WORKING PAPER
2023:67

Bouncing Back After Employer Exit: Does Experience from Temporary Self-employment Help or Hurt?

Monia Lougui and Anders Broström

RESEARCH NETWORK DEBATE
SWEDISH ENTREPRENEURSHIP FORUM

Working Papers Series from Swedish Entrepreneurship Forum

In 2009 Swedish Entrepreneurship Forum started publishing a new series of Working Papers. These are available for download on www.entreprenorskapsforum.se, and are part of our ambition to make quality research available to a wider audience, not only within the academic world.

Scholars from different disciplines are invited to publish academic work with the common denominator that the work has policy relevance within the field of entrepreneurship, innovation and SMEs.

The working papers published in this series have all been discussed at academic seminars at the research institution of the author.

ABOUT SWEDISH ENTREPRENEURSHIP FORUM

Swedish Entrepreneurship Forum is the leading Swedish network organization for generating and transferring policy relevant research in the field of entrepreneurship and small enterprise development.

Swedish Entrepreneurship Forum is a network organization with the aim

- to serve as a bridge between the small business research community and all agents active in development of new and small enterprises.
- to initiate and disseminate research relevant to policy in the fields of entrepreneurship, innovation and SME.
- to offer entrepreneurship researchers a forum for idea sharing, to build national and international networks in the field and to bridge the gap between research and practical application.

Find out more on www.entreprenorskapsforum.se

Bouncing Back After Employer Exit: Does Experience from Temporary Self-employment Help or Hurt?

Monia Lougui*

Anders Broström†

20230205

Abstract

This paper explores self-employment as a response to worker displacement. We analyze salary remuneration in their first regular employment for Swedish individuals who were previously displaced due to employer exit, comparing the group who experienced a spell in self-employment with their peers who did not. To construct a relevant control group of peers, we start from the set of all displaced employees and apply coarsened exact matching to ensure similarity on key observables. Our results demonstrate that the average treatment effect is positive. In further exploration, we find evidence suggesting that this effect is at least partially driven by self-employment experiences being positively evaluated for jobs requiring generalist and managerial skills rather than industry-specific expertise. We conclude that self-employment would seem to constitute an attractive alternative for displaced workers. We also discuss how our results contribute to the broader debate about labor market valuation of self-employment.

Keywords— labor market, self-employment, valuation, displacement, generalist ***JEL codes***— J31, J62, J65

*Swedish Defence Research Agency, monia.lougui@foi.se

†Swedish Entrepreneurship Forum and Royal Institute of Technology, andbr@kth.se

1 Introduction

Self-employment is considered as a career option by an increasing share of workers in developed economies. For many individuals, self-employment is a temporary activity, which is abandoned when new employment opportunities arises or in connection to start-up failure (Bruce and Schuetze, 2004; Taylor, 1999; Kaiser and Malchow-Moller, 2011). Scholars studying entry and exit from self-employment have therefore increasingly started to consider these transitions in a broader context, applying a career perspective to the study of both decisions and consequences of self-employment experiences (Bates, 2005; Marshall, 2016; Burton et al., 2016; Koch et al., 2021). We know relatively little, however, about the role of self-employment decisions in the context of worker displacement. In this paper, we address the question how a 'detour into self-employment' in the wake of workplace closure affects the individual's attractiveness of the labor market. Specifically, we evaluate the earnings of displaced individuals who re-enter regular employment after a spell in self-employment.

Displacement has negative consequences for many workers in the short term, and may hamper the income and career of affected individuals also in the long term due to unemployment and wage reduction (Jacobson et al., 1993). However, firm exits may also have positive welfare effects, paving the way for industrial renewal and more efficient allocation of resources (Pe'Er and Vertinsky, 2008). To minimize worker distress while maximizing the benefit of Schumpeterian creative destruction, workers displaced by employer exit must be able to find new, appropriately matched jobs within a reasonable period of time.

In contemporary labor markets, self-employment constitutes one such option. Displaced workers may turn to self-employment in order to avoid unemployment, but may also utilize the 'push' effect of displacement to realise entrepreneurial ambitions (Thurik et al., 2008; Lougui and Broström, 2021). Such options are often the subject of direct public support in the form of active labor market programs (Srhoj and Zilic, 2021). It is thus important to evaluate outcomes for individuals moving into self-employment after being displaced due to employer exits. While some scholars have started to investigate the direct question of how such ventures develop (Nyström, 2020), there is very little evidence available regarding the question of whether entrepreneurial experiences allow displaced workers to bounce back on to the regular labor market.

The question of how entrepreneurial experiences are evaluated by employers has been the subject of study over the last two decades, with markedly mixed and contradicting conclusions (Luzzi and Sasson, 2016). The net effect of self-employment on subsequent labor income has been found to be negative (Bruce and Schuetze, 2004; Failla et al., 2017), with the contingencies that this only applies to women (Williams,

2000) or to the lowly educated (Hyytinen and Rouvinen, 2008). Yet other studies have found the effect to be positive (Daly, 2015), in particular for former entrepreneurs hired in highly innovative sectors (Luzzi and Sasson, 2016), for those with above-average entrepreneurial income, and for those who have employed at least one other individual while self-employed (Kaiser and Malchow-Moller, 2011). These studies are empirically set in the U.S. (Williams, 2000; Bruce and Schuetze, 2004; Daly, 2015) or in the Nordic countries (i.e. Denmark (Kaiser and Malchow-Moller, 2011; Failla et al., 2017) and Norway (Luzzi and Sasson, 2016)). Notably, findings are also inconsistent within these empirical settings.

With evidence regarding the average evaluation of self-employment experience diverging between studies, there is a relatively weak basis for conclusions that may be extrapolated to the particular situation of self-employment as a response to displacement. It can also be argued that the evaluation of self-employment as a response to displacement may be shaped by a particular set of considerations, shifting the general perception of the merit value of self-employment. It is possible that self-employment undertaken under the threat of unemployment sends weaker signals about individuals' inherent entrepreneurial traits than would a corresponding mobility from an existing job. On the other hand, employers may also interpret a step into self-employment from threatening unemployment as signalling fortitude and ambition.

In summary, it is fundamentally unclear what to expect regarding the evaluation of self-employment experiences in the wake of displacement. We therefore approach this problem as an empirical question, and evaluate the average effect of self-employment on consecutive earnings in regular employment. Furthermore, we investigate a set of contingencies suggested in extant literature on the labor market valuation of self-employment experience. Specifically, we investigate potential contingency factors centered on the level of human capital of the self-employed, and the level of engagement in entrepreneurial venturing as self-employed. We do this based on the assumption that the valuation of entrepreneurship may vary with differences in the opportunity costs of entrepreneurship and the quality of the self-employment project (Amit et al., 1995; Cassar, 2006), and that conflation between high- and low-quality entrepreneurship may cause inconsistencies between results of previous studies.

In further work, we explore contingencies not discussed in previous studies. Specifically, we investigate whether self-employment is more positive for individuals with broad rather than single-industry experience, and whether previously self-employed are more likely to be assigned managerial positions in consecutive employment. We also discuss whether the perception of self-employment experience in regular employment contexts is dominated by signalling (i.e. self-employment experience as providing a signal of certain personal

traits and innate abilities) or by employers' perception of skills accrued in self-employment.

We rely on the Swedish employer-employee matched data for empirical analyses. The data allows us to identify firms registering a shut down during the period 2001-2006. We are able to obtain complete labor market data for 597 individuals who worked for these exiting firms, and experienced a spell in self-employment before re-entering a position of regular employment. A matched sample of 8,430 individuals who were displaced from the same workplaces are used as control group in order to estimate treatment effects.

We find evidence of a positive treatment effect of a spell in self-employment on the wage in subsequent employment. This valuation is only to a limited degree affected by contingency effects. Interpretations and implications for our understanding of the labor-market assessment of self-employment are discussed.

2 Labor market valuation of self-employment experience

In negotiating their wage, newly employed individuals are being subjected to the new employers' evaluation. For individuals returning to conventional employment after a spell of self-employment, this evaluation is affected by the employer's judgment of skills and capacities accrued through the self-employment experience. Furthermore, because self-employment is associated with particular personality traits and distinct social merits (Stanworth et al., 1989; Chen et al., 1998), such halo-effects may also shape the assessment of the formerly self-employed.

The entrepreneurship literature offers several suggestions for positive halo-effects, whereby entrepreneurial experience may translate to a signal of productive and valuable traits. Fortitude, self-confidence and self-efficacy are all traits that may be associated with entrepreneurship Busenitz and Barney (1997); Astebro et al. (2014), and that employers may value. Hiring managers may be inclined to perceive individuals with a recent spell in self-employment as having demonstrated a strong personal drive that will be of value also in performing tasks for a new employer (Eliasson, 2006). Connotations of risk tolerance (Hvide and Panos, 2014; Koudstaal et al., 2015) may also affect the assessment of previously self-employed individuals by hiring managers. They may also associate entrepreneurship with creativity (Shane and Nicolaou, 2015).

An additional association made with self-employment is abilities of multitasking. This view is built around the view of the entrepreneur as an individual that arranges and brings together different resources, and who therefore qualifies as a business generalist. Put differently, being self-employed can be considered

to signal more balanced talents than the average worker with corresponding qualifications working in paid employment (Lazear, 2005). This expectation may carry over into a positive signal on the labor market, particularly for innovative firms and for managerial positions where a variety of skills is emphasized more than specialization.

Self-efficacy, creativity and a broad skill set are generally valuable traits. In line with this reasoning, Luzzi and Sasson (2016) predict a favorable median return to self-employment on the labor market. It would, however, also seem fully possible that employers may be concerned about employing the previously self-employed, e.g. in associating them with problematic or negative connotations such as being overly autonomous and difficult to control (Douglas and Shepherd, 2002), or by expecting self-employed to be more inclined to future labor mobility. Consistent with this view, Koellinger et al. (2015) find that hiring managers in the UK were less likely to respond to job applications from a fictitious self-employed individual than to an (equally fictitious) non-entrepreneur with otherwise identical qualifications. Mahieu et al. (2021) argue that even when employers do not associate self-employment with negative aspects, genuine uncertainty among employers about how to evaluate the productivity of workers with self-employment experience leads to them offering lower wages to such individuals.

Labor market signalling is mainly associated with traits and personal attributes supposedly distinguishing an entrepreneur as being able to run a business. Experience from self-employment may also, however, provide signals about the individual having a different skill-set than workers without such experience. As argued by Lazear (2005), entrepreneurially oriented individuals may choose to strive towards developing a balanced skill set by investing in their relatively weakest skills. Individuals starting a business are therefore more likely to have followed a wide and varied education (Lazear, 2004) and to have a broader set of skills acquired from on-the-job training and experience.

Entrepreneurial experience is not only providing signals about an individuals' inherent (in our case: pre-displacement) traits and attributes, but is also a direct source of learning. While most job provide valuable experiences and opportunities to hone relevant skills, self-employment provides its particular set of challenges.

The human-capital of self-employed and paid-employed may therefore, on average, be different. It may also be argued that self-employment experience offers opportunities to develop and hone valuable skills. Baptista et al. (2012) argue that supervision and coordination skills are among the most important skills developed under self-employment. Traits such as creativity and self-efficacy may also be particularly

valued in regard of positions involving leadership responsibilities. It is therefore possible that experiences in supervision and coordination help qualify the previously self-employed for positions involving managerial tasks. Baptista et al. (2012) find support for the individuals with self-employment experience being more likely to obtain a managerial job. This suggests a particular mechanism through which self-employment experience may be associated with above-average compensation in subsequent employment.

Either as mediated through signaling effects regarding personal characteristics or through the accumulation of skills valued by employers, the valuation of self-employment experience acquired after displacement may be affected by the extent to which entry into self-employment is to be understood as primarily a substitute for unemployment (low-quality entrepreneurship), or as a genuine bet on a significant entrepreneurial opportunity (high-quality entrepreneurship). In other words, we expect that differences in the valuation of self-employment across individuals are positively correlated to differences in the opportunity costs of entrepreneurship, i.e. to the level of possible income that the individual foregoes when switching to self-employment. These opportunity costs are imperfectly observable to a hiring employer. However, employers may form an opinion about the value of a particular spell in self-employment on the basis of observable information. Such information may, we suggest, consist of traditional indicators of human capital. Individuals with greater human capital are more likely to have foregone non-trivial outside opportunities when entering self-employment, and therefore more likely to have been engaged in high-quality entrepreneurship. Employers may also form an opinion by directly assessing information about the ambition and success of a venture founded by an individual who they consider employing.

In conclusion, we find little definite guidance in extant literature to set our expectations as regards the net labor market value of self-employment experience - neither in the more general setting nor in regard of our particular focus on post-displacement careers. We do, however, expect that the level of human capital, as well as the level of engagement in entrepreneurial venturing as self-employed should be positively related to valuation of self-employment experience.

3 Empirical context

In this section we provide a brief description of the conditions for entrepreneurship in Sweden, with the aim to describe decisions about a shift to and from self-employment are framed in this setting.

Sweden is an innovation-driven economy where many firms compete based on innovative products

and services finalized using advanced technologies and processes. In the report from 2017, the Global Entrepreneurship Monitor (GEM) introduces a new measurement for entrepreneurial spirit which is a compound index of entrepreneurial awareness, opportunity perception, and entrepreneurial self-efficacy. Compared with other innovation-driven economies covered by the annual GEM assessment, Sweden has the second highest index right after the United Arab Emirates[1]. This gives a hint of attitudes being positive towards entrepreneurship in Sweden. According to national surveys from 2004, entrepreneurship in Sweden is considered as an option for about half of the population and even a preferred employment for one forth of the population[2].

Yet, the rate of individuals actually starting a business is not quite in line with the positive view on entrepreneurship. In 2004, only ten percent of the Swedish population were self-employed. A candidate explanation to this gap between the desire to become self-employed and the rate of self-employed, in addition to lack of business ideas and the engagement entrepreneurship requires, is the relatively strong supply of regular jobs, and the regulative framework in Sweden.

The Swedish labor market is characterised by relatively strict employment protection legislation. This is generally held to reduce labor turn-over in general, and self-employment in particular[3]. In addition, the unemployment insurance benefits in Sweden are generous making self-employment a less attractive option when being laid-off. Such unemployment policies and job security makes self-employment a less attractive option not only for those with a necessity to find a source of personal income but also for individuals with a business idea and the ambition to grow as with strict employment regulations, hiring is associated with greater risk.

In summary, Sweden is seen as having relatively high barriers to self-employment. The frequency of self-employment is also traditionally lower in Sweden (and other north-European countries) than in many other parts of the world (Torrini, 2005). These circumstances may imply that Swedish employers, being relatively inexperienced in evaluating spells of self-employment, may be uncertain about their relevance as qualification. Such uncertainty would generally suggest a negative bias in the assessment of job candidates with self-employment. However, it is also possible that positive attitudes negates this effect. It is, in summary, not clear that Swedish labor market evaluations of self-employment experiences would be neither much larger, nor much lower than in other comparable countries.

[1]Global Entrepreneurship Monitor (2018).Global Report 2017/2018. Retrieved from https://www.gemconsortium.org

[2]Figures taken from the Entrepreneurship Barometer introduced by the Swedish Business Development Agency

[3]OECD 2004

4 Methodology and empirical approach

Similarly to the studies applied in von Greiff (2009); Kaiser and Malchow-Moller (2011); Luzzi and Sasson (2016); Failla et al. (2017); Roed and Skogstrom (n.d.); Mahieu et al. (2021), examining the mobility of employees and the outcome of self-employment on the labor market, we exploit administration register data and employer-employee matched data provided by Statistics Sweden. The extensive data encloses all individuals of age 16 and older registered as residing in Sweden each year. The data is available from 1990 and the register is updated on a yearly basis.

4.1 Sampling strategy

The focus of our study is the treatment effect for individual$i$, of a recent spell in self-employment, in terms of subsequent labor market outcome (i.e. wage remuneration in subsequent employment). The treatment effect is unobserved and hence needs to be estimated:

$$TE_i = Y_i(1) - Y_i(0)$$

Where TE_i is the treatment effect of unit i, $Y_i(1)$ is its outcome (annual wage from first conventional employment after displacement) if treatment was received and $Y_i(0)$ is the outcome of the same unit in the absence of treatment.

4.2 Sampling procedure

For this study, we extract all firms registering a closure between 2001 and 2006. Apart from the status of the firm, we record the size and industry classification of the exiting firm. Using the employer-employee matched data, we compose a list with the individuals employed by these considered firms. For these individuals, we extract data on their socio-demographic characteristics, employment status, income, position and industry up to ten years before the closure event that qualifies them for inclusion in the sample.

Following von Greiff (2009), we restrict the data to individuals between the ages 25 to 55 to avoid including employees who could still be students or approaching retirement. We also exclude the owners of the exiting firms.

The employer-employee data allows us to follow the employment status and the mobility of the employees after closure of their most recent employer. Hence, we can distinguish the individuals who turn to self-

employment[4] within a year after the closure of their previous workplace from those who move on to a consecutive employment or to unemployment, respectively. Individuals who do not return to conventional employment after a period of four years in self-employment are excluded from our sample. Individuals returning to micro-firms (with up to five employees) are also excluded from the analysis, following previous register-based studies on entrepreneurship which have suggested that drawing a distinct line between self-employed and employed in small firms is subject to a certain degree of uncertainty (Sørensen, 2007).

We utilize data from taxation registers to determine individuals' wage income, and data from other matched registers to collect data on characteristics of the individual and on the firms where the individuals work in each year. Wage data is corrected for inflation.

We identify 169,584 individuals who are displaced due to employer exit, and for whom we can retrieve data on all variables of interest. Of these, just over 2% are registered as being self-employed in the year following that of employer exit. Those that experience a spell in self-employment before returning to the regular labor market earn 13% less, on average, than those that are registered as employed in the year after displacement. Almost one out of two spells in self-employment lasts only about a year; that is, the individual is yet again registered in regular employment two years after displacement.

4.3 Matching strategy

Comparing the subsequent paid wage of individuals starting a business with the wage of individuals moving into a new contract of regular employment after displacement may be subject to selection bias driven by systematic differences between individuals who choose to enter self-employment and those who move on directly to regular employment. With the estimation of causal effect using observational data as in our case, the goal is to replicate a randomized experiment and to operate with a treated and a control group where the differences in the covariates are random. Yet with non-random selection into self-employment, the sample differences cannot be guaranteed to be randomized.

We seek to reduce observable heterogeneity by employing a matching approach in the selection of a final control group such that the validity of the estimated causal effect increases (Blackwell et al., 2010). The matching consists of finding for each treated unit at least one non-treated unit with similar covariates, in order to build a control group from the matched non-treated units. We use the Coarsened exact matching (CEM) method. CEM employs monotonic imbalance bounding which implies 1) that the maximum

[4]In the literature on the valuation of self-employment experience, self-employment is typically defined as equivalent to owning and working in a small firm. We adopt the same definition for our study

imbalance between the treated and the control can be defined by the user rather than discovered ex post estimations and 2) that the maximum imbalance does not have to be identical for each variable (Iacus et al., 2009).

The matching is performed on a set of variables collinear with the propensity of treatment, here meaning the decision to start a new business after displacement due to workplace closure, and simultaneously to the outcome variable Y. The first factor that we match on is the identity of the closed down firm initially employing the employees. It is widely known that some firms seem to constitute more fertile grounds for entrepreneurial venturing than others (Gompers et al., 2005; Kacperczyk and Marx, 2016). By an exact matching on the firm we surpass a number of endogeneity issues and ensure a similar starting point for treated and non-treated individuals.

Labor market experience and credentials are important predictors of both self-employment entry and employment opportunities (Parker, 2018; Rider et al., 2019). We therefore also base matching on variables describing tenure and tertiary education acquirement. We measure tenure as the number of years that each individual spent as an employee in the firm before closure. For data availability reasons, this variable is censored at five years before the exit event. We also control for the position of the individual at the exiting firm, by including a dummy indicating whether the individual was a manager at the latest conventional employment. In addition, following Kaiser and Malchow-Moller (2011), Williams (2000), and Bruce and Schuetze (2004), the wage income enjoyed in the exiting firm is included as indicator of individual-specific heterogeneity. Position in the firm and salary are indicators of skills and professional status, and are strong drivers of employers' pecuniary valuation of a potential employee (DeVaro and Waldman, 2012; Barach and Horton, 2020). These factors therefore also arbitrate the opportunity cost of self-employment related decisions.

We furthermore match on gender, as the labor economics literature repeatedly has identified systematic gender difference in the remuneration for paid employment. The age of the individuals is also likely to influence both wage and career choice of the individual (Kaiser and Malchow-Moller, 2011). Matching on age is based on three categories (25-34 35-44 45-55).

Moreover, we introduce an indicator of parenthood in the matching. As argued by Kaiser and Malchow-Moller (2011), parenthood is associated with an increase in the opportunity cost of entrepreneurship, e.g. in the form of increased risk aversion. Hence, parenthood may drive both the selection into self-employment and the paid-employment wage (Leigh, 1986; Hamilton et al., 2000; Hundley, 2000; Halek and Eisenhauer,

2001; Budig, 2006; Folta et al., 2010; Marshall and Flaig, 2014).

4.4 Matching results

After applying matching to the sample, 8,430 individuals remain, whereof 597 individuals with a spell in post-replacement self-employment. Table 1 reports the mean and standard deviation of the variables in our sample before and after matching. The t-statistics reported in columns 3 and 6 refer to a test for difference in means between the sub-sample of individuals staying in regular employment and the sub-sample of individuals with a detour in self-employment. The results indicate an improvement in terms of observable imbalance between the two treated and non-treated after matching. In the pre-matching sample, males, parents and highly educated individuals are over-represented in the group of self-employed. These differences are however largely removed with matching. Moreover, differences in the average number of individuals with managerial or self-employment experience are reduced in the matched sample. Yet also in the matched sample there are prevailing differences between the two groups, suggesting that the average level of human capital is higher among the individuals entering self-employment than among individuals finding new employment after displacement due to employer exit.

We furthermore evaluate how well the matching reduces differences between the treated and the control group by estimating a logistic model for treatment propensity. The results, which are not separately reported, suggest that there are non-significant differences between the groups in terms of all matched variables, with the exception of pre-displacement wage income. Further scrutiny reveals an interesting pattern regarding differences in salary income before displacement between the treated group and the control group. As shown in Table 1, the pre-displacement salary income is about 10 % higher for the treated group than the control group. However, once controlling for observables[5], the treated group actually has 14 % lower pre-disposal salary than the control group. The treated group is thus characterised by 1) over-representation of individuals with characteristics that, on average, are associated with higher income, and 2) lower income than their peers with similar characteristics. This pattern may derive from a lower general (unobserved) ability among the treated (negative selection into self-employment), but also from the treated individuals being more poorly matched to their exiting workplaces. It is possible that individuals who enter self-employment do so partly because they base their expectation of their earning opportunities in regular employment on previous under-performance caused by poor employer-employee matching.

[5]This result is based on another non-reported regression predicting salary income as a function of observables and the *Treatment* variable

Table 1: Descriptive statistics: Mean, standard deviation and t-statistics for test of difference-in-means

	Full sample To regular empl.	Full sample To self-empl.	Difference$^{\alpha}$	Matched sample To regular empl.	Matched sample To self-empl.	Difference$^{\alpha}$
Individual characteristics						
Tertiary education	0.339	0.370	-3.31***	0.433	0.411	1.05
	(0.473)	(0.482)		(0.495)	(0.492)	
Female	0.437	0.324	12.35***	0.412	0.359	2.58**
	(0.496)	(0.468)		(0.492)	(0.480)	
Age	36.27	37.70	-8.62***	33.15	34.99	-5.21***
	(8.574)	(8.286)		(8.179)	(8.328)	
SE experience	0.076	0.318	-26.78***	0.003	0.028	-3.60***
	(0.266)	(0.466)		(0.061)	(0.166)	
Parenthood	0.180	0.228	-5.81 ***	0.136	0.137	-0.02
	(0.384)	(0.419)		(0.343)	(0.344)	
Position at last employer						
Tenure	1.856	1.825	0.92	1.567	1.719	-2.19*
	(1.718)	(1.714)		(1.666)	(1.639)	
Salary	2,347	2,478	-2.46**	2,138	2,343	-2.47**
	(2,243)	(2,749)		(1,433)	(1,991)	
Managerial position	0.056	0.143	-12.80***	0.006	0.026	-3.16***
	(0.230)	(0.350)		(0.075)	(0.161)	
Characteristics of spell in SE						
LLC		0.397			0.255	
		(0.489)			(0.436)	
SE income		29,569			12,712	
		(218,474)			(85,701)	
Venture size		5.256			4.425	
		(6.563)			(6.257)	
N	166,942	2,642		7,833	597	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

$^{\alpha}$ t-statistic for test of difference-in-means

Standard deviation in parentheses

4.5 Model

To estimate the wage difference of individuals had they not opted for a short spell in self-employment, we examine the wage obtained from the first conventional employment after displacement due to firm closure. We apply an econometric model inspired by Mincer's Earning Regression (1958; 1974), where the logarithm of the wage is expressed as a function of schooling and work experience:

$$ln(w) = \alpha_0 + \rho_s s + \beta_0 x + \beta_1 x^2 + \varepsilon$$

where w is the wage, s is the level of schooling, x the work experience, and ε the residuals with mean zero. The model implies that the level of schooling is perceived as an investment which increases the future income and that on-the-job investments can augment the earnings.

Our general model extends the basic Mincer equation. Since our main interest is in estimating the effect of treatment, a variable T indicating whether the individual experienced a spell in self-employment or not is added to the model. We are also, however, interested in investigating variation within the group of treated, and hence we introduce a further set of variables interacted with T. These variables can be said to capture (a fraction of) otherwise unobserved differences in the opportunity costs of becoming and ceasing to be self-employment. These opportunity costs are imperfectly observable to a hiring employer. However, employers may form an opinion about the value of a particular spell in self-employment on the basis of observable information. Such information may, we suggest, consist of traditional indicators of human capital. Individuals with greater human capital are more likely to have foregone non-trivial outside opportunities when entering self-employment, and therefore more likely to have been engaged in high-quality entrepreneurship. Employers may also form an opinion by directly assessing information about the ambition and success of a venture founded by an individual who they consider employing.

We apply, after matching, an ordinary least squares (OLS) estimator to the following model:

$$ln(w) = \alpha_0 + (\theta_0 + \gamma_0 f_j + \gamma_1 p_i) * T + \beta_0 x_i + \beta_1 p_i + \varepsilon$$

W is the yearly income from first conventional employment after displacement, f_j is a vector of variables describing characteristics of the new firm launched by individuals who become self-employed after

displacement, p_i is a vector with variables characterizing individual i (experience and schooling), and x_i is a vector with both demographic and experience variables for individual i (as well as the square of experience as above). The variables are described and motivated below.

All models are estimated with standard errors clustered on the identity of the exiting firm. Thereby, we are able to relax the standard assumption that standard errors (i.e. the labor market prospects of a firm's employees) are not correlated across employers due to unobserved firm-level heterogeneity.

4.6 Dependent variable

The dependent variable is the first yearly wage income from regular employment, after being displaced due to firm closure.[6] For individuals in the control group, this corresponds to the year after displacement. For individuals shifting into self-employment after their employer exits, the dependent variable is measured one year after the return to conventional employment. This lag is introduced in order to avoid conflating earnings while in self-employment from earnings in the new regular employment. Such conflation would otherwise be likely to arise as our wage data is measured on an annual basis and we do not observe in which month of the year that the new employment is started.

It should be noted that with this design, any on-the-job experience and wage development of the control group of regular employees is left out from the econometrical evaluation. While any experience that the self-employed accrue while in self-employment is allowed to affect the wage outcome of the treated group, the experience from paid employment that this group foregoes does not affect the evaluation. Under the (very reasonable) assumption that the value of such experience is greater than zero, our results will therefore provide an upper bound on the total effect of self-employment on subsequent wage. The main benefit of our design is that it allows us to isolate the valuation of self-employment per se from the evaluation of a corresponding spell in employment.

Table 1 illustrates the distribution, before matching, of the individuals in each category of individuals and the average yearly income from first conventional employment after displacement.

[6] Individuals who are not registered as being in paid employment within the window of observation are not included in the sample. This selection effect is likely to provide a downward bias on our estimate of treatment effects of self-employment, assuming that those staying in self-employment are on average at on average more successful as entrepreneurs - hence attractive as employees - than those returning to employment.

4.7 Control variables and contingency effect variables

The labor market value of individuals is evaluated in terms of knowledge and skills not only acquired through formal education but also as a result of working experience (Rosen, 1972). As of control variables with impact on the dependent variable, we include a set of variables traditionally associated with an individual's human capital and firm level information that were used as basis for matching, with the exception that we do not include fixed effects for the exiting firms. Specifically, we use variables reflecting the education (*Tertiary education*) and work experience of the individual (*Tenure*), including an indicator for previous experience of self-employment (*SE experience*). The individual's earnings in employment before exit (*Salary*) is also included as a control variable. In this setting, estimates on other controls will not directly reflect their association with total earnings, but rather reflect how gender and human capital affect *changes* in earnings between the old (displaced) employment and the new.

Finally, we include three sets of further controls capturing contextual idiosyncrasy. These are the size of the new employer (in logged form) which is included for differences in compensation scheme by firm size (Brown and Medoff, 1989), as well as year and region fixed effect dummies to control for heterogeneity in re-employment opportunities (Nyström, 2018). A summary of the variables is available in Table 6 in the Appendix.

In order to investigate various contingencies for the labor market evaluation of self-employment experience suggested in previous studies, we construct a further set of variables meant to capture variation in ambition between different self-employment projects. Individuals engaging in more ambitious entrepreneurial venturing are, all else equal, likely to have higher opportunity costs of entrepreneurship than individuals in less ambitious forms of self-employment (Cassar, 2006). That is since the level of income that the individual is willing to forego for self-employment should increase with the estimated value of entrepreneurial income or, more generally, the expected utility of the self-employment option.

We chose to use three measures, which are only observed for individuals with self-employment experience: the size of the newly formed firm, the legal form of the new firm (limited liability company (LLC)=1, sole proprietorship=0), and the logarithm of average annual income in self-employment. Incorporating a LLC requires a certain investment of capital and is more demanding in terms of accounting requirements, but is advantageous for entrepreneurs who wish to grow their ventures - e.g. because it allows them to

retain capital in the firm and to offset profits and losses across time. Choosing an LLC legal form thus signals greater ambitions and higher expected earnings (Levine and Rubinstein, 2013; Rider et al., 2019). Employing other individuals is clearly also an indication of a more demanding and seriously meant entrepreneurial ambition. The level of earnings in self-employment is, finally, both an indication of the scope of self-employment activity and a direct indication of the opportunity costs of returning to self-employment.

In using earnings in entrepreneurship as a measure that is expected to reflect ambition and success, it is important to recognize that entrepreneurial income comes in many forms and often is unequally distributed over time (Carter, 2011). We are able to collect data both on salary income derived from self-employment, and on dividends from firms owned by the individual. Furthermore, we are able to take into account any profits or losses reported from selling stocks in a firm owned by the focal individual.[7] All income is averaged across the entrepreneurial spell. This means, for example, that an individual who undertakes an ambitious entrepreneurial project and foregoes salary income in the early stages is still associated with high income if his or her venture is sold at significant profit when the individual re-enters regular employment. We therefore expect our income measure to represent the economic value of the self-employment with reasonably high adequacy.

[7]Dividends and realised profits are measured for all LLC firms where the majority of the shares are owned by no more than four individuals (Åstebro et al., 2013).

5 Results

5.1 Main results

Our main results are derived from running a set of four regression models. Outcomes are reported in Table 2 below.

Model 1 is the regression with just the key explanatory variable (treatment). We find that on average, the wage earnings in new employment of the previously self-employed is not significantly different from those of the control group of individuals moving directly on from employer exit into a new employment situation.

In the second model (*Model 2*), the explanatory variables are regressed on the dependent variable *new income from paid-employment after displacement* along with the full set of control variables. In contrast to *Model 1*, the estimate on the treatment variable is now significantly positive. This suggests that even in the matched sample that we use, treatment is correlated with some of the covariates associated with higher salary. Specifically, gender and education remain individually associated with wage income on the first position as regularly employed after displacement due to employer exit. The estimate on treatment, suggesting that the average income difference between the treated and the non-treated amounts to approximately 20%.

Table 2: Main Results, OLS estimation

	(1) ln(New salary)	(2) ln(New salary)	(3) ln(New salary)	(4) ln(New salary)	(Before matching) ln(New salary)
Treatment	0.0783	0.203***	-0.208	0.325*	0.137**
	(0.0523)	(0.0487)	(0.125)	(0.128)	(0.0479)
Personal characteristics					
Tertiary education		0.200***		0.191***	0.167***
		(0.0334)		(0.0359)	(0.00382)
Female		-0.193***		-0.193***	-0.165***
		(0.0417)		(0.0417)	(0.00363)
Age		0.0213		0.0214	0.0151***
		(0.0202)		(0.0202)	(0.00193)
Age^2		-0.000262		-0.000265	-0.000203***
		(0.000260)		(0.000261)	(0.0000251)
SE experience		0.181		0.187	-0.0283***
		(0.162)		(0.162)	(0.00708)
Parenthood		0.0218		0.0219	-0.0408***
		(0.0655)		(0.0657)	(0.00557)
Position at last employer					
Tenure		-0.0412		-0.0424	-0.0625***
		(0.0352)		(0.0353)	(0.00341)
$Tenure^2$		0.00850		0.00879	0.0119***
		(0.00746)		(0.00749)	(0.000700)
ln(Salary)		0.524***		0.526***	0.478***
		(0.0374)		(0.0376)	(0.00429)
Managerial position		0.0285		0.0472	0.167***
		(0.123)		(0.129)	(0.00736)
Contingency effects					
Treatment*Tertiary education			0.336***	0.0845	0.0539
			(0.0866)	(0.0914)	(0.0408)
Treatment*Managerial position			0.177	-0.294	-0.204***
			(0.395)	(0.343)	(0.0563)
LLC			0.393**	0.124	0.191***
			(0.126)	(0.125)	(0.0496)
ln(SE income)			0.0285*	-0.0150	-0.00124
			(0.0139)	(0.0140)	(0.00572)
ln(Venture size)			-0.0867	-0.102	-0.0281
			(0.0889)	(0.0873)	(0.0314)
Other controls					
Size of new employer		Yes		Yes	Yes
County dummies		Yes		Yes	Yes
Year dummies		Yes		Yes	Yes
Constant	7.591***	3.309***	7.591***	3.303***	3.824***
	(0.0327)	(0.378)	(0.0327)	(0.379)	(0.0448)
Observations	8,430	8,430	8,430	8,430	169,584
R^2	0.000	0.447	0.006	0.448	0.334

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The third model of Table 2 investigates variation in first employment income within the group of individuals with a post-displacement spell in self-employment. The results here show that the sub-set of previously self-employed that formed a limited liability company and/or had tertiary education received higher wages than the average control group individual, whereas individuals with less education who engage in self-employment in the form of a sole proprietorship do not. Furthermore, individuals with greater earnings as self-employed, controlling for the other four interaction variables, tend to earn more also in regular employment.

Finally, *Model 4* combines models 2 and 3 into one. Controlling for the set of variables of *Model 2*, none of the contingency effects are individually significant. Compared to *Model 2*, however, we see that the inclusion of interaction terms increases the base estimate of *treatment*.

In robustness test of the results on interaction terms in *Model 4*, we estimate the model with the terms introduced one at a time. Thereby, we seek to hedge against bias that may arise e.g. because *venture size* and firm type (LLC) can be expected to be simultaneously determined. In these estimates, which are available upon request, we find largely similar results as in Table 2. In particular, none of the estimates on interaction terms is significantly different from zero also when estimated in this way.

5.2 Reflections on results and methodology

In order to consolidate our results, we next investigate to what extent they are driven by our specific methodological choices when selecting our sample of treated and constructing a control group. We do this by backing down, step-by-step, from the choices we have made and generate three sets of reference point results.

First, we note that since the wage earnings of the treated group is evaluated at a later point in time than the earnings of the control group, estimates on *Treatment* in our main results must be interpreted as an upper bound of the earnings difference. The average spell of self-employment is two years (mean: 1.9, mode: 2), and salary for this group is measured the year after they were first registered to have returned to regular employment. This means that the control group has on average two years to achieve the 20-30 percent increases associated with treatment in Table 2. We explore how this methodological choice affects our results by investigating the salary development of our control group over this time period. Our data

indicates that the control group experiences an average salary increase of 5 % in their first two years on the new employment. Also when deducting this income from the estimated advantage of the treated group, the effect of treatment is significant and substantively positive. Given the magnitude of the estimate (c.f the 95 % confidence interval on the variable *Treatment* in the main model (2) of Table 2), the treatment effect may thus be interpreted as positive also when considering the difference in evaluation period of the treated and control groups.

A second comparison concerns our choice to not include in the control group individuals who go through a phase of unemployment after displacement, before re-entering the labour market. Remaining unemployed is clearly an alternative to both self-employment and new employment. While we would expect that including individuals with a spell of unemployment in the control group would increase - or at least not decrease - the estimate on *Treatment*, it could also be possible that the opposite is true, e.g. if this group is dominated by individuals with such high expectations regarding their future earnings that they do not see the need to engage in either self-employment or a less well-paying job while waiting for an attractive offer.

Matching and estimation of the comparison between those experiencing a spell in self-employment and those experiencing a spell in unemployment is carried out in parallel to the main examination reported above. These results, which are reported in Table 7 in the Appendix, suggest that individuals moving from self-employment to a new regular employment are better paid than those moving from unemployment. This is true also when controlling for our full vector of individual-level control variables. However, the average treatment effect is insignificantly different from zero in *Models 3 and 4*. Yet, we may conclude that our choice to exclude these individuals from our main control group would not seem to in itself be responsible for the positive estimates obtained in Table 2.

A third comparison is to benchmark our main results against the corresponding estimation on a sample where the control group is not restricted by means of sampling. The right-hand column of Table 2 reports results for the model with all covariates. As can be expected, estimates on covariates that were included in the basis for the matching are accentuated for this sample. As regards the estimate of the treatment effect, it has lower magnitude, but is still significantly positive. The exception here is the group of individuals who had a *Managerial position* in the exiting firm *and* who did not choose to incorporate an *LLC* for their spell in self-employment. Overall, however, we conclude that our main results of an average positive treatment

effect is not driven by the matching per se.

5.3 Additional analysis and discussion of mechanisms

Having established an average positive effect of self-employment in response to displacement, when controlling for individual characteristics, we next turn to investigate what mechanisms that may be driving this result. In particular, we ask whether the labor market valuation of self-employment in our sample is dominated by halo effects (i.e. self-employment experience signalling self-efficacy and other positive personal traits and characteristics) or by employers valuing skills acquired during the preceding spell of self-employment (learning effects). Furthermore, we discuss to what extent a positive average evaluation of self-employment reflects enhanced opportunities for the previously self-employed to take up better-paying types of jobs (Merida and Rocha, 2021).

Considering the question of traits signalling versus learning effects (i.e. skills signalling), it should first be noted that none of the contingencies examined in Table 2 are individually significant. In particular, the size or economic success of the new venture are not found to be systematically related to future wage income in regular employment. If employers attribute value to skills and experiences accrued in self-employment, we would expect the valuation of self-employment experience to vary with the performance of the venture. The lack of findings on contingencies findings would thus seem consistent with the view that employers primarily value a history of self-employment as an undifferentiated one-off signal of valuable individual characteristics.

In order to further investigate this view, we introduce (Table 3, *Model 1*) an interaction term between the variable *treatment* and the dummy variable indicating that the individual has recent self-employment experience accrued before the displacement event defining our empirical investigations. If employers value self-employment experience as a one-off signal of individual characteristics, we may expect that a spell in self-employment is more clearly associated with a wage increase for individuals without such prior experience. In other words: if halo effects alone were behind the positive relationship between self-employment experience and salary in subsequent employment, we would thus expect the interaction term to be negative, effectively cancelling out some or all of the positive effect. At least, this would be the case if entirely voluntary self-employment and self-employment as response to displacement were equally strong signals regarding

underlying entrepreneurial traits.

We find that the estimate on the interaction term is negative, but far from statistically significant.[8] Hence, we cannot deduce that it is only halo-effects, or for that matter only learning effects, that drive the main results. A possible interpretation is that both the valuation of each type of effect varies between employers, making point estimates of each of our individual contingency factors imprecise. Future research should investigate inter-employer (possible: inter-industry or inter-job) heterogeneity of self-employment experiences. Furthermore, future research should also seek to go beyond the traditional measures of entrepreneurial performance used in our analysis in search for evidence of learning effects and its drivers.

A second question that we seek to explore is whether the effect documented in Table 2 is driven by employers viewing self-employment experience as making an individual generally more valuable, or as more suitable for certain types of (better paid) jobs. The first of these mechanisms would imply that employers are prepared to offer higher average wages for a given job to the previously self-employed, expecting a higher degree of productivity. The second mechanism may take a form where self-employment experience affects job-sorting, so that a spell in self-employment increases an individual's chances of being offered a job of a different type, and a type that is on average more well-paid. Specifically, in line with our discussion in Section 2 above, we suggest that self-employment experience may increase an individual's chances of getting a (relatively well-paid) job where generalist skills rather than deep specialist skills are required, or increase the individual's value for generalist jobs.

Our first investigation into this matter involves studying whether there are signs of self-employment experiences affecting the sorting of individuals into industries of employment. To this end, we introduce a set of controls into our main model capturing industry fixed effects. The results (which are available upon request but not separately reported) show that the estimates remain largely the same as in Table 2. These results suggests that unobserved differences between the treated and the untreated in terms of industry of employment do not affect the estimate on *Treatment* in our main results.

We next explore sorting into particular types of jobs. Self-employment experience has been argued to be relevant for developing supervision and work coordination skills, and therefore it may be associated

[8] In view of the relatively low number of individuals with bothprevious and novel experience from self-employment in the matched sample, we re-estimate *Model 1* of Table 3 for the un-matched sample. Results are the same: the interaction *Treatment * SE experience* is insignificant.

with increased opportunities for being assigned managerial positions (Baptista et al., 2012). A separate tabulation shows that 18.0 % of those experiencing a spell in self-employment obtain a managerial position when returning to status as regular employees. The same is true for only 5.7 % of those moving directly to a new employment after displacement. This difference becomes even more pronounced when only considering individuals who were not already managers in the exiting firm. 7.8 % of those experiencing a spell in self-employment after being displaced from a non-managerial position move to a managerial position when returning to regular employment, whereas only 1.7 % of those moving directly into employment are promoted in this fashion. We conclude that there is some evidence of the relationship between self-employment experience and labor market enumeration being driven by job-sorting.

In further exploration of job-sorting arguments, we speculate that the average positive effect of self-employment experience may be driven by individuals on particular types of career trajectories (Baptista et al., 2012). We move to investigate this idea by introducing three new variables into our main model. *Model 2* of *Table 4* lists these variables and their estimates. The first of these variables measures the breadth of recent working experience, in terms of the number of unique industries that an individual has worked in during the five years preceding the focal displacement event. Having experience from different industries is likely associated with a broad, rather than specialized, skill set (Spanjer and van Witteloostuijn, 2017). Having changed industry several times may also, however, be associated with job-hopping, and as such associated with negative signals and with a preference for variety that may affect earnings (Åstebro and Thompson, 2011). To isolate the latter effect, a separate control for the number of unique employers for which an individual has been working during the last five years is introduced. Both of these variables are also interacted with the treatment variable. Finally, to complement the measure of breadth of industry experience as employee, a dummy variable is also introduced which takes the value 1 if the individual has established a venture in a different industry than that where the individual was working before being displaced, and 0 for everyone else.

The results suggest that self-employment in combination with previous job-hopping has negative connotations - but that this effect is off-set if job-hopping has enabled the accumulation of broad industry experience. In other words, the effect of self-employment is higher for individuals with a broad industry background. This suggests that self-employment may be particularly positively valued for individuals on a

career track emphasizing inter-industry transferable skills.

Table 3: Additional analysis: Job mobility history

	(1) ln(New salary)	(2) ln(New salary)
Treatment	0.213***	0.264*
	(0.0481)	(0.108)
Individual characteristics		
Tertiary education	0.199***	0.196***
	(0.0334)	(0.0334)
Female	-0.194***	-0.195***
	(0.0417)	(0.0418)
Age	0.0213	0.0212
	(0.0202)	(0.0203)
Age^2	-0.000262	-0.000261
	(0.000260)	(0.000261)
SE experience	0.213	0.184
	(0.172)	(0.161)
Parenthood	0.0217	0.0248
	(0.0656)	(0.0656)
Position at last employer		
Tenure	-0.0412	-0.0404
	(0.0352)	(0.0351)
$Tenure^2$	0.00853	0.00864
	(0.00747)	(0.00750)
ln(Salary)	0.523***	0.525***
	(0.0375)	(0.0376)
Managerial position	0.0304	0.0269
	(0.123)	(0.123)
Experience of job mobility		
ln(Industry experience breadth)		0.00850
		(0.0455)
Treatment*ln(Industry experience breadth)		0.358*
		(0.140)
ln(Number of employers)		0.00392
		(0.0475)
Treatment*ln(Number of employers)		-0.312**
		(0.115)
Different industry (venture)		-0.0331
		(0.0843)
Recent SE experience		
Treatment* SE experience	-0.363	
	(0.441)	
Other control variables		
Size of new employer	Yes	Yes
County dummies	Yes	Yes
Year dummies	Yes	Yes
Constant	3.314***	3.298***
	(0.376)	(0.373)
Observations	8,431	8,431
R^2	0.447	0.448

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5.4 Duration of self-employment

We have already, in our main analysis, investigated potential contingencies proxying for the level of ambition and success of an entrepreneurial venture, with results pointing at very limiting contingencies on observable firm characteristics when controlling for individual-level characteristics such as education and pre-displacement salary. In a complementary analysis, we explore if the salary in first regular employment varies with the duration of the spell in self-employment. It seems reasonable to expect that very short spells provide less positive signals about both the inherent traits and skills acquired in self-employment of the displaced individual. Not only may short-lived venture engagements be perceived as less relevant - rapid exit may be associated with a failure stigma and provide a negative signal regarding the individual's abilities and perseverance (Cardon et al., 2011).

We re-run *Model 4* of Table 2, but with the variable Treatment replaced by a set of dichotomous variables capturing the duration of the self-employment spell in years. Results are presented in Table 4. For brevity, only estimates on the new set of dichotomous variables are presented, estimates on controls are close to those of the corresponding model in Table 2.

Table 4: Additional analysis: Job mobility history

	(1)
	ln(New salary)
1 year spell	0.169
	(0.103)
2 year spell	0.212
	(0.114)
3 year spell	0.343*
	(0.133)
4 year spell	0.370**
	(0.123)
	(0.169)
Full set of controls	YES

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$

We find that the average positive effect in our main analysis in fact is primarily driven by self-employment spells extending 2 years. The evidence for individuals who spend one or two years in self-

employment being compensated better than their peers who move directly into regular employment is much weaker, with much more variation in outcomes rendering the coefficient estimates for the difference between short self-employment spells and regular employment less precise. These results bear resemblance to the findings in Baptista et al. (2012), who also find that spells of up to two years in self-employment have very low impact on earnings in subsequent employment.

5.5 How different is the context of post-displacement?

Our analysis is, to our knowledge, a first attempt to investigate the specific case of how post-displacement spells in self-employment are valued upon re-entry into regular employment. There is, however, as discussed already in the Introduction, an established literature addressing the broader phenomenon of self-employment experience as a labor market credential. In a final set of investigations, we seek to set our results in closer relation to existing work, in order to facilitate comparisons.

For this purpose, we build a data set where the starting point is all individuals in the Swedish economy, rather than those who are displaced. We define variables in the same way as in our main data, and we construct a control group through matching following the exact same procedure as described above. Table 5 in the Appendix shows a replication of our main result based on a non-selective sample, i.e. all self-employment events with subsequent return to a position in paid employment in the Swedish economy. The time period and the variable definitions are the same as in the data used to produce our main results. The estimate on *Treatment* is negative throughout the four models. This is in contrast to our main results, but is well in line with other studies employing similar methods to estimate the labour market valuation of self-employment experiences (e.g. (Failla et al., 2017; Mahieu et al., 2021)). We interpret the differences between this set of results and our main results as primarily reflecting a downward bias in the estimate of the treatment effect in the unrestricted sample. This bias, we argue, comes from negative self-selection into and out of self-employment. The group of self-employed contains individuals who, controlling for typical observables such as the existence of a higher education degree and labour market experience, on average have worse outside options in terms of career and income opportunities than the average individual without self-employment experience (Kacperczyk and Marx, 2016). Such unobserved differences between the treated group and the control group entails that the average difference in outcome between treated and un-treated

individuals cannot be said to represent the true treatment effect, i.e. the difference between actual salary income in first employment after self-employment and the contrafactual earnings that the individual had experienced in the absence of any self-employment experience.

Columns (3) and (4) of Table 5 shows that contingency effects are much more pronounced in the non-selective sample than in our main results. If we think of the ambition and success of the firm in which an individual is self-employment as (admittedly noisy) indicators of the opportunity costs of self-employment, the magnitude of estimates on *LLC*, *SE income* and *Venture size* should reflect the magnitude of unobserved differences in opportunity costs between the treated and the untreated. Comparing the estimates on the contingency effects in our main results with those in Table 5 therefore strengthens our conviction that the estimate on *Treatment* in our restricted sample better represents the true treatment effect.

Finally, comparison between the results of Tables 5 and 2 suggests that the differences in treatment effect estimates between the two samples is particularly pronounced for individuals with tertiary education. That is, results indicate that unobserved differences in earning ability between individuals engaging in self-employment and similar individuals who do not are particularly accentuated among the educated.

6 Discussion

We have sought to analyse the valuation of self-employment experiences in the context of worker displacement due to firm closure, arguing that this particular context is particularly relevant per se. But our study may also be thought of as part of a broader discussion about the valuation of entrepreneurial experience on the labor market. Empirical evaluations of this problem are plagued by econometric challenges involved in the evaluation of treatment effects regarding individual's labor market choices and outcomes. The precision of an estimation of the treatment effect of self-employment experience through non-experimental control group designs critically depends on the econometrician's ability to minimize non-observed heterogeneity between groups. If there is a systematic difference in skills and abilities between people who enter self-employment and those who do not, treatment effect estimates will be biased. If, for example, entrepreneurially oriented individuals are on average less productive than less entrepreneurial individuals, or less successful in exploiting their productivity in wage negotiations, the treatment effect of a spell in

entrepreneurship will be negatively biased in econometric evaluations unless the econometrician is able to find and include suitable proxies for these traits in multivariate wage analysis.

By only including what is sometimes referred to as "pushed entrepreneurship" (Andersson and Klepper, 2013; Lougui and Broström, 2021), we expect that our study setting offers a lesser amount of unobserved differences in personality traits and preferences between the treated and the control group that what is the case when evaluating workers who move from a firm that does not close down into self-employment. This can also be expressed so that we expect the level of unobserved differences in the opportunity costs of self-employment between the treated and the control group to be lower between displaced peers that what is the case for colleagues in general.

When comparing individuals from exiting firms, we are likely to face lower level of unobserved heterogeneity between the treated and untreated groups that what is the case in the more general setting of entry and subsequent exit from self-employment. Specifically, we expect that the context of pushed entrepreneurship features both fewer individuals who enter self-employment with relatively poor outside options (i.e. low opportunity costs), and fewer individuals with very strong outside options (i.e. high opportunity costs). That is since an external shock such as the exit of the employing firm reduces the opportunity costs for leaving the current job to zero for all displaced individuals. In the absence of such a shock, individuals will stay in employment unless they are either driven by 1) sufficiently strong necessity-oriented motives (e.g. threat of unemployment, dissatisfaction with the current job); 2) by non-pecuniary motives (e.g. a wish to re-locate geographically); or 3) by perceiving self-employment as more economically attractive through some combination of sufficiently valuable entrepreneurial opportunity (Dimov, 2010) and perceptions of being relatively undervalued by employers (Hegde and Tumlinson, 2021). This should mean that individuals who are observed to move into self-employment should be expected to include both the least and the most ambitious and economically promising instances of all potential self-employment projects. In fact, it has been established that self-employment under general circumstances is a much more attractive move for the most and and the least able workers (Åstebro et al., 2011; Joona and Wadensjö, 2013; Galperin et al., 2020). It is in these tails of the distribution of expected outcome that we find self-employment experiences for which it will be particularly difficult – due to the unobserved nature of the actual opportunity costs of self-employment – to identify a close comparison (a non-treated individual with similar opportunity costs)

for evaluation of contrafactual labor market outcomes. This makes estimation of the average treatment effect particularly cumbersome.

Whether the average estimated treatment effect identified in our context of worker displacement will be lower or higher than that observed in a less restricted sampling strategy basically depends on in which tail that the unobserved differences in earnings ability between treated and non-treated are most dramatic. With our results painting a more positive picture about the evaluation of self-employment on the labor market that what has been found in most previous studies, we find it possible and plausible that the mobility into self-employment observed in previous studies is dominated by individuals with below-average outside options. That is, it is possible that extant evaluations tend to underestimate the labor market evaluation of self-employment experience (Manso, 2016). Future studies should seek to investigate this possibility, e.g. by employing more nuanced proxies for the opportunity costs of entrepreneurship or natural experiments.

When reasoning about how our results relate to the more general question about how employers perceive self-employment experience, it should be noted that our estimates also can be accused of being induced with an upward bias if interpreted in relation to the more general treatement effect of self-employment experience. Employers may have less reason than otherwise to perceive a shift into self-employment as conveying a signal of general tendency to job mobility when this mobility takes place in the wake of displacement rather than by leaving an existing employer. Our estimates of treatment effect thus apply to the valuation of traits and skills associated with self-employment, in the absence of acute concerns that a previously self-employed individual will prove less loyal to a new employer than what can be expected to the average worker. Note, however, that these concerns would in principle apply to an individual with a history of any type of job mobility, so it is not clear that these type of connotations should be considered part and parcel of the assessment of self-employment per se.

7 Conclusions

It is often argued that a spell in self-employment is an increasingly important ingredient of the contemporary and, even more so, future career (Rider et al., 2019). It is therefore a matter of high interest to understand the labor market implications of self-employment experience. In this paper, we investigate the careers of

individuals who undertake a spell of one-four years in self-employment after being displaced in the context of firm closure. Specifically, we study their salary income upon re-entry into regular employment and compare that to the corresponding income of their peers who did not engage in self-employment to assess how such experiences are evaluated.

We exploit rich employer-employee data on the full Swedish population that allows us to focus our empirical investigation on individuals who are displaced in the context of employer exit. To further trim the sample, we apply coarsened exact matching. In a final step, we regress future wage on the treatment variable, while applying a set of conventional controls.

Our results paint a largely positive picture of how experience from self-employment among recently displaced workers is evaluated on the Swedish labor market. Compared to their peers who find and accept new employment after losing their current job due to employer exit, individuals who experience a spell in self-employment earn approximately 20% more when controlling for differences in characteristics between the two groups. From our further analysis, three sets of finding help us understand this effect. First, we find that the average effect is driven by spells lasting three or four years, whereas the salary of individuals who only resort to self-employment during one or two years after displacement is not systematically higher than that of peers without such experience. Second, we find some evidence for the average affect being driven by job-sorting mechanisms. Self-employment experience is valuable for career paths emphasising generalist skills acquired from multi-industry experience, and facilitates promotion to managerial roles. Finally, we show that our positive results apply to the the specific context of post-displacement that we study. When mirroring our analysis in a broader sample where mobility into self-employment takes place from any workplace, we find - in line with many previous studies - that the average spell in self-employment is associated with a penalty on future wages.

Our study has implications for the pursuit of answers to the more general question of how self-employment experience are evaluated at the regular labor market. In that all individuals in our sample are being forced to some form of job mobility, we expect to have reduced the level of unobserved heterogeneity between the treated and the non-treated compared to the samples studied in previous work addressing this question. Such heterogeneity is an inherent challenge for empirical evaluations of labor market outcomes and may, we argue, explain why previous studies of the labor market evaluation of entrepreneurial

experiences have reached largely contradictory results. Specifically, we suggest many studies may have suffered from a tendency to conflate high-quality and low-quality entrepreneurship. Our results, including the comparison between our main analysis and the general case, raise questions about whether previous studies emphasising negative valuations are overestimating the average earnings abilities of those entering self-employment. Specifically, our results may be interpreted as indicating that a straightforward comparison between individuals who do and do not enter self-employment in the absence of an external shock, as conducted in some earlier work, may fail to account for negative selection into self-employment - in particular among the more qualified (e.g. educated, with managerial experience) workers.

By assessing the labor market valuation of self-employment experiences in the wake of displacement, the study contributes to the literature on entrepreneurship as a career option (Bates, 2005; Burton et al., 2016). The study also contributes to literature on the consequences of worker displacement, and on the role of entrepreneurship in this context (von Greiff, 2009; Røed and Skogstrøm, 2014; Nyström, 2020).

Our analysis is of direct relevance to individuals considering self-employment. The results also have two major implications for contemporary economic policy. First, the finding that self-employment experience is on average positively valued on the labor market suggests that there is a mostly unrecognized upside to self-employment. While it is possible that the risks associated with self-employment as such may lead to lower rates of entry than what is socially optimal, our findings all else equal contradicts the need to stimulate self-employment in general through additional economic incentives. Secondly, a positive evaluation of self-employment - and the economically significant difference between self-employment and unemployment for subsequent labor market prospects - would seem to support the notion that supporting self-employment may be an appropriate component in policy to fight unemployment (Srhoj and Zilic, 2021; Cowling and Dvouletỳ, 2022). In particular, self-employment may be encouraged as a stepping stone towards re-integration into the regular labor market after worker displacement.

In view of our results, we see a need for further study to examine employers' valuation of self-employment experience which allows to differentiate between different types of attributes that may be associated with self-employment, and different types of job tasks for which these attributes may be more or less positively perceived.

APPENDIX

Table 5: OLS regression results: Complete population

	(1) ln(new salary)	(2) ln(new salary)	(3) ln(new salary)	(4) ln(new salary)
Treatment	-0.155***	-0.0446***	-1.284***	-0.409***
	(0.00375)	(0.00326)	(0.0134)	(0.0118)
Individual characteristics				
Tertiary education		0.231***		0.234***
		(0.00127)		(0.00129)
Female		-0.215***		-0.215***
		(0.00132)		(0.00132)
Age		0.0207***		0.0208***
		(0.000931)		(0.000930)
Age^2		-0.000238***		-0.000238***
		(0.0000120)		(0.0000120)
SE experience		-0.0268***		-0.0276***
		(0.00253)		(0.00253)
Parenthood		0.0890***		0.0884***
		(0.00130)		(0.00130)
Position at last employer				
Tenure		0.0166***		0.0171***
		(0.00124)		(0.00124)
$Tenure^2$		0.000188		0.000118
		(0.000245)		(0.000245)
ln(Salary)		0.369***		0.366***
		(0.000830)		(0.000834)
Managerial position		0.235***		0.241***
		(0.00244)		(0.00248)
Contingency effects				
Treatment*Tertiary education			0.203***	-0.0625***
			(0.00741)	(0.00659)
Treatment*Managerial position			0.335***	-0.167***
			(0.0143)	(0.0127)
LLC			0.225***	0.116***
			(0.0122)	(0.0106)
ln(SE income)			0.143***	0.0555***
			(0.00191)	(0.00167)
ln(Venture size)			0.0662***	0.0318***
			(0.00600)	(0.00525)
Other controls				
Size of new employer		yes		yes
County dummies		yes		yes
Year dummies		yes		yes
Constant	7.706***	4.360***	7.720***	4.382***
	(0.000712)	(0.0182)	(0.00213)	(0.0182)
Observations	1,412,937	1,412,937	1,412,937	1,412,937
R^2	0.001	0.256	0.026	0.256

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: Description of variables

Variables	**Type**	**Description**
New salary	Continuous	The yearly salary from the first conventional job after displacement one year after being hired
Treatment	Dichotomous	Individual goes into self-employment after displacement
Tertiary education	Dichotomous	Individual holds degree from tertiary education
Female	Dichotomous	Individual is female
Age	Continuous	Age of the individual at the time of displacement
SE experience	Dichotomous	Individual has previous self-employment experience
Parenthood	Dichotomous	Individual has at least one kid aged between 0 and 3
Tenure	Count	Number of years in the firm before displacement (censored at 5 years)
Size	Continuous	Size (number of employees) of the last employer before displacement
Salary	Continuous	Last yearly salary obtained from employment before displacement
Managerial position	Dichotomous	Individual held position as manager before displacement
LLC	Dichotomous	New venture is incorporated as limited liability company
Venture size	Dichotomous	Size (number of employees) of the new venture
Industry experience breadth	Count	Number of industries from which the individual has working experience in the five years preceding displacement
Number of employers	Count	Number of unique employers in the five years preceding displacement
Different industry	Dichotomous	New venture is in a different industry than the exiting employer
County	Dichotomous	Indicator variables for which county that the individual resides in when displaced
Year	Dichotomous	Indicator variables for in what year that the individual was displaced

Table 7: The effect of self-employment vs. unemployment on earnings in regular employment

	(1) ln(new salary)	(2) ln(new salary)	(3) ln(new salary)	(4) ln(new salary)
Treatment	0.238**	0.253**	-0.129	-0.0509
	(0.094)	(0.119)	(0.135)	(0.203)
Individual characteristics				
Tertiary education		0.331***		0.0149
		(0.0681)		(0.220)
Female		-0.239***		-0.242**
		(0.0835)		(0.0856)
Age		0.0607		0.0558
		(0.0398)		(0.0408)
Age^2		-0.000702		-0.000687
		(0.000509)		(0.000525)
SE experience		0.0437		-0.084
		(0.113)		(0.111)
Parenthood		-0.0470		0.0126
		(0.100)		(0.101)
Position at last employer				
Tenure		-0.0700		-0.0802
		(0.0679)		(0.0654)
ln(Salary)		0.245***		0.198***
		(0.0450)		(0.0456)
Managerial position		-0.307		-0.042
		(0.159)		(0.166)
Contingency effects				
Treatment*Tertiary education			0.327***	0.206
			(0.073)	(0.235)
Treatment*Managerial position			-0.344	-.0398
			(0.210)	(0.289)
LLC			0.125	0.177
			(0.0854)	(0.0811)
ln(SE income)			0.0326***	0.0143
			(0.010)	(0.0103)
ln(Venture size)			0.033	0.0189
			(0.048)	(0.0499)
Other controls				
Size of new employer		yes		yes
County dummies		yes		yes
Year dummies		yes		yes
Constant	7.499***	4.510***	7.502***	5.106***
	(0.086)	(0.772)	(0.0867)	(0.851)
Observations	792	792	792	792
R^2	0.166	0.160	0.200	0.173

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

References

Amit, R., Muller, E. and Cockburn, I. (1995), 'Opportunity costs and entrepreneurial activity', *Journal of Business Venturing* **10**(2), 95–106.

Andersson, M. and Klepper, S. (2013), 'Characteristics and performance of new firms and spinoffs in Sweden', *Industrial and Corporate Change* **22**(1), 245–280.

Åstebro, T., Braunerhjelm, P. and Broström, A. (2013), 'Does academic entrepreneurship pay?', *Industrial and Corporate Change* **22**(1), 281–311.

Åstebro, T., Chen, J. and Thompson, P. (2011), 'Stars and misfits: Self-employment and labor market frictions', *Management Science* **57**(11), 1999–2017.

Astebro, T., Herz, H., Nanda, R. and Weber, R. A. (2014), 'Seeking the roots of entrepreneurship: Insights from behavioral economics', *Journal of Economic Perspectives* **28**(3), 49–70.

Åstebro, T. and Thompson, P. (2011), 'Entrepreneurs, jacks of all trades or hobos?', *Research policy* **40**(5), 637–649.

Baptista, R., Lima, F. and Preto, M. T. (2012), 'How former business owners fare in the labor market? Job assignment and earnings', *European Economic Review* **56**(2), 263–276.

Barach, M. A. and Horton, J. J. (2020), How do employers use compensation history?: Evidence from a field experiment, Technical report, National Bureau of Economic Research.

Bates, T. (2005), 'Analysis of young, small firms that have closed: delineating successful from unsuccessful closures', *Journal of Business Venturing* **20**(3), 343–358.
URL: *http://linkinghub.elsevier.com/retrieve/pii/S0883902604000308*

Blackwell, M., Iacus, S. M., King, G. and Porro, G. (2010), 'CEM: Coarsened exact matching in stata', *Stata Journal* **9**(4), 524–546.

Brown, C. and Medoff, J. (1989), 'The employer size-wage effect', *Journal of political Economy* **97**(5), 1027–1059.

Bruce, D. and Schuetze, H. J. (2004), 'The labor market consequences of experience in self-employment', *Labour Economics* **11**(5), 575–598.

Budig, M. J. (2006), 'Gender, self-employment, and earnings: The interlocking structures of family and professional status', *Gender and Society* **20**(6), 725–753.

Burton, M. D., Sø rensen, J. B. and Dobrev, S. D. (2016), 'A Careers Perspective on Entrepreneurship', *Entrepreneurship: Theory and Practice* **40**(2), 237–247.

Busenitz, L. W. and Barney, J. B. (1997), 'Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making', *Journal of Business Venturing* **12**(1), 9–30.

Cardon, M. S., Stevens, C. E. and Potter, D. R. (2011), 'Misfortunes or mistakes?: Cultural sensemaking of entrepreneurial failure', *Journal of Business Venturing* **26**(1), 79–92.

Carter, S. (2011), 'The rewards of entrepreneurship: Exploring the incomes, wealth, and economic well–being of entrepreneurial households', *Entrepreneurship theory and practice* **35**(1), 39–55.

Cassar, G. (2006), 'Entrepreneur opportunity costs and intended venture growth', *Journal of Business Venturing* **21**(5), 610–632.

Chen, C. C., Greene, P. G. and Crick, A. (1998), 'Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?', *Journal of business venturing* **13**(4), 295–316.

Cowling, M. and Dvouletỳ, O. (2022), 'Uk government-backed start-up loans: Tackling disadvantage and credit rationing of new entrepreneurs', *International Small Business Journal* p. 02662426221124733.

Daly, M. (2015), 'The long term returns of attempting self-employment with regular employment as a fall back option', *Labour Economics* **35**, 26–52.

DeVaro, J. and Waldman, M. (2012), 'The signaling role of promotions: Further theory and empirical evidence', *Journal of Labor Economics* **30**(1), 91–147.

Dimov, D. (2010), 'Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning', *Journal of Management Studies* **47**(6), 1123–1153.

Douglas, E. J. and Shepherd, D. A. (2002), 'Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization', *Entrepreneurship theory and practice* **26**(3), 81–90.

Eliasson, G. (2006), 'From employment to entrepreneurship: shifting perspectives in europe and the us on knowledge creation and labour market competition', *Journal of Industrial Relations* **48**(5), 633–656.

Failla, V., Melillo, F. and Reichstein, T. (2017), 'Entrepreneurship and employment stability - Job matching, labour market value, and personal commitment', *Journal of Business Venturing* **32**(2), 162–177.

Folta, T. B., Delmar, F. and Wennberg, K. (2010), 'Hybrid Entrepreneurship', *Management Science* **56**(2), 253–269.

Galperin, R. V., Hahl, O., Sterling, A. D. and Guo, J. (2020), 'Too good to hire? capability and inferences about commitment in labor markets', *Administrative Science Quarterly* **65**(2), 275–313.

Gompers, P., Lerner, J. and Scharfstein, D. (2005), 'Entrepreneurial Spawning : Public Corporations and the Genesis of New Ventures , 1986 to 1999', *The Journal of Finance* **LX**(2).

Halek, M. and Eisenhauer, J. G. (2001), 'Demography of risk aversion', *The Journal of Risk and Insurance* **68**(1), 1–24.

Hamilton, B. H., Journal, S., June, N. and Hamilton, B. H. (2000), 'Does Entrepreneurship Pay ? An Empirical Analysis of the Returns to Self-Employment', *Journal of Political Economy* **108**(3), 604–631.

Hegde, D. and Tumlinson, J. (2021), 'Information frictions and entrepreneurship', *Strategic Management Journal* **42**(3), 491–528.

Hundley, G. (2000), 'Male / Female Earnings Differences in Self-Employment : The Effects of Marriage , Children , and the Household Division of Labor', *Industrial and Labor Relations Review* **54**(1), 95–114.

Hvide, H. K. and Panos, G. A. (2014), 'Risk tolerance and entrepreneurship', *Journal of Financial Economics* **111**(1), 200–223.

Hyytinen, A. and Rouvinen, P. (2008), 'The labour market consequences of self-employment spells: European evidence', *Labour Economics* **15**(2), 246–271.

Iacus, S., King, G. and Porro, G. (2009), 'cem: Software for Coarsened Exact Matching', *Journal of Statistical Software* **30**(9).

Jacobson, L. S., LaLonde, R. J. and Sullivan, D. G. (1993), 'Earnings losses of displaced workers', *The American economic review* pp. 685–709.

Joona, P. A. and Wadensjö, E. (2013), 'The best and the brightest or the least successful? self-employment entry among male wage-earners in sweden', *Small Business Economics* **40**(1), 155–172.

Kacperczyk, A. and Marx, M. (2016), 'Revisiting the small-firm effect on entrepreneurship: Evidence from firm dissolutions', *Organization Science* **27**(4), 893–910.

Kaiser, U. and Malchow-Moller, N. (2011), 'Is self-employment really a bad experience?', *Journal of Business Venturing* **26**(5), 572–588.

Koch, M., Park, S. and Zahra, S. A. (2021), 'Career patterns in self-employment and career success', *Journal of Business Venturing* **36**(1), 105998.

Koellinger, P. D., Mell, J. N., Pohl, I., Roessler, C. and Treffers, T. (2015), 'Self-employed but looking: A labour market experiment', *Economica* **82**(325), 137–161.

Koudstaal, M., Sloof, R. and Van Praag, M. (2015), 'Risk, uncertainty, and entrepreneurship: Evidence from a lab-in-the-field experiment', *Management Science* **62**(10), 2897–2915.

Lazear, E. P. (2004), 'Balanced Skills and Entrepreneurship', *American Economic Association* **94**(2).

Lazear, E. P. (2005), 'Entrepreneurship', *Journal of Labor Economics* **23**(4), 649–680.

Leigh, J. P. (1986), 'Accounting for tastes: Correlates of risk and time preferences', *Journal of Post Keynesian Economics* **9**(1), 17–31.

Levine, R. and Rubinstein, Y. (2013), 'Smart and illicit: Who becomes an entrepreneur and does it pay?'.

Lougui, M. and Broström, A. (2021), 'New firm formation in the wake of mergers and acquisitions: An exploration of push and pull factors', *Journal of Evolutionary Economics* **31**, 65–89.

Luzzi, A. and Sasson, A. (2016), 'Entrepreneurial Exit and Earnings in Subsequent Paid Employment', *Entrepreneurship Theory and Practice* pp. 401–420.

Mahieu, J., Melillo, F., Reichstein, T. and Thompson, P. (2021), 'Shooting stars? uncertainty in hiring entrepreneurs', *Strategic Entrepreneurship Journal* **15**(4), 526–567.

Manso, G. (2016), 'Experimentation and the Returns to Entrepreneurship', *Review of Financial Studies* **29**(9), 2319–2340.

Marshall, D. R. (2016), 'From employment to entrepreneurship and back: A legitimate boundaryless view or a bias-embedded mindset?', *International Small Business Journal* **34**(5), 683–700.

Marshall, M. I. and Flaig, A. (2014), 'Marriage, Children, and Self-Employment Earnings: An Analysis of Self-Employed Women in the US', *Journal of Family and Economic Issues* **35**(3), 313–322.

Merida, A. L. and Rocha, V. (2021), 'It's about time: The timing of entrepreneurial experience and the career dynamics of university graduates', *Research Policy* **50**(1), 104135.
URL: *http://www.sciencedirect.com/science/article/pii/S0048733320302109*

Mincer, J. (1958), 'Investment in human capital and personal income distribution', *Journal of Political Economy* **66**(4).

Mincer, J. (1974), *Schooling, experience, and earnings*, Vol. I, NBER Press, New York.

Nyström, K. (2018), 'Regional resilience to displacements', *Regional Studies* **52**(1), 4–22.

Nyström, K. (2020), 'Entrepreneurship after displacement', *Small Business Economics* **54**(2), 475–494.

Parker, S. C. (2018), *The economics of entrepreneurship*, Cambridge University Press.

Pe'Er, A. and Vertinsky, I. (2008), 'Firm exits as a determinant of new entry: Is there evidence of local creative destruction?', *Journal of Business Venturing* **23**(3), 280–306.

Rider, C. I., Thompson, P., Kacperczyk, A. and Tåg, J. (2019), 'Experience and entrepreneurship: A career transition perspective', *ILR Review* **72**(5), 1149–1181.

Røed, K. and Skogstrøm, J. F. (2014), 'Job loss and entrepreneurship', *Oxford bulletin of economics and statistics* **76**(5), 727–744.

Roed, K. and Skogstrom, J. F. (n.d.).

Rosen, S. (1972), 'Learning and Experience in the Labor Market', *The journal of human resource* **7**(3), 326–342.

Shane, S. and Nicolaou, N. (2015), 'Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions', *Journal of Business Venturing* **30**(3), 407–419.

Spanjer, A. and van Witteloostuijn, A. (2017), 'The entrepreneur's experiential diversity and entrepreneurial performance', *Small Business Economics* **49**(1), 141–161.

Srhoj, S. and Zilic, I. (2021), '"fine... i'll do it myself": Lessons from self-employment grants in a long recession period', *IZA Journal of Labor Policy* **11**(1).

Stanworth, J., Stanworth, C., Granger, B. and Blyth, S. (1989), 'Who becomes an entrepreneur?', *International Small Business Journal* **8**(1), 11–22.

Sørensen, J. B. (2007), 'Bureaucracy and entrepreneurship: Workplace effects on entrepreneurial entry', *Administrative Science Quarterly* **52**(3), 387–412.

Taylor, M. P. (1999), 'Survival of the fittest? An analysis of self-employment duration in Britain', *The Economic Journal* **109**, 140–155.

Thurik, A. R., Carree, M. A., Van Stel, A. and Audretsch, D. B. (2008), 'Does self-employment reduce unemployment?', *Journal of Business Venturing* **23**(6), 673–686.

Torrini, R. (2005), 'Cross-country differences in self-employment rates: The role of institutions', *Labour Economics* **12**(5), 661–683.

von Greiff, J. (2009), 'Displacement and self-employment entry', *Labour Economics* **16**(5), 556–565.

Williams, D. R. (2000), 'Consequences of self-employment for women and men in the United States', *Labour Economics* **7**.

RESEARCH NETWORK DEBATE

SWEDISH ENTREPRENEURSHIP FORUM

WWW.ENTREPRENORSKAPSFORUM.SE