

# Legal Aid and Legal Expenses Insurance, Complements or Substitutes? The Case of The Netherlands

Klein Haarhuis, C.M.; Velthoven, B.C.J. van

## Citation

Klein Haarhuis, C. M., & Velthoven, B. C. J. van. (2010). Legal Aid and Legal Expenses Insurance, Complements or Substitutes? The Case of The Netherlands. Department of Economics Research Memorandum. Leiden: Universiteit Leiden. Retrieved from https://hdl.handle.net/1887/15825

Version:Not Applicable (or Unknown)License:Leiden University Non-exclusive licenseDownloaded from:https://hdl.handle.net/1887/15825

**Note:** To cite this publication please use the final published version (if applicable).

Department of Economics Research Memorandum 2010.02

Legal Aid and Legal Expenses Insurance, Complements or Substitutes? The Case of the Netherlands.

Carolien Klein Haarhuis and Ben van Velthoven

Leiden University

# Correspondence to

Leiden Law School Department of Economics P.O. Box 9520 2300 RA Leiden The Netherlands Phone ++31 71 527 7756 Email: <u>economie@law.leideniniv.nl</u> Website: <u>www.economie.leidenuniv.nl</u>

Editors

Prof. dr. C.L.J. Caminada Dr. B.C.J. van Velthoven

### Legal Aid and Legal Expenses Insurance, Complements or Substitutes? The Case of the Netherlands. \*

#### Carolien M. Klein Haarhuis

Research and Documentation Centre Ministry of Justice P.O. Box 20301, 2500 EH The Hague The Netherlands E-mail: C.M.KLEIN@minjus.nl

#### Ben C.J. van Velthoven

Leiden Law School Economics Department, Leiden University P.O. Box 9520, 2300 RA Leiden The Netherlands E-mail: <u>b.c.j.vanvelthoven@law.leidenuniv.nl</u>

#### Abstract

The budget of the Dutch Ministry of Justice is under great strain. Quite recently, the budget for legal aid (some  $\in$  450 million in total) has been critically reviewed in order to save  $\in$  50 million in the next few years. One of the main savings proposed was to discontinue subsidized legal aid for non-criminal cases for all but the lowest income groups and to refer the citizens involved to private legal expenses insurance (LEI). This proposal did not receive much public support and has been put aside for the time being. But on the next occasion it is quite likely to reappear on the political agenda.

Given the present state of affairs, it seems wise to study the interrelationship between legal aid and LEI. Is LEI a system that is only relevant to the high income groups which are not eligible for subsidized legal aid? Is it therefore a complement to legal aid? Or is LEI also of interest to lower income groups, and can it serve as a substitute?

Our paper provides an empirical study of the interrelationship between legal aid and LEI in the Netherlands at present. It uses the results of the second wave of the Dutch *Paths to Justice* survey held in the first quarter of 2009. We first analyze how the holdership of LEI policies is distributed among the population in general and among income classes in particular. We then discuss how the incidence of justiciable problems interrelates with the possession of LEI. Next, we study how the possession of LEI affects the responses to justiciable problems. Do people take action? Do they seek legal advice? And from which sources? Finally, we take a look at the results.

Comparing the respondents with and without LEI in various income classes, we try to answer the central question: complement or substitute? We conclude that a shift from legal aid to LEI has some clear disadvantages for low income citizens, but these may well be compensated for by some important advantages, brought to the fore by our empirical data.

JEL-codes: K40 Keywords: legal aid, legal expenses insurance

<sup>\*</sup> Paper to be presented at the 8th LSRC International Research Conference, Cambridge UK, 30th June - 2nd July 2010. We thank Olaf van Vliet for useful comments on an earlier draft of this paper.

#### 1. Introduction

The budget of the Dutch Ministry of Justice is under great strain. For instance, in recent years the Ministry has launched a program to reduce crime by 25%. Moreover, the worldwide financial crisis has thrown public finance off balance. Under these circumstances the budget for legal aid (some  $\in$  450 million in total) has been critically reviewed in order to save  $\in$  50 million in the next few years and is unlikely to escape a new round of scrutiny in the near future. One of the main savings proposed recently was to discontinue subsidized legal aid for non-criminal cases for all but the lowest income groups and to refer the citizens involved to private legal expenses insurance (LEI). This proposal did not receive much public support and has been put aside for the time being. But on the next occasion it is quite likely to reappear on the political agenda.

Given the present state of affairs, it seems wise to study the interrelationship between legal aid and LEI. Is LEI a system that is only relevant to the high income groups which are not eligible for subsidized legal aid? Is it therefore a complement to legal aid? Or is LEI also of interest to lower income groups, and can it serve as a substitute?

Similar questions were addressed by Kilian & Regan (2004) when they studied the co-existence of LEI and publicly funded legal aid in Germany and Sweden.<sup>1</sup> They argue that a combination of LEI and legal aid may be a useful policy package to overcome market failures in the provision of legal services. By lowering thresholds, both may help citizens who would otherwise have insufficient means to defend and assert their legal rights effectively. LEI on its own, however, is unable to come close to achieving the ideal of equal justice for all, regardless of income and wealth. Two reasons are that LEI is by definition limited in the protection it offers, and the fact that those who need LEI most, low-income citizens, are the least likely to purchase such insurance. Another weakness is the lack of legal assistance in the non-litigious legal problems of everyday life, since general legal advice is covered neither by German nor by Swedish-style LEI. Our paper contributes to the literature in that it discusses the co-existence of legal aid and LEI in the Netherlands, which has an institutional setting that is in some respects different from Germany or Sweden. More importantly, we set out to find an empirical answer, using the results of the second wave of the Dutch Paths to Justice survey held in the first guarter of 2009.

The rest of the paper is organised in the following way. In section 2 we first introduce the specific institutional setting for the Netherlands. How have legal aid and LEI developed over the past decades and what is the current state of affairs? In section 3 we analyze how the holdership of LEI policies is distributed among the population in general and among income classes in particular. Section 4 discusses the incidence of justiciable problems in relation to the possession of LEI. How the responses to justiciable problems are affected by the possession of LEI is studied in Section 5. Do people take action? Do they seek legal advice? And from which

<sup>&</sup>lt;sup>1</sup> If we take a further look at the literature on LEI it turns out to be rather modest in scope. Pfennigstorf (1975) presents interesting material on the history of LEI in Europe since the early decades of the twentieth century. He also discusses the reasons that might explain the slow start of LEI in the USA as opposed to its successful operation in Europe. For abstract modelling on LEI one can refer to Baik & Kim (2007), who compare contingent fees and LEI in their potential significance for credit-constrained plaintiffs. Van Velthoven & Van Wijck (2001) and Heyes et al. (2004) provide theoretical analyses of LEI that also take account of its preventative effect. LEI is attractive for credit-constrained plaintiffs as it strengthens their bargaining position in post-accident negotiations. This may induce higher settlement offers and raise ex ante care levels by potential injurers. The number of trials is reduced ceteris paribus by this effect but is, overall, affected ambiguously because LEI need not reduce the probability of trial. Hence, LEI may, but need not, increase social welfare.

sources? Section 6 takes a look at the ensuing number of court trials. Section 7, finally, presents some results of the actions that have been taken. Section 8 concludes. Comparing the actions and results for citizens with and without LEI in various income classes, we will try to answer the central question: complement or substitute?

## 2. Institutional setting

#### 2.1 Legal aid

In the Netherlands, publicly funded legal aid was introduced by law in 1958. Citizens with limited disposable means could henceforth invoke the assistance of a lawyer who would be reimbursed by the government. The citizen received the assignment free of charge, or had to pay a small private contribution depending on his level of income and wealth.

Following a debate about alleged lacunae in legal assistance, especially in some legal spheres that were deemed highly relevant to the less well-endowed in society (social security, labour, renting and consumer problems), Legal Aid Bureaus were instituted in 1974. They were funded by the government and had the task to provide information and advice as a free first-instance service. Legal aid itself remained a task for the legal profession.

In the course of time, a number of administrative reforms have been carried out, including the introduction of a new legal aid law (1994) and subsequent amendments (2005/6), and the replacement of the Legal Aid Bureaus by Legal Services Counters. Recurring budget problems have been solved by regular adjustments to the income and wealth limits giving entry to subsidized legal aid. The private contribution for calling in a lawyer was also gradually raised.

Nevertheless, the outline of the Dutch legal aid system remains as follows:

- a free first-instance service for information and advice;
- entry to lawyers' assistance for the less well-endowed, subject to a private contribution that varies with the level of income and wealth;
- a subsidy to lawyers in the form of a lump sum that varies with the type of problem and the complexity of the case.

More specifically:<sup>2</sup>

- The income thresholds to be eligible for subsidized legal aid are € 34,400 maximum for families and € 24,000 for singles.
- The limit for wealth is set at a maximum of € 20,700 per person (the value of one's own house not included).
- About 3.7 million households fall within these ranges, or 6.2 million persons, which is 39% of the overall population.
- The private contribution is divided into 5 classes, ranging from € 100 to € 750 per assignment.
- In 2008, 422,000 lawyer assignments were allocated, of which 158,000 regarded criminal law and 95,000 family law matters.
- Government expenses for legal aid amount to an annual € 453 million. In the next few years, however, a budget cut of € 50 million must be implemented.
- The average subsidy per legal aid case is € 874 (criminal cases € 977, other cases € 815).

To be able to properly appreciate the Dutch system, several other arrangements should be mentioned. Apart from the subsidies for lawyer fees, court fees for the less

<sup>&</sup>lt;sup>2</sup> An important source of information is the *Legal Aid Monitor 2008 (Monitor Gesubsidieerde Rechtsbijstand*, http://www.rvr.org/binaries/over-rvr/monitor/monitor\_2008\_web\_kl.pdf).

well-endowed are reduced by 75% or 50%. For court procedures, there is a two-way cost-shifting regime. The party who wins in court can recover his legal expenses from the opposing party. This also holds for the government, who can recover its subsidy. On the other hand, the party who loses in court, even if he belongs to the less well-endowed, must compensate the legal expenses of the winning party. Finally, for those citizens who do not have recourse to the legal aid system, lawyers' charges are based on an hourly fee.

#### 2.2 Legal expenses insurance (LEI)

LEI has developed parallel to legal aid in the Netherlands. It was introduced in the 1950s as a specific instrument to recover losses resulting from motor vehicle accidents. From the 1970s onwards, LEI policies were also offered with a wider coverage to protect families against legal expenses from other kinds of disputes. Varying from one insurer to the other, families can now choose from a number of modules, which include: disputes related to work and income, consumer purchases, housing, medical errors, fiscal affairs and asset management. LEI policies in the Netherlands are generally 'stand alones', i.e. unconnected with other types of insurance.

The coverage of disputes by LEI in the Netherlands is limited in the sense that cases of minor interest generally do not qualify for legal assistance. Most policies also exclude divorce cases and other types of cases with a moral hazard component (tax disputes, criminal affairs). In general, a three-month qualifying period applies after an insurance policy is taken out.

Originally, LEI family policies were only of interest for the highest income classes outside the range of legal aid. Since the 1980s, however, the number of policies has exploded. See Figure 1.<sup>3</sup> This impressive growth is closely related to and runs parallel with the regular cuts in the range of the legal aid system and the increases in private contributions over the same period.



#### Figure 1 Number of LEI family policies, 1970-2008, x 1,000

<sup>&</sup>lt;sup>3</sup> Source: Dutch Association of Insurers (Verbond van Verzekeraars). Statistics on personal LEI generally distinguish between motor vehicle accident policies and family policies (including all other modules).

The current state of affairs regarding LEI in the Netherlands is as follows:<sup>4</sup>

- There are 2.2 million family policies, besides almost 1.4 million motor vehicle accident policies.
- The overall premium revenue is € 381 million from family policies and €85 million from motor vehicle accident policies.
- The average premium paid per family policy is € 172. Of course, the premium depends on the number and kind of modules included. Full coverage implies an average premium of some € 250.
- The number of claims originating from LEI family policies is 260,000, i.e. 12% of the number of policies.
- The average amount connected with a claim is reported by the industry to be € 872.

When a policy holder submits a claim, the insurer first attempts to deal with the problem by itself, deploying its own staff. If these attempts to settle the case do not suffice, the client is generally free to choose a lawyer to provide further assistance and to represent him in court. These external costs (that is, the client's own legal costs plus any recovery of legal expenses if the opposing party wins in court) are restituted completely or up to a maximum, depending on the specific terms of the policy.

Somewhat earlier data<sup>5</sup> show that in practice a court procedure is started in about 10 per cent of all cases for which claims are brought forward. In about 4 per cent of all cases an external lawyer is called in, to obtain a second opinion or because the Bar has a monopoly to represent the client in court.<sup>6</sup>

#### 2.3 Resulting state of affairs

In the Netherlands, legal aid and LEI have developed in parallel. In terms of size and population coverage, the LEI system is steadily growing and closing in on the legal aid system.

#### 3. Holdership of LEI family policies

#### 3.1 Data

In 2003 the first *Paths to Justice* survey for the Netherlands was conducted, following the main lines set out by Genn (1999). An English summary of the results was published in Van Velthoven & Ter Voert (2008). The survey consisted of two questionnaires, which were addressed to a random sample from the internet panel of TNS NIPO, a specialised Dutch survey research bureau. In the first questionnaire, the screening survey, individuals aged 18 or over were asked whether they had experienced justiciable problems of various sorts in the fields of civil and administrative law during the previous five years. Respondents were deemed eligible for the second questionnaire, the problem-solving survey, if they had reported at least one non-trivial justiciable problem. They then were asked in detail about the way they had handled the first problem that had actually started in the five-year

<sup>&</sup>lt;sup>4</sup> An important source of information is *Dutch Insurance Industry in Figures 2009* (*Verzekerd van cijfers 2009*,

http://www.verbondvanverzekeraars.nl/UserFiles/File/cijfers/VvC2009.pdf).

<sup>&</sup>lt;sup>5</sup> Source: CBS, *Assurantiejaarboek 1998*, p. 172.

<sup>&</sup>lt;sup>6</sup> This holds for most criminal cases and many civil cases. Only if the case is heard in a cantonal court or if the case is in an administrative law field, the client may represent himself or opt for a non-lawyer.

period under scrutiny.

In the first quarter of 2009 a second wave of this *Paths to Justice* survey was held, following a very similar set-up. The results were published in Dutch in Van Velthoven & Klein Haarhuis (2010). The screening survey investigated the extent to which respondents were faced with justiciable problems in the period between January 1, 2004 and December 31, 2008. This survey was returned by 5,166 persons (a response rate of 74.1%). The sample is representative for the Dutch population in terms of sex, age and education. Of the 2,940 respondents who qualified for the problem-solving survey, 2,268 (a response rate of 77.1%) returned the second questionnaire. Upon closer inspection, 2,234 responses proved to be useful for further analysis.

In the screening survey, respondents were explicitly asked whether they were holding any kind of LEI policy and if so, what modules were covered by it. The data from this second Dutch *Paths to Justice* survey thus offer a unique opportunity to investigate the effects of LEI coverage on the incidence and the handling of justiciable problems.

#### 3.2 LEI holdership

When asked whether they were holding any kind of LEI policy, 3,219 of the 5,166 respondents to the screening survey - i.e. 62.3% - said yes. As to the modules covered, the figures were:

-	motor vehicle accidents	2,373
-	work and income	1,595
-	consumer purchases and housing	1,689
-	medical errors	1,270
-	other	131
-	don't know exactly	677

From these figures it is immediately clear that a substantial degree of overlap exists between the various modules. To be precise: out of the 2,542 respondents who provided details, only 533 or 21% reported to have just one module covered. Of these respondents, 462 or 87% had a motor vehicle accident policy.

Following the statistics from the insurance industry, we will henceforth distinguish between motor vehicle policies and family policies. In our analysis, family policies will refer to those LEI policies that contain one or more non motor vehicle accident modules. This definition results in 2,757 of our 5,166 respondents - i.e. 53.4% - having an LEI family policy.

It is of course highly unlikely that LEI holdership is distributed evenly among the population. For one thing, high income earners do not have access to the legal aid system, as we noted before, while lower income earners do, with a private contribution that increases with income. Figure 2 illustrates how LEI family policies are distributed among income classes, according to our survey data.<sup>7</sup> Income is measured as gross yearly household income in euros. The distribution is rather skewed, as could be expected. What is more surprising is that even among the lowest income classes holdership is over 30% and thus no longer a rare event.

<sup>&</sup>lt;sup>7</sup> 944 respondents did not report household income. We checked LEI holdership among this group, which turned out to be 54.8%, almost equal to the overall average of 53.4%. This suggests that the non-response on income does not distort the results further on.



Figure 2 Holdership of LEI family policies in % and by household income

To find out which other personal characteristics affect the decision to buy an LEI family policy, we ran a logistic regression. See the Appendix Table A1 for more details.<sup>8</sup> The results show that LEI holdership is influenced by several characteristics other than income. It turns out, for instance, that couples who are married or live together (with or without children) are more likely to have an LEI policy than singles. As a policy covers the whole family, it apparently becomes more attractive with increasing family size. Holdership is also positively correlated with being employed and owning one's own house. These characteristics may give rise to disputes that are covered by specific LEI modules.<sup>9</sup>

To simplify the analysis and the presentation, we will henceforth compress the ten income classes of Figure 2 into three major classes: (1) less than  $\in 20,500$ , (2)  $\in$ 20,500 - 45,000 and (3)  $\in$  45,000 and more. See Table 1. This threefold classification has been chosen in view of the legal aid income thresholds in the Netherlands; cf. Section 2. Taking into account differences in income definitions (survey: gross income; legal aid criterion: fiscal income) together with the difference in the income threshold for multi-person households versus singles, we know (almost) for sure that respondents in income class 1 are entitled to legal aid according to government standards. Respondents in income class 3 on the other hand are definitely outside the range of legal aid. Income class 2 takes an intermediate position.

Table 1 Holde	ership of LEI family policies	s, three major income classes
Household inco	me N	LEI family policies, in % <sup>a</sup>
Less than € 20,	500 594	34.0
€ 20,500 - 45,0	00 2,170	51.1
€ 45,000 and m	ore 1,458	63.8

<sup>a</sup> Differences between income classes are highly significant ( $\chi^2(2)$ = 157.4, p = 0.000).

<sup>8</sup> Insignificant variables are not included. The odds ratios reveal for each category of an independent variable the proportional increase in the probability of LEI holdership relative to the reference category.

<sup>9</sup> Our results are corroborated by the findings of Broeders (2008), who investigated the image of the LEI insurance industry in a consumer panel (N = 1.080). She, too, found that the possession of a LEI family policy is affected by age, education, income, province and house ownership.

#### 4. Frequency of justiciable problems

In the screening survey, respondents were asked about the justiciable problems in the fields of civil and administrative law they were faced with in the period January 1, 2004 through December 31, 2008. They were presented a list of 67 different sorts of problems, organised into ten main categories, followed by three 'catch-all' questions asking whether respondents, besides anything already reported, had had legal action taken against them, had been threatened with legal action, or had considered initiating court proceedings themselves for any reason. To be sure that only serious problems were included in the analysis, we applied a non-triviality threshold. A problem was deemed to be trivial if the respondent had not taken any action because (1) the problem was not important enough or (2) the respondent did not dispute the outcome or believed that the other side was right.

We found the overall incidence of justiciable problems to be 60.5%. That is, 60.5% of all respondents faced one or more non-trivial justiciable problems over the five-year period. The average number of problems of those facing one or more justiciable problems was 3.11. The overall frequency of problems for the total group of respondents was 1.88.

From these figures it is immediately clear that problems are not evenly distributed across the population. Here, we concentrate on the differences between LEI insured and non-insured. Table 2 offers the corresponding breakdown of the frequency figures, with a further disaggregation with regard to the level of income. Overall, problem frequency for insured people is some 11% higher than for non-insured: 1.97 versus 1.78. This overall difference is statistically highly significant (F(1;5164) = 7.79, p = 0.005). This also applies to income class 3 (F(1;1456) = 5.61, p = 0.018). No significant differences are found for income class 2 (F(1;2168) = 2.58, p= 0.11) and income class 1 (F(1;592) = 0.75, p = 0.39).

	LEI	Insured	Non-insured	Total				
Income								
Less than 20,500		2.24	2.04	2.11				
20,500 - 45,000		1.91	1.74	1.83				
45,000 and more		2.13	1.83	2.02				
Total (N=5,166)		1.97	1.78	1.88				

Table 2 Frequency of justiciable problems by LEI insured/non-insured and byhousehold income

The observed differences between the insured and the non-insured suggest a connection between problem frequency on the one hand and access to justice on the other. Two effects may be involved here:

- a selection effect. The urge to buy an insurance policy is larger for those people who are more prone to experiencing justiciable problems (and have no access to legal aid).
- a behavioural effect (moral hazard). People who know that they can call in legal assistance (either through the legal aid system or through their LEI policy) in a real dispute, may be less hesitant to enter into situations that have the potential to generate problems and may be more likely to bring issues to a head.

Both effects can explain why the difference in problem frequency between the insured and the non-insured is significantly positive for the highest income earners, who are definitely outside the range of legal aid. This is not to say that LEI may not have any advantage for low income people, who are certainly entitled to legal aid. Otherwise it would be hard to understand why some 30% of this class opted to buy

an LEI policy in the first place. For low income earners, LEI precludes payment of the private contribution that goes with legal aid. It also averts the risk of cost shifting if any resulting trial were lost. It may further be the case that the psychological barrier of having recourse to the professional staff of an insurance company is somewhat lower than that of calling in a lawyer. We thus would expect that the difference between the insured and the non-insured for income class 1 would tend to be lower and/or less significant than for income class 3 (with income class 2 taking a position in between), but it need not necessarily be nil. The figures in Table 2 are clearly in line with these expectations.

It goes without saying that problem frequency does not only vary with LEI holdership. One additional look at the first column of Table 2 suggests that problem frequency also varies with income. To find out which other personal characteristics affect problem frequency, we ran a multivariate analysis. Because the number of non-trivial justiciable problems per respondent as dependent variable is a natural count, Poisson regression analysis was applied. See the Appendix Table A2 for more details.<sup>10</sup>

Personal characteristics like age, marital status, education and social group appear to have an effect on problem frequency. Those aged between 25 and 54, the divorced, as well as those entitled to benefits and the self-employed experience relatively many problems. The degree of urbanisation goes with only small differences in problem frequency. The results also point to a number of baseline effects. The number of justiciable problems increases with having a job, owning a house or renting property. We further note that the effect of income on the number of problems is significant, ceteris paribus. Some kind of U-shape can be observed here. If income increases from the lower to intermediate levels, the number of problems tends to go down, whereas in the higher income categories somewhat more problems are reported.<sup>11</sup>

What is most important in the perspective of the present paper, however, is the finding that the difference between the insured and the non-insured remains significant. If we control for several other personal characteristics, LEI holdership increases problem frequency by 8%. If it can be accepted that these other characteristics take account of the selection effect, then this 8% may be equated with the behavioural effect of LEI. The 11% overall difference in problem frequency between the insured and the non-insured can then be decomposed into a selection effect of 3% and a behavioural effect of 8%.

#### 5. Legal advice

We now turn to the next question. Given a justiciable problem, do LEI holders react differently from non-insured people? In this section, we investigate whether legal services of any kind are called in, and to what intensity. For this purpose we use data from the second questionnaire of the recent Dutch *Paths to Justice* study, the problem-solving survey. These data refer to 2,234 problems that were experienced by as many respondents.

<sup>&</sup>lt;sup>10</sup> In the analysis we included all respondents, with and without problems. When we restrict the analysis to respondents who experienced at least one problem, the results are largely the same. Only the effect of the urbanisation variable proves insignificant.

<sup>&</sup>lt;sup>11</sup> Disregarding for a moment the atypical lowest income group < 9,500, which mainly consists of students and part-time workers.

#### 5.1 First response

Following the terminology of Genn (1999), the first steps in dealing with a justiciable problem are (1) the decision to take action, yes or no, and (2) the subsequent choice between seeking advice and help from outside advisers or trying to resolve the problem without such help. Overall, 6.0% of our 2,234 respondents did nothing (the lumpers), 42.0% set out to resolve the problem without help (the self-helpers), and 52.0% sought advice from one or more experts or organisations (the advised).

Table 3 presents a breakdown of this first response with respect to LEI holdership and income. The overall difference in the response pattern between the insured and the non-insured is highly significant ( $\chi^2(2) = 35.6$ , p = 0.000). LEI holders take somewhat more action on their problem than non-insured people. More particularly, they seek much more advice and are less inclined to resolve a problem without help.

Table J	I li st respon	se io ju	Stician	e probie	, mə, m			lai		
	Income class		Lower income		Middle income		High income		Total	
	Insured	Yes	No	Yes	No	Yes	No	Yes	No	
First response										
Lumpers		6.5	9.8	5.7	7.1	3.0	7.1	4.8	7.5	
Self-helpe	ers	40.9	34.4	37.2	46.6	38.2	54.4	37.7	47.4	
Advised		52.7	55.8	57.1	46.3	58.7	38.5	57.5	45.1	

 Table 3
 First response to justiciable problems, in % of column total

If we discriminate between income classes, it turns out that the difference in response pattern between the insured and the non-insured specifically holds for the highest income class ( $\chi^2(2) = 28.83$ , p = 0.000). Here, 58.7% of the insured obtain some kind of legal advice against only 38.5% of the non-insured. For income class 1, by contrast, LEI holdership does not have a significant impact on the response pattern ( $\chi^2(2) = 1.57$ , p = 0.46). Income class 2 takes the intermediate position ( $\chi^2(2) = 10.82$ , p = 0.004).

We can also approach the figures in Table 3 the other way around. For LEI holders, the response pattern reveals no significant difference with respect to income ( $\chi^2(4) = 5.22$ , p = 0.27). But it definitely does for non-insured respondents ( $\chi^2(4) = 16.33$ , p = 0.003).

The interpretation of these findings is quite straightforward. For people in the low income class, holding an LEI policy does not fundamentally change the situation. They can fall back on the legal aid system to obtain a subsidized lawyer anyway. Hence, we would not expect any real difference in initial response between the insured and the non-insured. For people in the high income class, on the other hand, LEI holdership clearly lowers the threshold for obtaining legal advice. When non-insured, they have to pay for any legal assistance, legal aid being out of range. When insured, they can call in their LEI, so we would expect more advice-seeking and less passivity.

#### 5.2 Intensity and type of legal advice

Given the first response, we now look into the type of legal advice being sought and the intensity of the contacts with legal advisers. Overall, the 1,161 advised in our dataset had on average 2.14 contacts for advice and help. These contacts are widely distributed across a large variety of experts and organisations to which private citizens can go for legal advice. Some of these experts and organisations are specialised in a specific field, others have a wider scope; some provide legal advice as their main task, for others it is a matter of secondary importance. Among all these legal advisers, lawyers are the most demanded: on average 0.24 contacts per advised, a market share of 11.3% in the total number of contacts. Second in line are LEI companies: 0.23 contacts per advised, a market share of 10.0%. The trade unions and the Legal Services Counters (combined with their predecessor before 2005, the Legal Aid Bureaus) follow at 0.18 contacts per advised each, a market share of 8.6%.

Table 4 offers a breakdown of the average number of contacts and the type of these contacts by LEI holdership and income. The overall difference between the insured and the non-insured in the total number of contacts is not significant at the 5% level (F(1;1159) = 3.36, p = 0.07). If we draw a further distinction between income classes, however, the highest income earners turn out to have significantly more contacts with legal advisers once they are insured (F(1;367) = 5.20, p = 0.023). For income class 1, on the other hand, the difference between the insured and the non-insured is not statistically significant (F(1;138) = 1.20, p = 0.28), while income class 2 once again takes the intermediate position (F(1;479) = 3.95, p = 0.048). Not surprisingly, if we take a look at the decomposition of the total number of contacts, it is the intensity of LEI use that differs most notably between the insured and the non-insured.

	Income class	Income class Lower income Middle income		High income		Total			
	Insured	Yes	No	Yes	No	Yes	No	Yes	No
Contacts									
Total num	ber,	2.65	2.37	2.25	1.99	2.09	1.73	2.20	2.04
of which w	/ith								
- lawyers	S	0.24	0.44	0.24	0.25	0.20	0.14	0.22	0.28
- LEI		0.35	0.09	0.40	0.04	0.33	0.06	0.35	0.05
- other		2.06	1.85	1.61	1.70	1.56	1.53	1.64	1.71

Table 4	Number c	of contacts	with legal	advisers
---------	----------	-------------	------------	----------

The figures in Table 4 can also be approached in an alternative way. Within the group of the insured, no significant difference exists in the use of LEI and the Bar when the group is broken down to income class (F(2;590) = 0.72, p = 0.49 and F(2;590) = 0.39, p = 0.68, respectively). Significant differences do exist in the use of other legal aid advisers, however, with the advised among the lower income earners having more contacts than those among the higher income classes. We can only guess at the reasons behind this finding. It may be that low income earners have fewer resources to find the proper way in the total landscape of advisers by themselves and need more referrals to arrive at the appropriate place. Their ability to act upon advice and help in a fruitful way (making a telephone call to the other party, writing a letter, negotiating a settlement) may also be somewhat less developed.

Within the group of the non-insured, obviously no real difference is found in the number of LEI contacts when broken down to income class (F2;394) = 0.68, p = 0.51). There is, however, an important and significant difference in the number of contacts with the Bar (F(2;394) = 5.17, p = 0.006). The advised in the low income class have on average 0.44 contacts with lawyers, compared to 0.14 contacts for the highest income class.

These findings can be interpreted in terms of a substitution and a pulling effect. As we noted before, holding an LEI policy does not fundamentally change the situation for people in the low income class. It only means an additional address to go to, next to the legal aid system they already have recourse to. It just saves the private contribution, and the psychological barrier is perhaps somewhat lower. Hence for the advised among the lowest income class, the impact of LEI is largely by substitution: the subsidized lawyer is replaced by direct assistance from LEI staff (followed in only the most difficult cases by the assistance of a lawyer). For people in the high income class, on the other hand, LEI holdership brings about a fundamental change. When non-insured, they have to pay for a lawyer on the basis of an hourly fee. When insured, they can call in LEI staff and - if necessary - a lawyer at no (or much lower) additional costs. Contacts with LEI staff thus will result in a higher intensity of lawyer contacts, making LEI a pull factor.

These effects of substitution and pulling bring about an interesting result among the figures in Table 4. Once, because of LEI holdership, the conditions for invoking legal assistance are more or less equalised between income classes, the contact intensity with lawyers also becomes equal.

#### 5.3 Controlling for intervening variables: multivariate analysis

We are well aware that, apart from LEI holdership and income, a wide range of other factors may have played a part in the use of legal advisers. This observation may endanger the validity of our findings above. To control for other relevant factors (most notably: personal characteristics, type of problem, gravity and complexity of the problem and expected revenue from its resolution), we conducted multivariate analyses on (1) the first response to a justiciable problem, (2) the total number of the contacts with legal advisers, and (3) having recourse to the Bar. For details, see the Appendix Tables A3-A5.

Surveying the results, we conclude that they corroborate our earlier findings.

- Ceteris paribus, holding an LEI policy makes it more likely that a person will actively respond to a justiciable problem. Given an active disposition, LEI also increases the probability that a person will seek legal advice. Other factors that contribute to an active disposition and to the seeking of advice are directly related to a cost-benefit assessment of efforts to sort out the problem: expected revenue, and the gravity and complexity of the problem.
- Income in itself does not appear to be a significant factor. But things change when we take account of the interaction between LEI and income.<sup>12</sup> The results confirm that income is most notably a factor of importance when people are not insured. Among the non-insured, the number of contacts with legal advisers in general, and with lawyers in particular, decreases with income. When people are insured, the effect of income is insignificant.

### 6. LEI and court proceedings

As the process of problem resolution evolves, self-helpers and the advised have to make new choices. They can strive for an agreement with the other party. They can stop the process, either because they think it is best to give in as the expected benefits do not make up for all the trouble and cost, or because events have taken another turn such as to make the problem no longer acute or even irrelevant (the person has got another job, the neighbour has moved etc.). And they can start court proceedings. In this section we analyze the latter decision. To what extent is the decision to enter a court procedure associated with LEI holdership?

Again, data were taken from the problem-solving survey of the recent Dutch *Paths to Justice* study. However, some of the 2,234 problems in that survey had not yet evolved to the point where the choice on starting a court proceedings, yes or no, might have come up. So, for the present purpose, we only use the 1,982 problems

<sup>&</sup>lt;sup>12</sup> Inclusion of an interaction term between LEI and income in the regressions did not work out because of multicollinearity. Instead we have run separate regressions for the insured and the noninsured.

that may be regarded as final.

Official proceedings were started in 12.7% of all final problems. The larger part of these official proceedings were extrajudicial (notice of objection, conciliation board, rent tribunal, arbitration). Court proceedings were started in only 5.4% of final problems. In passing we note that it is mostly the advised that initiate court proceedings (9.9%), while it is a rather rare event among self-helpers (0.9%).

Table 3 Court proceeding	з, ш <i>7</i>		ii pioni		- 1,904	-)		
Income class	Lower income		Middle income		High income		Total	
Insured	Yes	No	Yes	No	Yes	No	Yes	No
Court proceedings	8.4	4.3	8.4	5.0	6.0	2.2	6.5	4.0

Table 5 (	Court	proceedings,	<u>in % of</u>	final	problems (	(N =	1,982	)
								_

Table 5 presents a breakdown of the relative use of court proceedings with respect to LEI holdership and income. Overall, the difference between the insured and the noninsured is significant ( $\chi^2(1) = 5.80$ , p = 0.016). LEI holders, when active, more often bring their problems to court than the non-insured. The difference between the insured and the non-insured is especially large and significant for the highest income class ( $\chi^2(1) = 4.90$ , p = 0.027). It turns out to be non-significant for income class 1.<sup>13</sup> Income class 2 once again takes the intermediate position, as the difference between the insured and the non-insured is on the verge of significance ( $\chi^2(1) = 3.82$ , p = 0.051).

To control for our findings and isolate the effects of potential intervening variables, we conducted a multivariate analysis of the use of court procedures. Problem type has a strong effect: problems relating to the lease of property, health and work are relatively often brought before a court. Other relevant variables are: the gravity and the complexity of the problem.<sup>14</sup> Ceteris paribus, LEI holdership also turns out to be significant, although the contribution to overall explained variance is relatively small. The insured have a 60% higher chance of being party in a court procedure than the non-insured. The effect of income in itself is not significant at the 5% level. Taking account of the interaction between LEI and income does not change the latter finding.<sup>15</sup>

In sum, having an LEI policy lowers the threshold for starting a court procedure.<sup>16</sup> We already observed that the large majority of court proceedings is initiated by the advised. Thus, for LEI holders, calling in more legal assistance goes along with more court procedures. This raises an interesting question about the chain of causality. One possibility is that people know in advance that their problem will be difficult to

<sup>13</sup> We note that the number of observations in this group is rather small (N = 223, with only 13 starting a court procedure). The result of insignificance from the statistical test should thus be treated with reserve.

Our finding that the decision to start a court procedure is correlated with the problem's complexity may raise some doubt as to the proper measurement of the latter variable and the causal direction involved, since complexity was measured by asking the respondents for the expected duration of sorting the problem out. If we exclude the variable from the regression, however, the coefficients and significance levels of the other variables, and most notably LEI holdership and income, are not affected.

<sup>15</sup> Inclusion of an interaction term between LEI and income in the regression did not work out because of multicollinearity. Instead we have run separate regressions for the insured and the non-insured and found no effect from income.

<sup>16</sup> There is no sign of any displacement of or substitution for extrajudicial proceedings. Within income classes 1 and 2 we find no significant difference in the use of extrajudicial proceedings between insured and non-insured. And within income class 3 the insured even start significantly more extrajudicial proceedings than the non-insured.

settle and will need a court's decision to resolve it, and hence seek a lawyer to assist and represent them. The other possibility is that people seek legal assistance because they have no real idea how their case should be handled properly, and that it is the lawyer who pushes to initiate court proceedings, maybe even more in his own interest than in the interest of his client. Our results suggest that both lines of reasoning may tell a part of the story. Elements such as the gravity and the complexity of the problem and the expected revenue from sorting it out were found to play a significant role in the decision to seek legal assistance and the number of contacts with advisers (cf. Tables A3-A4 in the Appendix). But we also find a significant effect if we include an additional variable for being an advised person or a self-helper in our multivariate analysis on the use of court procedures.

### 7. Results

At the end of the process, what are the results? This issue can be approached from various angles. In this section we will address the following two questions. (1) Did the process of problem resolution as such yield any outcome? (2) Did the active reach their main objective, either directly through the process of problem resolution or indirectly through some other kind of action?

#### 7.1 Outcome of the process of problem resolution

The lumpers did not take any action in the first place, while some of the active - selfhelpers and advised persons - stopped the process of trying to resolve the problem at one moment or another for the reasons discussed earlier. For these persons we can say that the process of problem resolution did not result in any outcome. This occurred in 40.5% of the 1,982 final problems of our survey. In 53.0% of the final problems our respondents reached some form of agreement with the opposing party, whether full or partial, be it directly or through legal assistance, in the course of legal proceedings, or even in follow-up negotiations after the conclusion of legal proceedings. That leaves 6.5% of the problems, where a decision by a third party during official proceedings constituted the conclusion of the dispute resolution.<sup>17</sup>

Table 6 differentiates the findings. Overall there appears to be no significant difference in the outcome pattern between the insured and the non-insured. Nor is the outcome pattern significantly different between the insured and the non-insured within any of the three income classes. At one point, however, we do find a significant difference: for the non-insured between income classes ( $\chi^2(4) = 14.52$ , p = 0.006).<sup>18</sup> Non-insured low income earners are definitely less successful in the process of problem resolution than high income earners.

l able o	Outcome of proce	255 01	propier	n resol	ution, ir	1 % 01	nnai pr	emeido	<b>)</b>
	Income class	Lower	income	Middle income		High income		Total	
	Insured	Yes	No	Yes	No	Yes	No	Yes	No
Outcome									
Agreemen	t	47.0	40.7	54.2	54.5	55.6	58.3	53.3	52.7
Concluded	by decision	7.2	5.0	7.4	6.9	8.4	4.3	7.5	5.4
No result	-	45.8	54.3	38.4	38.6	36.0	37.4	39.2	41.9

## Table 6 Outcome of process of problem resolution, in % of final problems

<sup>&</sup>lt;sup>17</sup> A further distinction between extrajudicial proceedings (3.3%) and court procedures (3.2%) would make the numbers too small to derive any meaningful conclusions.

<sup>&</sup>lt;sup>18</sup> For the insured the pattern does not significantly differ between income classes:  $\chi^2(4) = 3.06$ , p = 0.55.

#### 7.2 Achievement of main objective

That the resolution process is concluded with a form of agreement or a decision by a third party does not imply that the person involved has been completely satisfied. And by the same token, the fact that the person involved did not obtain any result from the resolution process due to passivity or stopping at one moment or other does not by definition mean that his main objective has not been reached and that the problem will last for ever. For problems can also reach a more or less satisfactory end in other ways, such as through unilateral action by one of the parties or by the intervention of a third party. A noise problem in a rental apartment, for instance, can be settled or taken to court. But the problem can also resolve itself if the housing association evicts the noisemaker due to unpaid rent, or if the perpetrator gets weary of all the complaints and turns the volume down, or if the victim moves to another apartment.

In the problem-solving survey people were asked about their main objective when they decided to take action and started on the resolution process. At the end, 75.6% of our 1,858 active respondents reported to have reached their main objective, either fully or partially. For 3.0% it was too early to say, and 21.5% said no.

Table 7 presents a breakdown of the answers. Overall, the pattern of answers is not significantly different between the insured and the non-insured, nor is it within any of the three income classes. Between income classes, however, we do find a significant difference for the non-insured ( $\chi^2(4) = 15.73$ , p = 0.003).<sup>19</sup> Non-insured low income earners are definitely less successful in terms of achieving their main objective than high income earners.

Income class	Lower income		Middle income		High income		Total	
Insured	Yes	No	Yes	No	Yes	No	Yes	No
Objective achieved								
Fully or partially	74.0	64.0	73.5	78.7	74.8	81.3	74.6	76.8
No	23.4	30.4	23.2	18.9	21.8	16.8	22.1	20.7
Too early to say	2.6	5.6	3.3	2.4	3.5	1.9	3.3	2.6

 Table 7
 Achievement of main objective by actives, in % of final problems

#### 7.3 Evaluation

The findings in this section are quite remarkable. The results from the process of problem resolution show some clear and statistically significant differences with respect to LEI holdership and income. It does not matter whether the result is measured by the outcome of the problem resolution process itself or by the achievement of the respondent's main objective. Among the non-insured, low income earners are definitely less successful than high income earners, while among the insured we do not find any significant difference. This would suggest that high income earners are better equipped than low income earners - first of all financially, but presumably also in terms of know-how, communication and bargaining skills - to tackle problems by themselves in a fruitful way.

LEI holdership, apparently, can fill the gap. The insurance policy lowers the financial threshold for seeking legal assistance. But maybe even more importantly, handling of the problem is to a large extent taken over by the staff of the insurance company. And this might compensate for any lack of know-how and for shortcomings in communicative and bargaining skills.

The same gap might, in principle, be filled by having recourse to the legal aid

<sup>&</sup>lt;sup>19</sup> For the insured the pattern does not significantly differ between income classes:  $\chi^2(4) = 0.38$ , p = 0.98.

system. A low income earner can turn to a Legal Services Counter as a free firstinstance address for information and advice and then obtain an assignment for a subsidized lawyer for further assistance. The legal aid system not only has these opportunities on offer, they are also seized upon to the point that lawyers may even be over-used by low income earners, as the figures in preceding sections suggested. But it does not show in the outcomes. As a consequence, we are left with serious doubts about the quality of the services of the legal aid system. Can low income earners fruitfully exploit the information and advice they receive from the Legal Services Counter? Or should more effort be made to lead them by the hand? And if lawyers take on an assignment, with a subsidy in the form of a lump sum that only varies with the type of problem and the complexity of the case, do they really make every effort (and every hour) that is needed to obtain a satisfactory result for the client? Or is it the apprentice from the lawyer's office who is put on the job, as training and useful leg-up to becoming a full partner in the office?

### 8. Conclusion

This paper has shown that legal aid and LEI have co-existed in the Netherlands for quite some time now. While LEI is steadily growing, the relative importance of legal aid is receding step by step as a result of successive budget cuts (with decreasing income and wealth thresholds and increasing private contributions). In the present situation, high income citizens that have to cope with problems in the fields of civil and administrative law do not have access to the legal aid system, but the majority of them can fall back on an LEI family policy for legal assistance. Low income citizens do have recourse to legal aid, but a growing minority has also bought LEI. In this sense, legal aid and LEI are complements.

If we look into the future, however, LEI would seem to be a useful alternative to substitute legal aid, if a new budget cut turned out to be unavoidable. To develop this idea in some detail, we first summarize the main findings from our empirical analysis:

- People holding an LEI policy have on average 11% more justiciable problems than the non-insured. The figures point out that there is a selection effect of 3% and a behavioural effect (moral hazard) of 8%.
- For high income citizens, LEI holdership clearly lowers the threshold for obtaining legal assistance. When insured, they seek more often advice on a problem and the average number of contacts with legal advisers per problem increases too. Most of the additional contacts are with the staff of the insurance company. But the intensity of lawyer contacts also rises, making LEI a pull factor.
- For low income citizens, holding an LEI policy does not fundamentally change the terms for obtaining legal assistance. Thus we find no significant differences in the extent and the intensity of seeking legal assistance between the insured and the non-insured. There is however a change in composition due to substitution. Insured citizens tend to replace the subsidized lawyer by direct assistance from LEI staff, which lowers the intensity of lawyer contacts.
- Among the insured, the effects of pulling and substitution bring about an equalisation of the contact intensity with lawyers between income classes, where the intensity of lawyer contacts is clearly skewed towards the low income class among the non-insured.
- Holding LEI lowers the threshold for starting a court procedure, once again specifically for high income earners. A combination of pulling and pushing effects seems to be involved here. High income citizens can more easily afford legal assistance, which may be an indispensable link to initiating court proceedings when problems are somewhat more complicated. But lawyers can also push their clients into a court procedure, when settling or giving in would be the clients' better choice.

 As to the results of the process of problem resolution, we find a significant difference among the non-insured. Despite the availability of legal aid, low income earners are definitely less successful than high income earners in achieving their main objective and in closing their problems with a form of agreement or a decision by a third party. Once people are insured, however, we do not find any significant difference. LEI holdership apparently compensates for the lack of know-how and for shortcomings in communicative and bargaining skills of low income citizens.

Consider now an extension of LEI to replace the civil and administrative law component of legal aid.<sup>20,21</sup> Low income earners can then no longer rely on the assignment of subsidized lawyers by the legal aid system (with the concomitant private contribution ranging from  $\in$  100 to  $\in$  750 for an assignment and the risk of cost shifting upon losing in court). Instead, they have to buy insurance, which costs some  $\in$  175 - 200 per year for the most relevant modules.

Firstly, this has financial repercussions for low income citizens, which might be judged to be an unfair shift in income distribution. Secondly, the shift may affect the coverage of disputes. Both legal aid and LEI exclude cases of minor importance, with very comparable thresholds of €180 for legal aid and € 200 - 225 for most LEI policies. So, in this respect there is no real difference. But there is with respect to divorce cases, which are very often excluded from LEI coverage.<sup>22</sup> Now, as it is unlikely that people will stay married only to avoid the court and lawyer fees, this once again boils down to an issue of income distribution. A definite judgment on this issue must be postponed, as much depends on how the government reallocates the budget savings.

Thirdly, our findings suggest that the shift from legal aid to LEI for low income citizens may lead to:

- somewhat more justiciable problems as a result of moral hazard;
- a major shift away from lawyer contacts to direct assistance from LEI staff;
- a modest increase in the number of court proceedings, mainly because of the rise in the number of justiciable problems;
- a major improvement in the outcome of the process of problem resolution, most notably as a result of a higher settlement rate.

All in all, the burden of legal assistance would be shifted from the public to the private purse. And there would be a major decrease in the demand for lawyer services, to be substituted by legal assistance from LEI staff members. Access to justice would be affected adversely in some respects (divorce cases, citizens not buying insurance). At the same time, access to justice would get a major boost, as low income citizens would be much better served in their interests. And this might well have a preventative effect, too, tending to lower the number of justiciable problems over time. This leads us to the conclusion that the shift from legal aid to LEI has some clear disadvantages for low income citizens, but these may well be compensated for by some important advantages, brought to the fore by our empirical data.

<sup>&</sup>lt;sup>20</sup> Legal assistance in criminal affairs is generally not covered by LEI. Criminal lawsuits were not taken into consideration in the Dutch *Paths to Justice* study, so we have no empirical data to rely on.

<sup>&</sup>lt;sup>21</sup> Legal aid here refers more specifically to subsidized legal assistance by lawyers. Access to justice would be served by maintaining the Legal Services Counters as a free firstinstance service for information and advice, open to all citizens (as in practice it already is).

<sup>&</sup>lt;sup>22</sup> This is especially important, as an official divorce can only be obtained in the Netherlands through a court procedure.

#### References

- Baik, Kyung Hwan & Kim, In-Gyu (2007). Contingent fees versus legal expenses insurance. *International Review of Law and Economics*, vol. 27, 351-361
- Broeder, S. (2008). *Rechtsbijstandverzekeringen in beeld. Een onderzoek naar beeldvorming van consumenten over rechtsbijstandverzekeringen en rechtsbijstandverzekeraars.* Den Haag: Verbond van Verzekeraars
- Genn, Hazel (1999). Paths to Justice. What people do and think about going to law. Oxford/Portland Oregon: Hart Publishing
- Heyes, Anthony, Rickman, Neil & Tzavara, Dionisia (2004). Legal expenses insurance, risk aversion and litigation. *International Review of Law and Economics*, vol. 24, 107-119
- Kilian, Matthias & Regan, Francis (2004). Legal expenses insurance and legal aid two sides of the same coin? The experience from Germany & Sweden. *International Journal of the Legal Profession*, vol. 11, pp. 233-255
- Pfennigstorf, Werner (1975). Legal expense insurance. American Journal of Comparative Law, vol. 23, pp. 451-489
- Van Velthoven, B.C.J. & Klein Haarhuis, C.M. (2010). *Geschilbeslechtingsdelta* 2009. *Over verloop en afloop van (potentieel) juridische problemen van burgers*. Den Haag: Boom Juridische uitgevers
- Van Velthoven, B.C.J. & Ter Voert, M.J. (2008). Paths to Justice in the Netherlands. In: Legal Aid in the Global Era. Conference Reports and Papers, International Legal Aid Group (ILAG), 8-10 June 2005, Killarney, Glasgow: Centre for Professional Legal Studies, University of Strathclyde, pp. 231-254
- Van Velthoven, Ben & Van Wijck, Peter (2001). Legal cost insurance and social welfare. *Economics Letters*, 72, 387-396

## Appendix

Table A1Holdership of LEI family policy, logistic regression. Regression coefficients<br/>B, odds ratios Exp(B), p-values and proportion of variance R2 explained<br/>(N=5.151)

Variables included <sup>a</sup>	В	Exp(B)	Significance	Proportion R <sup>2</sup>
Age			0.00	0.015
18-24 (reference category)		1		
25-34	0.92	2.50		
35-44	0.93	2.53		
45-54	0.93	2.54		
55-64	0.95	2 59		
65+	0.80	2 23		
Marital status	0.00	2.20	0.00	0.005
Not married (reference category)		1	0.00	0.000
Living together	0 24	1 27		
Married	0.24	1 10		
Widow(er)	-0.01	0.99		
Divorced	-0.35	0.00		
Educational level	0.00	0.71	0.05	0.004
Lower (reference estegen)		1	0.05	0.004
Lower (reference category)	0.00	1 25		
	0.22	1.20		
Intermediate vegetional	0.21	1.23		
	0.31	1.30		
Higher vegetional/DA	0.41	1.51		
Higner vocational/BA	0.20	1.22		
	0.00	1.00	0.04	
Degree of urbanisation			0.04	0.003
High (urban) (reference category)	o (=	1		
Intermediate to high	0.17	1.18		
Intermediate	0.25	1.29		
Intermediate to low	0.20	1.23		
Low (rural)	0.35	1.42		
Household income in euros			0.00	0.010
< 9,500 (reference category)		1		
9,500-15,000	-0.47	0.63		
15,000-20,500	-0.31	0.73		
20,500-28,500	-0.15	0.86		
28,500-34,000	0.02	1.02		
34,000-45,000	0.02	1.02		
45,000-56,000	0.25	1.29		
56,000-68,000	0.30	1.35		
68,000-91,000	0.43	1.53		
> 91,000	0.49	1.64		
Social group			0.01	0.005
Self-employed (reference category)		1		
Civil servant	-0.01	0.99		
Employed	0.07	1.07		
Entitled to benefits	-0.15	0.86		
Retired	-0.31	0.73		
Housewife	-0.51	0.60		
Student	-1.29	0.27		
House ownership (past 5 years)			0.00	0.012
No (reference category)		1		
Yes	0.49	1.63		
Constant	-1.51	0.22	0.00	
Nagelkerke R <sup>2</sup> , total			0.00	0.121
<sup>a</sup> Deckward induction Ne significant	affa ata farre		uina abildran vavaa	

Backward induction. No significant effects found for sex; having children younger than 18 over the past 5 years and being employed over the past 5 years.

Variables included <sup>a</sup>	В	Exp(B) <sup>b</sup>	Significance	Wald $\chi^2$ (model fit)
Age		• • •	0.00	167.304
18-24 (reference category)		1		
25-34	0.28	1.33		
35-44	0.22	1.25		
45-54	0.21	1.24		
55-64	-0.07	0.93		
65+	-0.52	0.60		
Marital status			0.00	129.702
Not married (reference category)		1		
Living together	-0.01	0.99		
Married	-0.10	0.90		
Widow(er)	-0.03	0.97		
Divorced	0.32	1.38		
Educational level			0.00	205.022
Lower (reference category)		1	0.00	
Lower vocational	0 41	1 51		
Intermediate	0.60	1.82		
Intermediate vocational	0.68	1.02		
Higher general secondary	0.00	2 11		
Higher vocational/BA	0.70	2.11		
I Iniversity/MA	0.01	2.24		
Household income in euros	0.00	2.77	0.00	44 706
< 9500 (reference category)		1	0.00	
9 500 (Telefence category)	0 17	1 10		
15 000 20 500	-0.01	1.19		
20 500 28 500	0.01	1.00		
20,500-20,500	0.01	1.01		
20,000-04,000	_0.02	0.02		
45,000-45,000	-0.02	0.90		
45,000-50,000 56,000 68,000	-0.00	0.94		
	-0.07	0.93		
> 01 000	-0.02	0.99		
<u>&gt; 91,000</u>	0.04	1.04	0.01	10.041
Ligh (urban) (reference esterony)		1	0.01	13.341
High (urban) (reference category)	0.06	1 07		
	0.00	1.07		
	-0.03	0.97		
	0.01	1.01		
	0.02	1.02	0.00	444.400
Social group			0.00	144.129
Self-employed (reference category)	0.00	1		
	-0.26	0.78		
Employed	-0.23	0.79		
Entitled to benefits	0.23	1.26		
Retired	-0.05	0.96		
Housewife	-0.44	0.64		
Student	0.02	1.02		
Employed past 5 years			0.00	66.420
No (reference category)		1		
Yes	0.30	1.35		
House ownership past 5 years			0.00	78.576
No (reference category)		1		
Yes	0.25	1.28		
Rented property past 5 years			0.00	137.685
No (reference category)		1		

 Table A2
 Frequency of justiciable problems, Poisson regression results. Regression coefficients B, exponents, p-values and model fit (N=5.151)

Yes	0.29	1.34		
Holding LEI family policy			0.00	11.895
No (reference category)		1		
Yes	0.07	1.08		
Constant	-0.47	0.62	0.00	14.021
<sup>a</sup> No significant effects found for sex, h	aving childre	en under 18 and h	naving let property o	ver the past 5

years. These variables were excluded from the analysis.

Proportion of number of problems relative to the reference category.

# Table A3 First response: becoming active (versus remaining passive): logistic regression analysis. Regression coefficients B, odds ratios Exp(B), p-values and proportion of variance R<sup>2</sup> explained (N=2.234)

	Variance	c it capiali	icu (i <b>ii</b> =2.23+)	
Variables included <sup>a</sup>	В	Exp(B)	Significance	Proportion R <sup>2</sup>
Expected revenue from sorting out			0.00	0.055
problem in euros <sup>⁰</sup>				
< 250 (reference category)		1		
251-2,500	1.13	3.11		
> 2,501	2.24	9.37		
Gravity of problem			0.00	0.030
Not grave at all (reference category)		1		
A little	0.39	1.47		
Fairly	0.75	2.12		
Very serious	0.84	2.33		
Fully preoccupied	2.88	17.87		
Claimant or defendant in problem			0.00	0.019
Claimant (reference category)	1			
Defendant	-0.80	0.45		
Holding LEI family policy			0.02	0.007
No (reference category)		1		
Yes	0.43	1.54		
Constant	1.98	7.21	0.00	
Nagelkerke R <sup>2</sup> total				0 112

Nagelkerke R<sup>-</sup>, total

0.112

No significant effects found for sex, age, marital status, degree of urbanisation, income, education, social group, problem type, civil or administrative law, trade union membership and type of other party. Expected duration of sorting out problem was not included because the passive skipped this question during the survey.

Further disaggregation of this variable into more subclasses did not yield satisfactory results, because of the relatively small number of passive people, who moreover had no expected revenue values above 10,000 euros.

# Table A4First response: obtaining legal assistance (versus resolving the problem<br/>without help), logistic regression analysis. Regression coefficients B, odds<br/>ratios Exp(B), p-values and proportion of variance R<sup>2</sup> explained (N=2.100)

Variables included <sup>a</sup>	В	Exp(B)	Significance	Proportion R <sup>2</sup>
Marital status			0.01	0.006
Not married (reference category)		1		
Living together	0.45	1.57		
Married	0.12	1.13		
Widow(er)	0.49	1.63		
Divorced	0.69	1.99		
Social group			0.04	0.005
Self-employed (reference category)		1		
Civil servant	-0.07	0.93		
Employed	-0.39	0.67		
Entitled to benefits	-0.04	0.96		
Retired	-0.64	0.53		
Housewife	0.09	1.10		
Student	-0.87	0.42		

Degree of urbanisation	-		0.03	0.007
High (urban) (reference category)		1		
Intermediate to high	0.44	1.55		
Intermediate	0.33	1.39		
Intermediate to low	0.24	1.28		
Low (rural)	0.56	1.74		
Problem type			0.00	0.015
1. Work (reference category)		1		
2. House ownership	0.42	1.52		
3. Letting property	0.01	1.01		
4. Renting property	-0.22	0.80		
5 Consumer goods/services	-0.32	0.73		
6 Money	-0.04	0.96		
7 Family/relations	0.83	2.30		
8 Children under 18	0.53	1 70		
9 Health problems (work accident)	1 20	3 31		
10 Other (discrimination libel)	0.80	2 22		
Expected revenue form sorting out	0.00	2.22	0.00	0.026
problem in euros			0.00	0.020
< 25 (reference category)		1		
	0.25	1 28		
20-50	0.25	1.20		
51-100 101 250	0.49	1.03		
101-250	0.45	1.57		
	1.18	3.25		
501-1,000	1.67	5.29		
1,001-2,500	1.01	2.73		
2,501-5,000	1.58	4.86		
5,001-10,000	1.65	5.18		
10,001-25,000	1.52	4.55		
25,001-50,000	1.18	3.25		
> 50.000	2.18	8.89		
Expected duration of sorting out			0.00	0.034
problem				
Less than a week (reference category)	0.50	1		
1-2 weeks	0.50	1.65		
3-4 weeks	0.43	1.53		
1-2 months	0.97	2.65		
3-4 months	1.05	2.87		
5-6 months	1.40	4.04		
7-9 months	1.69	5.42		
10-12 months	0.89	2.44		
More than a year	1.40	4.06		
Claimant or defendant in problem			0.05	0.001
Claimant (reference category)		1		
Defendant	0.25	1.28		
Gravity of problem			0.00	0.037
Not grave at all (reference category)		1		
A little	0.10	1.10		
Fairly	0.71	2.03		
Very grave	0.95	2.58		
Fully preoccupied	1.78	5.92		
Type of other party			0.00	0.010
Private (reference category)		1		
Company. organisation	-0.46	0.63		
Government	-0.64	0.53		
Other	0.10	1.11		
Trade union membership			0.00	0.014
No (reference category)		1		
Member & work related problem	1.18	3.25		
Holding LEI family policy	-		0.00	0.005
J 7 1 J				-

No (reference category)		1		
Yes	0.36	1.43		
Constant	-2.43	0.09	0.00	
Nagelkerke R <sup>2</sup> , total				0.306
a Ne similiant affects found for		مامع معالياته معالم	alalatanti ya Tavy	

No significant effects found for sex, income, education, civil or administrative law.

#### Table A5 Number of contacts with legal advisers, Poisson regression analysis. Regression coefficients B, exponents, p-values and model fit (Wald) (N-1 159)

Household income       0.03       9.18         Low (reference category)       1       1         Intermediate       -0.16       0.86       1         High       -0.20       0.82       0.00       30.83         Expected duration of sorting out problem       0.00       30.83       1         Less than 1 week (reference       1       1       1       1         category)       -0.11       0.90       3-4 weeks       -0.05       0.95         1-2 wonths       0.02       1.02       3-4 weeks       -0.06       1.06	Variables included <sup>a</sup>	В	Exp(B)	Significance	Wald $\chi^2$ (model fit)
Low (reference category)       1         Intermediate       -0.16       0.86         High       -0.20       0.82         Expected duration of sorting out problem       0.00       30.83         Less than 1 week (reference       1         category)       -0.11       0.90         1-2 weeks       -0.05       0.95         1-2 months       0.02       1.02         3-4 months       0.06       1.06	Household income			0.03	9.18
Intermediate         -0.16         0.86           High         -0.20         0.82           Expected duration of sorting out problem         0.00         30.83           Less than 1 week (reference         1         1           category)         -0.11         0.90           1-2 weeks         -0.05         0.95           1-2 months         0.02         1.02           3-4 months         0.06         1.06	Low (reference category)		1		
High         -0.20         0.82           Expected duration of sorting out problem         0.00         30.83           Less than 1 week (reference         1         1           category)         -0.11         0.90           3-4 weeks         -0.05         0.95           1-2 months         0.02         1.02           3-4 months         0.06         1.06	Intermediate	-0.16	0.86		
Expected duration of sorting out       0.00       30.83         problem       1       1         Less than 1 week (reference       1       1         category)       -0.11       0.90         1-2 weeks       -0.05       0.95         1-2 months       0.02       1.02         3-4 months       0.06       1.06	High	-0.20	0.82		
problem         1           Less than 1 week (reference         1           category)         -0.11         0.90           1-2 weeks         -0.05         0.95           1-2 months         0.02         1.02           3-4 months         0.06         1.06	Expected duration of sorting out			0.00	30.83
Less than 1 week (reference       1         category)       -0.11       0.90         1-2 weeks       -0.05       0.95         3-4 weeks       0.02       1.02         3-4 months       0.06       1.06	problem				
category)         1-2 weeks       -0.11       0.90         3-4 weeks       -0.05       0.95         1-2 months       0.02       1.02         3-4 months       0.06       1.06	Less than 1 week (reference		1		
1-2 weeks     -0.11     0.90       3-4 weeks     -0.05     0.95       1-2 months     0.02     1.02       3-4 months     0.06     1.06	category)				
3-4 weeks         -0.05         0.95           1-2 months         0.02         1.02           3-4 months         0.06         1.06	1-2 weeks	-0.11	0.90		
1-2 months         0.02         1.02           3-4 months         0.06         1.06	3-4 weeks	-0.05	0.95		
3-4 months 0.06 1.06	1-2 months	0.02	1.02		
	3-4 months	0.06	1.06		
5-6 months 0.22 1.24	5-6 months	0.22	1.24		
7-9 months 0.08 1.08	7-9 months	0.08	1.08		
10-12 months 0.17 1.18	10-12 months	0.17	1.18		
More than a year 0.17 1.19	More than a year	0.17	1.19		
Gravity of problem 0.00 40.20	Gravity of problem			0.00	40.20
Not grave at all (reference 1	Not grave at all (reference		1		
category)	category)				
A little -0.29 0.75	A little	-0.29	0.75		
Fairly -0.19 0.83	Fairly	-0.19	0.83		
Very grave -0.12 0.88	Very grave	-0.12	0.88		
Fully preoccupied 0.12 1.13	Fully preoccupied	0.12	1.13		
Type of other party 0.00 14.05	Type of other party			0.00	14.05
Private (reference category) 1	Private (reference category)		1		
Company, organisation -0.16 0.85	Company, organisation	-0.16	0.85		
Government -0.22 0.80	Government	-0.22	0.80		
Other -0.08 0.92	Other	-0.08	0.92		
Holding LEI family policy 0.04 4.07	Holding LEI family policy			0.04	4.07
No (reference category) 1	No (reference category)		1		
Yes 0.09 1.09	Yes	0.09	1.09		
Constant         1.06         2.88         0.00         262.25	Constant	1.06	2.88	0.00	262.25

No significant effects found for sex, age, marital status, social group, degree of urbanisation, education, claimant or defendant, and trade union membership. An interaction effect between income and LEI turned out to be absent (p=0.53).

# Table A6Starting a court procedure, logistic regression analysis. Regression<br/>coefficients B, odds ratios Exp(B) and proportion of variance R2 explained<br/>(N=1.856)

(11-1,000)				
Variables included <sup>a</sup>	В	Exp(B)	Significance <sup>b</sup>	Proportion R <sup>2</sup>
Social group			0.08	0.019
Self-employed (reference category)		1		
Civil servant	-1.44	0.24		
Employed	-0.84	0.43		
Entitled to benefits	-0.02	0.98		
Retired	-0.97	0.38		

Income	-		0.07	0.012
Low (reference category)		1		
Intermediate	0.36	1.43		
High	0.04	1.04		
Problem type			0.00	0.044
1. Work (reference category)		1		
2. House ownership	-1.03	0.36		
3. Letting property	0.04	1.04		
4. Renting property	-1.81	0.16		
5. Consumer goods/services	-2.18	0.11		
6. Money	-0.44	0.64		
7. Family/relations	-0.09	0.92		
8. Children under 18	-1.00	0.37		
9. Health problems (work, accident)	0.13	1.14		
10. Other (discrimination, libel)	-0.73	0.48		
Expected duration of sorting out			0.00	0.047
problem				
Less than a week (reference category)		1		
1-2 weeks	1.89	6.61		
3-4 weeks	1.91	6.74		
1-2 months	2.42	11.28		
3-4 months	2.35	10.45		
5-6 months	3.13	22.79		
7-9 months	3.22	25.12		
10-12 months	2.96	19.22		
More than a year	3.21	24.84		
Gravity of problem			0.00	0.037
Not grave at all (reference category)		1		
A little	-0.40	0.67		
Fairly	0.27	1.31		
Very grave	0.06	1.06		
Fully preoccupied	1.35	3.85		
Type of other party			0.03	0.013
Private (reference category)		1		
Company, organisation	-0.94	0.39		
Government	0.11	1.12		
Other	-0.04	0.96		
Holding LEI family policy			0.05	0.005
No (reference category)		1		
Yes	0.47	1.60		
Constant	-4.08	0.02	0.01	
Nagelkerke R <sup>2</sup>				0.260

<sup>a</sup> No significant effects found for sex, marital status, degree of urbanisation, education, expected returns, claimant or defendant, and civil or administrative law type of problem.

<sup>b</sup> Deviating from the other tables in the Appendix we here use a 10% significance level for including or excluding variables. Presumably because of the relatively low number of court procedures that were actually started, the results are not very robust if we hold to a 5% significance level. Once social group is dropped from the regression, income becomes insignificant at a p-value of 0.12, starting a knock-on effect. For once income is dropped from the regression, the LEI policy variable also becomes insignificant.

# **Research Memorandum Department of Economics**

Research Memoranda

- 6 - 0	are ava can be Nether	ailable from Department of Economics homepage at : <u>http://www.economie.leidenuniv.nl</u> ordered at Leiden University, Department of Economics, P.O. Box 9520, 2300 RA Leiden, The lands Phone ++71 527 7756; E-mail: <u>economie@law.leidenuniv.nl</u>
2010	0.02	Carolien Klein Haarhuis and Ben van Velthoven Legal Aid and Legal Expenses Insurance, Complements or Substitutes? The Case of The Netherlands?
2010	0.01	Koen Caminada, Kees Goudswaard and Ferry Koster Social Income Transfers and Poverty Alleviation in OECD Countries.
2009	0.03	Megan Martin and Koen Caminada Welfare Reform in the United States. A descriptive policy analyse.
2009	9.02	Koen Caminada and Kees Goudswaard Social Expenditure and Poverty Reduction in the EU and other OECD Countries.
2009	9.01	Maroesjka Versantvoort Complementariteit in arbeid- en zorgtijd.
2008	8.06	Koen Caminada and Kees Goudswaard Effectiveness of poverty reduction in the EU.
2008	8.05	Koen, Caminada, Kees Goudswaard and Olaf van Vliet Patterns of welfare state indicators in the EU. Is there convergence?
2008	8.04	Kees Goudswaard and Koen Caminada The redistributive impact of public and private social expenditure.
2008	8.03	Karen M. Anderson and Michael Kaeding Pension systems in the European Union: Variable patterns of influence in Italy, the Netherlands and Belgium.
2008	8.02	Maroesjka Versantvoort Time use during the life course in USA, Norway and the Netherlands: a HAPC-analysis.
2008	8.01	Maroesjka Versantvoort Studying time use variations in 18 countries applying a life course perspective.
2007	.06	Olaf van Vliet and Michael Kaeding Globalisation, European Integration and Social Protection – Patterns of Change or Continuity?
2007	.05	Ben van Velthoven Kosten-batenanalyse van criminaliteitsbeleid. Over de methodiek in het algemeen en Nederlandse toepassingen in het bijzonder.
2007	.04	Ben van Velthoven Rechtseconomie tussen instrumentaliteit en normativiteit.
2007	.03	Guido Suurmond Compliance to fire safety regulation. The effects of the enforcement strategy.
2007	.02	Maroesjka Versantvoort Een schets van de sociaal-economische effecten van verlof en de beleidsmatige dilemma's die daaruit volgen.
2007	2.01	Henk Nijboer A Social Europe: Political Utopia or Efficient Economics? An assessment from a public economic approach.
2006	0.04	Aldo Spanjer European gas regulation: A change of focus.
2006	0.03	Joop de Kort and Rilka Dragneva Russia's Role in Fostering the CIS Trade Regime.

2006.02	Ben van Velthoven Incassoproblemen in het licht van de rechtspraak.
2006.01	Jurjen Kamphorst en Ben van Velthoven De tweede feitelijke instantie in de belastingrechtspraak.
2005.03	Koen Caminada and Kees Goudswaard Budgetary costs of tax facilities for pension savings: an empirical analysis.
2005.02	Henk Vording en Allard Lubbers How to limit the budgetary impact of the European Court's tax decisions?
2005.01	Guido Suurmond en Ben van Velthoven Een beginselplicht tot handhaving: liever regels dan discretionaire vrijheid.
2004.04	Ben van Velthoven en Marijke ter Voert Paths to Justice in the Netherlands. Looking for signs of social exclusion.
2004.03	Guido Suurmond Brandveiligheid in de horeca. Een economische analyse van de handhaving in een representatieve gemeente.
2004.02	Kees Goudswaard, Koen Caminada en Henk Vording Naar een transparanter loonstrookje?
2004.01	Koen Caminada and Kees Goudswaard Are public and private social expenditures complementary?
2003.01	Joop de Kort De mythe van de globalisering. Mondialisering, regionalisering of gewoon internationale economie?
2002.04	Koen Caminada en Kees Goudswaard Inkomensgevolgen van veranderingen in de arbeidsongeschiktheidsregelingen en het nabestaandenpensioen.
2002.03	Kees Goudswaard Houdbare solidariteit.
2002.02	Ben van Velthoven Civiele en administratieve rechtspleging in Nederland 1951-2000; deel 1: tijdreeksanalyse.
2002.01	Ben van Velthoven Civiele en administratieve rechtspleging in Nederland 1951-2000; deel 2: tijdreeksdata.
2001.03	Koen Caminada and Kees Goudswaard International Trends in Income Inequality and Social Policy.
2001.02	Peter Cornelisse and Kees Goudswaard On the Convergence of Social Protection Systems in the European Union.
2001.01	Ben van Velthoven De rechtsbijstandsubsidie onderzocht. En hoe nu verder?
2000.01	Koen Caminada Pensioenopbouw via de derde pijler. Ontwikkeling, omvang en verdeling van premies lijfrenten volgens de Inkomensstatistiek.
1999.03	Koen Caminada and Kees Goudswaard Social Policy and Income Distribution. An Empirical Analysis for the Netherlands.
1999.02	Koen Caminada Aftrekpost eigen woning: wie profiteert in welke mate? Ontwikkeling, omvang en verdeling van de hypotheekrenteaftrek en de bijtelling fiscale huurwaarde.
1999.01	Ben van Velthoven and Peter van Wijck Legal cost insurance under risk-neutrality.
1998.02	Koen Caminada and Kees Goudswaard Inkomensherverdeling door sociale zekerheid: de verdeling van uitkeringen en premieheffing in 1990 en 1995.
1998.01	Cees van Beers Biased Estimates of Economic Integration Effects in the Trade Flow Equation.

1997.04	Koen Caminada and Kees Goudswaard Distributional effects of a flat tax: an empirical analysis for the Netherlands.
1997.03	Ernst Verwaal Compliance costs of intra-community business transactions. Magnitude, determinants and policy implications.
1997.02	Julia Lane, Jules Theeuwes and David Stevens High and low earnings jobs: the fortunes of employers and workers.
1997.01	Marcel Kerkhofs and Maarten Lindeboom Age related health dynamics and changes in labour and market status.
1996.07	Henk Vording The case for equivalent taxation of social security benefits in Europe.
1996.06	Kees Goudswaard and Henk Vording Is harmonisation of income transfer policies in the European Union feasible?
1996.05	Cees van Beers and Jeroen C.J.M. van den Bergh The impact of environmental policy on trade flows: an empirical analysis.
1996.04	P.W. van Wijck en B.C.J. van Velthoven Een economische analyse van het Amerikaanse en het continentale systeem van proceskostentoerekening.
1996.03	Arjan Heyma Retirement and choice constraints: a dynamic programming approach.
1996.02	B.C.J. van Velthoven en P.W. van Wijck
	De economie van civiele geschillen; rechtsbijstand versus no cure no pay.
1996.01	Jan Kees Winters Unemployment in many-to-one matching models.
1995.05	Maarten Lindeboom and Marcel Kerkhofs Time patterns of work and sickness absence. Unobserved effects in a multi-state duration model.
1995.04	Koen Caminada en Kees Goudswaard De endogene ontwikkeling van de belastingdruk: een macro-analyse voor de periode 1960- 1994.
1995.03	Henk Vording and Kees Goudswaard Legal indexation of social security benefits: an international comparison of systems and their effects.
1995.02	Cees van Beers and Guido Biessen Trade potential and structure of foreign trade: the case of Hungary and Poland.
1995.01	Isolde Woittiez and Jules Theeuwes Well-being and labour market status.
1994.10	K.P. Goudswaard Naar een beheersing van de Antilliaanse overheidsschuld.
1994.09	Kees P. Goudswaard, Philip R. de Jong and Victor Halberstadt The realpolitik of social assistance: The Dutch experience in international comparison.
1994.08	Ben van Velthoven De economie van misdaad en straf, een overzicht en evaluatie van de literatuur.
1994.07	Jules Theeuwes en Ben van Velthoven De ontwikkeling van de criminaliteit in Nederland, 1950-1990: een economische analyse.
1994.06	Gerard J. van den Berg and Maarten Lindeboom Durations in panel data subject to attrition: a note on estimation in the case of a stock sample.
1994.05	Marcel Kerkhofs and Maarten Lindeboom Subjective health measures and state dependent reporting errors.
1994.04	Gerard J. van den Berg and Maarten Lindeboom Attrition in panel data and the estimation of dynamic labor market models.
1994.03	Wim Groot Wage and productivity effects of enterprise-related training.

- 1994.02 Wim Groot Type specific returns to enterprise-related training.
- 1994.01 Marcel Kerkhofs A Quadratic model of home production decisions.