# Safety-net or Safety-trap?

The position of safety-netters in the intervention and work resumption process

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# Abstract

In this master' thesis the probabilities of work resumption and receiving an return-towork oriented intervention for disabled unemployed and flex workers are analysed and described. In the literature this particular group of the labour force, also called safetynetters, is characterised as disadvantaged relative to usual employees. This thesis, therefore, describes the factors that are related to the probability of receiving a work resumption oriented intervention by the Dutch National Social Insurance Institute (NSII/UWV). Subsequently the relation between receiving an intervention and work resumption is explored. The answers on these questions are compared with results from previous studies, where the differences may indicate the impact of the current economic situation on intervention and work resumption probabilities. These questions are answered in the first place through an extensive literature review and then by analysing and discussing our data. In this thesis the factors that are significantly related to the intervention and work resumption probabilities are confirming the existing literature. According to my results, interventions by the NSII are not significantly related to work resumption. Further, and also important for safety-netters, unemployment has a decreasing effect on work resumption and increases sickness duration. Comparing our results with previous studies, indicates that both the intervention and work resumption probabilities are lower in 2012 than, for example, 2007. In the discussion of this thesis, recommendations are given to find causal results instead of relation. This thesis can contribute to the existing literature because of the explicit focus on safety-netters and the use of recent data.

# Samenvatting

Deze masterscriptie beschrijft en analyseert de kansen op werkhervatting en het krijgen van begeleiding naar werk voor arbeidsongeschikte werklozen en flex-werkers. Dit gedeelte van de beroepsbevolking, ook wel vangnetters genoemd, wordt in de literatuur omschreven als achtergesteld ten opzichte van reguliere werknemers. Om die redenen beschrijft deze scriptie in eerste instantie de factoren die gerelateerd zijn aan het krijgen van begeleiding naar werk door het UWV. Vervolgens zal de relatie tussen het krijgen van begeleiding en werkhervatting worden onderzocht. Deze resultaten worden vergeleken met eerdere studies waarbij de gevonden verschillen mogelijk (gedeeltelijk) te herleiden zijn naar de invloed van de huidige economische situatie op begeleiding- en werkhervattingkansen. Bovenstaande vragen worden in de eerste plaats beantwoord door een uitgebreid literatuuronderzoek en vervolgens door het beschrijven en analyseren van eigen data. Factoren die in deze scriptie significant gerelateerd zijn aan begeleiding- en werkhervattingkansen bevestigen de bestaande literatuur op dit gebied. Verder laten de resultaten zien dat begeleiding door het UWV niet significant gerelateerd is aan werkhervatting en dat werkloosheid een negatieve invloed heeft op werkhervatting en ziekteduur. Deze resultaten zijn voornamelijk van toepassing op de vangnettersgroep. Wanneer deze resultaten vergeleken worden met eerder onderzoek wordt het duidelijk dat zowel de kans op begeleiding als werkhervatting lager is in 2012 dan in, bijvoorbeeld, 2007. In de discussie van deze scriptie worden aanbevelingen gedaan om te komen tot causale verbanden in plaats van relaties. Deze masterscriptie kan bijdragen aan de bestaande literatuur vanwege zijn focus op vangnetters alleen en door het gebruik maken van recente data.

## Introduction

"The Netherlands is sick", a prime minister once said, referring to the relative high percentage of Dutch employees that was sick or disabled. In 2003 in total 993 thousand employees received a disability benefit whereas the labour force was around 7.3 million. As a consequence, the social security system in the Netherlands was reformed and the number of disabled employees decreased. An important development in this process was the introduction of the new Disability Insurance Act (WIA) in 2005. Disability percentages decline and the WIA scheme was called a miracle in comparison to its predecessor the WAO, the debacle. However, since the start of the economic crises in 2008 the percentages of disabled and, in particular, unemployed increase. Two important trends are related to this increase. Since 2000, in the first place, the number of flexible contracts increases. The percentage of employees with a temporary contract, for example, increased from 13 percent in 2001 to 19 percent in 2012. Employees with these kinds of flexible contracts are easier to fire in situations of economic downturn or disability, a development that also is seen after 2008. In the second place, after 2008 employment decreases and it became more difficult to return to work, even when a disabled employee was recovered entirely.

In order to improve work resumption possibilities of disabled employees, Dutch employers are obliged to provide return-to-work oriented assistance in the first two years of disability. Disabled persons without employer, however, are dependent on the Dutch National Social Insurance Institute (NSII/UWV) for receiving this assistance. This latter, specific group of the labour force, also referred to as safety-netters, is the main subject of this thesis. Temporary employees and employment agency workers can be fired easily in situations of disability. According to our data, the probability for safety-netters of receiving an intervention from the NSII is much lower than for regular employees. Further, the absence of a workplace to return to excludes these safety-netters often from the opportunity to resume work partly, which is found to increase work resumption probabilities significantly. As a consequence the work resumption rates for safety-netters are also lower than for regular employees, in particular when no work resumption oriented assistance is provided by the NSII or in situations of economic downturn and high unemployment rates. Describing and analysing the disadvantaged position of the safety-netters in more detail is therefore important and in this thesis structured in the following way. In Chapter 1 the existing literature concerning safety-netters, work resumption oriented interventions and work resumption is summarised and described. Factors related to both intervention and work resumption probabilities are in this literature review categorised in health, personal, work and institutional related characteristics. Subsequently, theory and the most recent and important policy changes concerning safety-netters are described in Chapter 2. These two chapters provide a theoretical framework for the analysis and results of our dataset. This dataset, and the methodology for the analysis, are described in Chapter 3. Results are shown and described in Chapter 4 and discussed in Chapter 5. In this latter chapter also the conclusion is drawn and some policy recommendations are given. Because the presented results in this thesis must be interpreted as relations, also two different methods to obtain causal results in future research are described.

# **Chapter 1 Literature Review**

In this chapter, the literature published after 2003 (and indirectly also prior articles and results) is described and used as a theoretical framework for the analysis presented in this paper. Disability, sick-leave and sickness duration are relevant subjects for several academic disciplines, such as the medical and economic literature. Results and implications of these studies are important for a wide range of organisations. Reintegration organisations may use the results to improve work resumption rates and vocational interventions whereas firms can improve their absence management and policy makers can develop better disability and sick-leave policies. In the Sections 1 - 4 of this chapter the following four categories of characteristics<sup>1</sup>, and their possible effect on work resumption, are discussed: health<sup>2</sup>, personal, work and institutional related characteristics.

In Figure 1 the connections between the four categories of characteristics, work resumption oriented interventions, disability benefits or work resumption and sickness duration are shown. In order to establish a theoretical framework for the findings in this thesis, each relation is discussed shortly. The four categories of characteristics have direct influence on the outcome variable "Disability Benefits or Work Resumption" via (A) and on "Sickness/Disability Duration" via (B). These two variables are closely related but a longer duration also decreases the work resumption probabilities (E). More severe complaints or blue-collar jobs, for example, are related to lower work resumption probabilities and thus longer sickness duration (A/B). The four categories of characteristics are also related to the probability of receiving an intervention (C) because, for example, stricter disability policies and a higher age are related to lower intervention probabilities. Receiving an intervention increases return-to-work probabilities (F). Lastly, some factors in particular can also be related to personal expectations about work resumption, for instance being depressed or unemployed (D). This indirect effect on duration (and work resumption) is shown with line (G).



#### Figure 1: Analytical Framework

**Source:** this figure is developed by the author to visualise the literature review of Chapter 1

<sup>&</sup>lt;sup>1</sup> This classification is derived from Huijs et al. (2012)

<sup>&</sup>lt;sup>2</sup> Health characteristics are defined here as the type and severity of diagnoses or personal perceptions concerning the persons health status (see also Section 1.1).

## Section 1.1 Health Characteristics

Diagnoses, severity of the symptoms, perception of one owns health status and other health characteristics are the first category that will be discussed in this chapter. A major drawback for describing these characteristics, in general done by the medical literature, is the subjectivity in the assessments of, for example, the severity of the symptoms or the self-perceived health status (14,34).

As regards diagnoses, mental health problems are generally related to a negative or lengthening effect on sickness duration, relative to other symptoms (61,64). The probability of full-time sick leave, compared to part-time sick leave, with this diagnosis is also higher (6,64). For musculoskeletal disorders, however, the effect on sickness duration and work resumption is less strong, sometimes only marked as potential risk factor (15,46). Work resumption rates are higher for this diagnosis, relative to other diagnoses, when it is combined with a partial return-to-work intervention (Figure 1, line C). The literature, nevertheless, does not provide a conclusive answer with respect to the relation between the type of diagnoses and its effect on sickness duration or work resumption rates (4,37,52). All the same, the literature does provide robust evidence that more severe diagnoses cause longer sickness durations and a higher disability incidence (32,63).

Complete recovery and full return-to-work perceptions are strongly related to work resumption rates. When positive, the literature shows that it is correlated to less sickness absence, shorter sickness duration (11,13,23,27,58) and lower return-to-work thresholds (46), Figure 1 line (G). These perceptions are, in some way, impacted by all categories of characteristics and therefore an important variable in the whole work resumption process. According to a systemic literature review by Kuijer et al. (2006), however, positive perceptions are not significantly related to sickness absence thresholds<sup>3</sup>. This may be explained by the symptom of interest in that paper, namely chronic low backpain, which can make work impossible. Closely related to these two perceptions is the self-perceived health status. When health is perceived as good, it will have a positive impact on work resumption rates, while the opposite holds when health is perceived poorly (9,11,14,27-29,41,64).

Work resumption rates are negatively related to the sickness absence history of a person. Therefore, first time sick-leavers have a higher probability of returning to work compared to persons with several previous sick-leaves (7,35,47,52), in particular when the same disorder is diagnosed (58). Evidence for the effect of this health characteristic on work resumption is however not conclusive because several studies find no (63) or only limited evidence (26,27). The last characteristic discussed in this section is the duration of the sickness. Work resumption rates for long-term disabled decline with a longer duration of the absence (1,2,23,58), Figure 1 line (E). The literature does not give a conclusive explanation but reasons for this relation can be the severity of the disorder (work becomes impossible), the increasing distance to the labour market or the lack of motivation to reintegrate (27,46).

<sup>&</sup>lt;sup>3</sup> Factors that 1) prevent employees from sick-listing or 2) lower the sickness absence incidence.

#### **Section 1.2 Personal Characteristics**

The second category of characteristics is personal and, in the context to increase work resumption rates, therefore the most complicated category to change. For example, a higher age of sick-listed employees is mostly found to be related with lower work resumption rates (9,15,36,47) and longer sickness durations (7,26,28,29,37,54,58,61, 63,) but one cannot alter a person's age. Of course, a distinction has to be made between sick-leave determinants and work-resumption determinants but usually the effect goes in the same direction<sup>4</sup>. Further, some studies only found positive effects for younger disabled (1,11), negative effects for older than 55 disabled (7,64) or no significant effect at all (23,46,48,52,55,56,63), Figure 1 line (A). For the characteristic gender the results are even more inconclusive. Some studies found that female sick-leavers have a disadvantaged position in the work resumption process (7,17,26-29,41,55,56), or no significant difference is found (2,11,23,26,32,46,47,52,54,55,61,63) while other studies conclude that female sick-leavers are more likely to have part-time sick-leave (7,9,36,64), Figure 1 lines (A,C,F).

Higher income and more education, often closely related characteristics, are generally positively related to higher work resumption rates and shorter sickness durations (9,13,17,27-29,32,35-37,41,48,52,53,64). This effect, however, is not found in all the reviewed articles (11,23,46,63), or the characteristics are not included in the analyses. Unemployment has a decreasing effect on work resumption rates and increases the sickness absence probability and duration (1,2,26,27,35,36,41,46,48,61). This is important, considering the subject and results in this thesis, because unemployed are one group of the safety-netters, but this will be discussed more extensively in Chapter 2. Furthermore, marital status in some studies is found to have impact on sickness duration and work resumption. (7,13,17,41) conclude that this characteristic has a favourable effect on the sickness duration and work resumption rates whereas (32,46,54,63) find no significant effects. Native disabled, compared to immigrants, return to work sooner and are more likely to participate in interventions (4,6,7,9,36). Personal characteristics that can be influenced and improved through interventions are the self-efficacy and ability to cope with disability and sickness. When positive, both these characteristics have a shortening effect on sickness duration and increases work resumption rates (22,37,38). In summary, these personal characteristics can have an effect on work resumption rates and sickness duration. However, as mentioned earlier, these characteristics are mostly not easily to alter for improving the work resumption rates in contrast to, for example, the work characteristics (26).

<sup>&</sup>lt;sup>4</sup> For example age: older persons have more often sick-leave but also the work resumption probability is lower.

#### **Section 1.3 Work Characteristics**

This category of characteristics is related to the workplace and type of work. Examples are the type of profession, job (in)security and the relation between employer and employee or co-workers but also workplace related interventions (also described in Section 1.4). Relating this to Figure 1, all channels are included because the effect of the characteristics on work resumption is relevant, as well as the effect of interventions and perceptions or expectations.

Occupations, professions or work types, in the first place, are changing over time. Physical demanding jobs become less common and work requires increasingly more social and emotional capacity (51). As a consequence, mental disabilities have become more prominent and are responsible for about 50 percent of the sickness absence in the Netherlands (23,50). Further, blue-collar employees or employment in the manufacturing sector is related to longer sick-leave duration (15,55). This category of labour is in general more physically demanding what may be an explanation for the longer sick-leave duration and higher sickness absence rates (53,56). Summarising it can be said that the type of diagnosis largely depends on the profession or work type and that in recent years a trend appears of an increasing number of mental problems, burnouts and depressions (31). Contact between employer and employee early in the sick-listing process (14,30,32) and frequent supervisory contact (26) are related to higher work resumption rates and lower disability beneficiaries stock. Important during the whole process is the relation between employer and employee who, when it is poor, can negatively affect work resumption (52,55) in particular when there are problems or disputes in this relation (9). The opposite holds when this relation is good and the sick employee receives supervisory and/or co-worker support (14,17,54,56). Further the literature mentions characteristics as self-efficacy, perceived work attitude (22), willingness to spend effort in work resumption (14), job security (64) and regular contact between healthcare providers and the workplace (30) as factors that can have a positive impact on sick-leave durations and work resumption rates.

Literature concerning work characteristics in the context of sickness, disability and work resumption also describes the numerous varieties of workplace related interventions and their effect on work resumption rates or sickness absence prevention. A short overview of the main findings is described here. Increasing work resumption rates can be reached through discussing work resumption and designing a return-to-work plan together with the sick employee (29,30,77). Interventions by the employer or third parties, early in the sick-listing process, have similar implications and therefore promoted in several studies (1,5,27,33) to reduce sick-leave rates or facilitate work resumption. Besides early interventions, the multidisciplinary character and consistency of these interventions are emphasised in these papers. The inclusion of a work/vocational rehabilitation component in the interventions is related to an increasing effect of work resumption rates (65). Further, Anema et al., (2009) identify four work interventions that are related to earlier and sustainable work resumption for disabled with chronic back pain: adaption of the workplace or working hours, job redesign and therapeutic work resumption (8,25). Other interventions that are related to higher work resumption rates are (i.a.) consultation and consensus among stakeholders (25), (26) case management interviews (only for returning to the current employer), job training (2), therapy (10) and ergonomic work visits (30). For all these interventions, however, the condition is that there is a workplace to return to. This condition is not always satisfied in particular in the situation of safetynetters. Concluding can be said that workplace interventions can increase work resumption rates but most important is the availability of a workplace (30). The disadvantaged situation for safety-netters will be discussed more extensively in Section 2.1.

#### Section 1.4 Institutional Characteristics

In this category, the characteristics are related to, for example, the design of the disability/sickness policies, institutional differences between countries and intervention policies for companies and NSIIs with their relation to work resumption rates and sickness duration. Generally, the literature makes a distinction between the compensation policy approach (or: welfare based systems) and the reintegration policy approach (or: integrated systems). The latter one emphasises more the reintegration in the labour force or work resumption and the access to disability benefits is more restricted compared to the first approach. This results in a higher number of disabled for the first system, longer sickness durations and lower work resumption rates (64). Focussing on reintegration, and thus work resumption probability increasing interventions (Section 1.3), therefore logically decreases the stock of sick and disabled employees. Explaining this difference in the number of disability benefit claimants between European countries, Börsch-Supan, (2010) found that the most important predictor here is the minimum level of disability to obtain full benefits (21). This conclusion, the fact that disability definitions and self-reported health differ across countries and the variation in generosity of the welfare systems (17,61) leads to the conclusion that the design of the policy significantly can influence the number of sick-leavers and work resumption rates (8,43,63).

According to several papers is the economic situation in a country related to sickness durations (46,61) and this effect can be two sided. On the one hand it may be easier to take advantage of the welfare system in a booming economy because in periods of economic downturn, disability policies often become stricter as a result of government austerity and as a form of concealed unemployment. On the other hand, however, people report sick more often in economic downturns (14,8) to avoid unemployment or social assistance benefits which are lower most situations. Literature about the relation between unemployment and disability is important considering the main focus of this thesis, the safety-netter. Examples of findings here are the relation between higher unemployment rates and longer sickness durations (61) or an increasing stock of disability claimants. For the US this is an increasing inflow effect whereas for Europe it is more a decreasing outflow effect. Policies aimed at safety-netters in the Netherlands therefore can be integration programs through workplace provision to return-to-work partially (37,61).

Part-time work resumption (or part-time sick-leave) is a nationwide policy implementation in, for example, the Netherlands and Denmark. The effects of this policy are shorter sickness durations (7,26,37) and higher sustainable work resumption rates (6,8,36,41). Some studies propose a delayed introduction, after 60 days of sick-listing for example (5,11) or find only positive effects when the sick employee or safety-netter starts in full-time sick-leave (3). TNO, a Dutch research organisation, concludes that work resumption is more often a condition for rehabilitation than the other way around (79). In particular because of this fact, safety-netters do have a disadvantaged position in the return-to-work process.

## Conclusion

This chapter gives an overview of the literature in the last ten years concerning characteristics related to work resumption and sickness duration. Four different categories, namely health, personal, work and institutional characteristics are discussed and summarised in Figure 1. An important distinction is the difference between health-related and work-related absence because each type needs a different approach. The lack of consistent results in the literature makes it difficult to draw conclusions from this literature review. Clear is, however, that many factors have an effect on work resumption or sickness duration and that policies should be aimed at specific target populations. The results of this thesis will add to the existing literature because of the specific target population, namely safety-netters. The next chapter will describe this particular group of employees more extensively and also the most relevant policy changes for safety-netters.

# Chapter 2 Institutional Background

In this chapter the term '*safety-netter*' is elaborated further by discussing the people who are safety-netters, and their disadvantaged position in receiving an intervention and the work resumption process. Further, the most relevant laws and policy changes concerning safety-netters are explored in a chronological order and related to this particular group of potential employees. This chapter ends with a short conclusion.

## Section 2.1 Safety-netters

The aim of this paper is to explore and describe the position and work resumption process of safety-netters. This particular group of employees consists out of three main categories. The first group are disabled unemployed, people with no employer on the day of sick-listing. Temporary employees, the second group, do have an employer on the moment of sick-listing but the contract ends while the employee is still sick-listed. After ending the employment contract, the employer is no longer required to participate in the work resumption process of the sick-listed employee. A third group of safety-netters are agency employees, whose employers are not obliged either to facilitate work resumption measures or interventions. In the Netherlands, however, the employment agencies and the Dutch National Social Insurance Institute (NSII) agreed to corporate in workresumption measures for the first eight weeks of sickness-absence (9). Hence, these three categories of employees do not have an employer when sick-listed and therefore the NSII behaves as their employer also. In the sick-listing process for normal employees the Dutch NSII has a more supervisory role (Section 2.2). At the moment of sick-listing, safety-netters will receive benefits from the Sickness Insurance Act for two years before becoming eligible for the Disability Insurance Act (Section 2.2).

Safety-netters do have a disadvantaged position in the labour market and workresumption process compared to usual employees (see also Chapter 1, 4 and 5). In general it can be said that safety-netters have higher probabilities to become unemployed and flow into the Disability Insurance Act (WIA) after two years of Sickness Insurance Act (Ziektewet) (44). This is caused by the fact that it is easy to fire these employees and because of personal-related characteristics with a negative impact on work resumption (discussed below). In the Netherlands, the percentage of flexible contract employees is still increasing, from 13 percent in 2001 to 19 percent in 2012 (60, 59). However, as Table 1 shows, inflow of the Disability Insurance Act (WIA) is for more than 30 percent determined by temporary employees and agency workers. Including unemployed the percentage increased to more than 50 percent in 2012 (33 percent in 2006). This could be an indication of the (relative) disadvantaged position in the labour market, but also in the work-resumption process. The latter is confirmed by means of three arguments, namely the absence of an employer, less return-to-work interventions and personal related characteristics.

Sick or disabled safety-netters have, by definition, no employer to return to and are therefore less motivated and incentivised to resume work (9). Interventions aimed at returning-to-work are therefore provided by the NSII or third parties. Partial work resumption or workplace related adaptations consequently occur less frequent (9, 77, 79) while (among others) these interventions have a strong positive impact on durable return-to-work probabilities (Section 1.3). The second drawback for safety-netters in the

Table 1: Inflow of Disability Beneficiaries, per Employee Type (2006-2012
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	Employees		Employees Unemployed		Temp. E	Temp. Employees		Agency Workers	
	Inflow	% Total	Inflow	% Total	Inflow	% Total	Inflow	% Total	
2006*	14000	66.7%	4400	21.0%	2000	9.5%	600	2.9%	21000
2007*	13500	60.5%	5300	23.8%	2600	11.7%	900	4.0%	22300
2008	14200	56.1%	6100	24.1%	3600	14.2%	1400	5.5%	25300
2009	15700	53.6%	6300	21.5%	5200	17.7%	2100	7.2%	29300
2010	18000	50.4%	6500	18.2%	8700	24.4%	2500	7.0%	35700
2011	18500	48.8%	7700	20.3%	9600	25.3%	2100	5.5%	37900
2012	16400	48.2%	8000	23.5%	8000	23.5%	1600	4.7%	34000

Source: Kenniscentrum UWV (2013)

\* The numbers for 2006 and 2007 are not entirely correct. For administrative reasons the numbers for employees are too high and for temporary and agency workers too low

work resumption process is the significant lower frequency of interventions aimed at returning to work (9). Employers are required to provide assistance in the work resumption process of employees, monitored by the NSII and will be punished in situations of lacking effort. For safety-netters the NSII should monitor its own achievements and can be confronted with capacity shortages in providing interventions to all safety-netters. The last drawback described here concerns personal characteristics of safety-netters which are related to lower work resumption probabilities and longer sickness durations. Unemployed, in general, are less healthy than usual employees and often report worse self-perceived health (9,12,31) whereas this variable is one of most important predictors of work resumption (28,29). Other characteristics, often related to longer sickness duration and lower work resumption rates in the literature, are low income and education levels, non-native ethnicity and not married (11,31,58,61,75-78). Summarised, safety-netters have a disadvantaged position on the labour market even as in the work resumption process (less interventions) and have characteristics that are usually related to longer sickness duration and lower work resumption rates.

#### Section 2.2 Gatekeeper Protocol

In April 2002 the Dutch government introduced a law in order to improve the existing Gatekeeper Protocol. The objective of this law is reducing sickness absence among employees and motivating or enforcing employers to actively participate in the work resumption process (57). The main components of this legislation are shortly described in this section.

Within the first week, absence because of sickness or disability has to be reported to a company doctor or health and safety officer. In situations of sickness duration longer than six weeks, an Occupational Health or company doctor has to make a problem analysis about the disability severity, remaining work capacities and potential work resumption measures. Within eight weeks, a vocational rehabilitation plan has to be formulated in cooperation with both the sick-listed employee and the employer. After 42 weeks of sickness absence the employer is required to report this employee the NSII. For employees without an employer all these actions are the responsibility of the NSII. Evaluation of the return-to-work process and participation of both stakeholders is done after one year and two weeks before requesting a Disability Insurance Benefit (WIA) in the 91th week of sick leave. At the moment of applying for WIA benefits, the employer

has to hand-in a complete reintegration report which includes all the measures taken for the work resumption of the disabled or sick-listed employee. When the employer, however, has not invested enough effort to make work resumption possible, the punishment of continued wage payments after two years is available to the NSII. In the same way, employees with insufficient participation in the work resumption process are potentially penalised (57,68).

# Section 2.3 Act for Extension of Wage Payments during Sickness Absence (WLVZ)

Early 2004, the new act for wage payments during sickness (WLVZ) replaced the old version (Wulbz), a next step to improve the process in situations of sickness and disability. Main modification was the extension from one to two years that the employer is responsible for the wage payments. Objective was to further increase the involvement and participation of employers in the work resumption process of sick/disabled employees and equalise this process to the Sickness Insurance Act process. In the first year the employee mostly receives 100 percent of his salary, the second year of absence 70 percent. Safety-netters are subject to the Sickness Insurance Act for the first two years and after that, when the criteria are met, a benefit from the Disability Insurance Act is received (74).

## Section 2.4 Stricter Examination Criteria (aSB)

End 2004 the examination criteria for disabled/sick an unemployed were made stricter, a preparation for the introduction of the WIA in 2005. Employees with part-time jobs, for example, are considered to be suitable for full-time jobs or working in the evening hours. Employment wherefore the presence of basic skills (such as the Dutch language) is required, is also appropriate for employees without these skills. The objective of these stricter criteria is creating more opportunities for sick and unemployed to resume work (partly) and decrease the number of sick-leavers (45).

#### Section 2.5 Disability Insurance Act (WIA)

In December 2005, the Act for Work and Income according to Labour Capacity or the renewed Disability Insurance Act (WIA) replaced the previous act (WAO). The introduction of the WIA was another important measure in reducing the number of long-term sick-leave benefit applicants, in particular concerning the inflow of the WIA. Studying the disability inflow reduction in the Netherlands, van Sonsbeek and Gradus (2011) conclude that this renewed Disability Act is responsible for 21 percent of the total decrease. Main improvements compared to the WAO are emphasising reintegration or work resumption instead of income compensation and the increased eligibility threshold for entering the WIA. Employees should have lost at least 35 percent of their work capacity compared to 15 percent in the WAO scheme. Both employees and safety-netters are subject to this law, whereas the two years before entering the WIA are different (Section 2.3). Within the new Disability Act, distinction is made between return-to-work

schemes for non-permanent disabled (**1 and 2**) and income provision for permanent disabled (**3**) (9,28).

**1) WGA 35-80:** employees with a lost work capacity between 35 and 80 percent are eligible for this return-to-work scheme of the Disability Act. Regular employees also should have worked 26 of the 36 weeks before sick-listing. In the first period the replacement rate is related to the wage before sick-listing whereas the duration is related to work history. After this period, the replacement rate is depending on the actual wage earned and potential wage according to NSIIs assessments. Improving work capacity and working more is resulting in higher total earnings (while benefits are lower) to incentivise work resumption. A deteriorating situation can lead to a transpose to WGA 80-100 (2) or, when disability evolves into permanent, to the IVA scheme (3) (69-71).

**2) WGA 80-100:** full, not permanent disabled are covered by this second scheme within the Disability Act. Remaining work capacity is less than 20 percent but improvement is plausible, in contrast to the IVA scheme (**3**). Further, the same restrictions and rules as in the first scheme apply (60).

**3) IVA:** this income provision scheme is meant for full and permanent disabled with remaining work capacity less than 20 percent. Permanent in this context means that, for the short term, improvement is unlikely. The IVA benefit is 75 percent of the wage before sick-listing and in the first five years, every year a reassessment of disability severity is conducted. Without improvements the IVA will provide income for disabled until retirement, otherwise a transpose to one of the WGA schemes (**1 or 2**) takes place (59, 67).

## Section 2.6 Modernisation of the Sickness Insurance Act (BeZaVa)

Act for Limitation of Sickness Absence and Disability among Safety-Netters or Modernisation of the Sickness Insurance Act is introduced in 2013 and partly in January 2014. Main objective is to reduce the relative high rates of long-term sickness absence among safety-netters (Section 2.1). Besides this, also the process equalisation with the Disability Insurance Act (WIA) is important (Section 2.5). The main components are discussed shortly.

In line with the Disability Insurance Act, also the Sickness Insurance Act should be focussed on work resumption instead of wage compensation. Realisation of this objective is partly implemented through the introduction of a yearly reassessment of disability severity and stricter eligibility criteria. Another measure is the implementation of workhistory related benefits, which means that the benefit duration is dependent on the years of active working. After this period, the sick or disabled person's benefit is 70 percent of the wage before sick-listing. Further, employment agencies have to corporate with the NSII to prevent this category of employees for long-term sickness absence and improve reintegration participation of both these agencies and the employees. In this context also the policy for reintegration of sick-leaved employees without employer became stricter, for example by extending the maximum probationary period to six months.

Finally, since January 2014 the contributions of employers with respect to sickness and disability benefits are differentiated and related to the number of sick-listed employees in a particular company. Large companies' contributions are entirely determined by their own sickness absence rates and for medium sized firms it is also partly determined by sectoral inflow. Small companies' contributions are entirely dependent on sectoral inflow.

The objective of this policy is to stimulate firms to decrease and prevent sickness absence as much as possible (49,66).

#### Conclusion

This chapter has showed that safety-netters, a particular vulnerable category of employees, have a disadvantaged position in the labour market and work resumption process. Main cause is the absence of an employer and workplace to return to, which was also found in the literature review of Chapter 1. In the last decennium several important measures and policy changes had been taken to decrease the relative high sickness absence among safety-netters and improve work resumption rates.

# Chapter 3 Data & Methodology

## Section 3.1 Data

In this paper the probability of receiving an intervention and the impact of such an intervention on the work-resumption rates of sick/disabled, is studied. For this purpose we use a dataset with micro-level data on sick/disabled safety-netters in the Netherlands. This dataset is provided by AStri/APE and is, among others, compared with the results of a previous and comparable analysis of these two companies (APE/AStri, 2010) to explore possible differences over time. Both datasets are collected through two waves of surveys among safety-netters which are selected by the Dutch National Social Insurance Institute (NSII/UWV) but the focus here is on the most recent dataset. This section describes the method for collecting the data and the descriptive statistics.

The first wave of surveys was conducted in September 2012, about nine months after sick listing. 9000 safety-netters, sick-listed between October and December 2011 were selected by the NSII and sent a questionnaire. The response on this first wave of surveys was 2994 sick-listed safety-netters (33 percent). In this survey, questions were asked concerning issues such as the sickness period and health status, employment and work history and sickness and benefit history. Further, questions were asked about work resumption, interventions for work resumption, self-management and involvement and, finally, general questions<sup>5</sup>. In May 2013, 17-20 months after the moment of sick-listing of these safety-netters, the second wave of surveys was conducted among the response group of the first round. The response rate of the 2994 safety-netters was 47 percent (1413 persons). Different issues comparing to the first survey, were questions concerning the current status (resumed work, still sick/disabled, recovered but not working etc.) and the search efforts for work. In the 91th week the safety-netter is eligible to apply for a disability benefit and, when accepted, this benefit is paid out after 104 weeks (2 years). For the 1413 safety-netters that responded in the second survey, information on whether the person has been accepted for a WIA benefit or not is provided by the NSII. Altogether, these two surveys and information about the acceptance/ rejection for a WIA benefit provide us with a panel micro dataset of 1413 safety-netters in the period 10-2011 until 12-2013.

In Table 2 the descriptive statistics are shown. The variable *Ethnicity* is measured in the following way: a respondent is seen as an immigrant when he/she or at least one of the parents is born abroad<sup>6</sup>. *Education* is divided in three different groups. The first group (1) has at least passed primary and/or secondary education and (2) has at least passed secondary vocational education, senior general secondary education (Havo) or pre-university education (VWO). The last group (3) has at least passed higher professional education or university education. *Personal Income* on the second survey moment is compared with the first moment and can be higher, the same or lower. The same reasoning holds for *Household Income* but it is only measured for safety-netters with a partner that has paid employment or benefits.

<sup>&</sup>lt;sup>5</sup> Surveys/questionnaires can be requested by the author

<sup>&</sup>lt;sup>6</sup> According to the official definition of Statistics Netherlands (CBS)

	Unemployed	Temp.	Agency	Total	Ν
<b>Respondents 1:</b>	44%	42%	11%		2994
Respondents 2:	42%	47%	11%		1413
Gender (= Women):	45%	35%	53%	47%	2962
Ethnicity (= Imm.):	25%	22%	38%	25%	2875
<b>Highest Education:</b>					2879
1	48%	45%	61%	48%	
2	33%	37%	31%	35%	
3	20%	18%	8%	17%	
Personal Income:					2922
< 1000 €	33%	42%	40%	38%	
1000-1400 €	37%	36%	42%	37%	
1400-1800 €	29%	14%	13%	16%	
1800-2200 €	7%	6%	3%	6%	
> 2200 €	2%	1%	0%	1%	
Same on Moment 2:	57%	46%	44%	50%	1384
Lower on Moment 2:	40%	49%	52%	45%	1384
Household Income:					2672
< 1000 €	13%	18%	17%	16%	-
1000-1400 €	22%	23%	29%	23%	
1400-1800 €	19%	14%	17%	17%	
1800-2200 €	16%	19%	16%	17%	
> 2200 €	24%	21%	14%	21%	
Same on Moment 2:	43%	37%	43%	40%	878
Lower on Moment 2:	53%	57%	53%	55%	878
Duration > 1 Year:	49%	42%	44%	45%	2978
0-6 Months:	18%	19%	15%	18%	2978
6-12 Months:	13%	10%	10%	11%	2978
0 12 110111101	10 / 0	10 / 0	1070	11/0	2570
	Min	Max	Mean	St. Dev.	Ν
<b>Age</b> (in 2012)	18	65	46.30	11.46	2989
Education (1-8)	1	8	3.62	1.78	2948
Personal Income	1	6	1.98	1.04	2922
Moment 2:	1	3	2.41	0.58	2911
Household Income	1	6	3.21	1.53	2746
Moment 2:	1	3	2.47	0.59	2275
Work History	0	80	24.00	12.35	2890

# **Table 2: Descriptive Statistics**

Source: AStri/APE (2014)

#### Section 3.2 Methodology

For the analysis of the data in this thesis, a probit procedure with a logistic distribution is used. Regression analysis with this particular distribution is characterised by a binominal outcome or dependent variable. In our case, a disabled person can either receive an intervention or not receive an intervention. Similar reasoning can be applied to the other outcome variable, work resumption. Equation (1) shows the logistic distribution with the mean (5) and variance (6). Here t can be seen as the linear function of the independent variables  $x_{i}$ , and (1) can be rewritten to Equation (2). The probability of success, F(x) =1, is when the disabled person receives an intervention or resumes work. The inverse of this function (3) equalises a linear regression function and these so-called log-odds (or: natural logarithm of the odds) are shown in Table 4 and 6. However, these log-odds cannot be used easily to compare results or the impact of different independent variables. Odds ratios, however, can be used to compare the outcome variable (receiving an intervention or work resumption) in situations where the subject is exposed to the variable of interest with situations where this is not the case. Examples of variables of interest are men vs. women or receiving an intervention vs. not receiving an intervention and these odds ratios are calculated with Equation (4). When the odds ratio equalises one, exposure to variable of interest (e.g. being a men) has no impact on the outcome variable (e.g. probability of work resumption). Higher (lower) than one means that exposure is related to higher (lower) probabilities of the outcome variable. A numerical example is given by discussing the outcomes in Table 4.

Relating this theory to our situation, the outcome F(x) represents the probability of receiving an intervention or work resumption. The intercept and the independent variables,  $X_i$ , are shown in the first column of Table 4 and 6 and can be, for example, *age*, *type of safety-netter*, *sickness duration* etc. Further, the impact of these variables on the outcome variable, in log odds (Eq. (3)), is shown in the second column of Table 4 and 6 (resp.  $\beta_0$  and  $\beta_i$ ).

(1) 
$$F(t) = \frac{1}{1+e^{-t}}$$
 (2)  $F(x) = 1/(1+e^{-(\beta_0+\beta_i x_i)})$  (3)  $g(x) = \ln \frac{F(x)}{1-F(x)} = \beta_0 + \beta_i x_i$   
(4)  $\frac{F(x)}{1-F(x)} = e^{\beta_0+\beta_i x_i}$  (5) Mean: 0 (6) Variance:  $\pi^2/2$ 

The next chapter presents the results of this analysis of our data. These results, however, should not be interpreted with care because the data does not allow us to draw causal conclusions. Findings therefore should be interpreted as correlations or associations. In Chapter 5 of this thesis, two different methods are discussed for finding causal results and an example is given from a comparable field of research.

# Chapter 4 Results

## **Section 4.1 Interventions**

In this section the interventions and the probability of getting an intervention for safetynetters is described. Related to Chapter 2, these results can provide evidence for the theory about the disadvantaged position of safety-netters in the labour market and work resumption process. First the data will be discussed and after that a determinant analysis of the intervention probability follows. The results of the second survey moment (after 18 months) are shown between brackets unless mentioned otherwise. Results in this and next section will be discussed more extensively in the next chapter (discussion and conclusion).

In general, 55 (38) percent of the safety-netters indicate that there were no institutions that provide counselling interventions to them to resume work. UWV, the Dutch National Social Insurance Institute (NSII) is named in 27 (41) percent and other reintegration companies in 14 (25) percent as one of the (or the only) organisation(s) that provide work resumption oriented interventions to the safety-netters. However, it is important to note that 49 (34) percent of the safety-netters indicate that they are too sick to resume work. Further, 23 (42) percent did receive one sort of an intervention at the moment of the survey. When employed at the moment of sick-listing, safety-netters are also entitled to interventions provided by the employer to increase the probability of work resumption. Even though, as shown in Table 3, 73 (64) percent of the safety-netters indicate that their employer has done nothing in this context. Both for the first and second survey moment, these percentages are higher for agency workers. Other options are, for example, a personal meeting or occasional call by the employer. Further, on average 74 (41) percent of the working safety-netters had no contact with a company doctor and if they had, only in 46 (50) work resumption was discussed.

After being sick-listed, on average 82 (81) percent of the safety-netters had been in contact with the NSII, with the highest percentages for unemployed. From this group of safety-netters, 62 (51) percent declare that work resumption was not considered, which may be caused by the possibility that this person was too sick. Further, in 40 percent of the cases no problem analysis or action plan (50 percent) was made and the safety-netters had no influence on the measures taken by the NSII (44 and 46 percent). Examples of measures taken by the NSII are personal meetings (52 and 53 percent), occasional calls (52 and 53 percent) or advice about the best treatment for the disease (15 and 13 percent). Finally, 68 (65) percent of the persons who had been in contact with the NSII, agree with the interventions provided and 72 (66) percent thinks that the NSII invested enough effort for their work resumption. In comparison, the question whether the employer or employment agency has invested enough effort is answered with "Yes" only in 25 (21) percent of the cases.

These numbers and Table 3 show that interventions are not common among safetynetters either by the employer and the NSII. One reason is the fact that some disabled are too sick to receive an intervention. Even when the disabled were in contact with the NSII, around 50 percent indicate that work resumption was not discussed or no problem analysis/action plan to resume work was made. The information from this data thus supports the theory described in Chapter 2, were the disadvantaged position of safety-

Table 3:	Intervention Descri	ptives for Safety	v-netters (2	012-1 and 2012-2)
			,	

	Unempl.	Temp.	Agency	Total
Distribution of Safety-netters	1329	1259	331	2994
categories (2012: moment 1 and 2)	594	660	159	1413
Supporting authorities in the work	56% (1294)	54% (1234)	58% (324)	55% (2852)
resumption process: None	41% (589)	35% (653)	42% (159)	38% (1401)
Work resumption intervention at	51% (1299)	46% (1237)	48% (322)	49% (2858)
survey moment: <b>Too sick</b>	39% (320)	30% (398)	32% (84)	34% (802)
Work resumption intervention at	21% (1299)	24% (1237)	23% (322)	23% (2858)
survey moment: <b>Yes</b>	38% (320)	45% (398)	42% (84)	42% (802)

#### When not unemployed on the moment of sick-listing:

	Unempl.	Temp.	Agency	Total
What has employer done to keep /	71% (389)	70% (1116)	85% (310)	73% (1815)
return you to work? Nothing	57% (113)	61% (274)	81% (109)	64% (496)
Contact with the company doctor	63% (292)	81% (1031)	62% (273)	74% (1594)
after sick-listing: No	46% (98)	40% (411)	42% (106)	41% (615)
Work resumption discussed with the	57% (176)	52% (804)	59% (160)	54% (1140)
company doctor: No	59% (39)	46% (162)	56% (48)	50% (249)
NSII did intervene, employer could	6% (299)	6% (1035)	5% (283)	5% (1617)
have invested more effort: <b>Yes</b>	-	-	-	-
Employer / employment agency has	22% (296)	26% (1025)	21% (284)	25% (1605)
invested enough effort: Yes	9% (556)	31% (610)	25% (150)	21% (1316)

#### Contact and interventions by the NSII:

	Unempl.	Temp.	Agency	Total
In contact with the NSII after the	85% (1230)	80% (1148)	77% (294)	82% (2672)
moment of sick-listing: <b>Yes</b>	79% (556)	83% (619)	78% (149)	81% (1324)
In the contact with the NSII, are rtw	65% (1005)	59% (885)	61% (218)	62% (2108)
possibilities discussed? No	58% (440)	45% (513)	52% (116)	51% (1069)
Did the NSII made a problem analysis:	41% (1312)	38% (1232)	42% (323)	40% (2867)
No	-	-	-	-
Did the NSII made a actionplan for	50% (1307)	49% (1229)	54% (323)	50% (2859)
resuming work: No	-	-	-	-
Personal impact on work resumption	46% (1227)	41% (1162)	49% (306)	44% (2695)
measures: No impact	49% (551)	41% (610)	54% (152)	46% (1313)
Agree with the measures taken to	67% (1101)	70% (1044)	65% (269)	68% (2414)
resume work: Yes	66% (517)	66% (584)	58% (142)	65% (1243)
When in contact with the NSII, did	74% (1026)	71% (956)	73% (246)	72% (2261)
they invested enough effort? <b>Yes</b>	64% (427)	66% (492)	72% (109)	66% (1028)

Source: Astri/APE (2014)

Notes: 1) The number of respondents are shown between brackets 2) The white rows in the table describe survey moment 1 and the grey rows survey moment 2 3) The answers from survey moment 2 concern the period after survey moment 1 (10-18 months after sick-listing)

	after 10 months			after 18 months			
	Coeff.	SE	p-value	Coeff.	SE	p-value	
Tabawaant							
	-0.24	0.227	0.300	-0.92	0.342	0.007	
Year $(1 = 2012)$	-0.48	0.148	0.001	0.22	0.200	0.277	
Unemployed	0.11	0.121	0.368	-0.17	0.162	0.286	
Agency Worker	0.07	0.184	0.720	-0.20	0.273	0.463	
Year * Agency Worker	0.08	0.231	0.735	0.18	0.203	0.379	
Year * Unemployed	0.00	0.154	0.981	-0.40	0.364	0.271	
Age	-0.15	0.033	0.000	-0.01	0.005	0.267	
Gender (1 = Women)	0.06	0.077	0.407	-0.07	0.107	0.515	
Etnicity $(1 = Immigrant)$	-0.16	0.087	0.075	0.09	0.122	0.461	
Eduation	-0.01	0.075	0.938	-0.10	0.099	0.294	
Low Income <sup>1</sup>	0.16	0.042	0.000	0.00	0.109	0.992	
Personal Restrictions (1 = Yes)	-0.23	0.072	0.002	-0.03	0.098	0.784	
Work History <sup>2</sup>	0.00	0.001	0.656	0.01	0.002	0.012	
Sickness Duration	0.00	0.071	0.992	0.04	0.098	0.696	
Physical Complaints	0.22	0.074	0.003	0.00	0.099	0.975	
Mental Complants	0.05	0.076	0.486	0.11	0.103	0.286	
Health Status (at moment 1)	-	-	-	0.19	0.171	0.271	
Detoriated Health Status	-	-	-	-0.13	0.114	0.239	
Improved Health Status	-	-	-	0.23	0.121	0.058	
Work Status at moment 1	-	-	-	-0.19	0.162	0.238	
Intervention by NSII at moment 1	-	-	-	1.16	0.102	0.000	
Changes in Unemployment	-0.03	0.054	0.599	-0.09	0.073	0.218	
Observations:		4005			2065		

#### Table 4: Determinants of Intervention Probability for Safety-netters by the NSII

Source: AStri/APE (2014) and APE/AStri (2010)

Notes: 1) here income is divided in five different classes. A higher income thus means a higher probability of

interventions. 2) Work history is equal to the number of worked years / (age - 15)

netters was described. The remaining part of this section describes and shows (Table 4) the intervention probabilities for safety-netters by a determinant analysis.

Table 4 shows the logit coefficients of the intervention probability by the NSII for safetynetters, both in 2007 and 2012. The difference between these two years of observation is captured with the variable Year (1 = 2012). In Table 4 this variable is negative and significant after nine months of sick-listing which means that the probability of getting an intervention is lower for 2012 than for 2007 for all safety-netters. Personal restrictions (dummy) can be, for example, age (too old), the current economic situation (no jobs) or taking care for children, partner or other family. These restrictions are possible obstacles to get an intervention or to resume work (Section 4.2). In this table, the intervention probability at survey moment 2 is also determined by factors from survey moment 1. Getting an intervention at moment 1 or the relative health status for survey moment 2, for example, are included in the analysis for the intervention probability after 18 months. In Appendix 1 several other tables are included.

At survey moment 1, 10 months after sick-listing, five factors have a significant relation with the probability of an intervention by the NSII. In the first place, interventions in 2012 are less likely relative to 2007. As it can be seen in Table 4, the coefficient for 2012 is -0.48 which is equal to an odd ratio (OR) of 0.619 (Section 3.2). In other words, the probability of an intervention by the NSII for safety-netters in 2012 is 38.1 percent lower than in 2007. Other significant variables that are related with lower probabilities are a higher age (OR 0.861) and having personal restrictions (OR 0.80) whereas higher income (OR 1.174) and having physical complaints (OR 1.246) have an increasing relation with the intervention probability. Other variables are not significant in this model. Intervention probabilities for safety-netters at survey moment 2, 18 months after sick-listing, are positively related to only two significant variables. The first one is a longer work history (OR 1.010) and the other one is getting an intervention at survey moment 1 (OR 3.190). Probabilities at moment 2 thus notably increase when the sick-listed safety-netter is participating in an intervention at survey moment 1. Indirectly, however, the significant variables at survey moment 1 are also related to the intervention probability at moment 2. Higher income, for example, increases the intervention probability at moment 1 and getting an intervention at moment 1 increases the intervention probability at survey moment 2. Intervention probabilities at survey moment 2, therefore, are indirectly also related to the year of observation, higher age, having personal restrictions, higher income and having physical complaints. Other variables, in this model, are not significant.

#### Section 4.2 Work Resumption

In this section the work resumption probabilities are described. In the first place descriptive statistics will be discussed and shown, followed by a determinant analysis for work resumption probabilities. The outcome variable, work resumption, must be seen as partly or complete work resumption. Results for survey moment two are shown between brackets as well as the odd ratios in the determinant analysis. The results of this and previous section will be discussed more extensively in the next chapter (discussion and conclusion).

On the question whether the respondent started working at any moment after sicklisting, an average of 75 (84) percent answered with "No". Among the different groups of safety-netters the difference is not large, except for the fact that flexible employees on both moments have the highest work resumption rates. When started working again, the average number of hours per week was thirteen with the lowest number for unemployed (11) and the highest for agency workers (17). On survey moment 1, on average 66 percent is still at work, now on average for fourteen hours a week. From the group that started working after survey moment 1 (16 percent) on average 72 percent still work at survey moment 2 for about 20 hours a week. However, the safety-netters that worked at survey moment 1 mostly do jobs as volunteer or unpaid intern (52 percent) except for the flexible employees (39 percent). The latter found more often work by their previous or new employer (22 and 26 percent). Working at survey moment 2 is on average for 54 percent by a new employer and for 18 percent as freelancer (among unemployed this is 29 percent).

The largest share of the safety-netters is not working which may be explained by the response to the question whether their health status is good enough to work. An average of 75 (72) percent of the not working group thinks that their current health status does not allow them to return to work. When health is not the problem, main reasons why the safety-netters do not work are the fact that they are not able to find a new employer (36 percent) or they fear a worsening health status when the resume work (28 percent). For the second survey moment these percentages are respectively 44 and 18 percent.

#### Table 5: Work Resumption Descriptives for Safety-netters (2012-1 and 2012-2)

	Unempl.	Temp.	Agency	Total
Distribution of Safety-netters categories	1329	1259	331	2994
(2012: moment 1 and 2)	594	660	159	1413
Started working again after sick-listing /	76% (1320)	72% (1246)	80% (327)	75% (2893)
after moment 1: No	90% (584)	77% (641)	88% (156)	84% (1381)
When started working, still working at	71% (302)	62% (332)	66% (61)	66% (695)
survey moment? Yes	67% (57)	76% (143)	67% (18)	72% (218)
Health status good enough to work? No	77% (1091)	73% (1027)	75% (284)	75% (2402)
	74% (439)	70% (415)	74% (126)	72% (980)
What advice did the NSII give about rtw	54% (1083)	50% (1016)	53% (275)	52% (2374)
possibilities: <b>No advice 1</b>	52% (316)	47% (218)	51% (51)	50% (585)

Source: AStri/APE (2013)

Notes: **A)** The total number of respondents are shown between brackets **B)** White rows show results for survey moment 1, grey rows results for survey moment 2 **C)** Answers from survey moment 2 represent the period after moment 1, thus 10-18 months after sick-listing.

#### Table 6: Determinants of Work Resumption for Safety-netters (2007 and 2012)

	after 10 months (2012)			after	after 18 months		
	Coeff.	SE	p-value	Coeff.	SE	p-value	
Intercept	-0.75	0.405	0.064	-1.66	0.614	0.007	
Year $(1 = 2012)$	-	-	-	-0.37	0.419	0.373	
Temp. Employee $(1 = Yes)$	-	-	-	0.94	0.325	0.004	
Agency Employee (1 = Yes)	-0.18	0.189	0.348	0.50	0.470	0.287	
Unemployed $(1 = Yes)$	-0.10	0.122	0.406	-	-	-	
Year * Temp. Employee	-	-	-	-0.78	0.385	0.042	
Year * Agency Employee	-	-	-	-1.02	0.668	0.125	
Age (at survey moment 1)	-0.13	0.051	0.008	-0.02	0.008	0.020	
Gender (1 = Women)	0.38	0.121	0.002	-0.06	0.176	0.734	
Etnicity $(1 = Immigrant)$	-0.81	0.165	0.000	-0.27	0.221	0.227	
Education $(1 = Low)$	-0.43	0.120	0.000	-0.10	0.169	0.543	
Income	0.18	0.061	0.004	-0.16	0.182	0.372	
Personal Restrictions $(1 = Yes)$	-	-	-	-0.76	0.172	0.000	
Work History	0.12	0.071	0.085	0.01	0.004	0.129	
Sickness Duration $(1 = > 1 \text{ Year})$	-0.09	0.112	0.405	0.02	0.165	0.907	
Physical Complaints (1 = Yes)	-0.25	0.118	0.031	-0.23	0.167	0.171	
Mental Complaints (1 = Yes)	0.17	0.117	0.142	-0.06	0.173	0.742	
Interventions by Employer	-	-	-	0.54	0.172	0.002	
Interventions by the NSII	-	-	-	0.21	0.167	0.207	
Health Status (at survey moment 1)	-	-	-	0.62	0.224	0.006	
Deteriorated Health (18 vs. 10 months	-	-	-	-0.92	0.244	0.000	
Improved Health (18 vs. 10 months)	-	-	-	0.76	0.177	0.000	
Work Status (at survey moment 1)	-	-	-	2.20	0.199	0.000	
Change in Unemployment	-0.09	0.078	0.254	0.17	0.125	0.172	
Observations:		2537			1880		

Sources: APE/AStri (2010) and AStri/APE (2014)

Notes: *Age* is measured in 5 classes; *Income* at moment 1 is measured in 5 classes and at moment 2 it is a dummy which is 1 when income is low; *Work History* at moment 1 is measured in 4 classes and at moment 2 it is: years worked / (Age-15); *Change in Unemployment* at moment 1 is 2012 relative to 2011 and at moment 2 it is the change in local unemployment.

Further, the NSII did not give advice to 52 (50) percent of the not working safety-netters about the return-to-work possibilities, which may be explained by the fact that a large share indicates that their health does not allow work resumption. Expectations, finally about future health status and work resumption show that 24 (37) percent thinks that they will not be able to work again or they do not know (32 and 22 percent). Additional problems in resuming work, besides health, are age (too old: 30 and 32 percent), economic downturn (42 and 43 percent) or none (34 and 32 percent).

In Table 6 the factors are shown for work resumption probabilities for safety-netters after 9 and 18 months. For the first survey moment only the results from 2012 are shown because of differences in measuring work resumption between 2012 and 2007. Results from the second survey moment are corrected and can therefore be compared with 2007. The outcome variable (work resumption) is defined here as partly or complete work resumption on the moment of the survey.

After 9 months of being sick-listed, four variables have a negative relation with work resumption probability. Work resumption rates are lower for safety-netters that are older (OR 0.878), immigrants (OR 0.445), lower educated (OR 0.651) or with physical complaints (OR 0.779). Except for the latter, all factors are strongly significant (at one percent level). In contrast to this, safety-netters that are women (OR 1.462) or with a high income before sick-listing (OR 1.197) have a higher work resumption probability compared to men respectively low income earners. Other factors do not have a significant correlation with the work resumption probability after 9 months of sick-listing. After 18 months of sick-listing the following factors have a significant negative relation with work resumption probabilities at a five percent level: being a flexible employee in 2012 (OR 0.458) relative to unemployed safety-netters and a higher age (OR 0.980). Further, on a one percent level, personal restrictions (OR 0.468) and a deteriorated health status with respect to survey moment 1 (OR 0.400), are related with lower returnto-work probabilities. Work resumption probabilities are higher for sick-listed flexible employees safety-netters (OR 2.560), after interventions by the employer (OR 1.716), health status and improved health status with respect to survey moment 1 (OR 1.859 and OR 2.138) and, finally, resumed work partly at survey moment 1 (OR 9.025). Factors that increase work resumption probabilities after 9 months are all significant at a one percent level.

## Conclusion

In this chapter the results for interventions and work resumption are described. In Section 4.1 it can be seen that safety-netters have a disadvantaged position in the labour market as well as in the work resumption process. There are factors that have a negative (or positive) relation with the probability of receiving an intervention. Resuming work is more difficult for safety-netters with certain characteristics (such as age or education). Overall, the disadvantaged position of safety-netters and the fact that some sick-listed are too sick is related to the low intervention and work resumption probabilities. In the next chapter these results will be discussed and concluded.

# Chapter 5 Conclusion and Discussion

In this chapter the research questions will be answered by concluding and discussing the results of Chapter 4. For improving the disadvantaged position of safety-netters in the intervention and work resumption process, some recommendations are given. The results of this thesis can contribute to the existing literature because it is focussed only on safety-netters and because of the recent data.

#### 1. Which factors do have an impact on the intervention probability?

For finding an answer on the question which factors have impact on the intervention probability of safety-netters, first the literature is described (Chapter 1) and then the data is analysed (Chapter 4). Also, as it is described in Chapter 3, the most important (and recent) policy changes are discussed. From the literature review it became clear that factors related to intervention probabilities are almost always the same as the factors that have a relation with the work resumption probability. For example a higher age and, more inconclusive, gender (women) have a negative impact on both probabilities. Partial work resumption and already receiving an intervention on the other hand, are related to an increase in the probability of receiving an intervention (again). Several drawbacks, however, made it difficult to draw clear conclusions from this literature review. First drawback is the scarcity in literature that concerns (only) the group of safety-netters. The majority of the articles explores and describes the work resumption (probabilities) or, in a less extent, intervention (probabilities) for usual employees instead of safety-netters. Factors related to the intervention probability are in most situations the same for usual employees and safety-netters although important differences exist as it is described in Section 2.1. The absence of an employer, which provides interventions, and personal characteristics related to lower intervention or work resumption probabilities, makes it more difficult to use the same literature results for both usual employees and safety-netters. Second, and somewhat related to the first drawback, is the lack of literature with an emphasis on interventions instead of work resumption. Often the effect of interventions and other factors on work resumption (probabilities) or sick-leave duration is described. Intervention (probability) as outcome or dependent variable therefore is not common in the academic literature. The last drawback is the lack of consistent results among various articles which makes it difficult to draw clear and coherent conclusions. This thesis can improve the existing literature because the results are focussed on the group safety-netters.

In Section 4.2, where the analysis results for interventions are described, it becomes clear that a large share of the safety-netters does not receive interventions. Apart from the group that indicate being too sick on the survey moment, interventions are not usual both from the NSII and the employer (See also Table 3 in Chapter 4). The results from the logit analysis in Table 4 show that interventions by the NSII after 10 months are significantly related to the factors *Year* (will be discussed later), *Age, Income* and having *Physical Complaints.* After 18 months of sick-listing only *Work History* and *Intervention by the NSII at survey moment 1* have a significant relation with the intervention probability by the NSII, although indirectly the significant factors of survey moment 1 are related with the intervention probability of survey moment 2 through *Interventions at moment 1.* However, when this analysis is done with only the dataset of AStri/APE (2014) more factors become significant but also having *Personal Restrictions* like feeling too

old, negative economic situation or taking care for family or children. In this dataset the intervention probability after 18 months is positive and significant related to being Unemployed, having Physical or Mental problems and Health status at survey moment 1. Negative and significant related factors are again a higher Age and having Personal Restrictions. Finally, for comparing the intervention probabilities of safety-netters with usual employees, a full model is estimated with both usual employees and safety-netters either for 2007 and 2012 as for only 2012. When both the dataset from APE/AStri (2010) and AStri/APE (2014) are used, for usual employees and safety-netters, it is clear that safety-netters have a disadvantaged position, as described in Chapter 2. The OR for being a safety-netter is 0.361 and for being safety-netter in 2012 the OR is 0.507. This means that a safety-netter has a 63.9 percent lower probability of receiving an intervention and a safety-netter in 2012 a 49.3 percent lower probability in comparison to a usual employee. Using only the dataset of AStri/APE (2014), it is found that safetynetters have an 85.5 percent lower probability of receiving an intervention compared to usual employees. On the other hand, receiving an intervention the first survey moment is related to an increase in intervention probability at survey moment two in both datasets (OR 5.00 and OR 5.26).

What are the implications of these results and what can help to improve intervention probabilities for safety-netters? The Dutch government recently announced to invest an additional 34 million euro (last year 67 million) for interventions targeted at unemployed safety-netters older than 50 years. This specific group of safety-netters is extra vulnerable as the literature and results also show. Important is, however, that these interventions are specified to the specific disabilities of the safety-netters and not general interventions which can be applied to all safety-netters. Another recent improvement is the increased participation of employers in the intervention and work resumption process (Chapter 2). Finally, emphasising on work resumption instead of income compensation in the situation of disability is important. Partially return to work increases the full return to work probability and interventions should be aimed at increasing the probabilities of safety-netters to return to work partial or in the form of internships.

# **2.** Which differences can be observed when these results are compared with results from older datasets?

The main issue in this question is to compare the data of this thesis (AStri/APE, 2014) with an older dataset concerning safety-netters (APE/AStri, 2010) to find the impact of the relevant (economic) situation. Economic downturn and increasing unemployment have impact on the capacity of the NSII to provide interventions to all safety-netters and it is more difficult to resume work (partly). In Table 4 the difference between the two datasets is captured with the variable Year (1=2012). The relation between intervention probability for safety-netters by the NSII after 10 months and this variable is negative (OR 0.617). Intervention probability for safety-netters in 2012, compared to 2007, thus is 38.3 percent lower. In contrast to this finding, this variable Year is not significant related to intervention probability after 18 months. Further, comparing Table 3 with APE/AStri (2010) makes clear that also intervention probability in the perception of the safety-netters is decreased in contrast, however, to usual employees (AStri/APE, 2014). For work resumption probabilities the same reasoning can be used. Table 6 shows that the relation between the variable Year and work resumption probability is negative but not significant. Only for the interaction term of Year and Temporary Employee significant results are found (OR 0.458). The work resumption probability for temporary employees in 2012 is thus 52.2 percent lower than for the same group of safety-netters in 2007. As mentioned earlier, the intervention probability for safety-netters is decreased with respect to 2007. Even more, when a safety-netter in 2012 receives an intervention, the work resumption probability is still lower than for a safety-netter *without* an intervention in 2007 (AStri/APE, 2014). Safety-netters, and in a less extent usual employees, in 2012 thus have a lower work resumption probability compared to 2007. The conclusion for this question therefore is that the macro-economic situation (and likely the current economic downturn) is related to a decrease in both intervention and work resumption probabilities and possibilities.

#### 3. What is the impact of interventions on work resumption probabilities?

Finding an answer on the question what the impact of interventions on work resumption probabilities is, is addressed in the same way as the first question. In the first place the literature and theory are explored (Chapter 1 and 2) and summarised in Figure 1. Subsequently the data of this thesis is analysed and discussed in Chapter 4. Figure 1 show that work resumption (and indirectly sickness duration) is related to the health, personal, work and institutional related characteristics. Examples of these characteristics can be found in Chapter 1 and are shortly discussed in answering the first research question. Interventions are correlated to both these characteristics and work resumption probabilities via B and D in Figure 1. Drawbacks and shortcomings of the literature review are discussed before in this chapter and will not be discussed further here. Factors that in the literature are related to work resumption are also found in the analysis of this thesis. A higher age, immigrants, physical complaints and lower education are significant related to a lower work resumption probability after 10 months (Table 6). Women, a longer work history and a higher income on the other hand are related to higher probabilities. After 18 months of sick-listing being a temporary employees, interventions by the employer, health and work status at survey moment 1 and an improved health status compared to survey moment 1 are significantly related to higher work resumption probabilities. Temporary employees in 2012, a higher age, personal restrictions (explained earlier) and a deteriorated health status relative to survey moment 1 on the other hand are related to lower work resumption probabilities after 18 months. Most striking in these results is the insignificance of the relation between interventions by the NSII and work resumption probabilities. Safety-netters thus have a lower probability of receiving an intervention and when they receive an intervention it does not have a significant relation with work resumption. For agency and temporary employees the interventions provided by the employer however do have a positive relation with work resumption (OR 1.95 and OR 2.67). From this result it can be concluded that the availability of an employer in the situation of disability is important, as it is mentioned several times before. Again the recommendation is to improve the probabilities of safetynetters to return to an employer, even in the form of an internship. Partly work resumption, as the literature review showed, is strongly related to complete return-towork probabilities. Further, the effectiveness of the different treatments and their effect on work resumption probabilities should be explored, as it is done in Bolhaar et al., (2014). It is important, finally, to combine the right treatment with the type of disability because each type needs its own treatment. Methods to explore these two last recommendations, and an excellent example, are described in the next section.

#### Recommendations

The results in this paper cannot be interpreted as causal, as is also mentioned in Section 3.2. Therefore they are described as relations, associations and correlations. In this part of the conclusion we will describe two different methods for finding causal results instead of correlations. These methods can be used for related research in the future. In this paper we have tried to use the first method by sending a questionnaire to the Dutch NSII (UWV) but this organisation was not willing to corporate because of the political sensitivity of questions.

The first method for finding *causal* results is an application of the regression discontinuity design. Because of the fact that rules can be arbitrary, this method provides a quasi-experimental design in situations where experimental designs are impossible or unethical. The key element in this design is to compare the group that is just affected by the rule with the group that is just not affected by the rule. Examples of such rules in the situation of safety-netters can be *age, gender, work history, disability duration, diagnoses* etcetera. When the NSII (UWV), for example, does not provide interventions to safety-netters that are older than 60 years, this can be used as arbitrary rule or threshold. The group of safety-netters just below 60 can be compared to the group of safety-netters just above 60. Other covariates are (almost) the same and receiving an intervention, or not, is the only exogenous variable. This rule is an example of sharp regression discontinuity, in contrast to a fuzzy regression discontinuity where, for example, the probability of receiving an intervention decreases after 60. Here we will only focus on the sharp regression discontinuity.

Receiving an intervention thus is a function of the covariate  $X_i$ , age in this example. When  $X_i$  is larger than  $X_0$  (60 years), probability of receiving an intervention is zero ( $D_i = 0$ ). On the other hand,  $D_i = 1$  when  $X_i$  is smaller than  $X_0$  (60). When linear regression is possible, the following (general) formulas can be used to explore the effect of interventions on the outcome variable ( $Y_i$ ), which is *work resumption* in the situation of disabled safety-netters:

- $E[Y_{0i} \mid X_i] = \alpha + \beta X_i$
- $\quad Y_{1i} = Y_{0i} + \rho$
- $Y_i = \alpha + \beta X_i + \rho D_i + \eta_i$

In the regression equation *a* is a constant,  $\beta$  is the effect of the covariates (*X<sub>i</sub>*) on work resumption (*Y<sub>i</sub>*),  $\rho$  is the effect of receiving an intervention (*D<sub>i</sub>*) on work resumption and  $\eta_i$  is the error term. In the context of this paper, the rule or threshold (*X<sub>0</sub>*) must be discovered from the data or the NSII should give an indication which thresholds are used. Unfortunately, this last option is highly unlikely because of the political sensitivity of this subject. In theory all safety-netters should receive an intervention, unless the disability is too severe. The NSII, therefore, is either not using such thresholds or not revealing information when it is using these sorts of thresholds.

The second method for finding *causal* results is using a randomised controlled trial (RTC). In this paper, as the results also has shown, are a lot of safety-netters that were too sick to receive an intervention. Therefore it is difficult to estimate the effect of, or relation between, the interventions on work resumption. In a randomised experiment, safety-netters (who are not too sick) are randomly divided to one of the two groups. The first group of safety-netters, the treatment group, receives interventions while the other group, the control group, does not receive interventions. Covariates are (almost) the

same because of the random assignment to one of the groups and the effect of interventions will be the only exogenous variable. Unless the fact that this would be the close to optimal solution, it is hard to implement this method. Drawbacks are the possible unethical treatment for the group without interventions and the political sensitivity of the subject. An excellent example of this method is the article of Bolhaar, Ketel, & van der Klaauw (2014) about the effect of reintregration instruments on outflow of social assistance benefits. In this study, the case managers receive a different default option for the reintegration instrument every three months. In this way there is an external control for the use of the reintegration instruments and comparable persons receive different treatments. Because the assignment to a case manager is random and this study is controlled for time and workplace effects on the outflow, the only exogenous variable is the intervention (reintegration instrument). The results are remarkable. Reintegration instruments, compared with no instruments or help at all, show only a positive effect on work resumption after 30 weeks of social assistance. Further, the instrument "Job Counselling" has a negative effect on income compared with no help at all and no effect on work resumption. "Trial Placement", "Wage Subsidies" and also "Normal Policy<sup>7</sup>" have a positive effect on income after 35 weeks in comparison with no help. In contrast to this, the simple instrument of a "Search Period" before entering the social assistance is related to a significant decrease in inflow and increased income from labour (74). The conclusion of this section is therefore that comparable research can find causal results even though it will not be unchallenging to conduct.

<sup>&</sup>lt;sup>7</sup> Here the case manager can choose the reintegration instruments, with no default option given by the researchers.

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