

article

The collective risk management of solo self-employed workers in the Netherlands

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The growth of solo self-employed workers in the Netherlands (zpp'ers) has not yet triggered a debate on how to combine their income security and business autonomy. The extent to which the social protection system and interest groups promote zpp'ers to take up collective arrangements mitigating income insecurity due to work incapacity and preventing income insecurity due to poor employability is investigated using the social risk management framework. Correcting economic obstacles and irrational risk perceptions, collective arrangements are found to encourage the take-up of work incapacity insurance and training among zpp'ers.

Key words solo self-employed workers • social risk management • social protection system • interest groups • income insecurity

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Introduction

The growing number and the heterogeneity of solo self-employed persons have raised concerns about solo self-employment as a potentially precarious form of work, exposing individuals to income insecurity (Caraher and Reuter, 2017; Kalleberg, 2000). Although solo self-employment is not precarious per se, its recent growth has been interpreted as the most radical individualisation of social risks management, a trend driven by flexible markets and activating welfare reforms in which social risks are shifted from collective actors to the individual (Bröckling, 2016; Caraher and Reuter, 2017). This is because a rising share of the working population receives weaker statutory protections compared to what compulsorily covers employees against social risks (Fondeville et al, 2015; Spasova et al, 2017). While weaker compulsory protection lowers tax pressure and thus preserves business autonomy, it also exposes solo self-employed workers to income insecurity when risks occur. To contribute to evidence-based decision making, this paper explores the extent to which the income insecurity of solo self-employed people can be restrained without undermining their autonomy.

This debate is central in the Netherlands, where the lack of compulsory social contributions and an advantageous tax regime drove the EU's fastest growth of solo self-employed workers (*zelfstandig zonder personeel* or *zzp*'ers) above 1 million out of the 8.5 million working population¹ (Kösters, 2017; Vermeylen et al, 2017). Working on their own account and without employing other people, *zzp*'ers are free to organise their business to gain profit (Conen et al, 2016; Josten et al, 2014; Ministerie van Financiën, 2015). However, excluded from statutory sickness, disability and unemployment schemes, *zzp*'ers also face a particularly high exposure to income insecurity in case of work incapacity and poor employability, unless this risk is voluntarily managed (Berkhout and Euwals, 2016a; 2016b; Muffels, 2013; Vermeylen et al, 2017).

While traditional *zzp*'ers, such as shop owners or farmers may cope with income insecurity using the potential buffer that financial capital can offer in times of hardship, this option is less likely among newer 'employee-like' figures: carers, teachers, delivery workers, builders (Conen and Schippers, 2017; Conen et al, 2016; Kösters and Smits, 2017; Ministerie van Financiën, 2015; van Vuuren and Hesselink, 2011). Providing mostly services and not products, the new *zzp*'ers have less financial capital and savings. Furthermore, when coming from previous experiences in employment or unemployment, new *zzp*'ers may lack knowledge and expertise in how to run a sustainable business and manage individually their risk of income insecurity.

Since the lack of financial capital and business skills may prevent *zzp*'ers from managing their risks via savings or insurance on the private market, the extension of compulsory protection to this group has been advocated but not implemented (Kremer et al, 2017) as it would affect *zzp*'ers' autonomy and competitiveness in the EU free market (Berkhout and Euwals, 2016a; Klosse, 2017; Vermeylen et al, 2017; Westerveld, 2012). Like all citizens, *zzp*'ers are provided with a safety net to cope with their income falling under subsistence level (Aerts, 2005) as well as a basic social protection for pregnancy and childbirth, both financed by taxes. However, to secure their income above subsistence level, *zzp*'ers have to rely on the private market to buy insurance against income loss due to work incapacity and to attend training to prevent poor employability (Dekker, 2010). Due to high opportunity costs and insufficient supply of private insurance, in 2013 only a third of *zzp*'ers took up an insurance against work incapacity and attended training to prevent poor employability (Berkhout and Euwals, 2016a; de Vries and Bruins, 2013).

The low take-up of private insurance against work incapacity triggered the concern of the EU Council.² This has, however, not yet opened a debate on which collective arrangements in the present institutional setting may promote *zzp*'ers to voluntarily manage their income security (Berkhout and Euwals, 2016a; van Echtelt et al, 2016). Focusing mainly at comparing the statutory protection gap between solo self-employed people and employees across countries, present studies (Aerts, 2005; Fondeville et al, 2015; Kösters, 2017; Vermeylen et al, 2017) are normatively biased when assuming uniform preferences of *zzp*'ers for compulsory protection (Berkhout and Euwals, 2016a; Dekker, 2010). By doing so, they limit our knowledge of alternative arrangements created by the social protection system and interest groups to promote the resilience of *zzp*'ers (Jansen, 2017).

This paper investigates the extent to which the social protection system and interest groups can restrain the income insecurity of *zzp*'ers by promoting a collective management of income insecurity due to work incapacity and poor employability. The main research question is: *to what extent do collective arrangements encourage zzp'ers*

to take-up: 1) insurance to mitigate income insecurity against work incapacity and 2) training/network events to prevent income insecurity due to poor employability?

The Netherlands is an interesting case, where the systems of social protection and interest representation are sufficiently organised to encourage the individual self-regulation with more advantageous collective risk management arrangements (Jansen, 2017). We limit the shortages of the existing literature mentioned above by using the social risk management approach (Holzmann, 2005; Holzmann and Jørgensen, 2001; Schmid, 2005; 2008). Combining insights from economics and psychology, our main argument is that, when correcting irrational risk perceptions and economic obstacles the social protection system and interest groups' arrangements will lower the opportunity costs and encourage the voluntary take-up of insurance against work incapacity and of training among zzp'ers. The empirical analysis uses a quantitative design on the Dutch Self-employed Working Conditions Survey (*Zelfstandigen Enquête Arbeid* (ZEA) 2015 conducted by *Centraal Bureau voor de Statistiek* (CBS) and *Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek* (TNO) N=4796) (Janssen et al, 2015).

This paper is structured as follows. The second section introduces the social risk management approach and the third section formulates hypotheses. The section after that provides details about the methodology. Finally, findings are discussed in the fifth section and conclusions are presented in the final section.

Social risk management

The rise of solo self-employment implies that an equivalent larger share of the workforce cannot rely on the institutional support automatically granting employees income security against work incapacity and poor employability (Bröckling, 2016; Caraher and Reuter, 2017). Solo self-employed workers have to actively manage their risk to emancipate themselves from a vulnerable position (Bröckling, 2016). Here the social risk management approach is useful to analyse the arrangements that zzp'ers can use to fulfil their income security and the institutional incentives that they experience (Holzmann, 2005; Holzmann and Jørgensen, 2001; Schmid, 2005, 2008).

This approach identifies different arrangements on the bases of their strategy and their formality. In terms of strategy, these arrangements can either prevent an event, mitigate or cope with an event's potential impact. Their formality depends on which actors provide or support them. Arrangements are less formal when provided by individuals or households, and more formal when provided by market institutions, governments and international institutions (Holzmann and Jørgensen, 2001). Schmid adopted this framework and identified four ideal types of social risk sharing around which various risk managements arrangements can be allocated: individual responsibility, individual solidarity, solidarity and collective solidarity (Figure 1) (Schmid, 2005). The types of risk sharing depend on whether the event causing income insecurity is triggered by the individual (internal risk) or not (external risk) and on whether its impact can be borne by the individual or self-organised groups (individual) or requires a public support (society). This study is limited to the analysis of arrangements managing the income insecurity generated by two events: work incapacity and poor employability.

Work incapacity is defined as a temporary or permanent work ability loss due to psycho-physical health impairments and may be internal, in case of pregnancy, or external (sickness or disability) (Van Gerven, 2008; van Oorschot et al, 2010). Poor

employability is defined as a temporary or permanent loss of market competitiveness and may be induced by either market circumstances or poor individual business/career choices (Conen et al, 2016; Dekker, 2010; de Vries and Bruins, 2013). In general, the risk of income insecurity triggered by work incapacity and poor employability can be managed by coping, mitigating and preventing arrangements situated around each of the four ideal types of risk sharing. Once an event occurs, coping arrangements can be implemented privately and informally via personal or household savings (individual responsibility or individual solidarity) or publicly and formally via universal social assistance schemes (collective solidarity or solidarity).

Ex-ante strategies can be implemented to either prevent the occurrence of the event or, when this is not possible, to mitigate their potential impact (Holzmann and Jørgensen, 2001) with again either a narrow or societal risk sharing. In western welfare democracies, employees' income insecurity generated by work incapacity or poor employability is usually mitigated by compulsory social protection schemes against sickness, disability and unemployment around the collective solidarity ideal type (Schmid, 2005). Solo self-employed workers have generally no or only a limited access to these schemes, especially in countries where those schemes are organised on a social insurance base with financing shared between employees and employers, as in the Netherlands (Spasova et al, 2017). This is because these types of public arrangements are supported by a much thinner social legitimation, as the risk of zzp'ers is not deemed dependent on external employer's choices triggering the events (for instance unhealthy work environment, or insufficient training). Since zzp'ers work under the authority of no one else than themselves, the management of work incapacity and poor employability that does not threaten their subsistence is seen as part of their business plan and is voluntary. From this perspective, public compulsory arrangements can even undermine their autonomy and in turn their EU competitiveness (Berkhout and Euwals, 2016a; Conen et al, 2016).

Since full business autonomy translates, in principle, into full individual responsibility, income insecurity is in the first instance managed via individual arrangements surrounding individual responsibility ideal type. Those include in the first instance coping arrangements, such as private savings, and allow for very limited risk sharing within the household. Considering the income insecurity of zzp'ers as an internal risk impinges on the development of individual mitigation arrangements via private market insurance. Due to the moral hazard, the insured could undertake behaviours triggering the events. This holds especially for poor employability, as the moral hazard for work incapacity is moderated by health circumstances unrelated to the insured choices (external).

Next to the issue of moral hazard, poor employability is also a correlated event that cannot be mitigated by market providers, due to their limited organisational capacity (Iversen and Rehm, 2016; Schmid 2008). As a result, the only market arrangements that zzp'ers can use against poor employability pursue a preventative strategy, namely training activities and networking. Updating and developing their technical, business, as well as social skills thus become the main ways that zzp'ers have to prevent the market demand of their services and products from shrinking (de Vries and Bruins, 2013).

Mitigating strategies against work incapacity implemented via private and not via compulsory social insurance, although fully complying with the autonomy of zzp'ers, have a few unattractive aspects hindering their voluntary take-up (Schmid 2008). First, having a limited organisational capacity, private insurance companies cannot

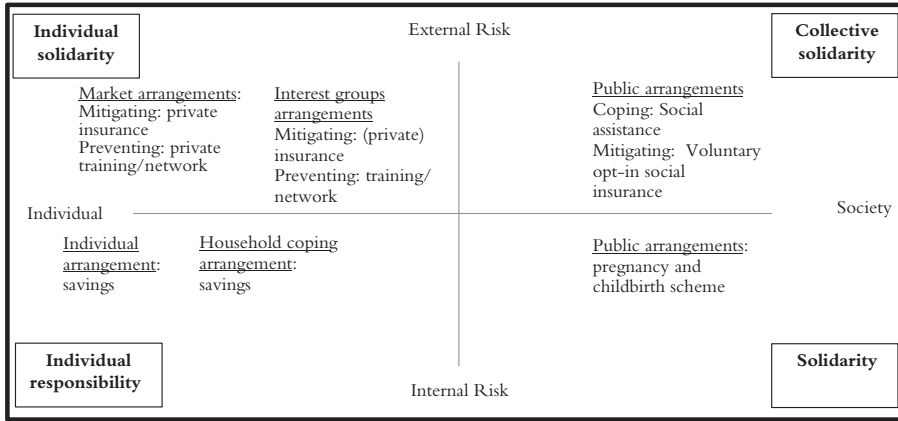
directly control for moral hazard and need other disincentives limiting the income security fulfilment in the short-term (Holzmann and Jørgensen, 2001; Schmid, 2008) with, for instance, longer waiting periods. Second, information asymmetries raise the average premiums when providers cannot fully profile the risk of clients. Third, the voluntary, and not compulsory, adoption of such an arrangement allows low-risk groups, better aware of their actual risk, to forgo insurance when overpriced by informational asymmetries. This is known as adverse risk selection and has the effect of raising the premiums for the insured and making insurance unaffordable to high-risk groups (Akerlof, 1970; Iversen and Rehm, 2016; Rothschild and Stiglitz, 1978). Fourth, unlike social insurance schemes, insurance companies can deny access to the least profitable clients selecting out high (bad) risks groups.

Insights from psychology of intuitive beliefs and choices show that, additionally to these economic obstacles, another aspect hinders the take-up of private insurance mitigating work incapacity and of training/network activities preventing poor employability. Individuals have a non-rational risk perception and tend to be risk-averse when choosing between certain and uncertain gains and risk-takers when choosing between certain and uncertain costs (Kahneman, 2003; Schmid, 2005). The non-rational risk perception discourages zzp'ers from managing their risks via market arrangements, the higher their short-term costs and the more unlikely their gains in the long-term are. This distortion is particularly relevant when dealing with events that are highly unlikely, but with a harmful potential long-term impact, such as work incapacity. It is moreover also relevant for preventing strategies, as training or networking activities are unlikely to produce immediate gains on income security, justifying the short-term costs.

In short, both economic obstacles and non-rational risk perception hinder the take-up of market arrangements managing income insecurity (Berkhout and Euwals, 2016a; Josten et al, 2014), and this is especially harmful for zzp'ers in more vulnerable circumstances. The relationship between risk and private arrangements is in fact an inverse U shape. The likelihood of buying private insurance or attending training/network event is low when the risk is perceived as low (due to the irrational perception) and it increases with risk up to a point where arrangements are no longer supplied or are perceived as unaffordable and then it drops again (Akerlof, 1970). As they are more vulnerable to work incapacity, zzp'ers in high-risk groups face much higher premiums than those in low-risk groups or, worse, fall out of the private insurance target. For this reason, for example, only for low-risk groups can private insurance last after the age of 58–60 years (7–8 years before statutory retirement age) and premiums can triple during the individual lifespan. As more vulnerable to poor employability, zzp'ers facing financial problems may perceive the costs of training or network activities much higher than more successful zzp'ers. In both cases, vulnerable circumstances may increase the opportunity costs as high as to discourage or even prevent zzp'ers who are most exposed to income insecurity from taking up risk management arrangements.

Since market arrangements may drive the income insecurity of zzp'ers in case of work incapacity and poor employability, the role of collective arrangements promoted by the social protection system and interest groups against these two events is here analysed. In Figure 1 the arrangements provided by the social protection system are situated around the collective solidarity ideal type, while those provided by self-organised interest groups are near the individual solidarity type but in between individual market arrangements and public arrangements.

Figure 1: Risk management arrangements available to zzp'ers in the event of work incapacity and poor employability around the ideal types of social risk sharing



Sources: Schmid, 2005; Berkhout and Euwals 2016a, 2016b; own elaboration

The main argument is that collective arrangements will restrain the income insecurity of zzp'ers if they reduce the economic obstacles and the irrational risk perception that discourage the take-up of risk management market arrangements against work incapacity and poor employability. In the next section, all the arrangements provided to zzp'ers by the social protection system and interest groups will be explained in more detail. Yet hypotheses will be formulated only for the collective arrangements implementing a mitigating or a preventative strategy against work incapacity and poor employability.

Collective risk management

Social protection system in the Netherlands

Although in principle zzp'ers are exposed to the same events triggering income insecurity as employees, they are not supported by the same mandatory social insurance schemes against sickness, disability and unemployment. As mentioned earlier, they are mainly eligible for coping strategies at social assistance level. Only three public arrangements against work incapacity provide zzp'ers with a higher level in the case of pregnancy and childbirth and if they started their business after becoming unemployed or directly after leaving a job in employment, and only this latter implements a mitigating strategy.

Around collective solidarity, the coping safety net is offered by a Royal Decree (*Besluit bijstandsverlening zelfstandigen* (Bbz) 2004). Zzp'ers that fail to meet their subsistence costs can obtain Bbz benefit³ in cases of: temporary financial difficulties, termination of a non-viable business, problems during the start-up phase⁴ and older age.⁵ The duration is in principle 12 months max⁶ and the benefit is generally provided as an interest-free loan, becoming an allowance only if at the end of the accounting year the total income falls under the subsistence level. Moreover, the first pillar of the Dutch pension system provides a coping arrangement against old-age under the Old Age Security Law (*Algemene Ouderdomswet* (AOW)) linked to the years of residence

before statutory retirement age. Zzp'ers are generally not eligible to the second pillar ensuring income stability in old-age, unless their occupation falls under the scope of a pension scheme or, in the case of a transition from employment to self-employment, they opt to extend their participation in their former employer's pension scheme offering this possibility⁷ (Aerts, 2005). For the rest, the state supports the establishment of voluntary private pensions (third pillar) with tax benefits (Conen et al, 2016). Bbz and AOW are two coping arrangements of collective solidarity, a source of basic resilience whose financing is shared among the whole working population via taxes.

Public coping arrangements target only two groups of zzp'ers above social assistance level. First, female zzp'ers in the case of work incapacity due to pregnancy and childbirth (solidarity - *Zelfstandig en Zwanger* (ZEZ)) receive a maximum of 100 per cent of the minimum wage for 16 weeks, also financed via taxes. Second, unemployed with a right to unemployment benefits that start their business under the supervision of the Dutch Employee Insurance Agency (*Uitvoeringsinstituut Werknemersverzekeringen* (UWV)) are protected against the initial income instability (collective solidarity). This arrangement allows combining part of the unemployment benefit (71%) with business profit in the first 26 weeks. After 26 weeks of working as a self-employed person the entitlement to unemployment benefit ends. If the business does not turn out to be successful and is fully terminated, zzp'ers can fall back on any remaining benefit rights, although this possibility is limited in time⁸. This arrangement is regulated in the Unemployment Insurance Act (Article 77a WW) and thus not financed by zzp'ers, but via employees' social premiums.

Like the opt-in mitigating arrangement allowing former employees to extend their participation to their former employer's pension fund, former employees can also voluntarily extend their previous collective insurance against work incapacity due to sickness and disability. According to the Sickness Act,⁹ new zzp'ers previously insured for at least one year can opt to take over the task of their former employer and pay full social premiums within 13 weeks. Premiums can be paid for two benefits: a sickness benefit (*ZW-uitkering*) covering the first two years of work incapacity and a disability benefit (*WIA-uitkering*) from the third year up to statutory retirement age. Being part of the statutory social protection system, this mitigating arrangement is not affected by economic obstacles, thus until statutory retirement age neither access, nor premiums are linked to the individual risk. Although part of collective solidarity, this arrangement is voluntary and allows for a certain autonomy in deciding which share of the income to insure up to the maximum daily wage. Nevertheless, the 13-week opt-in period may actually be too short to make an informed decision about leaving social insurance for other arrangements.

Being part of a voluntary social insurance scheme based on collective solidarity between low- and high-risk groups averages the premiums across all insured workers and disadvantages low-risk groups, who are allowed to opt-out. While high-risk former employees face incentives to opt in in terms of more affordable premiums and wider access, low-risk groups that, under irrational risk perception, would not buy a private insurance would be even less likely to opt in to the more expensive social insurance scheme (Iversen and Rehm, 2016). In average those two effects for low- and high-risk former employees might cancel each other out, unless two aspects are considered. First, risk-averse (young) low-risk former employees may fear the loss of acquired rights and perceive higher opportunity costs of opting-out, especially considering the pay-outs of social insurance in terms rising private premiums in older age and

the short 13-weeks opt-in period. Second, since a third of zzp'ers are older than 55 years and about 70 per cent are older than 45 years, for a large share of zzp'ers the public scheme would still be more affordable and accessible than private insurance.

All in all, in the first hypothesis it is expected that the mitigating arrangement offered by the statutory social protection system to former employees promotes the take-up of insurance against work disability. Therefore, we expect that former employees will show a higher propensity to insure against work incapacity than the others.

H1: Former employees will be more likely to be insured against work incapacity than the rest.

As mentioned earlier, an ability to opt in to sickness and disability arrangements raises the incentives to mitigate against work incapacity mostly among high-risk former employees, for whom private insurance is inaccessible or unaffordable (according to the inverse U-shaped relationship explained earlier) (Akerlof, 1970). Due to informational asymmetries, private insurance companies select and raise premiums of bad risk based on three criteria: age, health conditions and occupation (Berkhout and Euwals, 2016a). Therefore, we expect former employees in older age, poor health and in high-risk occupations to show a higher propensity to be insured than other former employees.

H2: Among former employees, zzp'ers that are: a) aged 55 years or older b) in poor health and c) in high-risk occupations are more likely to adopt insurance against work incapacity than others.

Interest groups

In the Netherlands, different groups promote the interests of zzp'ers at both political and societal level. At societal level, they supply members with individualised services, either directly or via private providers (Jansen, 2017, van der Meer, 2017). By doing so interest groups support the management of zzp'ers' risk in an alternative way compared to traditional public support. The main groups promoting the interests of zzp'ers are listed in Table 1.

As pointed out by Jansen (2017) the interest representation of zzp'ers in the Netherlands is carried out by three types of organisations. First, zzp'ers are traditionally represented, as entrepreneurs, via business associations, especially those lobbying for small organisations, such as MKB Nederland (*Midden en Kleinbedrijf* – small and medium-sized enterprises (SME)) and VNO-NCW (Confederation of Netherlands Industry and Employers). Second, the Dutch trade unions have been pioneers in Europe in setting up specific branches for zzp'ers (*FNV Zelfstandigen* in 1997 and *CNV Zelfstandigen* in 2007). Third, independent solo self-employment organisations emerged as early as in the mid-1990s (for example: *Vereniging van Zelfstandigen Zonder Personeel* (VZZP) in 1995, and *ZZZP Nederland* (ZZP/NL) in 2006) especially in industries, such as construction, where the upward trend of solo self-employment showed the most critical aspects (*Zelfstandigen Bouw* (Zbo)).

Like the business association- and trade union-affiliated organisations, independent groups have an active lobbying agenda as well as a public role. This is the case of the IMK (*Instituut voor Midden- en Kleinbedrijf* – Institute for Small and Medium-sized

Table 1: Examples of groups promoting the interests of zzp'ers

Year	Organisation	English translation	Members (approx.)
Post-war	Instituut voor het Midden- en Kleinbedrijf (IMK)	Institute for Small and Medium-sized Enterprises	?
1995	Vereniging van Zelfstandigen Zonder Personeel (VZZP)	Association of Self-employed without Employees	600 (2014)
1997	FNV Zelfstandigen (FNV-ZZP)	FNV Self-employed (trade union-affiliated: FNV)	15000
2000	Zelfstandigen Bouw (ZBo)	Self-employed Construction (trade union-affiliated: FNV until 2012)	10000
2002	Platform Zelfstandige Ondernemers (PZO-ZZP)	Platform for Independent Entrepreneurs	20000 (2014)
2006	ZZP Nederland (ZZP-N)	Solo self-employed Netherlands	44000
2007	CNV Zelfstandigen (CNV-ZZP)	CNV Self-employed (trade union-affiliated: CNV)	600 (2014)
2007	Vereniging Broodfonds	Breadfunds	19000
2009	ZZP Netwerk Nederland (ZZP-NN)	ZZP Network Netherlands (SME association-affiliated MKB-Nederland)	5000 (2017)
2013	Netwerk Zelfstandig Werkenden (NZW) en Ondernemerscollectief	Independent Contractor Network (trade union-affiliated: De Unie) and Entrepreneurs' Collective	26000

Source: Jansen, 2017 and own elaboration

Enterprises), which assesses and supports the recovery (and bankruptcy) plans of zzp'ers claiming for Bbz benefit. Furthermore, together with the trade union-affiliated organisations, independent groups have a societal role as well offering individual benefits to their members (Jansen, 2017). In industry-specific groups (*Zelfstandigen Bouw*) benefits are similar to the ones provided by traditional professional associations, including quality labels guaranteeing both the skills of their members and the genuine quality of the business relation between members and their clients.

In more encompassing groups, benefits include a set of risk management arrangements that members can buy under more favourable conditions than in the market via a platform providing them with specialised information, knowledge and expertise (individual solidarity). Benefits include: fiscal and legal advice upon inscription and a wide range of additional services on demand (such as health, work incapacity or liability insurance, legal support). Although the supply may vary across interest groups, the types of benefits provided are rather similar. Some of the benefits provided by three interest groups are presented as examples of the arrangements of individual solidarity provided by interest groups to mitigate income insecurity against work incapacity and to prevent income insecurity due to poor employability.

The Bread Funds¹⁰ (*Vereniging Broodfonds*) are independent groups providing direct mutual aid mitigating income insecurity due to medium-term work incapacity. Funds started as informal cooperatives (Smith, 2014) about 10 years ago with a coordination structure (*BroodfondsMakers*), promoting new groups and supervising existing ones. At the moment of writing, 490 groups in 176 places in the Netherlands organise in total about 21,000 zzp'ers. By statute, each group counts between 20 and 50 members (in average 45)

selected by co-optation. Members pay a fixed monthly contribution (€33.75–€112.50) according to the donation they would like to receive in case of sickness (€750–€2,500 per month). Contributions are paid only if members earn more than the minimum donation to an individual account up to a maximum buffer of 36 months and are considered personal savings until withdrawal.¹¹ Donations can be withdrawn by sick members after a one-month waiting period and for a maximum of 24 months. Due to the lack of any medical assessments of claimants' health this arrangement is exposed to moral hazard and critically depends on trust and social control. In 2016 an alliance (*Broodfondsalliantie*) was created to promote the financial sustainability of Bread Funds collectively.

Furthermore, interest groups can support sustainable entrepreneurship of zzp'ers via business skills' development, as the IMK¹² does via advice, training and guidance.¹³ It also provides similar assistance to starters and established zzp'ers via courses, which are also available online.

Similar initiatives are also provided by ZZZP-N (*ZZZP Nederland*), founded in 2005 to compensate the lack of support around small business and quickly grown as the largest independent organisation for zzp'ers in the Netherlands (about 44,000 members).¹⁴ ZZZP-N offers members a wide range of benefits: training courses, legal advice and support (in case of disputes with clients), personal (for instance health) and business (for instance liability) insurances, administrative support, standard contract models to use with clients. Information and advice are accessed upon subscription (about €20 a year) and further benefits are bought separately upon members' request and are often customised to the needs of zzp'ers in different occupations and sectors. Unlike Bread Funds and IMK, ZZZP-N does not generally deliver benefits directly, but negotiates with private providers for collective discounts for its subscribers. In this way, it can reduce, for instance, work incapacity insurance premiums, normally ranging between 8 per cent and 17 per cent of average income (SER-advies, 2010).

While in standard sociological theories joining an interest group is in itself a collective action taken as a dependent variable (Olson, 1971), in this study it is treated as a predictor for two reasons. First, membership directly grants collective benefits in terms of political representation but requires additional costs to take up collective risk management arrangements that members may not be willing to pay (Jansen, 2017). Second, membership represents a necessary condition for zzp'ers to access interest groups' collective mitigating and preventing arrangements and the related incentives.

Apart from the arrangement provided by the Bread Funds, most of the arrangements provided by interest groups' mitigating work incapacity are based on private insurance complemented by additional incentives. One advantage of such arrangements is that they require lower premiums than equivalent market arrangements for both high and low risk groups.¹⁵ Equally important, when interest groups act as an intermediary with private providers, they inform their members about the implications of forgoing insurance and guide them through the market offers that suit them best. Members are thus exposed to information and advice that helps them to formulate more rational decisions concerning the costs/benefits of buying an insurance compared to their risk.

All in all, interest groups' mitigating arrangements provide their members with monetary and non-monetary incentives that reduce their members' opportunity costs of taking up a mitigating arrangement against work incapacity compared to non-members. Therefore, membership is expected to be positively associated with the take-up of insurance against work incapacity.

H3: If members of an interest group, zzp'ers will be more likely to be insured against work incapacity.

The information, guidance and the collective discount of interest groups' arrangements may rationalise the risk perception of members whose opportunity cost to manage their risk via private arrangements is just perceived as too expensive but still affordable. They are instead less likely to encourage the take-up of members at very high risk, as those incentives cannot fully dismantle the economic obstacles that those groups face in the private market (Schmid, 2008). First, those incentives are not likely to fully correct adverse risk selection (as in a compulsory system) and, as a result, unlike in the public opt-in arrangement, premiums rise with risk up to unaffordable levels. Second, the intermediation of interest groups does not prevent insurance companies from denying access to the least profitable clients selecting out high (bad) risks groups (Schmid, 2008). Third, the intermediation has no effect on informational asymmetries, which will still result in private arrangements discriminating premiums based on three 'observable' criteria: age, health conditions and occupation. Thus, we expect members in older age (especially after the age of 55 years), poor health and in high-risk occupations to show a lower propensity to be insured than the low-risk members.

H4: Members of an interest group that are a- aged 55 years or older b- in poor health and c. in a high-risk occupation are less likely to be insured against work incapacity than other members.

Another factor affecting the take-up of private insurance is income. While higher income promotes the take-up by raising the expected losses in case of work disability, lower income discourages it by increasing its opportunity costs (Iversen and Rehm, 2016). The incentives provided by the interest groups' arrangements are stronger for members in poorer financial situations, whose scarce resources expose them to a more irrational risk perception and thus to a lower propensity to buy insurance than better-off members (Schmid, 2005). While this latter group may be sensitive to non-monetary incentives, they have comparatively little to gain from the monetary incentives as they can buy insurance directly in the market in a more customised way (Checchi et al, 2010; Jansen, 2017). On the contrary, members in a poor financial situation are exposed to both sets of incentives. Non-monetary incentives rationalise their need for insurance and monetary ones allow them to access the only arrangement that they can afford. Although it can be argued that this effect may be explained by a lower propensity of successful zzp'ers to in first place join an interest group, recent evidence that membership of zzp'ers is not significantly related to high income (Jansen, 2017) may moderate the relevance of this bias.

All in all, we expect that, as they are exposed to stronger incentives, members in a poor financial situation will show a higher propensity to buy insurance against work incapacity than other members.

H5: Members of an interest group in a poor financial situation are more likely to be insured against work incapacity than members in a better financial situation.

As mentioned earlier, being correlated and internal (thus exposed to moral hazard), the impact of poor employability cannot be mitigated by the limited organisational capacity of interest groups and private insurance companies. Nevertheless, the arrangements of interest groups include formal training (for business skills, technical skills and network skills), but also network activities where members learn how to prevent losses in their competitiveness by meeting experts as well as other zzp'ers.

As for the arrangements mitigating the risk of work incapacity, interest groups provide both monetary and non-monetary incentives that, rationalising the risk perception of their members, are expected to promote the take-up of preventative arrangements against poor employability. Therefore, membership is expected to be positively associated with the attendance of training/network events.

H6: If they are a member of an interest organisation, a zzp'er will be more likely to attend a training/network event.

The same argument presented to underpin theoretically H5 holds also for H7. While better-off members have more to gain from buying customised training on the market, the incentives offered by interest groups' preventative arrangements are particularly relevant for less successful members. Non-monetary incentives make them realise that their poor performance is in itself a signal of their stronger exposure to poor employability and thus to a greater need of training. Monetary incentives allow them to actually access training.

All in all, as they are exposed to stronger incentives, members in a poor financial situation are expected to show a higher propensity to attend training/network events than other members.

H7: Members of an interest group in a poor financial situation will be more likely to attend a training/network event than members in a better financial situation.

After formulating our hypotheses, the next section describes the methodology used to test them.

Methodology

Our quantitative analysis uses the Dutch Self-employed Working Conditions Survey (*Zelfstandigen Enquête Arbeid* (ZEA) 2015 conducted by CBS and TNO, N=4796) (Janssen et al, 2015). This cross-sectional dataset is the second wave of a pilot survey conducted in 2012. The survey is conducted on a representative sample of self-employed workers, defined as independent entrepreneurs working for their own account or risk in their own business or practice. The sample is drawn from the population of self-employed workers who in 2013 applied for income tax return, who in mid-November 2014 were part of a household registered to a Dutch address and who, as of 1 January 2015, were at least 15 years old (Dirven et al, 2017). The data collection was conducted at the beginning of 2015 with an internet questionnaire.

Zzp'ers are the sub-group of independent entrepreneurs who do not have any personnel employed and represent about 75 per cent of the total sample, and 80 per cent of the whole population of self-employed people. This may be because, although

officially included in the definition of zzp'ers (Ministerie van Financiën, 2015), directors, major shareholders, and workers in family businesses are excluded from the ZEA in 2015 (Janssen et al, 2015), as in the previous wave (2012) their response rate was relatively low (Ybema et al, 2013). The results of this analysis cannot therefore be generalised to these two groups of solo self-employed workers (Dirven et al, 2017). The working sample includes 3226 zzp'ers aged between 15 and 64 years old.¹⁶

The operationalisation of our dependent variables is the following. The take-up of an arrangement mitigating income insecurity due to work incapacity (insurance) is measured with a dichotomous variable equal to 1 if respondents report to be insured against this risk. The take-up of an arrangement preventing income insecurity due to poor employability (training/network event) is measured with a dichotomous variable equal to 1 if respondents report having attended at least one of the following training/network activities in the last 12 months: training or instruction on the workplace, 1–5-day course or training, course or training longer than five days, visit to a trade fair congress or seminar, meeting of supplier or industry association.

As for our independent variables, the eligibility to the collective solidarity (opt-in) arrangement provided by the social protection system is measured via a dichotomous variable equal to 1 if respondents retrospectively report that they had a job as an employee before starting their business. The eligibility to individual solidarity arrangements provided by interest groups is measured via a dichotomous variable equal to 1 if respondents report to be a member of an industry organisation or an interest association. The variables that are interacted with our independent variables are the following. High-risk groups are measured using three dichotomous variables: older age, poor health and high-risk occupation (ISCO-08). Older age equals to 1 if respondents are aged between 55 and 64 years old. Poor health equal to 1 if the respondent rated their general health bad or very bad. According to the evidence that work incapacity has higher incidence in manual occupations (Leinonen et al, 2018), high-risk occupations equal to 1 if respondents define themselves as either: service and sales workers, skilled agricultural and forestry workers, craft and related trade workers, or plant and machine operators and assemblers. Finally, poor financial situation is measured as a dichotomous variable equal to 1 if respondents rate their business financial situation as either mediocre or bad. A description of the original items used for the operationalisation of our main variables is available in Table A1 (Appendix).

The analysis controls for: gender, age, education level, poor health, partner's income from employment, business, or benefit, years in solo self-employment, a side job in employment (hybrid zzp'ers), average weekly working hours, occupation (ISCO-08), financial capital above €100,000, financial situation of the business and industry (NACE). Descriptive statistics are provided in Table A2 (Appendix). When dichotomous, dependent and independent variables are recoded so that 0 refers to the negative answer and 1 to the affirmative answer. Since the dependent variables are dichotomous, the results are obtained using logistic regression analysis. The VIF test shows no problematic variable concerning multicollinearity (VIF<10).

Two main methodological limitations prevent this cross-sectional study from identifying causal statements. First, we cannot single out the effect of unobserved characteristics affecting, for example, membership as well as insurance and training. Second, it is not known if interest groups' membership precedes the take-up of work incapacity insurance and training, and thus the direction of such relations cannot be inferred.

Findings

The logistic regression estimates are presented in Table 2. They are expressed in odds-ratios and all models include controls described in the methodology section above. Model 1 tests H1 and H3, which formulates that arrangements provided by the social protection system and interest groups promote zzp'ers to take up an insurance against work incapacity. For these hypotheses to hold, a previous job in employment and the membership of an interest group should be positively related to being insured against work incapacity. As expected, results show that the odds of former employees and members of interest groups being insured against work incapacity are significantly greater (Odds Ratios are, respectively, 1.71 and 1.65) than the odds of zzp'ers with no previous experience in employment and non-members.

In model 2, the two-way interactions between our main predictors and vulnerable characteristics are included to test H2, H4 and H5. H2 argued that the (collective solidarity) opt-in arrangement encourages the take-up of insurance against work incapacity especially among high-risk former employees in older age, poor health and high-risk occupations, for whom market-based instruments are either unaffordable or inaccessible. The estimates are not significant and therefore do not support H2. As interest groups cannot correct market economic obstacles, H4 stated that the positive correlation between membership and insurance is lower among high-risk members and is partially supported by the estimates. While estimates are non-significant for members in the 55–64 years group and in poor health, they show that according to H4, among members, being in a high-risk occupation is associated with significantly lower odds of being insured against work incapacity (0.69 $p < 0.1$) relative to those who are not in a high-risk occupation. Hypothesis 5 stated that the positive association between membership and insurance is stronger among members having scarcer financial resources. As expected, results show that the odds of members in poor financial situations being insured are significantly greater (OR: 1.75) than more successful members.

Model 3 examines the relationship between membership of an interest group and attendance at a training/network event in the last 12 months. Since interest groups provide both monetary and non-monetary incentives to promote the take-up of preventative arrangements against poor employability, H6 states that membership is positively associated with attending a training/network event. Results corroborate H6 showing that the odds of members' attending training or network events are significantly greater than those of non-members (OR: 2.62). Finally, model 4 tests H7, according to which the association between membership and a training/network event is higher among members facing financial constraints. Although the interaction shows that the odds of attending training/network events are greater among members in poor financial situation than a more successful member, the estimate is not significant and does not corroborate H6.

Conclusions

While previous research links the rise of solo self-employment to an increased individualisation of social risk (Aerts, 2005; Dekker 2010), this is the first empirical study investigating the role of collective arrangements in restraining income insecurity of solo self-employed workers, but not their autonomy. Our

Table 2: Logistic regression for insurance against work incapacity and attend training/ network event

Main predictors	Insurance against work incapacity		Insurance against work incapacity		Attend training/ network event		Attend training/ network event	
	(1)		(2)		(3)		(4)	
	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE
Former employee	1.71***	(0.2)	1.43*	(0.24)	1.21+	(0.14)	1.21+	(0.14)
Member of interest organisation	1.65***	(0.16)	1.8***	(0.26)	2.62***	(0.29)	2.49***	(0.32)
Interactions								
Former employee*								
*55–64 yrs			1.41	(0.35)				
*Poor Health			0.8	(0.8)				
*High-risk occupations			1.2	(0.28)				
Interactions								
Member*								
*55–64 yrs			0.85	(0.17)				
*Poor Health			0.72	(0.66)				
*High-risk occupations			0.69+	(0.14)				
Poor Financial Situation			1.75	(0.42)			1.24	(0.32)
Personal characteristics								
Women	0.49***	(0.06)	0.49***	(0.06)	0.89	(0.1)	0.89	(0.1)
Age group								
15–24 yrs	0.65	(0.3)	0.65	(0.3)	1.19	(0.44)	1.19	(0.44)
25–34 yrs	0.82	(0.14)	0.8	(0.14)	0.75+	(0.13)	0.75+	(0.13)
35–44 yrs (ref.)								
45–54 yrs	0.73**	(0.09)	0.72**	(0.09)	1.39*	(0.18)	1.39*	(0.18)
55–64 yrs	0.52***	(0.07)	0.42**	(0.11)	1.18	(0.17)	1.18	(0.17)
Educational level								
Low (ref.)								
Middle	1.01	(0.15)	1.02	(0.15)	2.42***	(0.34)	2.4***	(0.34)
High	1.04	(0.17)	1.05	(0.18)	2.7***	(0.45)	2.7***	(0.44)
Poor health	1.19	(0.53)	1.5	(1.5)	0.58	(0.25)	0.57	(0.25)
Household characteristics								
Partner's income from business	0.81+	(0.09)	0.83	(0.1)	1	(0.12)	1.00	(0.12)
Partner's income from employment	1.26*	(0.12)	1.26*	(0.12)	1.3**	(0.13)	1.3**	(0.13)
Partner's income from benefit	1.22	(0.2)	1.23	(0.2)	0.95	(0.16)	0.95	(0.16)

Table 2: Continued

Main predictors	Insurance against work incapacity		Insurance against work incapacity		Attend training/network event		Attend training/network event	
	(1)		(2)		(3)		(4)	
	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE
Work/business characteristics								
Years in solo self-employment	1.02**	(0.01)	1.02**	(0.01)	0.99	(0.01)	0.99	(0.01)
Side job in employment	1.23	(0.18)	1.24	(0.18)	1.08	(0.16)	1.08	(0.16)
Average weekly working hours								
0–11 hrs	1.72**	(0.36)	1.76**	(0.37)	0.52**	(0.1)	0.52**	(0.1)
12–19 hrs	1.49+	(0.35)	1.5+	(0.35)	0.94	(0.22)	0.94	(0.22)
20–35 hrs (ref.)								
36–59 hrs	1.85***	(0.23)	1.86***	(0.23)	1.16	(0.15)	1.16	(0.15)
60+ hrs	2.24***	(0.36)	2.25***	(0.36)	1.59**	(0.28)	1.58**	(0.28)
Occupation ISCO-08								
01 Manager	1.18	(0.41)	1.24	(0.43)	0.81	(0.29)	0.82	(0.3)
02 Professionals (ref)								
03 Technicians and associate professionals	0.8	(0.12)	0.8	(0.12)	0.92	(0.15)	0.92	(0.15)
04 Clerical support workers	1.12	(0.4)	1.17	(0.42)	0.77	(0.27)	0.77	(0.27)
05 Service and sales workers	0.72+	(0.14)	0.73	(0.21)	0.79	(0.15)	0.79	(0.15)
06 Skilled agricultural and forestry workers	1.36	(0.44)	1.31	(0.5)	1.03	(0.37)	1.02	(0.37)
07 Craft and related trade workers	1.06	(0.23)	1.03	(0.31)	0.42***	(0.09)	0.42***	(0.09)
08 Plant and machine operators and assemblers	1.07	(0.41)	0.98	(0.42)	0.78	(0.31)	0.76	(0.3)
09 Elementary Occupation	1.39	(0.63)	1.42	(0.66)	0.54	(0.24)	0.53	(0.24)
Financial capital (>100000 euros)	0.95	(0.15)	0.96	(0.15)	1.37*	(0.22)	1.38*	(0.22)
Financial situation of business								
Very poor	0.53**	(0.11)	0.43***	(0.1)	0.98	(0.18)	0.94	(0.18)
Poor	0.67**	(0.1)	0.51***	(0.1)	0.9	(0.13)	0.85	(0.14)

Table 2: Continued

Main predictors	Insurance against work incapacity		Insurance against work incapacity		Attend training/network event		Attend training/network event	
	(1)		(2)		(3)		(4)	
	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE	Odd-ratios	SE
Reasonable (ref)								
Good	1.47***	(0.16)	1.46***	(0.16)	1.26+	(0.15)	1.25+	(0.15)
Very good	1.61**	(0.27)	1.62**	(0.27)	1.22	(0.24)	1.22	(0.24)
Industry								
A Agriculture and Fishery	0.94	(0.37)	1.04	(0.4)	1.82	(0.76)	1.82	(0.76)
B-E Manufacturing and energy (ref.)								
F Construction	1.54	(0.42)	1.51	(0.41)	1.11	(0.31)	1.1	(0.31)
G Trade	1.32	(0.38)	1.26	(0.37)	1.15	(0.34)	1.14	(0.34)
H Transport and storage	0.99	(0.42)	1.	(0.43)	0.95	(0.41)	0.95	(0.41)
I Hospitality	0.53	(0.25)	0.5	(0.24)	0.91	(0.38)	0.9	(0.38)
J ITC	1.01	(0.33)	0.99	(0.32)	0.89	(0.29)	0.88	(0.28)
KL Financial services and real estate	0.94	(0.45)	0.88	(0.43)	1.92	(1.11)	1.92	(1.12)
MN Business services	0.97	(0.27)	0.94	(0.26)	1.56	(0.45)	1.54	(0.44)
P Education	0.72	(0.25)	0.68	(0.24)	1.41	(0.49)	1.4	(0.48)
Q Healthcare	1.35	(0.42)	1.28	(0.4)	3.01**	(1.06)	3.01**	(1.06)
R-U Culture recreation and other services	0.7	(0.21)	0.68	(0.21)	1.6	(0.48)	1.59	(0.47)
N	2531		2531		2600		2600	
Log likelihood	-1462,5		-1456,24		-1330,83		-1323,15	
Pseudo R2	0.11		0.11		0.13		0.13	

theoretical contribution relates to both the research on social policy and interest representation fields. We provided a better understanding of the circumstances under which the social protection system and interest groups may promote solo self-employed workers to voluntarily mitigate income insecurity due to work incapacity and to prevent it in case of poor employability. We conducted our analysis in the Netherlands where an exceptional rise in solo self-employment was accompanied by a growing institutional support of their risk management outside the compulsory social insurance system.

Our description of public arrangements showed that collective solidarity provides mostly coping arrangements up to the social assistance level (Bbz, AOW) and one voluntary arrangement mitigating against income insecurity against work incapacity to former employees (opt-in). Interest groups support the income

insecurity management of their members offering arrangements that both mitigate the impact of work incapacity and prevent the impact of poor employability. Our main argument is that the take-up of mitigating and preventing strategies is promoted if collective arrangements dismantle the economic obstacles and correct the irrational risk perception that zzp'ers, especially in vulnerable circumstances, experience in the private market.

Our first conclusion is that the public mitigating arrangements allowing the opting-in of former employees into sickness and disability schemes only partially promotes income security and business autonomy. Being a former employee is associated to a higher propensity with being insured against work incapacity, which can be explained by the capacity of such a collective solidarity arrangement to dismantle economic obstacles (Baicker et al, 2012). Nevertheless, this claim has found limited empirical support as high-risk former employees, who would benefit the most by such an arrangement, are not significantly more likely to be insured than low-risk groups. Another possible explanation is that also low-risk groups receive incentives to opt in to the system. Their risk perception may be rationalised when realising the advantages of paying a constant premium rather than facing market obstacles when their risk rises or, more problematically, their autonomy may be actually limited by the 13-weeks opt-in period. In fact, this time span may be insufficient to make a fully informed decision especially for zzp'ers with no previous business experience. Thus, the concern of preserving acquired rights may actually constrain low-risk zzp'ers to opt-in, albeit the opt-out option is available at any time. Another weakness of this arrangement is that such a narrow eligibility strongly limits the autonomy and drives the income insecurity of high-risk zzp'ers who did not have a previous job in employment. Further research is needed to disentangle the incentives provided by such an opt-in system to high- and low-risk groups to understand better its impact on income insecurity and autonomy.

Our second conclusion is that the mitigating arrangement supplied by interest groups to their members have an overall mixed effect on the income insecurity and autonomy of zzp'ers. Members are more inclined than non-members to be insured against work incapacity and this may be explained by the set of incentives that members experience. We argued that incentives would be stronger for relatively low-risk and financially vulnerable groups and weaker for high-risk members. The former part of our statement cannot be fully supported by our analysis as our data limitations (see last paragraph) do not allow to exclude that relatively low-risk members have bought insurance on the market without interest groups' intermediation. Instead, the second part finds somewhat stronger support, as the take-up of insurance is more likely among members in poor financial situation but less likely among high-risk members. On the one hand, these findings support that the individual solidarity arrangement restrains income insecurity and supports the autonomy of zzp'ers in financial scarcity, who are not likely to afford private insurance. On the other hand, findings also support that, unable to dismantle economic obstacles, those arrangements are still insufficient to mitigate the income insecurity (and also promote the autonomy) of high-risk groups. These groups would only benefit by lower premiums and full access provided by collective solidarity arrangements (Schmid, 2005; 2008).

Our third conclusion is that preventative arrangements provided by interest groups against poor employability is linked to a better management of income

security. Membership is positively associated with the attendance of training/network events, which can be explained by the fact that interest groups' arrangements promote a more rational risk perception of members independently from their financial situation.

Finally, two important limitations of our study should be noted. First, the cross-sectional nature of the analysis does not allow us to identify the direction of the causal relation between our dependent and independent variables and does not allow controlling for unobserved variables affecting both our dependent and independent variables. Thus, our conclusions should be read in terms of associations and not as causal effects. Second, due to data limitations we cannot rule out that former employees and members of interest groups buy insurance and training on the private market with the result of overestimating the positive association between collective arrangements and income security. Future research is required to tackle these limitations.

Appendix

Table A1: Original items used for the operationalisation of our main variables (occupation ISCO-08 and age not included)

Variables	Original items	English translation
Insured against work incapacity	Bent u verzekerd voor arbeidsongeschiktheid?	Are you insured against work incapacity?
	<i>Ja/Nee</i>	<i>Yes/No</i>
Attend training/network event in last 12 months	Heeft u in de afgelopen 12 maanden voor uw werk één of meer van de volgende activiteiten bijgewoond?	Have you in the last 12 months for your work undertaken one or more of the following activities?
	<i>1. Training of instructie op de werkvloer, 2. 1-5 dagen cursus of opleiding, 3. Meer dan 5 dagen cursus of opleiding, 4. Bezoek aan een vakbeurs, congres of seminar 5. Bijeenkomst van leverancier of brancheorganisatie, 6. Nee, geen van deze activiteiten</i>	<i>1. Training or instruction on the workplace, 2. 1-5-day course or training, 3. Course or training longer than 5 days, 4. Visit to a trade fair congress or seminar, 5. meeting of supplier or industry association, 6. No, none of these activities</i>
Former employee	Welke situatie was op u van toepassing voordat u zelfstandige werd?	Which situation is applicable to you before you became self-employed?
	<i>Ik werkte in loondienst Ja/Nee</i>	<i>I worked as employee Yes/No</i>
Member of interest group	Bent u lid van een brancheorganisatie of een belangenvereniging?	Are you a member of an industry organisation or an interest association?
	<i>Ja/Nee</i>	<i>Yes/No</i>
Poor health	Hoe is over het algemeen uw gezondheid?	How is your health in general?
	<i>1. Zeer goed 2. Goed 3. Gaat wel 4. Slecht 5. Zeer Slecht</i>	<i>1. Very good 2. Good 3. Goes well 4. Bad 5. Very bad</i>
Poor financial situation	Hoe is op dit moment de financiële situatie van uw bedrijf?	At this moment how is the financial situation of your business?
	<i>1. Zeer goed 2. Goed 3. Redelijk 4. Matig 5. Slecht</i>	<i>1. Very good 2. Good 3. Reasonable 4. Mediocre 5. Bad</i>

Table A2: Descriptive statistics

Dependent variables	N	%	M	SD
Insured against work incapacity	3106	34.16		
Attend training/network event in last 12 months	3212	69.55		
Main predictors				
Former employee	3223	73.94		
Member of interest group	3216	38.46		
Former employee	3223	73.94		
Control variables				
Personal variables				
Women	3226	38		
Educational level				
Low	3193	15		
Middle	3193	38.24		
High	3193	46.76		
Age group				
15–24 yrs	3226	1.52		
25–34 yrs	3226	10.11		
35–44 yrs	3226	22.41		
45–54 yrs	3226	35.8		
55–64 yrs	3226	30.16		
Educational level				
Low	3193	15		
Middle	3193	38.24		
High	3193	46.76		
Poor health	3212	1.25		
Household variables				
Partner's income from business	3226	24.67		
Partner's income from employment	3226	52.88		
Partner's income from benefit	3226	9.27		
Work/business characteristics				
Years in solo self-employment	3090		12.7	9.56
Side job in employment	3026	17.28		
Financial capital (>100000 euros)	3067	17.22		
Average weekly working hours				
0–11 hrs	3047	7.75		
12–19 hrs	3047	4.56		
20–35 hrs	3047	27.63		
36–59 hrs	3047	43.65		
60+ hrs	3047	16.41		
Financial capital (>100000 euros)	3067	17.22		
Occupation ISCO-08				

Table A2: Continued

Dependent variables	N	%	M	SD
01 Manager	3200	1.72		
02 Professionals	3200	41.78		
03 Technicians and associate professionals	3200	13.5		
04 Clerical support workers	3200	1.84		
05 Service and sales workers	3200	14.34		
06 Skilled agricultural and forestry workers	3200	8.5		
07 Craft and related trade workers	3200	14.5		
08 Plant and machine operators and assemblers	3200	2.44		
09 Elementary Occupation	3200	1.38		
Financial situation of business				
Very poor	3218	8.42		
Poor	3218	17.22		
Reasonable	3218	30.83		
Good	3218	36.08		
Very good	3218	7.46		
Industry				
A Agriculture and Fishery	3226	8.12		
B-E Manufacturing and energy)	3226	3.87		
A Agriculture and Fishery	3226	3.87		
F Construction	3226	9.52		
G Trade	3226	9.89		
H Transport and storage	3226	2.73		
I Hospitality	3226	1.98		
J ITC	3226	5.58		
KL Financial services and real estate	3226	1.27		
MN Business services	3226	29.88		
P Education	3226	5.15		
Q Healthcare	3226	9.21		
R-U Culture recreation and other services	3226	12.8		

Conflict of interest statement

The Author declares that there is no conflict of interest.

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Notes

- ¹ www.cbs.nl/nl-nl/achtergrond/2017/06/bevolking-15-tot-75-jaar
- ² Council Recommendation on the 2016 Dutch National Reform Programme and Council opinion on the 2016 Dutch Stability Programme of the Netherlands, 2016/C 299/10.
- ³ Art. 2 Bbz 2004.
- ⁴ The claimant or his partner receives an unemployment benefit and intends to establish himself as an entrepreneur on the labour market.
- ⁵ A person is at least 55, worked as self-employed for at least 10 years.
- ⁶ Art. 18 Bbz 2004 regulates that this period can be extended to 24 months, for example in case of emergency or bad weather. New starter can obtain Bbz for 36 months and extensions are possible only in special circumstances (for example, long-term sickness).
- ⁷ Some examples are plasterers, terrazzo workers and persons working in the stone industry (*Kamerstukken II*, 2000–2001, 27 686, no 5, p 6); carpenters, joiners, metalworkers, steelworkers and painters, ship pilots and professionals (Article 5a.2.1 *Bedrijfstakpensioenfondsen voor de Bouwnijverheid*) (Schoukens, 2000).
- ⁸ Article 8(3) WW.
- ⁹ Article 64 (1, c)–66 (1, a) *Ziektewet*.
- ¹⁰ <https://www.broodfondsen.nl>
- ¹¹ Additional administration costs include: €250 to set up the fund and €10 each month.
- ¹² www.imk.nl/over-imk/
- ¹³ Besides that, it assesses the viability of a business plan of zzp'ers receiving Bbz (see above).
- ¹⁴ www.zzp-nederland.nl
- ¹⁵ www.zzp-nederland.nl/landingspaginas/aov-premie-berekenen
- ¹⁶ Among zzp'ers that have also a side job in employment (the so-called hybrid zzp'ers), respondents working more than 50 hours a week in their side job are excluded as outliers.

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