

## **Risk and Knowledge: Solidarity in the Age of Risk Calculations**

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### **1. Introduction**

In his famous idea of the risk society, Ulrich Beck stresses the increasing preoccupation of modern societies with risk and uncertainty. One way of dealing with risk and uncertainty at the individual level, is the sharing and pooling of risks in insurances. The emergence of insurance sometimes is explained by referring to the ‘veil of ignorance’. Much of the institutions of modern welfare states are based on the principle of insurance. In John Rawls’ Theory of Justice, the idea of the veil of ignorance plays an important role in explaining the emergence of solidarity and insurance (cf. Rawls, 1971; 1999). The core of the idea of the veil of ignorance is that people never know for sure whether or not they might be affected by (social) risks like illness or unemployment, although they are aware of the existence of these risks. Contributing to insurance schemes is a method to safeguard against the consequences of being confronted with one of these risks. Following Goodin (2001), the solidarity manifested in this type of insurance mechanisms refers to Durkheim’s concept of ‘mechanical’ rather than ‘organic’ solidarity. With this regard, Goodin (2001: 141) speaks of ‘solidarity without sentiment’. “In a system of mutual insurance, everyone’s premiums are collected together and used to pay off those to whom the insured-against *Bad Thing* has happened”.

However, in his seminal work *The New Social Question*, Pierre Rosanvallon reflects upon the impact of increasing knowledge on risks on the concept of solidarity (see Rosanvallon, 2000). In short: if I know for sure that a certain risk is not going to affect me, what reasons remain to contribute to insurance schemes? Basically, Rosanvallon states that increasing knowledge might ‘lift’ the veil of ignorance. Therefore, the increasing knowledge on risks will have significant impacts on the key institutions of welfare states. Rosanvallon pleads for a shift from contributions to general taxation to counterbalance the impact of the increase of knowledge that threatens to hollow-out the principle of solidarity (ibidem: 41).

In this paper, I set out to empirically assess the developments that Rosanvallon describes. I focus on the developments in the fields of pensions, health insurances and unemployment insurances in the Netherlands. The central question of this paper is: To what extent has knowledge on social risks increased in the last decade, and what – if any- impact does this have on social risk insurances. The analysis focuses on developments in the Netherlands, but the developments and trends that are observed in the Netherlands might serve as illustrations of developments that might be expected in other modern welfare states as well. Although Rosanvallon’s thesis has received significant scholarly attention, it has hardly been empirically tested. This paper tries to fill this gap.

The thesis that increasing knowledge on social risks affects modern welfare states is based on three assumptions:

1. Knowledge on social risks has increased;
2. This knowledge is usable for individuals and insurance companies, agencies, or governments to distinct ‘good risks’ from ‘bad risks’;
3. Individuals, insurance companies, agencies, or governments can apply strategies that anticipate on knowledge on the distribution of risks. Potential strategies are: selection, opting out, differentiation of contributions, differentiations of rights and obligations.

The structure of this paper follows these assumptions. Section two deals with the logic of insurance and its relation to the concept of solidarity. It presents a framework to assess the impact of increasing knowledge on solidarity. Section three discusses the issue of increasing knowledge on three social risks: ageing, health, and unemployment. Section four discusses recent changes in welfare state arrangements regarding these social risks, and poses the question to what extent these changes

might be considered as responses to increasing knowledge on risk distributions. In the final section, I sum up some conclusions on the impact of increasing knowledge on welfare states.

## **2. Solidarity and the logic of insurance**

Insurance might be defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for a premium. Basically, insurance concerns the pooling of risks. From an individual's point of view, it is rational to pool his own risks with those of other people who are less at risk than himself. However, if everyone has perfect information on risks and everyone reasons in the same way, people would end up pooling risks only with people who are running the same risks as themselves. Principles of insufficient information lead everyone to assume that they are as much at risk as everyone else, and everyone agrees to pool their risks with one another's on equal terms (Goodin, 2001: 142).

When knowledge on risk increases, this might have several effects. For instance, individuals might want to leave the risk pool, or insurers might want to differentiate premiums. In this paper, I make a distinction between *knowledge-based strategies* and *institutional strategies*. Knowledge-based strategies create an incentive for insurees and insurers to adjust their behavior because of increasing knowledge on risks. This is independent from the actual possibilities to act upon this incentive. For instance, membership of the insurance might be obligatory. At the individual level, 'adverse selection' and 'moral hazard' are considered as knowledge-based strategies. At the collective level of the insurer, classification is a knowledge-based strategy.

Institutional strategies create possibilities for insurees and insurers to modify the conditions of the insurance (including opting out). The institutional strategies are independent from the available knowledge on risks. 'Opting out' and 'freedom of choice' are institutional strategies at the individual level, 'selection', 'differentiation of premiums' and 'differentiation of rights and obligations' are strategies at the collective level. I will elaborate on these strategies now.

### *Knowledge-based strategies*

In this section, I will deal with adverse selection and moral hazard as individual strategies, and classification as a collective strategy.

“Adverse selection refers to the theoretical tendency for low risk individuals to avoid or drop out of voluntary insurance pools, with the result that (...) insurance pools can be expected to contain a disproportionate percentage of high-risk individuals” (Baker, 2001: 2). So adverse selection requires individuals to have knowledge that enables them to assess not only their own risks, but also to relate these risks to the average risks of the risk pool in which they participate.

Moral hazard arises when individuals insulated from risks behave differently from the way they would behave if they were fully exposed to the risk. For instance, in the field of unemployment insurance, an individual’s incentive to find a new job might be limited because of the unemployment benefit he receives. So moral hazard arises because individuals or institutions do not bear the full consequences of their actions. In this paper, moral hazard is considered as a knowledge strategy because it requires information asymmetry between claimant and insurer. When claimants’ information on the consequences of their behavior increases without being matched by an equal growth of information on the insurer’s side, the chance of moral hazard increases.

Adverse selection and moral hazard are strategies that individuals might apply when they have knowledge on their own risks. At the collective level, classification is a strategy that insurers might apply to distinct ‘good’ from ‘bad risks’. According to Baker (2001: 3), “[i]nsurance risk classification is the process of sorting insurance applicants into categories believed to correspond to differences in expected risk.

Common examples include sorting life insurance applicants by age, health insurance applicants by health status, (...) and property insurance applicants by the nature of the construction of the property to be insured (e.g., wood versus brick)”. Classification requires knowledge on factors that promote or prevent risks. In this paper, we try to identify to what extent increasing knowledge also has increased insurers’ possibilities for classification.

### *Institutional strategies*

In this section, I will focus on the individual institutional strategies of opting out and freedom of choice and the collective institutional strategies of selection, differentiation of contributions, and differentiations of rights and obligations.

Opting out simply refers to possibilities to leave or to choose not to participate in the insurance. This might sound trivial, but a lot of social insurances do not offer this option. For instance, all inhabitants of the Netherlands are obliged to participate in the

basic health insurance scheme. Freedom of choice might also be considered as partial opting out. In this strategy, people can choose to participate in or cancel elements of the insurance. For instance, the Dutch early retirement scheme offers different options concerning the age of early retirement and the height of the benefits.

Insurance companies can also apply institutional strategies. The first strategy is selection: the admittance or refusal of individuals based on their risk profiles. It is clear that life insurance policies are reluctant in the admittance of high-risk individuals. A second strategy is differentiation of premiums. Insurance companies might decide to admit high-risk individuals, but against a premium that covers their higher risk, and to award lower risks with lower premiums. A final strategy is the adaptation of the conditions for an insurance policy. Insurance companies might admit people with restrictions or specific obligations. For instance, Dutch health insurance companies use a waiting time for certain additional insurances. This means that coverage only starts after a specific period of time. Also, some incidents might be excluded from the policy.

In the following sections, I will analyze to what extent insurers and insureds can and do apply any of the strategies that have been discussed in this section.

### **3. Knowledge-based strategies**

One of the central arguments in this paper is that for increasing knowledge to affect solidarity, there are several conditions to be met. In this section, I focus on the first of these conditions: the issue to what extent knowledge on social risks indeed has increased. With regard to this issue, I am not only interested in the increasing knowledge itself, but also in the conditions that prevent or enable the use of this information by individuals, insurers or others. In this paper, I focus on three types of risks: ageing, health, and unemployment. In the previous section, I have introduced two knowledge-based strategies on the individual level (adverse selection and moral hazard) and one on the collective level (classification). This section discusses the potential use of these strategies based on the availability of information.

When considering the issue of usability, two – more or less related - distinctions are important. First, it is important to distinguish between public and private access to knowledge. Following Hoel and Iversen (2002) if access is restricted to the person

concerned, I denote information as private. I denote information as public, if the insurer has access to as much information for risk assessment of a potential policyholder as the policy-holder has himself. Who has access to what kinds of information depends on regulations. Following Radetzki et al. (2003), I distinguish between full information,<sup>1</sup> partial restriction and total restriction. With full information, I refer to situations in which third parties have access to all information relevant for assessing an individual's risk. With partial restrictions, I refer to regulations that prevent third parties to apply measures of risk selection before entering a policy, like medical check-ups or genetic testing. With total restrictions, I refer to situations where also all other available information – medical records, past test results, career histories – is restricted for third parties.

Second, a distinction might be made between deterministic and probabilistic knowledge on risks. I speak of deterministic knowledge if the information enables to specify with certainty the occurrence or absence of an incident. Probabilistic knowledge refers to information that specifies a higher or lower than average chance on the occurrence of an incident. I expect that on the individual level, deterministic knowledge will create a stronger incentive to reassess solidarity and insurance than probabilistic information. An example: if I am 100 % sure that my house will not catch fire at any time, I can safely cancel my fire-insurance policy. However, if I know that due to preventive measures the chance that my house burns down has decreased with 5 %, I am much more inclined to continue the policy, especially when I consider the costs of rebuilding and refurbishing.

In the following sections, I will discuss the level of knowledge that is available in four types of social risks: ageing, sickness, disability and unemployment. For each of these four types, I will assess if there is enough information available to distinguish between good and bad risks on the individual and public level, and if this information is probabilistic or deterministic.

### ***3.1 Aging***

While there are several other risks connected with old age- primarily related to health issues - in this paper I only focus on the risk of loss of income after retirement. Retirement might be considered as a logical consequence of decreasing productivity

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<sup>1</sup> Radetzki et al. (2003: 100) call this position 'absence of regulation'.

when people get older. In almost all modern countries, pensions serve as a mode of income after retirement. These pensions may take many different shapes: they might be financed by general taxes or by contributions from workers and employers; they might be based on the pay-as-you-go system whereby state benefits to retirees are paid out of contributions from current workers or they might be (partly) based on private contributions. In all cases, costs of the pensions are based on the height of the benefits and the number of years that people live after retirement. Therefore, knowledge on life expectancy is valuable both for potential retirees and for providers of pensions.

#### *Knowledge at a collective level*

Life expectancies are predictable for the short and middle-long term. However, there is a time lapse of about forty years between a person's first contribution to a pension schema and his retirement. After that, he is expected to live in retirement for twenty more years. This implies that pension providers have to be prepared for events that take place in a future that might be up to sixty years away. On this term, there still is a massive amount of uncertainty. To illustrate this uncertainty, the British Pension Commission shows how estimates of life expectancies for a man aged 65 have evolved in the past twenty-five years (figure 1). This figure shows large underestimates in both the 1983 and 1992 predictions.

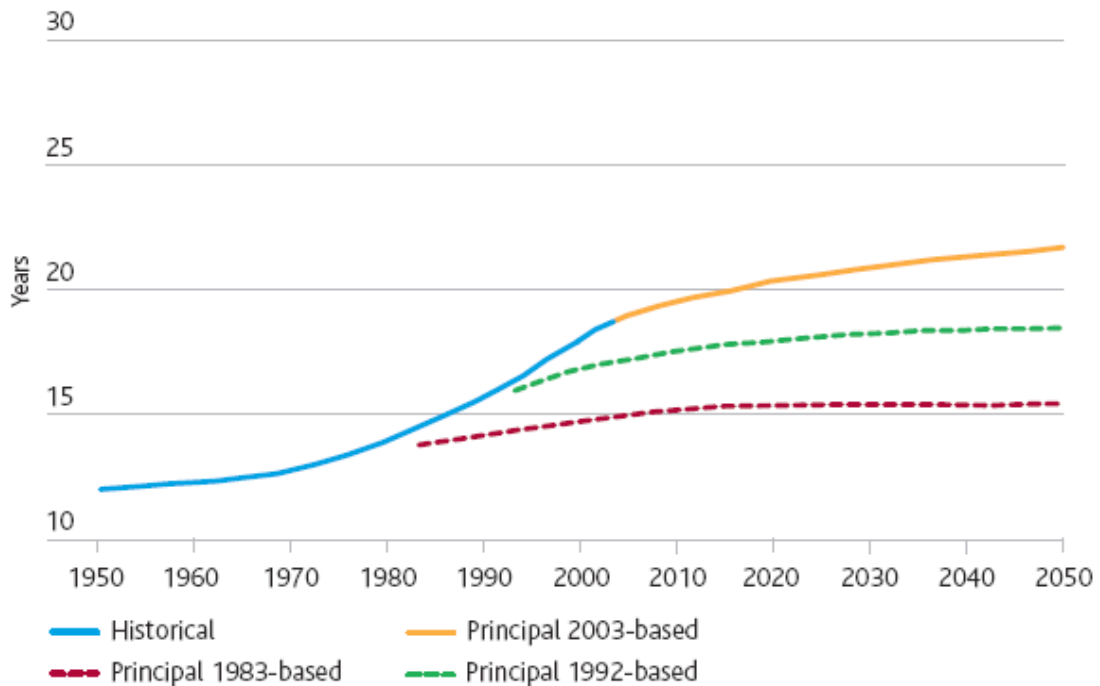


Figure 1: Life expectancy projections

Source: Pensions Commission, 2005, p. 182

The uncertainties concerning life expectancies have not decreased recently. Quite on the contrary, experts strongly disagree on which developments might be expected. For instance, lectures at the Cass Business School in Spring 2005 set out the two sides in the debate. On one side Professor Jay Olshansky and others suggest that life expectancy could level off or even decrease in the 21st century given factors such as the rise in obesity levels and the potential effects of infectious diseases. I would like to add several environmental issues like global warming and air pollution to this list. This school of thought believes that there is an absolute limit to how far life expectancy can go on rising. On the other hand, experts such as Professor James Vaupel suggest that life expectancy is set to continue to increase at a rapid rate. He reports that there is no indication that a change in the trend of increasing life expectancy is in sight (Pensions Commission, 2005). I would like to stress that advances in medical technology and accumulating knowledge on healthy lifestyles might be brought forward in favor of this position.

Taking into account the past errors in estimates and the different positions amongst experts, I come to the conclusion that there is no increasing knowledge on life expectancy that might affect the long-term policies of pension providers. Specifically,



there is too much uncertainty to successfully apply a strategy of classification at the entry of a pension scheme.<sup>2</sup>

### *Individual knowledge*

Although the proliferation of ‘life expectancy tests’ on the internet suggests otherwise, the uncertainties that pension providers are confronted with, are also in force at the individual level. Some risk factors clearly reduce life expectancy: smoking, short-lived parents, and overweight are examples of these. However, there are two aspects that mitigate the impact of knowledge on risk factors on an individual’s pension’s decisions. First, the overwhelming majority of known risk-factors are probabilistic instead of deterministic, with the exception of some genetic diseases. This implies that even the presence of severe risk factor do not block out the possibility of a long life in retirement. Second, most risk factors have only a moderate effect on life expectancy. Smoking is one of the most severe risk factors for early death, and reduces the life expectancy with 5 to 10 years. The effect of most other risk factors is fairly less (Hamermesh & Hamermesh, 1983). This indicates that even heavy smokers have good chances to live for at least 10 years in retirement. This gives no incentive to cancel or cut-back on pension plans. Moreover, several authors suggest that people have little knowledge on risk factors, and are even less willing to incorporate this knowledge in important decisions (Hamermesh & Hamermesh, 1983).

At the individual level the conclusion is that adverse selection is not likely to occur in pensions. The concept of moral hazard does not seem to make much sense in the world of pensions, it is highly unlikely that people decide to extend their life because they have a pension plan.

## **3.2 Health**

The social risks connected with illness traditionally consist of at least two elements: a temporary loss of income and the costs of medical treatment. In this paper, I focus on the latter. These risks are covered by health insurance schemes in almost all modern countries. In this section, I deal with the question to what extent knowledge on risks

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<sup>2</sup> However, there is a big difference between pensions and life insurances.

of illness is available on both the collective and the individual level, and what impact this has on the possible use of knowledge-based strategies by health insurers and individuals.

#### *Knowledge by insurance providers*

When given unlimited access to an individual's health status, including check-ups and even blood tests and genetic tests, health insurance companies might be able to quite accurately predict short-term and middle-term health expenses. This implies that there is a potential and an incentive for classification and segmentation in the health insurance market. However, there are three factors that limit the use of this information by health insurers. First, in most governments there are restrictions in the information that insurers are allowed to request from potential clients. Radetzki et al (2006: 2) state that "the freedom of insurance companies to employ genetic insights in risk assessment is being increasingly questioned on ethical grounds". But there are also several other regulations that prevent insurers from using specific health related information in order to classify and segment risks. However, it appears that there are several risk factors that health insurers are allowed to and actually do take into account when deciding on health policies. In two studies in the US on individual health insurance, Pauly and Herring (2007) found that age, sex and location accounted for varieties in premiums.

Second, in most countries there are strict regulations on the continuation of health insurance contracts and premium increases. This implies that even when new knowledge on an individual's potential risks becomes available, health insurers are unable to modify the conditions of the contract. In section four I elaborate on this issue. Third, in situations in which the health insurance market is a competitive market, individuals search for the best deal given their health status or it might be non-competitive. When there is a non-competitive market, government regulations on acceptance policies tend to be strict. Pauly and Herring show that – due to the latter two arguments - even when all legally available information is used to classify risks, health insurers do not fully incorporate these risks in the premiums. They show that higher risk people with expected expenses roughly four times higher compared with lower risk peoples actually paid premiums that were on average only about 1.6 times those of lower risk people.

I conclude that at the collective level, there is sufficient knowledge for health insurance companies to apply strategies of classification and segmentation, although various restrictions are in force.

#### *Individual knowledge*

As I discussed in the previous section, usually there is an asymmetry of information between the individual and his health insurance provider. The individual might or might not have been subject to regular medical check-ups, he might even have ordered DIY-genetic tests on the internet, and he surely has more detailed insight in his medical history and his lifestyle than his insurance company.

Although a lot of the information is probabilistic rather than deterministic, I conclude that this implies that both adverse selection and moral hazard are strategies that individuals can apply when covering for the social risks of illness.

### **3.3 Unemployment**

As for the other social risks that are discussed in this paper, I will start with an exploration of the extent to which insurers at the collective level possess information that enables them to classify and segment ‘good’ from ‘bad’ risks. Next, I will deal with this question on the individual level, focusing on the potentials for moral hazard and adverse selection.

#### *Collective*

In almost all countries, unemployment insurance is compulsory and risks are pooled among large groups of employees. There are several small-scale initiatives for private unemployment insurances, for instance in the US and in Denmark. The latter is specifically aimed at the self-employed. The key question for this paper is to what extent insurers are able to classify and segment risks.

A first observation concerning insurers’ knowledge on the risks of unemployment is that the number of benefits is strongly related with macro-economic conditions.

Although there are possibilities for classification and segmentation, uncertainty on future economic developments severely constrains the possibility of risk management strategies on both the collective and the individual level. However, given the economic developments, there are some clear factors that contribute to the risk of

unemployment. Three of these are easy to identify for insurance companies: age, educational background and occupation or sector (see, for instance, Tristao, 2007). So I might conclude that, in theory, unemployment insurers are able to classify and segment between people with high and low unemployment risks. To what extent they actually can and do use this information, is the topic of section 4.

### *Individual*

Vaughan and Vaughan (2001) argue that an individual's options for managing the risks of unemployment are very limited. The primary means of dealing with unemployment comes via state unemployment insurance programs, which tend to be limited in both amount and duration. The authors state that for most individuals, risk retention and reduction are the only means available for dealing with the unemployment risk. The only means to reduce the unemployment risks is through acquisition of education or specialized skills, or by selecting a career with little fluctuation in employment levels.

However, various other authors point out that employees might, and actually do, apply knowledge-based strategies in dealing with unemployment insurance. There is, for instance, an aspect of moral hazard connected with unemployment insurance. The prospect of finding new employment by a laid-off worker is determined to a large extent by the effort the unemployed worker exerts in searching for new employment (Chiu and Karni, 1998; Rendahl, 2007). These authors identify a second form of moral hazard. They state that the employees' efforts on the job affect their job performance and thus the probability of being laid off. However, this second moral hazard appears to be rather limited in comparison with the first one.

Adverse selection is an issue that is frequently brought forward in connection with unemployment insurance. Chiu and Karni (1998: 820) illustrate the occurrence of adverse selection with the case of the Canadian firm 'career Guard', a private, additional unemployment scheme. "Although this insurance policy did not cover executives fired within 6 months of purchasing insurance, (...) a very high proportion of those who purchased insurance were dismissed by their employers subsequent to the 6-month period. It appeared that Career Guard failed primarily because of adverse selection – those executives who knew they were likely to be dismissed were the main purchaser of insurance, and the insurer could not distinguish high-risk from low-risk customers (Green and Ridell, 1993: S99)". This illustrative case is supported more in

general by Kim's analysis of social risk perceptions and support for unemployment insurance. He concludes that "[p]eople in economic sectors characterized by a high probability of unemployment expect to be the winners out of the risk redistribution and will demand unemployment insurance. In contrast, individuals employed in sectors characterized by a low probability of job loss expect to lose from the process of risk redistribution and will support policies involving either a lower distribution of risks or the ability to opt out of social insurance" (Kim, 2007: 250).

So it appears that individuals do have information at their disposal that enables them to assess whether their risks of unemployment are relatively higher or lower than average. Insurers do not have this information at the individual level, apart from knowledge on the sector in which an individual is employed and his educational background. So both moral hazard and adverse selection are strategies that might occur in unemployment insurance.

#### **4. Institutional strategies**

In the previous section I have focused on the information that individuals and insurers have at their disposal to distinguish between 'good' and 'bad' risks. However, whether or not individuals and insurers actually behave upon this information depends on the strategies that they can use. As has been stated in the theoretical framework, individuals can use either the strategies of 'opting out' or 'limited coverage' once they have determined that they are a better than average risk. Insurers can use the strategies of selection, differentiation of contributions, and differentiations of rights and obligations. For various reasons, institutional barriers might limit the availability of these options. In this section I focus on the questions which strategies individuals and insurers have at their disposal. In contrast to section 3, which focuses on general developments, this section is based on trends and developments in the Netherlands. Each section starts with a brief outline of the ways in which social risks are managed in the Netherlands, then moves to a reflection on the ways in which individuals and insurers might reply to growing knowledge on social risks.

##### **4.1 Ageing**

###### *Institutional framework*

As in most developed countries, the pension system in the Netherlands has three pillars: the public pension scheme, employer-sponsored pensions and personal savings.

The first pillar, the old-age pension, exists since 1957 and is universal and quite generous. The benefit is linked to the minimum wage and everybody who is older than 65 receives it, as long as they have resided in the Netherlands between the ages of 15 and 64. Experts also say that it is necessary to increase the retirement age, since the life expectancy has increased over the years. This system is currently under pressure because the ageing of the population. This first pillar is financed by general taxes. Neither of the strategies that might enable participants to anticipate on information on risks can be applied in this first pillar.

The second pillar, the occupational pensions, is also widespread among workers: more than 90 percent of Dutch workers are covered by an employer-sponsored funded pension plan. This can be a corporate or industry wide pension fund, which has a separate legal entity, or it can be a group pension agreement with an insurance company or a professional association for self-employed professionals. The majority of workers are in defined benefit (DB) plans. That means that workers know how much their benefit is going to be. This is usually around 70 percent of either the final salary or career average salary. Lately there has been a massive movement to career average plans. By 2005, nearly three quarters of all active participants in retirement plans were in career average plans, and only around 10 percent were in final salary plans.

There are three recent developments that might be relevant for the topic of this paper: developments in the early retirement schemes, the shift from defined benefits to defined contribution in the second pillar, and the emergence of self-employment.

#### *Early retirement*

“In the Netherlands, early retirement schemes (*vervroegde uitredingsregelingen*, or VUTs) were established in the 1980s to make room for younger workers. VUTs were financed on a pay-as-you-go basis, which meant that claimants were not confronted with the cost of their early exit. In 1997, the government and its social partners agreed to reverse the trend in the exit behavior of Dutch older workers, by replacing VUTs

with less generous pre-pension schemes” (Van Oorschot, 2007: 250). Most pre-pension schemes are designed such that claiming pension at age 62 offers a pension of 70% of a worker’s previous wage. Working longer than this age will increase the pre-pension and the retirement pension. The Dutch government used to exempt pre-pension premiums from general taxation, but this was abolished from 1 January 2006 in order to curtail early-exit opportunities. The shift from VUT’s to pre-pension schemes is mostly completed. In 1995 about 80% of workers were covered by VUTs, and hardly any by pre-pension schemes. At present, 87% are covered by pre-pension schemes, and about 2% by VUTs” (Van Oorschot, 2007: 250; see also Schills, 2008).

With the transformation from VUTs to pre-pension schemes, some room for ‘opting out’ and ‘freedom of choice’ has emerged at the individual level. This implicates that opportunities have emerged to anticipate on knowledge on ageing at the individual level. However, it is highly unlikely that individuals take their life expectancies into account when deciding on early retirement. For instance, in an analysis of individual factors that play a role in early retirement decisions, Schills (2008) does not find any support for this.

### *Self-employment*

A large part of Dutch social security expenses, including the second pillar pension contributions, are financed by contributions of employers and employees. Self-employment might be used as a method to by-pass the obligatory contributions. In the Netherlands, a specific tax regime has been created for self-employed without staff (*zelfstandigen zonder personeel* or zzp’s). Since the early 2000s, the number of zzp’s in the Netherlands has increased from 150.000 to an estimated 500.000 in 2008.

Recent research showed that opting out of pension, disability and unemployment benefits are hardly ever a motive for individuals to become self-employed (see EIM, 2007). There are three main reasons to choose for self-employment: (1) personal circumstances like lay-offs, (2) dissatisfaction with the current labor relation, (3) a desire for self-fulfillment and freedom (Pleijster and Van der Valk, 2007: 10).

So I might conclude that the choice for the status of self-employed is not directly related to any of the issues in this paper. However, the strong increase of the number of zzp’s in the Netherlands produces a possibility to opt out of the second pillar of the pension.

### *From defined benefits to defined contributions*

In an increasing number of cases big companies are also trying to shift the pension risks towards the employees. Agreements with trade unions have been reached where the switch has been made to a defined-contribution (DC) occupational pension scheme. With DC plans employees know what contribution is being paid, but they don't know how much benefit they will receive in the end.

Where the shifting of pension risks from employer to employee is attended by the increasing of range of choices available to individual employees, this development touches the very core of the pension system, which was originally based on solidarity. Ponds and Van Riel (2007) argue that the average-wage schemes that have replaced the final-pay schemes in the Netherlands, may be viewed as hybrid DB-DC schemes. They are like DB plans in that accrued pension rights are based on an employee's wages and years of service, and contribution rates can be raised in response to a funding shortfall. They are like DC plans in that the annual indexation factor, which is applied to both the accrued rights of active workers and the benefits of retired workers, is tied to the fund's financial status and, therefore, investment returns. As a result, these hybrid plans have two mechanisms – contribution rates and indexation – to control solvency risk, effectively minimizing the risk of under-funding. Although defined-contribution schemes tend to enhance the freedom of choice the current hybrid system that has been introduced in the Netherlands does not have effects on the possibilities of opting out or choice.

### **4.2 Health insurance**

On 1 January 2006 a new Health Insurance Act (HIA) was introduced in the Netherlands. This new act unified the old sickness fund scheme and private health insurance into one mandatory scheme for all residents. This single health insurance scheme covers essential care. There is a basic package, which is mandatory and defined by law. Moreover, there are additional insurances covering all health services not included in the basic package. Insurers are legally obliged to accept everybody applying for the mandatory package, regardless of age, gender, or health status. A refined risk adjustment system is in place to compensate insurance companies for cost



differences induced by socio-economic factors such as age, gender, income, location, and prior healthcare consumption. Such a system levels the playing field for health insurers by enabling price competition on the premium rate. The HIA aims to guarantee universal access to the healthcare system.

“The premium for the new insurance consists of two components: a community-rated nominal premium of around Euro 1,000 paid by insured as from the age of 18. The size of this premium varies among insurers and is unrelated to age, gender, income, or health status. However, everyone with the same policy will pay the same insurance premium. The second premium component is an income-related contribution that equals 6.5% of the income and will be payable up to the income ceiling of Euro 30,015. The income-related premiums are collected through payroll and income taxes and are redistributed through the risk-adjustment system” (Mosca and Schut-Welkzijn, 2008: 261-262)..

Within the framework of the HIA, there are several development that are relevant for the issues of this paper. The first is the issue of risk selection through collective contracts, second, the issue of freedom of choice, and finally the issue of diversification of premiums and rights. I will elaborate on these issues in the remainders of this section.

#### *Risk selection through collective contracts*

In the Netherlands, traditionally, private insurance companies created collective contracts with large employers. The new HIA created possibilities for insurance companies to give discounts to groups of insured (collectivities) up to 10% for the nominal premium of the basic insurance. In addition, discounts on the additional insurances are allowed, as well as special offers. 59 % of the insured participate in a collective contract, the majority (70%) through their employers. More interesting are the other 30% of collective insured. These participate in so-called ‘open collectivities’. These collectivities can be formed by any group of people who have something in common. ‘Open collectivities’ might be formed by people with common health problems (patient groups), students, members of organizations like trade unions or sport clubs, and so on. These different groups obviously have different health risks. The ways in which insurers deal with these open collectivities, might give some insight in the extent to which insurers actively use a strategy of diversification. Roos

and Schut (2008) identified almost 150 ‘open collectivities’, which they have classified into 8 different groups. Table 1 gives an overview of some of the groups of collectivities, and the discounts they have managed to negotiate on the premiums for basic insurance and additional insurance.

Group of collectivities	Risk	Average discount	
		Basic insurance	Additional insurance
Patients	Higher than average	6.3	6.5
Younger people / students	Lower than average	8.8	14.8
Elder people	Higher than average	6.4	7.7
Members of trade unions / self employed	?	7.7	9.9
Members of interest groups	?	6.9	8.8
Sporters / supporters	Lower than average	7.7	9.2

Table 1: Risks and collectivities

Source: Roos & Schut, 2008: 65

Although the differences are not very large, from this table it is obvious that the use of collective contracts enables insurers to – rudely – classify and segment health risks and diversify the premiums.

#### *Diversification of premiums and rights in additional insurances*

In contrast to the basic insurance, there is no obligation for acceptance, nor are there any restriction for differentiations in premiums. Therefore, insurers do have possibilities for risk selection in the additional insurances. Almost 90 % of the people do have additional health insurance. Almost all insured have the same provider for basic insurance and additional insurance. This is not obligatory, but insurers are allowed to charge additional fees to insured with additional insurances only at their company. Therefore, the policies for additional insurance might also serve as a tool for selection for the basic insurance.

Although it is hard to prove, evaluation reports suggest that this is exactly what is happening. Insurers refuse people that seem to form a bad risk an offer for additional insurances, or only against high premiums of with restrictions. Since it is hard to get only additional insurance from another insurance company, this effectively means that

these people have two options: choose for basic insurance only (for which insurers have a plight to accept everyone), or try to find another insurance company. Unfortunately, there is no empirical evidence available on the scale on which this type of selection occurs. However, there are two figures that might give somewhat of an idea. First, 8 out of a total of 30 insurance companies require a health statement when people apply for health insurance. In this questionnaires, questions are asked about diseases (5 companies), use of health care in the past (8), use of medicines (3), and general health condition (4). Second, out of a representative sample of 1712 insured, 77 people declared that they were subject to restrictions or an excess fee in their premium (Roos and Schut, 2008).

There are no indications that insurance companies use any of the strategies of selection and differentiation in their existing policies. However, it appears that on a limited scale they do use these strategies for new policies.

#### *Freedom of choice*

At the individual level, the freedom of choice in the Netherlands is limited. The conditions of the basic insurance are prescribed by law, insurers cannot make exceptions to these conditions. The only possible exception is the so-called ‘pro-life’ insurance for people that have moral or religious obligations to some medical treatments (for instance, abortion). However, this does not affect the premium. Interestingly, since the introduction of the HIA in 2006, the basic insurance has been slowly but gradually expanded. In 2007, the first ivf-treatment was added to the basic insurance, whereas previously only the second and third treatments were covered. In 2008, birth control (“the pill”) was reintroduced, as well as a preventive anti-flu injection for people aged 60 and older.

The extension of the basic insurance actually implicates that the freedom of choice and the opting-out options for people who have prior knowledge of their health risks, is diminished.

### **4.3 Unemployment**

#### *Institutional framework*

The Dutch Unemployment Insurance Act (WW) insures employees against the financial consequences of unemployment. The WW is financed by contributions from employers and employees. The Institute for Employee Benefit Schemes (UWV) is

responsible for the implementation. The Dutch Act is rather unremarkably, its basic features correspond with unemployment schemes that can be found in most other European countries as well. This implies that the possibilities to apply any of the risk management strategies that have been identified in the previous sections are limited. Also in correspondence with most other European countries, there have been various reforms of the Unemployment Insurance Act aimed at limiting eligibility and lowering duration and height of the benefits. This has not significantly altered the characteristics of the unemployment scheme.

However, there are two developments that deserve some attention with regard to risk management strategies. The first is the road to self employment that has been discussed in section 4.1. Employees might also use this road to by-pass the obligations of the unemployment act. Second, recently proposals have been issued for a radical reform of the Unemployment Act. One of these proposals has been the transfer or responsibility for unemployment benefits to the employer for a limited time period. I will elaborate on these two developments.

### *Self-employment*

As has been stated in section 4.1, self-employment has seen an increasing popularity in the Netherlands for some time. It is possible for people in sectors with low unemployment risks, or with low-risk occupational backgrounds, to take the step towards self-employment and thus by-pass the unemployment insurance. Although I have seen in section 3 that unemployment strongly correlates with macro-economic developments, it is quite clear that education and experience are rather good indicators to distinguish good risks from bad risks. People who consider themselves good risks, might thus have an incentive to save on contributions to the unemployment scheme. From the discussion in section 4.1 it appeared that risk selection seldom is a motive for people to become self-employed.

Ejrnaes and Hochguertel (2008) conducted a study on Danish panel data on self-employed and unemployment insurance. Their question was not whether self-employed use their status to circumvent social insurances, their findings do provide some insights on this issue. They came to two conclusions. The first: self-employed were not primarily interested in unemployment insurance, but participated because of the early retirement scheme that the Danish unemployment insurance offered. Insurees have the option of participating in an early retirement scheme, unavailable to

non-insurees. The second conclusion was that self-employed with unemployment insurance become unemployed more often than those without unemployment insurance. Eijrnaes and Hochguertel argue that moral hazard is responsible for this. However, it might also be the case that people participating in unemployment insurance know that they have a relatively high risk on unemployment, because of personal or business characteristics. Anyway, the main conclusion concerning this issue is that self-employed do not choose for their self-employed status because of risk management strategies.

### *Proposals for reform*

In May 2008, the Dutch Bakker-Committee - that was installed to advise the cabinet on ways to increase the labor participation in the Netherlands – published a report in which also proposal for a radical reform of the Unemployment Insurance Act were done. For this paper, the most interesting proposal was to transfer the responsibility for the unemployment benefits to the employer for the first six months of unemployment. The committee assumed that this would stimulate employers to actively invest in both the employability of employees and in the active placement of people in risk of lay-off at other employers (“from work to work”). This would lead to a new perspective on risk management in the Dutch Unemployment Insurance Act. However, the proposals of the Bakker-Committee have received diverse responses in the political arena. This implies that it is still the question whether this proposal will be actually implemented.

## **5. Conclusions**

This paper started with the observation that increasing knowledge on social risks might have impact on the social insurances that deal with these risks. For this observation to be correct, three conditions have to be fulfilled:

1. There must indeed be increasing knowledge;
2. This knowledge has to enable insurees and insurance companies to distinguish ‘good’ from ‘bad’ risks.
3. The institutional framework must enable insurees and insurance companies to act upon this knowledge.

The central question of this paper was: To what extent has knowledge on social risks increased in the last decade, and what – if any- impact does this have on social risk insurances. Table 2 summarizes the conclusions on this.

<b>Knowledge strategies</b>			<b>Pension</b>	<b>Health</b>	<b>Unemployment</b>
	<b>Individual</b>	<i>Adverse selection</i>	Not possible	Possible	Possible
	<i>Moral hazard</i>	Not possible	Possible	Possible	
<b>Collective</b>	<i>Classification</i>	Possible	Possible	Possible	
<b>Institutional strategies</b>	<b>Individual</b>	<i>Opting out</i>	Limited	Not possible	Limited
		<i>Freedom of choice</i>	Limited	Yes	Not possible
	<b>Collective</b>	<i>Selection</i>	No possibilities	Limited	No possibilities
		<i>Diversification of premiums</i>	No possibilities	Yes	No possibilities
		<i>Diversification of obligations and rights</i>	No possibilities	Limited	No possibilities

Table 2: conclusion

From table 2 we can conclude that – with the exception of health – the availability of knowledge-based strategies is rather limited. This means that the possibilities to distinguish ‘good’ from ‘bad’ risks both at the collective and at the individual level are limited. The availability of institutional strategies – again with the exception of health – also is limited. This implies that – even if individuals or insurers have information that enables them to distinguish ‘good’ from ‘bad’ risks, institutional rules prevent them from using this information.

In answer to the central question of this paper, the conclusion has to be that although there have been advances in knowledge on social risks, these advances are primarily aimed at background factors. Although individuals might have information that enables them to assess whether they have an increased risk of some social risks, the impact of most of the risk factors that are known, are too limited to lead to the application of one of the knowledge-based strategies: moral hazard or adverse selection. At the collective level, insurance companies to some extent have

information at a general level that enables them to assess whether the risks of insurees are ‘worse than average’ or ‘better than average’.

However, the possibilities to use this knowledge are rather limited. I have identified different strategies that enable individual insurees and insurance companies at a collective level to act upon the available knowledge. For pension and for unemployment, these strategies only become available when individuals decide to leave the system of labor relations altogether and become self-employed. There are no strategies that insurers can use in these fields. The only field in which some of the knowledge individuals and insurance companies have might be used, is the field of health insurances.

However, contrary to what some scholars expect, the possibilities to act upon risk assessments are not increasing. In the Netherlands, there is a slow but gradual extension of the obligatory basic insurance, which decreases the possibilities of choice for individuals. Insurance companies on the other hand have created some possibilities through the use of collective contracts and the link between the basic insurance and additional insurances.

Overall, the conclusion can be no other than that the veil of ignorance, which some people consider to be an important driver behind solidarity, is still on its place. In some of the areas that have been dealt with in this paper, a glow of transparency can be observed. However, institutional restrictions prevent the use of information on risks both at the individual and at the collective level.

## **References**

- Baker, T., *Containing the Promise of Insurance: Adverse Selection and Risk Classification*, Connecticut: University of Connecticut School of Law Articles and Working Papers, 2001.
- Beer, P. de, Hoe solidair is de Nederlander nog?, in: Jong, E. de & M. Buijsen, *Solidariteit onder druk? Over de grens tussen individuele en collectieve verantwoordelijkheid*, Nijmegen: Valkhof Pers, 2005: 54-79.
- Chiu, W.H. & E. Karni, Endogenous Adverse Selection and Unemployment Insurance, in: *Journal of Political Economy*, vol. 106, no. 4: 806-827.
- Ejrnaes, M. & S. Hochguertel, *Entrepreneurial Moral Hazard in Income Insurance*, Amsterdam: Tinbergen Institute, 2008.

- Goodin, R.E., Review of 'The New Social Question: Rethinking the Welfare State', in: *Economics & Philosophy*, vol. 17, 2001, pp. 140-145.
- Gould, C.C., Transnational Solidarities, in: *Journal of Social Philosophy*, vol. 38, no. 1, 2007: 148-164.
- Hamermesh, D.S. & F.W. Hamermesh, Does perception of Life Expectancy Reflect Health Knowledge?, in: *AJPH*, vol. 73, no. 8, 1983, pp. 911-914.
- Hoel, M. & T. Iversen, Genetic testing when there is a mix of compulsory and voluntary health insurance, in: *Journal of Health Economics*, vol. 21, 2002, pp. 253-270.
- Kim, W., Social Risk and Social Insurance: Political Demand for Unemployment Insurance, in: *Rationality and Society*, vol. 19, 2007: 229-254.
- Mosca, I. & A. Schut-Welkzijn, Choice determinants of the mobility in the Dutch health insurance market, in: *European Journal of Health Economics*, vol. 9: 261-264.
- Pauly, M.V. & B. Herring, Risk Pooling and Regulation: Policy and Reality In Today's Individual Health Insurance Market, in: *Health Affairs*, vol. 26, no. 3, 2007: 770-779.
- Pensions Commission, *A New Pension Settlement for the Twenty-first Century. The Second Report of the Pensions Commission*, 2005  
<http://www.webarchive.org.uk/pan/16806/20070717/www.pensionscommission.org.uk/www.pensionscommission.org.uk/publications/2005/annrep/annrep-index.html>.
- Pleijster, F. & P. van der Valk, *Van onbemind tot onmisbaar. De economische betekenis van ZZP'ers nu en in de toekomst*, Zoetermeer, 2007.
- Ponds, E.H.M., & B. van Riel, *Sharing risk: The Netherlands' new approach to pensions*, Boston: Center for Retirement Research, 2007.
- Radetzki, M., et al., *Genes and Insurance. Ethical, Legal and Economic Issues*, Cambridge: Cambridge University Press, 2003.
- Rawls, J., *A Theory of Justice*, Cambridge: Harvard University Press, 1971 (revised edition 1999).
- Rehg, W., Solidarity and the Common Good: An Analytic Framework, in: *Journal of Social Philosophy*, vol. 38, no. 1, 2007: 7-21.
- Rendal, P., *Asset Based Unemployment Insurance*, EUI Working paper ECO 15, 2007.
- Roos, A.F. & F.T. Schut, *Evaluatie aanvullende en collectieve verzekeringen 2008*, Rotterdam: IBMG, 2008.



- Rosanvallon, P., *The New Social Question: Rethinking the Welfare State*, Princeton: Princeton University Press, 2000.
- Schills, T., Early Retirement in Germany, the Netherlands, and the United Kingdom: A Longitudinal Analysis of Individual Factors and Institutional Regimes, in: *European Sociological Review*, vol. 24, 2008: 315-329.
- Tristao, I.M., *Occupational employment risk and its consequence for unemployment duration and wages*, Working Paper Series, Congressional Budget Office, Washington, D.C., 2007.
- Van Oorschot, W., Solidariteit en het draagvlak voor sociale zekerheid: enkele kanttekeningen vanuit sociologisch perspectief, in: Herweijer, M. et al. (eds.), *Sociale zekerheid voor het oog van de meester: opstellen voor prof.mr. F. Noordam* Deventer: Kluwer, 2006, pp. 47-56.
- Van Oorschot, W., Narrowing pathways to early retirement in the Netherlands, in: *Benefits*, vol. 15, no. 3, 2007: 247-255.
- Vaughan, E. & T. Vaughan, *Essentials of risk management and insurance*, New York: John Wiley, 2001.