics* 7: 507-544.
- Shane S, Locke EA and Collins CJ (2003) Entrepreneurial Motivation. *Human Resource Management Review* 13: 257-279.
- Shapiro A (1975) The Displaced, Uncomfortable Entrepreneur. *Psychology Today* 9: 83-88.
- Shapiro A and Sokol L (1982) The Social Dimensions of Entrepreneurship. In: Kent CA, Sexton DL and Vesper KH (eds) *Encyclopedia of entrepreneurship*. Englewood Cliffs: Prentice-Hall, Inc., 72-90.
- Taylor M (2004) Self-Employment in Britain: When, Who and Why? *Swedish Economic Policy Review* 11: 139-173.
- Taylor MP (1996) Earnings, Independence or Unemployment: Why Become Self-Employed? *Oxford Bulletin of Economics and Statistics* 58: 253-266.
- Thurik AR, Carree MA, van Stel A, et al. (2008) Does Self-Employment Reduce Unemployment? *Journal of Business Venturing* 23: 673-686.
- Wagner J (1995) Firm Size and Job Creation in Germany. *Small Business Economics* 7: 469-474.
- Wennekers S, Noorderhaven N, Hofstede G, et al. (2001) Cultural and Economic Determinants of Business Ownership across Countries. In: Bygrave WD, Autio E, Brush CG, et al. (eds) *Frontiers of Entrepreneurship Research 2001: Proceedings of the Twenty-First Annual Entrepreneurship Research Conference*. Babson Park: Center for Entrepreneurial Studies, Babson College, 179-190.
- Wilson F, Kickul J and Marlino D (2007) Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurship Theory and Practice* 31: 387-406.



## Appendix A

Table A.1 and Table A.2 present pairwise correlations between all the explanatory variables employed in this paper. The data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008.

Table A.1: Correlation matrix

	<i>Satisfaction: income</i>	<i>% change in satisfaction: income</i>	<i>Satisfaction: job conditions</i>	<i>% change in satisfaction: job conditions</i>	<i>Income (CHF/1,000)</i>	<i>% change in income</i>	<i>Working hours</i>	<i>% change in working hours</i>
Satisfaction: income	1							
% change in satisfaction: income	-0.45***	1						
Satisfaction: job conditions	0.41***	-0.15***	1					
% change in satisfaction: job conditions	-0.16***	0.24***	-0.51***	1				
Income (CHF/1,000)	0.14***	-0.01*	-0.06***	-0.01*	1			
% change in income	-0.03***	0.04***	0.02***	-0.01	0.1***	1		
Working hours	-0.02**	0.00	-0.05***	0.00	0.47***	-0.02**	1	
% change in working hours	-0.01*	0.02**	0.00	0.01*	-0.05***	0.06***	0.09***	1
Job (in-)secur.	-0.14***	0.00	-0.13***	-0.03***	-0.07***	0.00	-0.05***	0.02***
% change in job (in-)secur.	0.01**	-0.04***	0.04***	-0.07***	-0.03***	0.00	0.00	0.01
Risk of unempl.	-0.16***	0.00	-0.16***	-0.02***	-0.05***	-0.01	-0.01**	0.01
% change in risk of unempl.	0.00	-0.02**	0.00	-0.07***	0.01	-0.02**	0.00	-0.02*
Age	0.10***	-0.03***	0.05***	-0.02***	0.31***	-0.13***	-0.04***	-0.04***
Male	0.00	-0.01*	-0.06***	0.00	0.38***	-0.03***	0.46***	-0.01**
Ethnic minority	-0.07***	0.00	-0.07***	0.00	0.00	-0.01	0.04***	-0.01
Not married	-0.08***	0.02***	-0.06***	0.00	-0.06***	0.06***	0.11***	0.00
Educ.2	0.04***	0.00	0.00	0.00	0.19***	-0.03***	0.11***	-0.01*
Educ.3	0.04***	0.01	-0.01	0.00	0.23***	0.00	0.05***	-0.01
Union memb.	0.04***	-0.01**	-0.08***	0.00	0.19***	-0.03***	0.07***	-0.01**
Homeown.	0.09***	-0.01	0.08***	0.00	-0.05***	0.01	-0.07***	0.00

Notes: \* identifies statistically significant correlations at the 10% level (two-tailed); \*\* 5%; \*\*\* 1%.

Table A.2: Correlation matrix (continued)

	Job (in- )secur.	% change in job (in- )secur.	Risk of unempl.	% change in risk of unempl.	Age	Male	Ethnic minority	Not married	Educ.2	Educ.3	Union memb.	Homeown.
Job (in-)secur.	1											
% change in job (in- )secur.	0.52***	1										
Risk of unempl.	0.45***	0.15***	1									
% change in risk of unempl.	0.21***	0.21***	0.61***	1								
Age	-0.01**	-0.03***	-0.05***	-0.02**	1							
Male	0.00	0.00	0.00	0.01*	-	1						
Ethnic minority	0.05***	0.01	0.06***	0.00	0.02***	0.02***	1					
Not married	0.04***	0.02***	0.06***	0.02***	-	0.49***	0.00	-0.07***	1			
Educ.2	-0.01	-0.01	-0.01	0.00	0.10***	0.14***	-0.05***	-0.06***	-	1		
Educ.3	-0.01**	-0.01**	-0.03***	0.00	0.05***	0.07***	0.04***	-0.01***	0.14***	-	1	
Union memb.	-0.01***	-0.01*	-0.03***	-0.02**	0.08***	0.11***	-0.03***	-0.04***	0.06***	0.05***	-	1
Homeown.	-0.03***	0.00	-0.06***	-0.01*	0.14***	0.03***	-0.2***	-0.22***	0.05***	0.02***	0.01**	-
												1

Notes: \* identifies statistically significant correlations at the 10% level (two-tailed); \*\* 5%; \*\*\* 1%.

## Appendix B

The following tables report the estimates obtained by computing separate regressions for men and women. Table B.1 reports our results for men, while Table B.2 reports the ones for women. Our results are shown to be robust to gender issues, as all coefficients for job satisfaction are stable in sign and statistical significance. With regard to the strength of the job satisfaction effects, for women they appear to be weaker when it comes to the decision of changing jobs (as an employee), and stronger in the case of the self-employment choice.

Table B.1: MNL estimates for the transition probability of men choosing a new job or becoming self-employed

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
<b>Satisfaction</b>				
Satisfaction: income	0.007	0.058	-0.179*	0.093
% change in satisfaction: income	0.554**	0.269	-0.020	0.449
Satisfaction: job conditions	-0.196***	0.061	0.183*	0.105
% change in satisfaction: job conditions	-1.064***	0.322	-0.016	0.457
<b>Objective work characteristics</b>				
Income (CHF, log)	-0.166	0.174	-0.474	0.292
% change in income	-1.902	1.915	-3.701	4.058
Working hours	-0.002	0.009	0.028*	0.016
% change in working hours	-0.059	0.038	-0.094	0.155
Job (in-)security	0.434***	0.136	0.173	0.227
% change in job (in-)security	0.003	0.178	-0.230	0.318
Risk of unemployment	0.103**	0.044	0.013	0.079
% change in risk of unemployment	0.002	0.083	-0.019	0.157
<b>Demographics</b>				
Age	-2.117***	0.355	0.144	0.568
Ethnic minority	0.087	0.234	-0.149	0.412
Not married	-0.067	0.175	-0.448	0.300
<b>Human and financial capital</b>				
Education2	0.809***	0.187	0.378	0.304
Education3	1.039***	0.209	1.073***	0.340
Union membership	-0.157	0.170	-0.811**	0.333
Homeownership	-0.113	0.154	0.071	0.259
(Intercept)	8.606***	1.799	0.548	3.134
Observations	1,135			
LR $\chi^2$ (dof)	332.16 (52)			
McFadden's pseudo- $R^2$	0.17			
AIC	1,751.74			
BIC	2,023.60			
Log-likelihood	-821.87			

Note: ML estimates of the probability to transit from a current paid job to either a new one or self-employment. Year dummy variables are included but not shown. Data are drawn from the SHP and

refer to male workers living in Switzerland in the years 1999–2008. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.

Table B.2: MNL estimates for the transition probability of women choosing a new job or becoming self-employed

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
<b>Satisfaction</b>				
Satisfaction: income	−0.034	0.050	−0.235***	0.086
% change in satisfaction: income	0.026	0.168	−0.623	0.404
Satisfaction: job conditions	−0.167***	0.063	0.388***	0.132
% change in satisfaction: job conditions	−0.658**	0.292	1.229*	0.634
<b>Objective work characteristics</b>				
Income (CHF, log)	−0.362***	0.136	−0.847***	0.213
% change in income	0.748	1.488	−0.659	2.658
Working hours	0.008	0.009	0.007	0.015
% change in working hours	−0.064	0.074	0.056	0.115
Job (in-)security	0.062	0.128	0.105	0.244
% change in job (in-)security	0.095	0.189	−0.199	0.359
Risk of unemployment	0.057	0.041	−0.010	0.076
% change in risk of unemployment	0.110	0.084	0.217	0.143
<b>Demographics</b>				
Age	−2.318***	0.320	−0.003	0.648
Ethnic minority	−0.308	0.281	0.008	0.544
Not married	0.629***	0.205	0.138	0.396
<b>Human and financial capital</b>				
Education2	0.828***	0.243	1.054**	0.447
Education3	0.453*	0.245	1.763***	0.402
Union membership	−0.274	0.207	−0.254	0.416
Homeownership	0.097	0.178	0.400	0.332
(Intercept)	11.895***	1.673	3.969	3.111
Observations	950			
LR $\chi^2$ (dof)	285.12 (52)			
McFadden's pseudo- $R^2$	0.18			
AIC	1.418.87			
BIC	1,681.11			
Log-likelihood	−655.43			

Note: ML estimates of the probability to transit from a current paid job to either a new one or self-employment. Year dummy variables are included but not shown. Data are drawn from the SHP and refer to female workers living in Switzerland in the years 1999–2008. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.

## Appendix C

The following tables report additional estimates obtained by including interactions terms between different sets of variables. With regard to the interaction term between tertiary education and income (Table C.1), we find a significant interaction, which we interpret as a (positive) moderating effect of education on the (negative) effect exerted by income on transition probabilities. As mentioned in Footnote 11, this finding appears to suggest that highly educated workers feel freer to decide on their future, for example because they have more opportunities available. Instead, we find no significant interaction between income and job satisfaction with regard to working conditions (in level and percentage change) (Table C.2).

Table C.1: MNL estimates for the transition probability of choosing a new job or becoming self-employed – Model with income and education interactions

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
<b>Satisfaction</b>				
Satisfaction: income	-0.028	0.037	-0.217***	0.062
% change in satisfaction: income	0.228	0.153	-0.401	0.293
Satisfaction: job conditions	-0.168***	0.043	0.260***	0.079
% change in satisfaction: job conditions	-0.826***	0.213	0.394	0.353
<b>Objective work characteristics</b>				
Income (CHF, log)	-0.243**	0.106	-0.736***	0.164
% change in income	-0.453	1.105	-1.244	2.090
Working hours	0.006	0.006	0.018*	0.010
% change in working hours	-0.039	0.033	-0.036	0.070
Job (in-)security	0.241***	0.091	0.135	0.163
% change in job (in-)security	0.060	0.127	-0.226	0.236
Risk of unemployment	0.084***	0.030	0.010	0.053
% change in risk of unemployment	0.056	0.058	0.086	0.105
<b>Demographics</b>				
Age	-2.181***	0.230	0.173	0.407
Male	-0.082	0.130	0.622**	0.249
Ethnic minority	-0.087	0.177	-0.232	0.323
Not married	0.221*	0.124	-0.261	0.227
<b>Human and financial capital</b>				
Education2	-1.677	2.841	4.784	3.823
Education3	-4.630*	2.516	-7.060*	3.958
Union membership	-0.186	0.129	-0.622**	0.258
Homeownership	-0.055	0.115	0.186	0.201
<b>Interactions</b>				
level of income * education2	0.223	0.256	-0.374	0.348
level of income * education3	0.484**	0.226	0.746**	0.352
(Intercept)	9.930***	1.213	2.909	2.033
Observations	2,085			
LR $\chi^2$ (dof)	578.59 (58)			
McFadden's pseudo- $R^2$	0.16			

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
AIC	3,115.84			
BIC	3,454.39			
Log-likelihood	-1,497.92			

Note: ML estimates of the probability to transit from a current paid job to either a new one or self-employment. Year dummy variables are included but not shown. Data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.

Table C.2: MNL estimates for the transition probability of choosing a new job or becoming self-employed – Model with income and satisfaction interactions

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
Satisfaction	0.015	0.052	-0.234**	0.095
Satisfaction: income	0.424*	0.223	-0.329	0.497
% change in satisfaction: income	0.447	0.744	1.776	1.401
Satisfaction: job conditions	-0.475*	0.288	1.046	0.700
% change in satisfaction: job conditions				
Objective work characteristics	0.196	0.549	0.298	1.108
Income (CHF, log)	7.314	11.676	-33.439	21.616
% change in income	0.006	0.008	0.008	0.015
Working hours	-0.011	0.049	-0.049	0.140
% change in working hours	0.226*	0.124	0.109	0.242
Job (in-)security	0.236	0.168	-0.184	0.332
% change in job (in-)security	0.099**	0.040	0.006	0.081
Risk of unemployment	0.018	0.074	0.062	0.139
% change in risk of unemployment				
Demographics	-2.725***	0.311	-0.822	0.607
Age	0.105	0.176	0.812**	0.377
Male	-0.218	0.229	0.102	0.455
Ethnic minority	0.151	0.158	0.083	0.309
Not married				
Human and financial capital	0.862***	0.182	0.635*	0.358
Education2	0.815***	0.194	1.303***	0.349
Education3	-0.250	0.159	-1.035***	0.371
Union membership	-0.050	0.146	0.171	0.284
Homeownership	-0.057	0.068	-0.118	0.128
Interactions				
level of income * level of satisfaction (job conditions)	-1.122	1.438	3.415	2.515
% change in income * level of satisfaction (job conditions)	-2.465	8.827	13.251	14.970
% change in income * % change in satisfaction (job conditions)	7.427	6.026	-7.083	12.305
(Intercept)	0.015	0.052	-0.234**	0.095

	<i>Job changers</i>		<i>Self-employed</i>	
	<i>Coefficients</i>	<i>Standard errors</i>	<i>Coefficients</i>	<i>Standard errors</i>
Observations	1,240			
LR $\chi^2$ (dof)	419.65 (58)			
McFadden's pseudo- $R^2$	0.19			
AIC	1,862.97			
BIC	2,170.35			
Log-likelihood	-871.49			

Note: ML estimates of the probability to transit from a current paid job to either a new one or self-employment. Year dummy variables are included but not shown. Data are drawn from the SHP and refer to workers living in Switzerland in the years 1999–2008. \* denotes coefficients statistically significant at the 10% level, \*\* 5%, \*\*\* 1%.