

3. Self-employment and the life course: analyses of panel data

This chapter further elaborates on the question how the group of self-employed without personnel can be characterised (RQ1b). Over the years many studies have focused on different characteristics of the group of self-employed. These studies have resulted in a number of important insights, yet there are still many gaps left in our knowledge, especially about transitions into and out of self-employment from a life course perspective. Based on secondary panel data analyses, this chapter addresses characteristics of self-employed without personnel in Germany and the Netherlands in terms of:

- Labour market transitions;
- Consequences of entry into and exit from self-employment;
- Consequences of self-employment experience;
- The role of earlier life experiences.

Although in the research literature all self-employed –including both self-employed *without* personnel and self-employed *with* personnel– are predominantly analysed together as one coherent group, it is increasingly

recognised that the high degree of heterogeneity among the ‘self-employed’ may in fact affect their responses to changes in the economic and institutional environment. Additionally, the growth in the number and share of self-employed in many countries is largely attributed to a growth in the number of self-employed *without* personnel. Therefore, and given the nature of our project, we will perform our analysis on self-employed *without* personnel only.

Cross-national panel data

For the analyses in this chapter we used panel data from the German Socio-Economic Panel (GSOEP) and the Dutch Labour Supply Panel (DLSP). Both surveys have a panel structure, offering the possibility to observe individuals over several waves. From this data we selected individuals belonging to the potential labour force, covering the time period between 2000 and 2010².

Both databases contain information on the labour market status of working and non-working individuals. Employment statuses were retrieved from individuals in the two countries every two years (2000, 2002, 2004, 2006, 2008 and 2010). Individuals were categorized into the

Quote



“There is still a tremendous lack of information about transitions and transition sequences between ‘non-standard’ and ‘standard’ forms of employment, especially in terms of life-course careers, which inhibits firm conclusions on the flexibility and security implications of non-standard employment.” - (Schmid, 2010: p.42)

² Before 1998, the German Socio-Economic Panel does not differentiate between self-employed *with* and *without* personnel. The data of the 2012 Dutch Labour Supply Panel was not yet available at the time of the study.



following possible labour market states: self-employed *without* personnel, self-employed *with* personnel, holding a job in wage employment and unemployed/ inactive. Besides employment status, the national longitudinal 'baseline' datasets (long format) include gender, year of birth, country of birth, educational attainment level, health status, children under age 12, net income from main job, net household income per month, hours in main job, job satisfaction, country code and wave year. We will discuss any differences between the two datasets due to the structure of the questionnaires or the exact phrasing of questions in the relevant sections.

Table 3.1 shows several characteristics of the self-employed without personnel from the panels. The table shows that in both countries male self-employed are somewhat underrepresented in the sample. Furthermore, in both Germany and the Netherlands older self-employed (50 years of age and older) are overrepresented. In the Netherlands, lower educated self-employed without personnel are overrepresented and non-natives are underrepresented.

Table 3.1 Characteristics of the respondents, by country

	Germany		Netherlands	
	SE without pers.	Panel data	SE without pers.	Panel data
Gender				
Male	62%	57%	62%	54%
Female	38%	43%	38%	46%
Age				
15-24 years of age	2%	2%	6%	4%
25-49 years of age	66%	62%	60%	60%
50-64 years of age	31%	36%	34%	36%
Educational attainment level				
ISCED Level 0-2	7%	6%	20%	26%
ISCED Level 3-4	49%	49%	38%	32%
ISCED Level 5-6	43%	45%	41%	42%
Country of birth				
Native	82%	84%	88%	97%
Non-native	18%	16%	12%	3%

Source: Labour Force Survey, Eurostat, 2014

The resulting datasets have particular strengths as well as several limitations. On the plus side, the longitudinal dimension offers the possibility to measure change at the individual level, while the cross-national dimension provides information on whether transitions in self-employment are either a national phenomenon or can be more widely found among solo self-employed. An important limitation is that the panels suffer – as do many other panels – from substantial panel attrition. In combination with the small numbers of solo self-employed in the separate waves this leaves too small a base to follow individual solo self-employed over a longer period of time. Therefore, we will not focus on *duration* of solo self-employment, but merely on *transitions* made by individuals.

Labour market transitions

This paragraph will provide a picture of transitions between self-employment and other employment statuses in Germany and the Netherlands. On the one hand there is the possible transition from any pre-self-employment status *into* self-employment (or, put differently, an *entry* into self-employment), while on the other hand individuals may make the transition from self-employment into another employment status (*exit* from self-employment). Table 3.2 shows the two-yearly stability as well as dynamics between solo self-employment and other labour market states for all transitions in the time period between 2000 and 2010.

Table 3.2 Two-yearly stability and changes of solo self-employment (in %), 2000-2010

	Germany			Netherlands		
	Total	Males	Females	Total	Males	Females
Status 2 years earlier ($t-2$)						
Solo self-employment	62	61	63	63	65	59
Self-employed <i>with</i> personnel	12	15	7	2	4	1
Wage employment	13	13	13	25	25	25
Unemployment/ Inactivity	13	11	16	10	6	15
<i>N</i>	2746	1569	1177	651	349	302
Status 2 years later ($t+2$)						
Solo self-employment	67	67	67	70	74	65
Self-employed <i>with</i> personnel	11	14	7	3	3	3
Wage employment	12	10	13	17	15	20
Unemployment/ Inactivity	10	9	13	10	8	12
<i>N</i>	2528	1426	1102	581	307	274

Note: Individuals are solo self-employed at time t .

Source: Own calculations, based on GSOEP and DLSP

The upper part of the table shows stability as well as possible *entry* into solo self-employment. In Germany, 62 per cent of those who were solo self-employed in any wave were also solo self-employed in the previous wave (that is: 2 years earlier), 12 per cent used to be self-employed with personnel, 13 per cent used to hold a job in wage employment and 13 per cent was unemployed or inactive in the previous wave. In the Netherlands, as compared to Germany, the results show a relatively high inflow from individuals who used to work in wage employment. In both countries males relatively often make a transition from self-employment *with* personnel into solo self-employment as compared to females, whereas females more often come from an unemployed or inactive status.

The lower part of the table shows the employment states of solo self-employed in the subsequent wave, representing possible *exit* from solo self-employment. Is self-employment a stage (intermediate or final) in a continuous working career, or is it more of a precursor to unemployment and inactivity? The findings show that in Germany, 67 per cent of those who

were solo self-employed were also solo self-employed after two years, 12 per cent held a job in wage employment two years later, 11 per cent became self-employed with personnel, and 10 per cent became unemployed or inactive. In the Netherlands, as compared to Germany, the results show a relatively high outflow from individuals into wage employment. In both countries, females more often (re)turn to an unemployed or inactive status than males do, while in Germany males more often make the transition into self-employment *with* personnel.

Overall, the results from table 3.2 show that while the majority of solo self-employed are also solo self-employed in the subsequent wave, dynamics are most prevalent between solo self-employment and wage employment - especially in the Netherlands. German individuals relatively often transit between solo self-employment and self-employment *with* personnel.

The findings furthermore present a rather 'balanced' transition matrix of entry into and exit from solo self-employment to the various labour market states and does not seem to indicate that solo self-employment functions as an obvious 'stepping stone' to becoming unemployed or inactive. Nevertheless, we cannot tell from this table to what extent solo self-employment affects labour market participation in the long run. Additionally, we don't know whether the balance between entry and exit might represent an 'artificial' balance, in the sense that institutions might obstruct transitions into other states. For instance, self-employed without personnel are often not entitled to unemployment benefits for their work as self-employed, so they may remain self-employed for a longer period of time because the route into unemployment is not an option.

Table 3.3 Two-yearly stability and transitions (in %), solo self-employed and employees, 2000-2010

	Germany		Netherlands	
	Solo self-employed	Wage employment	Solo self-employed	Wage employment
Status 2 years earlier ($t-2$)				
Solo self-employment	62	1	63	1
Self-employed <i>with</i> personnel	12	0	2	0
Wage employment	13	88	25	94
Unemployment/ Inactivity	13	11	10	5
<i>N</i>	2.746	46.572	651	11.964
Status 2 years later ($t+2$)				
Solo self-employment	67	1	70	1
Self-employed <i>with</i> personnel	11	1	3	0
Wage employment	12	88	17	92
Unemployment/ Inactivity	10	11	10	6
<i>N</i>	2.528	46.760	581	12.209

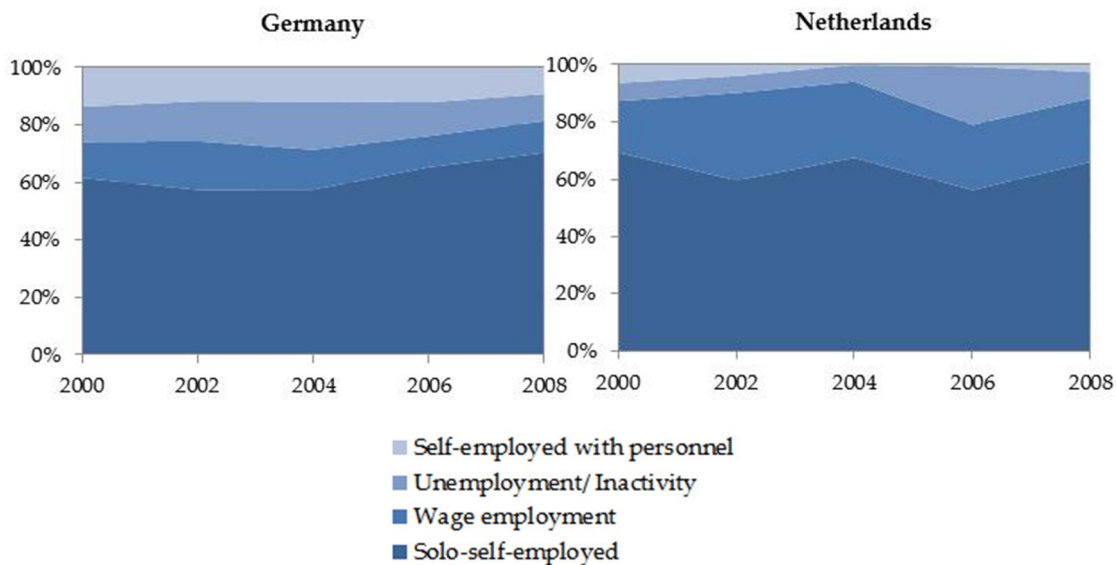
Source: Own calculations, based on GSOEP and DLSP



The upper part of table 3.3 shows stability as well as possible entry for both solo self-employed and employees. In Germany, 62 per cent of those who were solo self-employed in any wave were also solo self-employed in the previous wave, while 88 per cent of the employees were also in wage employment in the previous wave. In the Netherlands, as compared to Germany, the results show an even higher stability with 94 per cent of employees who are in wage employment in both waves. Furthermore, the Dutch employees have a relatively low inflow from unemployed or inactive individuals. The lower part of the table shows a similar picture of relatively high stability among employees as compared to those in solo self-employment.

Whereas the previous tables show the stability and possible transitions regarding solo self-employment for all waves pooled together, Figure 3.1 depicts the stability and possible entry into solo self-employment for the separate waves. Considering for instance the German solo self-employed in 2010, the graph shows that in 2008 about 70 per cent used to be solo self-employed, about 10 per cent was in wage employment, 10 per cent unemployed or inactive and 10 per cent used to be self-employed with personnel. Over time, the graph depicts a slight increase in the share of solo self-employed remaining self-employed between two subsequent waves. The graph for the Netherlands shows more volatility, which presumably partly has to do with the lower number of solo self-employed in each wave. The graph however seems to indicate that in 2008 and 2010 Dutch solo self-employment had a slightly higher inflow from individuals who used to be unemployed or inactive.

Figure 3.1 Two-yearly stability and entry into solo self-employment (in %), by wave

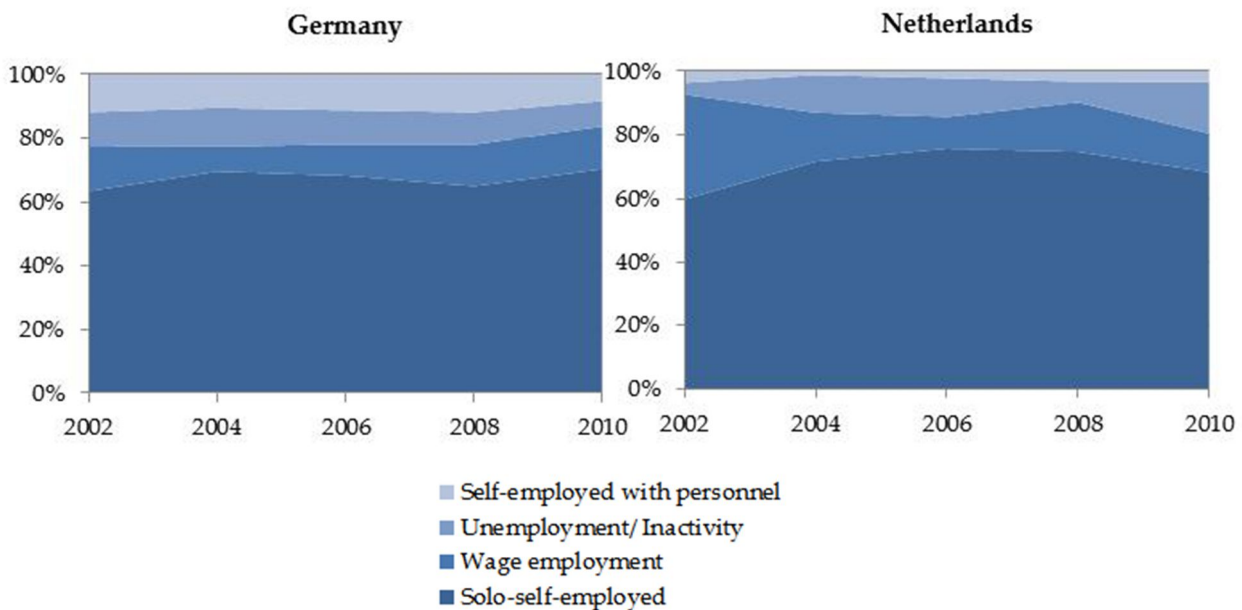


Source: Own calculations, based on GSOEP and DLSP



The graphs in Figure 3.2 show the destination states of solo self-employed. Considering the German solo self-employed in 2000, the graph shows that in 2002 64 per cent is still solo self-employed, 14 per cent has turned to wage employment, 10 per cent became unemployed or inactive and 12 per cent became self-employed with personnel. Over time, the graph depicts a rather stable picture in the share of solo self-employed in the various labour market states. The graph for the Netherlands also does not seem to show a trend towards an increase or decrease into any particular labour market state.

Figure 3.2 Two-yearly stability and exit from solo self-employment (in %), by wave



Source: Own calculations, based on GSOEP and DLSP

Self-employment and the life course

Are individuals with relatively unstable work histories more or less likely to enter solo self-employment? Or has the transition into solo self-employment maybe more to do with the combination of work and family life or health-related issues? This section aims to shed more light on such issues by examining the impact of preceding work, educational, health, income and family experiences on the transition into solo self-employment.

In this section we will adopt a life course perspective to the transition into solo self-employment (see for example Schippers, 2003, 2004; Newman & Newman, 2007; Van der Lippe et al., 2007). In line with the life course proposition of “multi-sphere development”, we will not only study experiences in the work sphere but also address aspects of other life spheres (i.e., educational, health, income and family). This approach includes both the dimension of ‘biographic time’ in the sense that earlier life experiences influence later events, and the dimension of ‘family time’ related to the notions of “linked lives” (Elder, 1994) or “interwoven lives” (Hagestad, 1981). Consequently, this approach will also provide more insight to the question to what extent

individuals self-control the transition into self-employment (Beck & Beck-Gernsheim, 2002). We theoretically and empirically distinguish between male and female pre-self-employment factors through which earlier experiences could affect the transition into self-employment.

Earlier studies often have focussed on the impact of earlier experiences from one life sphere, controlling for characteristics from various other domains. First, the pre-self-employment work status has been tested to influence self-employment (Martinez-Granado, 2002). In this respect, particularly the transition from unemployment to self-employment has received relatively much attention (Meager, 1992; Arai, 1997; Carrasco, 1999; Glocker & Steiner, 2007). Some studies have focused on transitions of specific subgroups on the labour market, such as the transitions of older workers (Giandrea, Cahill & Quinn, 2008; Zissimopoulos & Karoly, 2009) or ethnic and racial differences in self-employment (Fairlie & Meyer, 1996, 2000). Second, studies have found financial opportunities and constraints or access to capital to influence the transition into self-employment (Evans and Leighton, 1989; Evans and Jovanovic, 1989), including inheritances or windfall gains (Blanchflower & Oswald, 1998; Taylor, 2001). Finally, a few studies have focused on the combination of having a family and pursuing a career as a self-employed (Connely, 1992; Wellington, 2006). To our knowledge, no studies have studied the separate effects of various earlier life course experiences in one comprehensive approach.

Table 3.4 shows what experiences *prior* to the solo self-employment decision may have an impact on the transition into solo self-employment. For instance, does the preceding work status, health status, household income or having children affect the probability to make the transition into solo self-employment? The depicted odds ratio represents the ratio of the probability that individuals make the transition into solo self-employment to the probability that they do not. An odds ratio of one thus represents an equal probability.

The table shows that the *probability* of entering solo self-employment is substantially higher for those who used to be self-employed *with* personnel in the previous wave than for wage and salary workers (reference category); especially in Germany. The probability of entering solo self-employment is also higher for those who used to be inactive or unemployed. Although in absolute numbers the inflow from individuals who used to work in wage employment was higher in the Netherlands (see Table 3.2), in relative terms self-employed with personnel and inactive/ unemployed thus have a higher entry into solo self-employment.

Furthermore, the table shows that in Germany the probability to enter self-employment is higher among medium and higher educated individuals than among individuals with a lower educational attainment level. In the Netherlands, this only applies to higher educated females. The pre-self-employment health status seems to play a role only for males; males reporting to be in good health have a higher probability of becoming solo self-employed than those in poor health (the scale of health ranges from excellent to very poor, so higher scores represent worse health conditions). The pre-self-employment net household income does not seem to have a significant impact on entry into solo self-employment. Dutch women with children under age

12 have a higher probability to enter solo self-employment than those who don't have children in this age group; this does not apply to males nor to German women. Having a partner does not seem to affect the probability to enter solo self-employment.

Table 3.4 The transition into solo self-employment (logistic regression analysis, odds ratio), 2000-2010

	Germany		Netherlands	
	Males	Females	Males	Females
Pre-self-employment work status				
Wage and salary worker (= reference category)	-	-	-	-
Self-employed with personnel	24.478** (4.464)	28.828** (6.886)	9.670** (3.479)	8.041** (6.074)
Inactive/ Unemployed	4.127** (0.805)	2.665** (0.503)	2.354** (0.691)	2.193** (0.519)
Educational level				
ISCED 0-2 (= reference category)	-	-	-	-
ISCED 3-4	2.386** (0.638)	2.720** (0.822)	1.029 (0.286)	1.374 (0.393)
ISCED 5-6	1.945* (0.581)	4.807** (1.523)	1.507 (0.390)	2.278** (0.644)
Health status	0.825* (0.072)	0.988 (0.096)	0.712* (0.106)	1.152 (0.149)
Net household income	0.960 (0.034)	1.005 (0.031)	1.000 (0.000)	0.995 (0.021)
Family				
Children under age 12	1.138 (0.208)	1.158 (0.224)	0.913 (0.240)	1.932* (0.518)
Partner	0.864 (0.166)	1.025 (0.215)	1.267 (0.400)	1.150 (0.339)
Individual characteristics				
Age of respondent				
<35 years of age	0.936 (0.201)	1.855** (0.389)	1.604 (0.465)	1.570 (0.411)
35-49 years of age	0.990** (0.003)	0.984** (0.004)	0.991 (0.005)	0.998 (0.005)
>50 years of age (= reference category)	-	-	-	-
Country of birth (native = reference category)	0.776 (0.161)	1.142 (0.243)	1.715 (0.804)	1.150 (0.459)
Pseudo R ²	0.15	0.12	0.05	0.04
N	13684	14954	6808	7323

Note. *Significant at $p < .05$; ** significant at $p < .01$.

Source: Own calculations, based on GSOEP and DLSP

Table 3.5 shows what pre-self-employment experiences (in the work sphere, educational level, health status and family sphere) have an impact on the transition from *wage employment* into solo self-employment. The analysis is thus restricted to those who are wage and salary workers and the dependent variable represents the probability that individuals from this group enter solo self-employment (the depicted odds ratio represents the ratio of the probability that individuals make the transition into solo self-employment to the probability that they do not).

Table 3.5 The transition from wage employment into solo self-employment (logistic regression analysis), 2000-2010

	Germany		Netherlands	
	Males	Females	Males	Females
<i>Work sphere</i>				
Fixed-term temporary contract	1.213 (0.323)	2.408** (0.643)	1.547 (0.568)	3.256** (1.175)
Number of hours				
1-20 hours	3.556** (1.247)	1.894** (0.458)	0.855 (0.627)	0.747 (0.261)
21-31 hours	2.114 (0.837)	1.309 (0.359)	2.107 (0.930)	0.829 (0.292)
32+ hours (= reference category)	-	-	-	-
Job change	1.959** (0.416)	2.131** (0.525)	1.976** (0.515)	1.073 (0.333)
<i>Educational level</i>				
ISCED 0-2 (= reference category)	-	-	-	-
ISCED 3-4	1.237 (0.364)	1.393 (0.612)	0.927 (0.310)	1.891 (0.835)
ISCED 5-6	1.269 (0.405)	3.604** (1.584)	1.323 (0.408)	2.479* (1.090)
<i>Health status</i>				
	0.937 (0.103)	0.986 (0.123)	0.831 (0.161)	1.351 (0.270)
<i>Family</i>				
Children under age 12	1.412 (0.284)	0.886 (0.215)	0.814 (0.217)	2.869** (0.937)
Partner	0.787 (0.173)	1.107 (0.288)	1.596 (0.676)	1.497 (0.643)
Net household income	1.020 (0.057)	0.998 (0.060)	1.000 (0.001)	0.997 (0.020)
Age	0.981 (0.011)	0.982 (0.012)	0.991 (0.014)	1.032 (0.019)
Pseudo R^2	0.03	0.05	0.03	0.05
N	13340	11522	5177	4626

Note. *Significant at $p < .05$; ** significant at $p < .01$.

Source: Own calculations, based on GSOEP and DLSP



The results show that females who used to have a fixed-term temporary contract have a higher probability to enter solo self-employment than those holding a permanent contract in both countries; this does not apply to male workers. In Germany, both male and female employees working 20 hours a week or less have a higher probability to enter solo self-employment than those working 32 hours a week or more (reference category). In the Netherlands, whether or not individuals are working part-time does not seem to be related to entering solo self-employment. Both German and Dutch males and German females who had one or more pre-self-employment job changes *while being an employee* (so not a job change to self-employment) have a higher probability to enter solo self-employment.

Higher educated females have a higher probability to enter solo self-employment from a wage job than lower educated females in both countries. The pre-self-employment health status does not seem to affect entry into solo self-employment from wage employment. Dutch women with children under age 12 have a higher probability to enter solo self-employment than those who don't have children in this age group; this does not apply to males nor to German women. Having a partner does not seem to affect the probability to enter solo self-employment, nor does pre-self-employment household income.

Note: As mentioned before, the panels suffer – as do many panels – from substantial panel attrition. In combination with the small numbers of solo self-employed in separate waves this leaves too small a base to follow individual solo self-employed over a longer period of time, but also to study some specific transitions or subgroups. Although it would be relevant to study entry into solo self-employment from inactivity and unemployment or to examine exit from solo self-employment in more detail, we decided not to further examine these topics in this report.

Consequences of self-employment

In this section we will further examine the consequences of self-employment in terms of labour force participation. In addition, we will address financial consequences of self-employment in terms of wages as well as non-financial consequences in terms of job satisfaction.

Future employment

The first paragraph of this chapter already showed some first outcomes about the consequences of self-employment in terms of future employment. We showed that solo self-employment does not appear to be much of a precursor to unemployment or inactivity - at least not in the short run – but rather to continued self-employment or a job in wage employment.

Table 3.6 show a longer term perspective on participation probabilities for males and females in Germany and the Netherlands. In the uneven columns we examine the effect of solo self-employment experience on the probability of being employed in 2010. The presented odds ratio represents the ratio of the probability that individuals are employed (in wage employment, solo self-employment or self-employed with personnel) to the probability that they are not. An odds ratio of one thus represents an equal probability, an odds ratio larger than one refers to a higher probability of being employed and an odds ratio smaller than one to a lower probability of being employed. In the even columns we test whether solo self-employment experience influences the probability of being in *wage employment* compared to being unemployed or inactive in 2010. We controlled for age, country of birth, educational attainment level, health status, partner, children under age 12 and household income (results of control variables are not shown here for convenience of comparison).

The results from the uneven columns indicate that earlier solo self-employment experience positively affects individual labour force participation rates. For German males and German and Dutch females solo self-employment experience is associated with a higher probability of being employed in 2010. For Dutch males we found no effect from earlier solo self-employment experience on labour force participation.

Table 3.6 Logistic regression results, determinants of participation in 2010 (odds ratios)

	Germany				Netherlands			
	Males	Males	Females	Females	Males	Males	Females	Females
<i>Work history</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Solo self-employment	1.458** (0.137)	0.826 (0.103)	1.179* (0.091)	0.646** (0.066)	0.979 (0.186)	0.666 (0.160)	1.615* (0.397)	0.607 (0.173)
Unemployment/ inactivity	0.486** (0.016)	0.488** (0.016)	0.542** (0.012)	0.543** (0.013)	0.180** (0.028)	0.166** (0.027)	0.309** (0.024)	0.298** (0.024)
Part-time employment	1.040 (0.071)	1.068 (0.075)	1.318** (0.035)	1.350** (0.037)	1.530* (0.261)	1.513* (0.266)	1.750** (0.113)	1.795** (0.119)
Pseudo R^2	0.36	0.35	0.31	0.31	0.47	0.48	0.48	0.49
<i>N</i>	6214	5646	6749	6398	1879	1768	2099	2008

Note. *Significant at $p < .05$; ** significant at $p < .01$.

Source: Own calculations, based on GSOEP and DLSP

The results from the even columns show that while German females with self-employment experience have a higher probability of being *employed* in 2010 (uneven column), they have a lower portability for being in *wage employment* as compared to unemployment or inactivity. So for German females solo self-employment experience seems to negatively affect the chance to be employed in the wage sector. For Dutch females and Dutch and German males no effect from solo self-employment experience on the probability of being in wage employment was found.

Financial consequences

Income from self-employment is perhaps the most difficult component to measure and compare. Some research shows that entrepreneurs have lower (initial) average and median earnings than employees with the same observed characteristics, although it also seems to be more polarized (Hamilton, 2000; Lin *et al.*, 2000). This also seems to be true for German solo-self-employed (DIW, 2013). In addition, Hamilton (2000) finds that self-employed have lower earnings growth. As with paid employees, research shows that women in self-employment earn less than men, although there are mixed results on whether the gap is smaller or larger than among wage employees (cf. Hundley, 2001; Özcan *et al.*, 2003; Lechmann & Schnabel, 2012; Konietzko, 2015).

Table 3.7 shows the results of the net hourly income of solo self-employed compared to earnings from employees in our panel, as well as the change in net hourly income around entry and exit (from a job in wage employment into solo self-employment and vice versa). The net hourly income is computed from the self-reported number of hours worked and the estimated monthly income after tax³. Rows do not only contain the mean wage, but also show the wage *distribution*, which provides information on the spread of wages. Percentile wages, including the 10th, 25th, 50th (median), 75th, and 90th percentiles, indicate how much wages vary.

Table 3.7 Net hourly income (in Euro), solo self-employed and employees, 2000-2010

Germany	10%	25%	Median	75%	90%	Mean
<i>Current net hourly income</i>						
Self-employed <i>without</i> personnel	€ 2,88	€ 4,62	€ 7,69	€ 12,33	€ 19,78	€ 10,36
Wage employment	€ 4,57	€ 6,35	€ 8,73	€ 11,99	€ 16,97	€ 10,00
Ever self-employed <i>without</i> personnel	€ 4,81	€ 6,59	€ 8,65	€ 11,54	€ 16,15	€ 10,07
Never self-employed <i>without</i> personnel	€ 4,56	€ 6,35	€ 8,73	€ 11,99	€ 17,00	€ 10,00
<i>Δ Net hourly income</i>						
Δ Net hourly income around entry	€ -9,16	€ -1,57	€ 1,67	€ 4,60	€ 7,03	€ 0,46
Δ Net hourly income around exit	€ -6,36	€ -3,31	€ -0,13	€ 2,88	€ 7,97	€ -0,08
Netherlands	10%	25%	Median	75%	90%	Mean
<i>Current net hourly income</i>						
Self-employed <i>without</i> personnel	€ 4,04	€ 6,79	€ 10,30	€ 17,46	€ 35,00	€ 21,11
Wage employment	€ 7,06	€ 8,65	€ 10,72	€ 13,28	€ 16,67	€ 12,32
Ever self-employed <i>without</i> personnel	€ 8,00	€ 9,23	€ 11,75	€ 14,84	€ 20,60	€ 16,61
Never self-employed <i>without</i> personnel	€ 7,06	€ 8,65	€ 10,71	€ 13,27	€ 16,64	€ 12,29
<i>Δ Net hourly income</i>						
Δ Net hourly income around entry	€ -8,59	€ -3,46	€ 1,00	€ 7,93	€ 23,35	€ 8,65
Δ Net hourly income around exit	€ -12,19	€ -5,00	€ 2,02	€ 5,70	€ 6,96	€ 1,39

Source: Own calculations, based on GSOEP and DLSP

³ Monthly income may however be harder to estimate for individuals in solo self-employment than for individuals in wage employment.



The findings show that in Germany solo self-employed have lower median net hourly earnings than workers in wage employment and income is more polarized. Average net hourly earnings of solo self-employed are higher than earnings of individuals in wage employment though. In the Netherlands the findings to a large extent show a similar picture. In the Netherlands, employees who have ever been solo self-employed have a higher net hourly income than employees without solo self-employment experience, in Germany a history of solo self-employment seems to come at an income penalty for those with higher net hourly earnings.

Koellinger *et al* (2015) state: “When entrepreneurs say they are “not in it for the money”, the data seem to support them”. However, as can be seen from Table 3.7, this statement seems to be only partially true. Since the net hourly earnings from workers in solo self-employment are highly polarized, a substantial share of the solo self-employed have higher earnings than their wage and salary colleagues. Furthermore, individuals’ net hourly income around entry (from a job in wage employment into solo self-employment) shows that the majority of individuals earn more in their solo self-employment job than in their previous wage and salary job. So although some solo self-employed may earn less per hour than their wage and salary colleagues, they seem to earn more than *themselves in wage employment*.⁴ When individuals exit solo self-employment into a job in wage employment, the majority of Dutch workers also earn more than they did in the previous solo self-employment job. For German workers, the (re)turn into wage employment more often is accompanied by an hourly income reduction.

Table 3.8 shows the median net hourly income from workers in solo self-employment and wage employment for various individual characteristics. As with employees, the findings show that women in self-employment earn less than men. Even between these two countries there are mixed results on whether the gap is smaller (Germany) or larger (Netherlands) than among wage employees. In general, self-employed without personnel from all educational attainment levels have a lower median net hourly income than employees. The only exception comes from lower educated Dutch self-employed without personnel, who generally have a higher net hourly income than employees with a similar educational attainment level.

In all age groups self-employed without personnel earn less on an hourly base than employees, where the gap is smallest for Dutch workers between 35 and 49 years of age. Fulltime self-employed without personnel have a lower median net hourly income than employees, whereas self-employed working less than 32 hours a week have a higher median net hourly income than employees working part-time.

⁴ Of course this also depends on the number of hours solo self-employed work and *can* work; these findings refer to net hourly incomes

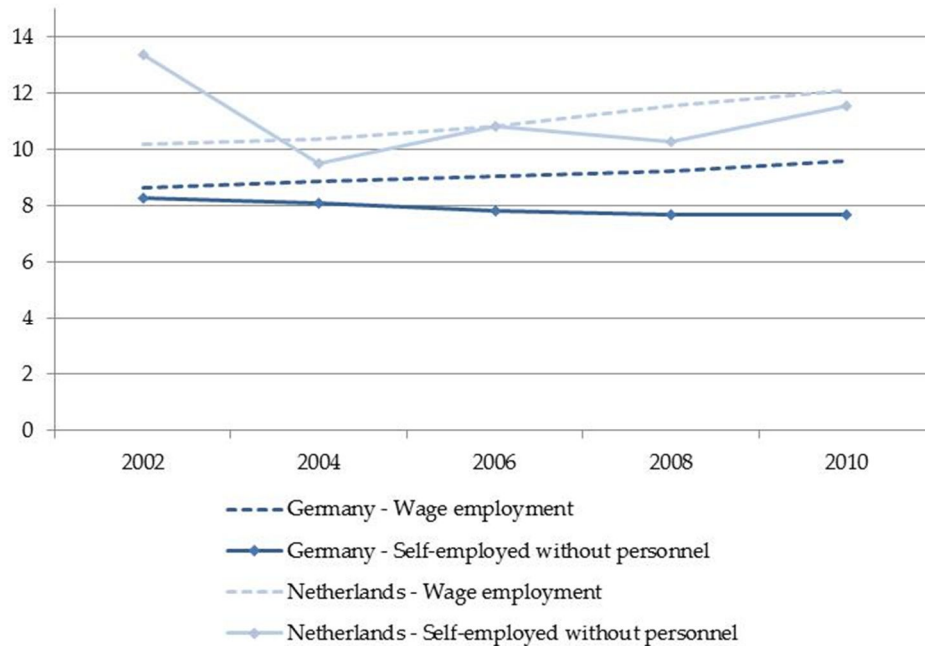
Table 3.8 Median net hourly income (in Euro), by characteristics of solo self-employed and employees, 2000-2010

	Germany		Netherlands	
	Wage employment	Self-employed without personnel	Wage employment	Self-employed without personnel
Gender				
Males	€ 10,07	€ 8,36	€ 11,08	€ 11,75
Females	€ 7,66	€ 7,01	€ 10,38	€ 9,22
Educational attainment level				
ISCED 0-2	€ 6,67	€ 6,15	€ 8,97	€ 10,00
ISCED 3-4	€ 8,08	€ 6,92	€ 10,16	€ 8,65
ISCED 5-6	€ 11,98	€ 9,23	€ 12,82	€ 12,31
Age				
<35 years of age	€ 7,06	€ 6,92	€ 9,12	€ 8,41
35-49 years of age	€ 9,46	€ 7,69	€ 10,96	€ 10,91
50+ years of age	€ 9,81	€ 8,46	€ 11,84	€ 10,57
Working hours				
Fulltime	€ 9,19	€ 7,69	€ 10,82	€ 10,03
Less than 32 hours	€ 7,69	€ 8,33	€ 10,59	€ 10,65

Source: Own calculations, based on GSOEP and DLSP

Figure 3.3 shows the median net hourly income for both groups of self-employed without personnel and employees by wave. The figure shows a gradual increase in net hourly income for employees over time in both countries. In Germany, the figure shows a gradual decrease of the median net hourly income of self-employed without personnel. In the Netherlands, the net hourly income shows more fluctuations, which presumably partly has to do with the lower number of solo self-employed in each wave. Perhaps these fluctuations also have to do with the economic climate, as the median net hourly income is relatively low during economic downturns, although the median net hourly income in 2010 seems to be at odds with this hypothesis.

Figure 3.3 Median net hourly income (in Euro), self-employed without personnel and employees, by wave



Source: Own calculations, based on GSOEP and DLSP

We saw earlier that a substantial share of individuals who become self-employed do not stay self-employed. What are the consequences of solo self-employment *experiences* during the career in terms of remuneration? Table 3.9 shows the longer term *wage-sector* consequences of self-employment experience. In this analysis, we estimated ordinary least squares regressions of the log of worker's net hourly wages in 2010 on measures of self-employment experience while controlling for a number of work history experiences, individual characteristics and household characteristics. Regressions are estimated separately for males and females. Work history experiences, besides solo self-employment experience, consist of incidence of unemployment/inactivity and part-time employment. In the even columns, we add the log of hourly wages from the start year (2000) to control for unobserved individual heterogeneity. This addition is relevant when workers who become solo self-employed have lower hourly wages regardless of any self-employment activity, or – to put it differently - they have unobserved characteristics that are associated with lower wages than those in continued wage employment. We controlled for whether the employee is currently working part-time (defined as working 32 hours a week or less), age, country of birth, educational attainment level, health status, partner, children under age 12 and household income (results of control variables are not shown here for convenience of comparison).



The results from Table 3.9 show that self-employment experience in general has no significant effect on earnings upon return to wage employment for either males nor females in the two countries under study. At first sight, the only exception seems to come from Germany: in this country solo self-employment experience is associated with reduced earnings upon return to wage employment for males. However, when we control for unobserved heterogeneity this effect disappears.

Furthermore, the table indicates that experience in unemployment or inactivity are to a large extent associated with wage reductions. In addition, the results suggest that both men and women seem to “negatively select” into unemployment/ inactivity. Or: men and women who select into unemployment/ inactivity experience have unobserved characteristics that are associated with lower earnings than those who remain in wage employment. Past part-time employment experience is also largely associated with wage reductions and the table shows evidence of selection into part-time employment.

Table 3.9 Regression results, determinants of log hourly wages in 2010

	Germany				Netherlands			
	Males	Males	Females	Females	Males	Males	Females	Females
<i>Work history</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Solo self-employment	-0.059* (0.027)	-0.037 (0.029)	-0.042 (0.024)	-0.022 (0.028)	0.034 (0.069)	0.018 (0.074)	0.014 (0.016)	0.003 (0.015)
Unemployment/ inactivity	-0.150** (0.014)	-0.099** (0.014)	-0.103** (0.012)	-0.068** (0.012)	-0.158** (0.075)	-0.149* (0.074)	-0.121** (0.030)	-0.109** (0.029)
Part-time employment	-0.007 (0.015)	-0.021 (0.016)	-0.020** (0.006)	-0.021** (0.005)	-0.026 (0.030)	-0.037 (0.028)	-0.028** (0.009)	-0.027** (0.009)
Ln (Wage start year)	-	0.311** (0.019)	-	0.275** (0.016)	-	0.242** (0.057)	-	0.126** (0.031)
Pseudo R^2	0.51	0.58	0.28	0.37	0.33	0.41	0.27	0.30
N	2749	2749	2636	2636	590	590	528	528

Note. *Significant at $p < .05$; ** significant at $p < .01$.

Controlled for: age, country of birth, currently working part-time, educational attainment level, health status, partner, children under age 12 and household income

Source: Own calculations, based on GSOEP and DLSP

Job satisfaction

In non-pecuniary terms, research finds a consistently high level of job satisfaction and well-being among the self-employed (e.g. Blanchflower, 2000; Hundley, 2001; Taylor, 2004; Benz & Frey, 2008). Self-employment offers significant non-pecuniary benefits, such as “being your own boss” (Hamilton, 2000), ‘procedural utility’ (Benz & Frey, 2008), flexibility and skill utilization (Hundley, 2001), which enhance the job satisfaction levels among self-employed. Research also shows this job satisfaction advantage is relatively small or non-existent among managers and members of the established professions—occupations where organizational workers have relatively high autonomy and skill utilization (Hundley, 2001).

Table 3.10 also shows relatively high levels of job satisfaction among German and Dutch self-employed without personnel. Job satisfaction levels are significantly higher for self-employed without personnel than for employees in both countries. In the Netherlands, employees who have ever been self-employed without personnel also report higher job satisfaction levels than employees without a self-employment history. This does not apply to German employees. The results furthermore show that entry into solo self-employment from wage employment is accompanied by a significant increase in job satisfaction in both countries. In Germany, an exit from solo self-employment into wage employment reduces job satisfaction significantly; in the Netherlands no effect was found.

Table 3.10 Job satisfaction^a, solo self-employed and wage employed, 2000-2010

	Germany	Netherlands
<i>Current employment status</i>		
Wage employment	7.04	3.25
Self-employed <i>without</i> personnel	7.13	3.50
Difference between wage employment and self-employment	0.09**	0.25***
<i>Past self-employment experience</i>		
Ever self-employed <i>without</i> personnel	7.06	3.42
Never self-employed <i>without</i> personnel	7.04	3.25
Difference between ever and never self-employed	0.02	0.27***
<i>Δ Job satisfaction</i>		
Δ Job satisfaction around entry (between $t-2$ and t)	0.52***	0.27***
Δ Job satisfaction around exit (between t and $t+2$)	-0.32*	0.07

Note: *Significant at $p < .10$; ** significant at $p < .05$; *** significant at $p < .01$.

^a the scaling of job satisfaction differs between the countries (Germany 10-point scale; Netherlands 4-point scale)

Source: Own calculations, based on GSOEP and DLSP