Economic uncertainty in the life course

The couple perspective

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Publication date
2023

Document Version
Final published version

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Printed by Gildeprint | Gildeprint.nl

Economic Uncertainty in the Life Course: The Couple Perspective

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor
aan de Universiteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. ir. P.P.C.C. Verbeek
ten overstaan van een door het College voor Promoties ingestelde commissie,
in het openbaar te verdedigen in de Agnietenkapel
op dinsdag 12 september 2023, te 13.00 uur

door Ekaterina Vladimirovna Chkalova
geboren te Kiev

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1. Synthesis

There are several ways to sustain oneself. One person may depend on relatives and family for their livelihood; another can rely on the generosity of the welfare state. The lucky ones can live independently on their private financial means using inherited or earned capital. However, most households in modern societies rely on income from the labour market to earn a living (CBS n.d. a). Not surprisingly, the working life – employment – is seen as the most important economic resource for households. Moreover, the realm of employment intervenes deeply in the everyday lives of individuals. Work structures the daily routine (Brand 2015; Oppenheimer 1988) but is also central to a person's identity and place on the socio-economic ladder (Kalleberg 2009; Sennett 1998).

While employment remains the major source of economic security for the vast majority of the population, the lifelong secure employment in Western countries that characterised the 1960s and early 1970s is no longer a given. In many European countries, a growing portion of the working population lacks adequate protection, putting the economic security provided by employment under strain. The rise in uncertainty coincides with the upcoming trend for both partners to be engaged in paid labour. Dual-working families have become the norm in contemporary society. This thesis aims to shed further light on the consequences of non-standard employment in the life course from the couple perspective.

1.1 What is non-standard employment?

Non-standard employment means the deviation from normal, standard employment. However, there is no clear definition of standard employment. What substitutes normal, standard employment depends highly on the national and historical context. Standard employment in the European context is usually defined as a '...normative state of affairs that depart from the post-World War II norm of secure employment with an employer, in which work is done full-time, full-year, on the employer's premises under his or her supervision, enjoying extensive statutory benefits and entitlements, and having the expectations of being employed indefinitely…' (Kalleberg 2018: 13). The Standard Employment Relationship (SER) in Europe is frequently measured as permanent full-time employment (Eurofound 2020; OECD n.d. a). In fact, the majority of European workers have a full-time permanent employment contract (OECD n.d. a). Subsequently, all types of employment that deviate from a permanent full-time employment contract can be seen as non-standard employment.

A clear distinction between the SER and other forms of employment concerns labour (employment) stability, its full-time status and social standards associated with SER (Bosch 2004; Schoukens and Barrio 2017). According to Schoukens and Barrio

(2017, 311): 'Labour stability is a key aspect of the social function of the standard employment relationship'. On the one hand, from the point of view of employees, the full-time, permanent character of the SER not only guarantees a salary sufficient to live on but also provides the promise of an adequate level of social insurance (Bosch 2004). On the other hand, the long-term duration of the relationship enables the employer to invest in his workers and allows the workers greater autonomy within the company. Furthermore, labour stability allows the employee to work within a normalised schedule, with standard integrated statutory holidays and leave provisions – the so-called 'standardised working time' (Hörning *et al.* 1990). Finally, deriving from the permanent full-time contracts falls also under what constitutes socially acceptable standards of protection.

While Dutch labour-market regulations offer a relatively high level of protection to employees with permanent contracts, non-standard employment in the Netherlands is rated relatively low on the scale of protection legislation (OECD 2019). Nevertheless, all dependent employment, including non-standard contracts, is covered by collective social-security arrangements such as unemployment, disability and pension schemes. However, non-standard employment is heterogeneous and some forms of it – like on-call work and agency work – are considered to be more precarious than temporary contracts in terms of income volatility and labour security (Mattijssen and Pavlopoulos 2019). Moreover, the lower and more-sporadic earnings that are associated with these types of employment equate with lower unemployment benefits, putting non-standard employees at greater risk of further precarious employment (Olsthoorn 2015). The Dutch self-employed are excluded from participation in advantageous collective social-security arrangements and are dependent on private arrangements.

1.2 The rise of non-standard employment

In its efforts to battle growing unemployment levels and face the challenges of the upcoming globalisation trend in the mid-1970s and 1980s, the OECD (Organisation for Economic Cooperation and Development) promoted labour-market deregulation reforms aimed especially at loosening employment-protection legislation (EPL). Many European countries choose to deregulate non-standard working arrangements, leaving the protection legislation of standard employment relationships mostly intact. The mainstream labour-market scholars agree that this labour-market policy has led to the so-called insider–outsider divide on the labour market, with standard employment being highly protected and the peripheral workforce being rendered increasingly flexible (Barbieri and Cutuli 2015; Blossfeld 2008; Esping-Andersen and Regini 2000). The European Commission (2010) has shown that there is a correlation between the share of temporary employees and EPL reforms that focus primarily on untying the protection of temporary employment. Therefore, regulation reforms are often seen as one of the major causes of the growth of non-standard

employment relations in countries that adopted such strategies (Barbieri and Cutuli 2015; European Commission 2010).

The idea behind the reforms was that the strict protection laws and wage-setting arrangements would make the labour market rigid. Deregulation of the labour market would offer flexibility to employers by enabling them to more easily adjust their workforce during turnover fluctuations. However, it would also be beneficial to the employees by making more non-standard work available in the periods when no standard employment is available to them. In countries where standard employment security is relatively stable, entrants are reluctant to accept non-standard contracts (Blossfeld 2008). The flexible non-standard employment would then serve as a stepping-stone to regular work for many who would otherwise remain unemployed (Bover *et al*. 2002; Ichino *et al*. 2008; Mertens and McGinnity 2004). In the meantime, a considerable and still growing body of literature is forming on the alleged effects of these deregulating labour-market reforms on the total employment, unemployment duration among non-standard workers and consequences of non-standard employment on the further careers of the workers (e.g. Dobbins and Plows 2022; Gebel 2010; Gonalons-Pons and Gangl 2022; Latner 2022; Pavlopoulos 2013; Mooi-Reci and Dekker 2015).

1.2.1 Overall trends

The rise of non-standard employment relationships measured as a share of temporary employment in total dependent employment is visible in the overall figures for Europe but is especially pronounced in Italy, Ireland, the Netherlands and France (Eurostat n.d.). Figure 1.1 shows the development of temporary employment as a percentage of total dependent employment in the European Union countries overall – and the Netherlands in particular – for the last four decades.

Businesses often use a non-standard labour force as external flexibility in order to adjust to demand shocks (Atkinson 1984). Therefore, non-standard employment is very sensitive to economic developments. The number of temporary agency workers, in particular, reacts very promptly to economic shocks, hence it is often used as an early indicator of labour-market developments. Temporary (agency) workers are the first to feel the blows from economic downturns as they get fired first. On the other hand, they also experience economic upturns first as they are the first to be hired the moment the economy starts to improve. Moreover, it is not unusual that, in times of economic boom with higher tension on the labour market, employers are more inclined to offer permanent contracts to attract much-needed workers (CBS 2020). Therefore, when analysing the share of temporary employment, it is important to keep the economic context – especially the development of total employment – in mind. In theory, in times of early economic upturn, the share of temporary work will rise but, as the tension on the labour market increases, permanent contracts will catch up, thus lowering the share of temporary jobs. In times of economic downturn, the

share of temporary contracts will drop as temporary workers are the first to lose their jobs. Eventually, other contract forms will catch up, increasing the share of temporary work yet again. However, these developments can also coincide with changes in labour-market policy, demographic (supply-side) changes and other structural trends (e.g. demand-side changes), making unravelling business-cycle components challenging.

While the Netherlands showed a stable increase in temporary work up to 2018, the European mean shows a stagnation of this trend from around 2008, the beginning of the recession period. During the more recent years from 2017 to 2020, a period with a growing economy and growing employment, there is even a decline in the share of temporary employment in European countries. In the Netherlands, the share of temporary work has been shrinking since 2018 and, in 2018 and 2019, could reflect higher tension on the labour market in times of economic boom in that period (CBS 2021a). This shrinking share of temporary employment, in combination with the decline in total employment in 2020 and 2021, could be a reflection of the economic downturn. The Covid-19 crisis was a major blow to the economy and EU countries introduced generous financial packages to support affected businesses and avoid unnecessary layoffs. The EU also decided to financially support specific countries that were relatively strongly affected by the corona crisis. The shrinking number of temporarily employed workers conceals great dynamics in the temporary-work labour force (CBS 2021b). On the one hand, more temporary workers lost their jobs during the crisis, indicating that newly introduced generous financial packages are not used by businesses to prolong temporary contracts. On the other, relatively few unemployed have found temporary work: a common route for the unemployed to find work is by getting temporary contracts.

When looking specifically at the Netherlands, the decreasing share of temporary contracts could also reflect the measures which the current Dutch government has been taking, which aim to reduce differences between permanent and temporary contracts as a way to make permanent contracts more appealing for employers. For example, the total period of successive contracts has been prolonged from two to three years. Another measure taken concerns the differentiation between insurance premiums by contract type. From the beginning of 2020, employers have been paying greater premiums for their employees with temporary contracts in contrast to permanent employees. The rationale behind this measure is simple: the temporary labour force is at greater risk of becoming unemployed. These measures could promote permanent contracts among employers and the decline in the share of temporary contracts in 2020 could be partly reflecting these policy changes.

All in all, although the development of the share of temporary employment has a business-cycle component, the clear structural trend in the rising share of temporary work has been visible since the 1980s (see Figure 1.1) in the EU27 and the Netherlands.

1.2.2 Trends by age

The rise in temporary work is especially pronounced among young people (Figure 1.2) – at the end of the 1980s, around 20 per cent were working with temporary contracts. In 1989, 19 per cent of Dutch youth and 31 per cent of European youth in dependent employment had a temporary contract. Thirty years later, in 2019, the proportion of youth with temporary contracts was 53 per cent in the Netherlands and 46 per cent in the European Union. This trend is consistent with the insider–outsider divide on the labour market, with older workers in standard employment being highly protected and the peripheral workforce, especially entrants to the labour market, being increasingly flexibilised (Barbieri and Cutuli 2015). While the rise in the share of the temporarily employed in the age group 25–54 is less pronounced compared to that of young people, this share has more than doubled, from around 5 per cent in 1984 to 13 per cent in 2019 in Europe overall and from 6 to 12 per cent in the Netherlands.

1.2.3 Trends by gender

Figure 1.3 shows the share of the temporarily employed in total dependent employment by gender in the Netherlands and in the European Union. Both women and men show an increase in the share of temporary workers. In European countries the increase of temporary contracts seems to be evenly distributed between genders. However, in the Netherlands, men seem to be affected to a greater extent by the rise of temporary employment. While the share of temporary employment showed a wide discrepancy between Dutch men and women, this gap had all but disappeared by 2020. The reduction of the temporary employment gap coincides with the trend for growing labour-market participation rates among Dutch women: from 36.1 per cent in 1980 to 77 per cent in 2020 (OECD n.d. b).

1.2.4 Trends by educational level

Another group that is affected by the incidence of rising economic uncertainty is the lesser educated (Kim and Kurz 2001). Figure 1.4 shows the share of temporary employment in total dependent employment by educational level. This percentage has risen for all groups; however, the incidence of temporary employment among the lesser educated has increased disproportionately strongly, almost doubling in the period 2003–2020. A substantial group of over 40 per cent of low-educated employees were lacking employment stability in the Netherlands by the end of the 2010s.

1.2.5 Trends by employment type

The group of on-call workers has shown the greatest increase in the last decade. However, the rise in non-standard employment in the Netherlands concerns not only

dependent employment in all its plurality (Figure 1.5). The Netherlands has also been confronted with the fast rise of the self-employed – the fastest of the OECD countries over the past two decades. This rise consisted mostly of the self-employed without employees – i.e., those who work for their own account (Smits, de Vries and Gringhuis 2021; OECD 2019). Although the share of the population who are self-employed consists mostly of older workers, the self-employed are no longer a marginal group among younger workers – 14 per cent of the self-employed aged 25–45 in the Netherlands in 2019 (CBS n.d. b).

1.3 Non-standard employment as a source of economic uncertainty

There is no clear definition of what exactly economic uncertainty is. In a broad sense one could say that economic uncertainty entails the perception of how the person in question is doing economically – in other words, can the person sustain him- or herself financially and how stable is this economic situation? Qualitative research in the Netherlands shows that there are at least four different aspects to which respondents refer when asked about economic uncertainty: tension about the uncertain future, financial distress, unpredictable life planning and the lack of recognition and appreciation (Kremer, Went and Knotterus 2017). This illustrates that economic uncertainty involves much more than merely the ability to financially sustain oneself. In the literature, economic uncertainty is often measured by indicators related to general well-being or work-related anxiety. However, the chosen definitions are often data-driven (Anderson and Pontusson 2007). This thesis will not elaborate further on what constitutes economic uncertainty in a broad sense but will look at it from a very specific angle. In this paragraph the model presented is of how having non-standard employment (NSE), the specific focus of this research, can lead to feelings of economic uncertainty. Consequently, the possible determinants of economic uncertainty that are connected to non-standard employment are discussed.

1.3.1 Non-standard employment and economic uncertainty

There are different ways in which NSE can lead to economic uncertainty. Figure 1.6 graphically summarises the model of economic uncertainty outlined below. NSE mostly plays a mediator role that predetermines the job insecurity (b), income insecurity (c) and job quality (d) and hence affects the economic uncertainty indirectly. However, it can trigger feelings of economic uncertainty in a more direct way (a).

Job insecurity

First of all, while standard employment is usually protected from sudden job loss, temporary employment is *a priori* fixed term, leaving the holder of this employment

contract uncertain about his or her future employment at the current workplace. Consequently, non-standard employment has been consistently associated with a greater risk of unemployment. Loog *et al*. (2014) have shown that increased dynamics on the Dutch labour market concern primarily hiring and separation dynamics when controlled for seasonal and business-cycle effects. The chance of becoming unemployed increased significantly in the period 2003–2013 while the probability of getting a new job remained stable.

As explained above, NSE is a determinant of possible job loss, i.e., job (in)security. However, job insecurity involves more than a threat of losing a job. It involves a perception of that threat in a particular situation combined with a sense of powerlessness to do something about it (Sverke and Hellgren 2002). While job loss is an objective indicator, job insecurity is a subjective product of the individual's interpretations of signals from his or her surroundings (Hartley *et al*. 1991; Jacobson 1991). Having non-standard employment is an external signal, as temporary workers are very well aware of the possibility of losing their job by the time their contract has expired (Gallagher and McLean Parks 2001). Consequently, the positive association between temporary work and feelings of uncertainty in comparison to that of employees in permanent employment is very well established in the literature (Balz 2017). Job insecurity is usually measured in terms of affect as well as cognition. Cognitive job insecurity implies the perceived probability of losing one's job, whereas affective job insecurity involves the level of anxiety and worry about this possible event (Sverke and Hellgren 2002). Cognitive job insecurity is hence always a determinant of affective job insecurity (Borg 1992; Borg and Elizur 1992), while affective job insecurity entails more than the conceived probability of losing one's job (Anderson and Pontusson 2007).

Income insecurity

Non-standard employment is consistently associated with lower and unstable incomes. An insufficient, unstable income creates income insecurity which, in turn, can generate feelings of economic uncertainty. Income can play a double role in the relationship between non-standard employment and economic uncertainty. On the one hand, non-standard workers, on average, have lower earnings and are more often confronted with higher income volatility (Amuedo-Dorantes and Serrano-Padial 2007; Hagen 2002; Vosko, MacDonald and Campbell 2009). On the other hand, a higher level of income could positively contribute to a sense of economic security as a higher income means greater financial resources for the household – which enables its members to build financial buffers in order to cope with economic setbacks. A higher income can thus compensate for economic uncertainty related to non-standard employment. Some non-standard employees, usually professional class (managers, higher government aides, legal specialists, etc.), could earn ten times the income of 'normal' employees (painters, factory workers, etc.) who would have to deal with

the uncertainty of non-standard employment without a generous salary that could compensate for it.

Job quality

Non-standard work is increasingly associated with less autonomy and less control over one's tasks and working time. It is also associated with a less-fortunate working environment such as being supported by the management and the colleagues and executing work within poorer working conditions (Findlay *et al*. 2013; Holman 2013). Workers with non-standard contracts enjoy fewer fringe benefits compared to permanent contract-holders. They enjoy fewer training and schooling opportunities (Arulampalam and Booth 2004; Fouarge, De Grip, Smits and De Vries 2012). Moreover, temporary workers are less often promoted compared to their permanent counterparts (Booth, Francesconi and Frank 2002). In short, non-standard work is associated with peripheral so-called 'bad jobs' (Kalleberg 2011) that could also put pressure on the workers' sense of economic security.

Non-standard employment

Non-standard employment can affect feelings of economic uncertainty directly. One could place a symbolic value on having an NSE contract. By not offering a standard employment contract, an employer sends a powerful message to the employee: the employer is not interested in a stable work relationship with this specific worker (Kremer *et al*. 2017). This could negatively influence the feelings of self-worth of the employees as well as their perceived place on the socio-economic ladder. To sum up, the lack of a future perspective, together with the lack of an investment in their future and of a long-term commitment can all negatively influence workers' sense of economic uncertainty (Kremer *et al*. 2017).

Moderators of economic uncertainty

The level of uncertainty could be moderated by labour-market conditions, national institutions and personal characteristics and circumstances. For instance, not every demographic group is evenly affected by economic uncertainty. The incidence of non-standard employment is traditionally more common among youth, women, the less educated and immigrants (Fuller and Vosko 2008; Kalleberg 2018; Olsthoorn 2015). Immigrant groups are usually referred to as low-skilled workers with arrearage, who are too lacking in (educational) credentials, limited in language skills or crucial labour-market information to get access to standard jobs (Ahmad 2008; Porthe *et al.* 2010). Youth with non-standard work are seen as novices on the labour market who still have to climb the career ladder through occupying entry-level jobs, which are more often temporary (De Witte 1999). Women occupying jobs on the edges of the labour market are usually perceived as secondary earners who are not

fully attached to the labour market but who take on part-time irregular jobs as an extra income for the family (Vosko *et al*. 2009).

It is important to stress that NSE does not necessarily means uncertainty *par definition*. First, some groups could be very content with their peripheral position on the labour market. The concept of a stopgap job could be applied here. A stopgap job is one that does not reflect the educational credentials or abilities of the employee. It is usually seen as short-term by both employers and employees (Oppenheimer and Kalmijn 1995). It can also apply to groups that are not attached to the labour market: e.g., retired persons, students or housewives as well as to those who only want to earn some extra money – a side job – and are not in pursuit of a stable position on the labour market. Second, NSE also has an important role as a stepping-stone on the job-market carousel, as non-standard jobs are usually the entry point for outsiders on the labour market (Addison *et al*. 2015). Therefore, non-standard employment could be a good first step towards a successful career (e.g., de Graaf-Zijl *et al*. 2011; Givord and Wilner 2015; Leschke 2009; Wolbers 2010). Third, some groups – such as the professional classes at the higher end of the occupational ladder – could find non-standard employment quite comfortable as they can earn a substantial salary by moving from one employer to another and being able to (re-)negotiate their salary. Negotiating power, due to special skills and abilities that are in demand by employers, guarantees this group a steady income and prevents financially disadvantageous (downward) transitions – thus tempering feelings of economic uncertainty.

Economic uncertainty does not depend solely on individual characteristics – such as age and educational level – but is also related to broader macro-economic conditions (Green 2009). It is conceivable that the share of people with a non-standard contract in the population will be of influence on the personal experience of economic uncertainty and, in particular, on the job insecurity of workers. In times of an economic boom, having a relatively unfortunate employment situation could lead to more uncertainty compared to times of economic turmoil, when it could be more acceptable to have a less-fortunate labour-market position. Another related outcome could concern the normalisation of non-standard work as the share of NSE shows a structural increase. Moreover, this normalisation could mainly take place among certain groups, such as youth, because they are exposed to non-standard employment to a greater extent.

Additionally, the level of state provision for the unemployed or the availability of other social safety nets such as social assistance could temper workers' feelings of economic uncertainty. However, over the last four decades, welfare states have scaled back those of their safety-net arrangements which could potentially compensate for lost employment, especially in the Netherlands. The accessibility, generosity and duration of various benefits such as unemployment benefits and social assistance were retrenched (van Gerven 2008). The retreating welfare state put

greater pressure on the necessity of employment as a means of making a living while, at the same time, European labour markets became increasingly uncertain (Kalleberg 2018). Despite the scaled back safety-net arrangements, the Netherlands still offers relatively high unemployment protection to the dependent employed (Esser, Ferrarini, Nelson, Palme and Sjöberg 2013). The unemployment-insurance net replacement rate in the Netherlands is relatively high while the duration of unemployment benefit is quite low. On the other hand, the qualifying period for unemployment insurance is relatively low, which makes it more accessible to NSE workers who are often engaged on the labour market for a shorter period of time.

1.3.2 Economic uncertainty and age

Age is an important factor influencing the experience of economic uncertainty (Sverke, Hellgren and Näswall 2006). Interpretation of the consequences of losing a specific job differs greatly by age group. The responsibilities that are associated with certain life-course phases have a great impact on workers' feelings of uncertainty. People with a mortgage and dependent children would feel greater anxiety about losing their job than someone who is unbound by long-term responsibilities (de Witte 1999). Job experimentation is also associated with youth on the labour market – young people are still looking for their place on the labour market and are more willing to experiment with different work environments. It makes them less anxious about changing jobs (Gervais, Jaimovich, Siu and Yedid-Levi 2016) and engaging in non-standard work. People who are more established on the labour market more often find themselves in a different life-course phase with more long-term responsibilities. They would usually avoid unnecessary job changes unless these coincide with substantial (financial) rewards.

The perceived probability of finding a new job is an important factor in explaining the emergence of feelings of economic uncertainty. A person who is quite sure of his or her ability to find a new job will feel less anxious compared to someone who has doubts about it. The probabilities of finding new work are not evenly distributed among the age groups. Older workers have fewer probabilities of finding a job once they are out of work. Moreover, they experience a lesser likelihood of obtaining permanent employment (Mattijssen and Smits 2017). Therefore, older individuals are especially vulnerable to job loss and hence could experience more economic uncertainty (Hartley *et al*. 1991). Recent research in the Netherlands has shown that feelings of uncertainty differ by age group and that this difference varies between the different types of non-standard employment (Chkalova and van Wijk 2020).

1.3.3 Economic uncertainty and gender

Women on the labour market were often marginalised in Western societies until quite recently. Women were seen primarily as caregivers, hence their responsibilities lay in the realm of household duties and childcaring and not in the realm of the

professional career of a breadwinner. Social norms dictated that women were supposed to be economically taken care of by their spouse, their family or the state. Social-security schemes therefore largely supported single women of different age groups – from single mothers to older widows. Despite the fact that women's labour-market participation rate has almost caught up with that of men nowadays, women remained a very specific group on the labour market. Research has shown that, for men, the realms of paid labour and family life seem to be on parallel tracks (Blossfeld and Drobniç 2001; Chung and Van der Lippe 2018; Damaske 2011) while women usually adapt their labour participation according to the situation at home. Working fewer hours, opting for jobs with flexible hours or occupations that offer more flexibility are often viable strategies for women who need to combine their working and family lives. Hence, most labour-market research differentiates by gender when looking at certain labour-market outcomes or related indicators.
Because of the particular position of women on the labour market, the relationship between NSE and economic uncertainty could turn out very differently for them compared to men. Traditionally, men attach more importance to their role as breadwinner than do women. They also derive their sense of identity and status more strongly from employment (Blom, 2019; Coltrane and Shih 2010; Doucet 2009; Meisenbach 2010; Townsend 2002). Therefore, men might experience more economic uncertainty in a non-standard employment situation. For women, working in non-standard employment – sometimes characterised as a stopgap job – could be a strategy to facilitate the household's needs yet maintain their connection to the labour market. Hence in this kind of situation, women would not experience economic uncertainty – on the contrary, some women might even seek and prefer non-standard work arrangements.

Moreover, although working mothers are no longer a rarity, some women still prefer to take a break from the labour market when their children are young. This may result in them – later in life – looking for an entry-level job when re-entering the labour market. Being able to get a re-entry job and having access to a wide range of temporary work could create a sense of economic certainty: a guarantee of being able to find work again later on. The pool of non-working women who become entrants on the labour market is still large. The proportion of non-working women who are available or looking for work, together with underutilised part-time workers, is structurally higher among women (CBS n.d. c).

1.3.4 Economic uncertainty and educational level

The increased uncertainty in the labour market has mainly affected the low-skilled, less-educated group, which has a greater risk of unemployment, a non-standard employment relationship and an irregular income than the higher educated (OECD 2011). Moreover, the less-educated, with their limited human capital, have to compete with other workers such as women, retired workers and higher-educated youth looking for a side job and who could become serious competition. The

internationalisation of the labour market also created pressure on the bottom rungs of the labour market due to the influx of migrants. While it has been proven to have rarely had a negative impact on the employment and wages of residents and that the effects are sometimes even positive, EU expansion has created great feelings of uncertainty at the lower levels of the labour market. Research by CPB and SCP (Berge *et al*. 2018) has shown that most less-educated older workers fear that they will not be able to get a new job which is comparable to their current work in terms of content and working conditions if they become unemployed. Apart from the influx of migrants, technological changes and the flexibilisation of the labour market are also mentioned by respondents as threats that endanger their position.

So, while for some groups (like women and youth), non-standard work could mean merely a side job and hence could be seen as convenient employment, for others the same job could be characterised as a dead end or a trap. While being fully attached to the labour market and fully dependent on the income from employment, the less-educated could feel that they are in danger of becoming outsiders on the labour market by only attaining short-term, precarious jobs without any prospect of securing standard employment. Although I am not aware of any research on how economic uncertainty varies by educational attainment, it is plausible that the lesser educated might experience higher levels of economic uncertainty. All in all, when it comes to feelings of economic uncertainty in relation to NSE it would not be unthinkable that this group would appreciate and value the standard employment much more than their higher-educated counterparts.

1.3.5 Economic uncertainty and employment type

There is a strong correlation between employment type and experiences of job insecurity. Permanent employees are the least likely to feel insecure about their job, while temporary workers and temporary employees with no prospect of a permanent appointment are the most likely to experience job insecurity. On-call and stand-in workers and temporary employees with a view to a permanent contract occupy an intermediate position when it comes to feelings of uncertainty (Chkalova and van Wijk 2020). When it comes to income insecurity, temporary and agency workers experience the greatest income gap compared to standard employees (Smits and de Vries 2019). Moreover, a person's employment type seems to be crucial in determining how successful their career will be in the future. On-call and agency work the most often lead to a precarious employment path in terms of both income volatility and job security (Mattijssen and Pavlopoulos 2019).

When it comes to perceptions of economic uncertainty, it is important to consider the self-employed who, on average, put a greater value on independence and freedom and for whom becoming self-employed is often a conscious decision. Hence, while the majority of temporary employees prefer a permanent contract, most self-employed are satisfied with their labour-market position (Hooftman *et al*. 2018).

This fast rise of those working for their own account has raised some concerns. Some of the self-employed without employees work for only one employer or client. This makes them financially dependent on that client, hence economically more uncertain. However, the self-employed also form a very heterogenic group. Kremer, Went and Knotterus (2017) use income distribution to illustrate the considerable differences between the self-employed and their counterparts in other employment relationships. The income distribution of the self-employed is much wider compared to that of employees, indicating that the poorest and the richest workers are more common among the self-employed. Therefore, generalising about the self-employed as a group is quite difficult, as self-employment has become a hybrid area of work containing a wide variety of positions (Murgia *et al*. 2020).

1.4 The consequences of economic uncertainty

As mentioned before, a considerable and still growing body of literature is forming on the alleged effects of growing NSE on labour-market outcomes (e.g., Dobbins and Plows 2022; Gebel 2010; Gonalons-Pons and Gangl 2022; Latner 2022; Matthijssen 2021; Mooi-Reci and Dekker 2015; Pavlopoulos 2013). While some studies report positive effects of NSE on the further careers of workers (e.g., de Graaf-Zijl, van den Berg and Heyma 2011; Givord and Wilner 2015; Leschke 2009; Wolbers 2010), other literature points to the more problematic outcomes (see Hopp *et al*. 2016; Scherer 2004). More-recent research in the Netherlands reports that while, for some groups, NSE serves as a stepping-stone to a prosperous career, for other groups it turns out to be a dead end. At the same time a significant group of workers cannot be classified in the dichotomy of positive or negative effects. Therefore, Matthijssen (2021) suggests viewing labour-market outcomes, in terms of employment and income security, as a multidimensional continuum with various gradations.

This thesis goes beyond the realm of work and focuses on the possible effects of non-standard employment in other life domains. The realm of employment intervenes deeply in the everyday lives of individuals: it structures their daily routine but is also central to their identity (Brand 2015; Kalleberg 2009; Oppenheimer 1988; Sennett 1998). If non-standard employed individuals experience more economic uncertainty compared to standard workers, it is conceivable this could affect their actions, decisions or preferences in other life domains as well. In particular, this thesis explores how economic uncertainty related to NSE affects union formation, the transition to parenthood and health.

1.4.1 The consequences of economic uncertainty on union formation

Economic certainty can be seen as attractive by potential partners (Becker 1991) and increase the likelihood of cohabitation or marriage. The assumption here is that partners tend to marry or cohabit if they possess enough of a stable economic basis. Non-standard employment implies uncertainty and can therefore deter young people from entering into the long-term commitments of a serious relationship (Mills, Blossfeld, and Klijzing 2005). The effects of growing uncertainty on working lives in the realm of union formation has been a subject of research since the 1980s. According to Oppenheimer (1994), it has become increasingly difficult to make a good assessment of a person's perspectives on the labour market, especially at the beginning of their career. Work patterns have become more erratic and unpredictable than in the past and young people in particular are increasingly faced with the economic uncertainty which non-standard employment entails. However, the assessment of a person's long-term prospects on the labour market remains crucial to determining whether he or she is a good life partner.

Recent trends justify research on economic uncertainty in a relationship by demonstrating how young people construct their personal lives. The milestones of youth are shifting (CBS 2019). By the age of 24, half of young people had a permanent contract in the Netherlands in 2004. Ten years later, in 2014, the median for having a permanent contract has shifted to the age of 28. Similar age shifts occurred among young people in regard to their transitions to first property ownership. The median age for having a stable relationship and marriage also significantly increased (Van der Mooren 2015) in the same period. Some of this shift could be explained by a longer commitment to education. The median age for finishing their education and leaving the parental home also increased in that period. However, whether and to what degree economic uncertainty contributes to these shifting milestones still remains an open question.

1.4.2 The consequences of economic uncertainty on family formation

Parenthood is not only a costly endeavour but also a long-term commitment. Economic uncertainty can make long-term commitments in the private sphere less feasible, impeding the process of family formation (Blossfeld, Klijzing, Mills and Kurz 2006; Kalleberg 2018; Kalmijn 2011). It is a common belief that parenthood requires stable employment and most Dutch individuals believe it to be necessary (Loozen and Kloosterman 2019). This belief is especially pronounced among young people – 88 per cent of those aged 18–25 believe that standard employment is a necessary requirement for parenthood compared to 75 per cent of the total Dutch population (Loozen and Kloosterman 2019).

According to the economic approach, a breadwinner’s stable labour-market position will positively correlate with the likelihood of having children. While this approach

is, in principle, gender neutral, this expectation presumably applies mainly to men (Oppenheimer, Kalmijn and Lim 1997). This is due to the traditional division of paid and unpaid work within households in the Netherlands (Portegijs and Van den Brakel 2016). Consequently, the effect on family formation of women's engagement in the labour force would differ from that of men's employment (Blossfeld and Drobniç 2001; Chung 2019; Chung and van der Lippe 2020). However, this does not mean that the woman's employment does not matter. Full specialisation is a risky strategy for households in times of unstable marriages and growing economic inequality (Oppenheimer 1997). The adaptive family strategy in contemporary society would be that both partners are engaged in paid labour. Therefore, women usually remain active on the labour market and adapt their participation after becoming mothers, working fewer hours, opting for jobs with flexible hours or occupations that offer more flexibility (Chung and van der Lippe 2018). Waiting until a level of career maturity is reached – marked by having a certain amount of income or a permanent contract – before giving birth, could be a strategy with which to minimise the negative economic consequences of becoming a mother (Buckles 2008; Miller 2011; Taniguchi 1999; Wilde, Batchelder and Ellwood 2010). Therefore, women could also feel under pressure to secure their employment before they take maternity leave and experience a non-standard employment as an obstacle to motherhood.

1.4.3 The consequences of economic uncertainty on health

The realm of work is fundamental for one's wealth, well-being, social identity and health. The realms of health and work are interrelated and this relationship goes beyond the traditional statistics of work-related physical accidents and exposure to chemicals. '*The way the work is organized … can be as toxic or benign to the health of workers over time as the chemicals they breathe in the workplace air*' (Gordon and Schnall 2009: 1). The work pace, space or intensity, the control one has over one's work, job security and appreciation and the support received from the employer could account for how a person experiences employment. The major pathway along which the organisation of work can influence a person's health is through *chronic stress*. Stress is a process from within the individual, an internal biological or psychological process. However, the causes of stress could be internal and/or external. The literature on this issue refers to the 'work stressors', the sources of stress that come from the social work environment itself. While there is an extensive legislation on physical health hazards in the workplace, the social work environment has been somewhat invisible and the causes and consequences of work-related stress are often seen as a psychological problem of the individuals themselves (Gordon and Schnall 2009). Nevertheless, economic uncertainty has also been identified as a well-recognised determinant of poor health (Knabe and Rätzel 2011). Studies have found that non-standard employment is associated not only with higher mortality rates (Virtanen *et al*. 2003) but also with poor physical and mental health (Artazcoz, Benach, Borrell and Cortes 2004; Ferrie, Shipley, Marmot, Stansfeld and Smith 1995). Income insecurity and higher income volatility, job insecurity,

deficient training, lower job autonomy and a lack of prospects for promotion have been suggested as theoretical pathways through which non-standard employment can negatively impact on a person's health (Benach and Muntaner 2007).

1.5 The couple perspective

The individual effects of non-standard employment can be compensated by the institutional or household context. Social-security schemes can offer protection against situations such as unemployment and dismissals, thereby compensating for (some of) the economic uncertainty which employees may experience (Muffels and Luijkx 2008). Next to institutional settings, the household to which an individual belongs is a possible source of compensation for his or her economic uncertainty (Grotti and Scherer 2014). Romantic relationships are still a major source of economic and social support for individuals, with those in a partnership having lower poverty rates and being, on average, wealthier, healthier and happier than their single counterparts (Sándor and Clerici 2019; Simon 2002). Moreover, the growing number of dual-income households offers new possibilities for couples to cope with insecurities on the labour market (Bernasco, De Graaf and Ultee 1998; Blossfeld and Drobniç 2001; Verbakel and de Graaf 2008). As mentioned earlier, full specialisation is a risky strategy for households nowadays (Oppenheimer 1997). In contemporary society, for both partners to be engaged in paid labour has become a normality. Therefore, the negative consequences of individual economic uncertainty may be partly compensated by the household context (Grotti and Scherer 2014). First, it is possible that the economic uncertainty of one partner is compensated for by the more stable and secure position of the other. Second, the secure position of one partner can enable the other to accept a riskier labour-market position such as temporary employment or a lower-income job. Therefore, the demographic consequences of an uncertain labour-market career should be studied in the context of the household. Major decisions, such as buying a new property, getting married or having children, are generally made by both partners (Blossfeld *et al*. 2006; de Lange, Wolbers, Gesthuizen and Ultee 2014).

According to the economic approach, a successful partner would decrease the incentives for the other partner to strive for a higher status on the labour market (Bernardi 1999; Bernasco *et al*. 1998; Verbakel and de Graaf 2008). One can expend this argument to economic uncertainty in the form of non-standard employment. According to this approach, couples might compensate for each other's uncertainties. According to the social-capital approach, partners can influence each other positively by offering help and exchanging resources such as information and support (Lin, Ensel and Vaughn 1981; Verbakel and de Graaf 2008). This theoretical mechanism would lead to a concentration of uncertainties in households without the resources which partners can exchange. Interestingly, because both theoretical mechanisms could be valid at the same time, the effects could cancel each other out. This poses a

great challenge for partner-effects research. However, the question of compensation or concentration is a very important one, not only from an academic point of view but also for policy-makers. If the mechanism of positive partner effects dominates, this will result in a concentration of uncertainties within the household, the accumulation of which will affect the overall inequalities between the households. If the mechanism of compensation behaviour prevails, the inequality between the households will be weakened. The accumulation of economic uncertainty over a longer period of time can have severe consequences for the couple in question, for whom this can also have more serious social consequences in terms of, for example, the poverty trap, social exclusion and decreased well-being within relationships. In addition, the accumulation of insecurities due to long-term employment uncertainty within the relationship can have demographic consequences and influence the likelihood of family formation or divorce.

The above underlines the importance of the partners' employment situation: a non-working dependent partner is a less-common family arrangement – most have become dual-earner couples, making them dependent on both incomes. The Netherlands is known for having one of the highest female labour-market participation rates in the EU and also for having the highest share of women who work part-time (Eurostat n.d.). Part-time work is often seen as a precarious form of employment; however, in the Netherlands, part-time work is protected and accepted, especially for women. Even more so, employees all have the right to work part-time. Another feature of the Netherlands is the country's cautious attitude towards the full-time use of formal childcare (Portegijs *et al*. 2006) and its family policy favouring the traditional division of labour (Gash 2009). Not surprisingly, the 'one and a half earner' model with the male partner as a full-time earner and the female partner working part-time has become the norm in the Netherlands in recent decades (Dirven 2013; Verbakel and de Graaf 2009). Thus, the Dutch model constitutes a 'hybrid' model: both partners are engaged in paid labour but the male partner remains the primary earner. However, this hybrid model is also changing towards a more-even income distribution within couples: the share of women's income within Dutch couples is slowly increasing and this is true both before and after the first childbirth (Van den Brakel and Arts 2021; Van den Brakel, Gidding and Huynen 2018; Van der Put, Chkalova and van Gaalen 2019).

1.6 Overview of the empirical chapters

The possible effects of non-standard employment in the life course, as outlined in Sections 1.4 and 1.5, form the basis for my research questions in this thesis. What are the possible consequences of uncertain employment at the different stages of the life course? Does non-standard employment stand in the way of a steady relationship? Does it matter what the employment situation of one's partner is for one's own employment? Once settled with a partner, does non-standard employment

influence family formation? Finally, how does non-standard employment relate to health? These questions are very relevant but extremely difficult to answer without longitudinal data. The associations found through a cross-sectional approach are usually difficult to interpret. First, cross-sectional data conceal the individual dynamics of everyday life. In contrast, a longitudinal design enables researchers to measure the transitions which people make in their personal and working lives, rather than merely measuring a single state which people are in at a particular point in time. Moreover, it becomes possible to relate these dynamics to transitions which people and/or their partners make in other life domains. Second, the question of causation and selection emerges when interpreting cross-sectional associations: are people who do not want to have children more likely to choose non-standard employment relationships or are they unlikely to become parents precisely because of their non-standard employment? Are people in non-standard employment less healthy in the first place or does it lead to the deterioration of their health? Although selection and causation effects cannot be totally disentangled, using a longitudinal design will help to unravel a few more pieces in this difficult research puzzle and enhance our understanding of how economic uncertainty intervenes in everyday life.

This thesis addresses the outcomes of uncertainty in the life course using rich register data based on the System of Social Statistical Datasets or SSD (Bakker, van Rooijen and van Toor 2014) made available by Statistics Netherlands, the Dutch national statistical office (see Table 1.1). Three out of four of my empirical chapters (Chapters 2, 4 and 5) use a combination of survey data and SSD register data in order to further enrich the longitudinal register data. Chapters 2 and 4 a combination of the Labour Force Survey (LFS) and SSD. Chapter 5 uses SSD in combination with Lifelines, a prospective population-based study in the northern Netherlands which contains longitudinal health information.

1.6.1 Economic uncertainty and union formation: Does non-standard employment stand in the way of a steady romantic relationship?

Chapter 2, the first empirical chapter, examines how having non-standard employment influences union formation. A non-standard employment relationship may prevent individuals from cohabiting or getting married. However, it is also possible that uncertainty in the labour market is compensated for by seeking stability in one's personal life. Another angle explored in this chapter is the possibility that, due to relatively high wages and good career opportunities, the highly educated experience fewer negative consequences from economic uncertainty than the lesser educated. Moreover, the association between an uncertain labour-market position and union formation could change over time as non-standard employment becomes more normalised. The following research questions are addressed in this chapter:

- To what extent does the likelihood of cohabiting or getting married differ between self-employed, non-standard and standard workers?

- What trends can be observed in the relationship between its formation and economic uncertainty over the past 10 years?
- Does the observed relationship between its formation and economic uncertainty differ by education level?

Pooled LFS survey data over the period 2003–2015 were linked with SSD to conduct the analysis. Information about labour-market positions is obtained from the LFS and the demographic transitions were established one year after the LFS survey interview, using the SSD. In this analysis we are mainly interested in young people at the beginning of their demographic life careers. Therefore, an age restriction was applied of 18–45 years for men and 18–40 years for women.

First, the research population of single individuals was examined for their transition to cohabitation and marriage within one year of the observation in the LFS. Two logistic regression models have been estimated – one for men and one for women, with the transition to cohabitation as a dependent variable. For the analysis of the transition from cohabitation to marriage, all unmarried cohabiting partner relationships were selected as a unit of analysis. For this purpose, partner relationships were selected in which the two people were living together at the moment of the LFS interview but were not yet married and did not have a registered partnership. Cohabitants can get married, but a cohabitation relationship can also fail. Both outcomes, marriage and separation, can be influenced by economic uncertainty. Because the probabilities of different outcomes can interfere with each other, we applied multinomial logistic regression for the couple-level analyses, in which another possible outcome – 'separation' – is included in the model (the competing risk model). Additionally, an investigation of the differences by level of education was conducted.

The analysis showed that non-standard employment is negatively correlated with the transition to cohabitation, particularly among less-educated men and women. Once cohabiting, it is mainly the non-standard employment of the man that is negatively correlated with the transition to marriage. Thus, the negative relationship between non-standard employment and marriage is particularly prevalent among lesser-educated men. The design allowed me to investigate whether the effect of non-standard employment on union formation has changed over the last decade. No significant trends were found in the relationship between non-standard work and relationship formation. The fact that no trends were found means that non-standard work has remained equally important for relationship and family formation over the past decade. However, the incidence of non-standard work has grown quite considerably. The total impact of non-standard work on relationship formation has therefore increased.

1.6.2 The concentration and dynamics of economic uncertainty within partner relationships

The second empirical chapter examines the association of employment statuses within couples. A partner relationship is still seen as one of the main resources of economic and social support for individuals. The emergence of the dual-earner model offers partners the opportunity to compensate for the uncertain labour-market situation of one partner with the stable employment status of the other partner. Moreover, the labour-market position of one partner can encourage the other partner to take on less secure and more risky employment. The labour-market position of both partners can change over time, alleviating the uncertainty within the household, although this uncertainty can also last for a long time. Therefore, the dynamics of the concentration within the household over time are also examined in this chapter. Finally, the concentration of employment statuses within the household can vary by educational level. The lesser educated have a greater risk of unemployment and more often an irregular income and they experience more incidences of non-standard employment compared to the higher educated (OECD 2011). On the one hand, there would be more need for both partners to contribute to the household income among the low-skilled (Luxton and Corman 2001; McCall 2001), which could influence the association between the partners' employment statuses in a positive way. On the other hand, the lesser educated are known to have more traditional views on the division of paid and unpaid labour within partnerships (Liefbroer and Billari 2010), which could influence the association between their employment statuses in a negative way. Additionally, both effects could be valid simultaneously, thus cancelling each other out. The following research questions are addressed:

- What is the association between the employment statuses of partners and to what extent can this relationship be explained by homogamy and shared-restrictions mechanisms?
- Does the association of partners' employment statuses become weaker or stronger during the first years of the relationship?
- Which educational groups are affected to a greater extent by the concentration of economic uncertainty and how stable is this concentration during the first years of the relationship?

In order to measure the association within couples, a cohort of newly formed couples in 2006 was followed for nine years using the SSD. Multinomial regression models are estimated to measure the correlation between the different types of employment situation.

Both economic uncertainty and certainty within partner relationships seem to be clustered. A person with a partner with a non-standard contract has a greater likelihood of also having a non-standard employment. A partner with an uncertain employment lowers the chance of a permanent contract. This correlation between

the different employment statuses and contracts can only partly be explained by homogamy in education, age and migrant background status and by shared restrictions such as regional unemployment rates. The longer the relationship lasts, the less frequent is the combination of two non-standard contracts within the household. This is especially pronounced among highly educated couples. The same applies to the concentration of permanent contracts: mainly among higher-educated couples does the likelihood of two permanent contracts increase during the relationship. Moreover, the results indicate the accumulation of economic (un-)certainty within couples over time. The dynamic analysis implies that partners more often move on together to a permanent contract or more often remain together in an uncertain employment relationship. The former seems to be especially the case for the higher educated, the latter applying mainly to less educated couples.

1.6.3 The effects of men's and women's income and non-standard employment on couples' transition to parenthood

Despite the popularity of the idea, among demographers and sociologists, that economic uncertainty impedes fertility, mixed evidence for this notion has been found. This empirical Chapter 4 investigates the association between economic uncertainty and childbearing among Dutch couples. The following contributions are made to the existing literature. First, detailed information about the income and employment status of both partners is used in the analysis of fertility outcomes. Full specialisation is a risky strategy for households in times of unstable marriages and growing economic uncertainty (Oppenheimer 1994; Oppenheimer *et al*. 1997). As dual-earner families are becoming the norm, we investigate both partners simultaneously. Second, two indicators of economic uncertainty, personal income and employment status represent two separate dimensions of economic uncertainty: the present financial affordability (income) and the future income insecurity (non-standard employment) *vis-à-vis* a more social dimension of economic uncertainty. Third, by taking information about two partners simultaneously, it is possible to estimate whether and to what extent the effects of economic uncertainty differ for male and female partners. Fourth, the transitions into parenthood are analysed while treating union dissolution as a competing risk. Several authors have argued that economic problems in a union can lead to union instability (Poortman 2005) and that, if such effects exist, they can be seen as indirect ways in which uncertainty affects fertility (i.e. via postponement). As the rise of non-standard employment and the decline in fertility are especially pronounced in the Netherlands (OECD 2019), a closer look at the transition into parenthood in relation to economic uncertainty in this country could provide valuable insights into a better understanding of broader European demographic trends.

To study this association, multinomial logit models were estimated using a combination of the pooled LFS and SSD register data from Statistics Netherlands. Two indicators of economic uncertainty – the personal income and employment

status – are used. These indicators represent two separate dimensions of economic uncertainty: the present financial affordability and the future income and employment insecurity concerning a more social dimension of economic uncertainty. The information about two partners simultaneously could be used to estimate whether the effects of economic uncertainty are gendered.

The main finding is that the economic uncertainty of men and women affects fertility in different ways. The non-standard employment of men has no effect on fertility, whereas men's lower incomes reduce the likelihood of becoming a parent. Men are still the main providers within the household and the woman's income is generally of lesser importance. For women, both non-standard employment and a lower income impede childbearing. Women usually adapt their labour participation after becoming mothers: working fewer hours, opting for jobs with adaptable hours or occupations that offer more autonomy in when and where to work are often viable strategies for women who try to combine working and family life. Rearranging their employment from the secure situation of having a permanent job gives Dutch women the possibility to match whatever preferences they have regarding their employment and working hours with the actual needs of the family. This does not apply to men, as full-time employment for men is still the default, regardless of their parenthood status. Hence, men's future employment security seems to be relatively unimportant in the transition to parenthood. In addition, the employment uncertainty of men and women in the form of unemployment and non-standard employment correlates strongly with the risk of separation, which can be seen as an indirect negative effect on fertility as well.

1.6.4 Employment uncertainty and health: A longitudinal analysis in the Netherlands

The final empirical chapter, Chapter 5, investigates the relationship between employment uncertainty and health. Research suggests that non-standard employment could affect health to the same extent (Kim and von dem Knesebeck 2015) or even more severely (Burgard *et al.* 2009) than actual unemployment. Studies have found that non-standard employment is associated with higher mortality rates (Virtanen *et al*. 2003) as well as with poor physical and mental health (Artazcoz *et al*. 2004; Ferrie *et al*. 1995). This association could reflect a causal relationship. However, workers in precarious employment situations could also be a selective group of people with health problems. If such people are less likely to obtain secure employment (i.e., reverse causality), this could also explain the observed association.

The contribution of this paper is threefold. First, we distinguish between different working arrangements such as non-standard contracts, standard contracts and non-employment. Second, using a unique combination of longitudinal data, we enhance our understanding regarding selection and causation mechanisms in the relationship

between health and non-standard employment. Third, we test the relationship between the health and the employment situation by using subjective and objective health indicators.

A combination of longitudinal health panel data LifeLines and SSD was used to investigate both non-standard employment and health effects. We selected according to age (20–65 years) during the research period and excluded both those enrolled in education and retirees, as we were solely interested in how health is related to employment among those who are potentially fully available in the labour market. Several subjective and objective health measures were used: seven types of prescribed medication and the Symptom Checklist-90 somatisation scale. The information on prescribed medication originates from the SSD. The indicators of prescribed medication show little change over time and we do not expect the indicators to promptly react to work uncertainty. To measure more immediate health changes, we use a subjective measure of health, the Symptom Checklist-90 somatisation scale (Zijlema, Stolk, Löwe, Rief, White and Rosmalen 2013). This information was obtained from LifeLines questionnaires. Two sets of models were estimated. Evidence for the selection mechanism is sought by estimating the effects of health at one point in time on transitions in the labour market after that point. *Vice versa*, evidence for causal mechanisms is sought by estimating employment effects on the subsequent transitions in health status. A caveat is that, even in this longitudinal design, 'causal' effects can be biased if people with negative health trajectories self-select into uncertain employment.

The results suggest that the association between non-standard employment and health is driven mainly by selection mechanisms. The relationship between non-employment and health seems to be driven by both selection and causal mechanisms. These findings suggest that being in non-standard employment does not appear to yield the same health consequences as non-employment in the Netherlands. However, the selection of healthier persons into standard employment suggests that non-standard employees with poorer mental health are trapped in downward trajectories with subsequent negative health outcomes. This evidence underlines the importance of employment for health outcomes and provides more evidence for a causal relationship between these two indicators.

1.7 Conclusions, limitations and implications

1.7.1 General conclusion

This thesis seeks to broaden our knowledge of the possible consequences of economic uncertainty in the different stages of the life course. Non-standard employment does intervene in the personal lives of individuals, although not everyone is evenly affected by it.

First, employment uncertainty, particularly among the less educated, is negatively correlated with a transition to cohabitation. Romantic relationships are still a major source of economic and social support for individuals and union formation is an important step in the transition to adulthood. Cohabitation is often a stepping-stone to further life events such as marriage and parenthood. More life domains could also be affected by the lack of a cohabiting partner. For example, having a partner could also have become a prerequisite to home ownership – property prices continue to rise in the Netherlands, making acquiring a residence solely on one income quite difficult (De Hypotheker 2021). Partnered, cohabiting individuals have lower poverty rates and are, on average, wealthier and report greater well-being than their single counterparts (Sándor and Clerici 2019; Simon 2002; Soons and Liefbroer 2008); however, there is the on-going debate on whether and how marriage and cohabitation contribute to general well-being and health (Kalmijn 2017).

Uncertain work arrangements seem to stand in the way of a steady partner relationship, especially among the less-educated – the already vulnerable group that is the most in need of the socioeconomic support a cohabiting union can offer. Due to relatively high wages and good career opportunities, the highly educated suffer less from economic uncertainty than the lesser educated when it comes to union formation. Higher educational levels are associated with better outcomes in future careers in terms of income (Matthijssen 2021) and in terms of transition into standard employment (Dekker 2009). The assessment of a person's long-term prospects in the labour market remains important in determining whether or not s/he is a good life partner. Non-standard employment, in combination with a lower educational attainment, seems to be signalling uncertainty, thus placing less-educated young men on the margins of the relationship and marriage market.

Economic uncertainty seems to be clustered within cohabiting couples. The hypothesis of compensation within the households is not confirmed, indicating that there is little room for compensation between partners. There is a clear age effect: the longer the relationship lasts, the less frequent the situation of uncertainty occurs, as many young couples manage to transit to a more stable economic situation. For them, non-standard employment has served as a stepping-stone to a more secure position on the labour market. However, it is mainly the higher educated who manage to achieve greater economic certainty during their relationship. Similar trends are found for the concentration of permanent contracts: the likelihood of two permanent contracts increases during the relationship mainly among higher-educated couples. This implies the accumulation of economic uncertainty, especially among lesser-educated couples. While the share of the lesser educated is shrinking among the general population, this group has been disproportionally hit by the rising economic uncertainty. Moreover, as they are less likely to improve their situation, they are at greater risk of experiencing long-lasting economic uncertainty. Again, uncertain work arrangements seem only to affect the already vulnerable group that

is the most in need of profiting from the compensation of socio-economic uncertainty within the household.

Overcoming the obstacles which economic uncertainty creates for union formation, it becomes obvious that this uncertainty also seems to stand in the way of people becoming parents. When confronted with non-standard employment, women tend to forgo the transition to parenthood, especially when in their 20s. Above a certain age, the economic uncertainty no longer seems to matter. Still, from the calculations of the effects of economic uncertainty on total fertility in the Netherlands in the last decade, a share of the decrease in the total fertility rate in that period could be contributed to economic uncertainty (van Wijk and Chkalova 2020). While many other factors can also explain the fertility drop, economic uncertainty among young women does seem to play a role. For women, having a child when temporarily employed could decrease the likelihood of them getting a permanent contract. Hence, women could feel more pressure to secure their employment before they take up maternity leave. By keeping a foot in the door of the labour market in the form of standard employment, women can plan their pregnancy, have a child, reassess the situation and adjust their employment accordingly. Rearranging the employment from a secure situation of having a permanent job gives Dutch women the possibility to match whatever preferences they have regarding their employment and working hours with the actual needs of the family. This does not apply to men, as full-time employment for them is still the default, regardless of their parental status. If necessary, men can keep working during their partner's pregnancy and shortly after the child is born. Hence, men's future employment uncertainty seems to be relatively unimportant in the transition to parenthood.

This thesis also provides a comprehensive empirical description of the relationship between health and employment in the Netherlands. No significant non-standard employment effects were found on the transition to ill health. However, we found positive effects of health on the transition from standard to non-standard employment. The results suggest that the association between non-standard employment and health is driven mainly by selection mechanisms. The relationship between non-employment and health seems to be driven by both selection and causal mechanisms. These findings suggest that being in non-standard employment does not seem to yield the same health consequences as non-employment in the Netherlands. However, the selection of healthier persons into standard employment suggests that non-standard employees with poorer mental health are trapped in downward trajectories with subsequent negative health outcomes.

To sum up, this research shows that uncertain employment can have consequences for couples and individuals during the life course. Some effects are direct, such as effects on childbearing, while some effects seem to be only indirect, such as the selection mechanism of healthy persons into standard employment. Nevertheless, economic uncertainty seems to permeate deeply into people's personal lives,

influencing various life domains. Moreover, this thesis provides strong evidence that economic uncertainty affects the various demographic groups differently during the life course. More specifically, the effects of non-standard employment investigated in this thesis vary strongly by gender and by level of education.

1.7.2 Limitations and suggestions for further research

In this thesis, a regular and broader definition of non-standard employment is applied. However, there is a strong correlation between employment type and the experience of job insecurity. Therefore, it will be useful to take these different work arrangements into account in future research. One limitation in this thesis is the lack of a macro-economic perspective. De Lange *et al*. (2014) showed that the macro-economic situation does affect youth in their family formation behaviour and that it is not channelled through the individual situation. While all empirical studies in this thesis account for the period effects, more attention could be given in the future to the interplay of micro and macro effects. Moreover, this study has been conducted in the Dutch context, making the generalisation of the results difficult, as the cultural and institutional context can mitigate or intensify the effects of economic uncertainty (Muffels and Luijkx 2008).

When it comes to the association of employment statuses, more research can be done on the dynamics of the labour-market involvement of both partners and the interplay between them. Although the research presented here is extensive, many research questions remained unanswered – for example, the strength of the correlation during the relationship remains unexplored and the possible partner effects remain unaddressed. It is still unknown how partners adjust their labour-market behaviour as a reaction to the uncertainty of the other partner. How does one partner's employment status affect the mobility of the other partner? Mapping these mechanisms could provide us with clues to how the accumulation of uncertainty within the household occurs. Moreover, long-lasting exposure to economic uncertainty could subsequently affect other life realms, reducing welfare and general well-being among specific groups and increasing the inequality between households. It is important for policymakers and politicians to be aware of the existing inequalities and the mechanisms that could reinforce these inequalities, while introducing policies focused on economic uncertainty.

When it comes to the relationship between non-standard employment and union and family formation, there are discrepancies in the results in previous research (Auer and Danzer 2015; Barbieri, Bozzon, Scherer, Grotti and Lugo 2015; de Lange *et al*. 2014; de la Rica and Iza 2005; Golsch 2003; Kreyenfeld, Andersson, and Pailhé 2012; Laß 2020; Liefbroer 2005; van Wijk 2021). Hence, more research is needed to explain the different outcomes in these empirical studies – and especially in the Dutch context (de Lange *et al*. 2014; Liefbroer 2005; Van Wijk, de Valk and Liefbroer 2021). This thesis contributes to previous research by showing that

economic uncertainty in its different facets (i.e., income and non-standard employment) has varying effects on the different demographic groups in the Dutch context. This could explain the conflicting empirical outcomes. However, the meta-analysis would also be useful to extend our knowledge of the statistical association between non-standard employment and the subsequent life transition – is the effect real in certain contexts? Moreover, more research on which theoretical mechanisms drive this association could also contribute to explaining the conflicting results.

As for understanding how inequalities are formed, other vulnerable groups and minorities also deserve more attention from researchers and policymakers. The incidence of non-standard employment is traditionally more common among immigrants and persons with a migration background; however, these groups have not been addressed in this thesis. Given the vulnerability of this group and the higher incidence of non-standard employment among them, it would be advisable for future research to map the consequences of non-standard employment on the life course of these specific groups. In the same way, other vulnerable groups on the labour market, such as the disabled (or partially disabled) and incapacitated, could deserve special attention from researchers when it comes to the consequences of non-standard employment on the further life courses of these individuals.

The findings on the selection of healthier persons in standard employment could have important implications in the light of the Covid-19 pandemic. The total health consequences of the pandemic are still unclear. A growing body of literature is already forming on the so-called post-Covid syndrome (Ballering, van Zon, Olde Hartman, Rosmalen 2022; Jamoulle, Kazeneza-Mugisha and Zayane 2022; Mikkelsen *et al*. 2022). If substantially more working individuals are dealing with long-term illnesses which prohibit them from entering standard employment, the implications of this mechanism for inequalities within Dutch society could turn out to be substantial. However, current labour-market shortages in the Netherlands could temper these negative consequences. Employers cannot afford to be too picky under current labour-market conditions. The Dutch labour market experiences this historical labour-market shortage in 2022, with all professional groups being affected (UVW 2022). This provides an opportunity for policymakers to promote and facilitate the employment of less-healthy individuals. Moreover, with health being an important selection instrument for employers, these latter could be more submissive to health promotion and unhealthy behaviour prevention campaigns in this post-pandemic time of worker shortages.

Another implication of this study is the possibility of spill-over effects. Long-lasting uncertainty could indirectly affect other family members and hence seep beyond the couple perspective. Children growing up in households experiencing long-lasting economic uncertainty could be affected by the stress it implies, influencing their quality time with their parents (Bøe, Sivertsen, Heiervang, Goodman, Lundervold, *et al*. 2014; Leinonen, Solantaus and Punamäki 2002) and the emotional and material

support which affected parents are able to give. Alternatively, the parents of the individuals under economic pressure could be confronted with dependent children for a longer periods of time, as economic uncertainty could delay the transition to adulthood. The growing number of so-called 'boomerang children' in the Netherlands could very well be partly driven by the rising economic uncertainty among young people (Wobma and de Graaf 2010).

Another important issue that needs to be considered is that of selection and causation. Individuals are not randomly put into non-standard employment. The final chapter in this thesis – Chapter 5 –contributes to the discussion on selection and causation concerning the relationship between non-standard work and health. The results indicate that the association between non-standard employment and health is driven mainly by selection mechanisms. In theory, selection mechanisms could also drive the association between union and family formation and non-standard employment. More longitudinal studies with an emphasis on selection and causation mechanisms would be useful in this regard. Moreover, future longitudinal analyses could shed further light on the role which economic uncertainty plays in the different life-course phases and demographic outcomes and could advance our understanding of the total impact of economic uncertainty during the transition to adulthood.

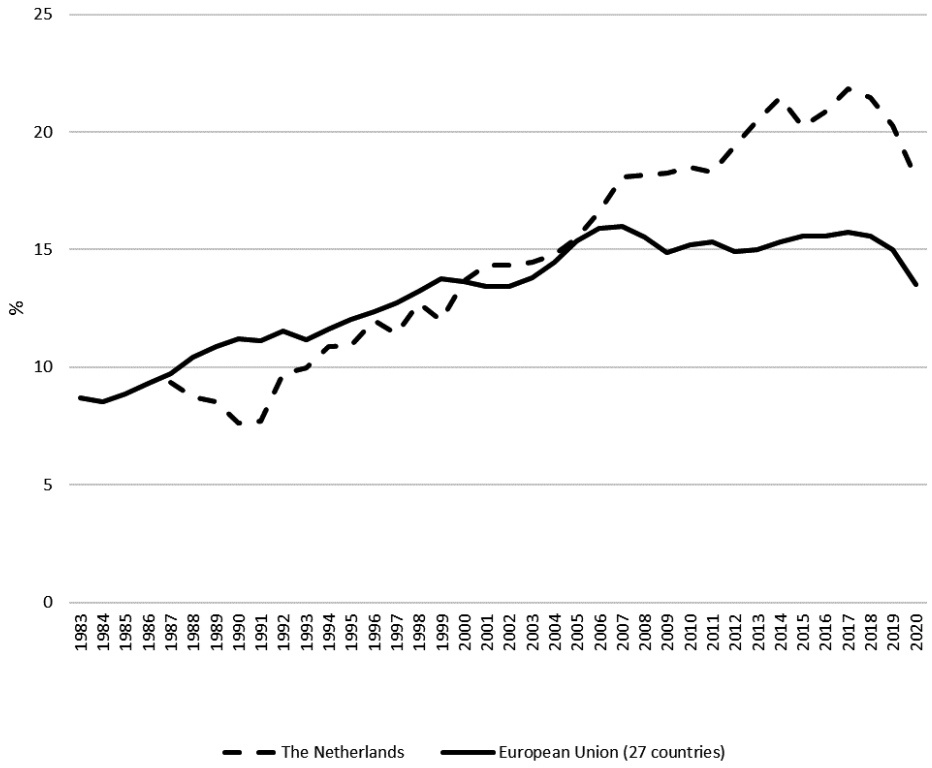
1.8 Tables and figures

Table 1.1 Overview of empirical chapters

	Research question	Main independent variable	Dependent variable	Data sources	Methodology
Chapter 2	What is the association between the employment status and transition to cohabitation and marriage?	Employment status, gender, educational level	Transition to cohabitation and marriage	System of Social-statistical Datasets in combination with Labour Force Survey (LFS)	logit & multinomial logit models
Chapter 3	What is the association of employment status within couples?	Employment status partner #2, educational level both partners	Empoloyment status partner #1	System of Social-statistical Datasets	multinomial logit models
Chapter 4	What is the association between employment status, income and the transition to parenthood?	Employment status, gender, income	Transition to parenthood	System of Social-statistical Datasets in combination with Labour Force Survey (LFS)	multinomial logit models
Chapter 5	What are the selection and causation mechanisms in the relationship between health and non-standard employment?	Employment status or seven types of prescribed medication and the Symptom Checklist-90 somatization scale	Transitions in the labour market & transitions in health status	System of Social-statistical Datasets in combination with Lifelines	multinomial logit models

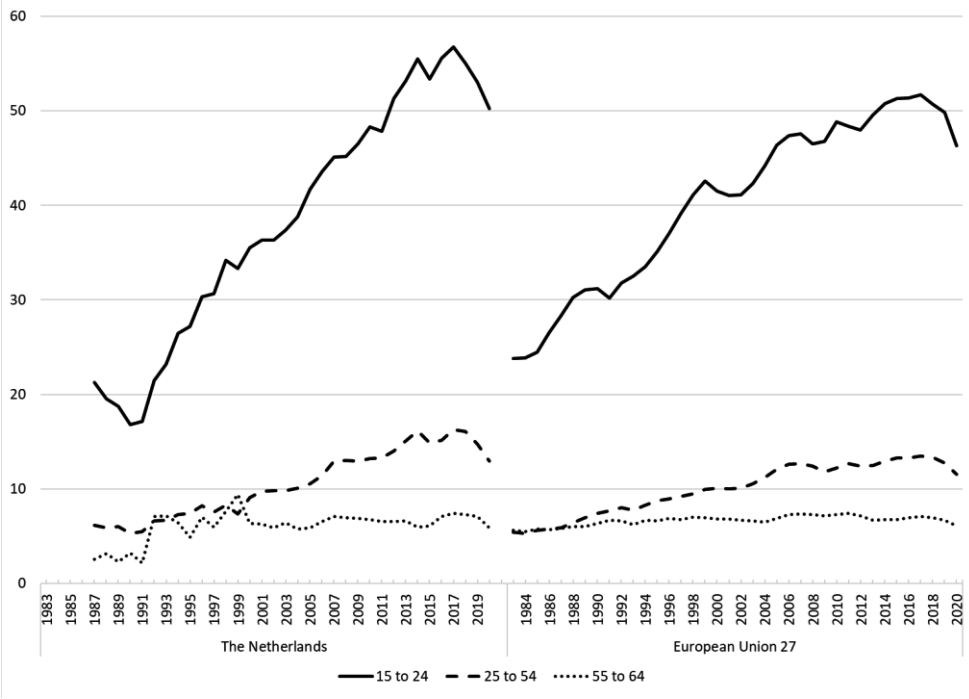
Source: the author

Figure 1.1 Share of temporary employment in total dependent employment 1983–2020, total



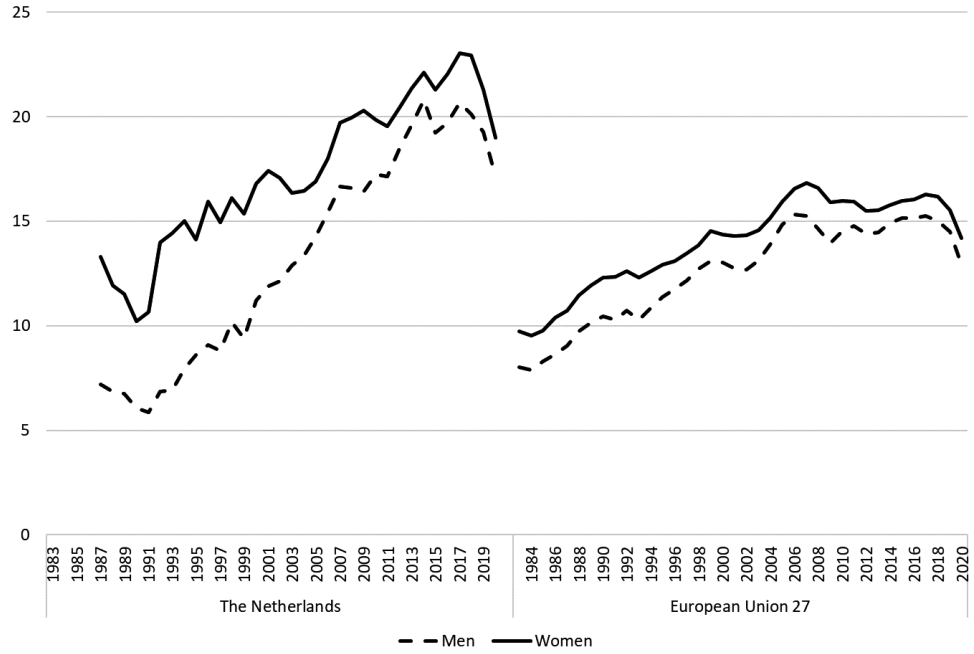
Source: OECD

Figure 1.2 Share of temporary employment in total dependent employment 1983 2020, by age group



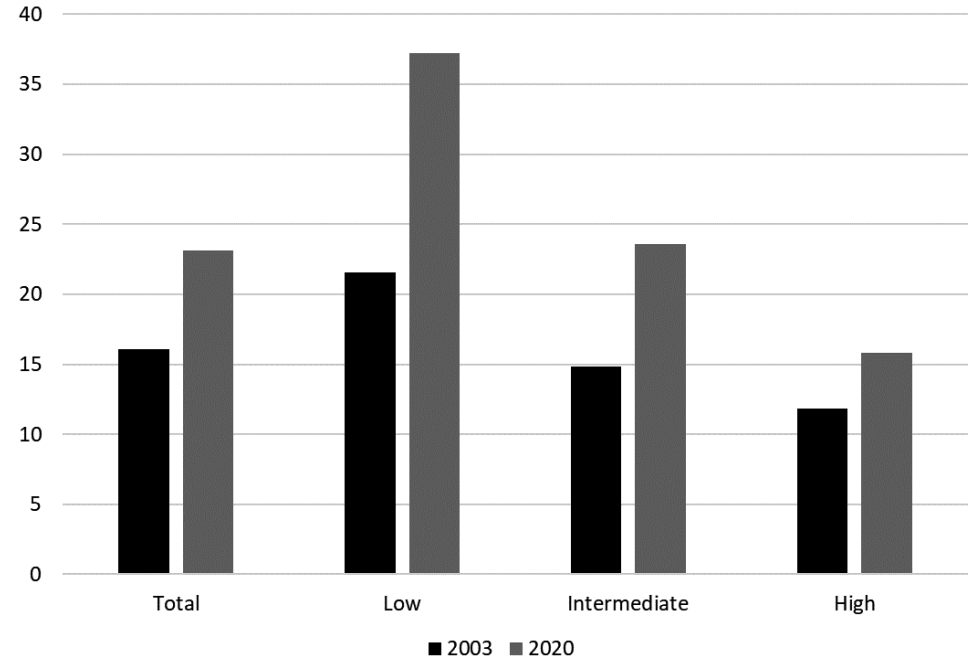
Source: OECD

Figure 1.3 Share of temporary employment in total dependent employment 1983–2020, by gender



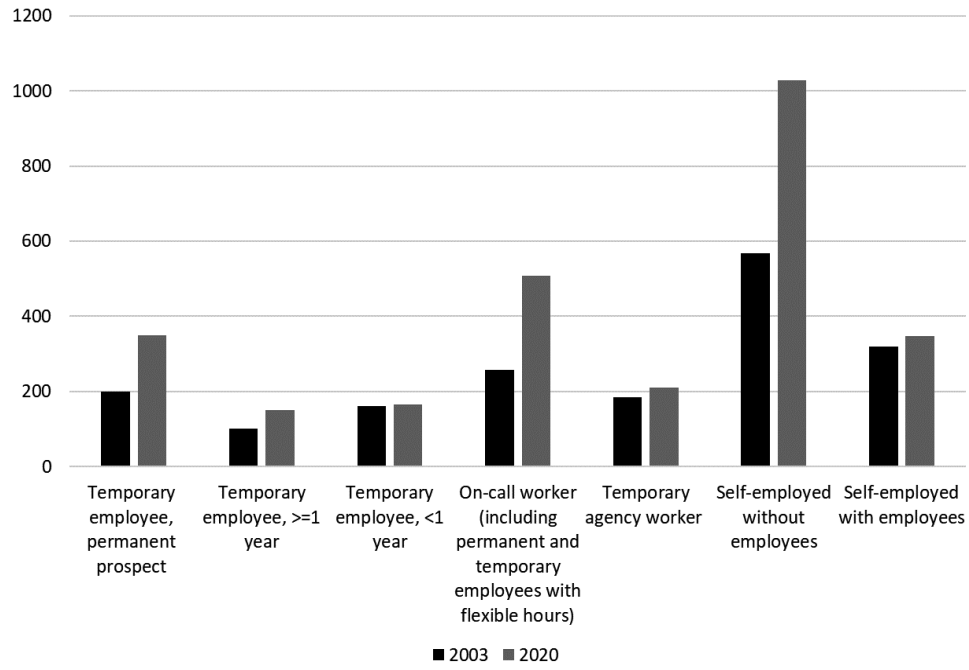
Source: OECD

Figure 1.4 Share of temporary employment in total dependent employment 2003–2019, by attained educational level, age group 15–75 years



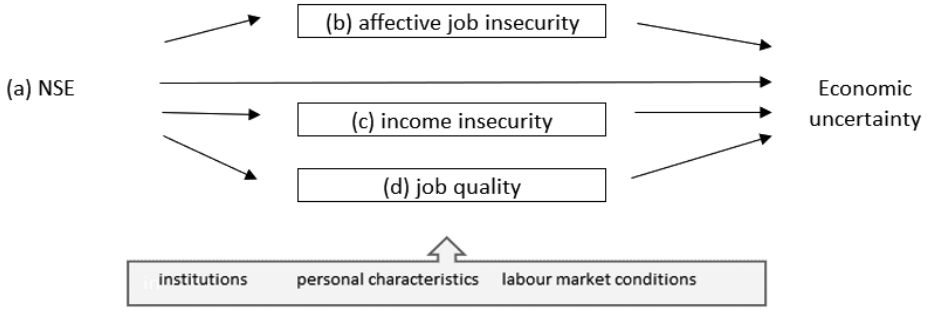
Source: CBS

Figure 1.5 Non-standard employment by employment type in 2003 and 2020, age group 15–75



Source: CBS

Figure 1.6 Theoretical model of economic uncertainty



Source: the author

2. Economic uncertainty and union formation: Does non-standard employment stand in the way of a steady romantic relationship?*

This chapter examines how having an uncertain labour-market position influences relationship formation. The analyses show that employment uncertainty, particularly among less-educated men and women, is negatively correlated with the transition to cohabitation. Once cohabiting, it is mainly the uncertain position of the man that is negatively correlated with the transition to marriage. The negative relationship between employment uncertainty and marriage is particularly prevalent among lesser-educated men. Non-standard employment does seem to stand in the way of a steady partnership among the less educated.

2.1 Introduction

The Dutch labour market has become highly flexible in recent years. The number of self-employed and employees with a non-standard employment has increased sharply in the Netherlands in a short period of time (Kösters and Smits 2015). As a result, the number of workers with relatively high job and income uncertainty has also increased. The negative impact of non-standard employment relationships on the careers of low-skilled and young workers is well documented. On average, they have lower wages, fewer training opportunities and a greater risk of unemployment compared to employees with permanent contracts (Giesecke and Groß 2003; Mertens, Gash and McGinnity 2007; OECD 2002). Because people with a non-standard employment relationship experience more uncertainty compared to workers with permanent contracts (Chkalova, Goudswaard, Sanders and Smits 2015; van Gaalen, Goudswaard, Sanders and Smits 2013), it is conceivable that their choices regarding relationship formation differ from those with a permanent employment contract. A non-standard employment relationship may prevent individuals from cohabiting or from getting married. For example, the lack of a permanent contract makes it more difficult to find a (larger and/or more expensive) residence. However, it is also possible that uncertainty on the labour market is compensated for by seeking stability in one's personal life. It is also possible that, due to their relatively high wages and good career opportunities, the highly educated suffer less from economic uncertainty than the lesser educated. In short, in view of the increasing share of non-standard employment, it is relevant to examine its possible consequences on

* Chapter 2 is translated from previously published work: Chkalova, K., & van Gaalen, R. (2017). Staat een flexibele arbeidsrelatie een vaste partnerrelatie in de weg? Tijdschrift voor Arbeidsvraagstukken, 33(3), 342-359. https://www.tijdschriftvoorarbeidsvraagstukken.nl/inhoud/tijdschrift_artikel/TA-33-3-10/Staateen-flexibele-arbeidsrelatie-een-vaste-partnerrelatie-in-de-weg

relationship formation for different groups as a part of the documentation of a broader social consequence of flexibilisation.

The emphasis in this research lies mainly on the possible differences by educational level and investigation of the trends. The following research questions are being addressed:

- To what extent do the chances of cohabiting or getting married differ between the self-employed, non-standard workers and employees with a permanent contract?
- What trends can be observed in the relationship between relationship formation and economic uncertainty over the past 10 years?
- Does this relationship differ by educational level?

2.2 Theoretical background

Individuals with a non-standard employment relationship have a less-stable basis on the labour market and this can hinder relationship formation. First, this section explains why non-standard employment is associated with uncertainty. Subsequently, the possible consequences of economic uncertainty for relationship formation are discussed.

2.2.1 Non-standard employment and economic uncertainty

Non-standard employment can create uncertainty in several ways. People in non-standard employment are at greater risk of job loss (Bierings, Kooiman and de Vries 2015). This means greater job insecurity for non-standard employees and a subsequent greater income insecurity in the longer term. In addition, non-standard workers have fewer schooling and training opportunities (Arulampalam and Booth 2004; Fouarge *et al*. 2012; Van Wijk, Klein Hesselink, Verbiest, Kooij-de Bode and Goudswaard 2013) and receive lower wages (Amuedo-Dorantes and Serrano-Padial 2007; Hagen 2002). A growing number of studies confirm that non-standard employment has long-term negative consequences for a person's future career (Gebel 2009; Scherer 2005; Steijn, Need and Gesthuizen 2006). This can create greater uncertainty about the prospects on the labour market for non-standard workers compared to employees with permanent contracts.

The self-employed who do not have employees also have to deal with greater uncertainty than permanent employees. First, their income is, on average, lower (CBS 2016a). In addition, they experience more income volatility. Once unemployed or disabled, they are less entitled to receive social benefits compared to employees who are automatically enrolled in unemployment and disability schemes. The self-employed must be insured through private schemes although, in practice, this is only

done to a very limited extent (CBS 2016b). This creates greater job and income uncertainty for the self-employed, who therefore indicate that they are more often concerned about the future compared to employees (Hooftman *et al*. 2018; Janssen, Torre, De Vroome, Mol, Janssen *et al*. 2015). Self-employed persons with employees are even more concerned about the future although, financially, they have a significantly better position. Their average income is higher than that of the self-employed without employees and also slightly higher than that of permanent employees. Self-employed persons with employees are also more often insured against disability and unemployment and have, on average, a greater capacity to absorb economic setbacks (CBS 2016b).

The self-employed both with and without employees could differ from non-standard employees in how they experience uncertainty. For the self-employed who, on average, value their independence and freedom, a certain degree of uncertainty is often a very conscious choice. For example, the majority of all non-standard workers indicate that they prefer a permanent contract, while most self-employed and freelancers are satisfied with their position as self-employed (Hooftman *et al*. 2018; Janssen *et al*. 2015). At the same time, the self-employed are liable to greater (financial) risks than people who work in paid employment.

2.2.2 The economic approach

Financial buffers – or having certain, highly sought after competences – can offer economic certainty. A stable income in the form of a permanent contract can also constitute a form of financial basis for the household. This economic certainty is considered as attractive by potential partners (Becker 1991) and will increase the likelihood of cohabitation and marriage. The assumption here is that partners only marry or cohabit if there is a stable financial basis on which to build and maintain the household. Non-standard work implies uncertainty and can therefore prevent young people from entering into the obligations that come with forming a relationship (Mills *et al*. 2006). The hypotheses discussed below are refinements of the general proposition that economic uncertainty in the form of non-standard work stands in the way of a steady partner relationship. It is argued, for example, that men in particular (and not women) will be affected by economic uncertainty. The so-called uncertainty thesis is based on economic theory but states that the consequences will be different for the probability of cohabitation than for the probability of marriage because the former relationships are more non-committal than the latter. It is also expected that the effect of economic uncertainty in the form of non-standard employment will be different for higher- than for lesser-educated individuals and that the effect will vary during the study period.

2.2.3 The uncertainty thesis

According to Oppenheimer (1994), it has become increasingly difficult to make a good assessment of a person's perspectives on the labour market, especially at the beginning of his or her career. Work patterns nowadays are more erratic and unpredictable; young people in particular are faced with economic uncertainty to a greater extent (Blossfeld *et al*. 2006). However, the assessment of a person's long-term prospects on the labour market remains crucial in determining whether he or she is a suitable life partner. In this regard, a cohabitation relationship can act as a trial period (Bumpass, Sweet and Cherlin 1991). For example, cohabiting partners can collect more information about each other before they engage in a serious relationship with greater obligations – such as getting married and having children. As a result, an uncertain situation will not hinder anyone from entering a cohabitation relationship. Another mechanism may relate to people who are less attractive as partners because of their economically uncertain position but who still want to enjoy the benefits of cohabitation (Kalmijn 2011). In this case, the uncertain situation of one or both partners will not hinder the likelihood of them living together. This mechanism mainly applies to expectations about the formation of cohabitation relationships and much less, if at all, to the probability of getting married.

Hypothesis 1a: Individuals in an uncertain employment position have an equal likelihood of cohabiting compared to individuals in a permanent employment relationship.

Hypothesis 1b: Individuals in an uncertain employment position have a lower likelihood of getting married compared to individuals in a permanent employment relationship.

There is support in the literature for the uncertainty thesis when it comes to cohabitation. Additionally, support has been found for the male breadwinner thesis when it comes to the likelihood of getting married. Kalmijn (2011), for example, has examined the insecure position of men in Europe. Specifically for temporary work, this study found no effects on the likelihood of cohabiting. However, workers with a temporary contract more often were more often cohabiting than married. Other studies also found that economic uncertainty barely affects the likelihood of couples living together (Liefbroer 2005). A study by de Lange *et al*. (2014), that specifically looked at the Dutch situation, reported no effect of the type of contract on the likelihood of cohabitation for men. In addition, a negative effect for men with a temporary contract was found when it comes to entering marriage. This outcome is also in line with our expectations.

2.2.4 Specialisation, the male breadwinner and the uncertainty reduction thesis

According to the economic approach, the moment a household is formed, the partners pool their resources and capacities in order to organise the household as efficiently as possible. The greatest advantage is gained by (complete) specialisation: one partner is engaged in paid work, the other partner specialises in domestic work (Becker 1991). Specialisation would not only be the most efficient strategy when maximising household utility, but it would also create interdependence between the partners. According to this theory, the stable labour-market position of the breadwinner would positively correlate with the likelihood of living with his or her partner and of getting married (and having children). While this approach is gender-neutral in principle, this expectation presumably applies mainly to men (Oppenheimer *et al*. 1997). Despite the fact that woman have evened up the score considerably when it comes to labour-market commitment, the division of paid and unpaid work within households is still quite traditional in the Netherlands (Portegijs and van den Brakel 2016). As a result, we can expect that women will be less inclined to specialise in paid work than men (the male breadwinner thesis).

Another related theoretical approach is the uncertainty reduction theory (Friedman, Hechter and Kanazawa 1994), according to which people will always try to reduce uncertainty. Women do this, for example, by choosing an alternative career as a mother and/or housewife, a role that is socially and culturally accepted among women. According to this theory, women with few labour-market prospects will tend to marry (and have children) more often in order to gain structure and certainty in an otherwise uncertain life course.

Hypothesis 2: Men (and not women), in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.

2.2.5 The educational level

The hypotheses above may apply to a greater or lesser extent to highly or lesser-educated individuals. Increased uncertainty on the labour market has mainly affected the low-skilled, less-educated workers. This group has a greater incidence of unemployment and of having an uncertain employment relationship and an irregular income compared to higher educated workers (OECD 2011). Therefore, there is a greater economic necessity among less-educated couples for both partners to contribute to the household income (Luxton and Corman 2001; McCall 2001). From an economic perspective, it can therefore be expected that higher-educated couples will have more (financial) room for specialisation. However, the highest level of education attained is not only related to income but is also related to differences of opinions and attitudes about the division of labour within the partnership (Liefbroer and Billari 2010). The higher educated will probably strive for a more modern and

thus more equal division of work and care compared to the lesser educated. This would actually reduce the likelihood of specialisation among those with a higher level of education. Moreover, we expect that variation according to educational level differs between men and women. In particular, higher educated women, who strive for a more equal division of work and care, are expected to be more sensitive to their own economic uncertainty. In addition, we expect that lesser-educated men will suffer the greatest disadvantage from an uncertain career due to a lower income and greater socio-cultural pressure in fulfilling breadwinner role.

Hypothesis 3a: Lesser-educated men, in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.

Hypothesis 3b: Higher-educated women, in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.

2.2.6 Trends

Increasingly more individuals are faced with a non-standard employment relationship or start their career as self-employed. Fewer workers have managed to obtain a permanent contract in recent decades. Because having a permanent contract was more common at the beginning of this century, a non-standard labour-market relationship could be accompanied by greater perceived uncertainty then. In recent years, having a non-standard employment relationship has become more common – one in three workers is employed on a non-standard basis. Therefore, it is quite conceivable that non-standard work is often more easily accepted as a stable labour-market position nowadays and is less often experienced as uncertain compared to earlier this century.

Hypothesis 4a: The negative effect of an uncertain employment position on the likelihood of cohabitation or marriage will weaken in the more recent periods.

The woman's income – and the certainty of it – has become increasingly important within the household (Kreyenfeld *et al*. 2012). Therefore, it is plausible to expect that the possible negative effects of women's economic uncertainty will be more pronounced in the more recent periods.

Hypothesis 4b: Women with a non-standard employment relationship will have a lesser likelihood of cohabiting and marrying compared to women with a permanent employment relationship. This will be more pronounced in the more recent periods.

2.3 Data and methods

The combination of datasets from the Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands (Bakker *et al*. 2014) are used to answer the research questions in this chapter. Information about labour-market positions is obtained from the LFS, whereby it is possible to distinguish between employees with a permanent and a non-standard employment relationship, and self-employed persons with and without employees. Demographic transitions were established one year after the LFS interviews using the SSD. LFS surveys were pooled over the period 2003–2015, allowing investigation of the trends.

As mentioned earlier, income uncertainty is one of the aspects that can explain the correlation between non-standard employment relationships and economic uncertainty. Workers with a non-standard employment relationship earn less and more often have an irregular income. A higher income can also offer guarantees because it enables the building of buffers to absorb economic setbacks. This means that a higher income can compensate for uncertainty. Therefore, we control for the level of personal income in the analysis. The period from 2003–2015 has been chosen because data on personal incomes are only available from then.

The variable of interest in this study, economic uncertainty, is captured in several categories:

- a standard (permanent) contract
- a non-standard employment relationship (temporary contracts, on-call and temporary workers)
- the self-employed without employees
- the self-employed with employees
- the unemployed and
- the non-active.

The basis for information about partnerships is the Personal Records Database, which contains information about marriages and registered partnerships. However, the information on unmarried cohabitants without a registered partnership is not directly available. To determine whether two cohabiting people form a partnership, it is necessary to examine, among other things, whether there is a family relationship (e.g., a brother–sister or mother–son relationship) and whether both partners are registered as tax partners. Cohabitants are classified as cohabiting partners only when a series of conditions are met.

In this analysis we are mainly interested in young couples, at the beginning of their careers. Therefore, an age restriction of 18 to 45 years for men and 18 to 40 years for women was applied for the analysis. Because the dynamics within same-sex

couples deserve a specific theoretical approach, only heterosexual couples were selected. Persons who died within one year of the LFS interview are also excluded.

2.3.1 The transition to cohabitation

The research population of single individuals was examined for transitions to cohabitation and marriage within one year after the observation in the LFS. For this analysis, married and unmarried cohabitation has been combined, as we are only interested in the transition of people from being single to running a joint household. About 1.5 per cent of single men and women who experienced the transition to cohabitation also immediately got married. A few single people who were married a year later and who did not live at the same address as their partner were not included in the analysis. Two logistic regression models have been estimated: one for men and one for women – with the transition to cohabitation as a dependent variable.

Table 2.1 shows the descriptive statistics. More than 12 per cent of single women and 9 per cent of single men made the transition to cohabitation within a year of the interview. However, this differs according to labour-market position. Among men, self-employed persons with employees (13 per cent) and persons with a permanent contract (11 per cent) are more likely to start cohabiting. The self-employed and persons with a permanent contract are generally also somewhat older. Among women, those with non-standard employment (13 per cent) or with a permanent contract (14 per cent) are more likely to live together. Self-employed women without employees make a transition to cohabitation less often (12 per cent) although this concerns a relatively small group. Inactive single men and women have the lowest likelihood of cohabiting one year after the interview, respectively 3 and 7 per cent. The greatest number of transitions to cohabitation are made in the 25–30-year age group. The educational level also seems to play a role in the likelihood of entering cohabitation for both men and women: the lesser educated make the transition from being single to cohabiting less often than the higher educated.

2.3.2 The transition to marriage

For the analysis of the transition from cohabitation to marriage, all unmarried cohabiting partnerships were selected as a unit of analysis. For this purpose, partnerships were selected among who were living together at the moment of the LFS interview but were not yet married and did not have a registered partnership. Cohabitants can get married, but a cohabitation relationship can also fail. Both outcomes, marriage and separation, can be influenced by economic uncertainty. Because the probabilities of different outcomes can interfere with each other, we applied multinomial logistic regression for the couple-level analysis, in which another possible outcome – 'separation' – is included in the model (the competing risk model).

Table 2.2 shows the descriptive statistics of the research population. Our dependent categorical variable consists of three possible outcomes for the couples under study:

- the situation has not changed; n = 27.606
- the couple married or registered the partnership; n = 3.055 or
- The couple separated; n = 1.716.

More than 9.4 per cent of the unmarried partners who were together at the time of the LFS survey were married within a year. The percentages are higher for couples with a permanent contract and lower for couples in which the male partner is not working. Higher-educated couples have a greater likelihood of making the transition to marriage.

2.3.3 Presentation of the results and research design

To ease their interpretation, the results of the logistic regressions for the probabilities of cohabitation and the multinomial regressions for the probabilities of marriage are presented as predicted probabilities. Because specific subpopulations are used, no LFS weights have been used in the models. The predicted probabilities represent the probability that men and women will start to cohabit or will get married when controlled for background characteristics. It is also indicated whether the differences between groups are statistically significant.

The overall effect of non-standard employment relationships may be cumulative. For example, the group of cohabitants can already be a very selective group because the labour-market position influences the chances of finding a partner and of getting married. Economic uncertainty can also affect the likelihood of a couple separating or starting a family. Thus, there is an interdependence between the various outcomes. In this study, we mainly focus on the net effect of economic uncertainty on relationship formation, ignoring any cumulative effects. Therefore, demographic factors such as relationship duration and the presence of children were not accounted for in the analysis. By controlling for these factors, the direct net effect of economic uncertainty on the relevant transition will be underestimated.

The timing of the transitions is not the subject of this study. To account for the fact that some groups go through certain transitions at a later age, all models consider the age of the individuals and in the case of couples the ages of both partners. Additional analyses were also performed that included interaction effects with age. No significant differences were found in the effects of economic uncertainty on the relationship formation by age category.

2.4 Results

2.4.1 The transition to cohabitation

The predicted probabilities in Table 2.3 show the percentage of the transition to cohabitation of the different groups, controlled for education level, age, period, migration background and income (log). The difference between men with a permanent contract and male self-employed persons with employees is positive and significant: 13 per cent of self-employed persons with employees make the transition to cohabitation compared to 9.6 per cent of men with a permanent contract. Unemployed and inactive men have a significantly lower likelihood of experiencing the transition to cohabitation compared to men with a permanent contract. The percentage of self-employed men without employees and men with a non-standard contract does not differ significantly from that of men with a permanent contract.

Women have a greater likelihood of making the transition to cohabitation compared to men. The difference between women with a non-standard contract and those with a permanent contract in the likelihood of cohabitation is significant after adjusting for age, origin, period, education level and (log) income: 13.7 per cent of the women with a standard contract start to cohabit, compared to 12.8 per cent of non-standard working women. Inactive and unemployed women are also significantly less likely to cohabit compared to women with a permanent contract.

The outcomes for men are in line with the expectations in Hypothesis 1a. If men have an income, an uncertain employment situation is not (negatively) related to his chances of cohabitation. The uncertainty thesis was expected to apply to both men and women. When it comes to the woman's position, the results do not support the expectations: her precarious employment situation apparently makes her a slightly less attractive partner. However, this difference is not very great. The effects of the major uncertainty (the unemployed or inactive) are much greater, especially for men (Hypothesis 2).

2.4.2 The transition to cohabitation by educational level

The predicted probabilities according to labour-market position by educational level are shown for men in Figure 2.1 and women in Figure 2.2. The thick line in the figures represents the average. There are significant differences in the likelihood of cohabitation between non-standard workers and employees with a permanent contract among men with a low education level, respectively 6.9 and 8.5 per cent. Both percentages are lower than the average of 9.2 per cent for all men. There is no significant difference in the effect of the employment relationship on the transition to cohabitation among men with medium and high educational levels. These results are in line with the expectations in Hypothesis 3a. It is mainly men with a low level

of education who experience a greater negative effect of economic uncertainty when it comes to cohabitation.

There are also differences by educational level for women. A smaller percentage of less-educated women with a non-standard contract make the transition to cohabitation compared to those with a permanent contract, 10.4 and 12.7 per cent respectively. However, this difference is not significant. Women with a secondary-education level with a non-standard job are also less likely to cohabit compared to women with a permanent contract and secondary education. The difference among women with a secondary education is statistically significant. This is not what was expected from the theory (Hypothesis 3b). Apparently, higher education nullifies the negative effects of economic uncertainty on the transition to cohabitation for women; those with fewer opportunities on the labour market are also less attractive as cohabiting partners.

2.4.3 The transition to cohabitation by time period

Subsequently, it was examined whether there are trends in the likelihood of cohabitation for men and women with different employment situations. The general conclusion is that the expectation that the negative effect of non-standard work and self-employment will decrease over time is not supported by the data (Hypothesis 4a). Hypothesis 4b which posits that the position of women on the labour market would become more important over time, is also not confirmed. Nor does it appear that the importance of a permanent contract or non-standard employment is increasing over time. The likelihood of a transition to cohabitation appears to follow a cyclical pattern: for all types of employment, there was a decrease in the transitions to cohabitation in the period 2008–2012 and an increase between 2004 and 2008.

2.4.4 The transition to marriage

A multinomial logistic regression model has been estimated with cohabitation relationships as the research unit, controlling for period, age, migration background, educational level and the personal income of both partners. The output of this model has been translated into the predicted probabilities for the outcome 'Transition to marriage or registered partnership' – the results shown in Table 2.4 are from the same model, in contrast to previous analysis in which we estimated separate models for men and women.

The labour-market situation of the woman does not seem to be important when it comes to the transition to marriage; however, the situation of the man does matter. Couples with men with a non-standard contract are less likely to get married compared to couples where men have a permanent contract: 8.3 as opposed to 9.5 per cent. Partnerships in which the man is self-employed without employees are also less likely (7.9 per cent) to get married within a year of the observation. These

outcomes for men are in line with the theoretical expectations from the economic approach (Hypothesis 1b). The position of the woman does not seem to matter much in the decision of couples to get married or register their relationship. This is also in line with the expectations in Hypothesis 2.

It may also be the case that it is not the individual labour-market position of both partners that influences the likelihood of their getting married but the combination of both of their labour-market situations. To test this, an interaction term between the labour-market statuses of both partners has been added to the model, although it has not resulted in a better model fit. No significant differences were found with regard to the combination of labour-market statuses of both partners. It does seem to be mainly the position of the men that influences a couple's chances of getting married.

2.4.5 The transition to marriage by educational level

The predicted probabilities of the transition to marriage by education level for male partners are shown in Figure 2.3. The thick line in the figure represents the average. Among less-educated men, the great differences can be seen in their likelihood of getting married according to the economic situation of the male partner. However, these differences are not significant. Of the less-educated couples whose male partner has a non-standard contract, 7.2 per cent get married within a year. This is lower than for less-educated couples whose male partner has a permanent contract – some 9.1 per cent of the latter group got married a year later. These results are in line with Hypothesis 3a, that less-educated men will suffer more from economic uncertainty. No statistically significant differences according to educational level were found for the female partner in the likelihood of their getting married within one year of the LFS observation (the results are available on request). This means that no support was found for Hypothesis 3b about higher-educated women.

2.4.6 The transition to marriage by time period

Subsequently, the effects of the labour-market position of both partners by time period were examined. No significant differences in the effect of non-standard work on young partners' likelihood of getting married by time period were found. The transition percentages by time period seem to follow cyclical developments – the same dynamics observed earlier in the cohabitation analysis.

2.5 Conclusion

In this study, economic uncertainty was investigated in correlation to relationship formation. This research contributes to the existing literature in several respects. First, we looked at the self-employed, a group who were often ignored in earlier research. In addition, with the current set-up, it was also possible to see whether the effect of non-standard employment has changed over the last ten years. We were also able to investigate differences by level of education.

Our analyses show that it is mainly less-educated men and women who experience the negative effect of economic uncertainty on the transition to cohabitation. Once cohabiting, it is mainly the uncertain position of the man that is negatively related to the transition to marriage. Here, too, the negative effect of economic uncertainty on marriage mainly affects men with a low level of education. Non-standard work therefore does appear to stand in the way of a permanent partner relationship, especially among the vulnerable group of less-educated workers.

No significant trends were found in the relationship between non-standard work and relationship formation. However, the transition rates seem to follow cyclical developments. Trends in demographic transitions are often associated with the business cycle (Sobotka, Skirbekk and Philipo 2011). This suggests that, in addition to the actual position on the labour market, the perspective of economic uncertainty is also an important element in the decision-making process of young couples when considering living together or getting married. This may also be related to the situation on the housing market. If it is more difficult to find suitable housing, fewer people will start living together (Rindfuss and Brauner-Otto 2008).

Previous Dutch research has found no effect of economic uncertainty on relationship formation (de Lange *et al*. 2014; Liefbroer 2005). Some older data were used in these studies. Our research covers a more recent period (2003–2014). It is therefore plausible that the negative effect of non-standard employment has only manifested itself in the Netherlands since the beginning of the century.

The fact that no trends were found means that non-standard work has remained equally important for relationships and family formation over the past decade. However, the incidence of non-standard work has grown quite considerably. The total impact of non-standard work on relationship formation is therefore increased. The negative effect on relationship formation affects individuals in a quite direct way. The lack or absence of a partnership can have consequences for, for example, fertility and health, as well as for well-being: people with a partner show higher scores on welfare and well-being (CBS 2015).

In this study, the focus was on possible trends in the relationship between non-standard employment and relationship formation. A longitudinal approach was not

considered. Therefore, the timing of certain transitions were not the subject of this study. Hence, how permanent the found negative effects of economic uncertainty are remains an open question. Couples and individuals could be only postponing certain transitions until their labour-market position is improved. In the long run this could eliminate the differences we found. These questions could be answered by using a longitudinal design in which individuals could be followed over a longer period of time and in which work careers could also be examined in a dynamic way to explain possible postponing behaviour. Is it the transition to a certain labour-market position that makes relationship formation possible or does economic uncertainty play a role only at a certain point in the life course?

2.6 Tables and figures

Table 2.1 The transition to cohabitation, descriptive statistics

	Men		Women	
	N Total	% transition to cohabitation	N Total	% transition to cohabitation
Total	67.695	9,3	44.430	12,2
Standard contract	36.392	10,9	22.209	13,8
Non-standard contract	13.896	8,9	10.635	13,2
Self-employed without employees	4.379	9,3	1.367	10,7
Self-employed with employees	1.358	12,6	276	12,3
Unemployed	4.962	5,9	2.800	9,9
Non-active	6.708	3,2	7.143	7,1

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 2.2 The transition to marriage, descriptive statistics

	Men		Women	
	N Total	% transition to marriage	N Total	% transition to marriage
Total	32.377	9,40%	32.377	9,40%
Standard contract	22.260	10,20%	21.046	9,90%
Non-standard contract	4.181	8,80%	5.622	9,50%
Self-employed without employees	2.678	7,40%	1.325	7,80%
Self-employed with employees	1.577	7,80%	377	6,10%
Non-employed	1.681	5,90%	4.007	8,00%

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 2.3 Single persons by labour-market situation, adjusted percentages transition to cohabitation

	Men		Women	
	predicted probabilities %		predicted probabilities %	
Standard contract	9,6	Ref.	13,7	Ref.
Non-standard contract	9,3		12,8	*
Self-employed without employees	10,1		13,3	
Self-employed with employees	13	***	16,3	
Unemployed	8,2	**	11,7	**
Non-active	5,2	***	9,3	***

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

The models are controlled for education level, age, period, migration background and income (log)

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 2.4 Unmarried cohabiting partnerships by labour-market situation of the male and female partners, adjusted percentages transition to getting married

	Men		Women	
	predicted probabilities %		predicted probabilities %	
Standard contract	9,5	Ref.	9,1	Ref.
Non-standard contract	8,5	*	8,9	
Self-employed without employees	7,9	**	9,2	
Self-employed with employees	8,2		6,8	
Non-working	7,4	**	9,1	
N	32.377		32.377	

* p < 0,05, ** p < 0,01, *** p < 0,001

The models are controlled for education level, age, period, migration background and income (log)

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

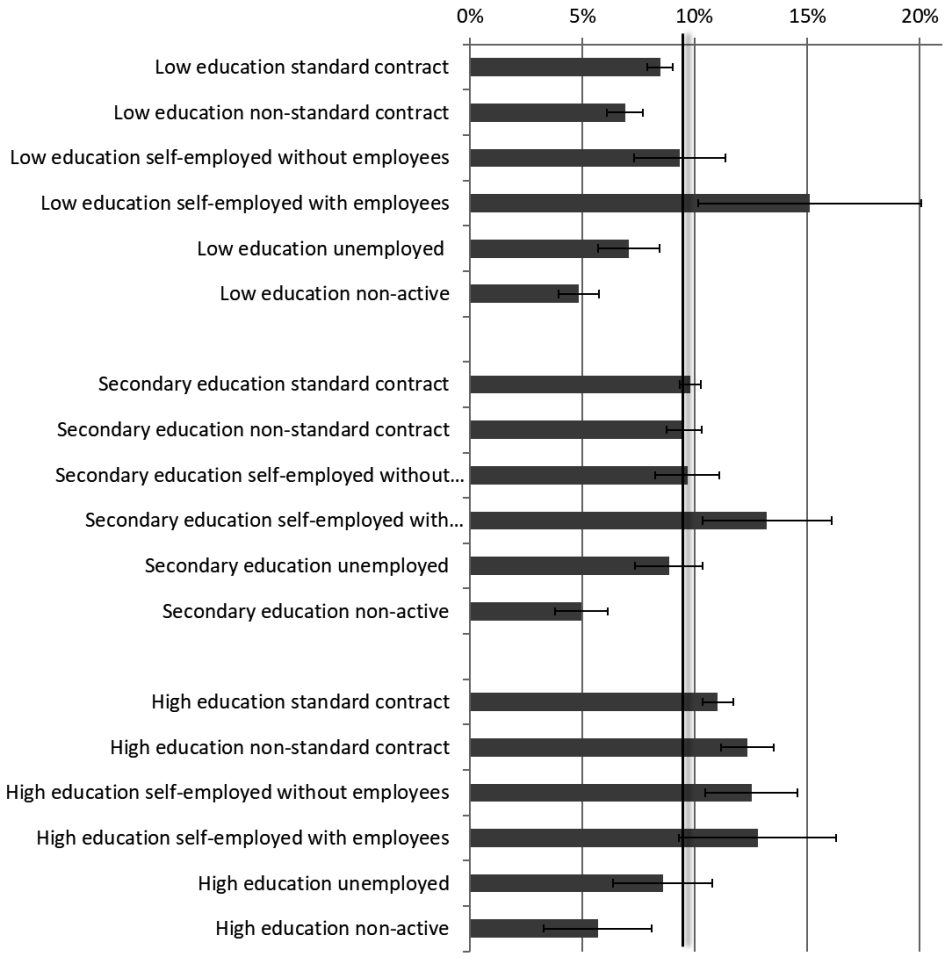
Table 2.5 Summary expectations and outcomes

		Men		Women	
		Transition to cohabitation	Transition to marriage	Transition to cohabitation	Transition to marriage
H1a	Individuals in an uncertain employment position have an equal likelihood of cohabiting compared to individuals in a permanent employment relationship.	yes		no	
H1b	Individuals in an uncertain employment position have a lower likelihood of getting married compared to individuals in a permanent employment relationship.		yes		no
H2	Men (and not women), in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.	no	yes	no	yes
H3a	Lesser-educated men, in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.	yes	yes		
H3b	Higher-educated women, in particular, experience the negative effect of an uncertain employment position on the likelihood of cohabitation or marriage.			no	no
H4a	The negative effect of an uncertain employment position on the likelihood of cohabitation or marriage will weaken in the more recent periods.	no	no	no	no
H4b	Women with a non-standard employment relationship will have a lesser likelihood of cohabiting and marrying compared to women with a permanent employment relationship. This will be more pronounced in the more recent periods.			no	no

Yes: hypothesis is supported; No: hypothesis is not supported.

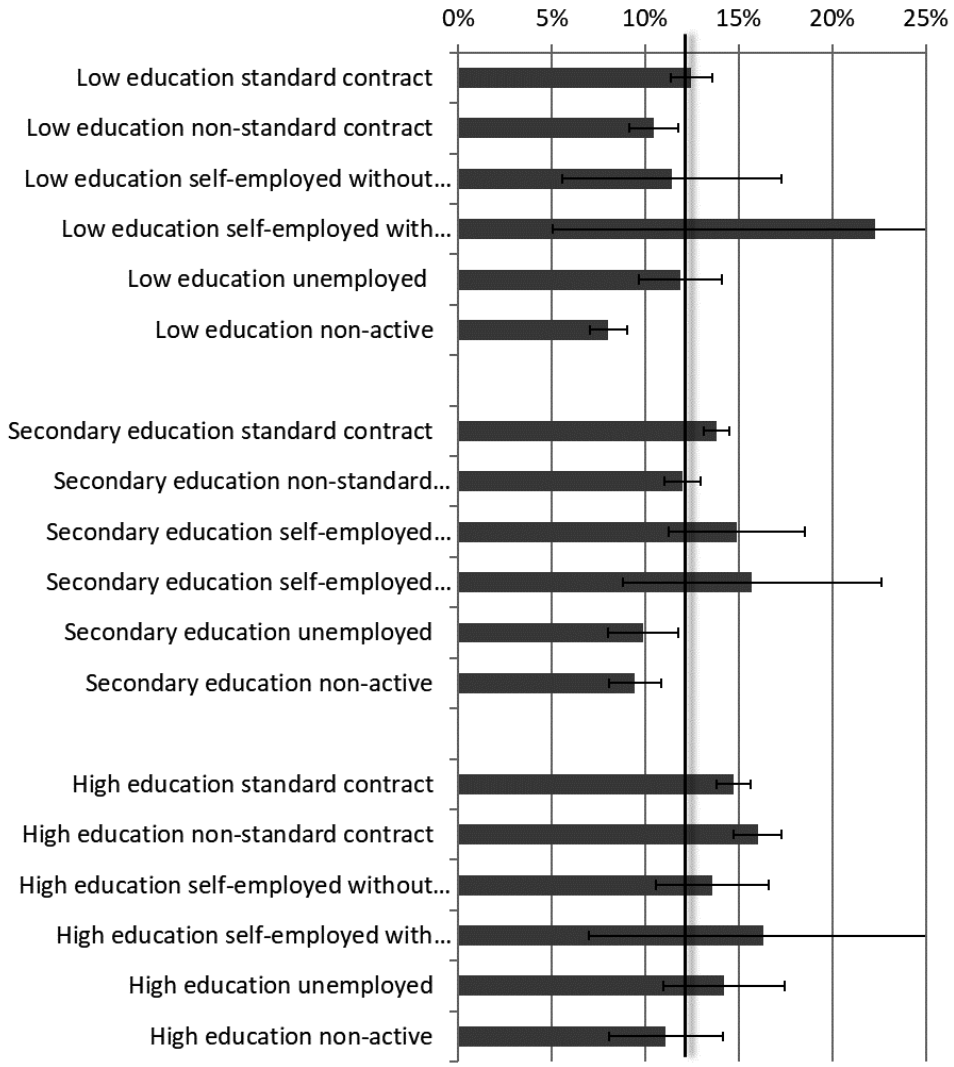
Source: the author

Figure 2.1 Single men by labour-market situation, adjusted percentages transition to cohabitation



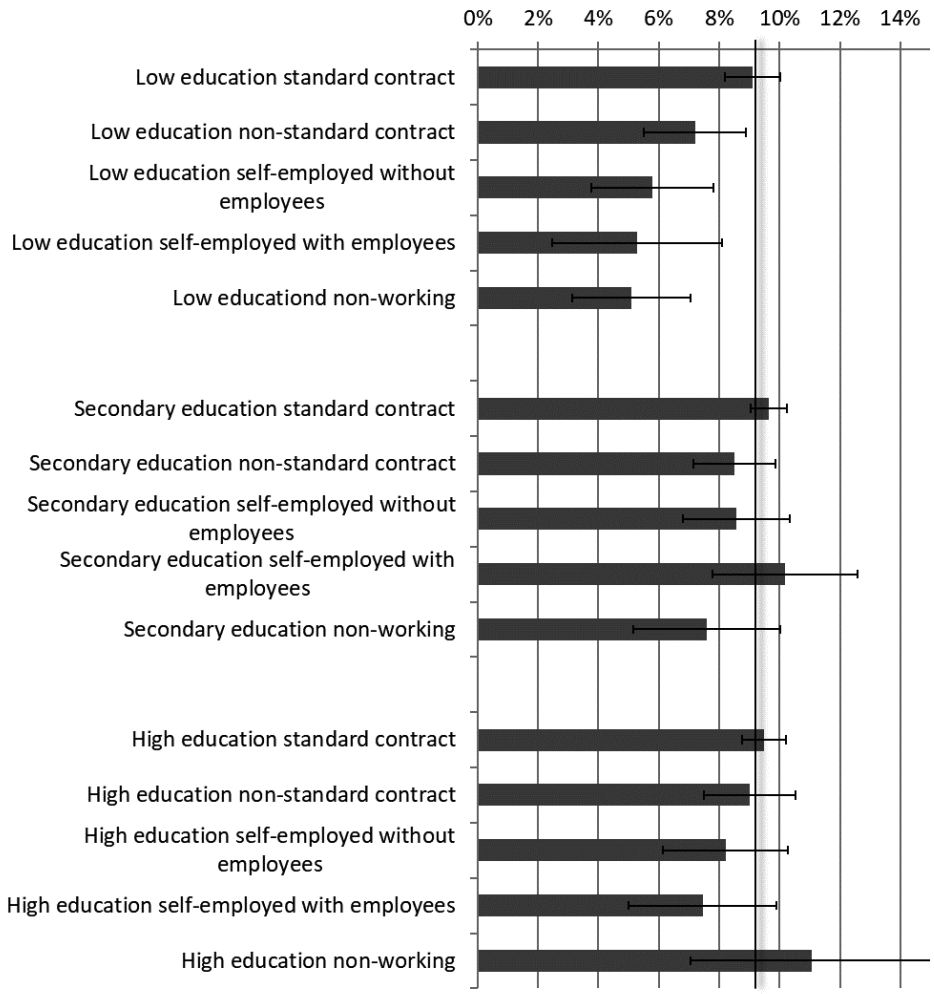
Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 2.2 Single women by labour-market situation, adjusted percentages transition to cohabitation



Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 2.3 The transition to marriage, adjusted percentages by education level of the man



Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

3. The concentration and dynamics of economic uncertainty within partnerships[†]

This chapter examines the association of employment relationships within couples, such as permanent contracts, non-standard contracts, self-employed and non-working status. Economic uncertainty within partnerships seems to be clustered. This correlation can only partly be explained by homogamy in education, age and migrant background status. The longer the relationship lasts, the less frequently the combination of two non-standard contracts within the household occurs. This is especially pronounced among highly educated couples. The same applies to the concentration of permanent contracts: the likelihood of two permanent contracts increases during the relationship mainly among higher-educated couples.

3.1 Introduction

Due to the flexibilisation of the labour market, the number of self-employed and employees with a non-standard contract in the Netherlands has increased sharply in a short period of time, which resulted in higher job and income insecurity (Kösters and Smits 2015). This development raises questions about the possible long-term socio-economic consequences of this trend. The negative consequences of non-standard employment for employees are well-documented – they have lower average wages, fewer training opportunities and a greater risk of unemployment compared to people in permanent employment (Giesecke and Groß 2003; Mertens *et al*. 2007; OECD 2002). These and other negative consequences of individual insecurity on the labour market can be partly compensated for not only by the institutional context, e.g., the social security system (Muffels and Luijkx 2008) but also by the family of which an individual is a part (Grotti and Scherer 2014). A partnership is still seen as one of the main sources of economic and social support for individuals. In addition, the emergence of the dual-earner model offers partners the opportunity to compensate for the uncertain labour-market situation of one partner with the stable employment status of the other. Moreover, the stable labour-market position of one partner can encourage or enable the other partner to leave permanent employment and, for example, become self-employed. Therefore, the demographic consequences of an uncertain labour-market career should be studied in the context of the household. Major decisions, such as buying a new property, getting married or having children, are generally made by both partners (Blossfeld *et al*. 2006; de Lange *et al*. 2014).

[†] Chapter 3 is translated from previously published work: Chkalova, K. (2017). Samen onzeker? Concentratie en dynamiek van arbeidsonzekerheid binnen partnerrelaties. In: Chkalova, K., Van Genabeek, J., Sanders, J. en Smits, W., Dynamiek op de Nederlandse arbeidsmarkt: de focus op ongelijkheid. Den Haag, Heerlen, Bonaire, Leiden: Centraal Bureau voor de Statistiek/TNO.

The association between the labour-market positions of partners has been a subject of study for some time. Research shows that unemployment is clustered within the households (Hout 1982; Payne 1987; Ultee, Dessens and Jansen 1988). The occupational status of working partners also shows a positive correlation (Bernasco *et al*. 1998; Verbakel, Luijkx and de Graaf 2008). More recently, further insight has been gained into the association of non-standard employment within households. Labour-market uncertainty in terms of temporary contracts appears to be clustered within them (Grotti and Scherer 2014; de Lange, Wolbers and Ultee 2013). There is a higher probability that the partner of someone with non-standard employment will also be in a non-standard employment situation. Specifically for the Netherlands, the association of non-standard contracts within households is growing rapidly and strongly (Grotti and Scherer 2014). This concentration of economic uncertainty within households could have consequences for socio-economic inequality. Moreover, the socio-economic consequences could be even greater if this situation does not change over the life course (Blossfeld and Timm 2003).

The labour-market position of both partners can change over time, alleviating the uncertainty within the household, but uncertainty can also last for a long time. This chapter examines the association between the different types of employment in new partnerships. Its contribution lies in the specific attention that has been given to the growing group of self-employed people, a group that has not been considered in previous research. Subsequently, we attempt to explain the association between the partners' employment positions through the homogeneity within couples in terms of age, migration background, educational level and economic situation in the region of residence. Another contribution of this research to the existing literature is that partnerships are monitored and analysed for several years longitudinally. Finally, this chapter examines the distribution of permanent and non-standard employment relationships within partnerships by education level. The position and prospects of individuals on the labour market are strongly related to their level of education. A higher level of education is also associated with higher wages, which enables households to build up financial buffers. Less-educated couples do not have these opportunities or have them to a much lesser extent. As a result, the long-term accumulation of uncertainty can have greater consequences for the lesser educated than for those with a higher level of education. It is therefore interesting to see whether the concentration of (un)certainty in the longer term differs according to education level: does the degree of uncertainty develop differently among the less-educated than among the highly educated? Are the less-skilled just as capable of compensating for the job insecurity within the relationship as their more highly educated counterparts?

3.2 The association of labour-market positions between partners

There are various mechanisms that can explain the relationship between partners' labour-market positions: homogamy, shared restrictions and partner effects. The idea of homogamy implies that individuals prefer a partner who resembles them. People often choose a partner of approximately the same age, with the same migrant background and the same educational level (Blossfeld and Timm 2003; Kalmijn 1998; Smits, Ultee and Lammers 1998). Age, education, and migrant background are also characteristics that can strongly influence the individual labour-market position of both partners. The association between the labour-market positions of the partners can therefore partly be a by-product of partner selection because homogamy within households influences the association indirectly, via the personal characteristics of each partner (Kalmijn 1998; Smits *et al*. 1998). Another explanation for this positive association is the shared restrictions. Partners often find themselves in the same economic situation, which also positively influences the association of labour-market positions (Bernasco *et al*. 1998). During an economic boom, both partners benefit from a favourable situation on the labour market while, during an economic downturn, they have to deal with their poorer prospects to the same extent. The spatial dimension also plays a role here: after all, both partners are tied to the same labour-market region. This mechanism, as with homogamy, is an indirect effect, because both the economic and the regional situation influence the individual labour-market positions of the partners and thus indirectly also the relationship between these positions.

Previous research has shown that the factors of homogamy and shared constraints do not fully explain the association of labour-market careers within partnerships (de Lange *et al*. 2013; Grotti and Scherer 2014; Ultee *et al*. 1988). In most studies, an important role is attributed to the so-called partner effects: the way in which the partners influence each other during their careers. These partner effects can positively or negatively influence the relationship. According to economic theory, partners pool their resources in order to organise the household as efficiently as possible. The main advantage, as shown by the same theory, is achieved through a specialisation in paid labour and household production (Becker 1991). However, this strategy is only rational if there are significant differences in the earning capacities of the partners. Specialisation results in a negative partner effect: if one partner has secured a stable financial basis for the household, it becomes less attractive for the other partner to invest in his or her career. This mainly relates to labour participation – and the effect is supported empirically (Blossfeld and Drobniç 2001; Verbakel and de Graaf 2008) – but it can also be applied to job insecurity. From the point of view of specialisation, an insecure employment relationship will be less problematic or even attractive if the other partner holds a standard contract (Grotti and Scherer 2014). This approach mainly applies to the long-term relationships. Newly formed unmarried couples have a greater likelihood of separation (Liefbroer and Dourleijn 2006). Therefore, these couples may be reluctant to specialise right away. Another

footnote to the idea of specialisation is that its effect could be gendered. Despite the considerable improvements of the relative female labour-market position, the division of paid and unpaid work within households is still quite traditional in the Netherlands (Portegijs and van den Brakel 2016). As a result, we can expect that women will be less inclined to specialise in paid work than men. Based on the idea that partners pool resources within the household and will tend to compensate for the risks, this theory predicts a negative association of economic uncertainty between partners. The situation described relates to one partner's response to an uncertain or problematic situation of the other. However, partners can also respond to the certainty of the other partner's labour-market position. This would also involve specialisation (Grotti and Scherer 2014).

There is also a possibility of positive partner effects, the theory behind which is that partners can influence each other because they have access to the (immaterial) resources that their partner possesses and that can be transferred (although to a limited extent) between them. These resources are, for example, the networks of one partner or the specific knowledge that can be used in the search for a better position or job. Not having a partner with resources will reduce the chances of someone getting a better labour-market position. This mechanism can result in a greater concentration of favourable and unfavourable labour-market positions within households (Bernasco *et al*. 1998; Verbakel and de Graaf 2008).

The above may relate to a greater or lesser extent to both higher- and lesser-educated couples. However, increased uncertainty in the labour market has mainly affected low-skilled workers. This group has a greater risk of unemployment and more often an irregular income compared the higher educated (OECD 2011). Therefore, there is a greater economic need for both partners to contribute to household income among the less-skilled (Luxton and Corman 2001; McCall 2001). From an economic perspective, it can be expected that higher-educated couples have more room for specialisation. However, the higher level of education is related not only to higher incomes but also to differences in attitudes and norms about the division of paid and unpaid labour within the partnerships (Liefbroer and Billari 2010). The highly educated will probably strive for a more modern and thus more equal division of work and care than the less educated. This would actually reduce the likelihood of specialisation among the highly educated influencing their association between the partners' labour-market positions in a positive way.

3.3 Research questions and research design

This research is the first descriptive study examining the correlation of labour-market insecurity within households in a dynamic way. In this contribution the following research questions are addressed:

- What is the association between the labour-market positions of partners and to what extent can this relationship be explained by homogamy and shared restrictions mechanisms?
- Does the association of the labour-market position of partners becomes less strong or stronger during the first years of the relationship?
- Which educational groups are affected to a greater extent by the concentration of economic uncertainty and how stable is this concentration during the first years of the relationship?

This contribution is descriptive in nature, leaving aside any partner effects that may further help to explain the dynamics in the relationship. The focus in this chapter is on the young couples who had left the education system and who have stayed together throughout the period of study. Couples who have broken up are not the focus of this research as the separation may be related to the (distribution of) economic uncertainty within the relationship. This could be the subject of future research.

Register information based on the System of Social Statistical Datasets (SSD) (Bakker *et al*. 2014) was used in this study. The *Polisadministratie*, a part of the SSD, was used for information about the type of employment contract and is available from 2006. For this reason, a cohort of newly formed partnerships from 2006 was followed.

The Municipal Personal Records Database (Basic Registration of Persons, BRP) forms the basis for information about partnerships. It contains information about marriages and registered partnerships. Information about unmarried cohabitants without a registered partnership is not recorded. To determine whether two cohabiting individuals form a partnership is examined, among other things, to see whether there is a family relationship (for example, brother–sister, mother–son) and/or whether the couples are registered as tax partners. Only when certain conditions are met are cohabitants classified as cohabiting partners. According to the SSD, a total of 580,368 new partnerships were created in 2006. Several further selections were used in this study. First, the partnerships that ended within one month were removed from the research population. In case someone had more than one partnership in 2006, only the first relationship is selected. As the dynamics within same-sex couples deserve a specific theoretical approach, only heterosexual couples were selected.

To exclude the possible effects of earlier relationships, the previous situation of both partners was examined. Only childless partners at the time that the household was formed were included in the study. For the same reason, couples whose partners had a child with someone other than the cohabiting partner during the study period were excluded. The interest of this study lies in couples who have left the education system. Therefore, partnerships in which the partners no longer attended education in the 2006–2014 study period were selected. This also minimises the risk that cohabiting students are wrongly characterised as a newly formed partnership. Couples in which one of the partners died during the study period are also excluded as labour participation can be influenced by illness or the illness of the partner. In addition, an age restriction was applied of 45 years as the maximum age for men and 40 years for women. This selection yields 69,970 newly formed households in 2006 that can be followed up to 2014. About the half of these couples (39,289) were still together in 2014. These couples form the research population.

The fact that couples choose to register the relationship is an indication of a higher level of commitment between them. This can affect the degree of trust that partners have in each other, for example to specialise. The arrival of children also often influences the division of paid and unpaid work within a partnership (Portegijs and van den Brakel 2016). For this reason, an indicator for each year was computed showing whether or not couples have a child together and have registered their relationship.

The dependent variable in this study, labour-market uncertainty, is expressed in four categories:

- standard employment (the most certainty),
- non-standard employment (temporary contracts, on-call and temporary workers),
- self-employed,
- not working (the least certainty).

In the case of someone having multiple jobs, the contract type of the job with the highest income was taken. If someone was classified as a self-employed person in the SSD and also had work as an employee, he or she is classified as self-employed. The directors and major shareholders (DGAs) are counted among the self-employed in this study. Non-working persons can be both those who are not available on the labour market due to illness or for personal reasons, as well as unemployed persons with or without benefits.

Information from the SSD about migration background and education level has also been added. A distinction is made between 1) the highly educated and 2) the less- and intermediate-educated. In order to take into account the regional labour-market situation affecting both partners, the unemployment rates of the NUTS 3 region of residence (COROP) have been included (CBS n.d. d).

The distribution of the population by background characteristics is shown in Table 3.1. As a result of the selection, the research population is a quite homogamous group of young households. This means that the conclusions of this study only apply to young couples who are at the beginning of their family life together. Another sidenote is that only one cohort was followed. As a result, the time variable that represents the duration of the relationship cannot be separated from a possible period effect (such as business-cycle effects). In the same fashion, with the current set-up it is not possible to separate the effect of the duration of the relationship from any career effects. This is of importance as the chance of finding permanent employment increases for everyone during their career (de Beer 2013). First, descriptive statistics are presented of the combinations of employment positions within the household during the first nine years of the relationship. Second, multinomial regression models are estimated to measure the correlation between the different types of employment situation. Background characteristics were then used to explain this association. Subsequently, multinomial regression models are estimated to map the groups of households that are faced with economic uncertainty to a greater or lesser extent. For this analysis, we also look at how dynamic the associations are. For all analyses, the couples who stayed together during the entire period, 2006–2014 (N 39,289), are the subject of the study.

3.4 Results

3.4.1 Descriptive analysis

The distribution of economic uncertainty within households over the years 2006–2014 is shown in Table 3.2. In 2006, both partners had permanent employment in 37 per cent of newly formed partnerships. That share rose to 40 per cent in 2008. After 2012, the percentage was somewhat lower again, partly as a result of the worsening economic situation. The number of transitions to permanent employment decreased during that period (Bierings *et al*. 2015). The shares of the combination of an uncertain situation and permanent employment varied between 44 and 42 per cent respectively. In more than 80 per cent of the couples studied, at least one partner had a permanent contract. It should be noted that the examined couples are a highly selective group. Only 60 per cent of those who are no longer together have at least one permanent contract; in 20 per cent of the relationships both partners have a permanent contract.

The share of households in which both partners have non-standard employment decreased between 2006 and 2014 from 7 to 3 per cent. The proportion of households in which both partners are self-employed, on the other hand, increased from 1 per cent in 2006 to 4 per cent in 2014. This development is in line with previous research in which an increase in the transitions to self-employment has been reported

(Bierings *et al*. 2015). The share of households with two non-working partners remained stable at around 2 per cent in the period under review.

The distribution of economic uncertainty within households by educational level shows differences between highly educated partnerships and those with a low or intermediate level of education (Tables 3.3 and 3.4). For example, at the start of the relationship, in 2006, 37 per cent of partnerships had two permanent contracts and there is no difference in education level. However, over time, the percentage of couples among the higher educated with two permanent contracts increased by almost 10 percentage points to 45 per cent, while among the lesser and intermediate educated it decreased slightly to 33 per cent in 2014.

At the start of the research period, less- and intermediate-educated households were less likely to have two non-standard contracts compared to highly educated couples (6 and 12 per cent, respectively). At the end of the research period, there were no longer any differences between these two groups (3 per cent in 2014). The concentration of the self-employed shows no major differences by education level. Partnerships in which neither partner worked turn out to be very selective group. In 2006, 75 per cent of all couples with non-working partners had low or secondary education. The selectivity of this group increases over time: in 2014 this percentage was 85 per cent, while the size of the group of unemployed people remains more or less the same. Partnerships in which both partners have a low or intermediate education make up 54 per cent of the total population.

The traditional division of labour within households becomes more common as the relationship lasts. In 2006, 9 per cent of couples consisted of a working man and a non-working woman. Nine years later, this rose to 14 per cent. The differences according to educational level are striking. This traditional combination is much more common among the lesser educated than among the higher educated in 2006 (12 and 5 per cent respectively) and this difference grew over time. In 2014, nearly one in five (19 per cent) of less-educated couples had traditionally divided their labour, compared to 8 per cent among higher-educated couples.

3.4.2 The association of economic uncertainty

Three multinomial logistic regression models have been estimated to measure the correlation between the different types of employment situation and to explain it with background characteristics. These models include all couples (39,289) in all periods (nine years). This produces a file of 353,601 records. Model 1 estimates the correlation with the following controls: the marital status of the partners, the duration of the cohabitation relationship and whether or not there are children in the household. How long the couple has been together is included in the model as a continuous variable. Including this as a categorical variable or/and as a quadratic term yields comparable results. Model 2 also controls for the unemployment rate in

the residential region. This approximates the effect of the shared restrictions. Model 3 includes controls for characteristics that can provide an additional explanation for the correlation of uncertainty, namely homogamy, by controlling the model for the individual characteristics that influence a person's chances on the labour market – such as education, age and migrant background. Figures 3.1 (men) and 3.2 (women) present the probabilities of economic uncertainty according to the partner's situation for all three models. The probabilities are shown as marginal effects. The full results of the models are included in Table 3.5 (men) and Table 3.6 (women).

The first result that stands out is that there is a certain correlation in the employment insecurity within the partnerships. Men and women with a partner who does not have a permanent contract are less likely to have a permanent contract themselves. When not controlled for homogamy and economic situation (Model 1), a man with a partner with a non-standard contract is 4 per cent more likely to also have a non-standard contract than men with a partner with a permanent contract. A non-working partner increases the likelihood that the men will be non-working themselves by 8 per cent (compared to people with a partner with a permanent contract). Men with a partner who is self-employed are 27 per cent more likely to be self-employed themselves compared to men with a partner with a permanent contract.

The results in Model 2 are comparable to those in Model 1. This means that shared restrictions, measured by regional unemployment in the region of residence, play a very minor role in explaining the relationship between the partners economic' uncertainty. The degree of association shows little change when additionally controlled for the personal characteristics of the two partners that influence their labour-market opportunities (Model 3). The greatest explanatory power of homogamy can be seen in the association between non-working partners.

A similar change in the coefficients between the models can be seen among women. There are, however, some differences between men and women in their likelihood of economic uncertainty. The negative marginal effect of permanent employment if there is a partner with an uncertain labour-market position is less strong for women. The positive correlation between two self-employed persons is also less strong among women than among men. Another difference between men and women is the likelihood of not working – this is higher for women than for men and is significantly related to the insecure position of the male partner.

In conclusion: after controlling for homogamy within couples and the regional labour-market situation, a significant correlation between the different forms of economic uncertainty remains. These results are in line with findings from previous research (Grotti and Scherer 2014; de Lange *et al*. 2013; Ultee *et al*. 1988). In addition, these results initially provide little support for economic theory that predicts the negative coherence of insecurity within households as a result of compensation or specialisation.

Tables 3.5 and 3.6 show the marginal effects of the controls for all three models. In what follows, only the results from Model 3 will be discussed. A higher level of education for both men and women and for their partner reduces the likelihood of not having work and increases the probability of a permanent contract. The effects of the non-standard contracts are different: higher-educated men only have a lesser likelihood of a non-standard contract if their partner has a low or intermediate education. The same applies to women. They are less likely to have a non-standard contract if their partner has a low or intermediate level of education. Age has a positive effect on the likelihood of a permanent contract and a negative effect on having a non-standard one. There is also a positive effect of age on the likelihood of being self-employed and not working. The latter applies only to men, as no significant effects were found for women.

For men, the length of the relationship has no impact on the likelihood of their not having work or a permanent contract. The birth of children lowers men's likelihood of being out of work but increases for women. For that matter, entering a marriage or registered partnership is also relatively strongly related to a non-working situation for women, while this has only a small negative effect for men. Having children and marrying or registering a partnership thus increases specialisation within partnerships in terms of labour participation.

3.4.3 Distribution of economic uncertainty by background characteristics

In the previous section the individual chances of certain employment situations are described with the emphasis on the effects of economic uncertainty for the partner. These individual chances provide an indication of the association of labour-market uncertainty within the relationship. This section takes the household situation as a starting point and examines how certain combinations of employment situation are distributed between households. To see which households are exposed to economic uncertainty, a multinomial regression has been performed with combinations of employment situations within partnerships as a dependent variable. For the sake of clarity, only the distribution of permanent and non-standard contracts will be discussed in what follows; all other combinations are categorised as ‘other’. A distinction is thus made between a situation in which both partners have a permanent contract (concentration of permanent contracts), a situation in which one of the partners has a permanent contract (combination of a permanent contract with a non-standard contract) and a situation in which both partners have a non-standard contract. The outcomes (marginal effects) are presented in Table 3.3.

Regional unemployment rates seem to play almost no role in the combination of a permanent contract and a non-standard contract. This is not in line with the compensation thesis, which states that compensation increases with rising uncertainty. The unemployment percentage does play a role in the concentration of

(un)certainty: the likelihood that both partners will have a permanent contract is smaller with higher unemployment rates. Conversely, the likelihood that both partners will have a non-standard contract is greater with higher unemployment rates.

The duration of the relationship increases the likelihood of two permanent contracts and decreases the that of two non-standard contracts. However, the effect of this variable is relatively small. For one of the partners to have a migration background reduces the possibility of two permanent contracts and increases that of two non-standard contracts. The migration background of one of the partners also increases the likelihood of other combinations of employment (un)certainty. Registered cohabitation or being married also increases the likelihood of other combinations and decreases that of combining two working statuses.

Education level also plays a role when it comes to the distribution of permanent contracts within the partnership. The likelihood of having a permanent contract for both partners is 5 per cent higher if one of the partners is higher educated and 7 per cent higher if both partners are, compared to partner relationships in which both partners have only secondary or lesser education.

Additional analysis with interaction between the relationship duration and the level of education (Figure 3.3) shows that, at the start of the relationship, higher educated couples have a fewer chances of two permanent contracts compared to couples with a low or intermediate educational level. As time and the relationship progress, this difference turns into an advantage. At the end of the period, highly educated couples are 11 per cent more likely to have two permanent contracts. This is in line with findings from the descriptive analysis. A similar picture can be seen in the concentration of non-standard contracts, whereby, initially, the likelihood is greater for highly educated couples. However, this difference applies mainly in the first years of the relationship whereas, at the end of the period, the picture reverses. This could reflect a difference in the number of years of work experience between lesser- and higher-educated couples. Because low-skilled workers started working earlier, they also have more time to secure a permanent position. In the long run, it turns out that they are less able to get a permanent contract than highly educated couples, resulting in a growing backlog. However, this may also be the result of the deteriorating economic situation in the study period, in which the lesser-educated were hit much harder than the higher-educated.

3.5 Conclusion

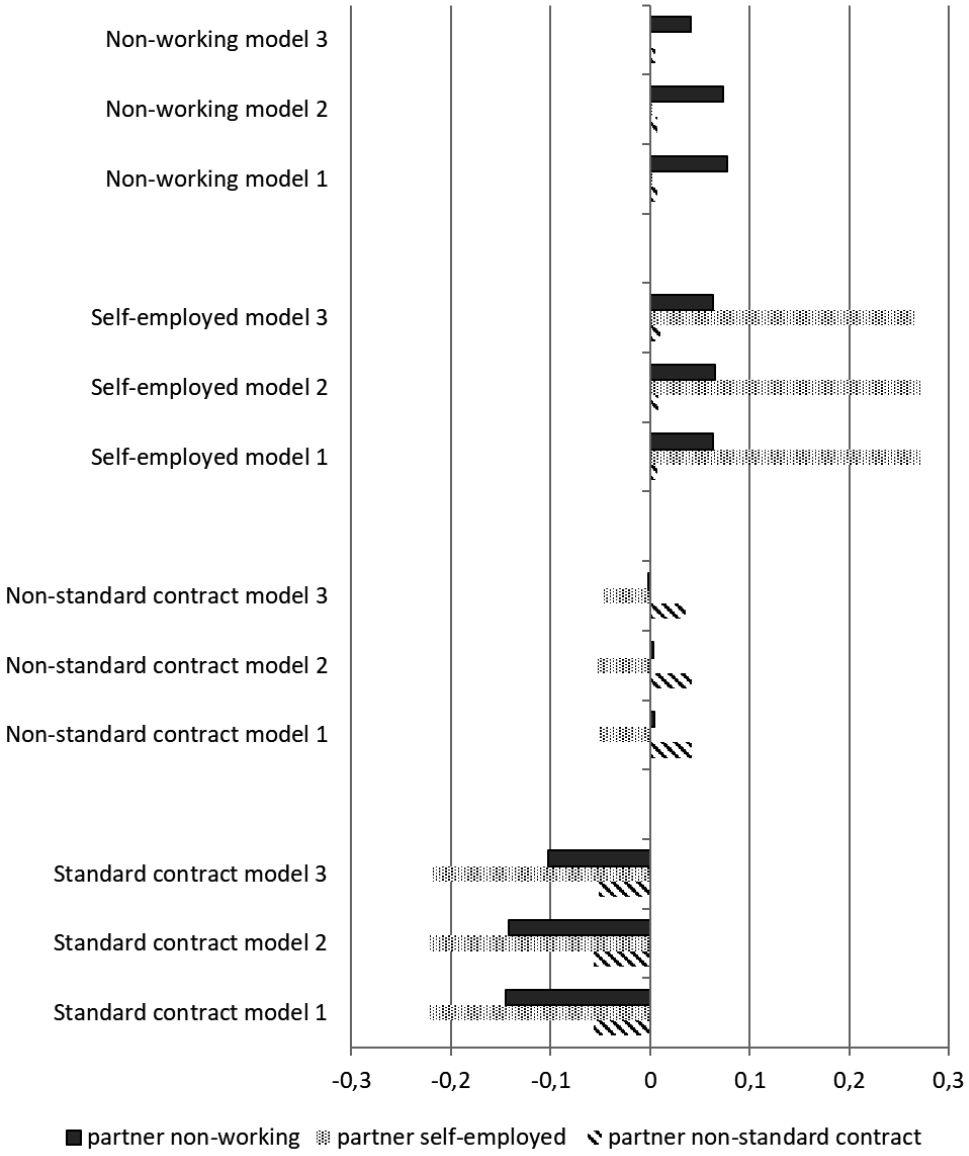
This chapter has examined the association of economic uncertainty within new partnerships during the first years of the relationship – specifically, the association between the different types of employment: standard, non-standard, self-employed and non-employed. The proportion of partnerships in which at least one permanent contract is present is higher than 80 per cent and, at first sight, this share appears to be relatively stable during the first years of the relationship. A breakdown by educational level shows a more dynamic picture. Over time, highly educated couples more often obtain two permanent contracts compared to the lesser or intermediate educated. The share of households with two non-standard contracts decreased during the study period and is especially pronounced among highly educated couples.

Employment uncertainty within the new partnerships is clustered. A person with a partner with a non-standard contract has a greater likelihood of having a non-standard employment him- or herself. A partner with uncertain employment lowers the likelihood of a permanent contract. This association of employment uncertainty can only be partly explained by the homogamy within the couples in terms of education, age and migrant background. It also appears that the regional economic situation (unemployment rates) where the partners live cannot fully explain the correlation. This unexplained correlation between employment (un)certainty implies that the positive partner effects seem to play a dominant role. The partners seem to keep each other captive in certainty or uncertainty. A less favourable position of one partner lowers the potential for the other partner to have a better position (in this case a permanent contract). The dynamic analysis implies that partners more often move on together to a permanent contract or remain together in an uncertain employment relationship. The former seems to be particularly the case for the higher educated, the latter applying mainly to less-educated couples. Future research should shed more light on this divide.

The accumulation of economic uncertainty over a longer period of time can have greater consequences for inequality between households. If couples fail to compensate for this uncertainty in the long run, this could have more severe social outcomes, for example, an increased likelihood of falling into a poverty trap, of social exclusion and of decreased well-being within relationships. In addition, the accumulation of uncertainties due to the long-term employment uncertainty within the relationship can have demographic consequences and influence the probabilities of family formation, divorce and having children. Future research will also have to show whether, to what extent and for which groups this is the case. A clear indication that certain combinations of employment (un)certainty can have demographic consequences is the selectivity found in the group of partnerships studied. Having one or two permanent contracts is significantly more common within this group than among couples who are separated.

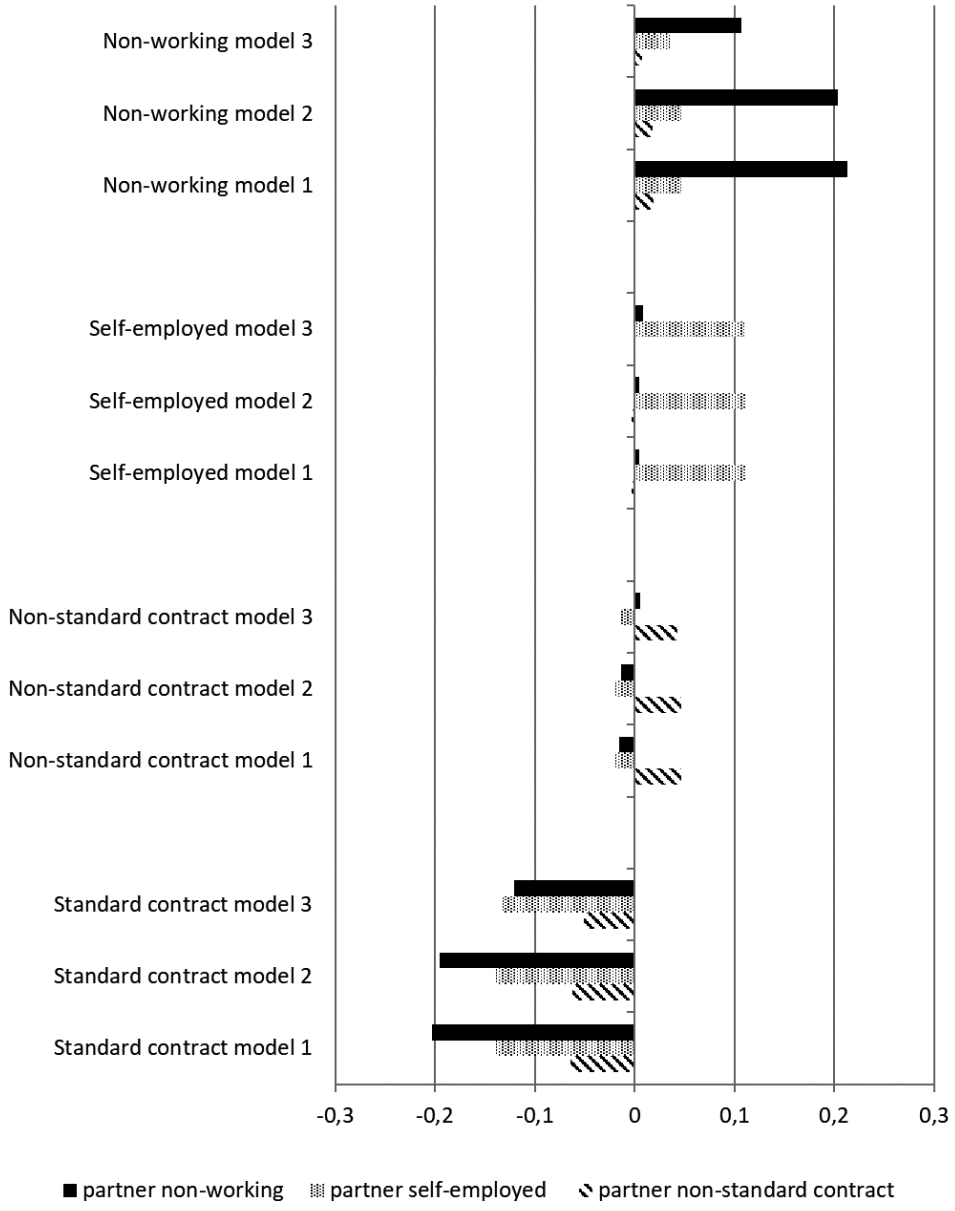
3.6 Tables and Figures

Figure 3.1 Men's marginal effects of the labour-market position by situation of the partner (partner with a permanent contract is the reference category) for newly formed partnerships in 2006, period 2006–2014



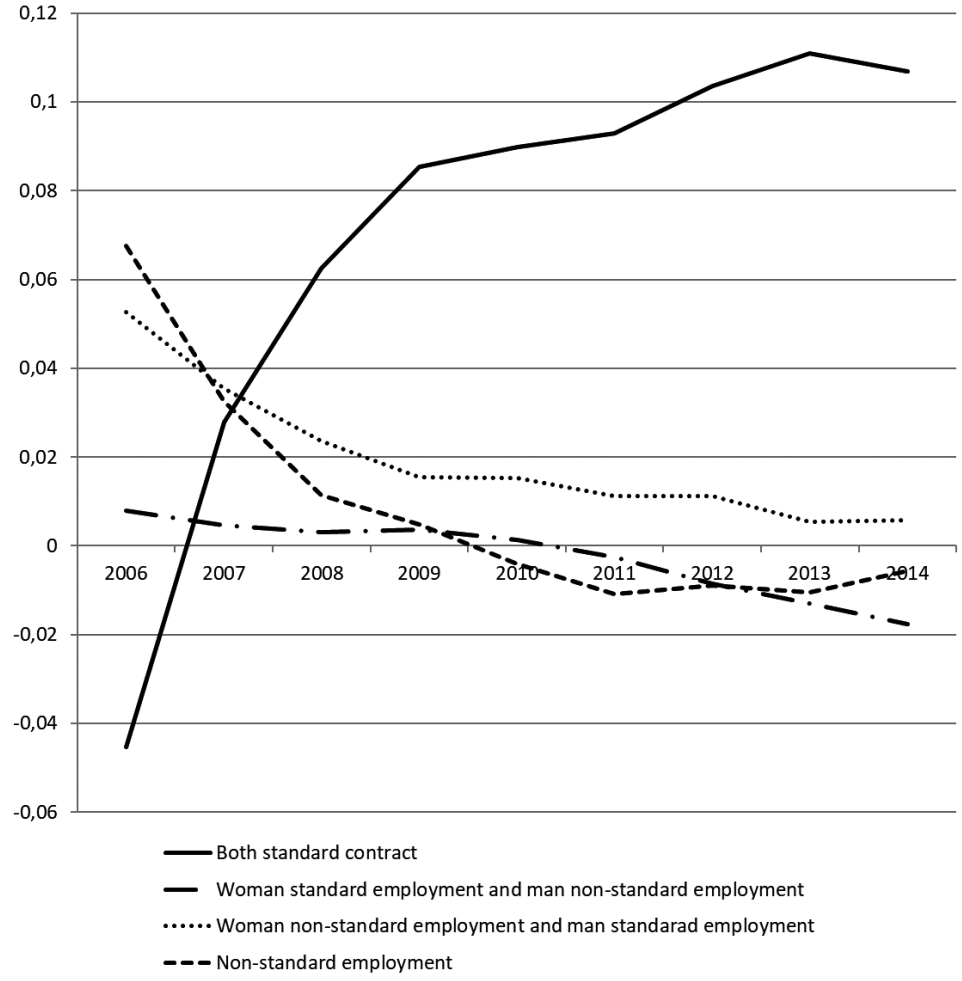
Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 3.2 Women's marginal effects of the labour-market position by situation of the partner (partner with a permanent contract is the reference category) for newly formed partner relationships in 2006, period 2006–2014



Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 3.3 Marginal effects of highly educated versus less-educated households on a combination of labour-market positions. Newly formed partner relationships in 2006



Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.1 Descriptive statistics of the population of newly formed partnerships in 2006 (selection of partners who stayed together in the period 2006–2014)

Marital status in 2006	*abs.*	*%*
Unregistered cohabitation	32.954	83,9
Registered cohabitation/married	6.335	16,1
Educational homogamy		
Both low or intermediate level of education	21.061	53,6
Man high education, woman low or medium education	6.206	15,8
Man low or medium education, woman high education	4.357	11,1
Both high education	7.665	19,5
Background		
Both non-migrantion background	29.187	74,3
Woman no migrantion background, man migrantion background	2.762	7,0
Woman migrantion background, man no migrantion background	3.686	9,4
Both migrantion background	3.654	9,3
Age men in 2006		
20-<25	6.430	16,4
25-<30	15.549	39,6
30-<35	10.470	26,6
35-<40	5.095	13
40 and older	1.745	4,4
Age women in 2006		
20-<25	13.860	35,3
25-<30	14.778	37,6
30-<35	7.384	18,8
35-<40	2.998	7,6
40 and older	269	0,7
Total	**39.289**	**100**

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.2 Distribution of labour-market positions within newly formed partnerships 2006–2014 (N=39,289)

		Women				
	Men	Standard contract	Non-standard contract	Self-employed	Non-working	Total
2006	Standard contract	37%	16%	2%	6%	61%
	Non-standard contract	12%	7%	1%	2%	22%
	Self-employed	7%	3%	1%	2%	12%
	Non-working	2%	1%	0%	2%	5%
	Total	58%	28%	4%	11%	100%
2007	Standard contract	38%	17%	2%	5%	62%
	Non-standard contract	12%	7%	1%	2%	22%
	Self-employed	7%	3%	2%	2%	13%
	Non-working	1%	1%	0%	1%	3%
	Total	59%	27%	4%	10%	100%
2008	Standard contract	40%	15%	2%	5%	62%
	Non-standard contract	12%	6%	1%	2%	20%
	Self-employed	8%	3%	2%	2%	15%
	Non-working	1%	1%	0%	1%	3%
	Total	60%	24%	5%	11%	100%
2009	Standard contract	40%	14%	3%	6%	62%
	Non-standard contract	10%	5%	1%	2%	18%
	Self-employed	8%	3%	2%	2%	16%
	Non-working	2%	1%	0%	1%	4%
	Total	60%	22%	6%	12%	100%
2010	Standard contract	40%	12%	3%	7%	62%
	Non-standard contract	10%	4%	1%	2%	17%
	Self-employed	9%	3%	3%	3%	17%
	Non-working	2%	1%	0%	1%	4%
	Total	61%	20%	7%	13%	100%
2011	Standard contract	40%	11%	3%	7%	62%
	Non-standard contract	10%	4%	1%	2%	16%
	Self-employed	9%	3%	3%	3%	19%
	Non-working	2%	1%	0%	1%	4%
	Total	60%	19%	8%	13%	100%
2012	Standard contract	40%	11%	4%	7%	61%
	Non-standard contract	9%	3%	1%	2%	16%
	Self-employed	9%	3%	4%	3%	20%
	Non-working	2%	1%	0%	1%	4%
	Total	60%	18%	8%	14%	100%
2013	Standard contract	38%	10%	4%	8%	60%
	Non-standard contract	9%	3%	1%	2%	15%
	Self-employed	10%	3%	4%	4%	20%
	Non-working	2%	1%	0%	2%	5%
	Total	59%	17%	9%	16%	100%
2014	Standard contract	37%	10%	4%	8%	59%
	Non-standard contract	9%	3%	1%	3%	15%
	Self-employed	10%	3%	4%	4%	20%
	Non-working	2%	1%	0%	2%	6%
	Total	58%	17%	9%	16%	100%

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.3 Distribution of labour-market positions within newly formed partnerships 2006–2014 in which both partners have a low or secondary education (N=21,071)

		Women				
	Men	Standard contract	Non-standard contract	Self-employed	Non-working	Total
2006	Standard contract	37%	15%	2%	7%	60%
	Non-standard contract	11%	6%	0%	3%	21%
	Self-employed	7%	3%	1%	2%	13%
	Non-working	3%	1%	0%	2%	6%
	Total	58%	25%	3%	14%	100%
2007	Standard contract	36%	16%	2%	7%	59%
	Non-standard contract	12%	7%	1%	3%	22%
	Self-employed	7%	3%	2%	2%	14%
	Non-working	2%	1%	0%	2%	4%
	Total	56%	26%	4%	14%	100%
2008	Standard contract	36%	14%	2%	7%	59%
	Non-standard contract	11%	6%	1%	3%	21%
	Self-employed	8%	3%	2%	3%	16%
	Non-working	1%	1%	0%	2%	4%
	Total	57%	24%	4%	15%	100%
2009	Standard contract	36%	14%	2%	8%	59%
	Non-standard contract	10%	5%	1%	3%	19%
	Self-employed	8%	4%	2%	4%	18%
	Non-working	2%	1%	0%	2%	5%
	Total	56%	23%	5%	16%	100%
2010	Standard contract	36%	12%	2%	8%	59%
	Non-standard contract	10%	5%	1%	3%	18%
	Self-employed	8%	3%	3%	4%	19%
	Non-working	2%	1%	0%	2%	5%
	Total	56%	21%	6%	17%	100%
2011	Standard contract	36%	11%	2%	9%	58%
	Non-standard contract	10%	4%	1%	3%	18%
	Self-employed	9%	4%	3%	4%	20%
	Non-working	2%	1%	0%	2%	5%
	Total	56%	20%	6%	18%	100%
2012	Standard contract	35%	10%	2%	9%	57%
	Non-standard contract	9%	4%	1%	3%	17%
	Self-employed	9%	4%	3%	5%	21%
	Non-working	2%	1%	0%	2%	5%
	Total	55%	19%	7%	19%	100%
2013	Standard contract	34%	10%	3%	10%	56%
	Non-standard contract	9%	4%	1%	3%	17%
	Self-employed	9%	4%	4%	5%	21%
	Non-working	2%	1%	0%	3%	7%
	Total	54%	18%	7%	21%	100%
2014	Standard contract	33%	10%	3%	10%	55%
	Non-standard contract	9%	3%	1%	4%	17%
	Self-employed	9%	4%	4%	5%	21%
	Non-working	3%	1%	0%	3%	8%
	Total	53%	18%	8%	21%	100%

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.4 Distribution of labour-market positions within newly formed partnerships 2006–2014 in which both partners are highly educated (N=7,667)

		Women				
	Men	Standard contract	Non-standard contract	Self-employed	Non-working	Total
2006	Standard contract	37%	19%	2%	3%	61%
	Non-standard cont	12%	12%	1%	2%	26%
	Self-employed	5%	2%	1%	1%	9%
	Non-working	1%	1%	0%	1%	4%
	Total	56%	35%	4%	6%	100%
2007	Standard contract	42%	19%	2%	2%	66%
	Non-standard cont	13%	9%	1%	1%	24%
	Self-employed	5%	2%	2%	0%	9%
	Non-working	1%	0%	0%	0%	2%
	Total	61%	31%	5%	4%	100%
2008	Standard contract	46%	16%	3%	3%	67%
	Non-standard cont	12%	7%	1%	1%	20%
	Self-employed	6%	3%	2%	1%	11%
	Non-working	1%	1%	0%	0%	2%
	Total	65%	26%	6%	4%	100%
2009	Standard contract	47%	15%	4%	3%	68%
	Non-standard cont	10%	5%	1%	1%	17%
	Self-employed	7%	2%	2%	1%	12%
	Non-working	1%	0%	0%	0%	2%
	Total	66%	23%	7%	4%	100%
2010	Standard contract	47%	13%	4%	3%	68%
	Non-standard cont	10%	4%	1%	1%	16%
	Self-employed	8%	2%	3%	1%	14%
	Non-working	1%	0%	0%	0%	2%
	Total	66%	20%	8%	5%	100%
2011	Standard contract	47%	12%	5%	4%	68%
	Non-standard cont	9%	3%	1%	1%	14%
	Self-employed	9%	3%	3%	1%	16%
	Non-working	1%	0%	0%	0%	2%
	Total	66%	18%	10%	6%	100%
2012	Standard contract	47%	11%	6%	4%	68%
	Non-standard cont	9%	3%	1%	1%	13%
	Self-employed	9%	3%	4%	1%	17%
	Non-working	1%	0%	0%	0%	2%
	Total	66%	17%	11%	6%	100%
2013	Standard contract	47%	10%	6%	5%	68%
	Non-standard cont	8%	2%	1%	1%	12%
	Self-employed	10%	3%	4%	1%	18%
	Non-working	1%	0%	0%	0%	2%
	Total	65%	16%	12%	7%	100%
2014	Standard contract	45%	10%	6%	5%	67%
	Non-standard cont	7%	3%	1%	1%	12%
	Self-employed	10%	3%	5%	2%	19%
	Non-working	1%	0%	0%	0%	3%
	Total	64%	16%	12%	8%	100%

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.5 Marginal effects for men's labour-market position within newly formed partnerships in 2006, period 2006–2014

	Standard contract	Non-standard contract	Self-employed	Non-working
	model 1	model 1	model 1	model 1
Partner standard contract	ref	ref	ref	ref
Partner non-standard contract	-0.057***	0.042***	0.008**	0.007***
	(-16.20)	(15.87)	(2.70)	(6.27)
Partner self-employed	-0.221***	-0.052***	0.271***	0.003
	(-29.80)	(-12.13)	(34.80)	(1.35)
Partner non-working	-0.145***	0.004	0.063***	0.078***
	(-28.11)	(1.24)	(14.63)	(25.17)
Years together	-0.001	-0.009***	0.008***	0.002***
	(-1.85)	(-21.78)	(20.80)	(9.86)
Children present	0.000	-0.004	0.019***	-0.015***
	(0.00)	(-1.51)	(6.34)	(-10.83)
Registered cohabitation/married	0.000	0.006*	-0.010**	0.003*
	(0.06)	(2.48)	(-3.13)	(2.44)
Regional unemployment (%)				
N	353.601	353.601	353.601	353.601

	Standard contract	Non-standard contract	Self-employed	Non-working
	model 2	model 2	model 2	model 2
Partner standard contract	ref	ref	ref	ref
Partner non-standard contract	-0.057***	0.042***	0.008**	0.007***
	(-16.08)	(15.74)	(2.81)	(5.98)
Partner self-employed	-0.221***	-0.052***	0.271***	0.003
	(-29.75)	(-12.15)	(34.80)	(1.31)
Partner non-working	-0.142***	0.003	0.065***	0.074***
	(-27.49)	(0.97)	(15.02)	(24.28)
Years together	0.002**	-0.012***	0.011***	-0.001***
	(2.73)	(-21.53)	(16.89)	(-5.03)
Children present	-0.001	-0.003	0.017***	-0.013***
	(-0.38)	(-1.00)	(5.85)	(-9.49)
Registered cohabitation/married	-0.001	0.007**	-0.011***	0.004***
	(-0.31)	(2.91)	(-3.44)	(3.30)
Regional unemployment (%)	-0.008***	0.008***	-0.007***	0.008***
	(-5.75)	(8.17)	(-6.41)	(17.01)
N	353.513	353.513	353.513	353.513

	Standard contract	Non-standard contract	Self-employed	Non-working
	model 3	model 3	model 3	model 3
Partner standard contract	ref	ref	ref	ref
Partner non-standard contract	-0.052***	0.036***	0.010***	0.006***
	(-14.82)	(13.76)	(3.61)	(4.85)
Partner self-employed	-0.219***	-0.046***	0.266***	-0.000
	(-29.82)	(-10.33)	(34.41)	(-0.25)
Partner non-working	-0.102***	-0.002	0.063***	0.041***
	(-19.57)	(-0.57)	(14.19)	(16.81)
Years together	0.000	-0.011***	0.011***	-0.000
	(0.27)	(-19.19)	(16.10)	(-0.68)
Children present	-0.003	-0.006*	0.019***	-0.010***
	(-0.91)	(-2.37)	(6.53)	(-7.42)
Registered cohabitation/married	0.012***	-0.000	-0.008*	-0.004**
	(3.35)	(-0.11)	(-2.53)	(-3.07)
Regional unemployment (%)	-0.005***	0.006***	-0.007***	0.005***
	(-3.78)	(6.79)	(-5.77)	(12.34)
Migration background				
both non-migration background	Ref	Ref	Ref	Ref
men no migration background; woman migration background	-0.048***	0.049***	-0.028***	0.027***
	(-6.43)	(8.90)	(-4.74)	(9.46)
men migration background; woman no migration background	0.007	0.003	-0.014*	0.004*
	(1.02)	(0.57)	(-2.47)	(2.20)
both migration background	-0.129***	0.073***	-0.014*	0.069***
	(-18.42)	(14.00)	(-2.48)	(20.64)
Education				
Both low or intermediate level of education	ref	ref	ref	ref
Man low or medium education, woman high education	0.007	-0.006	0.007	-0.007***
	(1.17)	(-1.65)	(1.35)	(-3.86)
Man high education, woman low or medium education	0.097***	-0.022***	-0.054***	-0.021***
	(16.35)	(-5.53)	(-10.85)	(-12.40)
Both high education	0.074***	-0.004	-0.048***	-0.022***
	(14.70)	(-1.11)	(-11.58)	(-14.98)
Age woman				
< 25 jaar	Ref	Ref	Ref	Ref
25-30 jaar	-0.010*	0.009**	0.003	-0.002
	(-1.98)	(2.79)	(0.68)	(-1.51)
30-35 jaar	-0.019**	0.003	0.013*	0.003
	(-2.91)	(0.72)	(2.33)	(1.28)
35-40 jaar	-0.013	0.002	0.002	0.008**
	(-1.37)	(0.30)	(0.30)	(2.59)
40 and older	-0.014	0.007	-0.008	0.014
	(-0.56)	(0.40)	(-0.39)	(1.58)
Age man				
< 25 jaar	Ref	Ref	Ref	Ref
25-30 jaar	0.024***	-0.036***	0.010*	0.002
	(4.32)	(-8.31)	(2.17)	(1.29)
30-35 jaar	0.025***	-0.078***	0.039***	0.013***
	(3.82)	(-15.79)	(7.07)	(6.20)
35-40 jaar	0.028***	-0.102***	0.051***	0.024***
	(3.36)	(-18.03)	(7.05)	(8.13)
40 and older	0.036**	-0.117***	0.050***	0.031***
	(2.97)	(-16.19)	(4.79)	(6.85)
N	353.513	353.513	353.513	353.513

Pseudo R2 model 1 0.026; Pseudo R2 model 2 0.027; Pseudo R2 model3 0.044; t-value in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 3.6 Marginal effects for women's labour-market position within newly formed partnerships in 2006, period 2006–2014

		Standard contract model 1	Non-standard contract model 1	Self-employed model 1	Non-working model 1
Partner standard contract		ref	ref	ref	ref
	Partner non-standard contract	-0.064***	0.047***	-0.003	0.020***
		(-16.85)	(15.92)	(-1.61)	(7.77)
	Partner self-employed	-0.140***	-0.019***	0.112***	0.047***
		(-28.73)	(-5.76)	(30.56)	(14.20)
	Partner non-working	-0.203***	-0.015**	0.005	0.213***
		(-28.11)	(-3.04)	(1.55)	(29.48)
Years together		0.003***	-0.009***	0.007***	-0.001**
		(6.02)	(-21.44)	(27.24)	(-2.98)
Children present		0.018***	-0.047***	-0.007***	0.037***
		(5.02)	(-18.39)	(-3.72)	(14.57)
Registered cohabitation/married		-0.066***	-0.010***	-0.006**	0.082***
		(-18.53)	(-3.96)	(-3.25)	(32.13)
Regional unemployment (%)					
N		353.601	353.601	353.601	353.601

		Standard contract model 2	Non-standard contract model 2	Self-employed model 2	Non-working model 2
Partner standard contract		ref	ref	ref	ref
	Partner non-standard contract	-0.063***	0.047***	-0.003	0.018***
		(-16.56)	(15.89)	(-1.58)	(7.37)
	Partner self-employed	-0.140***	-0.019***	0.112***	0.047***
		(-28.80)	(-5.77)	(30.54)	(14.29)
	Partner non-working	-0.195***	-0.014**	0.005	0.204***
		(-26.92)	(-2.73)	(1.74)	(28.29)
Years together		0.010***	-0.010***	0.008***	-0.008***
		(13.03)	(-16.69)	(17.19)	(-14.89)
Children present		0.014***	-0.048***	-0.007***	0.040***
		(4.02)	(-18.34)	(-3.84)	(15.63)
Registered cohabitation/married		-0.068***	-0.010***	-0.006***	0.084***
		(-19.10)	(-3.92)	(-3.32)	(32.71)
Regional unemployment (%)		-0.016***	0.002	-0.001	0.016***
		(-12.15)	(1.70)	(-1.79)	(17.56)
N		353.513	353.513	353.513	353.513

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

		Standard contract	Non-standard contract	Self-employed	Non-working
		model 3	model 3	model 3	model 3
Partner standard contract		ref	ref	ref	ref
	Partner non-standard contract	-0.050***	0.043***	0.001	0.007**
		(-13.67)	(14.65)	(0.29)	(3.10)
	Partner self-employed	-0.132***	-0.014***	0.110***	0.036***
		(-27.66)	(-4.23)	(30.52)	(11.65)
	Partner non-working	-0.121***	0.006	0.009**	0.107***
		(-16.81)	(1.06)	(2.82)	(18.22)
Years together		0.005***	-0.010***	0.007***	-0.003***
		(6.75)	(-16.63)	(16.70)	(-5.84)
Children present		0.009**	-0.048***	-0.005**	0.044***
		(2.69)	(-18.50)	(-2.87)	(18.68)
Registered cohabitation/married		-0.034***	-0.013***	-0.002	0.049***
		(-9.68)	(-5.17)	(-0.82)	(21.10)
Regional unemployment (%)		-0.009***	0.002*	-0.002*	0.009***
		(-6.79)	(2.23)	(-2.51)	(10.14)
Migration background					
	both non-migration background	Ref	Ref	Ref	Ref
	men no migration background; woman migration background	-0.027***	0.007	0.015***	0.005
		(-3.68)	(1.37)	(3.31)	(1.20)
	men migration background; woman no migration background	-0.147***	0.058***	-0.005	0.094***
		(-22.48)	(11.71)	(-1.42)	(19.64)
	both migration background	-0.216***	0.015**	-0.007*	0.209***
		(-31.18)	(3.00)	(-2.06)	(36.91)
Education					
	Both low or intermediate level of education	ref	ref	ref	ref
	Man low or medium education, woman high education	0.094***	-0.011**	0.008**	-0.091***
		(18.82)	(-2.98)	(2.80)	(-32.19)
	Man high education, woman low or medium education	0.003	-0.005	0.017***	-0.015***
		(0.54)	(-1.07)	(4.73)	(-3.72)
	Both high education	0.042***	0.018***	0.027***	-0.087***
		(8.44)	(4.88)	(9.19)	(-31.31)
Age woman					
	< 25 jaar	Ref	Ref	Ref	Ref
	25-30 jaar	0.045***	-0.037***	0.012***	-0.020***
		(9.73)	(-10.61)	(4.69)	(-6.60)
	30-35 jaar	0.054***	-0.067***	0.024***	-0.012**
		(8.70)	(-14.75)	(7.02)	(-2.89)
	35-40 jaar	0.058***	-0.091***	0.035***	-0.002
		(6.58)	(-15.32)	(6.62)	(-0.31)
	40 and older	0.066**	-0.096***	0.022	0.009
		(2.77)	(-6.43)	(1.69)	(0.57)
Age man					
	< 25 jaar	Ref	Ref	Ref	Ref
	25-30 jaar	0.015**	0.002	-0.000	-0.017***
		(2.70)	(0.48)	(-0.03)	(-4.94)
	30-35 jaar	-0.015*	-0.006	0.012**	0.008*
		(-2.30)	(-1.18)	(3.24)	(2.02)
	35-40 jaar	-0.044***	-0.008	0.016***	0.036***
		(-5.45)	(-1.40)	(3.54)	(6.64)
	40 and older	-0.069***	-0.011	0.020**	0.060***
		(-5.99)	(-1.31)	(3.11)	(7.31)
N		353.513	353.513	353.513	353.513

Pseudo R2 model 1 0.037; Pseudo R2 model 2 0.038; Pseudo R2 model3 0.076; t-value in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.7 Marginal effects of a combination of job insecurity within newly formed partnerships in 2006, period 2006–2014

	Both standard contract	Woman standard employment and man non-standard employment	Woman non-standard employment and man standarad employment	Both non-standard employment	Other combinations
Regional unemployment (%)	-0.009***	0.001	-0.001	0.002***	0.008***
	(-6.51)	(1.96)	(-0.76)	(4.65)	(4.29)
Years together	0.004***	-0.005***	-0.006***	-0.005***	0.012***
	(5.02)	(-11.30)	(-13.08)	(-18.58)	(15.58)
Children present	0.000	0.001	-0.028***	-0.015***	0.042***
	(0.07)	(0.37)	(-13.44)	(-11.58)	(12.19)
Registered cohabitation/married	-0.013***	-0.005**	-0.007**	-0.003*	0.027***
	(-3.61)	(-2.67)	(-3.16)	(-2.26)	(7.52)
Migration background					
both non-migration background					
men no migration background; woman migration background	-0.048***	0.023***	-0.006	0.015***	0.016*
	(-6.73)	(5.45)	(-1.56)	(5.66)	(2.17)
men migration background; woman no migration background	-0.100***	-0.021***	0.038***	0.013***	0.070***
	(-16.39)	(-6.81)	(9.21)	(5.49)	(10.59)
both migration background	-0.221***	-0.013***	-0.028***	0.024***	0.238***
	(-39.52)	(-3.82)	(-8.12)	(8.93)	(34.20)
Education					
Both low or intermediate level of education					
Man low or medium education, woman high education	0.053***	0.016***	-0.003	-0.005**	-0.061***
	(10.07)	(5.36)	(-1.13)	(-3.08)	(-10.95)
Man high education, woman low or medium education	0.058***	-0.009**	0.017***	-0.008***	-0.057***
	(9.62)	(-3.00)	(4.69)	(-4.52)	(-9.38)
Both high education	0.071***	-0.002	0.021***	0.009***	-0.100***
	(14.50)	(-0.71)	(7.12)	(4.85)	(-20.08)
Age woman					
< 25 jaar					
25-30 jaar	0.021***	0.014***	-0.025***	-0.005**	-0.005
	(4.60)	(5.70)	(-8.80)	(-2.88)	(-1.13)
30-35 jaar	0.020**	0.013***	-0.045***	-0.014***	0.025***
	(3.24)	(3.80)	(-12.67)	(-6.72)	(3.87)
35-40 jaar	0.025**	0.013*	-0.058***	-0.017***	0.038***
	(2.82)	(2.45)	(-12.65)	(-6.08)	(4.12)
40 and older	0.024	0.026	-0.062***	-0.023**	0.035
	(0.96)	(1.51)	(-5.32)	(-3.10)	(1.43)
Age man					
< 25 jaar					
25-30 jaar	0.023***	-0.019***	0.006	-0.009***	-0.001
	(4.26)	(-5.58)	(1.92)	(-4.41)	(-0.10)
30-35 jaar	0.000	-0.047***	0.003	-0.023***	0.068***
	(0.02)	(-12.18)	(0.77)	(-10.27)	(10.23)
35-40 jaar	-0.016*	-0.068***	0.001	-0.029***	0.113***
	(-2.06)	(-16.16)	(0.21)	(-10.79)	(13.34)
40 and older	-0.039***	-0.080***	-0.005	-0.032***	0.155***
	(-3.48)	(-15.39)	(-0.72)	(-9.06)	(12.68)
N	353.513	353.513	353.513	353.513	353.513

Pseudo R2 0.022; t-value in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

4. The effects of men's and women's income and non-standard employment on couples' transition to parenthood[‡]

Increasing economic uncertainty through the growth of non-standard employment could explain the recent fertility drop in Europe. Despite the popularity of the idea among demographers and sociologists that economic uncertainty impedes fertility, mixed evidence for this idea has been found. In this study we investigate the association between economic uncertainty and childbearing among Dutch couples. To study the association between employment status, income and the transition to parenthood, we estimated multinomial logit models using a combination of the Dutch Labour Force Survey (LFS) and register data from Statistics Netherlands. The main finding is that the economic uncertainty of men and women affects fertility in different ways. The non-standard employment of men has no effect on fertility, whereas men's lower income reduces the likelihood of their becoming a parent. For women, both non-standard employment and a lower income impede childbearing. In addition, the employment uncertainty of men and women in the form of unemployment and non-standard employment correlates strongly with the risk of separation, which can be seen as an indirect negative effect on fertility as well.

First, we use detailed information about income and employment status of both partners in our analysis of fertility outcomes. Second, two indicators of economic uncertainty – personal income and employment status – which represent two separate dimensions of it, are used. Third, by taking the information about the two partners simultaneously we can estimate whether the effects of economic uncertainty are gendered. Fourth, by estimating the effect of economic uncertainty on separation as a competing outcome, we also provide evidence that the various economic indicators have diverse ramifications on the different demographic outcomes. Finally, this article offers a detailed description of how the economic uncertainty of coupled men and women affects parenthood decisions in the Dutch context.

4.1 Introduction

Many European countries have experienced the growth of non-standard employment over the past three decades. While the pace of growth in non-standard employment varies substantially between countries (Eurostat 2019c; Hoekstra, Euwals, Arsova and Berkhout 2016), questions have been raised on the causes and consequences of it. Numerous studies have found that non-standard employment is associated with lower incomes, less upward mobility and more employment instability (Barbieri 2009; Gebel 2009; Kahn 2010; Kalleberg 2018; Scherer 2005; Steijn *et al*. 2006).

[‡] To be resubmitted after revision to an international journal

Economic uncertainty can also make long-term commitments in the private sphere less feasible, impeding the process of family formation (Blossfeld *et al*. 2006; Kalleberg 2018; Kalmijn 2011). This is especially true for the transition to parenthood, as parenthood is not only a costly endeavour but also a long-term commitment. Increasing economic uncertainty through the growth of non-standard employment could also explain the recent fertility trend in Europe. Following a substantial drop in fertility during the economic crisis in 2008, birth rates have shown almost no increase despite economic growth since 2014 (Eurostat 2019a, 2019b, 2019c).

Despite the popularity of the idea among demographers and sociologists that economic uncertainty impedes fertility, mixed evidence for this idea has been found. The way in which men's uncertainty relates to fertility intentions and behaviour seems to depend on cultural values and institutional settings. A negative correlation between the non-standard employment of men and fertility has been confirmed repeatedly in the Italian context (Busetta, Mendola, and Vignoli 2019; Santarelli 2011; Vignoli, Drefahl, and De Santis 2012), a welfare state with limited social and economic protection in cases of unemployment. The non-standard employment of men is also negatively correlated with the transition to fatherhood in Scandinavian countries (Lundström and Andersson 2012; Sutela 2012). Studies from Germany and the Netherlands, however, reported no correlation between non-standard employment and the transition to fatherhood (Auer and Danzer 2015; de Lange *et al*. 2014; Laß 2020; Liefbroer 2005).

While the results for men's non-standard employment are mixed, those for women indicate a negative effect of non-standard employment on the transition to motherhood compared to women in permanent employment (Auer and Danzer 2015; Barbieri *et al*. 2015; de la Rica and Iza 2005; Golsch 2003; Kreyenfeld *et al*. 2012; Laß 2020; Liefbroer 2005).

While the focus in the literature has been shifting towards uncertainty in terms of non-standard employment, income as an indicator of economic uncertainty is not losing its explanatory power when it comes to fertility outcomes. Higher-income couples can afford additional child-related expenses without reducing their own level of consumption (Happel, Hill and Low 1984; Hotz, Klerman and Willis 1997). Higher earnings could also indicate career maturity, as high-earning individuals are usually more established in the labour market. Income is repeatedly and positively associated with the transition to parenthood for men in many European countries (Hart 2015; Jalovaara and Miettinen 2013; Kreyenfeld 2005; Vignoli *et al*. 2012). A higher income could also reduce the long-term wage penalty of a career break due to parenthood and hence compensate for higher opportunity costs for women (Buckles 2008; Miller 2011; Taniguchi 1999; Wilde *et al*. 2010). However, the effects of income on women's fertility outcomes are mixed. In Italy and Germany, the effect of women's income on the transition to parenthood is found to be negative

or non-existent (Andersson, Kreyenfeld and Mika 2014; Kreyenfeld 2005; Santarelli 2011; Vignoli *et al*. 2012). In Scandinavian countries a positive effect of women's income on fertility is reported (Andersson *et al*. 2014; Hart 2015; Jalovaara and Miettinen 2013).

One important difference between income and employment status is that income covers the present financial situation, the affordability of parenthood. Non-standard employment represents future income uncertainty as well as a more social dimension of economic uncertainty, the relative place that an individual has on the career ladder (Oppenheimer 1988). Non-standard employment not only implies uncertainty in terms of income instability and job insecurity but also about future lifestyles and daily routines, making the prediction of how future life will look more difficult. According to Oppenheimer (1988: 574)

> […] *work structures life in many ways*[...] *Hence, if the nature of adult work roles appears very uncertain, so does the fabric of one's future life. For example, will work involve traveling extensively, reducing time spent together at home? Will the family have to move often because of job transfers? Does the job entail frequent overtime work on nights and weekends or working night shifts*?

Although income and employment status represent different dimensions of economic uncertainty, they are intertwined. On the one hand, income is one of the aspects that could explain the relationship between non-standard work and fertility, as non-standard workers have on average lower earnings and are more often confronted with higher income volatility (Amuedo-Dorantes and Serrano-Padial 2007; Hagen 2002; Vosko *et al*. 2009). On the other hand, a higher level of income could contribute positively to a sense of economic security, as it would mean greater financial resources for the household, which enables the couples to build financial buffers in order to cope with economic setbacks. Taking both indicators into account gives us a more complete picture of how economic uncertainty affects fertility. By looking at the different indicators of economic uncertainty and at both partners simultaneously, this study shows similar conclusions to those of Vignoli *et al*. (2012) about economic uncertainty and fertility in the Italian context. While their sample was too small to draw firm conclusions, the results indicated that, in the Italian context, the non-standard contract of both partners depresses first parenthood.

The contribution of this chapter is as follows. First, we use detailed information about the income and employment status of both partners in our analysis of fertility outcomes. Full specialisation is a risky strategy for households in times of unstable marriages and growing economic uncertainty (Oppenheimer 1994; Oppenheimer *et al*. 1997). As dual-earner families are becoming the norm, we investigate both partners simultaneously. Second, two indicators of economic uncertainty – personal income and employment status – represent two separate dimensions of economic uncertainty: the present financial affordability (income) and the future income

insecurity (non-standard employment) *vis-à-vis* a more social dimension of economic uncertainty. Third, by taking information about two partners simultaneously, we can estimate whether and to what extent the effects of economic uncertainty differ for male and female partners. We also analysed the interactions between male and female partners' employment positions but, since none of these were significant, we do not present them here. Fourth, we analyse transitions into parenthood while treating union dissolution as a competing risk. Several authors have argued that economic problems in a union can lead to its instability (Poortman 2005) and that, if such effects exist, they can be seen as indirect ways in which uncertainty affects fertility (i.e., via postponement).

Our aim is not to make a theoretical contribution but, instead, to provide new nationally representative evidence on important but well-known ideas about which the evidence has thus far not been conclusive. We offer a detailed empirical description of how the economic uncertainty of coupled men and women affects parenthood decisions in the Dutch context. Because the rise of non-standard employment and the decline in fertility are especially pronounced in the Netherlands (Eurostat 2019b), a closer look at the transition into parenthood in relationship to economic uncertainty in this country could give valuable insights into a better understanding of broader European demographic trends.

4.2 The Dutch context

The Netherlands constitutes a special case with regard to trends of rising non-standard employment and declining fertility. The average age of first-time motherhood has been increasing in the Netherlands, while the total fertility rate has declined over the past decade, despite the economic recovery (Eurostat 2019b). At the same time, non-standard employment has been rising in the Netherlands in particular and accounts for over a third of the working population nowadays (OECD 2019).

The rise in non-standard employment in the Netherlands concerns the rise in self-employment, temporary contracts, temporary agency workers and on-call contracts (OECD 2019). While Dutch labour-market regulations offer a relatively high level of protection to employees with permanent contracts, atypical employment in the Netherlands is rated relatively poorly on the scale of protection legislation (OECD 2013). Moreover, the different types of non-standard employment are not protected equally in the Netherlands. The self-employed, for instance, cannot participate in advantageous collective social-security arrangements like unemployment, disability and pension schemes and are dependent on private arrangements. Other types of contract have relatively low protection against dismissals and enjoy fewer fringe benefits compared to permanent contract holders, although they are covered by collective insurance schemes. However, the lower earnings that are associated with

these types of employment become lower unemployment benefits, putting non-standard employees at greater risk of further precarious employment (Olsthoorn 2015). An important difference between employees and the self-employed is the perception of insecurity. For the self-employed who, on average, put greater value on independence and freedom, becoming self-employed is more often a conscious decision. Hence, while the majority of non-standard workers prefer a permanent contract, most self-employed are satisfied with their labour-market position (Hooftman *et al*. 2018). The rise of the self-employed in the Netherlands was the fastest of all the OECD countries over the past two decades and consists mostly of the self-employed without employees (i.e., own-account workers) (OECD 2019). This rise of own-account work has raised some concerns. Some of the self-employed without employees work for only one client. This makes them financially dependent on that client, hence economically more uncertain. Although the population of self-employed people consists mostly of older workers, they are not a marginal group among younger workers. The percentage of the self-employed among the population aged 25–45 was 14 per cent in 2019 in the Netherlands (CBS. n.d. b).

When it comes to the transition to fatherhood, the national context is also important. In countries with a high prevalence of male breadwinner families, stable regular employment could be a prerequisite for young men for their transition to fatherhood. However, countries with a high prevalence of dual-earner families or extensive state provisions, like the Netherlands, could ease the transition to adulthood for young men without regular employment (Kalleberg 2018; Newman 2012). The national context makes the difference, as it does in the transition to motherhood (Begall 2013; Matysiak and Vignoli 2008). Causes for the conflict between labour-market participation and motherhood are usually sought in the institutional barriers, e.g., the availability of affordable (formal) childcare services and tax reductions for single-earner families, as well as in the sociocultural aspects such as attitudes towards working mothers (Kögel 2004). The Netherlands is known for having one of the highest female labour-market participation rates in the EU and the highest share of mothers who work part-time (Eurostat 2019c). While part-time work is often seen as a precarious form of employment, in the Netherlands it is protected and accepted, especially for women. Even more so, employees have the right to work part-time. Another feature of the Netherlands is the disapproving attitude towards the full-time use of formal childcare (Portegijs *et al*. 2006) and its family policy favouring the traditional division of labour (Gash 2009). Not surprisingly, the 'one and a half earner' model, with the male partner as a full-time earner and the female partner working part-time has become the norm in the Netherlands in recent decades (Dirven 2013; Verbakel and de Graaf 2009). Thus, the Dutch model is a 'hybrid' one: both partners are engaged in paid labour but the male partner remains the primary earner. For most childless women, having a permanent contract enables them to reach the ideal combination of becoming a mother and having a part-time job.

4.3 Data and research methods

4.3.1 Data

To study the association between employment status, income and the transition to parenthood, we use a combination of survey and register data from Statistics Netherlands. The Labour Force Survey (LFS) is an annual household survey and for this study we selected the period 2003–2015. We used this survey to establish the labour-market position of an individual and his/her partner. Register information based on the System of Social Statistical Datasets (SSD) (Bakker *et al*. 2014) was used to determine demographic transitions in the two years following the survey. The chosen approach of linking the LFS with the registers is similar to the method used by Lundström and Andersson (2012) in their study of labour-market status effects on first childbearing in Sweden.

To estimate the transition to parenthood, we selected cohabiting and married couples who were childless at the time of the first interview. Table 1 gives an overview of the selections made and the remaining couples. The persons we selected from the LFS were linked to the SSD and followed for a period of two years, with the interview date as the start of the observation window. We encountered few mismatch problems as the LFS survey uses the population register as a sampling frame (Table 4.1). No truncating issues were encountered, as register information was available for the same period for all records. Couples in which one or both partners had a child from a previous relationship at the time of the LFS interview were excluded. Couples who had a first child within nine months of the interview (due to possible existing pregnancies), same-sex couples and couples in which one of the partners died in the following two years were also excluded. We applied an age restriction of 18–45 years for women and 18–50 years for men.

4.3.2 Economic measures

Some types of non-standard employment differ very little from permanent employment in terms of economic uncertainty. Temporary contracts with the prospect of a permanent contract have a temporary employment contract that offers the likelihood of a permanent appointment if the employee performs well. According to research, temporary contracts with the prospect of a permanent contract are very similar to permanent contracts (Houwing and Kösters 2013). Therefore, we classified these contract forms as permanent employment. Although this research is mainly focused on non-standard employment, given the spectacular rise in own-account work in the Netherlands, we draw a distinction between two forms of self-employment: that with and that without employees. Economic uncertainty regarding employment status is captured under the following categories:

- Permanent workers (including those with the prospect of a permanent contract)

- Non-standard workers (temporary contracts, agency work, on-call work)
- Self-employed without employees
- Self-employed with employees
- Unemployed (people without paid work who have been looking and are immediately available for work)
- Not active.

The working hours of men and women were centred and those of unemployed and inactive individuals set to 0 (the average). This implies that the effect of, for instance, unemployment is *vis-à-vis* employed persons who work average hours. This is done to ease the interpretation of the coefficient for working hours, as our sample contains people who do not work and therefore have no working hours.

The (logged) income variable consists of personal gross income from labour, income from self-employment, allowances from income insurance (like unemployment benefits) and social facilities (except for child benefits). Premiums for income insurance (except for national insurances like social welfare) are deducted from personal income. Zero income and negative income (mostly self-employed with negative profits) were assigned to 1 and then ln(1) = 0.

4.3.3 Modelling fertility

Fertility was measured by the couple's first transition to parenthood within two years of the date of the interview (LFS), excluding the first nine months which could contain the existing pregnancies. We chose this approach instead of measuring fertility at the same time as the date of the interview because we are trying to capture how fertility behaviour is being affected by economic uncertainty. Therefore, we estimate the transition to parenthood within two years of the survey interview, with women's age as a control variable.

Cohabiting and married childless couples may separate before having a child. Jalovaara and Miettinen (2013) describe this choice as 'take it or leave it', a possible crossroads decision between having a child together or splitting up. If the couple fails to create a secure economic situation, they may wait for the situation to improve or they may split up. Both situations will lead to the postponement of fertility. Economic uncertainty could therefore affect fertility indirectly, via relationship (in)stability. Hence, we applied a multinomial logit model by integrating the other possible outcomes in our dependent variable, which consists of four possible outcomes:

- No change (reference) (no children born and still together) N=15,360
- The transition to parenthood and still together N=4,081
- Separation and no children born N=2,374

- Other outcomes (having a child with someone else, having a child and separation etc.) N=193

The last outcome is included in the model but not presented in the tables. This approach resembles a competing risk model in the event history framework. An ideal design would also include repeated measures of indicators for economic uncertainty but, unfortunately, this was not available.

4.3.4 Control variables

Fertility behaviour is often correlated with business cycles (Philipov, Thévenon, Klobas, Bernardi and Liefbroer 2009). Because we are merely interested in the effects of economic uncertainty at the micro level, we are controlling for the year of the interview (2003–2015). Furthermore, fertility rates usually vary between immigrants and the majority population (Kulu, Milewski, Hannemann and Mikolai 2019). Therefore, we control for migration background: no migration background, a Western migration background and a non-Western migration background. These categories are defined in accordance with the official definitions of Statistics Netherlands. To consider that some groups become parents at an older age, we control for age. Age is divided into five-year categories: under 25, 25–34, 35–39, 40–44 and 45–50. Educational attainment is negatively related to the transition to motherhood (Liefbroer and Corijn 1999); therefore, we control for educational attainment. Educational attainment is measured in three categories: low, intermediate and high. Lower education includes primary education, pre-vocational education, junior general secondary education and vocational education to the entry level – the former assistant level. Intermediate educational attainment includes senior general secondary education, basic vocational education, the vocational professional track and the vocational middle-management and specialist track. High educational attainment includes all education at the tertiary level – i.e., associate degree programmes, professional and academic Bachelor's and Master's degrees and programmes leading to the award of an advanced research qualification, such as a PhD.

4.4 Results

Table 4.2 describes the research population by labour-market status of both partners, income and background characteristics. Almost 19 per cent of the couples became parents and were still living as a couple two years after the interview. This percentage varies across employment status, age groups and educational level. Of the couples with men in non-standard employment, 17 per cent became parents while for couples in which men had permanent contracts, it was 19 per cent. For women the difference is slightly larger: 16 compared to 20 per cent. Besides couples with permanent contracts, partners in the age category 30–34 and higher-educated couples were also

more likely to become parents together. Of the couples, 11 per cent were separated before having a child within two years of the interview. Separation happened more often if one of the partners had a non-standard employment status or was unemployed.

The results of the multinomial logit models for the outcome 'transition to parenthood' and competing outcome 'separation' are presented in Tables 4.3, 4.4 and 4.5, with the outcome 'no changes' as the base. All models presented are controlled for age, educational level and migration background of both partners as well as the year of the interview. In the first three models we estimate the effect of income and employment status of men both separately (Models 1a and 1b) and simultaneously (Model 1c) (Table 4.3). In the same fashion, Models 2a, 2b and 2c show the impact of women's economic characteristics (Table 4.4.). Model 3 (Table 4.5) is the full model with both partners' economic certainty indicators.

4.4.1 Income

In the Netherlands, a man's income has a positive effect on the transition to parenthood (Model 1a). This positive effect remains after controlling for other labour-market characteristics (Model 1c). Women's income (Model 2a) shows a similar pattern: a positive correlation that remains after controlling for employment status and working hours (Model 2c). This means that the affordability of parenthood still plays a major role in fertility decisions. Moreover, the incomes of both partners seem to affect the fertility decision (Model 3). To give an idea of how much effect income has on the transition to parenthood, we calculated and plotted the predicted probabilities of having a transition to parenthood by women's and men's income using Model 3c (Figure 4.1). The predicted probability of entering parenthood by couples with men's income on the lower side of the income distribution is around 10 per cent. At the higher end of the men's income distribution, the couple's probability of entering parenthood is twice as high at over 20 per cent. Women's income shows a similar trend, although less pronounced: the predicted probabilities range from 14 per cent at the lower end of the income distribution to 20 per cent at the higher end. In other words, the income effect on fertility is stronger for men than for women.

4.4.2 Employment status

Men's non-standard employment does not seem to matter for couples' transition to parenthood in the Netherlands. The coefficient compares men who were in non-standard employment to men with a permanent position. The effect of the non-standard employment of men on the transition to parenthood is negative but not significant (Models 1b and 1c). For Dutch women, being in non-standard employment significantly reduces their likelihood of becoming a mother when compared to women with a permanent position (Model 2b). When controlled for income and other labour-market characteristics, the non-standard employment of

women does not lose its strength and remains quite a strong predictor of a couple's fertility (Model 2c). The calculated predicted probabilities of having a transition to parenthood by women's and men's employment are presented in Figure 4.2. We used the results of Model 3c to calculate the predicted probabilities. While the likelihood of couples with women in permanent employment entering parenthood is 19 per cent, the probability of couples with women in non-standard employment is 5 percentage points lower (14 per cent).

Self-employed men and women do not different in their likelihood of becoming parents compared to their counterparts with permanent employment contracts. The beta coefficients are positive but relatively small and not significant.

For men (Model 1b), being unemployed is associated with a smaller likelihood of becoming a father compared to men with a permanent contract; however, this association is not significant. It should be noted that only a small percentage (2 per cent) of the men are unemployed. When controlled for income (Model 1c) this effect almost disappears, indicating that it is only a matter of financial affordability when it comes to parenthood. Similar results are found for women (Models 2b and 2c). The small group of unemployed women (3 per cent) have a lesser likelihood of becoming a mother compared to women with permanent contracts ($p<0.10$) but controlled for income, this effect is reduced and is no longer significant, although it does not disappear as was the case with men's unemployment.

4.4.3 Working hours

The number of working hours has a positive effect on the transition to parenthood for men (Model 1c). For women the effect of working hours takes a different direction, indicating that part-time working women are more likely to have a child than full-time working women. The hours effects are substantial: the difference in predicted probabilities of making the transition to parenthood between couples where men work fewer hours and couples where men work more hours is about 8 percentage points (Figure 4.3). The difference between couples where the women work 40 hours a week and couples where they work 10 hours a week is around 4 percentage points. This finding is in line with what one would expect, since working fewer hours is more compatible with child-rearing for women while men remain the main earners in the Dutch 'hybrid' one-and-a-half-earner model (Model 2c and Figure 4.3).

4.4.4 Competing outcome: separation

Although separation is not the main focus of this research, it could intervene with fertility realisations. Therefore, we present the results for the separation outcome as a competing outcome in Tables 4.3, 4.4 and 4.5, together with the results for fertility. We find that 11 per cent of the couples split up without having had a child. The

models shows that separation rates correlate strongly with the economic uncertainty of both men and women. The non-standard employment, unemployment and inactivity of both men and women greatly increases the likelihood of separation. The important implication of these results is that couples who become parents are a somewhat selective population. Disregarding this competing outcome means underestimating the total effect of economic uncertainty on fertility. Separation usually also means a delay in childbearing and by increasing the likelihood of couples separating, non-standard employment also, indirectly, influences their fertility behaviour. The income of men and women, however, has no significant effect on the likelihood of couples breaking up.

The implication of the results described above is that the range of economic indicators could have varying ramifications on different demographic outcomes. Considering the different indicators of economic uncertainty is therefore desirable when investigating the effect of economic uncertainty on different demographic outcomes.

4.4.5 Robustness checks

To take into account that some groups become parents at an older age, we control for the age of both partners in all models. Additionally, we estimated models with interaction terms of the labour-market situation by age group (results not presented in this paper but available upon request). The results show no difference by age group for men. For women, the negative effect of non-standard employment was only present among women under the age of 30. Women between 30 and 45 years old do not show any differences in fertility behaviour to women in non-standard or standard employment. This means that, for women between 30 and 45 years old, non-standard employment is no longer an obstacle for childbearing, perhaps due to biological limitations: these women simply do not want to wait any longer. However, future research could solve the issue of the effect of employment status on total fertility by applying a longitudinal research method.

In this paper, we applied the regular, broader definition of non-standard employment. However, on-call work and agency work are considered to be more precarious than temporary contracts in terms of income volatility and job security (Mattijssen and Pavlopoulos 2019). The data source used (LFS) allows us to take the heterogeneity of non-standard employment into account and we conducted various additional analyses where we differentiated between the various forms of non-standard work – specifically on-call work, agency work and temporary contracts. The results for these different kinds of non-standard employment (available upon request) were very similar to the results presented in this thesis.

Another robustness check we apply to our data is shortening the length of the observation window to one year after the interview. This has resulted in fewer events but the estimation results were very similar to those presented here.

4.5 Conclusion and discussion

This study contributes to our knowledge concerning the association between economic uncertainty and fertility. As dual-earner families are becoming the norm, we investigated both partners simultaneously. The adaptive family strategy in the Netherlands requires both partners to be engaged in paid labour.

Economic uncertainty was measured using two separate indicators: personal income and employment status. These indicators represent two separate dimensions of economic uncertainty: the present financial affordability and the future income and employment insecurity concerning a more social dimension of economic uncertainty. This article provides strong evidence that different economic indicators affect women and men differently in the Dutch context. The man's lower income reduces the likelihood of parenthood more than the woman's. Men still are the main providers within the household and the woman's income is generally of lesser importance. This is especially true for the Netherlands, a country with the popular 'one-and-a-half-earner' model, in which the man works full-time and the woman part-time (Dirven 2013; van Gils and Kraaykamp 2008; Verbakel and de Graaf 2009).

This study also shows that it is not his employment uncertainty but hers (in the form of non-standard employment) which matters in terms of fertility in the Dutch context. Women shape their participation in the labour market according to their family needs while, for men, the realm of paid labour and family life seem to be on parallel tracks. Becoming a father hardly changes his involvement in paid labour (Blossfeld and Drobniç 2001). Therefore, women usually adapt their labour participation after becoming mothers: working fewer hours, opting for jobs with adaptable hours or occupations that offer more autonomy as to when and where to work are often viable strategies for women who try to combine working and family life. These choices constitute a major part of the long-term 'motherhood penalty' (Kleven, Landais and Søgaard 2018). Therefore, waiting until a level of career maturity is reached, marked by having a certain level of income or a permanent contract, before giving birth, reduces the long-term 'motherhood penalty' which mothers face (Buckles 2008; Miller 2011; Taniguchi 1999; Wilde *et al*. 2010). Moreover, for women, having a child when temporarily employed increases the risk of not getting a permanent contract or even of losing their job. Hence, women could feel more pressure to secure their employment before they go on maternity leave. By keeping a foot in the door of the labour market, women can plan their pregnancy, have a child, reassess the situation and adjust their employment accordingly. Rearranging their employment

from the secure situation of having a permanent job gives Dutch women the possibility to match whatever preferences they have regarding employment and working hours with the actual needs of the family. This does not apply to men, as full-time employment for men is still the default, regardless of their parenthood status. If necessary, men can keep working during their partner's pregnancy and shortly after the child is born. Hence, men's future employment security seems to be relatively unimportant in the transition to parenthood.

By estimating the effect of economic uncertainty on separation as a competing outcome, we have also provided evidence that the various economic indicators have diverse ramifications on different demographic outcomes. Taking into account several indicators of economic uncertainty is therefore desirable when investigating the effect of economic uncertainty. For the couples in this study, it seems to be a question of choosing between having a child together and splitting up. Our results show that men's and women's employment uncertainty in the form of unemployment or non-standard employment correlates strongly with the risk of separation. It seems that uncertainty in work coincides with uncertainty in relationships and, hence, while not influencing the transition into fatherhood directly, affects it indirectly through relationship stability.

In this study we did not address the issue of selectivity. Women and men do not enter into non-standard employment randomly. A longitudinal design may be more suitable in order to provide us with greater insights into selectivity and causality by investigating whether changes in employment status influence fertility behaviour. Another limitation concerns the effect on completed fertility. According to our additional analyses, after women with non-standard contracts reach a certain age, they become mothers as often as women with permanent contracts. This could enable women to catch up with those who acquired permanent contracts earlier in life, meaning that non-standard employment has no effect on completed fertility in the end. Another issue concerns the scope of this research. We looked specifically at individuals in couples, leaving singles out of the analysis. However, the individuals are not selected in couples randomly: economic uncertainty correlates also with family formation (de la Rica and Iza 2005; Kalmijn 2011; Mills *et al*. 2005). Therefore, economic uncertainty can also affect fertility indirectly by influencing couple formation. Thus, the effect of economic uncertainty on fertility as reported in this study could be underestimated. Future longitudinal analyses could shed greater light on the role that economic uncertainty plays in different life-course phases and varying demographic outcomes and could advance our understanding of the total impact of economic uncertainty during the transition to adulthood.

Finally, this study contributes to our knowledge of the Dutch context, a context that has been characterised by the rise of non-standard employment and the decline in fertility. The results of this study, the detailed description of how the economic uncertainty of men and women in couples affects their parenthood decisions offers

a possible explanation for the decline in fertility in the Netherlands. Our results are very similar to the study in the Italian context by Vignoli *et al*. 2012 which reports men's income to be of more importance than women's. The Italian study also reports that employment uncertainty in the form of the non-standard employment of men and women is negatively associated with the transition to parenthood. However, the Netherlands, with the country's high prevalence of dual-earner families and extensive state provisions, seems to ease the transition to adulthood for young men without regular employment in comparison to the Italian context, with its more traditional division of paid labour and less-generous social-security schemes. All in all, additional future longitudinal research in different national contexts on this subject is to be recommended.

4.6 Tables and figures

Table 4.1 Sample selection details

Total population LFS 2003-2015, first wave, person level: both partners occur in the data as individual records	1.584.191
Work status available	1.271.133
Not enrolled in the formal education at the time of the interview LFS	1.048.445
Cohabiting partner at the time of the interview LFS	768.913
Transformation sample from individual to couple level (incl. requirement both partners present in both sources and hetero couples)	380.270
Age selection	154.771
Selection both partners alive during observation window	154.678
Both partners childless at the time of the interview LFS	27.599
None of the partners is handicap or having severe long-term health problems	22.182
Persons occur more than once in the data with different time windows	22.008

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 4.2 Descriptive statistics

	Mean	Std. Dev.	Transition to parenthood %	Separated %
Income men (log)	10,34	1,24		
Income women (log)	9,88	1,69		
Hours men (centered)	1,84	4,81		
Hours women (centered)	2,93	7,65		
Labour market position men				
Standard employment	0,77	0,42	19,15	9,99
Non-standard	0,08	0,27	17,45	15,90
Self-employed without personnel	0,08	0,26	16,63	10,71
Self-employed with personnel	0,04	0,19	18,41	10,47
Unemployed	0,02	0,15	15,18	16,70
Not active	0,02	0,13	10,28	15,42
Labour market position women				
Standard employment	0,75	0,44	19,74	9,84
Non-standard	0,13	0,33	15,52	14,87
Self-employed without personnel	0,04	0,20	15,31	11,89
Self-employed with personnel	0,01	0,11	16,47	10,20
Unemployed	0,03	0,17	14,69	14,69
Not active	0,04	0,20	13,19	11,57

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 4.3 Multinomial regression model of the transition to parenthood and separation on partners' economic characteristics

	model 1a				model 1b				model 1c			
	Parenthood		Separation		Parenthood		Separation		Parenthood		Separation	
	b	t-value	b	t-value	b	t-value	b	t-value	b	t-value	b	t-value
Men income (log)	0.098***	4.468	-0.053***	-3.429					0.085***	3.890	-0.025	-1.464
Men flexible work (ref. permanent)					-0.096	-1.362	0.375***	5.064	-0.045	-0.635	0.334***	4.418
Men self-employed without personnel					-0.028	-0.386	0.150~	1.747	0.011	0.151	0.131	1.491
Men self-employed with personnel					0.085	0.871	0.174	1.457	0.068	0.679	0.212~	1.733
Men unemployed					-0.105	-0.805	0.553***	4.417	-0.002	-0.013	0.505***	3.978
Men inactive					-0.367*	-2.053	0.506***	3.365	-0.215	-1.182	0.436**	2.815
Men hours (centered)									0.011*	2.507	-0.012**	-2.656
Constant	-2.741***	-11.336	-0.994***	-5.118	-1.752***	-16.485	-1.609***	-13.252	-2.633***	-10.830	-1.330***	-6.332
Observations	22,008				22,008				22,008			
AIC	35.045				35,051				35,012			
BIC	35.789				35,891				35,900			
Log-Likelihood	-17.430				-17,421				-17,395			
Pseudo R2	0.063				0.064				0.065			

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10 The output of the multinomial regression models for the outcome 'transition to parenthood' and competing outcome 'separation' is presented with the outcome 'no changes' as the base outcome. All models presented are controlled for age, educational level and migration background of both partners and the year of the interview

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 4.4 Multinomial regression model of the transition to parenthood and separation on partners' economic characteristics

	Parenthood		Separation		Parenthood		Separation		Parenthood		Separation	
	b	t-value	b	t-value	b	t-value	b	t-value	b	t-value	b	t-value
Woman income (log)	0.039**	2.770	0.004	0.283					0.040*	2.456	0.026	1.589
Woman flexible work (ref. permanent)					-0.350***	-5.897	0.224***	3.557	-0.373***	-6.114	0.274***	4.241
Woman self-employed without personnel					-0.008	-0.086	0.327**	3.056	0.021	0.204	0.382***	3.507
Woman self-employed with personnel					0.071	0.391	0.247	1.150	0.162	0.874	0.192	0.886
Woman unemployed					-0.226~	-1.929	0.343**	2.929	-0.188	-1.562	0.425***	3.510
Woman inactive					-0.162	-1.494	0.177	1.565	-0.055	-0.464	0.302*	2.387
Woman hours (centered)									-0.008**	-2.860	0.009**	2.734
Constant	-1.703***	-15.987	-1.585***	-13.027	-2.136***	-12.650	-1.553***	-8.859	-2.073***	-10.970	-1.856***	-9.389
Observations	22,008				22,008				22,008			
AIC	35,039				35,086				35,019			
BIC	35,879				35,830				35,907			
Log-Likelihood	-17,415				-17,450				-17,399			
Pseudo R2	0.064				0.062				0.065			

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10 The output of the multinomial regression models for the outcome 'transition to parenthood' and competing outcome 'separation' is presented with the outcome 'no changes' as the base outcome. All models presented are controlled for age, educational level and migration background of both partners and the year of the interview

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

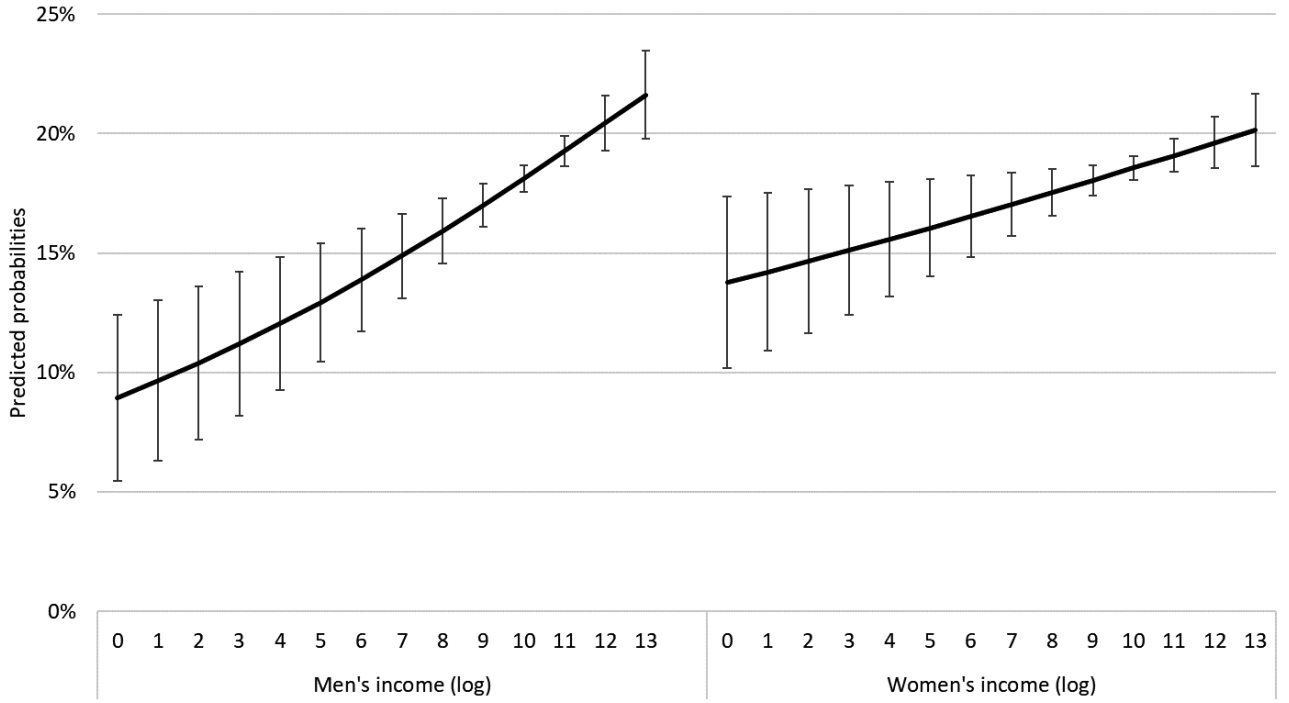
Table 4.5 Multinomial regression model of the transition to parenthood and separation on partners' economic characteristics

	Parenthood		Separation	
	b	t-value	b	t-value
Man income (log)	0.082***	3.751	-0.026	-1.523
Man flexible work (ref. permanent)	-0.010	-0.142	0.302***	3.973
Man self-employed without personnel	-0.000	-0.006	0.099	1.115
Man self-employed with personnel	0.044	0.433	0.186	1.491
Man unemployed	0.015	0.114	0.479***	3.761
Man inactive	-0.208	-1.141	0.403**	2.579
Man hours (centered)	0.012**	2.661	-0.013**	-2.863
Woman income (log)	0.039*	2.412	0.023	1.430
Woman flexible work (ref. permanent)	-0.366***	-5.973	0.244***	3.743
Woman self-employed without personnel	0.016	0.154	0.359**	3.245
Woman self-employed with personnel	0.155	0.827	0.157	0.709
Woman unemployed	-0.180	-1.495	0.383**	3.153
Woman inactive	-0.036	-0.299	0.240~	1.883
Woman hours (centered)	-0.008**	-3.102	0.010**	2.960
Constant	-2.901***	-10.164	-1.616***	-6.266
Observations	22,008			
AIC	34,952			
BIC	36,008			
Log-Likelihood	-17,344			
Pseudo R2	0.068			

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10 The output of the multinomial regression models for the outcome 'transition to parenthood' and competing outcome 'separation' is presented with the outcome 'no changes' as the base outcome. All models presented are controlled for age, educational level and migration background of both partners and the year of the interview

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

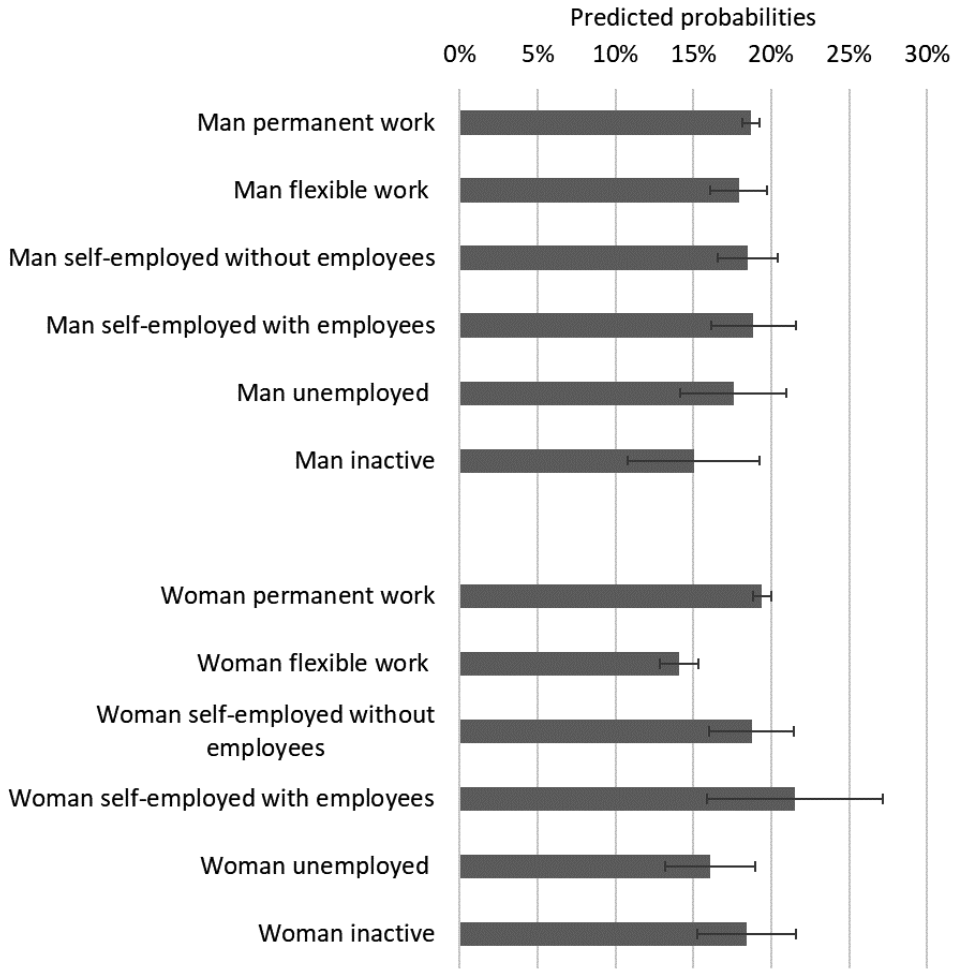
Figure 4.1 Predicted probabilities of transition to parenthood by the women's and men's income distribution



Note: The output of the multinomial regression models for the outcome 'transition to parenthood' with the outcome 'no changes' as the base outcome. The model is controlled for age, educational level and migration background, employment status, working hours (centered) of both partners and the year of the interview.

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

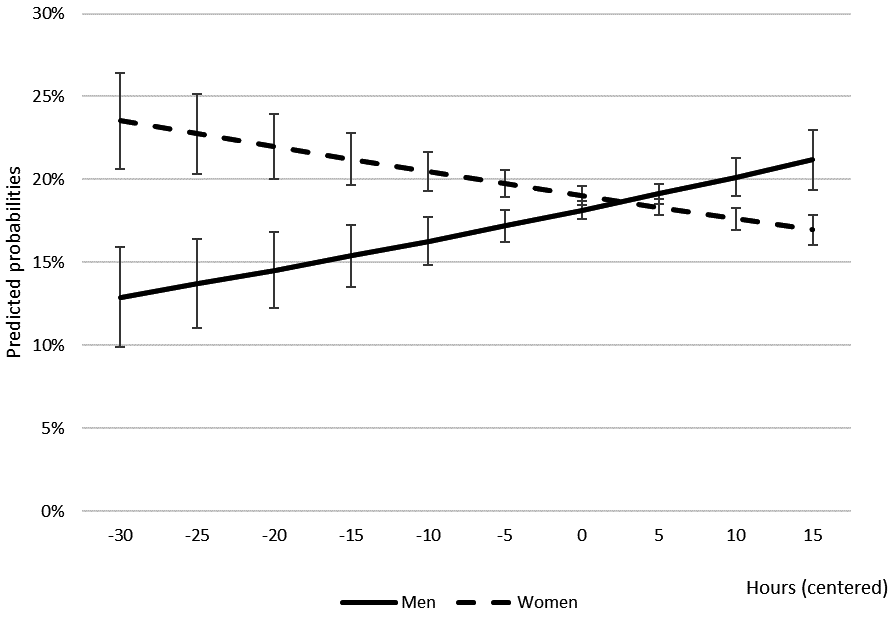
Figure 4.2 Predicted probabilities of transition to parenthood by the women's and men's employment status



Note: The output of the multinomial regression models for the outcome 'transition to parenthood' with the outcome 'no changes' as the base outcome. The model is controlled for age, educational level and migration background, income (log), working hours(centered) of both partners and the year of the interview.

Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 4.3 Predicted probabilities of transition to parenthood by the women's and men's working hours



Source: Labour Force Survey (LFS) and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

5. Employment uncertainty and health: A longitudinal analysis in the Netherlands[§**]

Previous research suggests that non-standard employment is associated with poor health outcomes. It is still unclear what drives this association: selection or causal effects. This study offers new insights into selection and causation mechanisms in the relationship between health and non-standard employment. A unique combination of longitudinal health panel data LifeLines and register-based System of Social Statistical Datasets was used to investigate both non-standard employment and health effects. Several subjective and objective health measures were used: seven types of prescribed medication and the Symptom Checklist-90 somatisation scale. The results suggest that the association between non-standard employment and health is driven mainly by selection mechanisms. The relationship between non-employment and health seems to be driven by both selection and causal mechanisms. Our findings suggest that being in non-standard employment does not seem to yield the same health consequences as non-employment in the Netherlands. However, the selection of healthier persons into standard employment suggests that non-standard employees with poorer mental health are trapped in downward trajectories with subsequent negative health outcomes.

5.1 Introduction

Many European countries have experienced a growth in non-standard employment during the last 30 years. While the pace and rate of this growth vary substantially between countries (Eurostat 2016; Hoekstra *et al*. 2016), questions have been raised about the effects of non-standard forms of employment on workers' health (Benach and Muntaner 2007). While unemployment is a well-studied determinant of poor health, the anticipation of job loss could also affect the health status, irrespective of whether the job loss actually happened (Knabe and Rätzel 2011). Research suggests that non-standard employment could affect health to the same extent (Kim and von dem Knesebeck 2015) or even more severely (Burgard, Brand, and House 2009) than actual unemployment. Studies have found that non-standard employment is associated not only with higher mortality rates (Virtanen *et al*. 2003) but also with poor physical and mental health (Artazcoz *et al*. 2004; Ferrie *et al*. 1995). This association could reflect a causal relationship. Lower and higher income volatility, job insecurity, deficient training, less job autonomy and a lack of prospects for promotion have been suggested as theoretical pathways through which non-standard employment can deteriorate health (Benach and Muntaner 2007). However, workers

§ This chapter was written under the co-supervision of Prof. dr. A.C. (Aart) Liefbroer at the Netherlands Interdisciplinary Demographic Institute (NIDI). I would like to express my gratitude for his mentoring during my time at NIDI.

** Will soon be submitted to an international journal.

in precarious employment situations could be a selective group of people with health problems. If such people are less likely to obtain secure employment (i.e., reverse causality), this could also explain the observed association. Despite the fact that empirical evidence on the effects of non-standard employment on health is inconsistent and less extensive compared to the effects of unemployment, the WHO has already recognised non-standard employment as an important socio-economic determinant of health (CSDH 2008).

In the literature, two distinct links between non-standard employment and health have been found. First, Virtanen *et al.* (2005) report an association between non-standard employment and psychological morbidity. They also find that the health risk depends on the context. Health morbidity was found to be higher in countries with a lower number of temporary and unemployed workers. Second, an extensive meta-analysis of 52 studies by Sanwald and Theurl (2014) shows that non-standard employment is associated with poorer mental and physical health. In both review studies, the authors stress that a healthy worker effect could lead to an overestimation of the effect of non-standard work on health and call for more research with an explicit focus on both selection and causation mechanisms. Most studies included in these two reviews are based on cross-sectional data, making the unravelling of causal and selection effects difficult. A more recent UK study by Bender and Theodossiou (2018) is one of the few that uses longitudinal data to investigate the relationship between non-standard work and health. This study reports, using several subjective and objective health indicators, that the duration in non-standard work (i.e., the time spent in an atypical employment contract) is negatively correlated with health. A recent review by Hünefeld, Gerstenberg and Hüffmeier (2020) has investigated the relationship between temporary agency work and mental health in Europe in the period 2000–2016 and reports a consistent positive association between temporary agency work and depression and fatigue. They also stress the need to improve future research by changing the comparison standards. While most studies compare non-standard employees to employees with standard contracts, it is useful to also make a comparison with unemployed individuals because most non-standard workers are recruited from the pool of the unemployed. Comparing standard workers to non-standard employees and, at the same time, non-standard employees to the unemployed, could give valuable insights into whether non-standard work yields the same health consequences as not being employed (Burgard *et al.* 2009; Kim and von dem Knesebeck 2015).

This study investigates the interrelationship between non-standard employment and health in the Netherlands. Up to now, just two Dutch longitudinal studies have been conducted on the relationship between non-standard employment and health. One study focused on selection mechanisms and investigated their health effects on employment trajectories (Wagenaar, Kompier, Houtman, van den Bossche and Taris 2012). It reports that employees with poorer health have a greater likelihood of ending up in non-standard employment and non-employment. Another study focused

on causation mechanisms and finds a positive correlation between a positive change in employment contract and subsequent mental-health status and vice versa; a negative correlation exists for negative change in employment contract (Kompier, Ybema, Janssen and Taris 2009).

The contribution of this paper is threefold. First, we distinguish between different working arrangements such as non-standard contracts, standard contracts and non-employment. Second, using a unique combination of longitudinal data, we enhance our understanding regarding selection and causation mechanisms in the relationship between health and non-standard employment. Third, we test the relationship between health and employment situation by using subjective and objective health indicators.

5.2 Methods

5.2.1 Data

We use the unique combination of longitudinal health panel data LifeLines (Klijs, Scholtens Mandemakers, Sneider, Stolk and Smidt 2015) and the System of Social Statistical Datasets, SSD (Bakker *et al.* 2014). SSD, a system of interlinked and standardised registers based at Statistics Netherlands, was used to determine labour-market transitions. LifeLines, a large prospective population-based study in the north of the Netherlands, contains longitudinal health information on over 160,000 respondents who were linked to the register-based SSD. Two waves of LifeLines were available at the time of the research: the first wave took place between 2007–2013 and the second between 2014–2017. Between waves, respondents answered two additional questionnaires. This resulted in data with four measurement time points in the period between 2007 and 2017. We selected by age (20–65 years) during the research period and excluded persons enrolled in education and retirees, as we were solely interested in how health is related to employment among those who are potentially fully available on the labour market. While students and retired persons can have a job, labour-market participation has a different priority to them.

We use two types of health measure: prescribed medication and somatic complaints. The information on prescribed medication originates from the SSD. Health-care insurance companies supply data to the National Health Care Institute (*Zorginstituut Nederland*) about all dispensed medication per person in the year concerned who are reimbursed under the statutory basic medical insurance. No information on the exact date of prescription nor on its duration is available. Therefore, we only can approximate the period between the prescription (the moment when professionals diagnose the health problems) and the timing of any labour-market transitions. Medication is classified based on their article codes into ATC classes (anatomic, therapeutic, chemical), a WHO (World Health Organization) drug classification

system (WHO n.d.). We derived the following medication groups, with the corresponding ATC codes in parentheses:

- Blood pressure (C02, C03A, C07, C08, C09A and C09B3)
- Cholesterol lowering drug (code C10)
- Diabetes (A10)
- Stomach medication (A02)
- Asthma and COPD (R03 and R05CB)
- Antidepressants (N06A)
- Tranquilisers (N05B, N05C)

Some medication (especially the blood-pressure medication) could be prescribed for purposes other than those mentioned above. However, research has shown the strong predictive power of the prescribed medication on the actual prevalence of the diseases for the seven chosen groups (Slobbe 2019). The prescribed medication for all seven groups is coded as dichotomous variables (0/1).

The indicators of prescribed medication show little change over time and we do not expect them to promptly react to work uncertainty. To measure more immediate health changes, we use a subjective measure of health, the Symptom Checklist-90 somatisation scale (Zijlema *et al.* 2013). This subscale measures somatic symptoms that can occur as a manifestation of an underlying psychiatric illness and other stress-related disorders. Respondents answered 12 questions about having stress-related disorders on a scale of 1 (not at all) to 5 (very much): 'Could you indicate to what extent you were bothered by the following problem or complaint in the past week?'. The score was calculated as the mean of the sum of all items (Cronbach's alpha = 0.796). Persons who answered fewer than four of the 12 items were removed from the analysis.

The employment status consists of the following categories:

- Standard employment (permanent contract)
- Non-standard employment (temporary contracts, agency work, on-call work)
- Not employed (unemployed or not in the labour force)

The question about being a full-time househusband or housewife, which was posed in the first wave, was used to filter out the individuals who declared being a full-time homekeeper. All other types of employees such as the self-employed and those in subsidised employment (WSW, Sheltered Employment Act) are rare and are categorised separately (other). For the purpose of clarity, we will not show the results for this category, as it is not the focus of our research. However, the results for all categories are available in the supplementary material.

We estimate two sets of models. Evidence for the selection mechanism is sought by estimating the effects of health at one point in time on transitions in the labour market after that moment. Alternatively, evidence for causal mechanisms is sought by estimating employment effects on the subsequent transitions in health status. A caveat is that even in this longitudinal design, 'causal' effects can be biased if people with negative health trajectories self-select into uncertain employment.

5.2.2 Selection mechanism: health effects

To test how health affects employment (the selection mechanism), we estimate the effect of health indicators at time t-1 on the probability of making certain labour-market transitions at time t. To test this relationship, we estimate discrete-time competing risk survival models. The risk set consists of persons in a particular employment position who are at risk of changing that position. Using competing risk models, we are able to take different outcomes into account. We estimate multinomial logit models (Allison 1982). The dependent variable in this survival model is the conditional probability that an individual i makes the transition to status m, at time t, conditional on the fact that he or she remained in the risk set until time t -1. The likelihood of the transition of individual i is calculated as followed:

$$P_{im} = (X_{it}) = \frac{\exp(b_0'^m + b_1'^m X_{it})}{1 + \sum_{m=1}^{4} \exp(b_0'^m + b_1'^m X_{it})}$$

5.2.3 Causation mechanism: Employment effects

In the second part of the analysis, we investigate the effect of an employment status on health. We estimate the effect of this status at time t-1 on the probability of experiencing certain health transitions at t. We examine eight dichotomised health indicators. Somatic disorder (range from 1 to 5) is dichotomised thus: scores <= 1.5 are coded as 'No or few complaints' and scores above 1.5 are coded as 'Many complaints'. The threshold of 1.5 was chosen based on the distribution in the first wave: 75 per cent of the respondents reported a score for somatic complaints lower than 1.5. We look at the probabilities of (un)healthy individuals entering another (un)healthy state while controlling for employment status prior to the transition. We applied logistic regression models for this part of the analysis (Aldrich, Nelson and Adler 1984):

$$P_i = (X_{it}) = \frac{\exp(b_0 + b_1 X_{it})}{1 + \exp(b_0 + b_1 X_{it})}$$

5.2.4 Descriptive results

Table 5.1 offers descriptive information on the likelihood of experiencing the examined transitions. The indicators of prescribed medication show little variance in general, although two specific medication groups show particularly low numbers of observations when it comes to changes in prescribed medication. Therefore, these two groups, tranquilisers and diabetes medication prescriptions, will not be discussed in the results section. However, these indicators are included in the models.

5.3 Results

The results in this section are presented as predicted probabilities – which are based on the output of the regression models with outcome 'no changes' as the base outcome and are calculated as average adjusted predictions. The models presented are controlled for covariates described in the supplementary material and are estimated with cluster-robust standard errors to account for the clustering within persons across time. The full models are included in the supplementary material.

5.3.1 Selection mechanism: Health effects

The results of the multinomial logit models are presented in Figures 5.1 and 5.2. The effects of somatic disorder (Models 1a, 1b and 1c, Figure 5.1) and seven prescribed medication groups (Models 2a, 2b and 2c, Figure 5.2) are estimated in separate models. When it comes to the transitions between one type of employment and another, we found positive effects of somatic complaints and antidepressants on the transition from a standard to a non-standard contract and a negative effect of antidepressants on the transition from a non-standard to a standard contract.

Somatic complaints have a positive effect on the transition from employment (with standard or non-standard contract) to non-employment. A positive effect implies that an increase in somatic complaints positively affects the likelihood of making the transition from an employed to a non-employed status. Holding all other factors constant, 25 per cent of persons with standard contracts with many complaints (score 5 out of 5) make the transition to non-employment compared to 1 per cent of standard employed persons with no somatic complaints (score 1 out of 5). Positive effects on the transition from standard to non-employment are also found for prescriptions for antidepressants, stomach medication and cholesterol.

Health effects on the transition from a non-standard to a non-employed status are similar to those from a standard status to a non-employed one. The predicted probabilities of non-standard employees leaving employment vary from 34 per cent at the highest level of somatic complaints to 5 per cent at the lowest. Positive effects on the transition from non-standard to non-employed status are also found among

users of antidepressants and stomach medication – comparable to the group of standard employees. Health indicators, on the contrary, show a negative effect on transitions from the non-employed to the employed. Statistically significant negative effects are found for somatic complaints, antidepressants, and stomach medication on the transition from non-employed to standard and non-standard employment.

5.3.2 Causation mechanism: Employment effects

The results of the models are presented in Figure 5.2. The effects of somatic complaints (Models 3a and 3b) and seven prescribed medication groups (Models 4a/4b–10a/10b) were estimated in separate models. Models with affix 'a' (3a–10a) are those for individuals in 'good' health, estimating the likelihood of making a transition to 'poor' health for that specific health indicator. Models with affix 'b' (3b–10b) concern models for individuals in 'poor' health, estimating the likelihood of them making a transition to 'good' health for that specific health indicator.

For the effects of non-standard employment, the results are inconsistent. Employees with a standard contract with many somatic complaints have a 39 per cent likelihood of improving their health status. For non-standard employees, the likelihood of experiencing fewer somatic complaints is 36 per cent. However, medication for cholesterol is showing an inconsistent effect for the transition to good health: a person with non-standard employment is more likely to remain on medication for cholesterol (13 per cent) compared to employees with a standard contract (10 per cent). No significant non-standard employment effects were found on the transition to poor health.

The results indicate a negative and significant effect of not-working status on the transition from poor to good health among somatic complaints and stomach medication. The transition to poor health status shows a similar pattern: a not-working status increases the likelihood of a transition to poor health being made among all types of health indicators. The non-employed are worse off than the employed, not only in comparison to the standard employed but also in comparison to non-standard workers.

5.4 Discussion

This study provides a comprehensive empirical description of the relationship between health and employment in the Netherlands. We distinguish between different working arrangements such as non-standard employment, standard employment and non-employment and use subjective and objective health measures: seven types of prescribed medication and the Symptom Checklist-90 somatisation scale. More importantly, using a unique combination of longitudinal data, this study

offers new insights into selection and causation mechanisms in the relationship between health and (non-standard) employment.

We found small positive effects of somatic complaints and antidepressants on the transition from standard to non-standard employment and a negative effect of antidepressants on the transition from non-standard to standard. This is an indication of the selection of individuals with poorer mental health into non-standard employment. Although the observed effect is small, it is in line with scarce previous research (Wagenaar *et al*. 2012). Concerning the non-standard employment effects on the transitions in health, the results are inconsistent. Small negative non-standard employment effects were found on the transition to good mental health. However, medication for cholesterol is showing a positive result for the transition to good health compared to employees with a standard contract. To sum up, the results above suggest that the association between non-standard employment and health is driven mainly by selection mechanisms.

Evidence for both selection and causal mechanisms was found for the relationship between non-employment and health. These results are in line with previous research (Brand 2015; Wagenaar et al. 2012). Healthier individuals are more likely to make the transition to work and at the same time less likely to lose their employment; this holds true for all the health indicators which we have examined. The health effects are quite strong and suggest the selection into work of healthier persons. Moreover, we found positive employment effects on health, which also apply to all the health indicators we have examined. Non-employed individuals are more likely to experience a deterioration in their health compared to working individuals. In addition, non-working persons with poor health less often experience health improvements compared to working persons with poor health. This evidence underlines the importance of employment for health outcomes and provides more evidence for a causal relationship between these two indicators.

Our findings contradict some prior studies on non-standard employment (Burgard *et al*. 2009; Kim and von dem Knesebeck 2015), as being in non-standard employment does not seem to yield the same health consequences as non-employment in the Netherlands. However, three main remarks must be made regarding the relationship between non-standard employment and health.

First, while no evidence of the deteriorating effect of non-standard employment on health is found, non-standard workers are more often exposed to unemployment – a situation that is profoundly associated with a deterioration in health. Therefore, non-standard employees could still be affected by economic insecurity in terms of health outcomes as they are more frequently exposed to unemployment spells compared to employees with a standard contract. Moreover, the selection of healthier persons into standard employment suggests that non-standard employees with poorer mental health are trapped in downward trajectories with a greater likelihood of losing their

jobs with subsequent negative health outcomes and a smaller probability of getting into (standard) employment. A longitudinal life-course approach would be recommended to shed further light on these possible indirect causal effects, especially in the light of the growing prevalence of non-standard employment and the effect on public health in general in many European countries.

Second, the LifeLines data consists of a population from the three northern provinces in the Netherlands. Although we have no indications leading us to assume that the relationship between employment status and health differs by region in the Netherlands, it is possible that the observed relationships apply only to this specific region. Nevertheless, there are solid indications that the relationship between non-standard employment and health differ by national context. Therefore, the results must be interpreted in the context of the relatively generous Dutch social-security schemes (Shahidi, de Moortel, Muntaner, Davis and Siddiqi 2016; Virtanen *et al*. 2005) that could temper the negative effects of non-standard employment.

Third, in this paper we apply the regular broad definition of non-standard employment. However, there is heterogeneity among non-standard work, especially in the Netherlands. For instance, on-call and agency work are both more precarious than temporary contracts in terms of income volatility and job security (Mattijssen and Pavlopoulos 2019). In the only Dutch study attempting to investigate causal mechanisms a correlation between temporary agency work and mental health was found (Kompier *et al*. 2009). It is not unthinkable that the relationship between non-standard employment and health transitions is present among the types of non-standard employment that are associated with greater economic uncertainty (Vives, Amable, Ferrer, Moncada, Lorens *et al*. 2013). In this study we were not able to further break down non-standard employment into different categories. All in all, it would be advisable to take the heterogeneity in non-standard employment into account in future research.

5.5 Tables and figures

Table 5.1a Descriptive statistics analysis selection mechanism (models 1a-1c & 2a-2c)

Working with standard contract

		No transition	From standard to non-standard	From standard to non-employed	Total
Total *(N)*		25.421	2.751	1.587	30.498
%		100%	100%	100%	100%
Somatic complaints	No or little complaints	63%	72%	60%	64%
	Many complaints	37%	28%	40%	36%
Medication Blood pressure	No	93%	96%	91%	93%
	Yes	7%	4%	9%	7%
Medication Diabetes	No	98%	99%	98%	99%
	Yes	2%	1%	2%	1%
Medication Cholesterol lowerı	No	85%	90%	77%	86%
	Yes	15%	10%	16%	14%
Medication Antidepressants	No	91%	92%	85%	91%
	Yes	9%	8%	15%	9%
Medication Stomach	No	82%	87%	79%	83%
	Yes	18%	13%	21%	17%
Medication Asthma and COPD	No	88%	91%	89%	89%
	Yes	12%	9%	11%	11%
Medication Tranquilizers	No	98%	98%	95%	98%
	Yes	2%	2%	5%	2%

Working with non-standard contract

		No transition	From non-standard to standard	From non-standard to non-employed	Total
Total *(N)*		3.013	3.353	1.107	7.701
%		100%	100%	100%	100%
Somatic complaints	No or little complaints	63%	75%	65%	69%
	Many complaints	37%	25%	35%	31%
Medication Blood pressure	No	95%	97%	94%	96%
	Yes	5%	3%	6%	4%
Medication Diabetes	No	99%	99%	98%	99%
	Yes	1%	1%	2%	1%
Medication Cholesterol lowerı	No	89%	93%	88%	90%
	Yes	11%	7%	12%	10%
Medication Antidepressants	No	91%	94%	87%	92%
	Yes	9%	6%	13%	8%
Medication Stomach	No	86%	90%	83%	88%
	Yes	14%	10%	17%	12%
Medication Asthma and COPD	No	89%	92%	89%	91%
	Yes	11%	8%	11%	9%
Medication Tranquilizers	No	98%	98%	97%	98%
	Yes	2%	2%	3%	2%

Non-employed		No transition	From non-employed to standard contract	From non-employed to non-standard	Total
Total (N)		2.424	457	1.309	4.513
%		100%	100%	100%	100%
Somatic complaints	No or little complaints	37%	75%	72%	54%
	Many complaints	63%	25%	28%	46%
Medication Blood pressure	No	83%	97%	94%	89%
	Yes	17%	3%	6%	11%
Medication Diabetes	No	95%	99%	98%	97%
	Yes	5%	1%	2%	3%
Medication Cholesterol lower	No	74%	90%	90%	81%
	Yes	26%	10%	10%	19%
Medication Antidepressants	No	73%	91%	89%	81%
	Yes	27%	9%	11%	19%
Medication Stomach	No	66%	89%	87%	76%
	Yes	34%	11%	13%	24%
Medication Asthma and COPD	No	83%	93%	91%	87%
	Yes	17%	7%	9%	13%
Medication Tranquilizers	No	90%	98%	97%	94%
	Yes	10%	2%	3%	6%

Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 5.2b Descriptive statistics analysis causation mechanism (models 3a-10a 3b-10b)

	Individuals with good health			**Individuals with poor health**		
Somatic complaints	No changes	Transition to poor health	Total	No changes	Transition to good health	Total
Total *(N)*	26.754	11.199	37.953	4.501	10.717	15.218
%	100%	100%	100%	100%	100%	100%
Standard contract	59%	63%	60%	48%	64%	59%
Non-standard contract	15%	14%	15%	13%	13%	13%
Non-employed	9%	10%	9%	25%	11%	15%
Medication Blood pressure						
Total *(N)*	37.992	1.339	39.331	2.138	517	2.655
%	100%	100%	100%	100%	100%	100%
Standard contract	57%	62%	57%	58%	61%	59%
Non-standard contract	16%	10%	16%	8%	9%	8%
Non-employed	11%	13%	11%	20%	16%	19%
Medication Diabetes						
Total *(N)*	40.256	298	40.554	501	91	592
%	100%	100%	100%	100%	100%	100%
Standard contract	57%	62%	57%	52%	62%	54%
Non-standard contract	16%	11%	16%	9%	9%	9%
Non-employed	12%	16%	12%	26%	19%	24%
Medication Cholesterol lowering drug						
Total *(N)*	35.367	2.707	38.074	3.707	1.661	5.368
%	100%	100%	100%	100%	100%	100%
Standard contract	57%	62%	57%	59%	65%	61%
Non-standard contract	16%	12%	16%	10%	13%	11%
Non-employed	11%	13%	11%	18%	11%	16%
Medication Antidepressants						
Total *(N)*	37.363	1.846	39.209	2.188	1.569	3.757
%	100%	100%	100%	100%	100%	100%
Standard contract	58%	59%	58%	49%	57%	52%
Non-standard contract	16%	14%	16%	13%	13%	13%
Non-employed	11%	17%	11%	27%	20%	24%
Medication Stomach						
Total *(N)*	34.877	3.929	38.806	3.026	4.027	7.053
%	100%	100%	100%	100%	100%	100%
Standard contract	58%	61%	58%	52%	64%	59%
Non-standard contract	16%	13%	16%	11%	12%	11%
Non-employed	11%	12%	11%	22%	12%	16%
Medication Asthma and COPD						
Total *(N)*	36.766	2.441	39.207	2.190	2.287	4.477
%	100%	100%	100%	100%	100%	100%
Standard contract	57%	60%	58%	55%	65%	60%
Non-standard contract	16%	14%	15%	13%	12%	13%
Non-employed	11%	12%	11%	17%	11%	14%
Medication Tranquilizers						
Total *(N)*	40.147	663	40.810	237	913	1.150
%	100%	100%	100%	100%	100%	100%
Standard contract	57%	49%	57%	36%	54%	50%
Non-standard contract	15%	15%	15%	8%	13%	12%
Non-employed	11%	24%	12%	46%	22%	27%

Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 5.3 Multinomial regression models on the probability of making certain labour-market transitions

	Model 1a Standard contracts > non-standard contract		Standard contracts > non-employed		Standard contracts > other		**Model 2a** Standard contracts > non-standard contract		Standard contracts > non-employed		Standard contracts > other	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Somatic complaints	0.187***	(0.056)	0.915***	(0.055)	0.220~	(0.113)						
Female (yes)	-0.021	(0.056)	-0.185*	(0.075)	-0.404***	(0.107)	-0.009	(0.056)	-0.119	(0.075)	-0.387***	(0.107)
	-0.205***	(0.061)	-0.059	(0.080)	0.122	(0.129)	-0.204***	(0.061)	-0.059	(0.080)	0.114	(0.129)
Children present (yes)	0.028	(0.047)	-0.477***	(0.058)	0.079	(0.089)	0.024	(0.047)	-0.472***	(0.059)	0.069	(0.089)
Children present (unknown)	0.116	(0.258)	0.246	(0.273)	0.065	(0.526)	0.114	(0.257)	0.278	(0.270)	0.076	(0.526)
Age category 31-40 (ref = 30 and younger)	-0.541***	(0.065)	0.180	(0.128)	-0.365**	(0.134)	-0.547***	(0.065)	0.133	(0.127)	-0.363**	(0.134)
Age category 41-50	-0.870***	(0.063)	0.210~	(0.121)	-0.564***	(0.130)	-0.874***	(0.063)	0.122	(0.121)	-0.539***	(0.131)
Age category > 50	-1.389***	(0.076)	0.418***	(0.121)	-0.925***	(0.150)	-1.387***	(0.077)	0.316*	(0.123)	-0.874***	(0.151)
Artistic occupations (ref= teaching occupations)	-0.042	(0.236)	0.409	(0.282)	1.323***	(0.304)	-0.038	(0.236)	0.460	(0.281)	1.329***	(0.305)
Sales and PR occupations	0.200*	(0.097)	0.211	(0.135)	0.730**	(0.228)	0.200*	(0.097)	0.212	(0.134)	0.725**	(0.228)
Business and administrative occupations	-0.096	(0.088)	0.075	(0.122)	0.511*	(0.204)	-0.099	(0.088)	0.055	(0.122)	0.506*	(0.204)
Managers	0.206	(0.126)	0.425*	(0.172)	1.412***	(0.208)	0.207	(0.126)	0.423*	(0.173)	1.410***	(0.208)
Public administration, protective services and legal occupations	-0.679***	(0.154)	-0.931***	(0.226)	0.168	(0.280)	-0.681***	(0.154)	-0.965***	(0.226)	0.165	(0.280)
Technical occupations	0.064	(0.099)	0.109	(0.137)	0.533*	(0.223)	0.068	(0.099)	0.136	(0.137)	0.528*	(0.223)
ICT occupations	-0.200	(0.141)	-0.144	(0.210)	0.466~	(0.248)	-0.200	(0.141)	-0.148	(0.210)	0.467~	(0.248)
Agricultural occupations	0.107	(0.177)	-0.455	(0.290)	1.389***	(0.322)	0.109	(0.177)	-0.425	(0.287)	1.379***	(0.322)
Health and welfare occupations	-0.390***	(0.092)	-0.587***	(0.130)	0.119	(0.214)	-0.390***	(0.092)	-0.607***	(0.129)	0.118	(0.214)
Service occupations	0.006	(0.119)	-0.345~	(0.176)	1.073***	(0.269)	0.010	(0.119)	-0.339~	(0.177)	1.081***	(0.269)
Transport and logistics occupations	0.191	(0.127)	-0.215	(0.181)	1.097***	(0.268)	0.192	(0.127)	-0.212	(0.181)	1.095***	(0.268)
Other/unknown	-1.455*	(0.632)	-2.715***	(0.651)	0.253	(1.021)	-1.441*	(0.634)	-2.672***	(0.645)	0.254	(1.021)
Occupational skill level, ISCO-level 2 (ref= ISCO-level 1)	0.031	(0.089)	-0.217~	(0.132)	0.365~	(0.199)	0.028	(0.089)	-0.233~	(0.132)	0.362~	(0.198)
Occupational skill level, ISCO-level 3	-0.191~	(0.105)	-0.422**	(0.151)	0.383~	(0.225)	-0.199~	(0.105)	-0.460**	(0.151)	0.374~	(0.224)
Occupational skill level, ISCO-level 4	-0.359**	(0.111)	-0.901***	(0.166)	0.264	(0.235)	-0.367***	(0.111)	-0.947***	(0.166)	0.250	(0.235)
Occupational skill level, Unknown	2.423**	(0.755)	2.567**	(0.787)	-10.943***	(1.027)	2.424**	(0.754)	2.629***	(0.773)	-10.931***	(1.025)

	Model 1a Standard contracts > non-standard contract		Standard contracts > non-employed		Standard contracts > other		**Model 2a** Standard contracts > non-standard contract		Standard contracts > non-employed		Standard contracts > other	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Small parttime job of 1-2.5 days a week (ref= less than 1 day a week)	-0.582***	(0.176)	-0.953***	(0.177)	-1.203***	(0.354)	-0.598***	(0.176)	-0.974***	(0.178)	-1.217***	(0.354)
Parttime job of 2.5 - 4 days a week	-1.084***	(0.173)	-1.317***	(0.172)	-1.307***	(0.338)	-1.099***	(0.173)	-1.336***	(0.173)	-1.330***	(0.338)
Fulltime job, more than 4 days a week	-1.088***	(0.174)	-1.559***	(0.174)	-1.269***	(0.343)	-1.100***	(0.174)	-1.578***	(0.175)	-1.295***	(0.343)
Lower or preparatory secondary vocational education (ref = primary education or nc	-0.186	(0.203)	0.275	(0.275)	-0.235	(0.526)	-0.190	(0.203)	0.318	(0.278)	-0.255	(0.526)
Junior general secondary education	-0.151	(0.203)	0.356	(0.275)	-0.046	(0.525)	-0.162	(0.203)	0.379	(0.278)	-0.076	(0.524)
Secondary vocational education or work-based learning pathway	-0.293	(0.198)	0.084	(0.274)	0.186	(0.512)	-0.307	(0.198)	0.112	(0.277)	0.147	(0.511)
Senior general secondary education, pre-university secondary education	-0.352~	(0.210)	0.283	(0.283)	0.536	(0.526)	-0.372~	(0.210)	0.306	(0.286)	0.491	(0.526)
Higher vocational education	-0.222	(0.202)	0.206	(0.278)	0.540	(0.519)	-0.243	(0.202)	0.228	(0.282)	0.488	(0.518)
University education	0.071	(0.212)	0.263	(0.299)	1.099*	(0.527)	0.046	(0.212)	0.264	(0.302)	1.033*	(0.526)
Other and unknown	-0.060	(0.257)	0.371	(0.336)	1.030~	(0.567)	-0.067	(0.257)	0.415	(0.340)	0.999~	(0.566)
Year beginning of the spell	-0.130***	(0.012)	-0.127***	(0.016)	-0.191***	(0.024)	-0.130***	(0.012)	-0.120***	(0.016)	-0.191***	(0.024)
Spell duration in years (accumulative)	-0.370***	(0.013)	-0.281***	(0.015)	-0.394***	(0.024)	-0.369***	(0.013)	-0.271***	(0.015)	-0.390***	(0.024)
Blood pressure (yes)							-0.097	(0.116)	0.147	(0.107)	0.012	(0.215)
Diabetes (yes)							-0.093	(0.238)	0.054	(0.210)	-1.074	(0.714)
Cholesterol (yes)							0.040	(0.074)	0.191*	(0.079)	-0.318~	(0.167)
Antidepressants (yes)							0.256**	(0.080)	0.740***	(0.082)	-0.037	(0.193)
Stomach (yes)							-0.033	(0.070)	0.237**	(0.075)	-0.053	(0.144)
Asthma and COPD (yes)							-0.148~	(0.082)	0.141	(0.091)	-0.040	(0.155)
Tranquilizers (yes)							-0.161	(0.196)	0.651***	(0.164)	0.031	(0.369)
Constant	260.179***	(25.065)	251.978***	(32.498)	381.034***	(48.103)	261.303***	(25.113)	239.563***	(32.294)	380.064***	(48.074)
Observations	109,184		109,184		109,184		109,184		109,184		109,184	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

	Model 1b Non-standard contract > standard contract		Non-standard contract > non-employed		Non-standard contract > other		**Model 2b** Non-standard contract > standard contract		Non-standard contract > non-employed		Non-standard contract > other	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Somatic complaints	0.045	(0.056)	0.608***	(0.075)	0.165	(0.196)						
Female (yes)	-0.136**	(0.049)	0.092	(0.079)	-0.521***	(0.150)	-0.130**	(0.049)	0.144~	(0.079)	-0.491***	(0.149)
	0.185**	(0.059)	-0.352***	(0.084)	0.252	(0.203)	0.185**	(0.059)	-0.364***	(0.084)	0.246	(0.203)
Children present (yes)	0.137**	(0.046)	-0.092	(0.073)	-0.117	(0.152)	0.132**	(0.046)	-0.083	(0.073)	-0.107	(0.154)
Children present (unknown)	-0.078	(0.322)	-0.418	(0.494)	-13.705***	(0.305)	-0.080	(0.322)	-0.399	(0.509)	-13.710***	(0.304)
Age category 31-40 (ref = 30 and younger)	-0.016	(0.060)	0.303**	(0.112)	0.179	(0.186)	-0.011	(0.060)	0.268*	(0.112)	0.166	(0.188)
Age category 41-50	-0.150**	(0.057)	0.513***	(0.104)	-0.169	(0.187)	-0.137*	(0.058)	0.444***	(0.106)	-0.197	(0.193)
Age category > 50	-0.288***	(0.072)	0.884***	(0.110)	-0.696*	(0.275)	-0.272***	(0.073)	0.798***	(0.113)	-0.727*	(0.284)
Artistic occupations (ref= teaching occupations)	-0.870***	(0.260)	0.101	(0.337)	1.513***	(0.446)	-0.868***	(0.260)	0.140	(0.333)	1.537***	(0.445)
Sales and PR occupations	-0.363***	(0.095)	-0.008	(0.157)	0.417	(0.336)	-0.355***	(0.095)	-0.002	(0.157)	0.424	(0.335)
Business and administrative occupations	-0.139	(0.087)	0.229	(0.145)	-0.030	(0.333)	-0.132	(0.087)	0.197	(0.146)	-0.041	(0.333)
Managers	-0.277~	(0.145)	0.092	(0.238)	0.527	(0.425)	-0.275~	(0.145)	0.059	(0.238)	0.522	(0.424)
Public administration, protective services and legal occupations	-0.044	(0.148)	-0.037	(0.249)	-0.003	(0.537)	-0.037	(0.149)	-0.068	(0.252)	-0.012	(0.538)
Technical occupations	-0.463***	(0.099)	0.256	(0.157)	-0.685~	(0.383)	-0.452***	(0.099)	0.258	(0.157)	-0.690~	(0.383)
ICT occupations	0.096	(0.143)	-0.178	(0.307)	-0.362	(0.579)	0.099	(0.143)	-0.197	(0.307)	-0.363	(0.579)
Agricultural occupations	0.174	(0.172)	0.514~	(0.267)	0.957*	(0.480)	0.179	(0.172)	0.545*	(0.266)	0.950*	(0.482)
Health and welfare occupations	0.018	(0.089)	-0.338*	(0.159)	0.099	(0.347)	0.024	(0.089)	-0.361*	(0.159)	0.096	(0.347)
Service occupations	-0.297**	(0.098)	0.128	(0.157)	0.266	(0.358)	-0.280**	(0.098)	0.136	(0.157)	0.269	(0.359)
Transport and logistics occupations	-0.332**	(0.116)	0.127	(0.180)	0.398	(0.363)	-0.315**	(0.116)	0.124	(0.181)	0.393	(0.360)
Other/unknown	-0.847~	(0.472)	0.436	(0.560)	-13.459***	(0.374)	-0.847~	(0.471)	0.439	(0.555)	-13.462***	(0.383)
Year beginning of the spell	-0.292***	(0.013)	-0.234***	(0.019)	-0.221***	(0.042)	-0.292***	(0.013)	-0.224***	(0.019)	-0.215***	(0.041)
Spell duration in years (accumulative)	-0.484***	(0.017)	-0.459***	(0.028)	-0.542***	(0.059)	-0.483***	(0.017)	-0.455***	(0.028)	-0.540***	(0.059)
Blood pressure (yes)							-0.047	(0.132)	0.131	(0.161)	0.531	(0.347)
Diabetes (yes)							-0.320	(0.265)	0.557*	(0.254)	0.315	(0.566)
Cholesterol (yes)							0.044	(0.082)	0.114	(0.111)	-0.164	(0.312)
Antidepressants (yes)							-0.152~	(0.086)	0.369***	(0.109)	0.093	(0.263)
Stomach (yes)							-0.089	(0.075)	0.220*	(0.101)	-0.143	(0.261)
Asthma and COPD (yes)							-0.018	(0.081)	0.164	(0.112)	-0.249	(0.306)
Tranquilizers (yes)							0.243	(0.194)	0.580*	(0.238)	0.981*	(0.416)
Constant	586.921***	(25.777)	467.875***	(38.737)	440.480***	(84.717)	586.900***	(25.898)	449.102***	(38.667)	429.974***	(82.866)
Observations	17,843		17,843		17,843		17,843		17,843		17,843	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

	Model 1c Non-employed > standard contract		Non-employed > non-standard contract		Non-employed > other		**Model 2c** Non-employed > standard contract		Non-employed > non-standard contract		Non-employed > other	
	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)	b	(se)
Somatic complaints	-1.010***	(0.130)	-0.999***	(0.082)	-0.818***	(0.154)						
Female (yes)	-0.035	(0.110)	-0.183**	(0.069)	-0.670***	(0.121)	-0.143	(0.110)	-0.283***	(0.069)	-0.746***	(0.120)
	0.784***	(0.160)	0.303***	(0.087)	0.926***	(0.188)	0.769***	(0.159)	0.302***	(0.086)	0.900***	(0.188)
Children present (yes)	0.670***	(0.119)	0.302***	(0.075)	0.386**	(0.128)	0.657***	(0.118)	0.301***	(0.075)	0.379**	(0.128)
Children present (unknown)	1.593***	(0.378)	0.504	(0.412)	0.499	(0.707)	1.595***	(0.402)	0.536	(0.410)	0.530	(0.723)
Age category 31-40 (ref = 30 and younger)	-0.794***	(0.196)	-0.865***	(0.133)	-0.354	(0.264)	-0.719***	(0.191)	-0.803***	(0.127)	-0.296	(0.262)
Age category 41-50	-1.286***	(0.188)	-1.179***	(0.125)	-0.309	(0.251)	-1.148***	(0.183)	-1.067***	(0.119)	-0.211	(0.249)
Age category > 50	-1.583***	(0.198)	-1.893***	(0.133)	-1.314***	(0.274)	-1.379***	(0.197)	-1.730***	(0.130)	-1.173***	(0.276)
Lower or preparatory secondary vocational education (ref = primary education or nc	0.235	(0.442)	0.726*	(0.284)	0.062	(0.554)	0.335	(0.441)	0.798**	(0.288)	0.111	(0.556)
Junior general secondary education	0.383	(0.440)	0.702*	(0.286)	0.310	(0.555)	0.486	(0.440)	0.789**	(0.289)	0.362	(0.558)
Secondary vocational education or work-based learning pathway	0.651	(0.430)	0.985***	(0.280)	0.770	(0.533)	0.758~	(0.430)	1.087***	(0.284)	0.827	(0.540)
Senior general secondary education, pre-university secondary education	0.376	(0.460)	0.750*	(0.297)	0.837	(0.556)	0.470	(0.460)	0.861**	(0.299)	0.896	(0.564)
Higher vocational education	0.777~	(0.435)	0.974***	(0.283)	1.311*	(0.533)	0.886*	(0.435)	1.099***	(0.287)	1.373*	(0.541)
University education	0.638	(0.466)	0.896**	(0.306)	1.440**	(0.551)	0.776~	(0.464)	1.050***	(0.311)	1.528**	(0.564)
Other and unknown	0.836	(0.599)	1.007*	(0.397)	1.374*	(0.668)	0.832	(0.606)	1.070**	(0.403)	1.364*	(0.670)
Year beginning of the spell	-0.185***	(0.029)	-0.011	(0.020)	-0.207***	(0.034)	-0.197***	(0.030)	-0.020	(0.020)	-0.214***	(0.035)
Spell duration in years (accumulative)	-1.255***	(0.096)	-1.035***	(0.049)	-0.722***	(0.058)	-1.261***	(0.097)	-1.042***	(0.049)	-0.728***	(0.058)
Blood pressure (yes)							-0.635*	(0.279)	-0.135	(0.146)	-0.270	(0.263)
Diabetes (yes)							-0.217	(0.480)	-0.141	(0.271)	-0.539	(0.594)
Cholesterol (yes)							-0.113	(0.179)	-0.200~	(0.113)	-0.116	(0.194)
Antidepressants (yes)							-0.565**	(0.177)	-0.446***	(0.105)	-0.836***	(0.230)
Stomach (yes)							-0.401*	(0.158)	-0.432***	(0.104)	-0.206	(0.188)
Asthma and COPD (yes)							-0.266	(0.193)	-0.091	(0.114)	-0.057	(0.215)
Tranquilizers (yes)							-0.801*	(0.375)	-0.545*	(0.212)	-0.364	(0.368)
Constant	372.667***	(58.889)	22.736	(40.346)	414.359***	(68.610)	396.013***	(59.367)	41.269	(40.348)	428.534***	(69.526)
Observations	11,249		11,249		11,249		11,249		11,249		11,249	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Table 5.4 Logistic regression models on the probability of experiencing certain health transitions

	Model 3b Somatic complaints		**Model 3a Somatic complaints**		**Model 4b Blood pressure**		**Model 4a Blood pressure**	
	Poor > good health		Good > poor health		Poor > good health		Good > poor health	
	b	(se)	b	(se)	b	(se)	b	(se)
Year beginning of the spell	0.003	(0.008)	-0.046***	(0.006)	-0.072*	(0.031)	-0.195***	(0.018)
Spell duration in years (accumulative)	-0.796***	(0.016)	-0.467***	(0.008)	-0.581***	(0.040)	-0.314***	(0.016)
Non-standard employment (ref = standard employment)	-0.131**	(0.041)	0.001	(0.032)	0.105	(0.177)	-0.068	(0.101)
Non-employment	-0.461***	(0.042)	0.382***	(0.038)	0.109	(0.143)	0.424***	(0.089)
Other	-0.140***	(0.041)	-0.028	(0.032)	0.195	(0.145)	0.056	(0.081)
Female (yes)	-0.092**	(0.028)	0.513***	(0.021)	0.494***	(0.099)	-0.554***	(0.057)
Partner present (yes)	0.083*	(0.038)	-0.098**	(0.031)	0.130	(0.153)	-0.114	(0.084)
Children present (yes)	0.183***	(0.029)	-0.050*	(0.023)	-0.108	(0.108)	-0.232***	(0.061)
Children present (unknown)	0.597***	(0.172)	0.432**	(0.136)	-1.219	(1.064)	0.146	(0.317)
Age category 31-40 (ref = 30 and younger)	-0.054	(0.054)	-0.151***	(0.041)	-0.496	(0.371)	0.653*	(0.258)
Age category 41-50	-0.191***	(0.051)	-0.172***	(0.039)	-0.583~	(0.333)	1.587***	(0.245)
Age category > 50	-0.234***	(0.054)	-0.254***	(0.041)	-0.977**	(0.331)	2.164***	(0.244)
Lower or preparatory secondary vocational education (ref = primary education or no education)	0.149	(0.113)	-0.147	(0.101)	-0.852**	(0.262)	0.028	(0.243)
Junior general secondary education	0.226*	(0.113)	-0.300**	(0.101)	-0.789**	(0.265)	0.081	(0.244)
Secondary vocational education or work-based learning pathway	0.263*	(0.110)	-0.392***	(0.098)	-0.663**	(0.252)	-0.288	(0.241)
Senior general secondary education, pre-university secondary education	0.331**	(0.117)	-0.457***	(0.103)	-1.087***	(0.324)	-0.646*	(0.262)
Higher vocational education	0.466***	(0.112)	-0.585***	(0.099)	-0.650*	(0.261)	-0.585*	(0.245)
University education	0.642***	(0.125)	-0.761***	(0.105)	-0.449	(0.321)	-0.671*	(0.269)
Other and unknown	0.208	(0.155)	-0.451***	(0.129)	-1.794**	(0.639)	-0.346	(0.329)
Diabetes type 2 mother (yes)	-0.046	(0.037)	0.011	(0.030)	-0.012	(0.115)	0.372***	(0.069)
Diabetes type 2 father (yes)	-0.118**	(0.039)	0.059~	(0.031)	-0.037	(0.135)	0.045	(0.081)
Cardiovascular disease mother (yes)	-0.021	(0.034)	0.134***	(0.027)	0.101	(0.104)	0.339***	(0.065)
Cardiovascular disease father (yes)	-0.033	(0.028)	0.060**	(0.022)	-0.222*	(0.095)	0.493***	(0.057)
Constant	-6.633	(16.790)	91.770***	(12.918)	144.722*	(62.124)	386.519***	(36.396)
Observations	31,229		125,885		8,552		154,493	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

	Model 5b Diabetes		Model 5a Diabetes		Model 6b Cholesterol		Model 6a Cholesterol	
	Poor > good health		Good > poor health		Poor > good health		Good > poor health	
	b	(se)	b	(se)	b	(se)	b	(se)
Year beginning of the spell	-0.064	(0.076)	-0.201***	(0.039)	-0.062***	(0.018)	-0.186***	(0.013)
Spell duration in years (accumulative)	-0.561***	(0.094)	-0.327***	(0.034)	-0.848***	(0.033)	-0.330***	(0.012)
Non-standard employment (ref = standard employment)	-0.060	(0.410)	0.147	(0.190)	0.307***	(0.089)	-0.043	(0.066)
Non-employment	-0.002	(0.345)	0.552**	(0.172)	-0.021	(0.094)	0.373***	(0.065)
Other	0.076	(0.372)	-0.307	(0.200)	0.080	(0.090)	-0.092	(0.062)
Female (yes)	0.971***	(0.267)	-0.479***	(0.119)	0.422***	(0.059)	0.018	(0.040)
Partner present (yes)	0.014	(0.303)	-0.135	(0.170)	0.157~	(0.088)	-0.089	(0.061)
Children present (yes)	-0.399	(0.261)	-0.371**	(0.132)	0.015	(0.062)	-0.052	(0.043)
Children present (unknown)			0.058	(0.616)	0.117	(0.396)	0.141	(0.234)
Age category 31-40 (ref = 30 and younger)	-1.313**	(0.456)	0.290	(0.408)	-0.622***	(0.152)	0.177	(0.109)
Age category 41-50	-2.326***	(0.415)	0.983*	(0.383)	-1.298***	(0.140)	0.636***	(0.102)
Age category > 50	-2.586***	(0.418)	1.085**	(0.383)	-1.547***	(0.143)	0.979***	(0.104)
Lower or preparatory secondary vocational education (ref = primary education or no education)	0.740	(1.099)	0.147	(0.472)	-0.118	(0.224)	0.137	(0.180)
Junior general secondary education	1.041	(1.086)	0.034	(0.478)	-0.176	(0.225)	-0.080	(0.181)
Secondary vocational education or work-based learning pathway	1.296	(1.066)	-0.170	(0.467)	-0.065	(0.220)	-0.192	(0.177)
Senior general secondary education, pre-university secondary education	1.961~	(1.126)	-0.207	(0.498)	-0.119	(0.235)	-0.217	(0.186)
Higher vocational education	1.443	(1.082)	-0.661	(0.480)	-0.043	(0.222)	-0.408*	(0.179)
University education	2.376*	(1.195)	-1.524*	(0.644)	0.083	(0.251)	-0.407*	(0.193)
Other and unknown	0.597	(1.535)	0.072	(0.614)	0.167	(0.297)	-0.236	(0.240)
Diabetes type 2 mother (yes)	-0.658**	(0.255)	1.049***	(0.128)	-0.127~	(0.074)	0.147**	(0.053)
Diabetes type 2 father (yes)	-0.467~	(0.270)	0.610***	(0.145)	-0.001	(0.080)	0.150**	(0.057)
Cardiovascular disease mother (yes)	0.642**	(0.246)	0.135	(0.139)	-0.071	(0.066)	0.256***	(0.048)
Cardiovascular disease father (yes)	0.022	(0.226)	0.169	(0.122)	-0.081	(0.058)	0.183***	(0.041)
Constant	126.842	(152.526)	397.528***	(78.320)	125.290***	(35.276)	370.305***	(25.137)
Observations	1,929		161,589		15,862		146,511	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

	Model 7b Antidepressants		Model 7a Antidepressants		Model 8b Stomach		Model 8a Stomach	
	Poor > good health		Good > poor health		Poor > good health		Good > poor health	
	b	(se)	b	(se)	b	(se)	b	(se)
Year beginning of the spell	-0.068***	(0.018)	-0.141***	(0.015)	-0.248***	(0.013)	-0.242***	(0.011)
Spell duration in years (accumulative)	-0.826***	(0.035)	-0.380***	(0.015)	-1.090***	(0.030)	-0.461***	(0.012)
Non-standard employment (ref = standard employment)	-0.021	(0.094)	0.100	(0.073)	-0.073	(0.070)	-0.001	(0.053)
Non-employment	0.022	(0.082)	0.654***	(0.072)	-0.224***	(0.066)	0.353***	(0.056)
Other	0.038	(0.100)	-0.130	(0.082)	-0.061	(0.066)	-0.009	(0.051)
Female (yes)	-0.086	(0.065)	0.612***	(0.052)	0.390***	(0.044)	0.266***	(0.034)
Partner present (yes)	0.116	(0.083)	-0.186**	(0.068)	0.218**	(0.067)	0.019	(0.051)
Children present (yes)	0.108~	(0.066)	-0.202***	(0.054)	0.154***	(0.046)	-0.108**	(0.037)
Children present (unknown)	0.412	(0.324)	0.467~	(0.244)	0.603~	(0.322)	-0.073	(0.203)
Age category 31-40 (ref = 30 and younger)	-0.194	(0.135)	0.118	(0.101)	-0.222*	(0.113)	0.168*	(0.084)
Age category 41-50	-0.536***	(0.130)	0.092	(0.098)	-0.500***	(0.107)	0.528***	(0.079)
Age category > 50	-0.533***	(0.136)	-0.015	(0.103)	-0.701***	(0.109)	0.708***	(0.080)
Lower or preparatory secondary vocational education (ref = primary education or no education)	0.192	(0.226)	-0.167	(0.193)	0.315~	(0.167)	-0.196	(0.146)
Junior general secondary education	0.133	(0.226)	-0.283	(0.193)	0.282~	(0.168)	-0.338*	(0.147)
Secondary vocational education or work-based learning pathway	0.037	(0.220)	-0.503**	(0.189)	0.322*	(0.164)	-0.491***	(0.144)
Senior general secondary education, pre-university secondary education	-0.068	(0.239)	-0.711***	(0.203)	0.563**	(0.179)	-0.802***	(0.154)
Higher vocational education	-0.170	(0.226)	-0.836***	(0.192)	0.594***	(0.167)	-0.772***	(0.145)
University education	0.283	(0.249)	-1.099***	(0.219)	0.674***	(0.192)	-1.117***	(0.162)
Other and unknown	0.002	(0.367)	-0.829**	(0.287)	0.152	(0.228)	-0.470*	(0.195)
Diabetes type 2 mother (yes)	-0.032	(0.083)	-0.003	(0.068)	-0.185**	(0.057)	0.140**	(0.045)
Diabetes type 2 father (yes)	0.010	(0.089)	0.057	(0.070)	-0.100	(0.061)	0.173***	(0.048)
Cardiovascular disease mother (yes)	0.094	(0.078)	0.061	(0.062)	0.010	(0.054)	0.136**	(0.042)
Cardiovascular disease father (yes)	-0.074	(0.064)	0.017	(0.051)	-0.173***	(0.045)	0.074*	(0.035)
Constant	136.695***	(37.067)	279.221***	(30.139)	497.894***	(27.094)	483.755***	(21.137)
Observations	10,205		152,614		15,867		146,188	

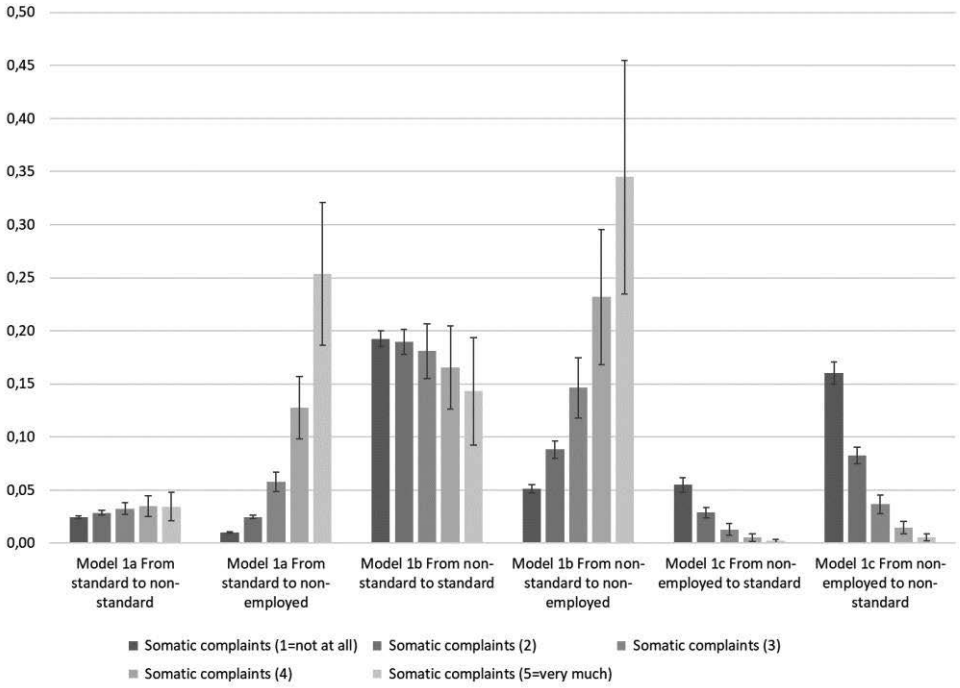
Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

	Model 9b Asthma and COPD		Model 9a Asthma and COPD		Model 10b Tranquilizers		Model 10a Tranquilizers	
	Poor > good health		Good > poor health		Poor > good health		Good > poor health	
	b	(se)	b	(se)	b	(se)	b	(se)
Year beginning of the spell	-0.061***	(0.016)	-0.046**	(0.014)	-0.450***	(0.031)	-0.106***	(0.026)
Spell duration in years (accumulative)	-0.934***	(0.033)	-0.481***	(0.016)	-1.172***	(0.082)	-0.358***	(0.025)
Non-standard employment (ref = standard employment)	-0.143~	(0.081)	0.004	(0.065)	0.287	(0.195)	0.369**	(0.118)
Non-employment	-0.025	(0.086)	0.330***	(0.071)	-0.481**	(0.155)	1.161***	(0.104)
Other	-0.059	(0.079)	0.132*	(0.062)	0.153	(0.236)	0.046	(0.133)
Female (yes)	0.093~	(0.054)	0.374***	(0.044)	0.001	(0.133)	0.340***	(0.083)
Partner present (yes)	0.096	(0.078)	-0.012	(0.064)	0.248	(0.156)	-0.096	(0.109)
Children present (yes)	0.091	(0.057)	-0.044	(0.047)	0.420**	(0.131)	-0.420***	(0.091)
Children present (unknown)	0.359	(0.420)	0.115	(0.315)	0.083	(0.554)	0.110	(0.460)
Age category 31-40 (ref = 30 and younger)	0.087	(0.106)	0.064	(0.087)	-0.508~	(0.277)	0.237	(0.175)
Age category 41-50	-0.129	(0.103)	-0.050	(0.084)	-0.707**	(0.265)	0.228	(0.170)
Age category > 50	-0.293**	(0.108)	-0.081	(0.088)	-0.568*	(0.284)	-0.056	(0.179)
Lower or preparatory secondary vocational education (ref = primary education or no education)	0.208	(0.225)	-0.434**	(0.167)	0.035	(0.448)	-0.481~	(0.271)
Junior general secondary education	0.314	(0.225)	-0.410*	(0.166)	0.717	(0.458)	-0.578*	(0.272)
Secondary vocational education or work-based learning pathway	0.289	(0.219)	-0.601***	(0.162)	0.267	(0.439)	-0.808**	(0.264)
Senior general secondary education, pre-university secondary education	0.314	(0.235)	-0.681***	(0.175)	0.344	(0.464)	-0.833**	(0.290)
Higher vocational education	0.354	(0.220)	-0.627***	(0.163)	0.540	(0.446)	-0.765**	(0.266)
University education	0.194	(0.240)	-0.875***	(0.181)	0.748	(0.498)	-0.813**	(0.300)
Other and unknown	0.447	(0.306)	-0.643**	(0.235)	1.067	(0.769)	-1.362**	(0.515)
Diabetes type 2 mother (yes)	0.091	(0.071)	0.159**	(0.058)	0.027	(0.158)	-0.030	(0.115)
Diabetes type 2 father (yes)	-0.066	(0.075)	0.100	(0.062)	0.101	(0.172)	0.168	(0.113)
Cardiovascular disease mother (yes)	0.019	(0.067)	0.067	(0.056)	0.222	(0.152)	0.088	(0.105)
Cardiovascular disease father (yes)	0.041	(0.055)	0.040	(0.045)	-0.208	(0.132)	0.029	(0.087)
Constant	120.907***	(31.789)	89.577**	(28.431)	906.012***	(62.589)	209.531***	(52.581)
Observations	11,285		151,192		1,835		161,602	

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

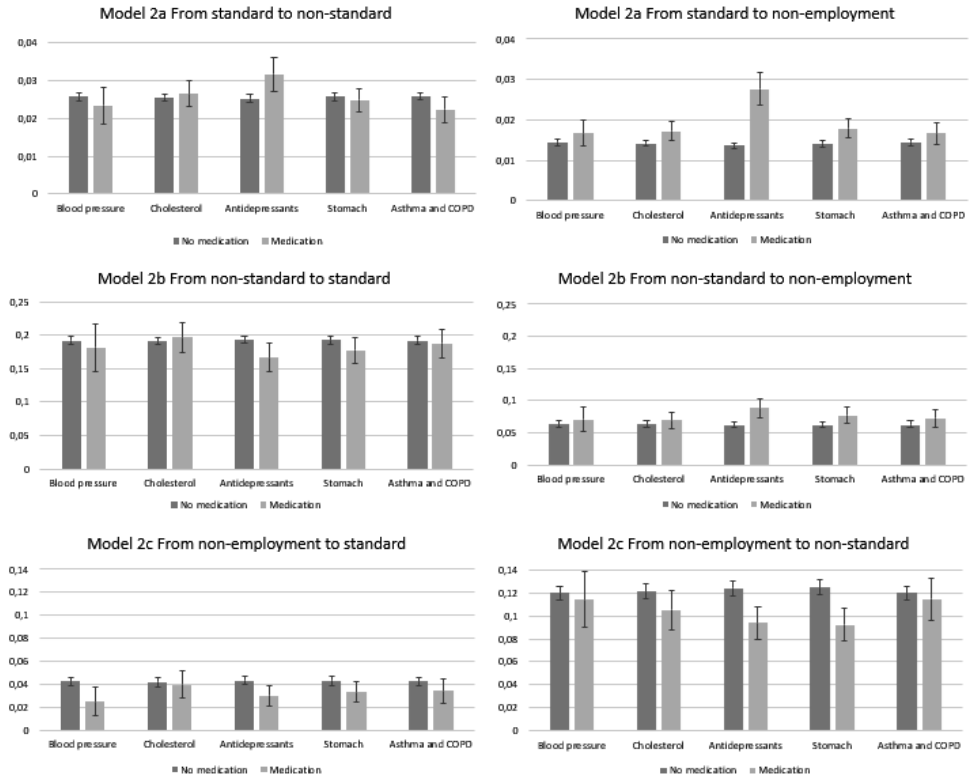
Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 5.1 Multinomial regression models of labour-market transitions, predicted probabilities by somatic complaints



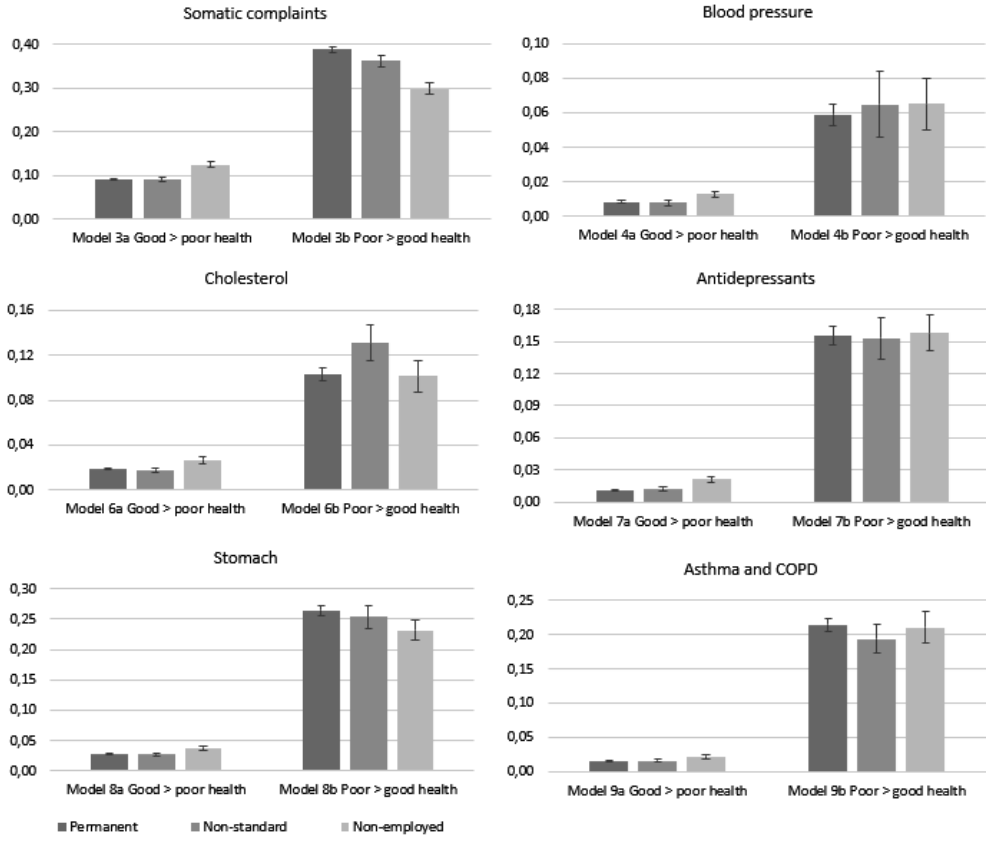
Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 5.2 Multinomial regression models of labour-market transitions, predicted probabilities by medication



Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

Figure 5.3 Multinomial regression models of transitions in health status, predicted probabilities by employment status



Source: Lifelines and the System of Social Statistical Datasets (SSD) of Statistics Netherlands; own calculations.

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Summary

The working life – employment – is seen as the most important economic resource for households. While employment remains the major source of economic security for the vast majority of the population, the lifelong secure employment in Western countries that characterised the 1960s and early 1970s is no longer a given. In many European countries, a growing portion of the working population lacks adequate protection, putting the economic security provided by employment under strain. If non-standard employed individuals experience more economic uncertainty compared to standard workers, it is conceivable this could affect their actions, decisions or preferences in other life domains as well. In particular, this thesis explores how economic uncertainty related to NSE affects union formation, the transition to parenthood and health. This question is extremely difficult to answer without longitudinal data. The associations found through a cross-sectional approach are usually difficult to interpret. Cross-sectional data conceal the individual dynamics of everyday life. In contrast, a longitudinal design enables researchers to measure the transitions which people make in their personal and working lives, rather than merely measuring a single state which people are in at a particular point in time. Moreover, it becomes possible to relate these dynamics to transitions which people and/or their partners make in other life domains. Second, the question of causation and selection emerges when interpreting cross-sectional associations: are people who do not want to have children more likely to choose non-standard employment relationships or are they unlikely to become parents precisely because of their non-standard employment? Are people in non-standard employment less healthy in the first place or does it lead to the deterioration of their health? Although selection and causation effects cannot be totally disentangled, using a longitudinal design will help to unravel a few more pieces in this difficult research puzzle and enhance our understanding of how economic uncertainty intervenes in everyday life. This thesis addresses the outcomes of uncertainty in the life course using rich register data based on the System of Social Statistical Datasets or SSD made available by Statistics Netherlands, the Dutch national statistical office. Three out of four of my empirical chapters use a combination of survey data and SSD register data in order to further enrich the longitudinal register data.

Chapter 2 examines how having an uncertain labour-market position influences relationship formation. The analyses show that employment uncertainty, particularly among less-educated men and women, is negatively correlated with the transition to cohabitation. Once cohabiting, it is mainly the uncertain position of the man that is negatively correlated with the transition to marriage. The negative relationship between employment uncertainty and marriage is particularly prevalent among lesser-educated men. Non-standard employment does seem to stand in the way of a steady partnership among the less educated.

Chapter 3 examines the association of employment relationships within couples, such as permanent contracts, non-standard contracts, self-employed and non-working status. Economic uncertainty within partnerships seems to be clustered. This correlation can only partly be explained by homogamy in education, age and migrant background status. The longer the relationship lasts, the less frequently the combination of two non-standard contracts within the household occurs. This is especially pronounced among highly educated couples. The same applies to the concentration of permanent contracts: the likelihood of two permanent contracts increases during the relationship mainly among higher-educated couples.

Chapter 4 investigates the association between economic uncertainty and childbearing among Dutch couples. The main finding is that the economic uncertainty of men and women affects fertility in different ways. The non-standard employment of men has no effect on fertility, whereas men's lower income reduces the likelihood of their becoming a parent. For women, both non-standard employment and a lower income impede childbearing. In addition, the employment uncertainty of men and women in the form of unemployment and non-standard employment correlates strongly with the risk of separation, which can be seen as an indirect negative effect on fertility as well.

Chapter 5 offers new insights into selection and causation mechanisms in the relationship between health and non-standard employment. A unique combination of longitudinal health panel data LifeLines and register-based System of Social Statistical Datasets was used to investigate both non-standard employment and health effects. The results suggest that the association between non-standard employment and health is driven mainly by selection mechanisms. The relationship between non-employment and health seems to be driven by both selection and causal mechanisms. Our findings suggest that being in non-standard employment does not seem to yield the same health consequences as non-employment in the Netherlands. However, the selection of healthier persons into standard employment suggests that non-standard employees with poorer mental health are trapped in downward trajectories with subsequent negative health outcomes.

To sum up, this thesis shows that uncertain employment can have consequences for couples and individuals during the life course. Some effects are direct, such as effects on childbearing, while some effects seem to be only indirect, such as the selection mechanism of healthy persons into standard employment. Nevertheless, economic uncertainty seems to permeate deeply into people's personal lives, influencing various life domains. Moreover, this thesis provides strong evidence that economic uncertainty affects the various demographic groups differently during the life course. More specifically, the effects of non-standard employment investigated in this thesis vary strongly by gender and by level of education.

Samenvatting

Voor de overgrote meerderheid van de bevolking vormt werkzame leven de belangrijkste bron van de economische zekerheid. Maar in tegenstelling tot de jaren zestig en begin jaren zeventig toen werknemers min of meer verzekerd waren van een levenslange aanstelling, is de baan voor met leven niet langer een vanzelfsprekendheid. Steeds meer mensen hebben een flexibele arbeidsrelatie. Ook hebben steeds meer mensen flexibel werk voor een lagere tijd. Als personen met een flexibele baan meer economische onzekerheid ervaren in vergelijking met werknemers met een vaste aanstelling, is het denkbaar dat dit ook van invloed kan zijn op hun acties, beslissingen of voorkeuren in andere levensdomeinen. In dit proefschrift wordt onderzocht hoe economische onzekerheid in verband met flexibele arbeidsrelaties de relatievorming, gezinsvorming en gezondheid beïnvloedt. Deze onderzoeksvraag is uiterst moeilijk te beantwoorden zonder longitudinale gegevens. De associaties die worden gevonden via een cross-sectionele benadering zijn vaak moeilijk te interpreteren. Cross-sectionele data verhullen de individuele dynamiek van het dagelijks leven. Een longitudinaal onderzoek daarentegen stelt onderzoekers in staat om de overgangen te meten die mensen maken in hun persoonlijke of werkende leven, in plaats van slechts één toestand te meten waarin mensen zich op een bepaald moment bevinden. Bovendien wordt het mogelijk om deze dynamiek te relateren aan transities die mensen en/of hun partners maken in andere levensdomeinen. Daarnaast blijft bij het interpreteren van cross-sectionele associaties de kwestie van oorzakelijkheid onbeantwoord: kiezen mensen die geen kinderen willen eerder voor flexibele arbeidsrelatie of zullen ze waarschijnlijk geen ouders worden juist vanwege het flexibele werk? Zijn mensen met flexibel werk überhaupt minder gezond of leidt het tot verslechtering van hun gezondheid? Hoewel selectie- en oorzakelijke effecten niet volledig kunnen worden ontward, zal het gebruik van een longitudinaal ontwerp helpen om nog stap dichterbij te komen bij het ontrafelen van deze moeilijke puzzel en ons begrip vergroten over hoe economische onzekerheid het dagelijks leven beïnvloedt. Dit proefschrift behandelt de uitkomsten van onzekerheid in de levensloop met behulp van rijke registergegevens op basis van het door het Centraal Bureau voor de Statistiek. Drie van de vier van mijn empirische hoofdstukken gebruiken een combinatie van enquêtegegevens en registergegevens om de longitudinale registergegevens verder te verrijken.

In ***hoofdstuk 2*** wordt onderzocht hoe het hebben van een flexibele arbeidsrelatie de relatievorming beïnvloedt. Uit de analyses blijkt dat arbeidsonzekerheid bij vooral laagopgeleide mannen en vrouwen negatief samenhangt met de kans om te gaan samenwonen. Eenmaal samenwonend is het vooral de onzekere positie van de man

die negatief samenhangt met de transitie naar trouwen. Ook hierbij geldt dat de negatieve relatie tussen arbeidsonzekerheid en trouwen vooral onder laagopgeleide mannen speelt. Flexibele arbeid lijkt een vaste partnerrelatie wel degelijk in de weg te staan en dan vooral onder laagopgeleiden.

Hoofdstuk 3 gaat in op de samenhang van verschillende typen arbeidsrelaties binnen partnerrelaties. Er is vooral gekeken naar werkenden met een vast, met een flexibel arbeidscontract, zelfstandigen en niet-werkenden. De economische onzekerheid binnen partnerrelaties lijkt geclusterd. Wie een partner heeft met een flexibel contract heeft zelf ook een grotere kans op een flexibele arbeidsrelatie. Een partner met een onzekere arbeidsrelatie verlaagt de kans op een vast contract. Deze samenhang van arbeidsonzekerheid kan maar voor een klein deel verklaard worden met de homogamie binnen de stellen in termen van opleiding, leeftijd en herkomst. Hoe langer de relatie duurt, hoe minder vaak de combinatie van twee flexibele arbeidscontracten binnen een huishouden voorkomt. Dit is vooral uitgesproken bij hoogopgeleide paren. Hetzelfde geldt voor de concentratie van vaste contracten: de kans op twee vaste contracten neemt gedurende de relatie vooral toe bij hoger opgeleide stellen.

Hoofdstuk 4 onderzoekt het verband tussen economische onzekerheid en het krijgen van kinderen. De belangrijkste bevinding is dat de economische onzekerheid van Nederlandse mannen en vrouwen de vruchtbaarheid op verschillende manieren beïnvloedt. De flexibele arbeidsrelatie van mannen heeft geen effect op de vruchtbaarheid. Het lagere inkomen verkleint wel de kans op een eerste kind bij de mannen. Bij vrouwen verlagen zowel flexibele arbeidsrelatie als een lager inkomen de kans op het krijgen van een eerste kindje. Bovendien hangt de arbeidsonzekerheid van mannen en vrouwen in de vorm van werkloosheid en flexibele arbeidsrelatie sterk samen met het risico op scheiding, wat ook kan worden gezien als een indirect negatief effect op de vruchtbaarheid.

Hoofdstuk 5 biedt nieuwe inzichten in de relatie tussen gezondheid en flexibele arbeidsrelatie. Een unieke combinatie van longitudinale gezondheidspanelgegevens van LifeLines en de registers opgenomen in het SSB werd gebruikt om zowel flexibele arbeids- als gezondheidseffecten te onderzoeken. De resultaten suggereren dat het verband tussen flexibele arbeidsrelatie en gezondheid voornamelijk wordt bepaald door de selectiemechanismen. De relatie tussen het niet-werken en gezondheid lijkt te worden gedreven door zowel selectie- als causale mechanismen. Onze bevindingen suggereren dat het hebben van een flexibele arbeidsrelatie niet dezelfde gezondheidsgevolgen lijkt te hebben als het niet-werken in Nederland. De selectie van gezondere personen in vaste contracten suggereert echter dat werknemers met een mindere gezondheid in een flexibele arbeidsrelatie kunnen vast

komen te zitten met een hogere risico op werkloosheid en daaruit voortvloeiende negatieve gezondheidsresultaten.

Dit proefschrift laat zien dat onzeker werk gevolgen kan hebben voor koppels en individuen gedurende de levensloop. Sommige effecten zijn direct, zoals effecten op de vruchtbaarheid, terwijl sommige effecten slechts indirect lijken te zijn, zoals het selectiemechanisme van gezonde personen in vaste contracten. Dit proefschrift laat zien dat de verschillende demografische groepen de economische onzekerheid gedurende de levensloop anders ervaren. De onderzochte effecten van flexibel werk verschillen namelijk sterk naar geslacht en opleidingsniveau. Samenvattend lijkt economische onzekerheid bij bepaalde groepen diep door te dringen in het persoonlijke leven van mensen en de uitkomsten op verschillende levensdomeinen te beïnvloeden.

Publication overview

Chapter 2 is translated from previously published work:

Chkalova, K., & van Gaalen, R. (2017). Staat een flexibele arbeidsrelatie een vaste partnerrelatie in de weg? Tijdschrift voor Arbeidsvraagstukken, 33(3), 342-359. https://www.tijdschriftvoorarbeidsvraagstukken.nl/inhoud/tijdschrift_artikel/TA-33-3-10/Staateen-flexibele-arbeidsrelatie-een-vaste-partnerrelatie-in-de-weg

Chapter 3 is translated from previously published work:

Chkalova, K. (2017). Samen onzeker? Concentratie en dynamiek van arbeidsonzekerheid binnen partnerrelaties. In: Chkalova, K., Van Genabeek, J., Sanders, J. en Smits, W., Dynamiek op de Nederlandse arbeidsmarkt: de focus op ongelijkheid. Den Haag, Heerlen, Bonaire, Leiden: Centraal Bureau voor de Statistiek/TNO.