

STUDY

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SELF-EMPLOYED WITHOUT PERSONNEL BETWEEN FREEDOM AND INSECURITY

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ABSTRACT

This WSI Study gives an overview of the position of solo self-employed in Germany and the Netherlands by examining – in their institutional context – labour market characteristics and social security provisions. The Study has been prepared within the project ‘Self-employed without personnel: between freedom and insecurity’, funded by the Hans-Böckler-Stiftung. It draws on results from desk research, analyses of existing statistical data, survey research and interviews with self-employed without personnel. The research was conducted by a research team from Utrecht University School of Economics (U.S.E.) in collaboration with the Institute of Economic and Social Research (WSI).

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Preface

This WSI Study gives an overview of the position of self-employed without personnel in Germany and the Netherlands by examining – in their institutional context – labour market characteristics and social security provisions of self-employed without personnel. The study addresses questions such as: How has the number of self-employed and the share of self-employment evolved? What is the legal and institutional position of self-employed without personnel? And what is the position of self-employed without personnel in terms of motives to become self-employed, their earnings, working hours, balance between work and family life, labour market opportunities, satisfaction, stability and security, future prospects, pensions and representation?

This reports draws on results from desk research, analyses of existing statistical data, survey research and interviews with self-employed without personnel. Comparative methods were used for analyses in Germany and the Netherlands. Labour force survey statistics were examined, panel data was being analysed for the period 2000-2010, survey research was conducted in 2014 and interviews were held in 2015-2016. Presenting a wide variety of up-to-date information on the solo self-employed' perspective in a changing labour market, this report aims to support the policy debate and provide information for policy makers and other stakeholders who take an interest in or are involved in tackling the manifold challenges related to these changing working patterns.

This research has been prepared within the project 'Self-employed without personnel: between freedom and insecurity', funded by the Hans-Böckler-Stiftung. The research was conducted by a research team from Utrecht University School of Economics (U.S.E.) in collaboration with the Institute of Economic and Social Research (WSI). The authors gratefully acknowledge the advisory board members for their constructive suggestions: Hans Pongratz from the University of Munich (Germany), Gunter Haake from Ver.di (Germany), Katharina Bockelmann from GEW (Germany), Sabine Jambon, researcher on solo self-employed (Germany), Margriet Kraamwinkel from FNV (Netherlands), Ronald Dekker from Tilburg University (Netherlands) and Roos Wouters, solo self-employed and publicist (Netherlands). Furthermore, we thank Alexandra Manske for leading the qualitative fieldwork in Germany and Maarten Debets for his contribution to the qualitative fieldwork in the Netherlands. And last but not least: we are very grateful to all solo self-employed respondents who participated in our survey and the interviews.

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1 Solo self-employment across time and place

1.1 Introduction

Recent decades show an increase in the number of self-employed without personnel in several European countries. While self-employment has long been associated primarily with agriculture (e.g. farmers) or trade (e.g. shopkeepers) recent growth in self-employment can be found in quite different occupations and sectors. The new self-employed without personnel are coaches, public relations officers, interim managers, but also bricklayers, carpenters, lorry drivers or home care workers. Many of these new self-employed without personnel seem to appreciate their position, often after a (long) career as an employee, although some feel forced and many find it hard to make a proper living, especially during the current economic crisis. Moreover, part of the self-employed without personnel do not have enough money to pay for disability insurance or for pension savings. In addition, experts show a growing concern about self-employed workers' investments in their future employability. This raises the question how self-employed without personnel deal with their insecure position, why they have decided to become self-employed (voluntarily or partly forced?) and how they prepare for the future. On the macro-level self-employed without personnel often remain invisible in discussions on socio-economic issues, because – almost by nature – they operate independently and have difficulties organizing collective action. This raises the question how their interests can be adequately included in socio-economic policy making.

When it comes to self-employed without personnel, The Netherlands constitutes an interesting case and example for other European countries. First, because no other European country shows such a large increase in the number of self-employed without personnel. Second, because of several attempts to give self-employed without personnel a voice and start some collective action. While The Netherlands has a rather flexible labour market and an economy that is strongly orientated on trade and commercial services, Germany has a different tradition in labour market relations and a different industry mix. This country has also shown an increase in the number of self-employed without personnel, but a much more moderate growth. While policy makers in various countries have taken the position to further promote an increase in the share of self-employed without personnel, unions all over Europe worry about the drawbacks of self-employment. Moreover, empirical knowledge about the position of self-employed without personnel and the returns to self-employment among especially the 'new solo self-employed' is limited. Nevertheless, self-employed without personnel are increasingly brought to the notice and the Dutch National Government for instance recently published a major exploration on solo self-employment (Rijksoverheid [Dutch National Government], 2015).

The research project 'Self-employed without personnel: between freedom and insecurity' was called into life in 2013 to provide more evidence based insights with respect to the current developments in self-employment in

Germany and the Netherlands. The study seeks to provide more insight into how self-employment has been changing over time and explores and explains self-employed' attitudes and behaviour towards work and social security provisions. This WSI Study contains the main findings from the project.

In the first place, it is important to study self-employed' attitudes and behaviour towards work and social security for *scientific* reasons. This study addresses several research questions regarding solo self-employment and self-employed' attitudes and behaviour that have received limited attention in the scientific literature to date. One gap this study addresses is that although governments in various countries have taken the position to stimulate transitions into solo self-employment (European Commission, 2010), there is only limited insight into the scale of the *changes*, the *dynamics* and the *consequences* related to solo self-employment. This study enhances our knowledge on who, why and with what consequences makes the transition into solo self-employment. A second void this study aims to fill concerns the attitudes and behaviour towards *pensions* and other *social security provisions* among self-employed without personnel. To that aim, unique primary quantitative and qualitative data was collected on solo self-employed' attitudes and behaviour towards work and social security.

Besides for scientific reasons, it is also important to study self-employed' attitudes and behaviour for *societal* reasons. From a macro-level perspective, the combination of increasing shares of solo self-employed and their coverage in terms of social security provisions may have substantial consequences for the welfare of citizens as well as welfare state expenditures – especially in the long term. Knowledge about solo self-employed transitions, their attitudes and behaviour towards work and social security and their views on the need for and perceived responsibility of various measures makes it easier to anticipate the requirements and feasibility of various policy measures in this field. Also at the meso-level, organizations (such as trade unions, specific organizations for self-employed and actors in the financial sector) may benefit from knowledge of solo self-employed' attitudes and practices towards work and social security when developing and introducing relevant support and tools. Moreover, at the micro level, individuals who consider to become solo self-employed may benefit from more insights on the consequences solo self-employment has on worker's positions and possibilities in the labour market. Finally, based on findings from this study self-employed may learn about interesting practices and ideas developed by other self-employed.

Chapter 2 will take an initial step towards the examination of *characteristics* and *changes over time* in Dutch and German solo self-employment. This chapter is based on a literature review in combination with analyses of Labour Force Survey statistics and other secondary data sources covering mostly developments in the period between 2000 and 2015. The research questions are:

1. How has the number of self-employed and the share of self-employment evolved in Europe and more in particular in the two countries of our study?

2. How can the group of solo self-employed be characterized in terms of labour market characteristics and to what extent have these characteristics been changing over time?

Whereas Chapter 2 focuses on changes in solo self-employment and in characteristics of solo self-employed over time at the aggregate level, Chapter 3 analyses *dynamics* in solo self-employment as well as *consequences* to German and Dutch solo self-employed based on individual-level panel data. This chapter addresses the following research questions:

3. What is the labour market stability and mobility of solo self-employed as compared to other groups in the labour market?;
4. How can solo self-employed be characterized in terms of earlier life experiences in various domains?;
5. What are the consequences of the transition into and exit from self-employment as well as the consequences of self-employment experiences during the career?

Chapter 4 presents the results from our primary data analyses, i.e. the results from our survey research and interviews among solo self-employed. In Chapter 4 the primary focus is on the examination of solo self-employed' attitudes and behaviour towards work and social security, but also on what solo self-employed think the role of governments and interest organisations could be. The research questions in this chapter are:

6. What is the position of self-employed without personnel in terms of their motives to become self-employed, their balance between work and family life, and their earnings and job satisfaction?
7. What are the views and behaviour of solo self-employed towards social security and pension savings?
8. And what should or could be – according to self-employed without personnel – the role of governments and interest organizations?

Chapter 5 evaluates the answers to the research questions and discusses the scientific and societal relevance of the findings. Furthermore, the strengths and weaknesses of the study are reviewed and suggestions are made for future research.

In section 1.2, we will discuss some theoretical considerations concerning the solo self-employed. This study on developments in solo self-employment and self-employed' attitudes and behaviour towards work and social security should furthermore be seen against the background of their institutional contexts, which will be described in section 1.3. The methodological approach will be discussed in section 1.4 and at the end of this introductory chapter we will present a brief overview of the outline of this study.

1.2 Theoretical considerations

Traditionally, self-employed have been treated as 'insiders' on the labour market, fitting the category of independent entrepreneurs who voluntarily seek to gain higher utility from income, autonomy, flexibility and other work-

ing conditions attributed to a job in self-employment. However, the group of solo self-employed is increasingly associated with what has been called 'involuntary' self-employment (Stone, 2006; Schulze Buschoff and Schmidt, 2009; Kautonen et al., 2010; Westerveld, 2012). Contrary to the traditional view of the independent entrepreneur, this branch of literature emphasizes the heterogeneity among the solo self-employed, with a special focus on the group of the more 'vulnerable' self-employed, often operating at the blurring boundaries between being an employee and employee-like self-employment. In answering our research questions we will take this heterogeneity among solo self-employed into account.

As most individuals in current day Europe are not wealthy enough to have their capital working for them they have to work themselves and supply their labour in the labour market. Not only do they have all kind of options in terms of how *many hours* they want to work and in which *profession* (usually related to earlier choices they have made during their educational career), theoretically they also have the option between working as an *employee* and working in *self-employment*. The 20th century welfare state has predominantly been organized around the concept of the employee, but history shows that part of the working population has been working in self-employment throughout the ages, though more in some countries and periods than in others.

Economists would be inclined to analyse the choice between employment and self-employment as the weighting of costs and benefits, utility and disutility. Individuals are expected to gain utility from income and either utility or disutility from aspects like independence, flexibility, workload and other working conditions. One of the potential benefits of self-employment is that you are your own boss. Unlike within a smaller or larger bureaucratic organization where there is some kind of manager (and maybe more than one) who tells you what to do and when to do it. Of course it depends on the kind of organization, the kind of manager and your own position how large the individual room to manoeuvre is, but somehow individual employees will have to account for their work to some kind of superior. Being self-employed there is no such superior. In principle this gives the self-employed a broad range of opportunities to organize their work and set their own agenda. If you like to work more during the summer or the winter, it is up to you (and of course your customers), and the same holds with respect to the morning, the evening or the weekend. You can also pick your own tasks and – if the market allows you – never have to do a job you do not like. Of course this ideal picture does not always turn into reality, but even if you have to perform some tasks you are not particularly fond of it still is your own decision and not that from your boss.

The other side of the coin is, however, the lack of certainty following from the fact that you have to acquire and organize your own work. While working with an employer offers the certainty that by the end of the month you will get your pay check no matter whether the employer has made more or less profits that month (unless business is such a disaster that it results in bankruptcy), there is no such certainty in self-employment. One month

may be very profitable, but the next one it may be hard to make any profits at all.

According to economists, freedom of action and financial reasons in terms of income and security constitute the main trade-off when it comes to the choice between employment and self-employment. Of course, this trade-off is highly shaped by institutional conditions. In some countries employees are well protected and taken care of in terms of unemployment benefits, disability benefits, pension benefits, opportunities for on the job training, protection against employers' capriciousness or even unfairness, etc. This makes the cost of forsaking the status of being an employee higher than in countries where the position of employees is weaker. So, institutional arrangements will also play a part in individuals' considerations. That is why throughout this study we will pay much attention to the role of institutional arrangements in the two countries we investigate.

Sociologists may add that different labour market segments offer different opportunities for different groups of individuals. Self-employment may require a series of competencies – like being able to deal with uncertainty, taking the initiative to acquire your own work, networking, organizational talents, etc. - that are not evenly distributed among individuals. In a similar vein employment within an organization is not as rewarding for every individual. Some people may find it difficult to reconcile organizational demands with care tasks at home and decide that self-employment offers better opportunities for combining work and family life. Other people may experience labour market discrimination in employment (either from the side of the employer or from colleagues in the work place)(Becker, 1957) and try to circumvent this discrimination by opting for self-employment. The past shows some unfortunate examples of how such discrimination was institutionalised, sometimes literally banning groups from employment into self-employment.

Next to individual considerations there are also images that play a part in the choice between employment and self-employment. While the image of the self-employed shop keeper or small farmer may not be that attractive to many, the 21st century image of the self-employed consultant or web designer who sits in the sun in an outdoor café working with his laptop and cell phone as his major tools may seem much more appealing (even though it may not be representative for all self-employment). Due to such a positive image more individuals may at least *consider* the possibility of self-employment than in the past.

Altogether, individual people may have different motives and reasons to opt for self-employment. Some may opt for self-employment looking for freedom, maybe after some disappointing experiences within an organisation, settling for more uncertainty and even a lower income than they used to have. Others think they can exploit their talents much better in the less regulated context of self-employment than within the context of an organisation with strict and tight pay schemes. Still others would have preferred a job as an employee, but – after a series of applications and an equal number of

rejections – come to the conclusion that self-employment is the only opportunity left. Especially since the economic crisis, which set in in 2008, we have witnessed the emergence of a new type of self-employed: individuals who get a message from their employer that for business reasons they cannot be kept as an employee any longer. But if they are willing to make the transition into self-employment, settle for lower pay and give up their social security rights, the employer will hire them to continue to do their old work. Sometimes they even have to pay for their own equipment too.

Given all these different motives and situations it will not come as a surprise that there is a wide variety among self-employed in terms of appreciation of their labour market situation, but also in terms of who gets by and who does not, who has interesting prospects and who has not and for whom a sustainable future lies ahead and who has to worry about the future.

Finally, the Transitional Labour Market approach has pointed to the fact that – in contrast to ‘traditional’ forms of self-employed – new forms of self-employment often do not constitute a life-time choice. While people who took over their father’s farm remained a farmer all of their life, many of the new self-employed have been in employment for some part of their labour market career and may make the transition back into employment at some moment in their labour market career. In this respect life courses and labour market careers have become more flexible. And this may also guide the perspective self-employed have on their own position and the role of institutions that determine the position of self-employed in society and the labour market.

1.3 The role of institutional surroundings

Labour markets may be among the most institutionalized markets. Opportunities and restrictions individuals face in the labour market are partly set by public and collective rules and regulations. Within this projects’ framework this is a factor of importance, because “the new self-employed are exposed to the same social risks as dependent employees, but they generally enjoy fewer social and labour rights” (Schulze Buschoff and Schmidt, 2009, p.147). This section addresses the question: What is the legal and institutional position of self-employed without personnel in the Netherlands and Germany - as such and compared to the position of employees? To that end, we will start by giving an outline of the labour market policy climate over the past three decades. The second section addresses the role of labour and social security law and the third section zooms in on possibilities for pension build-up available to solo self-employed in Germany and the Netherlands.

1.3.1 Labour market policy context

European labour markets have become more flexible over the last two to three decades. The movement towards more flexibility was inspired by the so-called supply-side economics, that claimed that welfare states had made markets (including the labour market) too rigid to be efficient any longer. The welfare state, in their opinion, had suffocated economic initiatives and that is why they promoted more economic freedom and less rules. Many of the rules developed in the welfare state, especially in the labour market, aim to protect the 'underlying' party in the market. In a market that is characterised by structural excess supply this underlying party is often that of workers. In addition, many labour market rules and regulations aim to create what economists like to call 'a level playing field', equal opportunities for the economic actors. As the labour market also determines to a large extent the distribution of incomes in society, rules with respect to minimum wages or equal pay for equal work also serve to realise welfare state goals with respect to equity, social protection and social cohesion. Therefore, discussions with respect to the organisation of the labour market not only include issues with respect to economic efficiency and the allocation of labour, but also issues with respect to income distribution, social protection and (in)equality. With this delicate balance in mind the former Dutch minister of Social Affairs and Employment, Ad Melkert, developing new labour market rules and regulations during the nineties of the 20th century presented his plans in a bill called "Flexibility and security". With this title he underlined the necessity to find a proper answer to the challenge to reconcile the need for efficient (labour) markets with the equally important need to guarantee a proper income and a proper way to live for everyone in modern European welfare states.

The evolution of self-employment as the most recent form of increasing labour market flexibility shows the same tension. On the one hand many, especially high educated workers, saw the economic boom around the turn of the century as a chance to benefit from the rewarding opportunities in the labour market. As new entrepreneurs they took the opportunity to sell their talents and services at a higher price and under more attractive conditions than they were used to as an employee. On the other hand, a growing share of those who become self-employed take this step because they lack other opportunities (for instance after they have lost their job due to the economic crisis) or because they are even pushed by employers to do so. In this latter case of more or less forced self-employment conditions and pay are usually far less attractive than for the pioneers among the self-employed. As a matter of fact statistics show that behind the facade of self-employment currently a growing number of poor workers can be found. This calls for a discussion on how to deal with this – in its current form – relatively new development in the labour market. It calls the more as in several countries and at the EU-level self-employment has been and still is promoted by governments as an attractive, new form of employment. Is self-employment a sustainable form of labour market flexibility? Or is it more like a 'Trojan horse'? What do we do with all the rules and regulations established to protect employees' health and income (for instance in

case of disability or unemployment)? Should they be extended to self-employed and, if so, on a mandatory base or only on a voluntary base? So far, much attention has been given to the efficiency gains of an increasing share of self-employed, while the (potential) equity losses have been largely disregarded.

1.3.2 Labour and social security law

The welfare state as it has grown during the second half of the 20th century typically took citizens in their role of *employees* as the focus of law and regulation. Looking back at a history of powerful and not always enlightened capitalist employers, many welfare state rules and regulations were developed to protect workers against exploitative employers. That is why one's employment status often determines the applicability of labour legislation, such as regulations on occupational safety and health, as well as access to insurance against social risks within the framework of statutory insurance systems. Solo self-employed are typically not subject to labour law but to civil and commercial law, leading to limited labour rights. In Germany and the Netherlands, full labour rights and social security entitlements are attached only to the employment status of 'employees'. Whereas employees thus tend to have the patronage of social and labour rights, facilities to solo self-employed are more frequently of a fiscal nature (Schulze Buschoff and Schmidt, 2009; SER, 2010).

Table 1 provides some insight into the differences in the social security framework between employees and solo self-employed as well as differences between the two countries, categorised by types of social risks. Note that whereas in the Netherlands there is a clear-cut distinction between employees and self-employed, in Germany there are special provisions for certain *groups* of self-employed (for instance for farmers or artists and publicists)(MISSOC, 2016). From the table several noteworthy conclusions can be drawn.

Table 1 Social security for employees and solo self-employed, Germany and the Netherlands

	Germany		Netherlands	
	Employees	Solo self-employed	Employees	Solo self-employed
Unemployment	Mandatory unemployment insurance (Drittes Sozialgesetzbuch: SGB III)	Since 2006, self-employed, who had been formerly employees, have the option to remain in the unemployment insurance system on a voluntary basis (SGB III)	Unemployment Insurance Act (WW)	No access to WW Revival of WW-rights after stopping self-employment within a certain time frame
Health	Compulsory health insurance under the GKV (Gesetzliche Krankenversicherung), or – if a certain threshold of income is exceeded - voluntarily under private health insurance (SGB V)	Since 2006 compulsory health insurance applies to all residents, including all groups of self-employed (SGB V)	Compulsory social insurance based on residency, contribution based	Compulsory social insurance based on residency (thus including all self-employed), contribution based
Disability/ Invalidity	Statutory reduced capacity insurance and right to pensions in case of reduction in earning capacity (SGB VI, VII, IX). Due to prerequisites and low benefits many employees insure via private market against disabilities	Insurance via private market Right to pensions in case of reduction in earning capacity for self-employed who are included in the statutory pension insurance (majority is not included)	Work and Income according to Labour Capacity Act (WIA)	Insurance via private market, premiums are tax deductible Self-employed have the option to remain in a collective insurance within 13 weeks after becoming self-employed
Pregnancy and childbirth	Mother Protection Act (Mutterschutzgesetz MuSchG)	Mother Protection Act (Mutterschutzgesetz MuSchG) does not apply to self-employed women	Work and Care Act (WAZO)	Self-employed and pregnant scheme (ZEZ) Self-employed women receive a maximum of 100% of the minimum wage for 16 weeks
Working conditions	Individual labour law (f.e. Teilzeit und Befristungsgesetz (TzBfG), work protection law (f.e. Arbeitszeitgesetz (ArbZG) and collective labour law (f.e. Tarifvertragsgesetz (TVG)	Labour and work protection law do not apply to solo-self-employed, with few exceptions (f.e. Tarifvertragsgesetz TVG §12a)	Working Hours Act Labour Conditions Act	Some regulations apply to solo self-employed as well, but for instance physical and psychological workload do not apply
Business risks	None	Fiscal facilities	None	Fiscal facilities, such as start-up allowances and SME profit exemption

Source: SER, 2010; Bögenhold, D./ Fachinger, U. (2012); Haun, D./ Jacobs, K. (2016); Karin Schulze Buschoff 2010, 2016a and 2016b; MISSOC, 2016



First, unlike for instance in the United States, in both countries nowadays health insurance applies – in principle - to *all* residents. Second, basic social protection in the event of pregnancy and childbirth in the Dutch context has been ‘restored’ in 2008, after this form of protection was abolished by the Dutch Government in 2004 (Arts, 2005). The German Mother Protection Act does not apply to self-employed women; this gap in the social security protection is topic of an on-going debate in Germany. Also, the fact that not all regulations on working conditions apply to all workers is a topic of on-going debate, i.e. in both countries. Finally, in both countries solo self-employed bear the responsibility for covering risks such as unemployment and disability, and are partly compensated for this through fiscal facilities. Unemployment risks and disability are covered to at least some extent for employees, although to a different degree in Germany and the Netherlands.

1.3.3 Old-age pension programmes

In many Western countries, including Germany and the Netherlands, old-age pension programmes are based on a three pillar system composed of statutory, occupational and private pension schemes for workers. In most countries, solo self-employed are not eligible for old-age pension programmes to the same extent as dependent employees, albeit to a varying extent in different countries (see e.g. Schulze Buschoff 2007). In this section we will provide some background information on the two old-age pension systems (see also Table 2).

In 2014, men and women in both countries had the same retirement age for basic respectively for statutory pensions (first pillar), which is 65.3 years in Germany and 65.2 years in the Netherlands (OECD, 2015). In Germany, the first pillar comes in the form of a statutory pension insurance (*Gesetzliche Rentenversicherung*). Funds are mandatorily paid in by contributors as a percentage of salaries. However, not all *self-employed* individuals are included in these insurance schemes (Fachinger and Frankus 2015). Under the statutory retirement insurance system there are special schemes for some groups of self-employed individuals (such as midwives and agriculturists), but the majority of solo self-employed is not covered by any kind of state pension insurance. Furthermore, as Fachinger and Frankus (2015) state: “the situation becomes even more complicated and heterogenic when the financing [own underlining] of the statutory old age provision is considered”. When individuals are not entitled to a contribution-based pension or their entitlement is below a certain defined threshold of minimum income, they rely on safety-net benefits in the form of means-tested social assistance. Although the German social security system in general offers individuals a relatively high degree of protection and insurance against social risks, this applies to solo self-employed only to a limited extent, or only for certain categories of self-employed (Schulze Buschoff and Schmidt 2009). This differs from the situation in the Netherlands, where all solo self-employed are covered by the basic public pension scheme (*Algemene Ouderdomswet* [AOW]; Old Age Security Law). All Dutch citizens who earn an income are obliged to contribute to the AOW and public pension premi-

ums are *de facto* income taxes. But also citizens who have not paid premiums (for instance after a career as a housewife), but lived in the Netherlands his/her entire life are entitled to this basic public pension. Employees contribute by paying a tax on wages; self-employed contribute by paying taxes afterwards on their yearly income from self-employment.

Second pillar voluntary occupational pension schemes play a dominant role in the Dutch pension system and also, but to a lower extent, in Germany. So-called 'employer pensions' are typically not compulsory, but in the Netherlands collective wage agreements are strong and more than 90 per cent of employees is covered by some form of occupational pension (Van Dalen et al. 2010). Dutch pension funds like the ABP (for civil servants and teachers) and PGGM (for the care and health sector) are among the biggest ones in the world. Although solo self-employed may have participated in occupational pension schemes in earlier jobs or participate via a second job, in their self-employment job they are generally not eligible for participation in this tier.

The third pillar is formed by voluntary private pension products and is mainly used by the self-employed and employees in sectors without a collective pension scheme. In the Netherlands anyone can purchase a product in the third pillar to save for extra income after retirement, often taking advantage of tax benefits. In Germany private pension schemes include (but are not limited to) the *Riester and Rürup* plans. Participants can get certain tax advantages and benefits from government subsidies for these plans, which vary from plan to plan.

Table 2 Comparison of old-age pension systems, Germany and the Netherlands

	Germany	Netherlands
First pillar	Statutory pension insurance; mandatory for employees; certain groups of solo self-employed are included but majority is not.	Basic pension system with universal coverage, including solo self-employed.
Second pillar	Voluntary occupational pension schemes are available in Germany, though not as widespread as in the Netherlands. Although solo self-employed may have participated in occupational pension schemes in earlier jobs or participate via a second job, in their self-employment job they are generally not eligible for participation in this tier.	Voluntary occupational pension schemes play a dominant role in the Dutch pension system (covering more than 90% of employees); Although solo self-employed may have participated in occupational pension schemes in earlier jobs or participate via a second job, in their self-employment job they are generally not eligible for participation in this tier.
Third pillar	Voluntary private pension products; Riester pensions are subsidized but only available for employees and certain groups of solo self-employed; solo self-employed can participate in so-called Rürup pensions (also subsidized).	Voluntary private pension products often taking advantage of tax benefits.

Source: own compilation

WSI

1.4 Methodology

The research questions (see section 1.1) were answered using a multi-method approach, i.e. desk research, analyses of existing statistical data, survey research and interviews with self-employed without personnel. Comparative methods were used for analyses in Germany and the Netherlands. Labour Force Survey (LFS) statistics were examined, panel data was being analysed for the period 2000-2010, survey research was conducted in 2014 and interviews were held in 2015-2016. We elaborate on the collection and characteristics of panel data, survey data and the qualitative research in the sections below.

1.4.1 Panel data

Panel data were analysed to gain more insight into transitions and transition sequences between 'standard' forms of employment and solo self-employments. For this study we used panel data from the German Socio-Economic Panel (GSOEP) and the Dutch Labour Supply Panel (DLSP),

covering the period 2000 to 2010¹. Both surveys have a panel structure, offering the possibility to observe individuals over several points in time. The two surveys contain detailed information at the individual level on work-related aspects, socio-economic and socio-demographic variables in Germany and the Netherlands. The variables on participation, income, job satisfaction and background variables are of a similar nature in the two surveys, making it possible to make meaningful comparisons of the results.

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). The two-yearly intervals result from the Dutch panel, as the Labour Supply Panel is conducted every other year. From the data individuals belonging to the potential labour force were selected and categorized into the 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. In case the structure of the questionnaires or the exact phrasing of questions differs between the two datasets, we will discuss this in the relevant sections.

Table 3 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.

The resulting data sets have particular strengths as well as several limitations. One strength is that these surveys have a panel structure, offering the possibility to observe individuals over several waves in the time period between 2000 and 2010. Another advantage is the cross-national dimension, providing information on whether consequences of self-employment are either a national phenomenon or can be found more widely among solo self-employed. This broader picture thus provides more insight into the robustness of the results. An important limitation is that the panels suffer – as do many other panels – from substantial panel attrition, i.e. the phenomenon that after participating in the survey once or several times people drop out and cannot be followed any longer. 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.

¹ 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.

Table 3 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, 2013



1.4.2 Survey data

Within the research project “Self-employed without personnel: between freedom and insecurity”, a questionnaire was developed to provide more insight into the attitudes and behaviour of self-employed without personnel. The questionnaire was designed to collect information on motives to become self-employed, pecuniary and non-pecuniary pay-off of the self-employment job, attitudes and behaviours towards work, work-family balance, views and behaviour towards risk, social security provisions and pensions, and views towards (possible) government policies. The survey took into account outcomes of earlier research in the field (see Chapter 2) and drew inspiration from earlier conducted surveys (e.g. Vossen and Bouwmeester, 2002; D’Amours and Crespo, 2004; Van den Berg et al, 2009; Ybema et al, 2013).

As can be read in Chapter 2, some of these topics were already explored in earlier research, especially in the areas of motives to become self-employed (e.g. Taylor, 1996; Dawson et al., 2009; Poschke, 2013b), pecuniary and non-pecuniary payoff (e.g. Hamilton, 2000; Hundley, 2001a; Levine & Rubinstein, 2013) and self-employment in relation to work-family balance (e.g. Budig, 2006; Wellington, 2006; Gurley-Calvez et al, 2009). Whereas most studies use large-scale secondary data to deal with specific (sub)topics, few surveys have been designed to study self-employed without personnel, enabling researchers to answer specific and unique research questions, to identify groups of self-employed without personnel and deal with linkages between various domains. For example, in the literature,

a polarized perspective regarding the nature of self-employed without personnel is often put forward. In this 'bimodal' perspective, one group comprises professionals or craftspeople facing considerable scope for rewarding self-employment activities, while the other group contains rather sidelined and sometimes even exploited 'marginalized' workers. Assuming the group of self-employed without personnel in Germany and the Netherlands also can be characterized by some bimodality, how do these different types of self-employed deal with their insecure position? Do they differ in their attitudes and behaviour towards pension savings and social security provisions? Such research questions can be answered with specifically designed survey research, but are difficult to address using secondary data. Only few studies have performed analyses on primary survey data (e.g. Vossen and Bouwmeester, 2002; D'Amours and Crespo, 2004). To our knowledge, no research on primary survey data has been conducted in a cross-national setting.

The data collection among self-employed without personnel in Germany and the Netherlands was carried out by TNS Nipo. The method used was computer-assisted web interviewing (CAWI). In both countries online panels were used to select the addresses of respondents. At the country level, a random sample was drawn from the group of panellists who are registered as being self-employed without personnel, with a check on a 60-40 distribution on gender (male-female) which was the prevalent distribution in the population in both countries in 2014. At the start of the questionnaire, screening questions were posed to check whether respondents were indeed/still self-employed without personnel. The fieldwork took place from 11 June until 23 June 2014. The total number of completed questionnaires was N=757 in Germany and N=793 in the Netherlands, amounting to a total of N=1550. The response rate in Germany was 19% and in the Netherlands 40%. The variation in the response rate is probably largely due to the fact that in Germany the number of bounced emails was unknown. This means that in Germany the gross sample base could not be corrected for ineligible non-response (meaning that no contact with the selected self-employed individual was ever established), and is likely to be more near the Dutch response rate.

Although both national datasets are sizeable, it is difficult to assess to what extent the samples are representative of the population of interest. When response rates are very high, this may give an indication of the quality of the data, while lower response rates may give rise to biased results. However, whether the latter is in fact the case is hard to establish. A few things can be noted in this respect.

First, the response rates can be considered normal. Corporate surveys have been found to be at most 20 to 30 per cent, but often lower (see Brewster et al., 1994; Kalleberg et al., 1996; Conen, 2013), whereas surveys among consumers or individuals are found to be on average between 55 and 75 per cent (De Leeuw, 1997; Luiten, 2009). The response rate in research among self-employed without personnel is expected to be in between. Earlier research among self-employed or solo self-employed report-

ed response levels between 20% and 35% (Vossen and Bouwmeester, 2002; Zandvliet et al, 2013; Ybema et al., 2013). Second, throughout the questionnaire item non response was generally low. For all but one question the item response was more than 97%. A question that was beforehand marked as a 'sensitive' question was the question on 'household income', showing an item response of 87%. Third, bias may arise when specific types of self-employed without personnel are more inclined to participate in a survey on this topic than others. For instance, if one assumes a higher response rate among self-employed without personnel holding negative attitudes or behaviour concerning social security provisions or pensions, the results might be biased by self-employed 'ventilating' their discontent. In this case, results on behaviour are likely to underestimate behaviour on pension savings and social security, and overestimate negative perceptions. Overall, the maximum 'acceptable' level of non-response is hard to establish: as long as non-response is equally distributed there is - in principle - no reason for biased results.

Table 4 shows several characteristics of the self-employed without personnel who participated in the survey. The table shows that in Germany male self-employed are slightly underrepresented in the sample, whereas in the Netherlands the share of males in the sample is slightly higher than in the population of self-employed without personnel as a whole. Furthermore, in both Germany and the Netherlands older self-employed (50 years of age and older) are clearly overrepresented. In the Netherlands, higher educated self-employed without personnel are overrepresented. In both Germany and the Netherlands non-natives and those who combine self-employment with a second job in paid employment are underrepresented.

Table 4 Characteristics of the respondents, by country

	Germany		Netherlands	
	SE without pers.	Survey	SE without pers.	Survey
Gender*				
Male	61%	57%	61%	65%
Female	39%	43%	39%	35%
Age*				
15-24 years of age	2%	1%	5%	1%
25-49 years of age	52%	38%	52%	35%
50-64 years of age	38%	54%	34%	52%
65-74 years of age	8%	7%	9%	13%
Educational attainment level*				
ISCED Level 0-2	7%	8%	18%	13%
ISCED Level 3-4	50%	50%	40%	34%
ISCED Level 5-6	43%	42%	41%	53%
Country of birth*				
Native	82%	94%	88%	97%
Non-native	18%	6%	12%	3%
Second job**				
Yes	6%	2%	12%	9%

* Labour Force Survey, Eurostat, 2014

** Statistics Netherlands/ Federal Statistical Office of Germany, 2013

Source: * Labour Force Survey, Eurostat, 2014; ** Statistics Netherlands/ Federal Statistical Office of Germany, 2013



Depending on the topic, it may be necessary to correct for the distributions as outlined in Table 4. With respect to *gender* the distributions are not particularly disturbing and analyses can be performed on males and females separately, as the number of respondents is large enough. *Non-natives* are almost systematically underrepresented in survey research, not only in this survey. Although this does not make our outcomes ‘right’, we consider the outcomes to adequately take across views and behaviour of native self-employed without personnel. In the results section and analyses we think it is particularly relevant to keep in mind the distribution for *age* groups, especially when we get to topics like pension savings, which are likely to be influenced by for instance the time ‘left’ to retirement. If deemed necessary, we will correct for this deviating distribution.

Besides the distributions on the basic characteristics outlined in Table 4, we think it is also important to keep other factors in mind when analysing the results. Depending on the topic it is for instance also important to keep in mind whether you need to work with the whole sample as our base sample, or only the self-employed without personnel who are the main breadwinners or work for more than 20 hours a week in this job. For instance with respect to social security, it may make a difference whether you are the main breadwinner or not when you decide to have a disability insurance for your work as a self-employed. In case an analysis is conducted upon a

specific sub-group of self-employed without personnel, this will be mentioned explicitly.

Finally, German and Dutch respondents are likely to differ in their response styles (see e.g. Harzing, 2006). The implication is that in some cases it may be more relevant to look at relative responses than absolute responses.

1.4.3 Qualitative research

Quote:

“The purpose of qualitative research is to describe and understand social phenomena in terms of the meaning people bring to them. The research questions are studied through flexible methods enabling contact with the people involved to an extent that is necessary to grasp what is going on in the field. The methods produce rich, descriptive data that need to be interpreted through the identification and coding of themes and categories leading to findings that can contribute to theoretical knowledge and practical use.”

(Boeije, 2010)

The qualitative part of this study aims to get to a holistic understanding of specific decision-making processes that participants are involved in in the phases prior to and while self-employed. First, the qualitative study aims to improve our understanding of the *decision to become* self-employed without personnel by examining the influence of character, earlier life experiences and expectations. The second objective is to *evaluate the decision* to become self-employed without personnel: to what extent and in what areas has the self-employment job met prior expectations? Third, the qualitative study aims at generating more insight into the *decisions to participate in pension saving schemes and social insurances* of self-employed without personnel.

We conducted in-depth interviews with self-employed without personnel in both Germany and the Netherlands. In-depth interviewing is an appropriate method for collecting data on individuals' personal histories, perspectives and experiences. We used a semi-structured form (as opposed to an open or structured form) as this provides the interviewer and the interviewee with a format and helps to direct the responses, while there is still room for the respondent to elaborate. Though focus groups may provide greater interaction and discussion, a focus group could also easily create biases and take specific turns, as other's responses could be imposed. One-to-one face-to-face interviews were used (as opposed to interviews carried out over the phone) to be able to also observe non-verbal communication.

The interviews were mainly concerned with decisions that have been made prior to and while self-employed, and we intended to interpret those decisions from a life course perspective. Therefore, the interviews contained elements of a life-story interview. We used these life-story elements for several reasons:

- Opportunities and restrictions in the earlier stages of careers may play a role in whether self-employment is an option;
- Participation in self-employment or attitudes and behaviour towards risks may be influenced by long term factors in individual's lives;
- A core principle of a life-story approach is that all aspects of life interact with, and have implications for, each other.

All interviews were recorded electronically and were fully transcribed. To ensure that we covered the same aspects of the qualitative research in both counties, a topic list for interviews was developed.

We used 'purposive sampling' or 'purposeful selection' for the recruitment of participants for this study. Purposeful sampling involves selecting research participants according to the needs of the study in that researchers choose participants who give a richness of information that is suitable for detailed research. The selection criteria for inclusion are self-employed without personnel from a sector which are highly significant for the structural change of self-employed labour and a strong growth of solo self-employment. In addition, we wanted two groups of self-employed without personnel to be able to *contrast* their status in terms of freedom and insecurity. We therefore choose to focus on solo self-employed from 'construction' and 'creative industries' (with the exception of the 'art and heritage sector'). In the time period between January 2015 and June 2016 a total of 25 interviews were conducted in these sectors (see Table 5). We recruited participants from various age groups and with different self-employment durations.

Participants were informed about the nature and the aims of the research project. As we recorded and transcribed the interviews we also informed the interviewee's that all data collected would remain anonymous and confidential. We assigned each participant a unique code number and pseudonym that were used with all data.

Table 5 Participating solo self-employed by age, sector, occupation and country

No	Pseudonym	Age group	Sector	Occupation	Country
1	Liam	40-49 years	Creative	Film cutter	DE
2	Matthew	40-49 years	Creative	Cameraman	DE
3	Adam	40-49 years	Creative	Music journalist	DE
4	Connor	40-49 years	Construction	Carpenter	DE
5	George	40-49 years	Construction	Architect	DE
6	Megan	30-39 years	Creative	Graphic designer	DE
7	Ann	30-39 years	Creative	Illustrator	NL
8	Gwenn	50-59 years	Creative	Textile designer	DE
9	Jack	40-49 years	Construction	Heating installer	DE
10	Thomas	40-49 years	Construction	Parquet foorer	DE
11	Babette	40-49 years	Creative	Communications	NL
12	Phoebe	40-49 years	Creative	Programme maker	NL
13	Owen	30-39 years	Creative	Musician	NL
14	Lauren	40-49 years	Creative	Photographer	NL
15	Dian	40-49 years	Creative	Interior styling and design	NL
16	Nolan	40-49 years	Creative	Photographer	NL
17	Richard	40-49 years	Construction	Architect	DE
18	Rachel	50-59 years	Construction	Fitter/ Installer	DE
19	Brian	50-59 years	Construction	All round construction	NL
20	Steven	20-29 years	Construction	Contractor	NL
21	Patrick	50-59 years	Construction	Carpenter	NL
22	Kyle	50-59 years	Construction	Kitchen renovator	NL
23	Austin	50-59 years	Construction	All round construction	NL
24	Samuel	20-29 years	Construction	Specialised welder	NL
25	Warren	30-39 years	Construction	Painter	NL

1.5 Outline of the study

This WSI Study consists of five chapters in total. After this introductory chapter, Chapters 2 to 4 present the results of the study. In Chapter 2, the results are presented on developments in solo self-employment across time and place. Subsequently, in Chapter 3 we present the results on labour market transitions, the impact of earlier life experiences and consequences of a job in self-employment based on panel data analyses. In Chapter 4, we present the results of our survey and qualitative research on self-employed' motives, work-life balance, pay-off, social security provisions and the perceived role of the government and interest organisations. The final Chapter 5 summarizes our findings and discusses the outcomes. In this final chapter we also discuss the implications of the study and provide suggestions for future research.

2 Solo self-employment across time and place

There is a substantial amount of research on developments in self-employment, characteristics of self-employed persons and their businesses, and the motives and working hours of self-employed. The existing literature on when, who and why people decide to become self-employed without personnel are reviewed in this section. Eurostat's Labour Force Survey statistics were used to illustrate developments in self-employment over time².

2.1 Developments over time

How has the number and the share of self-employment been evolving in Europe, and more in particular in the two countries of our study? The rise in the share of self-employed is a rather new phenomenon from a historical perspective. At the turn of the nineteenth century, self-employment was much more common than it is today and could especially be found among farmers, tradesmen, craftspeople and freelance professionals. Throughout the twentieth century, dependent work increased significantly and went hand in hand with technical change favouring capital-intensive, large-scale production, the rise of the 'Fordist model' and a change in industrial organization in most countries (OECD, 2000; Supiot, 2001). Since the 1970s, the long-term historical decline in self-employment as a proportion of total employment has slowed in most Western economies and in some countries even reversed, although the timing of the "renaissance" of self-employment differed between countries (OECD, 2000; Fairly and Meyer, 2000; Meager, 2007). This changing pattern renewed interest in self-employment among economists and other social scientists.

The transition from a continuously declining self-employment rate during the twentieth century into a rising self-employment rate at the end of that century is also characteristic for The Netherlands and Germany. In The Netherlands the self-employment rate declined steadily from the turn of the 19th century until the 1980s (Figure 1). German data shows a steady decline at least from the 1950s – we are not aware of prior data from the Statistisches Bundesamt – and a gentle slope upwards only appears at the tail of the figure.

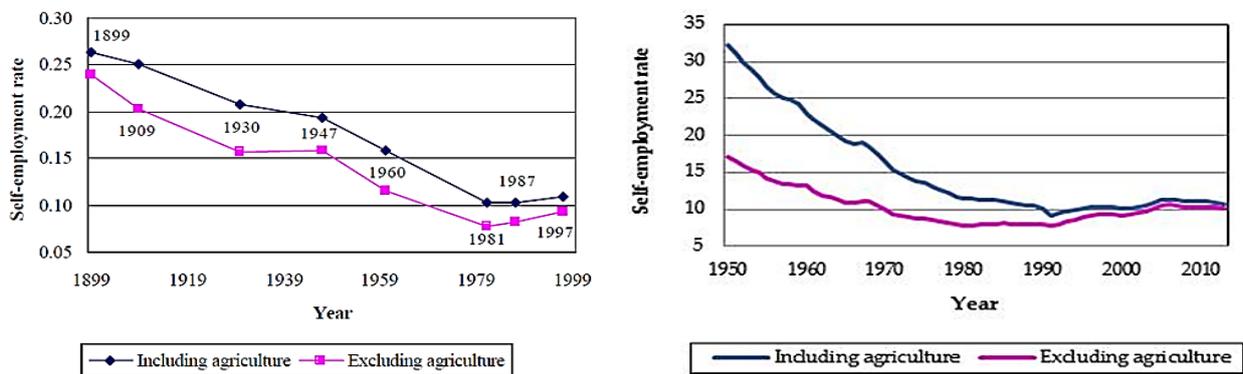
² Although definitions between different sources may vary, the statistics in this paragraph give a general overview of self-employed without personnel and follow standard international definitions. According to these definitions, self-employment jobs are ones where remuneration is directly dependent upon profits, and incumbents make operational decisions or are responsible for the welfare of the enterprise (OECD, 2000). Regarding self-employed without personnel, Eurostat defines this group as "Persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ no other persons" (Eurostat, 2003).

Quote:

“Self-employment attracted virtually no interest among labour market researchers until the first half of the 1980s. [...] Until recently most labour market analysis focused on the employee workforce, and especially on the male employee workforce working full-time hours. Self-employment is one of the Cinderella’s of labour market research, only recently invited to the ball.”

(Hakim, 1988: p.421)

Figure 1 Self-employment as a share of total employment in The Netherlands, 1899 – 1997 and Germany, 1950-2012



Source: Wenekers and Folkeringa, 2002/ Statistisches Bundesamt, 2013

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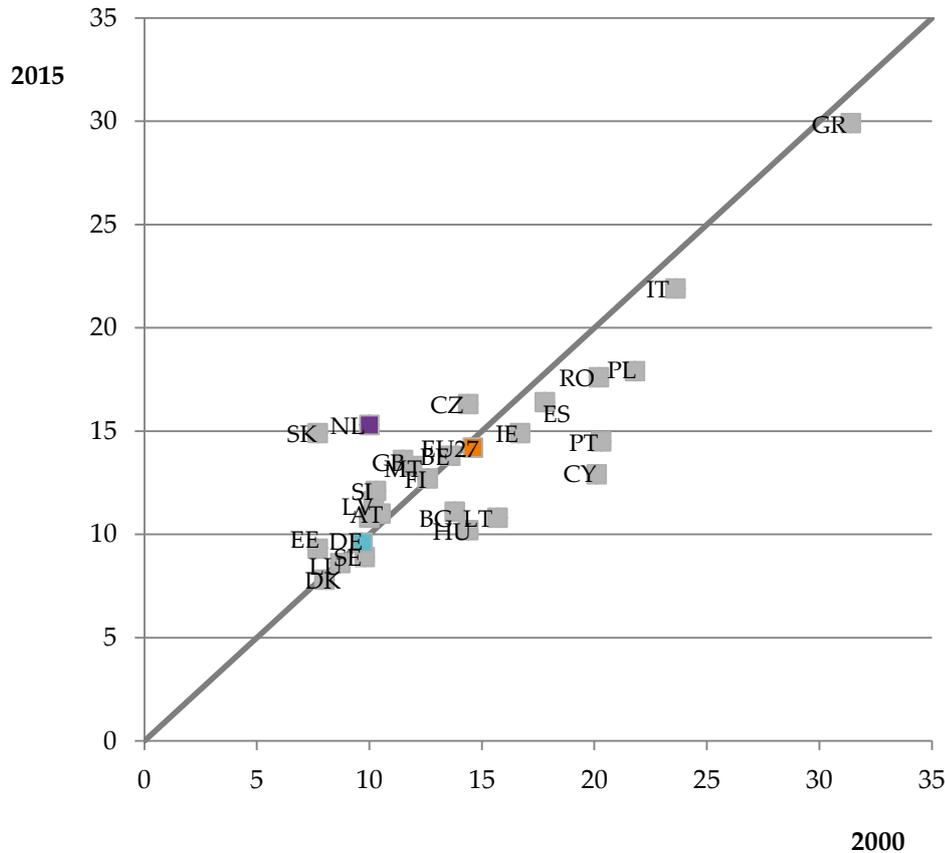
The underlying mechanisms of the “renaissance” are considered to originate from different sources, such as: 1) sector composition effects and the rise in the services sector (which typically provides more room for small-sized companies to compete); 2) the rise of new technologies; 3) changes in the industrial organization (e.g. more flexibility, out-sourcing, lean production); 4) changes in consumer demand allow small organizations to occupy ‘niches’; 5) government policies; 6) socio-cultural trends such as social norms regarding work and self-employment; 7) changes in labour supply (caused e.g. by other preferences or restrictions, work-life balance) and; 8) demographic changes (Meager, 1992; Luber and Gangl, 1997; Arum and Müller, 2004; Van Es and Van Vuuren, 2011).

Since the 1980s, a vast body of literature has emerged to shed more light on these possible underlying mechanisms and provide more insight into the decomposition of the growth in for instance the United States (Blau, 1987; Steinmetz and Wright, 1989; Evans and Leighton, 1989; Fairly and Meyer, 2000; Schuetze, 2000), the United Kingdom (Rees and Shah 1986; Meager, 1992; Winch, 1998; Taylor, 2004), The Netherlands (De Wit and Van Winden, 1989; Van Es and Van Vuuren, 2011) and Germany (Bögenhold and Fachiner, 2007). Some studies examine the aggregate development of self-employment over time in a cross-national perspective (Acs, Audretsch and Evans, 1992; Luber and Gangl, 1997; Blanchflower, 2000; OECD, 2000; Torrini, 2005).

Based on this literature, it emerges that the growth in self-employment is often attributed to a mixture of changes, primarily to changes in the industrial composition, government policies, and changes in labour supply. However, it is increasingly recognized that both the occurrence and timing of this “renaissance”, as well as the relative importance of various mechanisms underlying this changing pattern differs markedly between countries (Luber and Gangl, 1997; OECD, 2000; Arum and Müller, 2004; Meager, 2007; Van Es and Van Vuuren , 2011). For instance, Van Es and Van Vuuren (2011) find, in contrast with findings for the United States, that changes in the industrial composition only played a small role in The Netherlands. They postulate that generic policy effects are the most important causes of the increase in self-employment in The Netherlands.

The differences between countries in terms of occurrence and timing of a revival in self-employment can also be seen from Figure 2.2. In 2015, the share of total employment being self-employed ranges from 8 per cent in Denmark to 30 per cent in Greece. In the time period between 2000 and 2015 the self-employment rate is quite constant at the European level. In some countries, like Cyprus (-7 %-point), Portugal (-6 %-point) and Lithuania (-5 %-point) the self-employment rate has fallen. In other countries, like Slovakia (+7 %-point), The Netherlands (+5 %-point) and the United Kingdom, Czech Republic and Slovenia (all +2 %-point) the self-employment rate has increased.

Figure 2 Self-employment as a share of total employment in Europe, age 15-64 years, 2000 and 2015



Source: Eurostat/ LFS, 2016



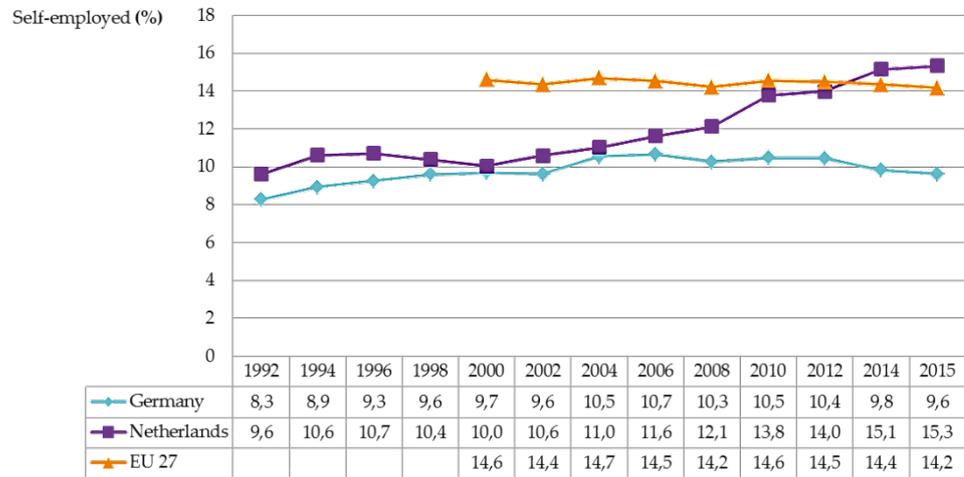
Figure 3 shows the development of self-employment as a share of total employment in more depth for Europe, Germany and The Netherlands for the time period between 1992 and 2015. This confirms the stable average of about 14.5 per cent at the European level and shows a substantial increase of self-employed persons in The Netherlands, especially since the early 2000s. For Germany the figure shows a more moderate growth from 8.3 per cent in 1992 to 10.4 per cent in 2012 followed by a recent decline. For an overview of more European countries see Annex 1.

Quote:

“As many authors point out, self-employment encompasses a wide range of working modes of different degrees of autonomy, some of which conform much more closely than others to the ‘entrepreneur’ of the economic models. It is, therefore, implausible to model the relationship between the economic cycle and self-employment as a single aggregate, when the aggregate is composed of diverse parts, each responding differently to changes in the economic and institutional environment.”

(Meager, 2007: p.4)

Figure 3 Self-employment as a share of total employment in Europe, Germany and The Netherlands (age 15-64 years), 1992 – 2015

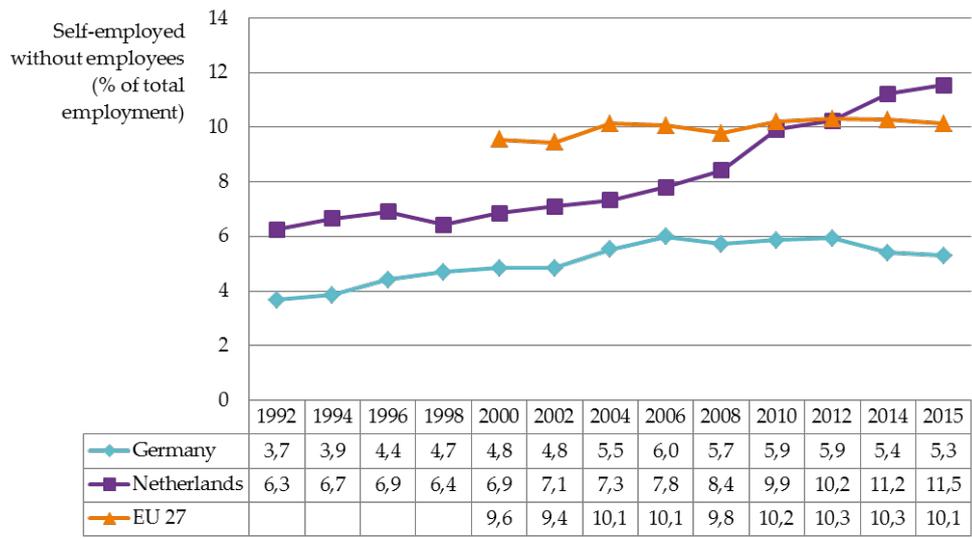
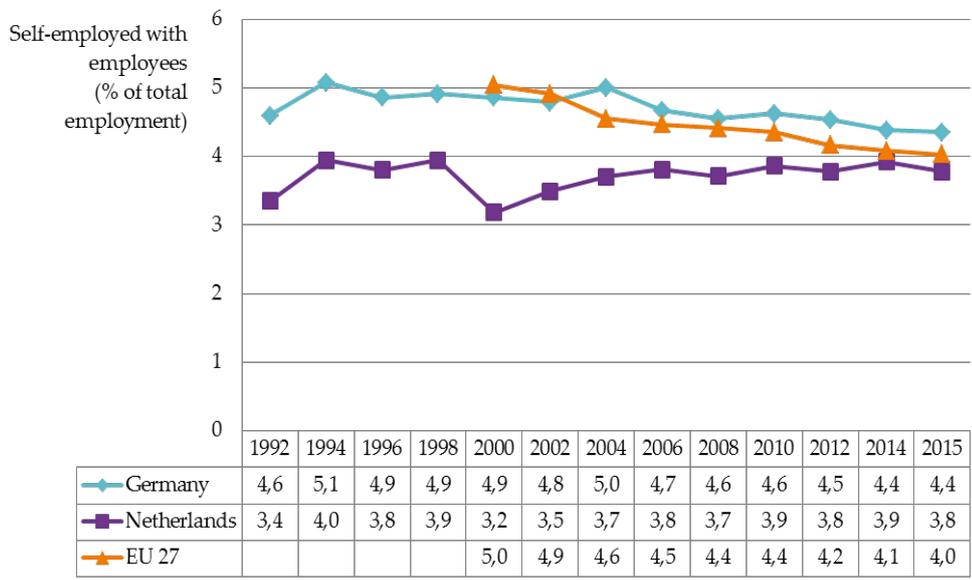


Source: Eurostat/ LFS, 2016

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Most studies depict developments in self-employment rates for the group of self-employed as a whole, which may implicate a homogenous group with similar underlying trends. However, in fact the group of self-employed is a rather heterogeneous one, as is often acknowledged in the literature (e.g. Arum and Müller, 2004; Meager, 2007). In that light, Figure 4 plots a basic distinction between self-employed with and without employees as a share of total employment (for an overview of more European countries and developments of self-employed without personnel in absolute numbers see Annex Table 2 to 4). Additionally, Figure 5 shows the ratio of self-employed persons without employees to the self-employed persons with employees in Europe. Whereas Figure 3 shows a stable self-employment rate at the European level of about 14.5 per cent, Figure 5 shows an increasing ratio of self-employed persons without employees to self-employed with employees. This applies strongly to The Netherlands and also, but to a far lesser extent, to Germany. In our research we are primarily interested in this relatively large and supposedly increasing group of self-employed without personnel.

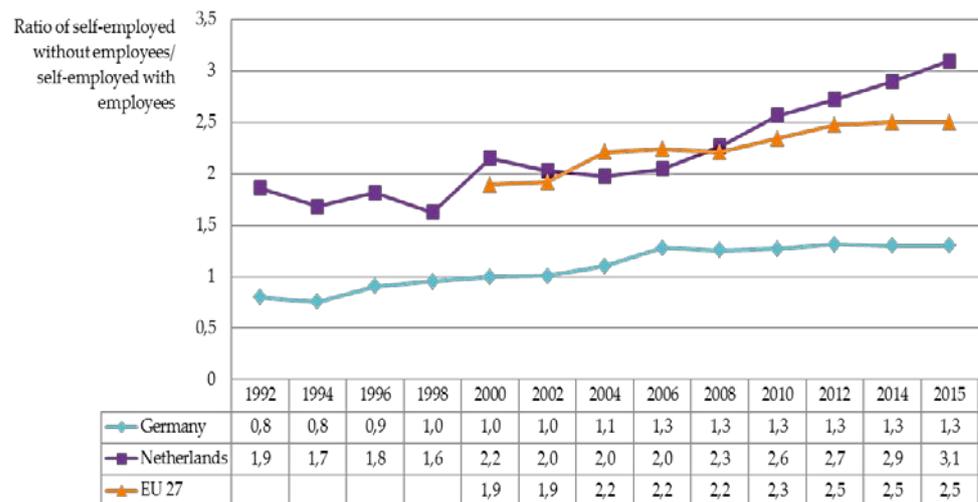
Figure 4 Self-employed persons with and without employees as a share of total employment in Europe, Germany and The Netherlands (age 15-64 years), 1992-2015



Source: Eurostat/ LFS, 2016



Figure 5 Ratio of self-employed persons without employees/ self-employed persons with employees in Europe, Germany and The Netherland (age 15-64 years), 1992-2015



Source: Eurostat/ LFS, 2016

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2.2 Characteristics of self-employed without personnel

This paragraph addresses the question how the group of self-employed without personnel can be characterised in terms of gender, age, education, branch of industry/ occupation, region and other characteristics, which we grouped into ‘individual characteristics’ and ‘business characteristics’.

2.2.1 Individual characteristics

Individual determinants of self-employment entry have been studied extensively (for an overview, see Simoes et al., 2013). In both Germany and The Netherlands, the majority of self-employed without employees is male (60 per cent), which is about 5 per cent below EU average (see Table 6 Self-employed persons without personnel, characteristics, 2015). In both countries the majority of all self-employed without employees is between 25 and 49 years of age (ca. 55 per cent) and more than 40 per cent are 50 years of age and older. The educational level among self-employed without personnel is particularly high in Germany, but also above EU average in The Netherlands. In Germany 49 per cent has a medium educational attainment level and 43 per cent is higher educated; in The Netherlands these percentages are 39 and 42 per cent respectively. In The Netherlands and in Germany most self-employed without personnel have a native background. In The Netherlands a substantial amount of 12 per cent of all self-employed hold a second job; in Germany self-employment is with 6 per cent less frequently combined with a second job.

Table 6 Self-employed persons without personnel, characteristics, 2015

	Germany		Netherlands		EU 27	
	SE without pers.	All employed	SE without pers.	All employed	SE without pers.	All employed
Gender*						
Male	61%	(53%)	60%	(53%)	66%	(54%)
Female	39%	(47%)	40%	(47%)	34%	(46%)
Age*						
15-24 years of age	2%	(9%)	6%	(15%)	3%	(9%)
25-49 years of age	50%	(56%)	51%	(55%)	56%	(61%)
50-64 years of age	39%	(32%)	35%	(28%)	34%	(28%)
65-74 years of age	9%	(2%)	8%	(2%)	7%	(2%)
Educational attainment level*						
ISCED Level 0-2	7%	(12%)	19%	(22%)	22%	(18%)
ISCED Level 3-4	49%	(59%)	39%	(42%)	45%	(48%)
ISCED Level 5-6	43%	(29%)	42%	(36%)	32%	(33%)
Nationality*						
Native	87%	(90%)	95%	(95%)	93%	(93%)
Non-native	13%	(10%)	4%	(5%)	7%	(7%)
Country of birth*						
Native	82%		88%		89%	
Non-native	18%		12%		11%	
Second job**						
Yes	6%		12%		-	

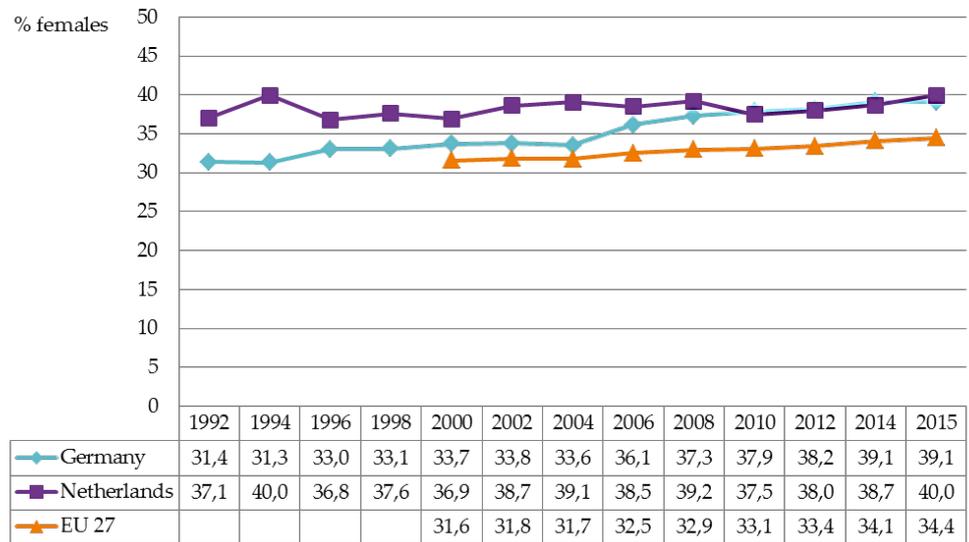
Source: * Labour Force Survey, Eurostat, 2016; ** Statistics Netherlands/ Federal Statistical Office of Germany, 2013



Compared to all employed individuals, self-employed without personnel are relatively often male: in Germany and The Netherlands 60-61 per cent among self-employed without personnel compared to 53 per cent among all employed. Self-employed are also relatively older and higher educated than average among employed individuals. In Germany, self-employed without personnel relatively often have a non-native background as compared to all employed.

Gender - Studies typically find that women have a lower propensity to enter self-employment than men (e.g. Blachflower, 2000; Verheul et al., 2012). Although female self-employment rates have been increasing over time in several countries (e.g. Evans and Leighton, 1989; Schulze Buschoff, 2007), the growth among men is sometimes found to be stronger (for instance in The Netherlands: see Bosch et al., 2012). Figure 6 shows that in Germany the share of female self-employed has increased gradually since the early nineties from 31 to 39 per cent, while in The Netherlands the share of female self-employed rather has been fluctuating around 39 per cent. Female self-employment is generally of a different nature than male self-employment (e.g. Georgellis and Wall, 2005; Bosch et al., 2012).

Figure 6 Share of females among self-employed persons without personnel in Europe, Germany and The Netherlands (age 15-64 years), 1992-2015



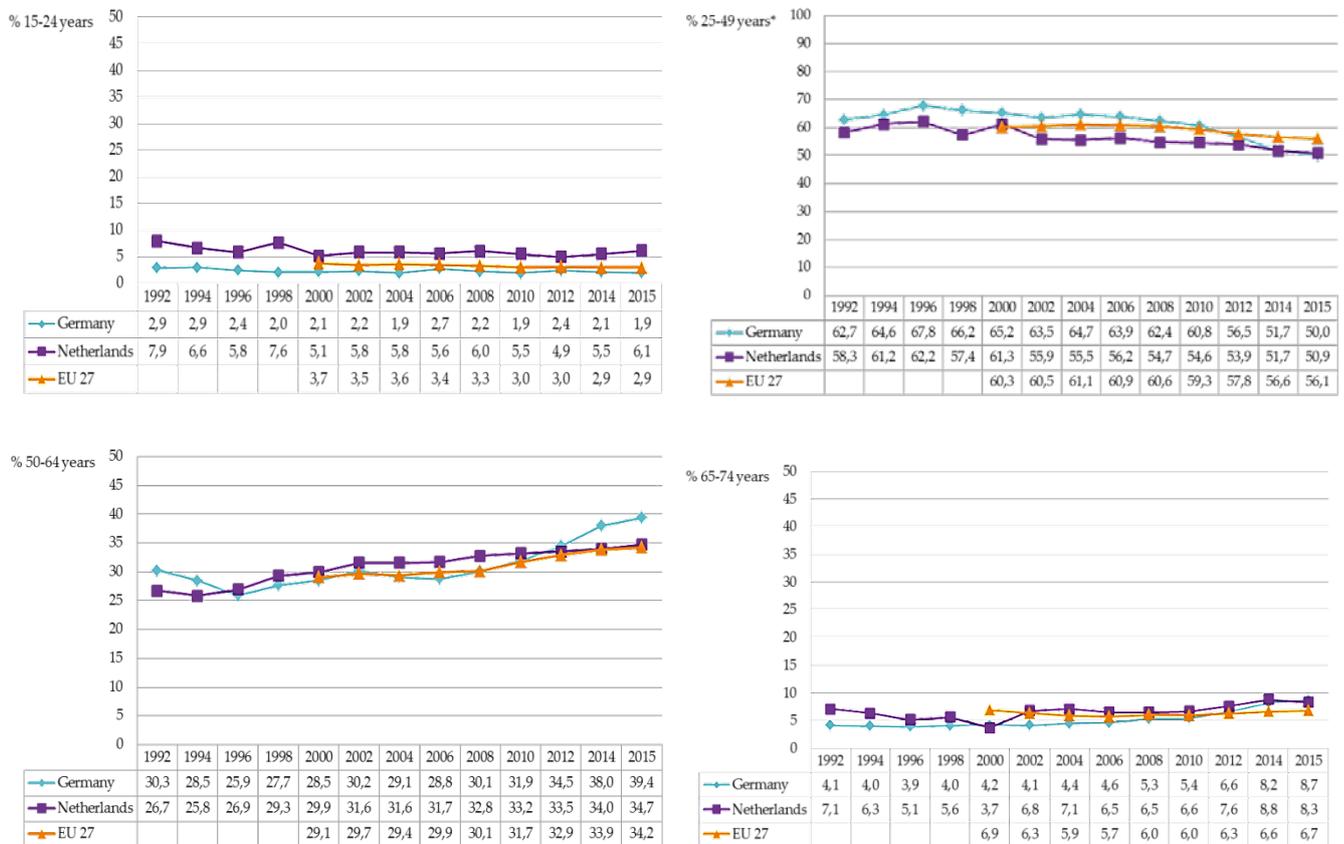
Source: Eurostat/ LFS, 2016



Gender differences may for instance arise from a higher risk aversion and other attitudes among women than men (e.g. Verheul et al., 2012); women and men are engaged in different sectors of industry (e.g. Wharton, 1989; Van Es and Van Vuuren, 2010); employers' behaviour reducing women's opportunities in wage employment, pushing them into self-employment as an escape strategy (e.g. Williams, 2012); or different family demands (e.g. Boden, 1999; Wellington, 2006; Gurley-Calvez et al., 2009).

Age - Studies generally find a positive relation between age and self-employment in Western societies (Blanchflower, 2004; Giandrea et al, 2008; Fritsch et al, 2012; Bosch et al, 2012). The positive influence of age is usually attributed to a larger stock of general and specific human capital, social capital (such as a more diversified and dense network) and financial capital (e.g. Zissimopoulos and Karoly, 2009; Cahill et al, 2013; Van Solinge 2014), a desire for more flexible employment (e.g. due to health-related issues) (Giandrea et al, 2008) or the choice for self-employment as a way to extend working lives (both necessity driven and opportunity driven) (cf. Van Solinge, 2014; Been and Knoef, 2015). A negative relation between age and self-employment may come from higher risk aversion levels and a shorter time horizon to recover the costs on initial investments. Based on the finding that older people are more often self-employed, the growth in self-employed without personnel is sometimes partly attributed to demographic changes, i.e. the ageing of society (e.g. Van Es and Van Vuuren, 2011). As shown in Figure 7, the growth in self-employment is both at the country level in Germany and The Netherlands, as well as on the EU level, strongest in the group 50 years of age and older. In Germany and The Netherlands, this group has increased from 34 to 41 per cent.

Figure 7 Self-employed persons without personnel by age group in Europe, Germany and The Netherlands (age 15-74 years), 1992-2015



Source: Eurostat/ LFS, 2016

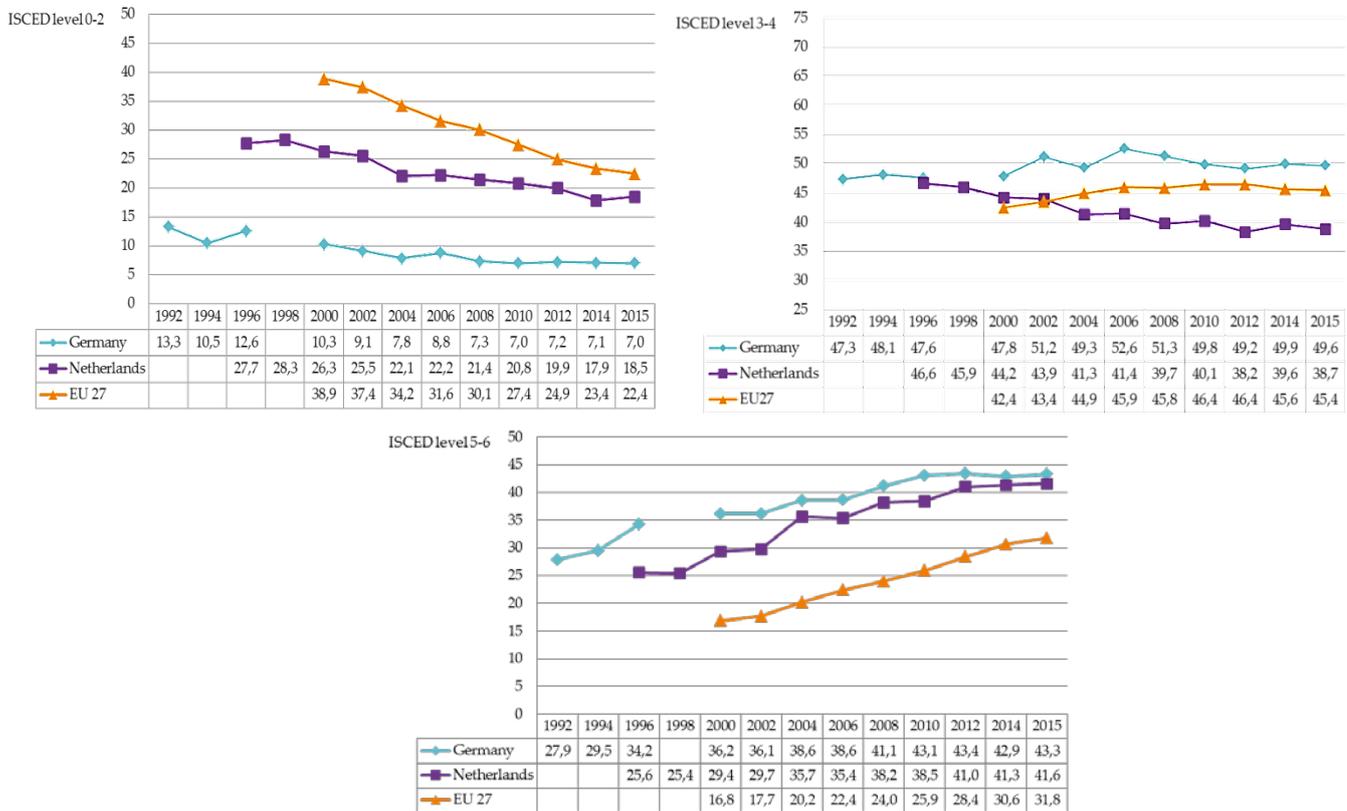
* Note: The axis of '25-49 years' ranges from 1 to 100

Education and experience – Earlier research predominantly finds a positive impact from experience on self-employment entry (Evans and Leighton, 1989; Poschke, 2013a). Studies examining the relationship between education and the propensity to enter self-employment are still inconclusive (cf. Rees and Shah, 1986; Blanchflower, 2004; Poschke, 2013a; Joonas and Wadensjö, 2013). This may be due to opposing arguments such as 1) higher educated individuals have better job opportunities in the wage sector 2) higher educated individuals are more able to identify self-employment opportunities and 3) higher educated individuals might have better abilities to succeed in self-employment occupations. Poschke (2013a) puts forward there might be a U-shaped relationship between education and self-employment entry.

Figure 8 shows that in The Netherlands and Germany, as well as on the European level, especially the share of self-employed without personnel among the higher educated has increased (“first and second stage of tertiary education”, ISCED level 5-6). The share of self-employed persons without personnel with “pre-primary, primary and lower secondary education” (ISCED level 0-2) has decreased gradually over time. Whereas the share of self-employed without personnel with “upper secondary and post-secondary non-tertiary education” (ISCED level 3-4) has decreased sub-

stantially among Dutch self-employed, the graph shows a slight relative increase in Germany and in Europe as a whole.

Figure 8 Self-employed persons without personnel by educational attainment in Europe, Germany and The Netherlands (age 15-64 years), 1992-2015



Source: Eurostat/ LFS, 2016

WSI

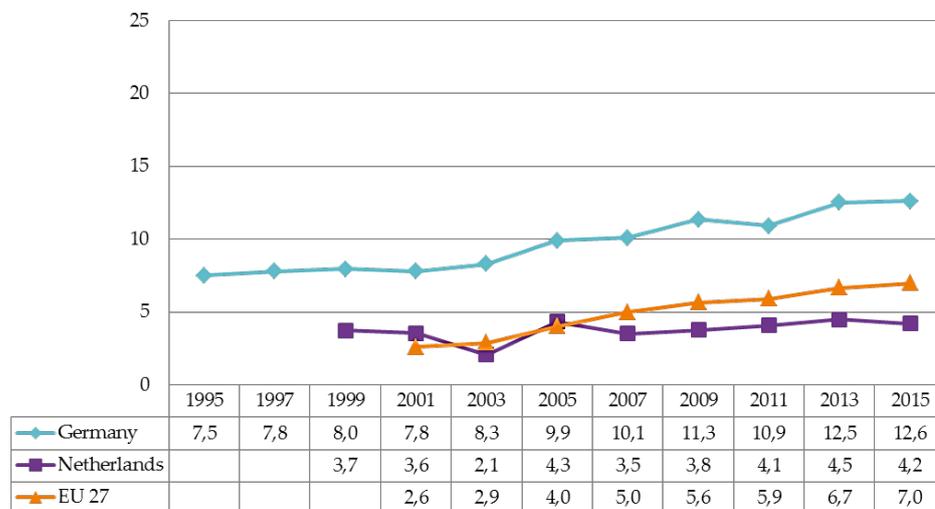
Family background – Earlier research provides support for the belief that the household composition influences self-employment decisions. When adults live in a couple, their combined income and wealth influence the decision to become self-employed. Once self-employed, it also provides more room to survive financially for a longer period of time. In addition, the spouse may participate in the business and provide emotional support. Empirical results predominantly find a positive relation between having a spouse and self-employment (e.g. Budig, 2006; Özcan, 2011). Having children may also affect the likelihood of self-employment. In positive terms, self-employment gives more independence and flexibility in managing working time, financial pressure might introduce additional motivation for exploring higher return activities and teenage children may help in family businesses. In negative terms, family responsibilities may increase parents' degree of risk aversion or child-rearing is considered to be difficult to conciliate with a high-demanding self-employment job. Empirical results indicate a positive correlation between having children and being self-employed (e.g. Dawson et al, 2009; Baumann and Brändle, 2012). Finally, most stud-

ies indicate that having a self-employed parent positively influences being self-employed (Taylor, 2004; Kirkwood, 2007; Barnir and McLaughlin, 2011). This may be the result of the transference of general and specific human capital, financial conditions and role models (Hundley, 2006; Chlosta et al, 2010; Barnir and McLaughlin, 2011).

Health – Research on how an individuals' health condition affects self-employment seems to be inconclusive. Some researchers find a positive relationship between (good) health and self-employment (Rees & Shah, 1986), some find no effect between health and self-employment (Fuchs, 1982) while others find that poor health is related to the transition into self-employment (Zissimopoulos and Karoly, 2007; Pagán, 2009; Jones and Latreille, 2011). Several reasons can be brought forward here. Poor health may be related to a larger propensity to be self-employed due to employer discrimination and self-employment may allow a better fit between the illness or disability and work duties and location. On the other hand, poor health may also prevent a transition to self-employment as workload cannot be transferred whenever necessary and “benefits offered by social security are usually more limited for the self-employed than for employees” (Simoes et al., 2013).

Ethnicity – Immigrant self-employment has been studied extensively over the last decades. Although Simoes et al. (2013) state that ‘the above-average propensity of immigrants to opt by a self-employment career path is a widely accepted and studied fact’, Table 6 does not seem to indicate an above-average propensity in The Netherlands, nor at the European level – at least not for self-employed without personnel. In Germany, however, self-employment does seem to be relatively high among non-natives, and has been increasing since the early nineties of the previous century (Fritsch et al., 2012; see also Figure 9). Fritsch et al (2012) argue this may be related to the enlargement of the European Union and increase in labour market mobility, making it easier for non-natives to start as a self-employed in Germany. Differences why non-natives might have an above-average propensity to enter self-employment may for instance arise from discrimination; ethnic enclaves creating a market with preferences and needs in which co-ethnics have a comparative advantage; a large self-employment tradition in the country of origin; and (initial) intentions to leave the host country again, leading to occupations that permit a shorter period of residence.

Figure 9 Self-employed persons without personnel, share of non-natives, in Europe, Germany and The Netherlands (age 15-64 years), 1995-2015



Source: Eurostat/ LFS, 2016:

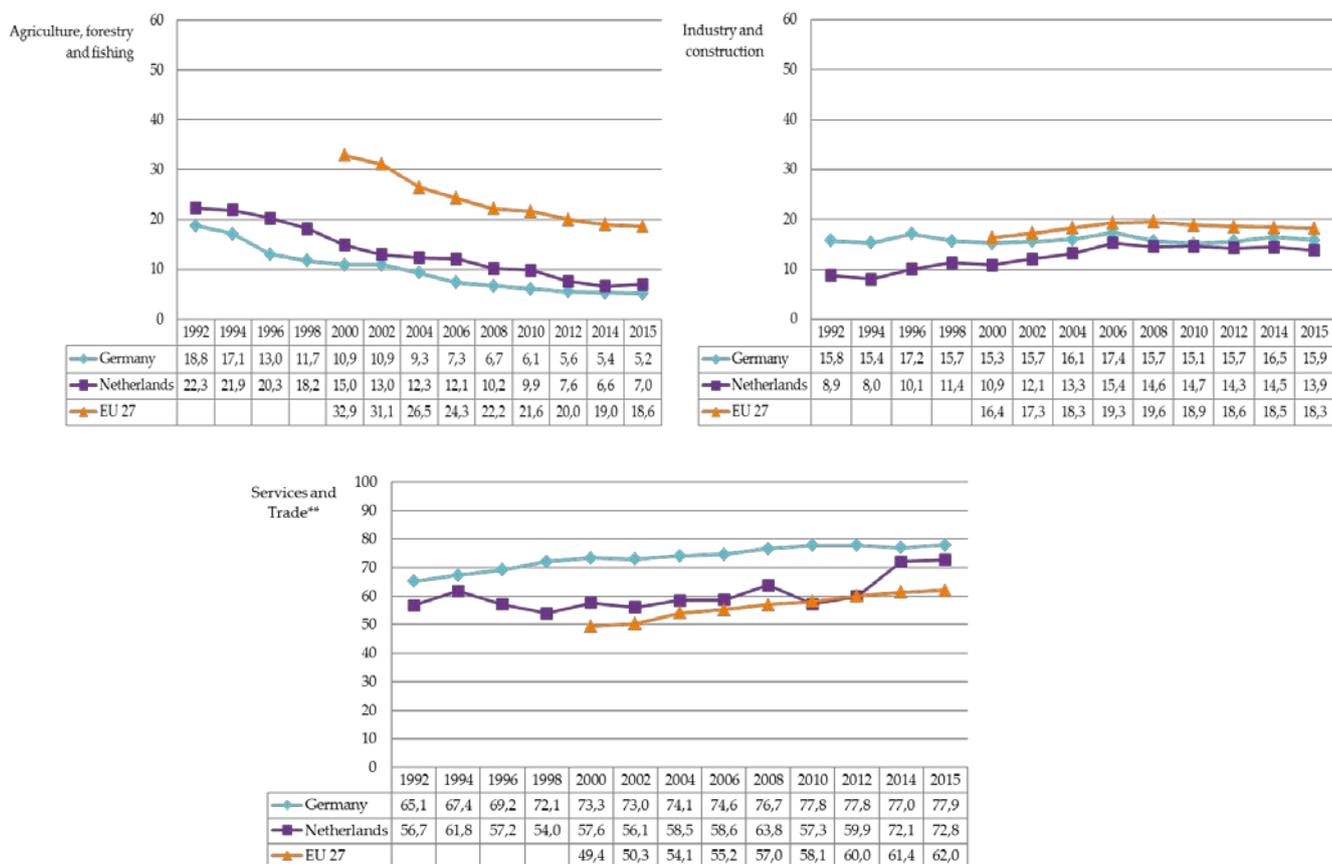


2.2.2 Characteristics of the business

In the section about ‘developments over time’ we already briefly addressed that sector composition and the rise in ‘services’ may play a role in the growth of self-employed without personnel. We also touched upon a study by Van Es and Van Vuuren (2011) who found, in contrast with findings for the United States, that sectoral shifts (from industries with a low self-employment rate towards industries with a high self-employment rate as well as intra-sectoral shifts) played only a small role in The Netherlands. So how are the developments in self-employed without personnel in different sectors of industry?

Several observations regarding sectoral changes can be made from Figure 10. First, both on the European level and in The Netherlands and Germany the share of self-employed without personnel in “Agriculture, forestry and fishing” has been declining since 1992. Second, especially in The Netherlands the group of self-employed without personnel has been growing in the sector “Industry and construction”. And finally, whereas in Germany and Europe as a whole the group of self-employed without personnel in “Services and Trade” has been growing continuously, the figure does not show the same type of growth in The Netherlands, at least not for the years 2010 and 2012. This finding may have to do with the (un)availability of specific statistics for The Netherlands (e.g. ‘financial intermediation and real estate, renting and business activities’) in the Labour Force Survey and the new categorisation since 2008 onwards (NACE Rev.2).

Figure 10 Self-employed persons without personnel by sector* in Europe, Germany and The Netherlands (age 15-64 years), 1992-2015



*Note: From 2008 onwards NACE Rev. 2; ** Note: The axis of 'Services and Trade' ranges from 1 to 100
Source: Eurostat/ LFS, 2016

In 2015, the largest group of self-employed without personnel in Europe was active in the sectors 'agriculture, forestry and fishing' (19%), 'wholesale and retail trade'(14%) and 'construction' and 'Professional, scientific and technical activities' (both 13%), accounting for an accumulative 59 per cent of all self-employed without personnel (see Table 7). In Germany, the largest groups come from 'professional, scientific and technical activities' (15%), 'construction' (11%) and 'wholesale and retail trade' and 'human health and social work activities' (both 10%) and. In The Netherlands, the largest groups can be found in 'professional, scientific and technical activities' (18%), 'construction' and 'human health and social work activities' (both 11%).

Table 7 Self-employed persons without personnel, by sector, 2015 Source: Eurostat/ LFS, 2016

	Germany		Netherlands		EU 27	
	Number of SE without personnel (2015) (x 1000)	Share sector in SE without personnel (2015) (%)	Number of SE without personnel (2015) (x 1000)	Share sector in SE without personnel (2015) (%)	Number of SE without personnel (2015) (x 1000)	Share sector in SE without personnel (2015) (%)
Agriculture, forestry and fishing	107,7	5%	65,4	8%	4.039,5	19%
Wholesale and retail trade	206,2	10%	86,0	10%	2.978,1	14%
Construction	227,9	11%	96,0	11%	2.785,9	13%
Professional, scientific and technical activities	314,5	15%	158,7	18%	2.673,3	13%
Human health and social work activities	197,6	10%	94,2	11%	1.327,5	6%
Other service activities	143,9	7%	55,3	6%	1.162,1	5%
Manufacturing	99,8	5%	34,0	4%	1.109,5	5%
Administrative and support service activities	138,4	7%	47,1	5%	807,5	4%
Transportation and storage	36,3	2%	21,5	2%	797,0	4%
Arts, entertainment and recreation	147,3	7%	58,8	7%	782,0	4%
Information and communication	133,2	7%	53,5	6%	770,3	4%
Education	139,9	7%	49,8	6%	696,3	3%
Accommodation and food service activities	43,2	2%	24,0	3%	691,0	3%
Financial and insurance activities	79,5	4%	19,2	2%	423,3	2%
Real estate activities	29,4	1%	8,0	1%	278,1	1%
Total	2.044,8	100%	871,5	100%	21.321,4	100%
				651,5		21.385,9

Source: Eurostat/ LFS, 2016



Table 8 shows for Germany and The Netherlands the changes by sector for the time period between 2008 and 2015. This table indicates that the growth in self-employed without personnel in both countries mainly seem to be attributable to a growth in ‘construction’ and different kinds of ‘services’ in both the public and the private sector. These findings correspond to other studies (e.g. Bosch et al, 2012). Table 9 shows the changes by occupation for Germany and The Netherlands for the time period between 2000 and 2010. In Germany, the largest groups in 2010 are ‘professionals’ (27%) and ‘technicians and associate professionals’ (24%). These types of occupations also largely contribute to the growth. The Netherlands show a different picture. The largest groups in 2010 are ‘professionals’ (27%) and ‘managers’ (23%). But over the course of the decade, the number and share of ‘managers’ has declined significantly, while the number and share among ‘professionals’, ‘craft and related trades’ and ‘technicians and associate professional’ increased.

The downward trend in the agricultural sector and rise in services is also reflected in the shift in type of occupations, as shown in Table 10 and Table 11. In 1996, mainly occupations in agriculture and trade could be found in the top ten occupations among self-employed without personnel, especially in The Netherlands. In 2008, the share of self-employed persons in these occupations have declined or disappeared from the top ten and their positions are taken by occupations in services, such as managers, salespersons, advisors and analysts. In Germany, the relatively high and increased share of teachers is notable.

Table 8 Self-employed persons without personnel, by sector, 2008-2015, numbers and shares

	Germany				Netherlands			
	Number of SE without personnel (2008) (x1000)	Number of SE without personnel (2015) (x1000)	Share sector in SE without personnel (2008) (%)	Share sector in SE without personnel (2015) (%)	Number of SE without personnel (2008) (x1000)	Number of SE without personnel (2015) (x1000)	Share sector in SE without personnel (2008) (%)	Share sector in SE without personnel (2015) (%)
Agriculture, forestry and fishing	145,6	107,7	7%	5%	72,5	65,4	12%	8%
Manufacturing	118,3	99,8	6%	5%	25,6	34,0	4%	4%
Construction	216,9	227,9	10%	11%	78,4	96,0	12%	11%
Wholesale and retail trade	273,6	206,2	13%	10%	66,0	86,0	11%	10%
Transportation and storage	52,7	36,3	2%	2%	15,4	21,5	2%	2%
Accommodation and food service activities	65,6	43,2	3%	2%	12,8	24,0	2%	3%
Information and communication	146,3	133,2	7%	7%	36,9	53,5	6%	6%
Financial and insurance activities	96,1	79,5	4%	4%	5,7	19,2	1%	2%
Real estate activities	26,0	29,4	1%	1%	6,6	8,0	1%	1%
Professional, scientific and technical activities	258,4	314,5	12%	15%	109,8	158,7	17%	18%
Administrative and support service activities	157,3	138,4	7%	7%	10,8	47,1	2%	5%
Education	125,9	139,9	6%	7%	25,5	49,8	4%	6%
Human health and social work activities	163,4	197,6	8%	10%	67,0	94,2	11%	11%
Arts, entertainment and recreation	138,0	147,3	6%	7%	49,2	58,8	8%	7%
Other service activities	159,3	143,9	7%	7%	46,3	55,3	7%	6%
Total	2.143,4	2.044,8	100%	100%	628,5	871,5	100%	100%

Source: Eurostat/ LFS, 2016



Table 9 Self-employed persons without personnel, by occupation, 2000-2010, numbers and shares

	Germany				Netherlands			
	Number of SE without personnel (2000) (x1000)	Number of SE without personnel (2010) (x1000)	Share sector in SE without personnel (2000) (%)	Share sector in SE without personnel (2010) (%)	Number of SE without personnel (2000) (x1000)	Number of SE without personnel (2010) (x1000)	Share sector in SE without personnel (2000) (%)	Share sector in SE without personnel (2010) (%)
Managers	328,3	300,2	19%	13%	184,2	187,2	34%	23%
Professionals	408,3	601,4	23%	27%	111,1	222,5	21%	27%
Technicians and associate professionals	382,4	545,6	22%	24%	75,9	130	14%	16%
Clerical support workers	27,7	26,3	2%	1%	9,3	14,1	2%	2%
Service and sales workers	123	196,7	7%	9%	34,8	77,5	7%	10%
Skilled agricultural, forestry and fishery workers	188,1	147,6	11%	7%	6,9	7,6	1%	1%
Craft and related trades workers	205,2	295,8	12%	13%	61,1	130,1	11%	16%
Plant and machine operators, and assemblers	50,1	42,9	3%	2%	18,6	22,8	3%	3%
Elementary occupations	26,3	68	2%	3%	14,2	18,9	3%	2%
Total	1742,4	2232,1	100%	100%	534,8	815,6	100%	100%

Source: Eurostat/ LFS, 2013



Table 10 Self-employed without personnel, top ten occupations, 1996 and 2008, Germany

1996		2008	
	%		%
1. Shopkeeper, retail	13,2	Shopkeeper, retail	9,1
2. Agriculturist	13,1	Agriculturist	7,2
3. Salesperson	4,2	Teacher	4,8
4. Catering	4,0	Visual artist	4,1
5. Financial adviser	3,5	Tax counsellor	3,6
6. Teacher	3,1	Construction worker	3,5
7. Driver	2,9	Broker, real estate agent	3,0
8. Manufacturer	2,9	Agent	3,0
9. Visual artist	2,9	Engineer	2,9
10. Broker, real estate agent	2,9	Beautician	2,8

Source: Brenke/ DIW Berlin, 2011



Table 11 Self-employed without personnel, top ten occupations, 1996 and 2008, The Netherlands

1996		2008	
	%		%
1. Head of a small poultry/ cattle farm	12,2	Head of a small poultry/ cattle farm	5,9
2. Shopkeeper, retail	7,1	Small company manager	3,3
3. Wholesaler/ personal property agent	4,9	Shopkeeper, retail	3,1
4. Head of a small market garden	3,5	Hairdresser, beautician	3,0
5. Graphic artist, designer	3,5	Building contractor carpentry (small company)	2,7
6. Head of a small arable farm	3,1	Graphic artist, designer	2,6
7. Head of a small farm (mixed)	3,0	Wholesaler/ personal property agent	2,5
8. Hairdresser, beautician	2,4	Salesperson	2,3
9. Physiotherapist, kinesiologist	2,2	Computer programmer/ systems analyst	2,0
10. Building contractor carpentry (small company)	2,1	Business organisation expert/ consultant	1,8

Source: Kösters (2009), p.8



Region – Self-employment also has a regional dimension, with marked differences between regions in entry rates and self-employment duration. These differences are found to be rather persistent over time. The diversity between regions may be explained from various regional determinants. Studies predominantly find a positive regional effect of purchasing power or the population density on self-employment, as many entrepreneurs produce for or serve a regional market – at least initially (Reynolds et al., 1994; Fritsch and Falck, 2003; Lückgen et al., 2004). Population density may also play a role through agglomeration effects (such as knowledge spill-overs and a larger provision of inputs).

Blanchflower (2000) finds that self-employed persons are less willing to move from their neighbourhoods, towns and regions than are employees, presumably because of the presence of a customer base for the self-employed along with business and personal contacts. The relation between regional unemployment and entrepreneurial activity leads to contradictory results so far. On the one hand, the relation may be positive as self-employment may function as an alternative to wage employment. On the other hand, the relation may be negative as a high regional unemployment level may be accompanied by low purchasing powers and below-average opportunities to start as a self-employed (Fritsch, 1992; Armington and Acs, 2002).

The studies of Fritsch and Falck (2003) and Lückgen et al (2004) are based on German data, the latter making use of the German Regional Entrepreneurship Monitor (REM), finding a positive regional effect of population density on self-employment. The highest shares of self-employed without personnel can be found in the city-state Berlin (11,5%) and Hamburg (8,6%) (Koch et al., 2010). From The Netherlands we know that about half of all self-employed without personnel live in the West of The Netherlands ('Randstad') and more than 60 per cent lives in urban areas (Ybema et al., 2013).

2.3 Motives

From the literature we know that individuals are attracted to self-employment because of independence, more autonomy and because of higher expected earnings relative to employment (e.g. Taylor, 1996; Dawson et al., 2009; Social-Economic Council [SER], 2010). Individuals may however also be 'pushed' into self-employment. As Kautonen et al. (2010) point out: "Involuntariness" as a motive for self-employment implies that an individual becomes self-employed even if they prefer paid employment, while at the same time they perceive the benefit from the self-employment to exceed the opportunity cost of the next best alternative in the labour market (or *unemployment*)" (p. 114). The underlying 'push' factors may arise from different sources, such as the 'unemployment push', discrimination or employers 'forcing' employees to become self-employed subcontractors.

Ybema et al (2013) show for The Netherlands that individuals choose for solo self-employment because they were 'up for a new challenge' (35%), 'always wanted to be self-employed' (34%), 'wanted autonomy in how much and when they worked' (32%) or 'did not want to work for a boss (anymore)' (22%). 'Involuntary' or 'necessity-based' motivations are not frequently mentioned. For German solo self-employed the main motives are reported to be 'be your own boss', 'earn more money' and 'new ideas' (all about 70%). Although these opportunity based reasons are frequently mentioned, German solo-self-employed also more often report 'involuntary' or 'necessity-based' motivations than Dutch respondents. For instance, more

than 50 per cent mentions ‘not to be unemployed’ and about 25 per cent mentions ‘did not find another occupation’ (Brenke, 2013).

These findings correspond to internationally comparative data from the Global Entrepreneurship Monitor (GEM), making a dichotomy between opportunity-driven and necessity-driven entrepreneurs. Improvement-driven opportunity entrepreneurs are defined as those opportunity-driven entrepreneurs who sought to either earn more money or be more independent, as opposed to maintain income. In 2014, 63 per cent of early-stage entrepreneurs are improvement-driven opportunity entrepreneurs in The Netherlands; in Germany this is 54 per cent (see Table 12). The Netherlands used to be among the countries with the lowest proportion of necessity-driven entrepreneurs, but 2014 seems to be an exception. Germany is among the higher shares of necessity-driven entrepreneurs. Whereas the motivations presented in Table 12 apply to all self-employed, there is evidence that necessity-based entrepreneurship is higher among self-employed without personnel (Van der Zwan et al., 2013).

Table 12 Necessity and Opportunity Entrepreneurship in Germany, The Netherlands and Innovation-driven economies (unweighted average)*, 2009-2014, % of TEA**

		2009	2010	2011	2012	2013	2014
Germany	Necessity-driven	31	26	19	22	19	23
	Improvement-driven opportunity	43	48	55	51	56	54
The Netherlands	Necessity-driven	10	8	9	8	8	16
	Improvement-driven opportunity	57	64	62	66	67	63
Innovation-driven economies	Necessity-driven	17	20	18	18	18	18
	Improvement-driven opportunity	56	54	57	51	54	55

* Innovation- driven economies: Australia, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Republic of Korea, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States



** Total early-stage Entrepreneurial Activity (TEA) refers to the percentage of the adult population (18-64 years of age) that is actively involved in setting up a business that they will (partly) own and/or currently own and manage a business that is less than 42 months old.

Source: GEM Global Reports 2009-2014

Opportunity-driven entrepreneurs are often found to remain in self-employment for a longer period of time than necessity-driven entrepreneurs (e.g. Block and Sandner, 2009). Additionally, it was found that necessity-driven entrepreneurs (entrepreneurs that are pushed into starting a business because they have no other options for work), have considerably lower rates of subjective well-being compared to opportunity-driven entrepreneurs (Amorós and Bosma, 2014).

Several studies point to significant differences between men and women in their motivation to become self-employed: whereas men seem to be more concerned with the offered independence and financial gain, women are more likely to say it offers a chance to work from home and are more concerned with family commitments (Boden, 1999; OECD, 2000; Dawson et al., 2009).

2.4 Working hours

Self-employed work longer hours than employees (see Table 13). On average, the self-employed worked 43 hours per week in 2015 in the EU compared with 36 hours for employees. Self-employed without personnel are in between. The absolute hours of work at the EU level correspond largely to the German hours of work. Dutch workers work substantially less hours a week among all groups, which probably has to do with the high share of part-timers in The Netherlands. When the average number of usual week hours of work part-time employees and full-time employees are presented separately, Dutch workers correspond much more to the hours worked in the EU and in Germany. In Germany and the Netherlands, the average number of usual weekly hours of work in the main job of self-employed without personnel has increased among part-timers between 2005 and 2015, while the number of hours has decreased among full-time self-employed without employees.

Besides workers who are (either full-time or part-time) engaged in wage work or self-employment, there are also workers who combine wage work and self-employment. These 'hybrid entrepreneurs' are assumed to represent a significant and increasing share of all self-employed, but little is known about their motives and behaviour (Folta et al., 2010). For instance, they may want to make an incremental transition into self-employment while retaining one's job, or maybe the second job functions as a (temporary) additional income. Self-employed without personnel for whom self-employment is the second job, work on average about 9-12 hours a week in this job.

Table 13 Average number of usual weekly hours of work in main job and second job, by professional status, in Germany, The Netherlands and Europe, 2005-2015

	Germany		Netherlands		EU 27	
	2005	2015	2005	2015	2005	2015
Hours in main job						
All employees	34,5	34,4	29,7	29,0	36,8	36,3
All self-employed persons	46,0	42,3	38,9	35,9	45,1	42,5
All self-employed without employees	41,2	36,5	33,9	32,6	42,8	40,0
Part-time employees						
Part-time employees	17,7	19,3	19,3	19,9	20,0	20,5
Part-time self-employed persons	15,7	16,4	16,8	18,3	19,0	18,2
Part-time self-employed without employees	15,2	15,8	16,1	17,7	18,7	17,9
Full-time employees						
Full-time employees	40,0	40,5	38,8	39,0	40,5	40,3
Full-time self-employed persons	51,6	48,9	52,6	48,7	49,3	47,5
Full-time self-employed without employees	49,3	46,1	50,8	47,4	48,0	46,2
Hours in second job						
All self-employed without employees	10,2	8,7	12,0	11,6	13,3	12,3

Source: Eurostat/ LFS, 2016

WSI

As presented in Table 14, a considerable share of the self-employed without personnel works at so-called ‘inconvenient hours’ or ‘unsocial hours’ (according to the nomenclature by Eurostat), especially in The Netherlands. In 2015, a large majority of self-employed without personnel worked ‘usually’ or ‘sometimes’ on Saturdays and in the evenings, about half of them worked on Sundays and 14-20 per cent of the self-employed without personnel worked at nights. This is substantially higher than for employees, but only slightly lower than the group of self-employed as a whole. In the time period 2005-2015 the share of self-employed who worked at unsocial hours has decreased in both countries, while the share of *employees* who works during unsocial hours has increased in the Netherlands.

Table 14 Share of workers working during unsocial hours, percentage 'usually' and 'sometimes', by professional status, in Germany, The Netherlands and Europe, 2006-2015

	Germany		Netherlands		EU 27	
	2006	2015	2006	2015	2006	2015
Working on Saturdays						
Employees	44,9	41,8	40,2	47,1	43,5	38,7
Self-employed persons	77,5	72,6	78,0	75,3	74,3	67,0
Self-employed without employees	74,0	67,8	76,5	72,8	73,9	65,5
Working on Sundays						
Employees	25,1	24,0	26,2	33,3	24,7	23,2
Self-employed persons	51,3	46,1	52,0	51,4	41,9	36,2
Self-employed without employees	48,9	43,3	52,7	50,3	42,7	35,9
Working at nights						
Employees	15,1	13,9	14,3	14,5	16,0	14,1
Self-employed persons	17,3	15,6	25,3	20,9	16,3	13,3
Self-employed without employees	14,6	13,6	25,2	20,3	15,3	12,5
Working in evenings						
Employees	42,8	41,3	40,6	48,0	35,9	33,4
Self-employed persons	72,5	66,9	75,8	73,0	55,0	49,3
Self-employed without employees	69,0	62,7	74,7	71,3	53,4	47,6

Source: Eurostat/ LFS, 2016

WSI

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

Since the 1970s, questions on ‘why’ the self-employment pattern has been changing and ‘who’ the new self-employed are have received relatively much attention and have been analysed extensively with both micro- and macro-level data. These studies have resulted in a number of important insights, yet there are still many gaps left in our knowledge, amongst others about transitions into and out of self-employment.

First, as Schmid (2010) puts it: “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” (p. 42). In this chapter, we examine to what extent solo self-employed differ from other groups, including employees in the flexible non-core workforce, with respect to their labour market transitions.

Second, earlier research on ‘who’ is likely to enter self-employment has particularly examined individual characteristics (Blanchflower, 2000; Taylor 2004; Fritsch et al., 2012; Simoes et al., 2013), personalities and motives to become self-employed (Dawson et al., 2009; Chlosta et al., 2010; Verheul et al., 2012). Some studies have addressed the ‘who’ question by focusing on the impact of earlier experiences on transitions into self-employment. For instance, the pre-self-employment work status (Martinez-Granado, 2002) and then particularly the transition from unemployment into self-employment has been the subject of several studies (Meager, 1992; Arai, 1997; Carrasco, 1999; Glocker and Steiner, 2007). Other 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 earlier inheritances or windfall gains (Blanchflower and 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). This chapter presents new evidence on the impact of preceding life experiences from various domains in one comprehensive approach. We aim to improve our understanding of the transition into self-employment by examining the impact of preceding work, educational, health and family experiences.

Third, except for several - predominantly US - studies (e.g. Ferber and Waldfogel 1998; Williams 2000; Bruce and Schuetze 2004), little attention has been paid to the *implications* of self-employment to one’s labour market career. This is the more remarkable, considering that governments in various countries have taken the position to promote or increase self-employment (European Commission, 2010). This chapter aims to improve our understanding of the labour market characteristics of solo self-employed and the consequences of transitions into and out of self-employment as well as the impact of self-employment experiences during the career.

Based on secondary panel data analyses, this chapter will address the following research questions:

- What is the labour market stability and mobility of solo self-employed as compared to that of other groups in the labour market?;
- How can solo self-employed be characterized in terms of earlier life experiences in various domains?;
- What are the consequences of the transition into and exit from self-employment?;
- And what are the consequences of self-employment experiences during the career?

3.1 Labour market transitions

This section 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 15 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. 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.

Table 15 Two-yearly stability and changes of solo self-employment (in %), 2000-2010

		Germany			Netherlands		
		Total	Males	Females	Total	Males	Females
Status 2 years earlier (<i>t-2</i>)							
	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
N		2746	1569	1177	651	349	302
Status 2 years later (<i>t+2</i>)							
	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
N		2528	1426	1102	581	307	274

Source: Own calculations, based on GSOEP and DLSP



Overall, the results from Table 15 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 (formal) unemployment is not an option.

The upper part of Table 16 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 individ-

uals. The lower part of the table shows a similar picture of relatively high stability among employees as compared to those in solo self-employment.

Table 16 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 (<i>t-2</i>)				
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
N	2.746	46.572	651	11.964
Status 2 years later (<i>t+2</i>)				
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
N	2.528	46.760	581	12.209

Source: Own calculations, based on GSOEP and DLSP

WSI

Table 17 further elaborates on the question whether stability and entry into self-employment differs between employees holding a permanent contract versus those holding a fixed-term temporary contract and how solo self-employed compare to those groups. The table shows that solo self-employed have a substantial higher mobility in their labour market status than wage and salary workers with a permanent contract (middle part of the table) and Dutch wage and salary workers with a fixed-term temporary contract (lower part of the table). Whereas about 60 per cent of those who were solo self-employed were also solo self-employed in the previous wave, more than 90 per cent of the employees with a permanent contract were also in wage employment in the previous wave. In Germany, solo self-employed show a similar mobility in labour market status compared to wage and salary workers with a fixed-term temporary contract.

Moreover, both German and Dutch solo self-employed markedly less often come from an unemployed or inactive status than fixed-term temporary workers do. So, while solo self-employed may more often make the transition from one labour market state into another, this is more *between jobs* than from an unemployed or inactive labour market status than is the case with wage and salary workers with a fixed-term temporary contract.

Table 17 Two-yearly stability and entry into solo self-employment/ wage employment (t-2 to t)(in %), solo self-employed and employees, 2000-2010

	Germany			Netherlands		
	Total	Males	Females	Total	Males	Females
Solo self-employed (at time t)						
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
Wage and salary worker, with permanent contract (at time t)						
Status 2 years earlier (t-2)						
Solo self-employment	0	0	0	1	1	1
Self-employed <i>with</i> personnel	0	1	0	0	0	0
Wage employment	93	95	91	96	98	95
Unemployment/ Inactivity	6	4	8	3	1	4
Wage and salary worker, with fixed-term temporary contract (at time t)						
Status 2 years earlier (t-2)						
Solo self-employment	1	1	2	1	1	2
Self-employed <i>with</i> personnel	0	1	0	1	1	0
Wage employment	61	62	59	74	78	71
Unemployment/ Inactivity	38	36	39	24	20	27

Source: Own calculations, based on GSOEP and DLSP

 WSI

In addition, Table 18 shows the number of times individuals were registered inactive or unemployed. The majority of self-employed without personnel was never in unemployment or inactive in previous waves, ranging between 74 per cent for German females and 94 per cent for Dutch males. Solo self-employed were more often inactive or unemployed than wage and salary workers in general and self-employed with personnel: between 80 and 97 per cent of wage and salary workers and between 91 and 99 per cent of self-employed with personnel were never in unemployment or inactive in previous waves. However, when a distinction is made between wage and salary workers with a permanent contract versus those with a fixed-term temporary contract, the data shows that solo self-employed were more often inactive or unemployed as compared to those with a permanent contract, but compared to wage and salary workers with a fixed-term temporary contract solo self-employed were less often inactive or unemployed.

Table 18 Number of times inactive/ unemployed by employment status (percentage), by gender, 2000-2010

Males	Germany			Netherlands		
	0 times	1 time	2+ times	0 times	1 time	2+ times
Self-employed without personnel	84	10	6	94	6	0
Wage employment	89	7	4	97	2	1
Permanent appointment	93	5	2	99	1	0
Fixed-term temporary contract	67	21	12	88	10	2
Self-employed with personnel	97	2	1	99	1	0

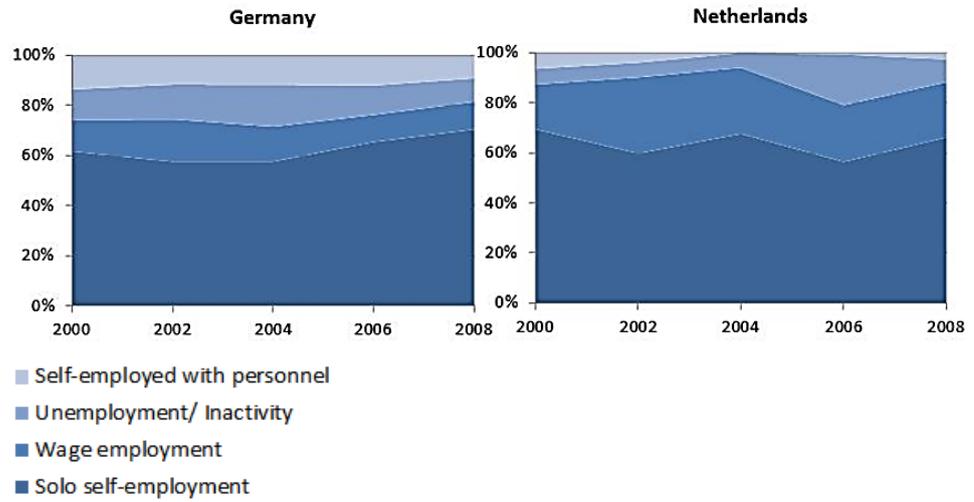
Females	Germany			Netherlands		
	0 times	1 time	2+ times	0 times	1 time	2+ times
Self-employed without personnel	74	15	11	85	9	6
Wage employment	80	12	7	93	5	2
Permanent appointment	85	10	5	95	4	1
Fixed-term temporary contract	61	24	15	82	13	5
Self-employed with personnel	91	5	4	99	0	1

Source: Own calculations, based on GSOEP and DLSP



Whereas the previous tables show the stability and possible transitions regarding solo self-employment for all waves pooled together, Figure 11 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 11 Two-yearly stability and entry into solo self-employment (in %), by wave

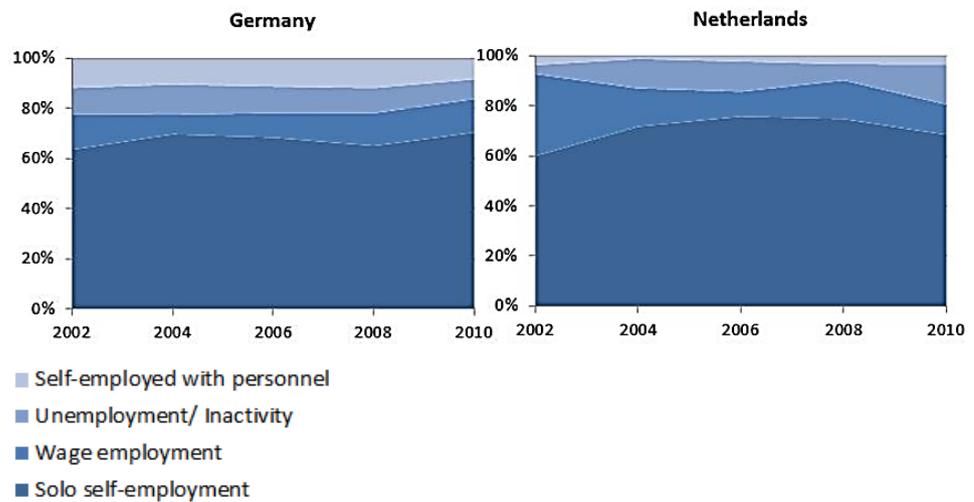


Source: Own calculations, based on GSOEP and DLSP

WSI

The graphs in Figure 12 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 12 Two-yearly stability and exit from solo self-employment (in %), by wave



Source: Own calculations, based on GSOEP and DLSP

WSI

3.2 The impact of earlier life experiences

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. To that end, we will adopt a life course perspective to the transition into solo self-employment (see for example Schippers, 2003, 2004; Newman and 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 and household). 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 and Beck-Gernsheim, 2002).

Table 19 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 15), 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 19 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**	28.828**	9.670**	8.041**
	-4.464	-6.886	-3.479	-6.074
Inactive/ Unemployed	4.127**	2.665**	2.354**	2.193**
	(0.805)	(0.503)	(0.691)	(0.519)
Educational level				
ISCED 0-2 (= reference category)	-	-	-	-
ISCED 3-4	2.386**	2.720**	1.029	1.374
	(0.638)	(0.822)	(0.286)	(0.393)
ISCED 5-6	1.945*	4.807**	1.507	2.278**
	(0.581)	-1.523	(0.390)	(0.644)
Health status				
	0.825*	0.988	0.712*	1.152
	(0.072)	(0.096)	(0.106)	(0.149)
Net household income				
	0.960	1.005	1.000	0.995
	(0.034)	(0.031)	(0.000)	(0.021)
Family				
Children under age 12	1.138	1.158	0.913	1.932*
	(0.208)	(0.224)	(0.240)	(0.518)
Partner	0.864	1.025	1.267	1.150
	(0.166)	(0.215)	(0.400)	(0.339)
Individual characteristics				
Age of respondent				
<35 years of age	0.936	1.855**	1.604	1.570
	(0.201)	(0.389)	(0.465)	(0.411)
35-49 years of age	0.990**	0.984**	0.991	0.998
	0.003	(0.004)	(0.005)	(0.005)
>50 years of age (= reference category)	-	-	-	-
Country of birth (native = reference category)				
	0.776	1.142	1.715	1.150
	(0.161)	(0.243)	(0.804)	(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 20 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 20 The transition from wage employment into solo self-employment (logistic regression analysis), 2000-2010

	Germany		Netherlands	
	Males	Females	Males	Females
Work sphere				
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)
Educational level				
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
Health status	0.937 (0.103)	0.986 (0.123)	0.831 (0.161)	1.351 (0.270)
Family				
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

WSI

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.

3.3 Consequences of self-employment

In this part 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.

3.3.1 Future employment

In section 3.1 we already showed that a substantial share of individuals who become self-employed do not stay self-employed. So a logical next question is: what are the consequences of solo self-employment experiences during the career? 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 21 shows 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 in general positively affects individual labour force participation rates: solo self-employment experiences are associated with a higher probability of being employed. 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 21 Logistic regression results, determinants of participation in 2010 (odds ratios)

	Germany				Netherlands			
	Males (1)	Males (2)	Females (3)	Females (4)	Males (5)	Males (6)	Females (7)	Females (8)
Work history								
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
N	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

WSI

The results from the even columns show that 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. However, though German females with self-employment experience have a higher probability of being *employed* in 2010 (uneven column), they have a lower probability of being in *wage employment* as compared to unemployment or inactivity (even column). So for German females solo self-employment experience seems to negatively affect the chance to be employed in the wage sector.

3.3.2 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 (Brenke, 2013). In addition, Hamilton (2000) finds that self-employed have lower earnings growth. As with paid employees, re-

search 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 and Schnabel, 2012; Konietzko, 2015).

Table 22 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 22 Net hourly income (in Euro), solo self-employed and employees, 2000-2010

Germany	10%	25%	Median	75%	90%	Mean
Current net hourly income						
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
Δ Net hourly income						
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
Current net hourly income						
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
Δ Net hourly income						
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



The findings show that in Germany solo self-employed have lower median net hourly earnings than workers in wage employment. Income is also 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 Nether-

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

lands, 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 22, 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 has 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 23 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 23 Median net hourly income (in Euro), by characteristics of solo self-employed and employees, 2000-2010

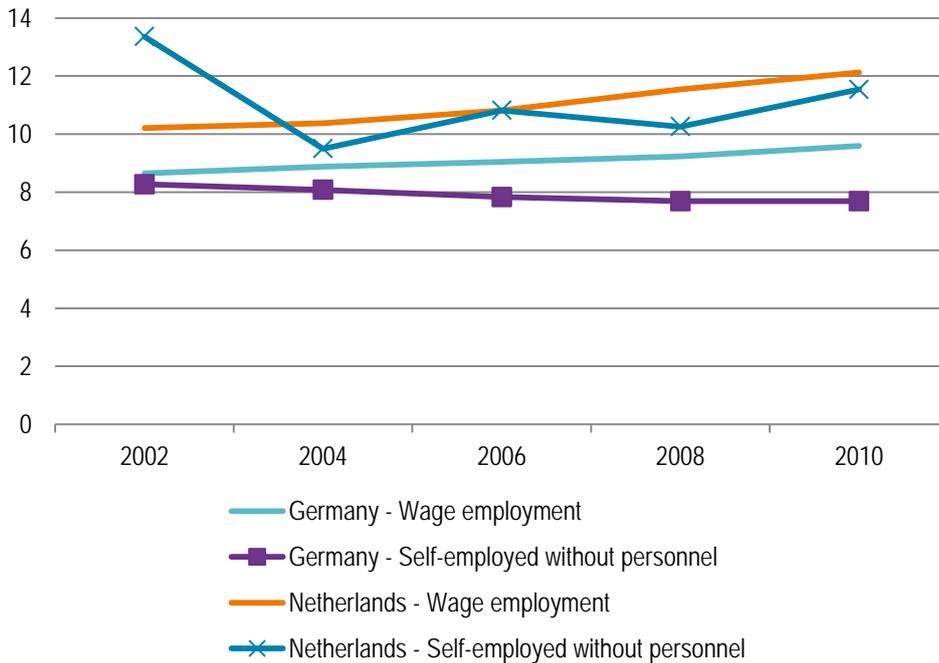
	Germany		Netherlands	
	Wage employment	Self-employed without personnel	Wage employment	Self-employed without personnel
Gender				
Males	€ 10,07	€ 8,36	€ 11,08	€ 11,75
Females	€ 7,66	€ 7,01	€ 10,38	€ 9,22
Educational attainment level				
ISCED 0-2	€ 6,67	€ 6,15	€ 8,97	€ 10,00
ISCED 3-4	€ 8,08	€ 6,92	€ 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 13 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 13 Median net hourly income (in Euro), self-employed without personnel and employees, by wave



Source: Own calculations, based on GSOEP and DLSP



Earlier we showed 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 24 Regression results, determinants of log hourly wages in 2010 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 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).

Table 24 Regression results, determinants of log hourly wages in 2010

	Germany				Netherlands			
	Males	Males	Females	Females	Males	Males	Females	Females
Work history	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Solo self-employment	-0.059*	-0.037	-0.042	-0.022	0.034	0.018	0.014	0.003
	(0.027)	(0.029)	(0.024)	(0.028)	(0.069)	(0.074)	(0.016)	(0.015)
Unemployment/inactivity	-0.150**	-0.099**	-0.103**	-0.068**	-0.158**	-0.149*	-0.121**	-0.109**
	(0.014)	(0.014)	(0.012)	(0.012)	(0.075)	(0.074)	(0.030)	(0.029)
Part-time employment	-0.007	-0.021	-0.020**	-0.021**	-0.026	-0.037	-0.028**	-0.027**
	(0.015)	(0.016)	(0.006)	(0.005)	(0.030)	(0.028)	(0.009)	(0.009)
Ln (Wage start year)	-	0.311**	-	0.275**	-	0.242**	-	0.126**
	-	(0.019)	-	(0.016)	-	(0.057)	-	(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

The results from Table 24 show that self-employment experience in general has no significant effect on earnings upon return to wage employment for neither 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. For females, past part-time employment experience is also associated with wage reductions and the table shows evidence of selection into part-time employment.

3.3.3 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, 2001b; Taylor, 2004; Benz and Frey, 2008). Self-employment

offers significant non-pecuniary benefits, such as “being your own boss” (Hamilton, 2000), ‘procedural utility’ (Benz and Frey, 2008), flexibility and skill utilization (Hundley, 2001b), 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, 2001b).

Table 25 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 enhances job satisfaction; in the Netherlands no effect was found.

Table 25 Job satisfaction^a, solo self-employed and wage employed, 2000-2010

	Germany	Netherlands
Current employment status		
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***
Past self-employment experience		
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***
Δ Job satisfaction		
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

4 Between freedom and insecurity: survey and interview results

What is the position of self-employed without personnel in terms of their motives to become self-employed, their balance between work and family life, and their earnings and job satisfaction? What are the views and behaviour of solo self-employed towards social security and pension savings? And what should or could be – according to self-employed without personnel – the role of governments and interest organisations in this story? This chapter addresses these questions based on the outcomes of the survey research and interviews with solo self-employed in Germany and the Netherlands (see section 1.4.3 for more information on the survey data and section 1.4.4 for more information on the qualitative research).

4.1 Motives to become solo self-employed

In the research literature all self-employed—including both self-employed *without* personnel and self-employed *with* personnel—are generally analysed together as one coherent group. This also applies to the literature on motives to become self-employed. In this section, we will specifically study motives to become self-employed without personnel and address the heterogeneity *within* this group.

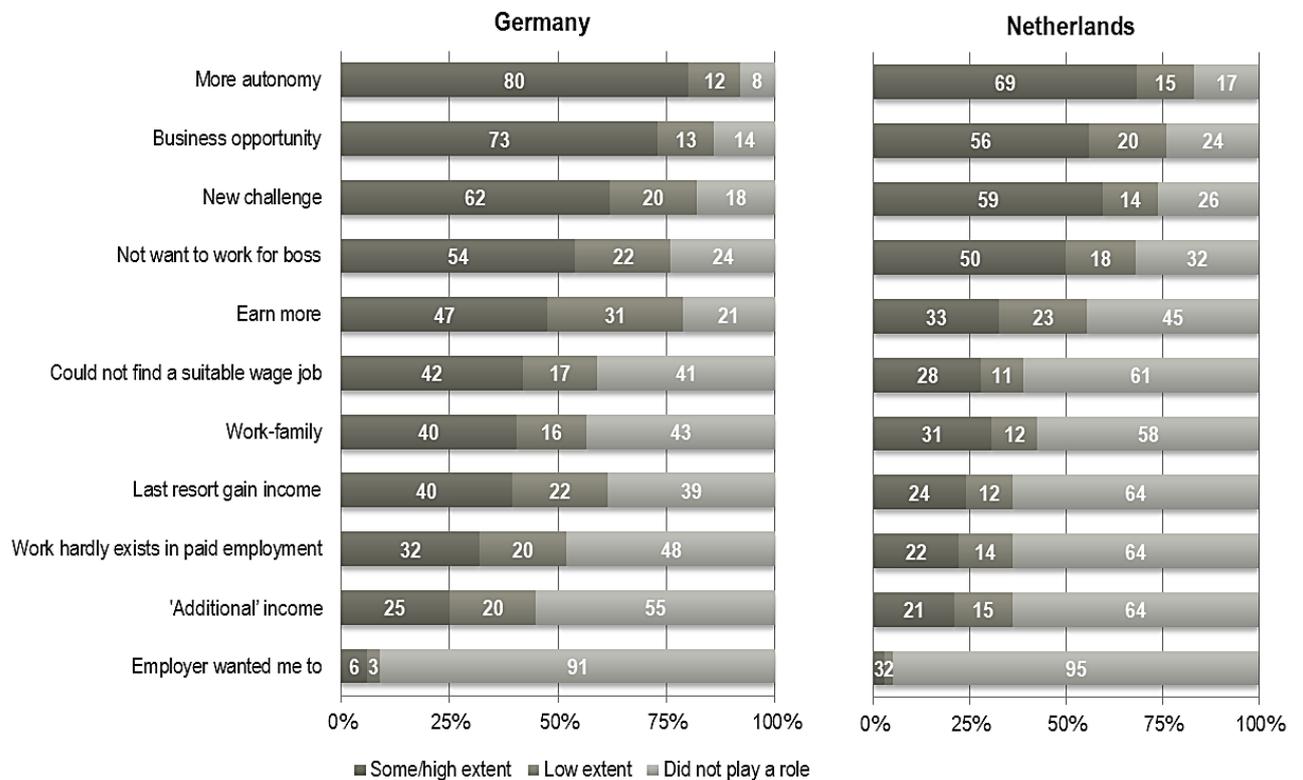
4.1.1 Pull or push?

Studies on motives to become self-employed often make a dichotomy between necessity-driven and opportunity-driven entrepreneurs (see also section 2.3). Although several self-employed may be clearly classifiable as being ‘opportunity-driven’ or ‘necessity-driven’, others may be less clearly assigned to one group, for instance because several motives may play a role at the same time or results may suffer from recall bias or reporting bias. In our survey, we intend to diminish such biases by posing singular questions on all motives, instead of asking for the ‘most important reason’ or posing it as one multiple answer question. The interviews contained elements of a life-story interview and we use these qualitative findings to examine the *influence* of various life-course elements and the *dynamics* in motives to enter or re-enter solo self-employment.

Figure 14 shows the answers of self-employed without personnel to the question: “to what extent did the following reasons or motivations play a role to make the transition into solo self-employment?” The majority of respondents in both Germany and the Netherlands mention ‘pull’ factors to make this transition: a desire for more autonomy, taking advantage of a business opportunity and looking for a new challenge are the ‘top four’ answers in both Germany and the Netherlands, with between 50 and 80 per cent of respondents indicating these reasons played a role to ‘some’ or a ‘high extent’. This is followed by higher expected earnings: 47 per cent of

German and 33 per cent of Dutch respondents indicate that such financial incentives played a role in making the transition into self-employment.

Figure 14 Motives to become solo self-employed, by country (N=1550)



Source: Survey Solo Self-employment (SSE), 2014



Nevertheless, the table also shows several noteworthy results with respect to so-called 'push' factors. To the items 'I could not find a suitable job as an employee (in paid employment)' and 'self-employment was my last resort to gain income' about 40 (!) per cent of German and about 25 per cent of Dutch self-employed without personnel reported this applied to them to 'some' or a 'high extent'. In both countries a minority of self-employed indicated their employer wanted them to work as a self-employed (six per cent in Germany and three per cent in the Netherlands).

These findings generally correspond to findings from earlier research. From the literature we know that individuals are attracted to self-employment because of independence, more autonomy and because of higher expected earnings relative to employment (e.g. Taylor, 1996; Dawson et al., 2009; SER, 2010), that individuals also may be 'pushed' into self-employment and that 'necessity-driven' entrepreneurship may be more prevalent among German than among Dutch self-employed. According to the Global Entrepreneurship Monitor (see Table 12) 16 per cent of Dutch entrepreneurs and

23 per cent of German entrepreneurs was estimated to be a ‘necessity – driven’ entrepreneur in 2014. However, based on the results of Figure 4.1, it seems that when motivations to enter self-employment are measured separately, a higher share of solo self-employed contain at least some elements of a ‘push’ into solo self-employment.

The interviews confirm that it is not always easy to determine whether an individual is opportunity-driven or necessity-driven. Several reasons often intertwine and the decision to enter solo self-employment frequently contains both elements of a ‘push’ and a ‘pull’ at the same time. During the interviews it also happened that after the ‘obvious’ motives were brought up (such as flexibility in working time and hours, autonomy, higher expected earnings), at a later stage more personal motives or earlier life events turned out to play a major role in the decision-making process. Here one can think of for instance an interviewee who at one point in the interviews tells that he actually developed a severe chronic sickness at relatively young age, which hindered him already during his studies and later made it difficult for him to hold on to a wage-and-salary job.

The qualitative research also shows that push and pull factors are dynamic and depending on experiences and expectations during one’s career their relative importance changes. The attractiveness of a job in solo self-employment may alter under the influence of for instance changes in one’s clientele, technological changes or changes in the economic climate. Changing *expectations* seem to play an important role among construction workers. In several interviews construction workers indicate that, although they at first thought they would like to do their work as a self-employed until they were 70 years old, they start to expect that their work will become physically too challenging well before reaching the statutory retirement age. In that light, some start to consider a return to wage employment, reconsider what they want to focus on in terms of tasks, think about or have started cooperating with younger solo self-employed (they generally do not consider to become self-employed *with* personnel, sometimes due to bad experiences but also because they do not want the stress and responsibility related to having someone employed), or even consider complete career switches. A narrative of a 53 year old solo self-employed in CONSTRUCTION provides some insights about his thoughts concerning the future:

“I sometimes think about a career change. Yes, I do think about it. I don’t know whether I will actually take the plunge. But, well, who doesn’t think of it? Maybe I would like to start a coffee house; I would like that. Or maybe I will go into teaching, who knows. Maybe if I will become disabled or unable to do my current work at one point. I would like to teach again if they would still want me” (Patrick, 53 years of age).

4.1.2 Involuntary versus voluntary self-employment

The involuntary or voluntary nature of being self-employed without personnel is an interesting starting point for further analyses. The hypothesis could be that on the one hand, there is the group of involuntary self-employed who are more often in favour of an increase in regulation and protection, because they feel they are the 'outlaws' of the modern, flexible labour market. On the other hand there is the group of individuals that does not want (hardly) any regulation nor protection because they feel they are well-equipped to face 'the challenge of the market'. Earnings, satisfaction, social security provisions and pension savings are all likely to be influenced by the involuntary nature of being self-employed.

Therefore, we used cluster analysis to reorganize our data into relatively homogeneous groups of individuals (Everitt et al., 2011). Departing from earlier research on involuntary self-employment we used several measures to examine the involuntary nature of being self-employed without personnel (Böheim and Muehlberger, 2006; Kautonen et al., 2009, 2010). The set of items designed to tap involuntary self-employment are summarized in Table 3.1. The analysis produced two clusters between which the variables were significantly different in the main. Table 4.1 shows one major cluster of self-employed without personnel (79% in the Netherlands and 68% in Germany) who were labelled the 'voluntary' self-employed. That is to say: this group contains self-employed without personnel for whom involuntariness does not seem to play much of a role in their reasons to become or stay self-employed. The smaller group consisting of 21 per cent in the sample in the Netherlands and 32 per cent in Germany represent the 'involuntary' self-employed. These respondents more often "could not find a suitable job as an employee", more often indicated "self-employment was my last resort to gain income" and/or had an "employer [who] wanted me to work as a self-employed", and more often agreed to the statements "I would rather like to be an employee, than being self-employed".

Who are these 'voluntary' and 'involuntary' self-employed? In Table 4.2 we present multivariate logistic regression analyses carried out to analyse self-employed without personnel in more detail. We first analysed what characteristics of self-employed without personnel are related to involuntary self-employment within the two countries (model 1 and 2). In model 3 we tested whether country differences with respect to involuntary self-employment could be linked to these structural factors of self-employed without personnel in the two countries.

The table shows that in both Germany and the Netherlands (models 1 and 2 respectively) the probability of being involuntarily self-employed rises with age (the odds ratio represents the ratio of the probability that self-employed without personnel are involuntary self-employed to the probability that they are not). Furthermore, people who indicated to be strongly hindered in their work due to chronic sickness or disability are more likely to be involuntary self-employed in both countries. In Germany it seems that particularly the low-educated self-employed are involuntarily self-employed, while in the

Netherlands the three educational attainment levels do not show significant differences. However, taking self-employed with a middle educational attainment level as the reference group, the findings show that self-employed with a middle education are more likely to be involuntarily self-employed than the higher educated in the Netherlands (analysis not shown here).

Table 26 Mean scores and standard deviations for items on involuntary self-employment, by cluster

	Germany						Netherlands					
	Cluster 1: Voluntary		Cluster 2: Involuntary		Whole sample		Cluster 1: Voluntary		Cluster 2: Involuntary		Whole sample	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Reason: I could not find a suitable job as an employee (in paid employment) ("1" = did not play a role to "4" = high extent)	1.66	0.81	3.43	0.99	2.22	1.20	1.40	0.71	3.33	1.13	1.81	1.14
Reason: Self-employment was my last resort to gain income ("1" = did not play a role to "4" = high extent)	1.65	0.78	3.41	0.91	2.21	1.16	1.32	0.64	3.26	1.12	1.73	1.10
Reason: My employer wanted me to work as a self-employed ("1" = did not play a role to "4" = high extent)	1.10	0.40	1.32	0.86	1.17	0.60	1.06	0.31	1.23	0.72	1.10	0.44
Statement: "I would rather like to be an employee, than being self-employed" ("1" = completely disagree to "5" = completely agree)	1.74	0.93	2.71	1.47	2.05	1.21	1.72	0.89	2.51	1.03	1.89	1.03
N	516		241		757		625		168		793	
Share	68%		32%		100%		79%		21%		100%	

Source: Survey Solo Self-employment (SSE), 2014



Table 27 Who are the involuntary self-employed without personnel? (logistic regression analysis)

	Model 1 - Germany		Model 2 - Netherlands		Model 3 - Total	
	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value
Age (years)	1.04**	4.06	1.03**	2.65	1.03**	4.88
Males (= reference category)						
Females	1.38	1.83	0.76	-1.39	1.04	0.32
Native (= reference category)						
Non-native	0.85	-0.45	1.28	0.49	1.02	0.08
Educational attainment level:						
ED 0-2 (= reference category)						
ED 3-4	0.40**	-3.09	0.98	-0.06	0.65*	-2.14
ED 5-6	0.38**	-3.22	0.67	-1.38	0.53**	-3.23
No chronic sickness/ disabled (= reference category)						
Slightly hindered in work	1.30	1.25	1.43	1.52	1.36*	1.98
Strongly hindered in work	2.95**	3.03	2.47*	2.38	2.71**	3.93
Years in self-employment	0.94**	-5.35	0.96**	-3.62	0.95**	-6.66
Sector of industry						
Public sector (= reference category)						
Agriculture, forestry and fishing	1.46	0.40	0.85	-0.20	1.15	0.23
Industry and construction	2.18	1.66	0.59	-1.28	1.01	0.03
Private services and trade	1.30	1.28	0.85	-0.68	1.09	0.57
Household composition:						
Single, without children (= reference category)						
Single, with children	1.27	0.65	0.76	-0.51	1.08	0.26
Couple, without children	0.74	-1.60	0.96	-0.18	0.82	-1.28
Couple, with children	0.87	-1.60	1.06	0.21	0.93	-0.40
Germany (= reference category)						
Netherlands					0.63**	-3.62
Pseudo R ²	0.08		0.04		0.06	
N	757		793		1550	

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

Source: Survey Solo Self-employment (SSE), 2014



Furthermore, Table 27 shows that in both Germany and the Netherlands being involuntarily self-employed is negatively related to the number of years in self-employment. In other words, self-employed without personnel who started their business more recently, are more often involuntarily self-employed. We also tested whether involuntary self-employment was related to whether the start-up of the business took place in relatively 'prosperous'

times or during the economic crisis. These findings (not presented here) show that the individuals who started their business before 2003 are significantly less likely to be involuntarily self-employed. The group who became self-employed in the time period 2003-2008 does not differ from the group who became self-employed between 2009 and 2014. However, from our data we cannot tell whether this is a real trend effect, or whether we are in fact observing a selection effect, as it may be the case that individuals who became involuntarily self-employed a longer time ago, in the meantime have found another (better suiting) employment status. It may also be the case that individuals get used to their situation, or reduce their cognitive dissonance.

In model 3 we included a country dummy variable for the Netherlands. This model shows that in the Netherlands self-employed are less likely to belong to the group of involuntarily self-employed. This model shows that after these structural factors are included, country differences are still present.

4.1.3 Combiners

Delmar et al (2008) argue that the reasons for wage-earning workers to engage in self-employment work (labelled 'combiners' in their study) may be different from motives from individuals who make the transition from wage work into full self-employment. In our study, 9% of Dutch respondents combine a wage-earning job with solo self-employment, where among German respondents this is only 2%. Table 28 shows several differences between 'regular' solo self-employed and 'combiners' in their attitudes towards solo self-employment.

Table 28 Attitudes towards solo self-employment, 'regular' self-employed (N=1464) and 'combiners' (N=86)

		Regular	Combiner
Functions as 'additional' income	Did not play a role	62	24
	Low extent	17	22
	Some/high extent	21	54
Could earn more as a self-employed	Did not play a role	33	45
	Low extent	27	28
	Some/high extent	41	27
Taking advantage of a business opportunity	Did not play a role	19	19
	Low extent	16	20
	Some/high extent	65	62
Was looking for a new challenge	Did not play a role	22	23
	Low extent	17	16
	Some/high extent	61	60
Intention to grow into self-employed with personnel	(Completely) disagree	69	78
	Neither agree, nor disagree	17	13
	(Completely) agree	14	9
Satisfaction with self-employment	Mean	7,6	7,4
Self-assessed attitude towards risk	Mean	6,9	6,8

Source: Survey Solo Self-employment (SSE), 2014



A first and maybe the most straightforward motivation to combine employment with a self-employment job may be to earn an extra income. Delmar et al (2008) argue that since self-employed earn less than a person with a similar background and a similar job as an employee – according to the literature -, there are reasons to doubt that extra income is an important explanation why a person would prefer a second income through self-employment over another wage earning position. Table 4.3 does not seem to support this view. A large proportion of the self-employed indicate that the income from their self-employment activities functions as an 'additional' income; only 24 per cent indicated this 'did not play a role' in their motivation to make the transition into self-employment. However, the transition was not so much made because they think they could earn *more* as a self-employed; only 27 per cent of the combiners indicated earning more played a role to some or a high extent.

Second, individuals who choose to combine self-employment with a paid job may differ from regular self-employed in their attitudes towards entrepreneurship and ambitions to engage in self-employment activities. Combiners do however not differ much in their decisions to make the transitions into self-employment from the regular self-employed when it comes to 'opportunity-driven' entrepreneurship (I was taking advantage of a business opportunity) or the desire for a 'new challenge'. Combiners, however, less often have the ambition to grow into a business with personnel than 'regular' self-employed.

A third motivation could be that individuals choose self-employment alongside a wage position to attain non-economic utility from self-employment. One of the most robust findings is that self-employed in various countries report higher job satisfaction than wage-earners (see e.g. Hundley, 2001b; Blanchflower, 2004). Individuals combining self-employment with work in a paid job might be trying to 'get the best of both worlds'. Combiners and regular self-employed without personnel do not differ significantly in their job satisfaction levels. So it may be that combiners may want to combine self-employment with work to increase non-economic utility, but they are not 'happier' than their 'regularly' self-employed colleagues.

A final motivation could be that 'combiners' are more risk averse than 'regular' self-employed, and therefore more often start their self-employment activities besides their (safe) regular job in self-employment. The findings in Table 28 do not support the hypothesis that combiners are more risk averse than regular self-employed (the difference between 6.9 and 6.8 is not significant).

Besides the motives mentioned above, there may be other reasons that play a role for individuals to combine employment with a self-employment job, but that we did not examine in our survey. Examples of these include for instance the possibility that individuals – besides being self-employed – also want to have access to information or technology an employer offers; have access to facilities in terms of medical care; or an individual who likes to have some colleagues around. Various other considerations for combining a job in paid employment with a self-employment job may thus play a role in this complex decision-making process.

4.2 Work-life balance

Family life may be of influence on the decision to become or stay self-employed. In positive terms, self-employment may give more independence and flexibility in managing working time and teenage children may help in family businesses. In negative terms, family responsibilities may increase parents' degree of risk aversion and child-rearing may be considered to be difficult to conciliate with a high-demanding self-employment job. Empirical results predominantly indicate a positive correlation between having children and being self-employed (e.g. Baumann and Brändle, 2012) and every now and then the question is posed whether self-employment may be "the new solution for balancing family and career" (Wellington, 2006).

Although research on the relation between family responsibilities and self-employment has typically focused on females only, we examined the care responsibilities of both male and female self-employed. Table 29 shows whether self-employed without personnel are involved in the day-to-day care for various family members for at least one working day a week (Monday-Friday). So this table does not provide information about the intensity of caring; female self-employed are likely to spend more days/hours than their male colleagues on day-to-day care. Nevertheless, the table does

provide information on whether self-employment forms some solution for balancing family and career for both males and females.

The results show that the majority (around three-quarter) of all self-employed without personnel is not involved in the day-to-day care for children, an invalid partner or the care for parents or grandparents. The largest group of self-employed without personnel (between 7 and 14 per cent) is involved in the care for children in the age group between 6 and 12 years, followed by the care for parents or grandparents (between 7 and 10 per cent). Double care (taking care for children and parents/grandparents) does not seem to be prevalent among self-employed without personnel (0 to 2 per cent).

Table 29 Involved in day-to-day care, by country and gender (N=1550)

	Germany		Netherlands	
	Males	Females	Males	Females
Children in the age group 0-6 years of age	5%	8%	6%	9%
Children in the age group 6-12 years of age	7%	12%	12%	14%
An invalid partner	1%	1%	3%	3%
Care for parents or grandparents	7%	9%	7%	10%
'Double' care	0%	2%	1%	2%
None	82%	75%	75%	69%

Source: Survey Solo Self-employment (SSE), 2014



There seems to be a fair share of self-employed without personnel who need to and do combine work and family life. But are family matters a reason to become solo self-employed? Or is it rather a convenience that may come with a solo self-employment job? In the survey we asked the question: to what extent did the following reasons or motivations play a role to make the transition into solo self-employment? - "I can combine work and family life better as a self-employed". 10 per cent of male self-employed and 28 per cent of female self-employed indicated this played a role "to a high extent". Table 30 shows the results of a multivariate ordered logistic regression analysis to examine what characterizes those for whom family plays a role to become self-employed without personnel. The analyses are performed for males and females separately.

In the Netherlands, those who indicated it was not or hardly possible to combine a career with family responsibilities in their previous job are more likely to make the transition into solo self-employment to be able to better combine work and family. This applies both to male and female self-employed. In Germany this effect does not seem to play a significant role. The partner having a paid job positively affects to make the transition into solo self-employment to combine work and family. When females are the

main breadwinner, they are less likely to make the transition into solo self-employment to combine work and family.

Table 30 Combining work and family (ordered logistic regression analysis)⁵

	Germany				Netherlands			
	Males		Females		Males		Females	
	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value
Combining not possible in previous job	1.17	1.94	1.11	1.05	1.54**	4.63	1.53**	3.45
Partner has paid job	1.54*	2.12	1.67*	2.00	1.44	1.68	2.04*	2.31
Main breadwinner	1.11	1.23	0.85*	-2.02	1.18	1.80	0.81*	-2.27
Children living at home	2.54**	4.10	3.29**	4.97	2.52**	4.52	3.86**	5.34
Age (years)	1.00	0.37	1.00	-0.14	0.98*	-2.43	1.03*	2.31
Native (= reference category)								
Non-native	0.27*	-2.42	1.00	0.01	0.35	-1.51	0.81	-0.37
Educational attainment level:								
ED 0-2 (= reference category)								
ED 3-4	1.14	0.40	0.82	-0.45	1.19	0.55	0.71	-0.84
ED 5-6	0.91	-0.31	0.88	-0.27	1.21	0.62	0.86	-0.41
Pseudo R ²	0.04		0.06		0.07		0.10	
N	435		322		512		281	

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

Dependent variable: To what extent did the following reasons or motivations play a role to make the transition into solo self-employment? - I can combine work and family better as a self-employed ('1' did not play a role - '4' high extent)

Source: Survey Solo Self-employment (SSE), 2014



However, from the survey data it is difficult to disentangle how self-employment and care responsibilities are interrelated over the life course. From the qualitative fieldwork the picture emerges that being self-employed is rather a *convenient* incidental circumstance, but not a *reason* to become self-employed. Among the interviewees, none of the female or the male solo self-employed mentioned reasons in the area of work-life balance as a motive to *become* solo self-employed and also when explicitly asked for it they indicate children were not a reason. A 40 year old solo self-employed in the CREATIVE INDUSTRY sketches her situation:

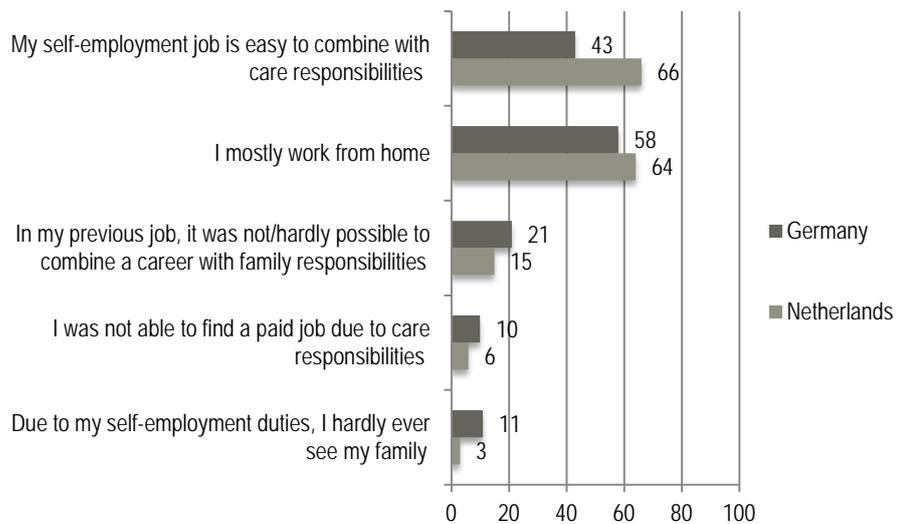
“No, having one [a child] definitely was not a reason, it just went that way. And I sometimes think: it is wonderful that it went this way. I had to bring him to day care for the first time only after nine months. It allows me to easily, flexibly do things” (Babette, 40 years).

⁵ In this model the outcome variable is treated as ordinal, as the response level has a natural ranking (did not play a role, low extent, some extent, high extent) despite our not knowing the actual distances between contiguous levels. Nonetheless, for the results of such models to be valid they must meet the criteria for proportional odds. The results of a χ^2 -test for proportional odds confirmed that the assumption of proportional odds was not violated.

Respondents did mention though that having young children might be a reason to *prolong* the self-employment situation, as it provides much needed flexibility.

Finally, we posed several statements about self-employment in relation to household matters. As shown in Figure 15, around two-third of Dutch self-employed without personnel indicate the job is easy to combine with care responsibilities and a comparable share of self-employed mostly work from home. In Germany this is around half of self-employed. About one-fifth of self-employed without personnel indicate that in their previous job, it was not or hardly possible to combine a career with family responsibilities. Finally, 10 per cent of German and 6 per cent of Dutch self-employed without personnel indicate that they were not able to find a job in wage employment due to care responsibilities. The figure also shows that a job in self-employment may sometimes come at an expense of the family: in Germany 11 per cent of self-employed report that due to their self-employment duties they hardly ever see their families, compared to 3 per cent in the Netherlands.

Figure 15 Self-employment in relation to household, by country



Source: Survey Solo Self-employment (SSE), 2014

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4.3 Pecuniary and non-pecuniary pay-off

Although it is sometimes suggested that self-employed are 'not in it for the money' (Koellinger et al., 2015), for workers financial incentives are likely to play a role in making the transition into another form of employment, including self-employment. In section 4.1 we showed that 47 per cent of German and 33 per cent of Dutch respondents indeed indicate that they made the transition into solo self-employment because they anticipated they could

earn more as a self-employed. What are the characteristics of self-employed who envisage to earn more in a self-employment job?

Table 31 Financial motive to enter self-employment (ordered logistic regression analysis)⁶

	Model 1 - Germany		Model 2 - Netherlands	
	Odds ratio	z-value	Odds ratio	z-value
Age (years)	1.01	0.12	1.15	1.49
Age-squared/1000	0.68	-0.32	0.07*	-2.00
Males (= reference category)				
Females	1.04	0.29	0.97	-0.17
Educational attainment (ISCED 0-2 = reference category):				
ISCED 3-4	0.80	-0.84	0.96	-0.19
ISCED 5-6	0.61	-1.78	0.97	-0.12
Sector of industry (Public sector = reference category)				
Agriculture, forestry and fishing	0.84	-0.22	0.62	-0.79
Industry and construction	1.85	1.59	1.45	1.45
Trade	1.92**	2.61	0.88	-0.46
Information and communication	0.85	-0.58	1.27	0.86
Professional, scientific and technical activities	1.47*	2.09	1.20	0.88
Other private sector services	1.63*	2.35	1.05	0.23
I am an expert in my field	1.13	1.31	1.27*	2.26
Work requires regular extra training	1.37**	4.50	1.25**	2.83
Weekly working hours	1.01*	2.57	1.00	-0.65
Second job	0.78	-0.53	0.66	-1.59
Years in self-employment	1.04**	4.10	1.03**	3.18
Main breadwinner	1.04	0.88	1.21**	3.47
(In)voluntary self-employment	0.80	-1.50	0.77	-1.55
Pseudo R ²	0.04		0.04	
N	757		793	

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

Dependent variable: To what extent did the following reasons or motivations play a role to make the transition into solo self-employment? - I could earn more as a self-employed ('1' did not play a role - '4' high extent)

Source: Survey Solo Self-employment (SSE), 2014



Table 31 shows the results of a multivariate ordered logistic regression analysis to examine what characterizes those for whom financial incentives play a role to become self-employed without personnel. The odds ratio rep-

⁶ In this model the outcome variable is treated as ordinal, as the response level has a natural ranking (did not play a role, low extent, some extent, high extent) despite our not knowing the actual distances between contiguous levels. Nonetheless, for the results of such models to be valid they must meet the criteria for proportional odds. The results of a χ^2 -test for proportional odds confirmed that the assumption of proportional odds was not violated.

resents the ratio of the probability that individuals had financial motives to become self-employed without personnel to the probability that they did not. The table shows that in Germany and the Netherlands the probability that financial motives play a role in the decision to become self-employed is not related to age, although the probability that financial motives played a role seems to decrease at *higher* ages in the Netherlands. Furthermore, although the literature sometimes indicates that men are more concerned with financial incentives than women (e.g. Dawson et al., 2009) our analyses do not show a difference in terms of gender.

In Germany it seems that particularly for self-employed in trade, professional, scientific and technical services and other private sector services higher expected earnings played a role to make the transition into solo self-employment. Furthermore, in both countries especially workers who indicate that they are an expert in their respective field or that their work requires regular extra training have a higher probability to report financial motives to make the transition into solo self-employment. These characteristics seem to be related to a group of self-employed that in earlier research have been referred to as 'iPros' (see for instance Rapelli, 2012; Leighton and Brown, 2013). The iPros are a group of independent professionals and "are highly skilled self-employed individuals who work for themselves but do not employ others. They range from journalists and designers to ICT specialists and consultants" (Leighton and Brown, 2013, p. 1). Although a large part of these iPros have a high educational attainment level (more than 50 per cent), the concept of iPros seems to have a stronger focus on *skills* and being an *expert* than on the level of education. These characteristics correspond to several findings in Table 31.

From the two fast-growing sectors in our qualitative research, construction and the creative sector, especially solo self-employed in 'construction' mention financial motives to become solo self-employed. For solo self-employed in the creative sector the pecuniary motive seems to play a role to a far lesser extent. In construction there seems to be a strong divide between those who became solo self-employed voluntarily and involuntarily. Those who became solo self-employed voluntarily often do so because they are a specialist in a specific field and think they can earn more in a self-employment capacity. Most of them turn out to make a good living and indicate it has worked out fine for them. Especially solo self-employed who started their business before the crisis seem to have met their expectations, which also partly has to do with the buffers they build-up during the 'golden years' before the crisis.

Finally, Table 31 shows that in both Germany and the Netherlands holding financial motives to become solo self-employed is positively related to the number of years in self-employment. In other words, self-employed without personnel who started their business a longer time ago, more often did this in the anticipation they would earn more in their self-employment job. In Germany, those who work more hours a week and in the Netherlands those who are the main breadwinner have a higher probability to become solo

self-employed because they think they can earn more in a self-employment job.

The next question is then: once self-employed, what is the pay-off from this job in self-employment? Income from self-employment is perhaps one of the most difficult components to measure and compare. Even among paid employment workers questions are likely to suffer from reporting bias and with self-employed this is aggravated by the complication what income from self-employment actually entails. We therefore choose to ask for self-assessed evaluations of the financial situation of the business and the financial situation of the household. The findings are shown in Table 32. In Germany, about half of self-employed without personnel indicate the financial situation of their business is 'moderate' and 'stayed about the same' compared to 5 years ago. At the household level, about a quarter indicates to face 'some' or a 'large' deficit and 8 per cent lives from a gross yearly household income that may be considered 'below minimum' (less than €12.500). Dutch self-employed, compared to their German colleagues, indicate more often the financial situation of their business is '(very) good'. Nevertheless, the economic crisis seems to have affected Dutch self-employed more, as a larger share says their financial situation has worsened compared to 5 years ago. Also the financial situation of the household seems to be a bit better among Dutch solo self-employed: about one-fifth indicates to face 'some' or a 'large' deficit and 4 per cent lives from a gross yearly household income that may be considered 'below minimum'.

Dutch self-employed without personnel assess their non-pecuniary payoff in terms of job satisfaction also a little higher than their German colleague self-employed: 7.84 in the Netherlands compared to 7.36 in Germany. Regression analyses (not presented) show that in both countries involuntary self-employed are significantly less satisfied. Nevertheless, the relation between the reasons to become solo self-employed and job satisfaction sometimes also seems to be a complicated one. In the qualitative fieldwork, we encountered several solo self-employed who were clearly pushed into self-employment by their previous employer or who were otherwise reluctantly solo self-employed, but at the same time gave very high ratings to their job. Typically, those were individuals who loved the content of their work, but not the fact of being self-employed and the related insecurity. On the other hand, we came across individuals who could be considered almost typical voluntary solo self-employed, who were not per se satisfied with their current situation. Nevertheless, by and large there seems to be a positive relation between voluntariness and the level of job satisfaction.

Table 32 Financial situation of the business and household income

	Germany	Netherlands
Financial situation of business		
Bad	20%	18%
Moderate	49%	41%
(Very) good	32%	41%
Financial situation compared to 5 years ago		
Worsened	23%	38%
Stayed about the same	52%	41%
Improved	25%	21%
Financial situation of household		
Large surplus	5%	11%
Some surplus	38%	43%
Get by	32%	26%
Some deficit	18%	15%
Large deficit	6%	5%
Gross yearly household income ⁷		
Less than €12.500	8%	4%
Between € 12.500 and € 26.500	23%	14%
Between € 26.500 and € 33.000	13%	13%
Between € 33.000 and € 39.500	12%	18%
Between € 39.500 and € 66.000	24%	27%
Between € 66.000 and € 78.500	9%	11%
More than € 78.500	12%	12%
Job satisfaction	7.36	7.84

Source: Survey Solo Self-employment (SSE), 2014:



Finally, Table 33 shows the results of an ordered logistic regression analysis showing the impact of clientele, control and characteristics of self-employed without personnel on the financial situation of the business. The odds ratio is formulated as a negative probability. The results show that *involuntary* self-employed and those who experience *fierce competition* are more likely to be in a bad financial situation. The *more different clients* or customers a self-employed had in the past 12 months, the more *control* over the day rate/hourly rate and the *higher educated*, the smaller the probability to be in a bad financial situation. There does not seem to be a relation between the share of turnover that came from the largest client or customer. We also tested whether it would make a difference to recode this into a dummy, with '1' is '90-100 per cent of annual turnover came from the biggest client or customer' and '0' is 'other', but this was not significant either. In the Netherlands, the results show that those who do not use *capital goods* worth at least 50.000 euros are more likely to be in a bad financial situation.

⁷ Gross yearly household income ranges were based on information about minimum and standard incomes for households in Germany and the Netherlands

Table 33 Financial situation of the business (ordered logistic regression analysis)⁸

	Model 1 - Germany		Model 2 - Netherlands	
	Odds ratio	z-value	Odds ratio	z-value
Number of clients/ customers (ordinal scale)	0.87**	-2.91	0.86**	-3.23
Share from largest client/ customer (ordinal scale)	0.99	-0.12	1.01	0.15
Self-assessed level of competition (Likert scale)	1.74**	7.83	1.89**	8.79
Control over day rate/ hourly rate (Likert scale)	0.72**	-5.15	0.70**	-5.06
Start of the business: 2009-2014 (= reference category)				
2003 - 2008	1.10	0.52	1.26	1.02
1995 - 2002	0.93	-0.36	1.15	0.60
> 1995	0.82	-0.92	1.65*	2.07
Voluntary (= reference category)				
Involuntary self-employment	1.57**	2.53	2.48**	4.74
Educational attainment level	0.79*	-2.22	0.78*	-2.28
Use of capital goods worth >€50.000: yes (= reference category)				
No	1.00	-0.01	2.55**	3.23
Sector of industry				
Public sector (= reference category)				
Agriculture, forestry and fishing	0.86	-0.19	1.85	1.02
Industry and construction	1.97	1.65	1.44	1.16
Private services and trade	0.96	-0.25	0.95	-0.27
Pseudo R ²	0.07		0.08	
N	712		764	

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

Source: Survey Solo Self-employment (SSE), 2014

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4.4 Attitudes and behaviour towards social risks

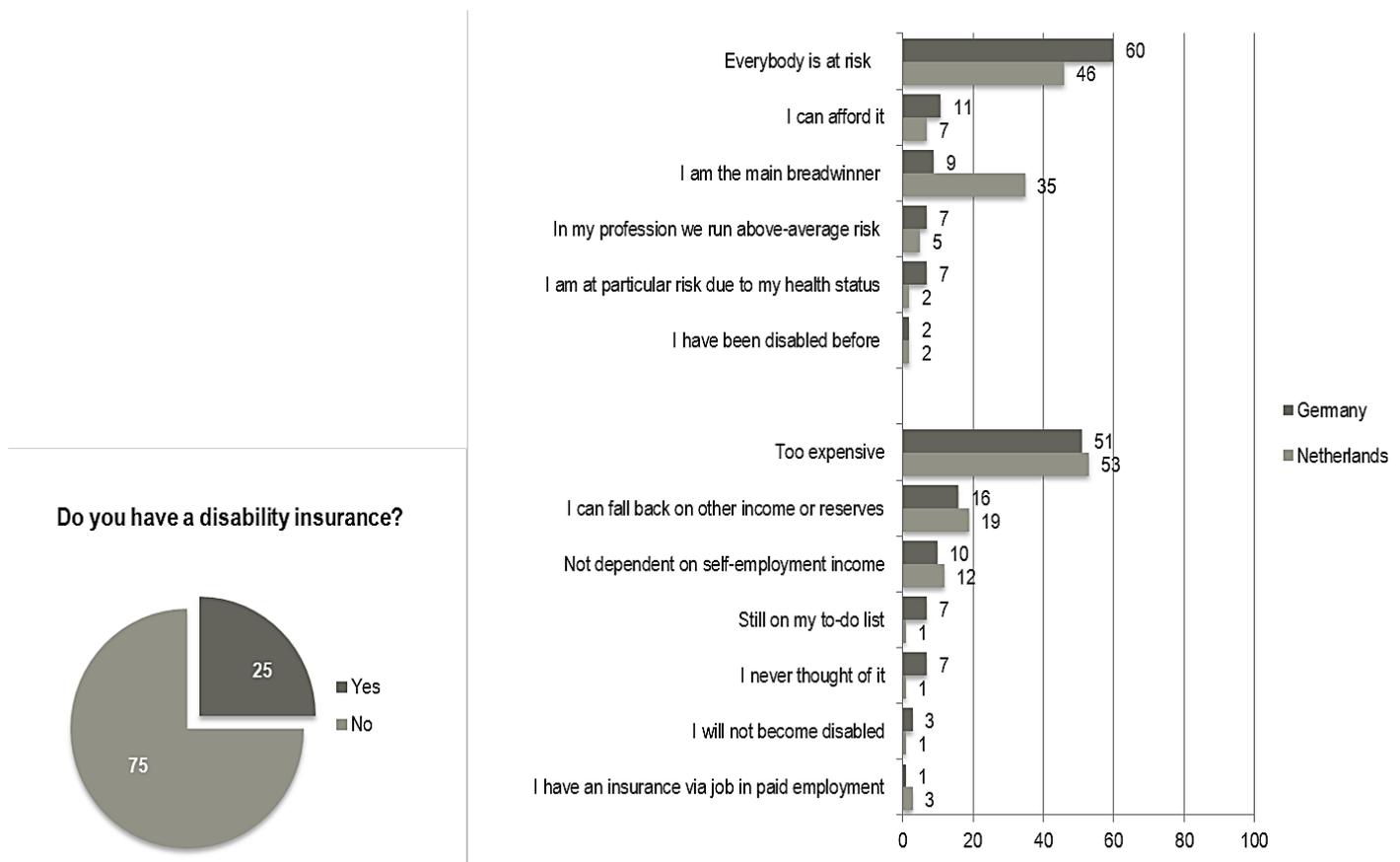
Self-employed have to deal with various social risks, including the risk of poverty in old age, the risk of disability and the risk of unemployment. On the one hand it is often claimed that *self-employed* are (and are supposed to be) predominantly self-supporting, while on the other hand it is often emphasized that they – or at least a part of them – should rather be considered to be *self-employed*, with a stronger focus on the dependent status (Westerveld, 2012). How do self-employed without personnel in Germany and the Netherlands deal with their insecure position? What insurances and measures do they apply? And how do self-employed without personnel prepare for the future?

⁸ We used an ordered logistic regression model to estimate the impact of clientele, competition and characteristics of the self-employed on the financial situation of the business. In this model the outcome variable is treated as ordinal, as the response level has a natural ranking (very good, good, moderate, bad) despite our not knowing the actual distances between contiguous levels. Nonetheless, for the results of such models to be valid they must meet the criteria for proportional odds. The results of a χ^2 -test for proportional odds confirmed that the assumption of proportional odds was not violated.

4.4.1 Dealing with social risks

About a quarter of German and Dutch self-employed without personnel report to have a disability insurance for their work as a self-employed. This means that three-quarter of self-employed without personnel report *not* to have a disability insurance for their work as a self-employed. Figure 16 shows the main reasons to opt and not to opt for a disability insurance.

Figure 16 Main reason to have (upper panel) or not to have (lower panel) a disability insurance, by country (N=1514)



Source: Survey Solo Self-employment (SSE), 2014

WSI

For German and Dutch self-employed without personnel who have a disability insurance, the main reason to have one is because they think 'everybody is at risk' (60 per cent in Germany and 46 per cent in the Netherlands). So, not necessarily because of particular risks due to health conditions or professional risks. In the Netherlands, being the main breadwinner is for 35 per cent of self-employed without personnel the main reason to have a disability insurance.

As being insured against disability may be one of the major achievements of the welfare state it may be even more interesting to know why self-employed without personnel choose not to have a disability insurance. Some decisions not to opt for disability insurance originate from a low risk

evaluation of the consequences of becoming disabled: the self-employed without personnel can fall back on other income or reserves, are not dependent on the self-employment income or have insurance via a job in paid employment. Together these reasons account for about one-third of all reasons not to engage in a disability insurance.

However, the largest part - about half of self-employed without personnel - who do not have a disability insurance state that disability insurances are 'too expensive'. This group seems to find a misfit between their perceived risk and the costs involved in covering those risks, although we cannot assess whether self-employed without personnel are counting with 'real' or 'perceived' costs for covering the risks. In other words, we cannot assess whether premiums are *in fact* too expensive to cover the risks. We do know from the Netherlands that already in 2010 the Social-Economic Council advised to take steps in order to increase affordability of disability insurances (Social-economic Council [SER], 2010). In addition, the Netherlands Authority for the Financial Markets (AFM) concluded in their 2011 report on the private market for disability insurance that insurance companies in the Netherlands have to make large improvements in their products and the advice they give, with a stronger focus attention on the *customer* (AFM, 2011). Nevertheless, it seems that still a substantial share of self-employed without personnel do not have a disability insurance because of the (high) costs involved.

The qualitative research also provides numerous examples of solo self-employed who indicate it is simply too expensive to ensure themselves. A grinding example comes from a solo self-employed man in CONSTRUCTION, who after receiving information from numerous insurance companies establishes that he cannot find a reasonable way to insure himself:

"The problem I encountered with my disability insurance at that time, was in the first place: because I work in construction. Construction comes with a high risk factor. Besides, I had a chronic sickness which made it almost impossible for me to get insurance. The risk is too high for insurance companies. So 9 out of 10 refused to insure me at that time, and number 10 comes up with such a premium that it is simply prohibitive for a starting entrepreneur. So, at that time I did not see any option to insure myself" (Steven, 28 years).

Although it is sometimes suggested that solo self-employed might not really think about insurance or do not want to insure themselves, this is not the picture that emerges from the interviews. Many solo self-employed have given it serious thoughts, but do not know how they could possibly pay the premium, especially those in their start-up phase, when they have 'conditions', or when they have to make ends meet from a low income. In addition, a representative narrative of a 40-year old solo self-employed in the CREATIVE SECTOR shows the level of stress involved:

"Insurances and everything, that is really coming between me and my sleep. From the fact that I am not insured at all, that I do not have any

disability insurance. Pensions I do not worry about as of yet, but disability really scares me. Because, how am I going to do that? If I cannot work, what will I do then... Then I receive nothing. And then what about my child? What choice will I have? Being on social security? That is a thorny problem; I really am losing sleep over this" (Phoebe, 40 years).

In the creative industries there seems to be a substantial divide between the two countries under study: whereas in the Netherlands interviewees tend to indicate that they cannot afford a disability insurance and highly worry about it, many of the German solo self-employed indicate they had the possibility to participate in sector-specific disability insurance schemes, which they almost all participated in and seem relieved about.

Nevertheless, especially when one is the main breadwinner in the household, the consequences of becoming disabled while not having a disability insurance can be substantial. From the data we selected the respondents who 'agreed' or 'completely agreed' to the statement: 'Within the household, I am the main breadwinner'. From this group, we selected solo self-employed until 65 years of age and those who work at least 32 hours a week in their self-employment job. For this subgroup we find that more individuals indicated to have a disability insurance than for the whole group (figure 4.3), but still 68 per cent of German solo self-employed and 57 per cent of Dutch solo self-employed reported not to have a disability insurance (!).

Another type of risk that is often addressed, also in the media, is the risk of poverty in old age of self-employed without personnel (see section 1.2 for more information about the pension system in the two countries). In both countries, self-employed without personnel bear to a high extent the responsibility for an adequate pension built-up. In that sense, the group of solo self-employed forms some kind of 'natural experiment' when it comes to shifting the responsibility of adequate pension savings from institutions to individuals. Whereas most employees in those countries are entitled to and participate in first and second pillar pension provisions, self-employed without personnel have to take care of (part of) these abstract and inter-temporal decisions themselves.

As shown in Table 34, in the Netherlands 72 per cent of self-employed without personnel are entitled to pension build-up via their work in paid employment (second pillar), for instance from a second job or prior wage and salary jobs. In Germany, this is with 42 per cent substantially lower. In both Germany and the Netherlands, 71 per cent of self-employed without personnel indicate to have taken additional private measures to generate more income in old age (third pillar).

Table 34 Entitled to supplementary pension, by country

	Germany	Netherlands
Additional pension from paid employment	42	72
Supplementary private pension savings	71	71

Source: Survey Solo Self-employment (SSE), 2014



Who are the self-employed without personnel who decide to engage in disability insurance or take additional measures to save for retirement? Table 35 presents the results of a multivariate analysis conducted to examine behaviour regarding disability insurance and pension savings by self-employed without personnel in more detail. In both models the odds ratio represents the ratio of the probability of self-employed applying a measure to the probability they will not. The analyses are restricted to solo self-employed under 65 years of age and working in non-agricultural industries.

The estimation results show that the financial situation of self-employed without personnel is positively related to the decision to have a disability insurance in the Netherlands as well as to additional pension savings in both countries. In other words, self-employed without personnel with comfortable financial means and a good financial situation of the business or household income are more likely to have taken additional pension savings and do more often opt for disability insurance (note that the financial situation of the business ranges from positive to negative, meaning that an odds ration below 1 is 'positive').

Individuals do not take their decisions in a vacuum. Decisions on whether or not to engage in social security provisions or pension savings are likely to affect the whole household when the self-employed has to call upon this allowance. To what extent does having a family influence the decision to participate in social security provisions or pension savings? And do individuals 'pool' income risks by holding a diversified portfolio of employment types and pension savings within households (intra-household risk pooling)? As Table 35 shows, we did not find an effect of having children living at home or partner on the probability to have opted for a disability insurance or supplementary pension savings. Also whether the partner has a job or not does not seem to affect the decision on how to deal with social risks. Finally, behavioural economists have suggested that when the *partner* is involved in the decision-making process, individuals may be more inclined to actively do something about their pension savings. The findings of Table 35 support this view, as the partner being involved in the decision-making is positively related to additional pension savings and having a disability insurance.

Furthermore, the results support the idea that individuals who live more on a day-to-day basis (orientation to time) are less likely to have taken measures for possible future demands in the form of a disability insurance or supplementary pension savings. The results do not support the hypothe-

sis that self-employed without personnel who are more risk-averse are more likely to cover these risks by opting for a disability insurance or having additional pension savings.

Table 35 Disability insurance (DI) and supplementary pension savings (PS)

	DI - Germany		DI - Netherlands		PS - Germany		PS - Netherlands	
	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value
<i>Financial situation</i>								
Financial situation of the business	0.99	0.16	0.70**	-2.78	0.83	-1.50	0.78	-1.88
Household income	1.26**	3.60	1.14	1.80	1.35**	4.86	1.36**	4.00
<i>Linked lives</i>								
Partner	0.75	-0.88	1.31	0.82	1.05	0.17	0.57	-1.81
Children living at home	0.76	-0.88	0.88	-0.65	1.14	0.60	0.68	-1.86
Partner has paid job	0.94	-0.18	0.92	-0.36	0.97	-0.10	1.48	1.61
Partner involved in decision-making	1.28*	2.37	1.21*	2.06	1.42**	3.62	1.26*	2.34
<i>Behavioural aspects</i>								
Orientation to time	0.81*	-2.36	0.81*	-2.00	0.75**	-3.50	0.67**	-3.98
Attitude towards risk	1.06	1.41	1.00	0.05	0.99	-0.16	1.00	-0.01
Financial adviser anxiety	1.19	1.46	0.87	-0.98	0.89	-1.06	0.68**	-2.75
<i>Voluntary self-employment (= reference category)</i>								
Involuntary self-employment	0.59*	-2.43	1.31	1.10	0.71	-1.74	0.78	-1.04
<i>Characteristics</i>								
Males (= reference category)								
Females	0.93	-0.37	0.64*	-2.08	0.87	-0.77	0.87	-0.65
Age (years)	0.99	-1.21	0.97**	-2.70	1.00	-0.35	1.05**	4.01
Educational attainment level:								
ED 0-2 (= reference category)								
ED 3-4	0.96	-0.12	1.21	0.56	1.40	1.02	1.68	1.75
ED 5-6	0.99	-0.01	1.40	1.02	2.56**	2.72	2.58**	3.16
Sector of industry								
Public sector (= reference category)								
Industry and construction	0.69	-0.60	3.13**	2.76	1.78	1.10	1.99	1.63
Trade	1.22	0.60	1.05	0.12	1.19	0.56	1.15	0.40
Private services	1.14	0.59	1.71	1.92	1.42	1.61	1.70	2.04
Weekly working hours	1.02*	2.56	1.03**	4.09	0.99	-1.43	1.01	1.76
Pseudo R ²	0.09		0.12		0.16		0.20	
N	699		678		699		678	

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

Source: Survey Solo Self-employment (SSE), 2014

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Finally, Table 35 also addresses the effect of 'financial adviser anxiety' on the probability for solo self-employed to have a disability insurance or sup-

plementary pension savings. 'Financial adviser anxiety' is a concept related to what medical doctors experience in their work environments, in the sense that "embarrassment, or the possibility of it, can keep individuals from seeking medical assistance, even when they are concerned about symptoms that seem serious" (Gerrans and Hershey, 2013 with reference to Shin, 2004). As Gerrans and Hershey (2013) state, adviser anxiety is a worry in itself, but also has an impact on the likelihood of seeking financial advice. We assessed financial adviser anxiety on a four-item scale, including items such as 'I find it difficult to ask a financial professional to explain something again, or use words that I can easily understand' and 'I would feel uncomfortable when a financial professional would point out some unwise financial decisions I made' (answer categories: '1' completely disagree to '5' completely agree)(German and Dutch $\alpha = .77$). For the Netherlands we found a significant negative relation between financial adviser anxiety and having supplementary pension savings. Or in other words: individuals who are more anxious to consult financial advisers less often reported to have supplementary pension savings.

A 'difficult' relationship with the financial sector is mentioned frequently by interviewees. Whereas in Germany some solo self-employed expressed a deep *mistrust* in the financial system and bankers as their representatives, from the interviews did not emerge the idea that financial adviser anxiety would play much of a role among the solo self-employed. Especially among solo self-employed in the creative sector in the Netherlands, some respondents briefly touched upon this matter though, for instance:

"What I would miss, maybe it already exists but I haven't heard from it, is more [advise] for entrepreneurs like me. Who care more about the *content*, often more active in the *creative* part, for instance artists and writers. People who look at such matters [financial products, such as disability insurance and pension build-up] differently. I look for those who are like-minded, kindred spirits. A friend of mine, who lives in Tilburg, she realised – and I thought that was a brilliant idea – that she wanted to become a financial coach, but then for people like me. Whom you need to address in another way, but whom you cannot address like that [like the current financials do], because that will not work. I said to her: well, I will be your first customer! I think that will be in great demand." (Phoebe, 40 years).

4.4.2 Perceptions of retirement income sufficiency

The limited amount of earlier research on self-employed workers in relation to pension build-up mainly concerns research in the area of *who* of the self-employed saves for their retirement (in terms of socio-economic background), *how* they save (for instance, through retirement accounts, life insurances or annuity-alike products) and how the coverage, contributions and benefits of solo self-employed, often in comparison with employees, *differs between countries* (e.g. Schulze Buschoff 2007; Choi 2009; Schulze Buschoff and Schmidt 2009; Mastrogiacomo and Alessie 2015). These

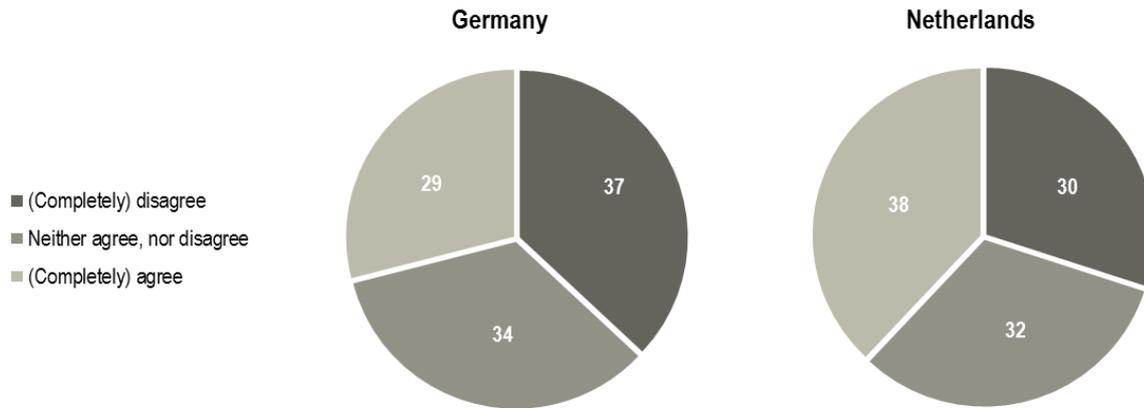
studies typically make use of legal statutes and objective measures on pension savings. In addition, several studies that seek to explain pension savings and retirement planning *control* for self-employment status (e.g. Bottazzi et al. 2006; Almenberg and Säve-Söderbergh 2011; Lusardi and Mitchell, 2011).

Little is known though about *how much* self-employed save and whether this is sufficient to live comfortable in old age. In that light it is often mentioned that 'unconventional ways' of retirement savings play an important, yet under-researched, role in retirement build-up and planning of self-employed (Mastrogiacomo and Alessie 2015). 'Unconventional' in this context refers to the fact that these types of pension savings do not go via traditional second or third pillar schemes and therefore are more difficult to link to their pension destination. Examples of such savings include (but are not limited to): saving for retirement on a savings account, the anticipated selling of a store or other real estate, the anticipated selling of professional equipment, or saving accounts that are financially managed conjointly with parents.

In this section, we therefore examine the *self-perceived* sufficiency of retirement income among solo self-employed. Do solo self-employed think their pension savings and other sources of income – whether accumulated in 'conventional' or 'unconventional' ways - are sufficient to live comfortably after retirement?

Figure 17 shows that overall, about one-third of self-employed without personnel think their pension savings and other sources of income are insufficient to live comfortably after retirement; which is substantially higher than among employees (Van Dalen et al. 2010). On the other hand, 29 per cent of German and 38 per cent of Dutch self-employed without personnel think their savings are sufficient to live comfortably after retirement.

Figure 17 Perceived sufficiency of income after retirement, by country

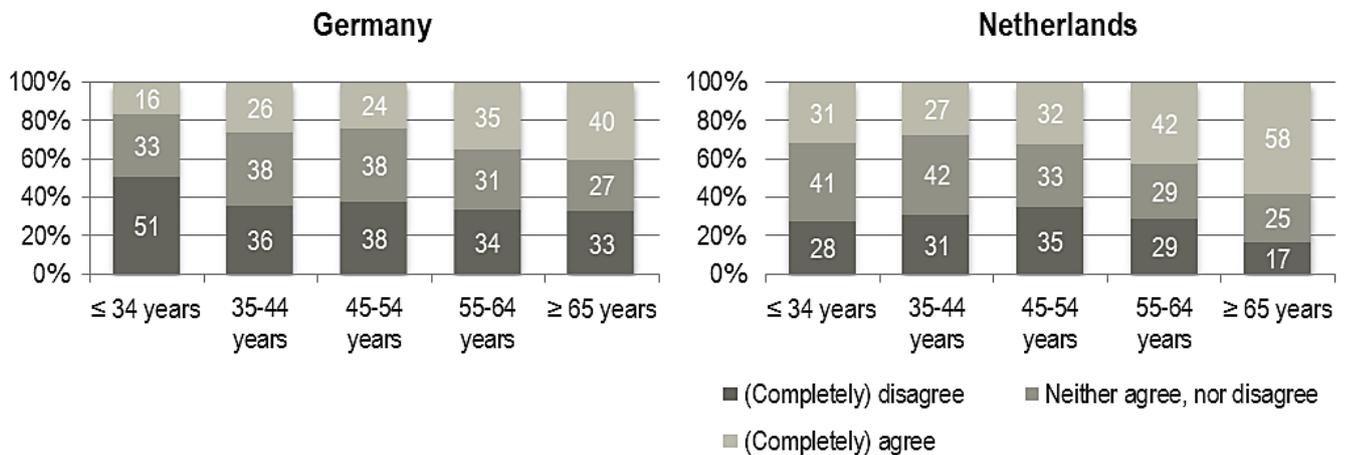


Statement: "My pension savings and other sources of income are sufficient to live comfortably after retirement"
 Source: Survey Solo Self-employment (SSE), 2014



Figure 18 shows the self-perceived sufficiency of retirement income by age group and country. In both countries, the self-assessed adequacy of income after retirement rises with age. This finding may on the one hand be the effect of accumulated savings over the life course resulting in a higher assessment of retirement income, but on the other hand could also imply that pre-retirement dynamics or 'time-left to retirement', as examined in for instance older workers' exit processes (Ekerdt and Deviney 1993), also influence retirement income decisions especially in the phase prior to retirement. Note that the figure also includes the group of self-employed without personnel of 65 years of age and older; for this group the outcomes may be considered an assessment of their current pensions. Note that one-third of this group in Germany and 17 per cent of this group in the Netherlands assess their pension as insufficient to live comfortably.

Figure 18 Perceived sufficiency of income after retirement, by country and age group



Statement: "My pension savings and other sources of income are sufficient to live comfortably after retirement"
 Source: Survey Solo Self-employment (SSE), 2014



The next step is to explain the perceived sufficiency of income after retirement. Table 36 shows the results of an ordered logistic regression analysis testing what predictor variables influence the self-assessed sufficiency of income after retirement. In the estimated models we included variables on financial means, entitlement to supplementary pension and behavioural aspects together with a set of background variables to control for socio-demographic differences. These background variables include gender, age, educational attainment level and the working hours per week. The analyses are restricted to solo self-employed under 65 years of age and working in non-agricultural industries.

The results show that in both countries, financial background variables⁹ and the entitlement to supplementary pension from both paid employment and additional measures (such as savings, (life) insurance or (other) investments to generate more income in old age) all positively affect self-assessed adequacy of income after retirement. Put differently: we find that self-assessed retirement income is strongly related to the *financial means* of solo self-employed and that the *savings history* of self-employed (through second pillar savings or taking additional measures) plays an important role in the assessment.

From the interviews the picture emerges that among German solo self-employed those who do not have the financial means to save for their evening of life have a more dismal view of the future when it comes to their pensions than Dutch solo self-employed. Several of them foresee a gloomy future, where many will live in poverty. The German interviewees also seem to have adjusted their dreams about the future to those expectations and they more regularly indicate that they will not need much in old-age. German solo self-employed in CONSTRUCTION (49 years) and the CREATIVE SECTOR (41 years and 49 years) formulate it this way:

“My realistic assessment is that my whole generation will typically not have a nice evening of life. I know, though, that I am someone who can be satisfied and happy with only a little. Satisfaction does not depend on materialistic possessions for me. I wish and hope that my evening of life will be, also when I have no materialistic insurance, still a beautiful one” (Connor, 49 years)

“That question can only be answered by suppression. From whatever point of view, so many people seem to suppress that problem. That is to say, it is a mixture of suppression on the one hand and bogeying by the insurance companies on the other. Probably the truth lies somewhere in between. But will it suffice? No, it will not, it will not.” (Liam, 41 years)

⁹ Note that the financial situation of the business range from positive to negative, meaning that an odds ration below 1 is 'positive'.

“[After retirement] I would like to have a small site somewhere where the sun tends to shine, I have some favourite places, and there I would like to read all the books I still want to read. I have many unread books at home. That is a pleasant outlook. And I found out that you do not need much money for that.” (Matthew, 49 years).

Although also many Dutch solo self-employed think they will not save enough to live comfortably after retirement, such generalist views were not expressed by any of the Dutch respondents. Some think they may have to adjust their wishes a bit to what they can afford, while others think they will find a way to save later on. All in all, the future does not look as bleak as with some German interviewees. It seems likely this has to do with the differing situation of the first pillar in the two countries: whereas in the Netherlands all solo self-employed know themselves covered by the basic public pension scheme, in Germany the majority of solo self-employed is not covered by any kind of state pension insurance (see also section 1.2.2). In terms of supplementary pension savings it attracted attention that in Germany relatively many interviewees put forward that they have or expect to inherit a house that will function one day as their retirement income.

“Well, that [house] is a very important element of my pension savings. When I would not have that, I would be seized by panic” (Liam, 41 years)

In the Netherlands on the other hand, relatively many solo self-employed indicated to have a working history in paid employment, which has - from an international perspective – relatively high second pillar coverage in the Netherlands (see section 1.2.2).

Besides financial means and supplementary pension rights, several studies show that (too) many individuals without defined benefit plans save (far) too little for their future (see for instance Thaler and Benartzi 2004). This is considered to be related to several behavioural mechanisms, including “cognitive and perceptual distortions that lead people to overweigh the present relative to the future” (Ratner et al. 2008, p. 389). This is also related to what is called ‘myopic behaviour’ in the social sciences. In this analyses, we therefore also considered four behavioural aspects that are assumed to stimulate or hamper perceived retirement income sufficiency: perceived financial knowledge, retirement goal clarity, retirement planning activity levels and an individual’s orientation to time.

First, we considered whether one’s self-reported level of financial knowledge affects the self-assessed sufficiency of retirement income. *Employees* with higher levels of financial literacy have consistently been shown to save and plan more than employees with lower knowledge levels (Van Rooij et al. 2011; Van Dalen et al. 2010). Although perceived financial knowledge may lead to subjective biases (that is, individuals may think they know more than they actually do), studies have shown that scores on perceptual knowledge indicators are significantly positively correlated with scores on objective financial knowledge measures (Hershey et al. 2007).

One's self-reported level of financial knowledge was assessed from a three-item scale taken from earlier research (e.g. Jacobs-Lawson and Hershey 2005; Hershey et al. 2007). This construct includes items such as 'I know a lot about financial planning' (answer categories: '1' completely disagree to '5' completely agree)(German $\alpha = .74$; Dutch $\alpha = .71$). The estimation results show that perceived financial knowledge is positively related to self-assessed sufficiency of income after retirement among solo self-employed as well.

Second, we examined whether retirement goal clarity influences self-assessed retirement income. Earlier research has pointed towards the importance of the development of clear and meaningful financial goals as they play a critical role in the retirement planning process (Stawski et al, 2007). We assessed retirement goal clarity on a three-item scale, including items such as 'I set specific goals for how much will need to be saved for retirement' and 'I have a clear vision of how life will be in retirement' (answer categories: '1' completely disagree to '5' completely agree)(German $\alpha = .70$; Dutch $\alpha = .72$). This behavioural dimension with respect to retirement goal clarity is related to the 'concrete versus abstract' principle and the tendency of individuals to overweigh the present relative to the future (O'Donoghue and Rabin 1999; Lynch and Zauberman 2006). It has been suggested that changing the cognitive representations of inter-temporal decisions could alleviate this bias (Ratner et al. 2008). In line with this, we find that solo self-employed with clearer retirement goals are more likely to positively assess their perceived retirement income sufficiency. This finding may implicate that it could be conducive to solo self-employed to work on the invention of more advanced forms of financial services to solo self-employed, such as in the area of retirement goal clarity. Earlier research in this area is limited, but relevant tools to support individuals in their decision-making are likely to gain importance; especially if the responsibility of adequate pension savings shifts further from institutions to individuals in Western countries. In that light, the United States may provide interesting initiatives in terms of 'smart support' (see e.g. Albright et al, 2000; Ross et al., 2010).

Table 36 Self-assessed retirement income sufficiency (ordered logistic regression analysis¹⁰)

	Germany		Netherlands	
	Odds ratio	z-value	Odds ratio	z-value
<i>Financial background</i>				
Financial situation of the business	0.64**	-3.55	0.65**	-3.59
Household income	2.10**	6.78	1.39**	3.28
<i>Supplementary pension rights</i>				
From paid employment	1.62**	2.83	1.61**	2.81
Partner pension	1.10	0.50	1.05	0.31
Additional measures	2.35**	4.68	2.26**	4.40
<i>Behavioural aspects</i>				
Perceived financial knowledge	1.54**	3.36	1.33*	2.11
Retirement goal clarity	1.40**	3.01	1.48**	3.38
Retirement planning activity level	1.14	1.39	0.89	-1.31
Orientation to time	0.79**	-3.09	0.80**	-2.64
<i>Voluntary self-employment (= reference category)</i>				
Involuntary self-employment	0.70*	-1.98	0.66*	-2.09
<i>Characteristics</i>				
Gender (Male = reference category)				
Female	0.85	-0.93	0.79	-1.34
Age (years)	1.01	1.00	1.02*	2.02
Educational attainment level:				
ED 0-2 (= reference category)				
ED 3-4	0.63	-1.45	0.98	-0.08
ED 5-6	0.49*	-2.15	0.93	-0.30
Sector of industry				
Public sector (= reference category)				
Industry and construction	0.66	-0.85	1.22	0.57
Trade	0.78	-0.87	1.56	1.53
Private services	0.67	-1.87	1.10	0.42
Weekly working hours	0.99	-1.24	0.98**	-3.46
Pseudo R ²	0.26		0.17	
N	710		695	

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

Source: Survey Solo Self-employment (SSE), 2014



Thirdly, retirement planning activity levels are being considered (see e.g. Hershey et al, 2007). Financial planning activities include several actions,

¹⁰ In this model the outcome variable is treated as ordinal, as the response level has a natural ranking ((completely) disagree to (completely) agree) despite our not knowing the actual distances between contiguous levels. Nonetheless, for the results of such models to be valid they must meet the criteria for proportional odds. The results of a χ^2 -test for proportional odds confirmed that the assumption of proportional odds was not violated.

such as meeting with a financial adviser and whether calculations have been made to estimate how much money should be saved for an adequate retirement income. Retirement planning activity level was also assessed on a three-item scale, including items such as 'Calculations have been made to estimate how much money I need to save to retire comfortably' (German $\alpha = .80$; Dutch $\alpha = .82$). We would have expected that higher levels of retirement planning activity levels would be positively related to one's self-assessed sufficiency of income after retirement, but we did not find any effect of this kind. Although the outcome that individuals with higher retirement planning activity levels do not have a higher self-assessed sufficiency of income after retirement at first sight may seem at odds, it could also implicate that 'calculations' and advice from financial experts comes at a rather abstract level and is not being 'internalised' into meaningful prospects and relevant actions.

Finally, we considered whether one's orientation to time affects the perceived sufficiency of retirement income, which was operationalized by the respondent's answer to the statement 'I pretty much live on a day-to-day basis (answer categories: '1' completely disagree to '5' completely agree). Earlier studies have shown that a short-term time orientation negatively affects retirement planning and saving. In this study an individual's time orientation is indicated by whether people live on a day-to-day basis. In both countries, we found that individuals living more in the 'here and now' reported a lower self-assessed sufficiency of income after retirement.

Overall, these outcomes on the behavioural level seem to indicate that individuals with a more concrete and internally motivated vision of their retirement goals are inclined to plan and save more.

Finally, it is noteworthy that *involuntary* solo self-employed typically assess their own expected retirement income sufficiency to be lower than those who made the transition into solo self-employment voluntarily. Although our analyses do not include objective measures and involuntary self-employed may still *de facto* face similar retirement incomes once they retire, involuntary solo self-employed thus do more often think that their pension savings and other sources of income will be insufficient to live comfortably after retirement.

4.5 The role of governments and interest organisations

Policy makers and social scientists typically assume that self-employed without personnel want to be autonomous actors and the self-employed "are portrayed as workers who embody an individualized type of risk management" (Dekker, 2010, p. 766). However, in the previous section we already came across various barriers that solo self-employed encountered in their dealings with social risks and earlier research has shown that at least some groups of self-employed without personnel may be not as reluctant towards collective risk strategies as one might expect from this 'autonomous actor' (Dekker, 2010). Who – according to self-employed without

personnel - should be responsible for social security provisions? And what is the position of solo self-employed with respect to trade union membership and specific organisations for self-employed without personnel?

4.5.1 Responsibility

Who – according to self-employed without personnel - should be responsible for the coverage of various types of social risks? In our survey research, we presented self-employed without personnel with several statements concerning the financial responsibility for covering social risks. These statements were normative in tone and are presented in Figure 19. The findings show that in both Germany and the Netherlands, a majority of self-employed without personnel agrees to the statement “It is inherent to a self-employment job that individuals bear the responsibility to bridge unemployment spells”; only 13 per cent of self-employed without personnel disagrees with this statement. This corresponds to the findings from Dekker (2010): based on findings from his qualitative study among 40 self-employed workers in the Netherlands, Dekker (2010) concludes that self-employed workers seem to have no desire for collective strategies in relation to unemployment risk.

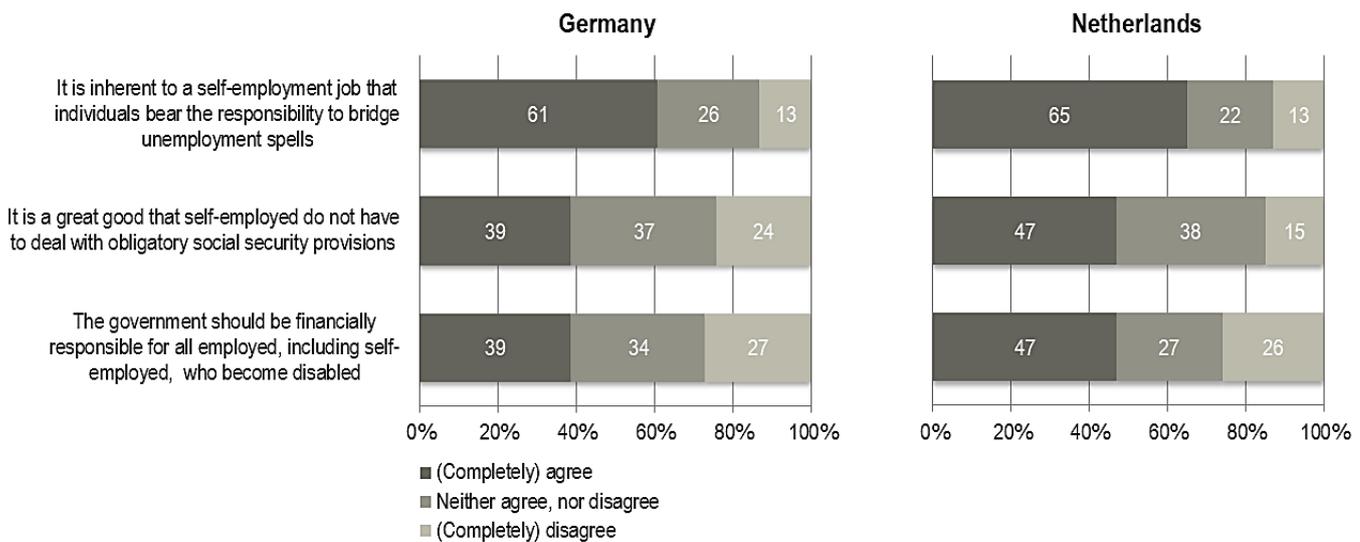
However, there is a clear divide in opinions when it comes to the statements “the government should be financially responsible for all employed, including self-employed, who become disabled” and “it is a great good that self-employed do not have to deal with *obligatory* social security provisions”. If self-employed without personnel would respond along the lines of being ‘autonomous actors’, they would typically disagree with the first and agree with the latter. Nevertheless, there is still a substantial group of self-employed without personnel who give an opposite answer. Note that in the Netherlands almost half of the respondents ‘agree’ or ‘completely agree’ to the statement that the government should be financially responsible for all employed, including self-employed, who become disabled; a quarter of respondents ‘disagrees’ or ‘completely disagrees’. The proposition that self-employed without personnel are individualists who do not want obligatory regulations or organized collective risk strategies thus seems to be only partially true.

This division in views on who should be responsible also emerges from the interviews with solo self-employed. Especially in the area of insurance against partial and full disability though, a substantial part of the solo self-employed is of the opinion that this should not be covered via the private insurance market. Although some solo self-employed reject almost any obligatory government interventions, the case of disability seems to take a different place even to them sometimes. Such ideas are reflected by the comments of a solo self-employed in CONSTRUCTION:

“Accidents happen. When you are not insured, you automatically fall back on society, one way or the other. And it can already happen when you’re only 21 years old. You get into an accident and you lose two legs; then you

will not work much anymore when you are a road worker. So I think it would be to the benefit of society as a whole to make people insure themselves, or actually make it a national insurance [volksverzekering], in which everybody participates and we can take care of those who strike so unlucky together. ... I think a government should take care of this; I am not a proponent of a free market for something that is so national insurance-like [volksverzekeringachtig]" (Brian, 57 years)

Figure 19 Financial responsibility regarding social risks, by country

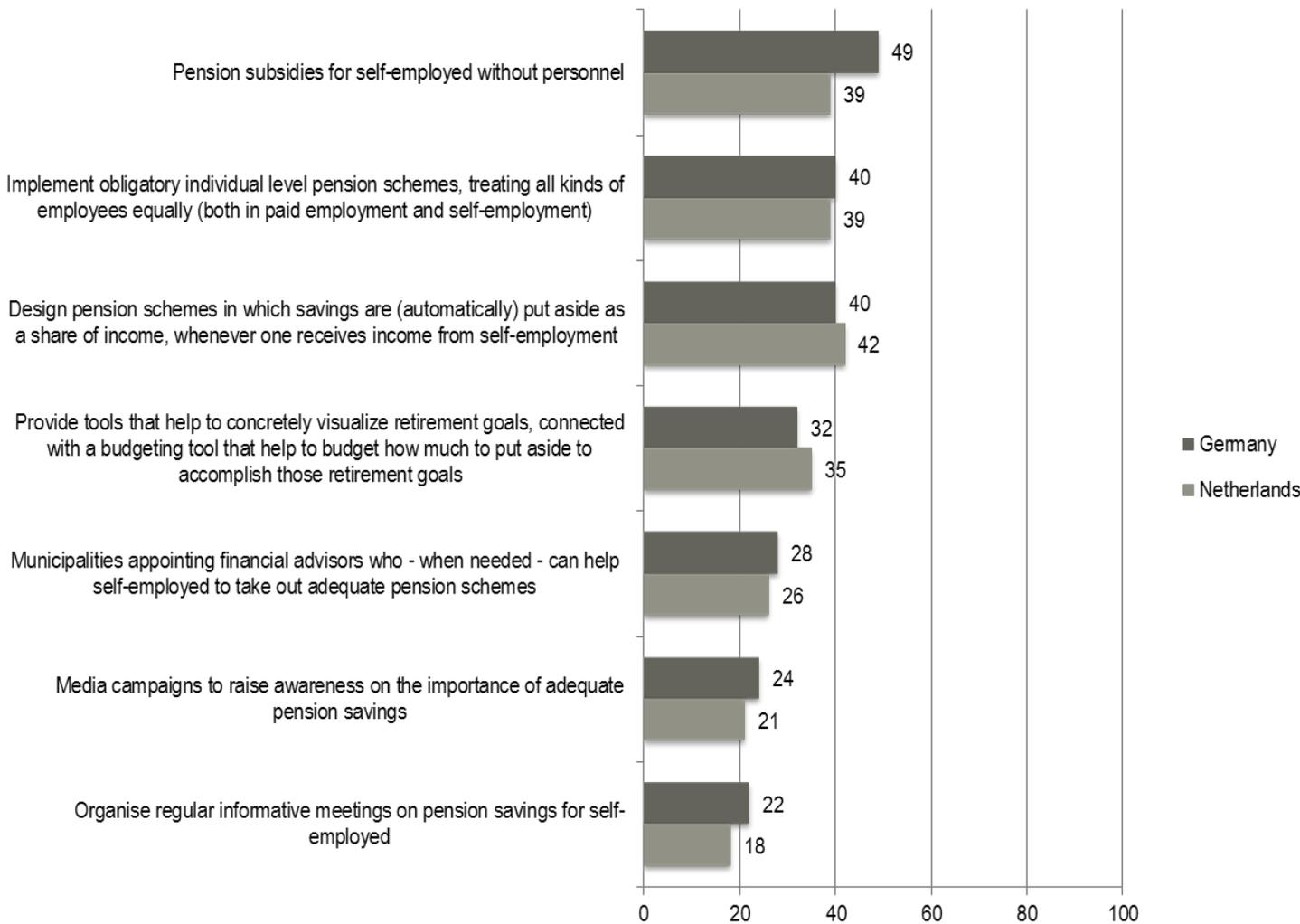


Source: Survey Solo Self-employment (SSE), 2014



Now what about the risk of poverty in old-age? Do solo self-employed think that measures that help the *individual* in their savings would be effective ways to generate higher pension savings among self-employed? Or do solo self-employed think rather obligatory regulations or collective risk strategies would be effective ways to stimulate pension savings? In the past, scientists and policy makers have been suggesting various measures to stimulate pension savings among individuals as well as among self-employed in particular. With these earlier suggestions in mind, we presented solo self-employed with a list of possible measures that might stimulate pension savings among solo self-employed. We asked solo self-employed whether they considered these measures potentially effective or ineffective in simulating pension savings. Their answers are summarized in Figure 20.

Figure 20 Possible measures to stimulate pension savings among self-employed without personnel, % (very) effective, by country



Source: Survey Solo Self-employment (SSE), 2014



Maybe the most striking result is that none of the suggested measures can count on a majority of self-employed who consider this measure to be ‘very effective’ or ‘effective’. Perhaps this is (again) a reflection of the highly diversified population of self-employed without personnel.

The upper part of Figure 20 shows that almost half of German and 39 per cent of Dutch self-employed without personnel think pension subsidies would be effective. Furthermore, about 40 per cent of respondents consider pension schemes in which savings are automatically put aside as a share of income whenever one receives income from self-employment to be effective, as well as the implementation of obligatory individual level pension schemes. About one-third of respondents think it could be effective to provide tools that help to concretely visualize retirement goals, connected to a budgeting tool that helps to budget how much money has to be put aside to accomplish these retirement goals. These ‘top’ results seem to reflect the variance of self-employed without personnel: on the one hand solo self-

employed who consider 'individual' solutions to be effective, and others who think 'public' measures are more effective.

At the other end of the spectrum the results show that less than a quarter of self-employed without personnel think it would be effective to organize regular informative meetings on pension savings or to have media campaigns to raise awareness on the importance of adequate pension savings. These findings seem to implicate that there is enough awareness and information about adequate pension savings available to self-employed without personnel, but it is more at the practical level this still need to be worked through.

These mixed findings correspond to the findings in the interviews. Some solo self-employed strongly believe self-employed should be responsible for their own pension build-up and they should be able to make their own decisions on when and how to contribute to their pension savings. Sometimes the additional argument is put forward that contributions are put aside in such a way that they do not interfere with business purposes. This may play a role for instance during the start-up phase but also at later stages when investments in their self-employment job are deemed necessary. This regularly contrasts with their views on how to deal with *disability* insurance. Whereas they may think disability should be arranged more like a national insurance, they underline this is very different from the situation regarding pensions:

“I think it very different with respect to pensions. I think that choice should be up to the self-employed or even more with 'workers' in general. Because whether someone wants to spend money now and after retirement has difficulties to hold body and soul together, or he wants to save now and put all the money aside and says 'I buy now not even an ice-cream' and wants to have plenty of dough after retirement, that's his call. The time you have to live afterwards is much shorter anyway then the risk you run in the event of disability at the age of 20 or 30 years, and besides, it involves a *choice*. ” (Brian, 57 years).

Others think there is no other way than making 'everything' a public or collective matter. These interviewees frequently indicate that they cannot afford the pension premiums. Often they already indicate themselves that they cannot keep prices up to a level where they can afford to put aside premiums. Reasonable pricing is something that many, especially starting, solo self-employed seem to have difficulties with.

It may therefore not come as a surprise that also a substantial minority calls for more collective agreements including self-employed without personnel. In the Netherlands, a quarter of self-employed without personnel 'agrees' or 'completely agrees' to the statement there should be more collective agreements that include self-employed without personnel; in Germany this is 15 per cent. Table 37 provides more information of whom of the solo self-

employed would be in favour of more collective agreements that include self-employed without personnel.

Table 37 Preference for more collective agreements that include self-employed without personnel, (ordered logistic regression analysis¹¹)

	Model 1 - Germany		Model 2 - Netherlands	
	Odds ratio	z-value	Odds ratio	z-value
<i>Labour market characteristics</i>				
Years in solo self-employment	1.02*	2.37	1.00	-0.54
Voluntary self-employment (= reference category)				
Involuntary self-employment	2.23**	4.73	1.58*	2.50
<i>Association membership</i>				
Trade union	2.01*	2.32	1.16	0.63
Specific organisation for self-employed	1.22	0.78	0.57*	-2.51
<i>Individual characteristics</i>				
Age (years)	0.98**	-2.92	1.00	-0.59
Educational attainment level:				
ED 0-2 (= reference category)				
ED 3-4	1.64	1.81	0.90	-0.48
ED 5-6	1.25	0.80	0.63*	-2.17
<i>Characteristics of the business</i>				
Sector of industry				
Public sector (= reference category)				
Industry and construction	0.49	-1.77	1.88*	2.12
Trade	0.46**	-2.91	0.89	-0.45
Private services	0.72	-1.90	0.85	-0.90
Different clients/customers (> 50 clients/ customers = reference category)				
< 10 clients/ customers	2.01**	3.73	1.00	0.01
10-49 clients/ customers	1.59*	3.41	1.10	0.54
Self-assessed level of competition	1.27**	3.86	1.24**	3.00
Financial situation of the business	1.43**	3.86	1.49**	4.71
Pseudo R ²	0.05		0.05	
N	751		782	

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

Source: Survey Solo Self-employment (SSE), 2014



¹¹ In this model the outcome variable is treated as ordinal, as the response level has a natural ranking ((completely) disagree to (completely) agree) despite our not knowing the actual distances between contiguous levels. Nonetheless, for the results of such models to be valid they must meet the criteria for proportional odds. The results of a χ^2 -test for proportional odds confirmed that the assumption of proportional odds was not violated.

4.5.2 Attitudes and behaviour towards interest organisations

In Germany and the Netherlands, overall trade union density was around 18 per cent in 2013 (OECD, 2015). Although unions have been increasingly including non-standard workers (part-time employed, temporary employed and solo self-employed) in their representational domain, non-standard workers are still substantially less often organised in unions (e.g. Pernicka, 2005; Vandaele and Leschke, 2010). For various reasons it has been assumed that non-standard workers would be less interested in union membership, but 'recent studies cast serious doubts on claims of attitudinal reluctance among non-standard workers to join unions' (Vandaele and Leschke, 2010, p. 16).

In our study, 5 per cent of German respondents and 8 per cent of Dutch respondents reported to be a member of a trade union (see Table 4.13), For the Netherlands this is comparable to the trade union density among temporary workers (9 per cent in 2008)(Vandaele and Leschke, 2010). Table 38 shows that the majority of solo self-employed do not consider to become a member of a trade union in the near future; a mere 2 per cent in Germany and 3 per cent in the Netherlands consider trade union membership. A larger share of solo self-employed is interested in organizations specific for self-employed without personnel: 8 per cent of German and 10 per cent of Dutch solo self-employed are a member of such organizations, and another 8 and 10 per cent *consider* membership.

Table 38 Membership of trade unions and other associations

	Member	Consider	Will not consider
Germany			
Trade union	5%	2%	93%
Specific organisation for self-employed without personnel	8%	8%	84%
Netherlands			
Trade union	8%	3%	89%
Specific organisation for self-employed without personnel	10%	11%	79%

Source: Survey Solo Self-employment (SSE), 2014

WSI

How can the group of union members be characterised as compared to non-union members and members from organizations specific for self-employed without personnel? To shed some light on the factors that may play a role in union membership and membership of specific organizations for solo self-employed we analysed the survey data for members and non-members on different aspects. The results are shown in Table 4.14. In both models the odds ratio represents the ratio of the probability of self-employed being a member to the probability they are not.

First, membership of trade unions or specific organizations for solo self-employed is likely to be affected by the course of one's career. Experiences of job insecurity or the perceived likelihood of instability may for instance be related to trade union membership. Table 39 seems to support this view, as the results show that self-employed workers who 'agree' or 'completely agree' to the statement "My work history mainly consists of fixed-term temporary jobs" in both countries have a higher probability to join a trade union. Besides, it is sometimes suggested that "some workers may have gained experience of collective organization during previous employment (on a standard contract basis) and are likely to be more predisposed to a collective orientation than others among whom union membership was less commonplace" (Vandaele and Leschke, 2010, p.17, with reference to MacKenzie, 2010). The results do not show a relationship between preceding wage and salary employment and the probability of being a trade union member. For Germany, the findings show that solo self-employed who were wage and salary workers before are *less* likely to be a member of specific organizations for self-employed. We did not find a relation between voluntary or involuntary self-employment and membership of a trade union or specific organizations for solo self-employed.

Second, networks could either positively or negatively affect membership of various organisations. The results show that self-employed who 'agree' or 'completely agree' to the statement "Cooperation with colleague-self-employed without personnel is important in my type of work" are more likely to be a member of a specific organisations for self-employed.

Third, individual characteristics such as gender, age and education have been suggested to influence membership. For instance, studies tend to find that women in countries like Germany and the Netherlands are less inclined to join trade unions (Visser, 2006; Schnabel and Wagner, 2007). However, studies also have found that 'gender-gaps' may disappear after controlling for other factors such as atypical employment contracts (Schnabel, 2013). The findings in Table 39 correspond to this latter finding and indicate that female solo self-employed in the Netherlands and Germany are as (un)likely as men to be trade union members, as well as members of specific organisations for solo self-employed. The age of respondents may also affect membership. For instance, it has been suggested that the young have a more individualistic orientation towards work (Vandaele and Leschke, 2010) and that workers may develop negative experiences over time resulting in a stronger perceived need for trade unions. Whatever the underlying mechanism, our findings support the hypothesis that trade union membership is higher among the older solo self-employed, but does not affect membership of specific organisations for self-employed. Although one might hypothesize that highly educated solo self-employed have other necessities and interests and therefore differ in the likelihood to join a union or specific organisation for self-employed, we find no relationship between educational level and membership.

Table 39 Explaining membership of trade unions (TU) and specific organisations for self-employed (SO) (logistic regression analysis)

	TU - Germany		TU - Netherlands		SO - Germany		SO - Netherlands	
	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value	Odds ratio	z-value
<i>Labour market characteristics</i>								
Years in solo self-employment	0.98	-0.82	0.96*	-2.22	1.00	0.29	1.02	0.91
Work history mainly consists of fixed-term temporary jobs	1.29*	2.03	1.38**	2.64	1.09	0.77	0.92	-0.63
Pre self-employment situation: Wage and salary worker	1.22	0.53	1.08	0.27	0.53*	-2.14	1.21	0.65
Voluntary self-employment (= reference category)								
Involuntary self-employment	0.91	-0.24	1.03	0.08	0.82	-0.53	1.34	0.83
<i>Network</i>								
Business network	0.97	-0.18	1.07	0.38	1.14	0.81	1.26	1.46
Cooperation with colleague solo self-employed	1.08	0.48	1.07	0.51	1.31*	2.07	1.49**	2.93
<i>Individual characteristics</i>								
Males (= reference category)								
Females	1.33	0.74	0.88	-0.42	1.57	1.40	0.65	-1.51
Age (years)	1.04*	2.06	1.04*	2.38	1.02	1.54	0.98	-1.76
Educational attainment level:								
ED 0-2 (= reference category)								
ED 3-4	1.39	0.41	0.97	-0.06	0.74	-0.59	0.81	-0.49
ED 5-6	1.87	0.78	1.43	0.71	0.67	-0.75	0.71	-0.77
<i>Characteristics of the business environment</i>								
Sector of industry								
Public sector (= reference category)								
Industry and construction	5.82	1.26	1.84	0.80	2.52	0.62	2.08	1.03
Trade	0.20	-1.61	0.88	-0.14	0.43	-0.99	1.57	0.60
Private services	0.38*	-2.40	0.70	-0.99	0.98	-0.07	1.31	0.76
Different clients/customers (> 50 clients/ customers = reference category)								
< 10 clients/ customers	2.72*	1.98	0.80	-0.58	0.66	-1.17	1.35	0.79
10-49 clients/ customers	1.18	0.29	0.82	-0.51	0.47	-1.94	1.74	1.48
Self-assessed level of competition	1.31	1.50	1.10	0.69	1.27	1.50	0.86	-1.14
Pseudo R ²	0.10		0.07		0.07		0.08	
N	751		782		751		782	

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

Source: Survey Solo Self-employment (SSE), 2014



Finally, characteristics of the business environment may influence membership of different organisations. The sector of industry may for instance affect the need for, attitudes towards and availability of relevant trade union sections or specific organisations. We find that solo self-employed in private services are less likely to be members of a trade union in Germany.

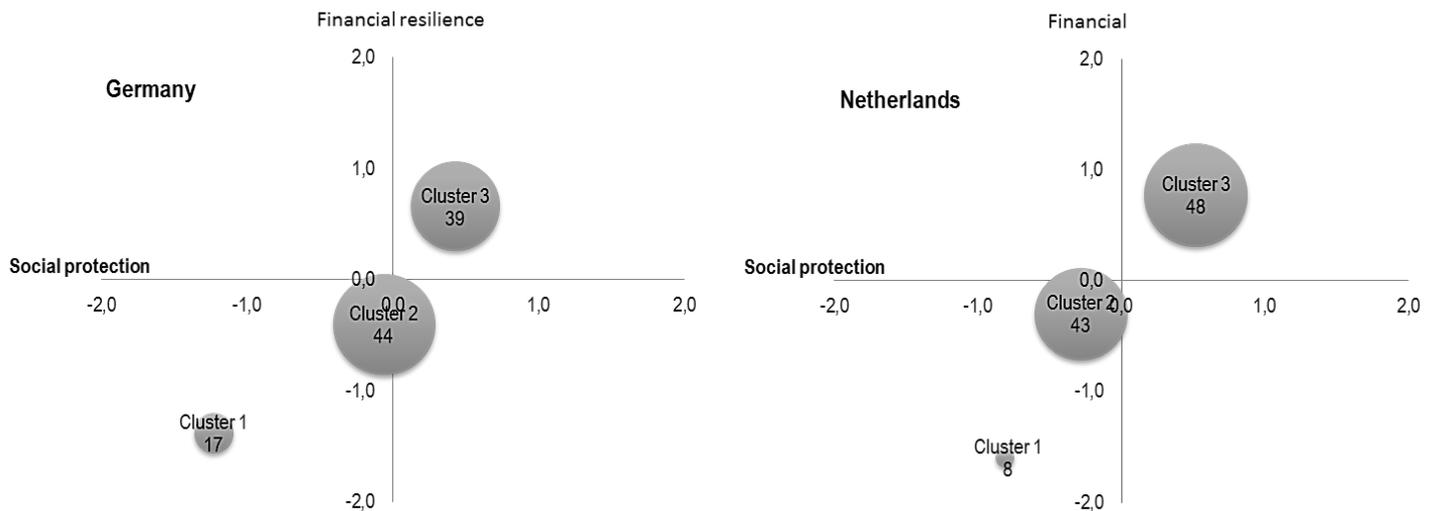
4.6 Connecting the dots: professionals, pragmatics and the precarious

Is the group of self-employed without personnel an issue for social policy? As outlined in the previous sections, the group behind the term self-employed without personnel is highly varied. Westerveld (2012) argues with respect to self-employed without personnel that “some belong under the heading ‘precarious’ while others definitely do not”. But to what extent can self-employed without personnel be considered ‘precarious’? To examine this precariousness of self-employed in more detail, a cluster analysis was run on German and Dutch self-employed without personnel. Several measures were used, departing from earlier research on typologies of own account workers in Canada (D’Amours and Crespo, 2004) and the United States (Stone, 2006). We viewed precariousness as a combination of low financial resilience and little social protection. To get to a typology on self-sufficiency versus precariousness a cluster analysis was performed. A hierarchical cluster analysis, using Ward’s method and the squared Euclidean distance, produced three clusters. We chose Ward’s method because it minimizes the variation in each cluster and is considered to be the most robust method, performing well under a range of circumstances (see e.g. Aldenderfer and Blashfield, 1984; Overall, 1993).

Financial resilience of self-employed without employees was measured by three items: their total gross yearly household income adjusted to the household composition, whether respondents had financial means to bridge a period without work and respondents were asked to assess the current financial situation of their household on a five-point scale (ranging from “1” large surplus to “5” large deficit). By using household income, financial resilience thus not automatically refers to resilience resulting from economic activity, but rather to resilience of the individual or the household, even when this sometimes means that solo self-employed for instance rely on their partner. Social protection was operationalized by asking whether self-employed have a disability insurance for their work as a self-employed without employees, whether they are entitled to supplementary pension from additional measures (e.g. savings, (life) insurance or (other) investments to generate more income in old age) and their assessment of the statement ‘my pension savings and other sources of income are sufficient to live comfortably after retirement’ (five-point Likert scale ranging from “1” completely disagree to “5” completely agree).

Figure 21 shows the results from this cluster analysis graphically and shows that the analysis produced three clusters. Percentages and means (with standard deviations in parentheses) for various characteristics of respondents are presented in Table 40.

Figure 21 Cluster analysis of solo self-employed in Germany and the Netherlands



Source: Survey Solo Self-employment (SSE), 2014



Cluster 1 comprises the group which can be regarded rather 'precariously' self-employed without personnel. Respondents in this cluster have a mean yearly household income which is well below the standard income, on average have the financial means to bridge a period of less than a month without work and the financial situation of the household is evaluated as having 'a deficit'. Respondents in this cluster less often than other clusters have disability insurances and tend to lack supplementary pension provisions. Solo self-employed in this cluster generally think their pension savings and other sources of income will not be sufficient to live comfortably after retirement. Cluster 2 is in all respects the 'in-between' category. Cluster 3 at the other end of the range comprises the group of 'self-sufficient' self-employed without personnel. Respondents in this cluster have a mean yearly household income which goes in the direction of twice the standard income, they have the financial means to bridge on average a period of about half a year without work and the financial situation of the household is self-assessed as having 'a surplus'. More than 80% of them has supplementary pension provisions and they generally think their pension savings and other sources of income are sufficient to live comfortably after retirement.

Table 40 Percentages and means (with standard deviations in parentheses) for various characteristics of respondents, by cluster

	Cluster 1 (n=190)	Cluster 2 (n=661)	Cluster 3 (n=663)
Financial position			
Gross yearly household income	1.97 (0.73)	2.98 (1.24)	5.33 (1.08)
Financial means to bridge period without work	1.40 (0.74)	3.28 (1.89)	4.52 (1.36)
Current financial situation of the household	2.09 (0.87)	3.15 (0.86)	3.79 (0.86)
Social security			
Disability insurance	0.11 (0.31)	0.21 (0.41)	0.34 (0.47)
Supplementary pension	0.29 (0.46)	0.57 (0.50)	0.83 (0.37)
Self-assessed adequacy of income after retirement	1.65 (0.78)	2.84 (1.03)	3.40 (1.00)
Labour market characteristics			
Job satisfaction	6.56 (2.08)	7.51 (1.68)	8.02 (1.50)
(In)voluntary self-employment	0.46 (0.50)	0.29 (0.45)	0.18 (0.38)
Demographic variables			
Age (years)	49.43 (9.75)	52.27 (10.47)	53.20 (10.24)
Percentage males	54.74	57.64	67.57
Educational attainment level:			
ISCED 0-2	15.79	12.56	6.64
ISCED 3-4	48.95	43.12	38.76
ISCED 5-6	35.26	44.33	54.60
Married/ with partner	56.84	68.68	84.16
Partner employed	35.26	51.29	63.20
Sector of industry			
Industry and construction	7.93	5.67	5.74
Trade	18.52	14.80	10.40
Private services	53.46	57.79	68.79
Public sector services	6.35	12.28	9.63
Arts, entertainment and recreation	13.76	9.45	5.43

Source: Survey Solo Self-employment (SSE), 2014



Notice from Table 40 that these clusters seem to be related to the level of job satisfaction and involuntary self-employment. A similar picture emerges from our qualitative research: there seems to be a *'precarious'* group, with on average low financial resilience, low coverage of social risks and who have relatively low levels of job satisfaction. Their interviews regularly *'breathe'* the atmosphere of people who *'feel trapped'*. The second group seems to comprise more of a group of *'pragmatics'*: some entered solo self-employment predominantly via push-factors whereas other were pulled into solo self-employment, but either way they take across the feeling that they can make a living out of it and they intend to make the best of it. Although sometimes maybe more for the non-pecuniary than for the pecuniary pay-

off, they enjoy or have learned to enjoy their solo self-employed situation and found a way to 'get by'. Finally, there seems to be a group of '*professionals*', who is confident and optimistic about the own achievements and expects a good future.

5 Conclusions, implications and discussion

5.1 Introduction

Recent decades show an increase in the number and share of solo self-employed in many European countries (Eurostat, 2016). While self-employment has long been associated with occupations in agriculture (e.g. farmers) and trade (e.g. shopkeepers), a growing share of the 'new self-employed' are active in sectors like services and construction. They tend to be own-account workers without personnel acting in occupations with low capital requirements. Traditionally, self-employed have been treated as 'insiders' on the labour market, fitting the category of independent entrepreneurs who voluntarily seek to gain higher utility from income, autonomy, flexibility and other working conditions attributed to a job in self-employment. However, the group of solo self-employed is increasingly associated with what has been called 'involuntary', 'dependent' and even 'precarious' self-employment (Stone, 2006; Schulze Buschoff and Schmidt, 2009; Kautonen et al., 2010; Westerveld, 2012). Contrary to the traditional view of the independent entrepreneur, this branch of literature emphasizes the heterogeneity among the solo self-employed, with a special focus on the group of the more 'vulnerable' self-employed, often operating at the blurring boundaries between being an employee and employee-like self-employment. Although in various countries a further increase in the share of self-employed is being advocated, there is only limited empirical knowledge on how the group of especially 'new solo self-employed' is faring.

This WSI Study examined developments in self-employment over time and explored and explained the position of solo self-employed in Germany and the Netherlands. To that end, a multi-method approach was adopted, i.e. research was conducted in the form of desk research, analyses of existing statistical data, survey research and interviews with self-employed without personnel. Comparative methods were used for analyses in Germany and the Netherlands. Labour Force Survey (LFS) statistics were examined, panel data was being analysed for the period 2000-2010, survey research was conducted in 2014 and interviews were held in 2015-2016. In this chapter, we will summarize the results of the chapters in this WSI Study (5.2). Then we will discuss the scientific and societal relevance of the results (5.3). In the final section, we will put forward suggestions for future research (5.4).

5.2 Summary of the results

How has the number and the share of self-employment been evolving in Europe, and more in particular in the two countries of our study? How can the solo self-employed be characterized in terms of labour market characteristics? And to what extent have these characteristics been changing over time? Chapter 2 takes an initial step towards the examination of *character-*

istics and changes over time in Dutch and German solo self-employment. This chapter is based on a literature review in combination with analyses of Labour Force Survey statistics and other secondary data sources covering mostly developments in the period between 2000 and 2015.

As shown in this chapter, the rise in the share of self-employed is a rather new phenomenon from a historical perspective. At the turn of the nineteenth century, self-employment was much more common than it is today and could especially be found among farmers, tradesmen, craftspeople and freelance professionals. Throughout the twentieth century, dependent work increased significantly and went hand in hand with technical change favouring capital-intensive, large-scale production, the rise of the 'Fordist model' and a change in industrial organization in most countries (OECD, 2000; Supiot, 2001). Since the 1970s, the long-term historical decline in self-employment as a proportion of total employment has slowed in most Western economies and in some countries even reversed, although the timing of the "renaissance" of self-employment differed between countries (OECD, 2000; Fairly and Meyer, 2000; Meager, 2007). The transition from a continuously declining self-employment rate during the twentieth century into a rising self-employment rate at the end of that century is also characteristic for The Netherlands and Germany. The increase in solo self-employment has been attributed to a mixture of underlying mechanisms, including technological developments, a changing industrial organization (e.g. more flexibility, out-sourcing, lean production), demographic changes and developments in the institutional environment (Meager, 1992; Torrini, 2005; European Commission, 2010; Van Es and Van Vuuren, 2011). In our research we focus on the relatively large and supposedly increasing group of self-employed *without* personnel.

The results on how the group of self-employed without personnel has developed in Germany and the Netherlands shows that growth in solo self-employment has been particularly marked in the Netherlands - this country belongs to the countries with the largest increase in the number of solo self-employed over the last decade. Germany on the other hand also showed an increase, but at a much more moderate pace and recently this number even started to decline. The results furthermore shows that growth in those countries has been relatively strong among older workers, the higher educated and in specific industries and sectors (such as various services and construction). In addition, growth in Germany has been relatively strong among women and non-natives, which is not the case in the Netherlands. In a cross-national perspective, the findings show that in Germany solo self-employed are relatively often non-native, highly educated and originate from necessity-driven start-ups. In the Netherlands, self-employed are relatively often improvement-driven opportunity entrepreneurs and for relatively many their job in self-employment comes as a 'second job'.

The findings with respect to working hours show that self-employed without personnel for whom self-employment is the second job, work on average about 9-12 hours a week in this job. Overall, self-employed work longer hours than employees and a considerable share of self-employed without personnel work at so-called 'unsocial hours', especially in The Netherlands.

Between 2005 and 2015, in both countries the average number of usual weekly hours of work in the main job of self-employed without personnel has increased among part-timers, while the number of hours has decreased among full-time self-employed without employees. The share of self-employed who worked at unsocial hours has decreased in both countries, while the share of *employees* who works during unsocial hours has increased in the Netherlands.

Whereas Chapter 2 focuses on changes in solo self-employment and in characteristics of solo self-employed over time at the aggregate level, Chapter 3 analyses *dynamics* in solo self-employment as well as *consequences* to German and Dutch solo self-employed based on individual-level panel data. For this chapter we used panel data from the German Socio-Economic Panel (GSOEP) and the Dutch Labour Supply Panel (DLSP), covering the period 2000 to 2010, to address questions such as: What is the labour market *stability* and *mobility* of solo self-employed as compared to other groups in the labour market? How can solo self-employed be characterized in terms of *earlier life experiences* in various domains? And what are the *consequences* of the transition into and exit from self-employment as well as the consequences of self-employment *experiences* during the career?

Regarding *dynamics*, the results show that compared to wage and salary workers with a permanent contract the solo self-employed show a relatively high labour market mobility, though their mobility is comparable to the mobility of wage and salary workers with a fixed-term temporary contract. Moreover, the mobility of solo self-employed is more often *between jobs* than from an unemployed or inactive labour market status. Solo self-employed were less often inactive or unemployed in the past than employees holding a fixed-term temporary contract.

In *absolute* terms, the inflow from individuals who used to work in wage employment is higher than the inflow from self-employed with personnel and unemployed or inactive individuals in the Netherlands. However, the *probability* to enter solo self-employment is higher for those who used to be self-employed with personnel or who used to be inactive or unemployed than for wage and salary workers. The transition into solo self-employment seems to be made by relatively well educated individuals and those in relatively good self-assessed health, although earlier research is divided on these topics. With respect to family background it was found that Dutch females with children under age 12 have a higher probability to enter solo self-employment.

The results furthermore show that wage and salary workers with a more flexible connection to the labour market are more likely to make the transition from wage employment into solo self-employment. Especially women with a fixed-term temporary contract are more likely to switch to solo self-employment. In Germany, employees in smaller part-time jobs have a higher probability to enter solo self-employment. Also the number of pre-self-employment job changes - while being an employee - increases the

probability to make the transition into solo self-employment. Higher educated females have a higher probability to enter solo self-employment and for Dutch mothers of young children solo self-employment seems to offer an opportunity to reconcile work and family life.

In terms of *consequences*, the results show that 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. Moreover, individuals who previously worked as wage and salary workers generally seem to earn *more* in their solo self-employment job. In non-pecuniary terms, we find an increase in the level of job satisfaction among solo self-employed coming from a wage and salary job. These results may indicate that at the individual level the *transition* into solo self-employment seems to pay – either in pecuniary or non-pecuniary ways.

The results furthermore show that solo self-employment *experience* positively affects individual labour force participation. However, solo self-employment experience seems to negatively affect the probability to be employed in the wage sector. Our findings do not provide information on *why* solo self-employment experiences negatively affect the probability of being employed in the wage sector. The results may for instance support the notion that a history in self-employment functions as a negative signal on the job market (see for instance Koellinger et al. 2015). It may also indicate that solo self-employed cannot (for instance because their work does not or hardly exists as a paid employment job) or do not wish to be employed in the wage sector. Previous self-employment experience in general seems to have no effect on future wage sector earnings. Overall, the results seem to indicate that if solo self-employment *experience* has any detrimental consequences, it is most likely to be in the area of the probability of (re)turning to the wage sector.

The findings from these panel data analyses can be seen as an indication that the transition into and out of solo self-employment ‘on average’ seems to pay and self-employment experience has no significant effect on future wage sector earnings. However, the findings also show high labour market mobility, substantial polarization and for some individuals the transition into solo self-employment is accompanied by a substantial decrease of net hourly income. In addition, transitions into and out of self-employment could be selective, for instance when the ones who go back into employment are predominantly ‘high ability workers’. This nuance implicates that although our findings may not point in the direction of negative consequences of solo self-employment to one’s career *in general*, it is also important to recognize possible negative consequences to subgroups. Chapter 4 therefore zooms in on the micro-level and presents the findings from our survey research and qualitative interviews among solo self-employed, which provides more information on the *mechanisms* that underlie those macro-level developments and addresses the *heterogeneity* within the group of solo self-employed.

Chapter 4 examines self-employed' attitudes and behaviour towards work and social security, the role of governments and interest organisations. Within the research project, a questionnaire was developed to provide more insight into the attitudes and behaviour of self-employed without personnel. This questionnaire was designed to collect information on motives to become self-employed, pecuniary and non-pecuniary pay-off of the self-employment job, attitudes and behaviours towards work, work-family balance, views and behaviour towards risk, social security provisions and pensions, and views towards (possible) government policies. The total number of completed questionnaires was N=757 in Germany and N=793 in the Netherlands, amounting to a total of N=1,550. In addition, qualitative interviews were held with solo self-employed in two fast growing sectors (construction and creative industries) to get to a holistic understanding of specific decision-making processes that participants are involved in.

The results in chapter 4 firstly address the position of self-employed without personnel in terms of their motives to become self-employed and their pay-off in terms of earnings and job satisfaction. Although several self-employed may be clearly classifiable as being 'opportunity-driven' or 'necessity-driven', others may be less clearly assigned to one group, for instance because several motives may play a role at the same time or results may suffer from recall bias or reporting bias. Therefore, we posed singular questions on all motives - instead of asking for the 'most important reason' or posing it as one multiple answer question. The majority of respondents in both Germany and the Netherlands mention 'pull' factors to make this transition into solo self-employment: a desire for more autonomy, taking advantage of a business opportunity and looking for a new challenge are the 'top' answers, followed by higher expected earnings. However, the results with respect to so-called 'push' factors are also noteworthy. About 40 per cent of German and 25 per cent of Dutch solo self-employed reported that they could not find a suitable job as an employee (in paid employment) or that self-employment was their last resort to gain income. In both countries a minority of self-employed indicated their employer wanted them to work as a self-employed (six per cent in Germany and three per cent in the Netherlands). These findings indicate that for a substantial group the decision to become solo self-employed contained at least some elements of a 'push' into solo self-employment.

To gain more insight into characteristics of the voluntary and involuntary self-employed, we reorganized our survey data into relatively homogeneous groups of individuals and analysed what characteristics of self-employed without personnel are related to involuntary self-employment. The results show that the probability of being involuntarily self-employed rises with age and that people who indicated to be strongly hindered in their work due to chronic sickness or disability are also more likely to be involuntarily self-employed in both countries. In Germany it seems that particularly the low-educated self-employed are involuntarily self-employed, while for the Netherlands the findings show that self-employed with a middle education are more likely to be involuntarily self-employed than the higher educated. In the Netherlands self-employed are less likely to be involuntarily

self-employed than in Germany. The involuntary or voluntary nature of being self-employed without personnel is likely to affect earnings, satisfaction, social security provisions and pension savings – we tested for this in analyses on these topics.

What is the position of self-employed without personnel in terms of their earnings and job satisfaction? The results show that in both countries a large majority of solo self-employed indicate an adequate financial situation of the business, household income and job satisfaction. Dutch solo self-employed seem to be affected more by the economic crisis than German solo self-employed. Still, compared to the German solo self-employed, Dutch solo self-employed more often indicate that the financial situation of the business is good and also the financial situation of the household seems slightly better. Dutch solo self-employed also assess their non-financial payoff in terms of job satisfaction a little higher than German solo self-employed do.

Self-employed have to deal with various social risks, including the risk of poverty in old age, the risk of disability and the risk of unemployment. What are the views and behaviour of solo self-employed towards social security and pension savings? The results show that about a quarter of German and Dutch self-employed without personnel report to have a disability insurance for their work as a self-employed. Especially when one is the main breadwinner in the household, the consequences of becoming disabled while not having a disability insurance can be substantial. After selection of self-employed who indicate to be the main breadwinner and work at least 32 hours a week in the self-employment group, we find that still 68 per cent of German solo self-employed and 57 per cent of Dutch solo self-employed reported *not* to have a disability insurance. The main reason to have a disability insurance is because ‘everybody is at risk’. Some reasons for not having a disability insurance originate from a low risk evaluation of the consequences of becoming disabled: the self-employed without personnel can fall back on other income or reserves, are not dependent on the self-employment income or have insurance via a job in paid employment. Together these reasons account for about one-third of all reasons not to engage in a disability insurance. However, the largest part - about half of self-employed without personnel - that do not have a disability insurance state that disability insurances are ‘too expensive’

Another type of risk that was addressed is the risk of poverty in old age. In both Germany and the Netherlands, 71 per cent of self-employed without personnel indicate to have taken additional private measures to generate more income in old age (third pillar). In the Netherlands a majority of self-employed without personnel are entitled to pension build-up via their work in paid employment (second pillar), for instance from a second job or prior wage and salary jobs. With 72 per cent, this is substantially higher than in Germany (42 per cent). Whereas in the Netherlands all solo self-employed are covered by the basic public pension scheme (first pillar), the majority of German solo self-employed is not covered by any kind of state pension insurance. Overall, about one-third of solo self-employed think their pension

savings and other sources of income are insufficient to live comfortably after retirement; this is substantially higher than among employees (Van Dalen et al., 2010). The self-assessed retirement income turns out to be strongly related to the financial means of solo self-employed, both at the level of the business and at the household level. In addition, behavioural aspects turn out to play a role. In that respect, perceived financial knowledge and retirement goal clarity positively influence the self-assessed sufficiency of retirement income. The results regarding perceived financial knowledge correspond to earlier findings among employees, as perceived financial knowledge is a frequently identified predictor of planning and saving, with high-knowledge individuals consistently showing to plan and save more than their low knowledge counterparts (eg. Ekerdt & Hachney, 2002; Banks & Oldfield, 2007; Van Dalen et al., 2010). Retirement goal clarity also plays a significant role in the perceived sufficiency of retirement income. Retirement planning activity levels on the other hand are not significant and individuals with a short-term orientation to time less often expect their retirement income will suffice. All these outcomes seem to indicate that at the behavioural level, individuals with a more concrete and internally motivated vision of their retirement goals are inclined to plan and save more. Although the outcome that individuals with higher retirement planning activity levels do not have a higher self-assessed sufficiency of income after retirement seems at odds, it could also implicate that 'calculations' and advice from financial experts comes at a rather abstract level and is not being 'internalised' into meaningful prospects and relevant actions. The results from this study show that the underlying mechanisms are more or less the same in the two countries.

Finally, we addressed the role of governments and interest organisations – according to the self-employed without personnel. The results show that only a small share of self-employed workers seems to desire collective strategies in relation to unemployment risks. A large majority of self-employed without personnel are of the opinion that it is inherent to a self-employment job that individuals bear the responsibility to bridge unemployment spells. The results with respect to pension provisions show a different picture and are more adequately described as 'mixed': some solo self-employed strongly believe self-employed should be responsible for their own pension build-up and they should be able to make their own decisions on when and how to contribute to their pension savings, whereas others think the pension systems should be reorganised – some opt for changes in the public sphere, others for different collective arrangements. The latter group frequently indicates that within the current pension system they cannot afford pension premiums and they worry about this. The results also seem to implicate that there is ample awareness and information about adequate pension savings available to solo self-employed, but it seems rather at the practical level that measures to stimulate pension savings need to be worked through. Finally, especially in the area of insurance against partial and full disability a substantial part of the solo self-employed seems to be of the opinion that the government should be financially responsible for all employed, including self-employed, who become disabled.

Rather than covering this via the private insurance market, disability is thought to be arranged more like for instance a national insurance.

In our study, we found 5 per cent of German respondents and 8 per cent of Dutch respondents to be a member of a trade union and respectively 8 and 10 per cent to be member of an organisation specific for self-employed without personnel. Solo self-employed in both countries rather consider joining an organisation specific for self-employed without personnel than becoming a member of a trade union. Self-employed without personnel are sometimes considered to be in a kind of 'in-between situation, as they are not typically represented by either trade unions nor by employer organisations. The modest share of solo self-employed who are a member of trade unions or consider trade union membership may also be a reflection of this 'in-between' situation.

Wrapping up the previous results and taking into account the large heterogeneity in the group of solo self-employed, the study addresses the question for whom self-employment results into a precarious financial situation as opposed to who is rather well-off. In our cluster analysis we find three types of solo self-employed based on their level of financial resilience and social protection, which we tentatively labelled 'precariously solo self-employed' (12,6%), solo self-employed who 'get by' (43,7%) and 'self-sufficient' solo self-employed (43,8%). The presence of this substantial group of precariously self-employed without personnel in both countries seems to indicate that at present there indeed seems to be an issue for social policy and an urgent need to bring solo self-employment towards a more sustainable form of employment, maybe most strikingly in the area of social security provisions.

5.3 Scientific and societal relevance

The study's scientific objectives were to advance the existing research literature on 1) changes, dynamics and consequences related to solo self-employment and 2) attitudes and behaviour towards pensions and other social security provisions among self-employed without personnel.

The results of our panel data analyses have particularly contributed to the first objective. Since the 1970s, questions on 'why' the self-employment pattern has been changing and 'who' the new self-employed are have received relatively much attention and have been analysed extensively with both micro- and macro-level data. This study has examined to what extent solo self-employed differ from other groups, including employees in the flexible non-core workforce, with respect to their labour market transitions - an area with a serious lack of information about transitions and transition sequences, especially in terms of life-course careers. Moreover, the panel data analyses present new evidence on the impact of preceding life experiences from various domains in one comprehensive approach, improving our understanding of the transition into self-employment by examining the impact of preceding work, educational, health and family experiences. Third, except for several - predominantly - US studies (e.g. Ferber and

Waldfoegel 1998; Williams 2000; Bruce and Schuetze 2004), little attention has been paid to the implications of self-employment to one's labour market career. This is the more remarkable, considering that governments in various countries have taken the position to promote or increase self-employment (European Commission, 2010). The results of our panel data analyses have contributed to our understanding of the consequences of transitions into self-employment and self-employment experiences during the career.

The study's second objective was to advance the existing research literature on attitudes and behaviour towards pensions and other social security provisions among self-employed without person; a highly under-researched area in the scientific literature. Unique primary quantitative and qualitative data were collected on solo self-employed' attitudes and behaviour towards work and social security. Whereas social security provisions such as pension savings of employees have been studied extensively internationally and over time, there is only limited insight into behaviour and entitlements of self-employed workers; a void this study aimed to fill.

Besides for scientific reasons we studied self-employed' attitudes and behaviour for societal reasons. First, the outcomes on labour market mobility of self-employed and the views on the need for and perceived responsibility of pension measures may function as points of departure for governments, trade unions, specific organisations of self-employed, actors in the financial sector and solo self-employed themselves. The findings from chapter 3 showed that solo self-employed have relatively high labour market mobility between jobs (in paid employment and self-employment). In designing 'new' forms of pension built-up this may be an important finding, as it stresses the need for flexibility and may advocate constructions in which individuals save for their pensions through similar institutions, regardless of whether they work as wage and salary workers or as a self-employed. Furthermore, in the past scientists and policy makers have been suggesting various measures to stimulate pension savings among individuals as well as among self-employed in particular. The findings from chapter 4 showed that none of the suggested measures could count on a majority of self-employed who considered a measure to be effective. On the one hand we found solo self-employed who consider 'individual' solutions to be effective, and on the other hand self-employed who think 'public' measures are more effective. Individual solutions included for instance pension schemes in which savings are automatically put aside as a share of income whenever one receives income from self-employment, and tools that help to concretely visualize retirement goals, connected to a budgeting tool that helps to budget how much money has to be put aside to accomplish these retirement goals. Public measures included for instance the implementation of obligatory individual level pension schemes and pension subsidies. Besides these 'top answers' we found that a minority of self-employed without personnel think it would be effective to organise regular informative meetings on pension savings or to have media campaigns to raise awareness on the importance of adequate pension savings. These findings seem to implicate that there is enough awareness and information about adequate pension

savings available to self-employed without personnel, but it is more at the practical level this still need to be worked through – actors may want to address that area in particular.

To elaborate on the previous paragraph, the findings in chapter 4 seem to implicate that it could be conducive to solo self-employed to work on the invention of different and more advanced forms of financial services to solo self-employed. The findings showed that a substantial share of solo self-employed consider ‘individual solutions’ to be effective, i.e. for instance pension schemes in which savings are automatically put aside as a share of income whenever one receives income from self-employment, and tools that help to concretely visualize retirement goals, connected to a budgeting tool that helps to budget how much money has to be put aside to accomplish these retirement goals. Furthermore, the results showed that solo self-employed who have clearer retirement goals are more likely to think their pension savings and other sources of income are sufficient to live comfortably after retirement. This finding may implicate that it could be conducive to solo self-employed to work on the invention of more advanced forms of financial services to solo self-employed. Earlier research in this area is limited, but relevant tools to support individuals in their decision-making are likely to gain importance; especially if the responsibility of adequate pension savings shifts further from institutions to individuals in Western countries. In that light, the United States may provide interesting initiatives in terms of ‘smart support’ (see e.g. Albright et al, 2000; Ross et al., 2010). A related finding is that for the Netherlands we found a significant negative relation between financial adviser anxiety and having supplementary pension savings. Or in other words: individuals who are more anxious to consult financial advisers less often reported to have supplementary pension savings. It may be relevant to further unravel this financial adviser anxiety and search for the mechanisms that cause this anxiety in order to better attune to the needs of solo self-employed. These issues may not be limited to the financial sector, but could also be filled in by interest organizations.

Finally, the results from our survey research show that a limited share of solo self-employed have a disability insurance (25 per cent). The findings also show that only a minority of solo self-employed do not opt for disability insurance because of a low risk evaluation of the consequences of becoming disabled: the self-employed without personnel can fall back on other income or reserves, are not dependent on the self-employment income or have insurance via a job in paid employment. However, the largest part - about half of self-employed without personnel - who do not have a disability insurance state that disability insurances are ‘too expensive’. Especially when one is the main breadwinner in the household, the consequences of becoming disabled while not having a disability insurance can be substantial. When only those solo self-employed are selected who are the main breadwinner in the household and work more than 32 hours a week, the results show that still the majority of solo self-employed does not have a disability insurance. Moreover, from the qualitative interviews emerges that a lack in insurance does not tend to originate from negligence: many solo self-employed have given various options of insurance serious thoughts,

but do not know how they could possibly pay the premium - especially those in their start-up phase, when solo self-employed have 'conditions', or when they have to make ends meet from a low income. A lack of insurance in this area seems to cause a lot of stress to the solo self-employed involved. In addition, both the findings from the survey and the findings from the interviews about who should be financially responsible for disabled solo self-employed seem to indicate that a substantial part of solo self-employed thinks that disability insurance cannot adequately and should not be taken care of through the private market. According to solo self-employed, also those who fit more the 'entrepreneurial type', especially in the area of disability insurance the national government would be the designated actor to take up an important role.

5.4 Discussion

In this final section, we discuss *methodological* strengths as well as limitations of this study and put forward suggestions for future research. One strength is that we were able to analyse data on self-employment with a panel structure, offering the possibility to observe individuals over time and thus address *transitions*; when it comes to solo self-employment a highly under-researched area in the scientific literature. Another advantage is the cross-national dimension of the research, providing information on whether consequences of self-employment are either a national phenomenon or are more widely found among solo self-employed. This broader picture thus provides more insight into the robustness of the results. Finally, the study used a multi-method approach to address its research questions. The combination of labour force survey statistics, panel data, survey research and qualitative research provides insight into both questions on incidence and trends of self-employed' attitudes and behaviour as well as more ambivalent developments and underlying mechanisms.

An important limitation is that the panels suffer – as do many panels – from panel attrition. This attrition for instance inhibits studying solo self-employment duration, but also how preceding experiences influence solo self-employment or to address consequences for solo self-employed over a longer period of time. Another limitation is that in some cases it might have been preferable to address the transition into solo self-employment from pre-self-employment *changes* rather than from per-self-employment *levels*. For instance, one might hypothesize that it is rather the *birth* of a first or second child that triggers a labour market transition (Vlasblom and Schippers, 2006), than the fact that there are young children living in the household. Future studies may want to take this into account when studying the transitions into solo self-employment.

Another limitation is that this study is based on solo self-employed' *self-assessed* attitudes and behaviour towards work and social security provisions. The study has shown that 40-50 per cent of solo self-employed can be considered to be 'self-sufficient' based on their self-reported financial resilience and social security provisions. A logical next question is whether this perceived sufficiency is accurate, or whether solo self-employed underes-

timate or overestimate financial means such as their household incomes and pension savings. Future research may want to combine solo self-employed' perceptions about income and savings and actual measures within households.

There is a number of issues that have received no or only limited attention in this study, but deserve to be considered in future research. First, this study aimed to examine transitions and transition sequences between 'standard' forms of employment and solo self-employment. Unfortunately, the combination of panels used in this project's framework did not allow us to follow individual solo self-employed over a *long period of time*. However, following the same solo self-employed over a longer period of time would have provided more opportunities to study causality, which helps to achieve a more thorough understanding of what is driving and shaping solo self-employed' behaviour - also from a life course perspective. Second, this study examined the position of self-employed without personnel and addresses the question for whom self-employment results into a precarious financial situation as compared to who is rather well-off. Although the study provides a first exploration of the possibilities of distinguishing precariously and self-sufficient solo self-employed, future studies might benefit from a comparison between self-employed workers with those in standard and other non-standard employment relations, also to provide a benchmark for further interpretation of the results. Finally, this study addresses solo self-employed views and behaviour towards work and social security provisions. However, there is possibly an even larger lack of knowledge in the area of how employers and clients, or more generally the demand side, are viewing the growth in solo self-employment, how they behave towards the self-employed and whether these views and behaviour have been subject to change. This demand side is important in 'setting the stage' for sustainable forms of self-employment. Future research may want to pay particular attention to this demand side, as well as the interaction between supply and demand.

Another issue for future research is the maintenance and development of self-employed human capital during their career. Many of the current self-employed have been working as an employee at the start and sometimes during a large part of their labour market career. This not only gave them a quick start in terms of networks of potential clients and customers, but also allowed many of them to utilize the branch or product specific knowledge they had acquired 'on the job'. While in many organizations employers take the initiative or at least contribute to the maintenance and accumulation of individuals' human capital it remains to be seen how self-employed and especially self-employed who were never in paid employment organize the maintenance of their human capital. Are they stronger motivated to keep investing throughout their life course (contrary to the well-known phenomenon that human capital of 45+ workers decline rapidly) or do they lack the means to do so in terms of time and money? And what does the answer to this question imply for their long term productivity?

As least as interesting is the issue of technological development. Much of the new self-employed can do without an organisation because of the blessings of technology. A cell phone and a laptop is often enough to start your own business (though of course not in every branch of industry). So far, these technological developments have favoured in particular the rise in the number of self-employed in creative industries and commercial services. But what if 3D-printing and similar novelties expand enormously? Will this allow for a further increase of opportunities for self-employment in branches where the need for capital goods, machines, laboratories etc. dominated production so far? These and other questions show that even though this study brought up a series of most relevant insights we are still in need of continuous scientific research because the field at which we are looking is still changing rapidly.

Future studies and articles resulting from this research project will be put online at the project's website: www.solo-selfemployed.eu.

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Annex A Statistics on self-employment

Table 1 Self-employment as a share of total employment in Europe (percentage), age 15-64 years, 1992 – 2015

	1992	1997	2002	2007	2012	2015
EU27			14,3	14,4	14,5	14,2
Austria		10,5	10,8	11,1	10,8	11,0
Belgium	14,8	14,6	13,3	13,1	13,0	13,8
Bulgaria			12,6	10,9	10,5	11,1
Croatia			17,6	17,0	16,0	12,9
Cyprus			18,8	17,5	13,7	12,9
Czech Republic		11,7	15,2	15,4	17,5	16,3
Denmark	8,1	8,1	7,7	8,0	8,3	7,8
Estonia		6,3	6,5	8,9	8,5	9,3
Finland		14,0	12,0	11,5	12,3	12,7
France	12,3	11,0	9,5	10,1	10,7	10,8
Germany	8,3	9,6	9,6	10,5	10,4	9,6
Greece	34,1	31,9	30,3	28,3	31,1	29,9
Hungary		16,2	13,0	11,8	11,0	10,2
Ireland	20,6	18,2	16,1	15,3	14,5	14,9
Italy	23,1	23,9	22,8	23,4	22,5	21,9
Latvia			9,3	9,0	10,2	11,6
Lithuania			16,8	12,4	9,6	10,8
Luxembourg	8,9	8,2	7,2	7,0	8,0	8,6
Malta			14,3	14,0	13,1	13,3
Netherlands	9,6	10,8	10,6	12,0	14,0	15,3
Poland		22,4	21,8	18,7	18,4	17,9
Portugal	22,0	23,4	21,7	19,2	17,0	14,5
Romania		17,7	20,1	18,6	18,9	17,6
Slovakia			8,3	12,8	15,3	14,9
Slovenia		11,4	10,9	10,0	11,6	12,1
Spain	20,4	20,4	16,9	16,2	16,3	16,4
Sweden		10,4	9,5	9,6	9,2	8,9
United Kingdom	12,2	12,1	11,6	12,6	13,5	13,6

Source: Eurostat/ LFS, 2016

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Table 2 Self-employed persons with employees as a share of total employment in Europe (percentage), age 15-64 years, 1992 – 2015

	1992	1997	2002	2007	2012	2015
EU27			4,9	4,4	4,2	4,0
Austria		4,8	5,1	4,8	4,5	4,4
Belgium	1,6	1,4	4,0	4,4	4,0	4,2
Bulgaria			3,4	4,0	3,5	3,5
Croatia			5,6	5,4	4,5	5,1
Cyprus			5,6	5,9	3,9	2,2
Czech Republic		4,0	4,0	3,7	3,3	3,4
Denmark	4,0	3,8	4,1	3,8	3,4	3,4
Estonia		2,4	1,9	3,4	3,8	3,7
Finland		4,5	3,9	3,9	3,9	4,1
France	4,8	4,6	4,0	4,4	4,3	4,2
Germany	4,6	4,9	4,8	4,6	4,5	4,4
Greece	6,9	7,1	7,4	7,9	6,9	6,8
Hungary		2,6	5,2	5,2	5,1	5,0
Ireland	5,5	5,3	5,7	5,6	4,5	4,4
Italy	12,9	12,4	11,8	6,7	6,3	6,2
Latvia			3,1	3,3	3,9	4,2
Lithuania			2,2	2,1	2,2	2,2
Luxembourg	3,7	5,4	5,1	3,0	3,0	3,4
Malta			4,1	4,9	4,3	4,3
Netherlands	3,4	3,9	3,5	3,9	3,8	3,8
Poland		3,7	3,8	4,0	4,1	3,8
Portugal	6,0	6,1	6,3	5,5	4,9	4,7
Romania		1,4	1,5	1,5	1,3	1,2
Slovakia			2,3	3,1	3,0	3,0
Slovenia		3,2	3,6	3,3	3,4	3,6
Spain	4,4	5,2	5,1	5,3	5,0	4,8
Sweden		4,0	3,7	3,8	3,7	3,4
United Kingdom	3,5	3,2	3,0	2,8	2,4	2,3

Source: Eurostat/ LFS, 2016



Table 3 Self-employed persons without employees as a share of total employment in Europe (percentage), age 15-64 years, 1992 – 2015

	1992	1997	2002	2007	2012	2015
EU27			9,4	10,0	10,3	10,1
Austria		5,7	5,6	6,3	6,3	6,6
Belgium	13,2	13,2	9,3	8,7	9,0	9,6
Bulgaria			9,3	6,9	7,0	7,6
Croatia			12,1	11,6	11,5	7,8
Cyprus			13,2	11,6	9,7	10,6
Czech Republic		7,7	11,1	11,7	14,2	12,9
Denmark	4,1	4,2	3,7	4,3	4,8	4,5
Estonia		3,9	4,6	5,5	4,7	5,6
Finland		9,5	8,0	7,6	8,4	8,6
France	7,4	6,4	5,4	5,8	6,4	6,6
Germany	3,7	4,7	4,8	5,8	5,9	5,3
Greece	27,2	24,8	22,9	20,4	24,2	23,1
Hungary		13,6	7,8	6,6	5,9	5,3
Ireland	15,2	12,9	10,4	9,7	10,0	10,5
Italy	10,2	11,5	10,9	16,7	16,2	15,7
Latvia			6,2	5,7	6,4	7,4
Lithuania			14,6	10,3	7,4	8,6
Luxembourg	5,2	2,8	2,1	4,1	5,0	5,1
Malta			10,1	9,1	8,8	9,0
Netherlands	6,3	6,9	7,1	8,1	10,2	11,5
Poland		18,6	18,1	14,7	14,3	14,1
Portugal	16,0	17,3	15,4	13,7	12,1	9,8
Romania		16,2	18,6	17,0	17,6	16,5
Slovakia			6,0	9,7	12,4	11,9
Slovenia		8,2	7,3	6,7	8,2	8,6
Spain	16,0	15,2	11,8	10,9	11,3	11,6
Sweden		6,5	5,8	5,8	5,5	5,5
United Kingdom	8,7	9,0	8,6	9,8	11,1	11,4

Source: Eurostat/ LFS, 2016

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Table 4 Self-employed persons without employees in Europe (1 000), age 15-64 years, 1992 – 2015

	1992	1997	2002	2007	2012	2015
EU27			18.981,0	21.405,1	21.652,9	21.664,9
Belgium	496,0	505,1	376,0	378,1	403,5	429,8
Bulgaria			256,0	221,7	202,0	225,9
Czech Republic		372,1	521,2	566,2	683,3	635,8
Denmark	106,6	112,2	98,9	118,1	127,0	119,3
Germany	1.330,6	1.629,9	1.733,9	2.185,7	2.265,4	2.065,9
Estonia		22,9	26,4	35,0	27,7	34,1
Ireland	168,9	173,3	179,0	202,3	178,7	198,6
Greece	968,4	925,1	959,9	914,8	879,3	820,1
Spain	2.046,2	2.001,2	1.963,7	2.220,3	1.968,5	2.054,0
France	1.620,6	1.396,4	1.296,0	1.471,3	1.645,4	1.732,8
Croatia			177,6	196,7	175,8	121,2
Italy	2.092,6	2.275,5	2.337,1	3.755,5	3.588,5	3.450,9
Cyprus			40,4	42,7	36,5	37,6
Latvia			57,4	57,6	54,4	64,0
Lithuania			203,7	146,6	92,2	111,7
Luxembourg	8,5	4,7	4,0	8,3	11,6	13,0
Hungary		484,3	300,9	257,3	224,0	219,3
Malta			15,0	14,1	14,8	16,4
Netherlands	409,9	493,2	574,8	678,8	836,7	937,2
Austria		203,8	204,2	242,5	252,9	267,6
Poland		2.726,7	2.442,2	2.205,1	2.200,5	2.228,8
Portugal	695,9	738,0	746,4	649,6	515,4	422,5
Romania		1.653,5	1.666,5	1.505,2	1.448,6	1.357,2
Slovenia		71,0	66,1	63,9	73,9	77,3
Slovakia			125,8	227,1	286,6	285,1
Finland		200,5	192,1	187,5	204,7	203,9
Sweden		249,5	246,8	256,8	249,6	254,5
United Kingdom	2.197,5	2.360,7	2.346,4	2.791,5	3.181,0	3.401,6

Source: Eurostat/ LFS, 2016

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