

# Hidden workers and the hidden worker potential in the Netherlands

*Brugt Kazemier*

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**Discussion paper (201306)**



## Explanation of symbols

.	data not available
*	provisional figure
**	revised provisional figure (but not definite)
x	publication prohibited (confidential figure)
—	nil
—	(between two figures) inclusive
0 (0.0)	less than half of unit concerned
empty cell	not applicable
2012–2013	2012 to 2013 inclusive
2012/2013	average for 2012 up to and including 2013
2012/'13	crop year, financial year, school year etc. beginning in 2012 and ending in 2013
2010/'11– 2012/'13	crop year, financial year, etc. 2010/'11 to 2012/'13 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

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# **Hidden workers and the hidden worker potential in the Netherlands**

**Brugt Kazemier<sup>1</sup>**

*From 2006 to 2010 Statistics Netherlands conducted surveys on the size and structure of the hidden labour market. Five to ten percent of the respondents admitted that they did not report all of their income to the tax or social security authorities.*

*The supply of hidden labour, however, is much larger. About 30 percent of all respondents said that they would do hidden work if they had the chance. Their characteristics are very similar to those who actually did the hidden work, although less pronounced.*

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*JEL classification: E26*

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<sup>1</sup> Statistics Netherlands, Demographic and Socio-Economic Statistics, PO Box 24500, 2490 HA The Hague, The Netherlands; b.kazemier@cbs.nl

## **1. Introduction**

According to a special issue of the Eurobarometer (European Commission, 2007) on undeclared work in the European Union, the Netherlands has one of the highest percentages of people working off the record (13 percent). Other leading countries are Denmark (18 percent), Lithuania (15 percent), Estonia (11 percent) and Sweden (10 percent).

These results are surprising and contrary to the results of other research. The prevailing view is that undeclared work is particularly manifest in countries like Italy, Portugal and Bulgaria. In the Eurobarometer, however, these countries score remarkably low at 3, 3 and 5 percent.

Renooy (2007) gives an explanation for these findings. According to him, two different phenomena were measured. Undeclared work in the north of Europe mainly consists of work for private individuals: small jobs, brief periods, and small amounts. In Southern and Eastern Europe undeclared work is more structural, with employees getting a substantial part of their regular wages paid in unrecorded ‘envelop wages’. Research conducted by Statistics Netherlands supports the analysis of Renooy for the Netherlands.

In the 1980s, Statistics Netherlands conducted extensive survey research on undeclared work, see for example Kazemier (1984), Kazemier and Van Eck (1986, 1992) and Van Eck and Kazemier (1988, 1989). There was a follow-up in 2006 due to the adoption of the “Draft council resolution on transforming undeclared work into regular employment” (Council of the European Union, 2003). Our main aims were to determine whether survey research can be used to monitor the underground economy, especially the changes in size over time (Kazemier, 2003a), to identify the sectors in the economy where hidden activities are of significant size and the distribution of hidden earnings over these sectors. Another aim was to determine whether the insights into the hidden labour market, as derived from our investigations in the 1980s, are still valid or whether they should be revised.

This paper reports on the most important results of the surveys. The paper starts in section 2 with some methodological issues. Section 3 presents the results with respect to the size of the hidden activities. Sections 4 and 5 deal with the characteristics of hidden and potential hidden workers. Section 6 deals with the main conclusions of the research.

## **2. Some methodological issues**

Hidden activities are not easily measured, as people seek to avoid detection. Therefore, one has to be very inventive to come up with a reliable estimate of their size. Many researchers have been very creative and many methods were used.

The methods used can be classified into three groups: macro-model methods, micro methods and other methods. The first group includes the often used monetary methods (for example Gutmann, 1977; Feige, 1979; Tanzi, 1980; Mogensen et al, 1995; Boeschoten and Fase, 1984; Fase, 1984), the unobserved variables method (Frey and Weck, 1983) and the method used by Schneider (e.g. Schneider and Enste, 2000; Schneider, 2005, 2006; Enste and Schneider, 2006). These methods tend to produce rather high estimates and do not provide a breakdown by economic activity or by characteristics of the hidden workers.

The second group, micro methods, consists of all methods that boil down to careful and detailed data analysis, such as tax audits and household surveys (for example Inland Revenue Service, 1979) and household surveys (e.g. Pedersen, 2003; Feld and Larsen, 2005, 2012; European Commission, 2007; Rockwool, 2011, 2012; Pacolet et al., 2012). These methods often provide detailed results, broken down by economic activity or personal characteristics. However, they also focus only on part of the underground economy, so they always underestimate its size.

The other methods consist of all methods that do not fit into the groups mentioned, like physical observation (e.g. Mars, 1982) and the methods used by national accountants to assure the exhaustiveness of the estimates

of national income. The latter often combine various methods, including expert guesses (Kazemier, 2003b; United Nations, 2008).

Of all methods, the monetary methods and the unobserved variables method generally yield the highest estimates; estimates based on surveys and the estimates by national accountants are generally the lowest. The latter and especially surveys, however, generally provide the most details on economic activity of the hidden work and on personal characteristics of the hidden workers. A more detailed description of methods used can be found in Van Eck and Kazemier (1989) and Kazemier (2003c, 2006).

As one of the aims of our research was to get a breakdown of unrecorded activities by economic activity, to be used in the calculation of the national income, we chose household survey research.

There are always two parties involved in unrecorded work: the contractor (the supply of hidden labour) and the customer (the demand for hidden work). To measure the size of the hidden activities one has to estimate at least one. If we use a household survey to see the supply of hidden labour, then undeclared work by companies is neglected. If we use the survey to see the demand for hidden labour, we miss undeclared work paid by firms, such as bars, cafes and restaurants. Therefore, both alternatives not fully cover the underground economy. Moreover, not all respondents involved in hidden activities are willing to admit to this in a survey. To make the results of the surveys comparable with our 1980's research to see whether things have changed or not – this was our third aim – it was decided to look at the supply side of hidden labour including an analysis of the characteristics and motives of hidden workers. To allow for at least some validation, we included some questions on the demand for hidden house cleaning and hidden home maintenance.

The research started in 2006 with an experiment to see if a mixed-mode survey would yield satisfying results<sup>1</sup>. In a mixed-mode survey

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<sup>1</sup> In a research on hidden activities by people on social benefits, Van Gils et al. (1996), Van der Heijden and Van Gils (1996) and Van der Heijden et al. (2000, 2005) used a randomized response technique. The advantage is that the “*randomized response*

respondents are approached in a way that best suites the interviewee (by internet, telephone, mail or face-to-face). In the tested mixed-mode survey, a random sample of persons (16+ years old) was asked to complete an internet survey. People who did not have access to the internet and some others could complete a survey on paper. Non-respondents were phoned and kindly asked to complete the online or paper questionnaire. They could also opt to be interviewed by phone. For control we also did traditional random face-to-face survey research. The numbers on response and respondents who reported hidden activities (incidence) are presented in table 1.

*Table 1. Response and incidence\* by survey mode, 2006*

Mode	Response		Respondents who admitted undeclared activities (standard error)
			%
Face-to-face	1133	61%	7.6 (0.9)
Mixed mode	980	51%	6.8 (0.7)
Internet	550	} 51%	7.6 (1.1)
Paper	129		3.9 (1.6)
Telephone	301		6.6 (1.2)

\* not weighted

The incidence in the face-to-face survey was significantly higher than in the mixed mode survey:  $\chi^2 = 6.85$  ( $\chi^2_{0.95\%}; df = 1 = 3.84$ ). Without the written or telephone variant in the mixed-mode, the differences are not significant at the 95 percent level, but they are at the 90 percent level. Although face-to-face surveys perform significantly better, it was decided to continue with internet surveys.

*procedure gives the lowest distortion on threatening questions about the performance on socially undesirable acts*” (Bradburn and Sudman, 1980). However, it is unclear to what extent this technique is useful for measuring hidden activities. In a pilot study in 1996 they tested the method on a sample of people who were caught for social benefit fraud. Part of the sample was surveyed in a traditional manner, part of it was surveyed using randomised response techniques. The results with randomised response were twice as high as the results of the traditional surveys. Nevertheless, only about 50 percent of the respondents admitted fraud, which was less than expected. Disadvantages of this technique are that it is difficult to explain to the interviewee and that one needs much larger sample sizes. Moreover the analysis of the outcomes is much more complicated (Van den Hout and Van der Heijden, 2002, 2004).

Not everybody has access to the internet or is equally good at using computers. This is especially the case for older people. Table 2 shows that there is a clear relationship between age and response on the online survey. Moreover, zero respondents over 65 years old admitted to working off the record. To further cut research costs it was decided to focus future research on people aged 16 to 65.

*Table 2. Response, incidence\* and internet access by age, internet-survey 2006*

Age	Access to the internet	Population	Response	Undeclared paid activities (st.error)
	%			
16-25 years	95	16	19	19.3 (3.8)
26-35 years	90	18	22	5.9 (2.2)
36-45 years	92	21	19	1.9 (1.4)
46-55 years	90	19	21	7.6 (2.4)
56-65 years	73	16	14	0.0
66-75 years	50	10	5	0.0
		100	100	7.1 (1.1)

\* not weighted

Finally, to improve response, the questionnaire was simplified and the screen layout made more attractive. In 2010 the questions on the time spent on hidden activities and the average hidden hourly wage rate were skipped. The (weighted) results on response and incidence are shown in table 3. The sample size in 2007-2010 was 10 thousand each year.

*Table 3. Response and incidence\* 2006-2010*

	Response 16-65 years old	Undeclared activities (standard error)
		%
2006 face-to-face	1029	9.4 (0.9)
2006 internet	499	6.8 (1.1)
2007 internet	2915	5.9 (0.4)
2008 internet	2626	5.4 (0.4)
2009 internet	1817	5.1 (0.5)
2010 internet	2660	6.3 (0.5)

\*weighted

There are two reasons for the low response in 2009. The first is that all surveys were held in October or November, except in 2009 when it was held in the second half of November and in December. December is not

the best month for survey research because of the many special days in that month: St. Nicolas on 5 December, Christmas on 25 and 26 December, the Christmas holidays and New Years Eve. The second and perhaps even more important reason is that there were some difficulties in the implementing. There is no reason to assume that the bad response has to do with the topic of the survey

A comparison of the 2006 face-to-face and the 2006 internet surveys shows a difference of 2.6%-point. In the 2006 internet survey, however, people could complete an alternative survey (paper or telephone). We do not know to what extend this has affected the results. The comparison of the 2007-2010 internet results and the 2006 face-to-face results suggests that the internet surveys underestimated the number of people who earned money off the record by at least 60 percent.

### **3. The hidden activities**

On average the unrecorded earnings sum up to 435 million euro<sup>2</sup>, which is just under 0.1 percent of gross domestic product or 0.2 percent of the total net household income (net wages plus net social benefits). Hidden working hours, raised for the whole population, sum up to 28.5 thousand working years. This is 0.4 percent of the non-hidden labour volume.

Total hidden income reported in the surveys is quite low.<sup>3</sup> This is because the people who do the hidden work either did not admit this in the survey or did not report the full extent of their hidden income. This is especially true for people with high hidden incomes. Hidden incomes of 10 000 euro or more were not reported in the survey. So hidden income will be much more underestimated than hidden workers.

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<sup>2</sup> The product of the average wage and the average working hours is less than the average hidden income. This is because people with low hidden wages work more hours than people with high hidden wages.

<sup>3</sup> Moreover, part of the reported hidden incomes are that small that, if declared to the tax authorities, they would not be taxed. This is the case for small hidden incomes earned by people without further income or social benefit.

*Table 4. Total hidden income, wages and hours worked, 2007-2010\**

		2007	2008	2009	2010	2007/10
Average wage	Euro/hour	9.10	12.30	13.10		11.50
Average hours worked		105	80	55		80
Average hidden income	Euro	800	810	660	545	705
Total hours worked	1000 fte**	39.5	27.0	18.5		28.5
Total hidden income	Million euro	515	475	375	375	435

\* Weighted and raised for the whole population; \*\* Fte = Full time equivalents = 1700 working hours.

How much the total hidden income is underestimated can be found in the 2006 and 2007 surveys. To avoid a sudden introduction of the topic ‘hidden income’ the most sensitive questions were preceded by questions about volunteer work and about maintaining and cleaning the home. The question was if the payments for the latter were kept from the tax authorities. About 3 to 6 percent of all households reported undeclared maintenance of a 1000 euro on average. And one fifth of all households said they paid a little over 10 euro an hour for 3.5 hours a week on average for cleaning. The reported demand for hidden labour is hardly affected by the survey mode, unlike the number of people admitting they worked off the record. The corresponding figures from the supply side are far lower, see table 5.

*Table 5. Hidden payments for and hidden income from cleaning and home maintenance, 2006-2008 (million euro)\**

	Demand		Supply
	2006 face-to-face	2006/07 internet	2007/08 internet
House cleaning	860	965	90
Home maintenance	245	275	90

\* Weighted.

The findings in table 5 are supported by the results of the Special Eurobarometer on undeclared work (European commission, 2007). There, little over 11 percent of all respondents said they had acquired undeclared household services. This includes gardening, child care, and care for the elderly. This is slightly less than in our surveys where 11.5 percent of all respondents who were asked, admitted that they paid for cleaning off the record. However, the latter does not include gardening, child care and care for the elderly. The outcomes for construction of the Eurobarometer are a

bit higher: they recorded 8 percent for their findings and we almost 6 percent for ours.

The results on house cleaning are also seconded by Van Nes et al. (2004). In their survey research on personal services they found that 17 percent of all households had a house cleaner for 3.4 hours a week at 8.35 euro an hour on average. Also the Dutch Household Budget Surveys yield similar results. They estimate total yearly expenditure on house cleaners at approximately 1000 million euro.<sup>4</sup> These include both hidden and non-hidden house cleaning.

According to the Dutch Household Budget Surveys, the total spending on home maintenance by households with the reference person aged between 15 and 65, was around 1200 million euro, both in 2006 and 2007. These include the non-hidden and perhaps part of the hidden home maintenance. This means that if the survey results are correct, 15 to 25 percent of all home maintenance (hidden and non-hidden) by these households is hidden.

The comparison of the demand based estimates and the supply based estimates suggest that the size of the hidden economy in euros may be underestimated by a factor up to 10. This is far too much to use these surveys to monitor the size of the hidden economy. Therefore the experiments were stopped. Whether face-to-face surveys can be used instead requires further investigation.

#### **4. Characteristics of hidden workers**

Two factors are important to participate on the hidden labour market: incentive and opportunity. Possible incentives are debts (needs), the marginal tax rate (rewards) and a low probability of detection and punishment (risks). Table 6 presents the incidence per possible incentive.

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<sup>4</sup> According to the Dutch Household Surveys, the average spending per household on household services was Eur 188 in 2006 and Eur 170 in 2007. The number of households with the reference person aged between 15 and 65 was 5.7 million in both years. The total

Around 6 percent of all people with debts reported hidden work, which is barely more than people without debts. So debts are not a major incentive, but the need for money is. Of all people who admitted working off the record, 7 percent used their hidden income to pay off debts, and 22 percent need the money for living (table 7). About 12 percent of the hidden workers spend the money on extras they could not afford without the unrecorded income.

*Table 6. Incentives to do hidden work, 2007/2010\**

	hidden workers	standard error
	%	
<b>Financial position<sup>2</sup></b>		
- has debts	6.2	1.4
- no debts, no savings	5.1	0.6
- no debts, can save money	5.7	0.4
<b>Monthly income<sup>1,3</sup></b>		
- no income	1.8	0.7
- up to 750 euro	5.8	1.1
- 750 - 2250 euro	2.6	0.4
- 2250 - 4000 euro	3.8	0.4
- more than 4000 euro	1.3	0.4
<b>Probability of detection</b>		
- very low	13.3	0.8
- rather low	4.7	0.3
- rather high	2.5	0.3
- very high	0.9	0.4
<b>Work status<sup>1,3</sup></b>		
- no job no social benefits	1.5	0.5
- has a job <sup>4</sup>	3.4	0.3
- has social benefits <sup>4</sup>	2.4	0.6

\* weighted; <sup>1</sup> excluding people under 25 years of age; <sup>2</sup> 2008/2010; <sup>3</sup> 2007/2009; <sup>4</sup> including people with both a job and social benefits

About 12 percent of all hidden workers said that they participated in the hidden economy because they could not find regular work. However, people without a job (25+ years old) participated relatively less than people with a job.

The surveys do not provide information on marginal tax rates. If income is used as a proxy, the relation is just the opposite of what is expected. People with no or a low income (low marginal tax rates) work off the

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amount spent by these households in 2006 and 2007 on household services was 1000 million on average (see [www.statline.nl](http://www.statline.nl)).

record more often than people with higher income (high marginal tax rates). Over one fifth of all hidden workers said that they do hidden work because it pays better than regular work.

*Table 7. Reasons to do hidden work (according to hidden workers) and spending of the hidden income, 2007\**

	2007
<b>Reasons to do hidden work</b>	
- hidden work pays better than regular work	21%
- less regulation	14%
- difficulty to find regular work	12%
- need the money for living	22%
<b>Spending of hidden income</b>	
- savings	21%
- household	14%
- something extra	12%
- pay off debts	7%

\*Weighted.

A high probability of detection may prevent people from doing hidden work (see table 6). The higher the assumed probability of detection, the less people work off the record. How punishment affects the decision cannot be deduced from the survey.

The opportunity to participate depends on knowledge and skills, the amount of time available and on the opportunity to find hidden jobs, for example via acquaintances who are involved in undeclared work. Participation is found especially among young people, males, people with a more or less technical education, people with small jobs, and people working in agriculture, construction, hotels and restaurants or in culture, sports and recreation (see table 8). People who know others who are involved in hidden activities participate more often than people without acquaintances who work off the record. Young people (mostly students) are well represented on the hidden labour market: 18 percent of all 15 to 24 year olds have hidden work. This affects the outcomes for other variables such as the percentage hidden workers among people without a regular job, people without regular work experience, working hours and position in the household (status). Therefore, for most variables, people aged under 25 are excluded from the tabulations.

*Table 8. Opportunities to do hidden work, 2007/2010\**

	% hidden workers	standard error
<b>Age</b>		
- 16-24 years	18.2	1.0
- 25-64 years	3.1	0.2
- 25-34 years	5.5	0.5
- 35-44 years	3.2	0.4
- 45-54 years	2.1	0.3
- 55-64 years	1.8	0.3
<b>Sex<sup>1</sup></b>		
- male	4.2	0.3
- woman	2.2	0.2
<b>Status<sup>1</sup></b>		
- single without children	3.7	0.5
- single with children	1.6	0.7
- with partner without children	2.7	0.3
- with partner with children	3.2	0.3
- child	7.4	2.4
<b>Working hours<sup>1</sup></b>		
- has no formal work	1.8	0.3
- 1-8 hours/week	5.1	1.5
- 9-16 hours/week	4.9	1.0
- 17-24 hours/week	3.3	0.6
- 25-32 hours/week	2.7	0.5
- 33 hours/week or more	3.5	0.3
<b>Has job. branch of industry<sup>1</sup></b>		
- agriculture, forestry, fishing	9.6	2.5
- construction	7.5	1.4
- education	1.8	0.7
- health and social work	2.7	0.5
- public administration	1.3	0.5
- culture, sports, recreation	5.5	2.3
- hotels and restaurants	4.8	1.7
- other	3.3	0.3
<b>Has ever had a regular job<sup>1</sup></b>		
- no	1.9	0.5
- yes	3.2	0.2
<b>Level of education<sup>1</sup></b>		
- primary vocational training	3.5	0.7
- secondary general education, low level	4.1	0.7
- secondary general education, high level	3.3	0.7
- secondary vocational training	3.8	0.4
- higher vocational training	2.3	0.4
- university	1.6	0.5
<b>Type of education<sup>1,2</sup></b>		
- mathematics, physics, medicine, economics, law etc.	1.7	0.4
- agriculture, Technology, transport, communication, public order and safety etc.	5.0	0.8
- teacher, social-cultural, care etc.	3.3	0.9
- general (primary, secondary)	3.6	0.7
- other	3.9	0.9
<b>Knows people who work off the record<sup>3</sup></b>		
- yes	8.9	0.6
- no	0.6	0.2

\* weighted; <sup>1</sup> excluding people under 25 years of age; <sup>2</sup> 2007/2008; <sup>3</sup> 2008/2010

If young people were not excluded from the tabulations, the average percentages of hidden workers in culture, sports and recreation or hotels and restaurants are far higher than the figures in the table: 12.4 and 14.8 instead of 5.5 and 4.8 percent. This means that mostly young people get paid off the record in these branches in addition to their regular wages.

*Table 9 Participation on the hidden labour market; logistic regression, 2007/2008.*

Variable	Type*	Regression coefficient	Marginal effect	Significance
<b>Size household</b>				
- 1 person (single)	b	0.30	0.0066	0.035
- 2 or more persons	R			
<b>Probability of detection</b>				
- very low	b	1.52	0.0498	0.000
- rather low	b	0.22	0.0044	0.011
- rather high	bR			
- very high	b	-1.38	-0.0275	0.041
<b>Age</b>				
- natural logarithm	c	-1.87	-0.0373	0.000
<b>Education</b>				
- higher vocational training, university	b	-0.54	-0.0102	0.000
- other	bR			
<b>Monthly income</b>				
- natural logarithm (no income = 0)	c	-0.21	-0.0042	0.000
- no income	b	-1.22	-0.0150	0.003
- not observed (2010)	b	-1.23	-0.0196	0.001
<b>Working hours</b>				
- 1-16 hours/week	b	0.53	0.0127	0.000
- not working; $\geq 16$ hours/week	bR			
<b>Job: type</b>				
- technical	b	0.64	0.0163	0.000
- other	bR			
<b>Job: branch of industry</b>				
- agriculture, forestry, fishing	b	1.02	0.0336	0.000
- construction	b	0.43	0.0105	0.053
- culture, sports, recreation	b	0.67	0.0183	0.030
- hotels and restaurants	b	0.56	0.0146	0.006
- other	bR			
<b>Knows people who work off the record</b>				
- yes	b	0.44	0.0098	0.000
- no	b	-1.99	-0.0224	0.000
- not observed (2007), don't know	bR			
<b>Constant term</b>		4.27		0.000
Nagelkerke $R^2 = 0.264$ ; N = 10018				

\*b: binary variable; c: continuous variable; R: reference group

Not all variables are equally important. To find out which variables are the most important we did a logistic regression<sup>5</sup>. The main determinants for doing hidden work are the probability of detection, knowing other people who work off the record, having a small job, age, and the branch of industry one is working in, see table 9. People with higher education do significantly less hidden work. Incentives like debts and being on social benefits do not play a significant role.

Gender is not relevant anymore, while in 1983/84 it was one of the main determinants. This change reflects the changed position of women on the regular labour market.

Another difference is that people on social benefits do not participate on the hidden labour market more than others, unlike the 1980s. There are two reasons for this. The first is that it is more difficult to get social benefits than it was twenty-five years ago, especially disablement benefits. Therefore, the current benefit recipients (mostly disabled, elderly, less educated, immigrants) have a weaker position on the regular labour market than those in the past.

The second is that the investigation of social benefit fraud has significantly improved (Ministry of Social Affairs and Employment, 2010). Moreover new laws increased the possibility to impose appropriate punishment (see for example Goudswaard en Heerma van Voss, 2006). This probably also explains why in the eighties people on social benefits had the same perception of the probability detection as others, and now they have a higher perception of it. Both, the more limited possibility to get a social security benefit and the improved investigation of social benefit fraud, make people more reluctant about hidden work.

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<sup>5</sup> In a logistic regression, the dependent variable (p) is a non-linear function of the independent variables (x<sub>i</sub>):  $p = 1 / [1 + e^{-(a_0 + a_1x_1 + a_2x_2 + \dots)}]$ .

## **5. Would-be hidden workers**

Almost 30 percent of all respondents said they would participate if they had the chance. To find out which variables determine who is a potential hidden worker, we carried out a similar logistic regression as in the previous section, see table 10. In general the same variables that determine participation also determine the willingness to participate, except for gender and (regular) monthly income. Potential hidden workers are mainly young, male, have a small and/or technical job or work in a hotel, restaurant or café, know other people who are involved in hidden activities and assume that the probability of detection is low. Also having debts plays a significant role.

Not all people who would potentially do hidden work actually did. Only a fifth admitted doing so. Comparison of the regression coefficients in tables 9 and 10 shows that, although the same variables (except gender and monthly income) are relevant for potential and actual participation, the values of the coefficients differ. In all cases the absolute values of the coefficient for actual participation (table 9) are higher than those for potential participation (table 10). This means for example that younger people are more willing to do hidden work than older people, and that the young people in the hidden worker potential actually participate more often than older people.

Although having debts affects people's willingness to participate in the hidden economy, such incentives do not affect the possibilities of finding hidden work. The only exception is a perceived high probability of detection, which may prevent people from accepting offers of hidden work. People who are willing to do hidden work are usually 'qualified' to do so, but only the best qualified actually take on the work. Would-be hidden workers are qualified to do hidden work but less so than others.

*Table 10. Potential participation on the hidden labour market; logistic regression, 2007/2010*

Variable	Type*	Regression coefficient	Marginal effect	Significance
<b>Gender</b>				
- male	b	0.39	0.0788	0.000
- woman	R			
<b>Size household</b>				
- Has partner and children	b	-0.20	-0.0398	0.000
- Has no partner or no children	R			
<b>Probability of detection</b>				
- very low	b	0.92	0.2030	0.000
- rather low	b	0.15	0.0298	0.000
- rather high	bR			
- very high	b	-0.37	-0.0741	0.000
<b>Age</b>				
- natural logarithm	c	-1.10	-0.2241	0.000
<b>Education</b>				
- higher vocational training, university	b	-0.44	-0.0861	0.000
- other	bR			
<b>Working hours</b>				
- 1-16 hours/week	b	0.33	0.0710	0.000
- not working; $\geq 16$ hours/week	bR			
<b>Job: type</b>				
- technical	b	0.26	0.0545	0.001
- other	bR			
<b>Job: branch of industry</b>				
- culture, sports, recreation	b	0.37	0.0794	0.082
- hotels and restaurants	b	0.37	0.0808	0.018
- other	bR			
<b>Knows people who work off the record</b>				
- yes	b	0.25	0.0525	0.000
- no	b	-1.00	-0.1688	0.000
- not observed (2007), don't know	bR			
<b>Financial position</b>				
- has debts	b	0.44	0.0957	0.009
- no debts, no savings	b	0.41	0.0884	0.000
- no debts, can save money	b	-0.07	-0.0144	0.270
- not observed (2007)	bR			
<b>Constant term</b>		2.85		0.000
Nagelkerke $R^2 = 0.178$ ; N = 8997				

\*b: binary variable; c: continuous variable; R: reference group

## 6. Conclusions

Internet is not the best mode for surveys on hidden activities. Assuming that surveys with the highest number of respondents admitting hidden activities are the best, face-to-face surveys are to be preferred. Comparison

of the results of the 2006 internet survey with the results of the 2006 face-to-face survey shows that the reported incidence in the internet surveys is significantly less. To what extent this difference is caused by hidden workers refusing co-operation (non-response) or hidden workers not admitting these activities in the survey, is not known.

According to the 2006 surveys at least 9 to 10 percent of the Dutch population aged 15-65 earned money they did not declare to the tax or social security authorities. On average they earned 11.50 euro an hour, and worked less than 100 hours a year. The average stated yearly hidden income is less than 1000 euro. Some of these incomes are that little that they would not have been taxed when declared.

People who work off the record are mostly young, know other people who participate on the hidden labour market, have a technical job (for example painter, carpenter, bricklayer or plumber), have a small regular job or have a regular job in agriculture, construction, culture, sports, recreation, hotels, cafés or restaurants. In the latter, young people often get paid off the record in addition to their regular wages.

About 30 percent of all respondents said that they would do hidden work, if they had the chance, but most did not. The characteristics of these would-be hidden workers are similar to those who actually did hidden work, although less pronounced. Would-be hidden workers are qualified to do hidden work, but less so than the people who actually work off the record.

Having debts affects the willingness to participate, but not the opportunity. A perceived high probability of detection may prevent people of accepting hidden work.

In contrast to the mid-eighties, people on social benefits do not participate more in the hidden labour market than others because it is more difficult to get social benefits and benefit recipients have a weaker position on the labour market. Furthermore, the investigation of social benefit fraud has significantly improved, which also makes claimants more reluctant. Another difference is that women are as well represented on the hidden

labour market as man, reflecting the changed position of women on the labour market.

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