

Undeclared work decreasing in Germany

Less undeclared work is carried out in Germany today than was previously the case.

This is shown by the results from a series of fourteen interview surveys on undeclared work carried out in Germany by the Rockwool Foundation Research Unit in collaboration with Professor Lars P. Feld of the University of Freiburg, member of the German Council of Economic Experts.

In 2008, the number of hours of undeclared work was at a level of 2.3% of the hours worked in the formal economy. In 2001, the corresponding figure was 4.1%.

However, the trend towards less undeclared work being carried out is not an indication that there are fewer people in Germany who do undeclared work. The proportion of people working on an undeclared basis has remained steady at around 10% throughout the whole period researched.

'Around one German person in ten carries out undeclared work. This has been the case ever since we started to measure the extent of undeclared work at around the turn of the millennium. The fact that the amount of undeclared work being done is nevertheless decreasing is due to fewer and fewer hours of such work being carried out by each of the individuals involved,' says Lars P. Feld.

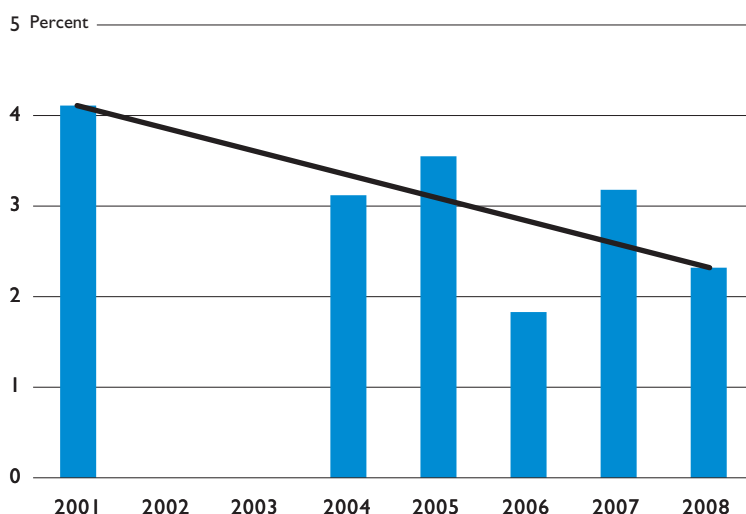
The average weekly amount of time spent on undeclared work by those who do it has fallen by over three hours, from eight hours to five.

The threat of discovery

The apparent decline in the number of hours of undeclared work may be connected with the efforts that have been made to restrict the extent of such work.

As the articles in this Newsletter show, undeclared work is particularly widespread among those members of the population who believe that the risk of being caught is small. Such people are twice as active on

FIGURE I
Undeclared work in relation to GDP



Note: The figure shows the number of hours worked in the undeclared sector in Germany as a percentage of the number of hours worked in the formal economy. The straight line shows the overall trend, based on the surveys for the years 2001 and 2004-08.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

the undeclared labour market as those who think there is a high risk of discovery.

When we control for factors such as gender, age and profession, the probability of a person stating that he or she has carried out undeclared work is still less if that person also indicates a belief that the risk is high or very high. This holds for both men and women.

The surveys also shed light on a number of aspects of undeclared work, including rates of pay, work sectors, and labour market groups who are particularly likely to carry out undeclared work.

'We have also examined the areas of residence of those who work without declaration, and it turns out that undeclared work is more widespread in eastern regions of the country than in the west. In 2008, 16% of people in the east of Germany said they had done undeclared work, as opposed to 8% in the west,' says Lars P. Feld.

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Undeclared work now constitutes a smaller proportion of the total economy of Germany

Undeclared work has made up a decreasing proportion of the total economy in Germany over the past decade. In 2008, the number of hours of undeclared work corresponded to 2.3% of the hours worked in the formal economy. Back in 2001 the proportion was 4.1%Page 3

One person in ten does undeclared work

The proportion of the population who carry out undeclared work has remained fairly constant since 2001. Around one person in ten in Germany does undeclared work in the course of a year. However, the age distribution is very skewed – the young are especially likely to do undeclared work.Page 5

Germans spending less time on undeclared work

People in Germany who carry out undeclared work have reduced the length of their undeclared working week in recent years. Women in particular do less undeclared work than previously. The undeclared working week for women was nearly 8 hours in 2001; by 2008, it had decreased to around 3.5 hours.Page 7

Little increase in general in undeclared pay rates

The payment for undeclared work has remained relatively constant since the turn of the millennium. In 2001 the average hourly rate of pay was 10 euro, while in 2008 it was 11 euro. Inflation over the same period was 14%Page 8

More undeclared work in the east than in the west

There is more undeclared work done in the former East Germany than in the rest of the country. In 2008 fully 16% of the adult population in the east carried out undeclared work, as opposed to 8% in the west.Page 10

What affects the probability of a person doing undeclared work?

Young, unmarried men with training in a skilled trade are more likely to do undeclared work than older, married women with white-collar jobs. A regression analysis was used to study the propensity of different categories of people to do undeclared work after taking socio-economic differences into accountPage 12

Every sixth hour worked in the building sector is undeclared

In the building sector, hours of undeclared work constituted 17% of the total of activity in 2006-08. Other sectors with significant amounts of undeclared work are agriculture, gardening, transport, and the hotel and restaurant sector.Page 13

The risk of discovery makes a difference

Those people who believe that there is only a small risk of their undeclared work being discovered by the authorities are also the ones who have the greatest tendency to do undeclared work; 18% of such people carry out undeclared work. . . .Page 14

The tax rate makes little difference

There is no clear link between the marginal rate of tax paid by people in Germany and their willingness to do undeclared work. One might expect that those who paid high rates of tax would be more willing to carry out undeclared work, but that is not the case.Page 16

Doing undeclared work is not regarded as such a bad crime

In moral terms, people in Germany find taking a train without a ticket more reprehensible than doing undeclared work. The majority also think that undeclared work is more acceptable than other forms of tax fraud.Page 17

Undeclared work now constitutes a smaller proportion of the total economy of Germany

Undeclared work represents a smaller proportion of the German economy today than previously. This is revealed through surveys of undeclared work carried out by the Rockwool Foundation Research Unit.

Over the period 2001-2008, the Research Unit has carried out 14 interview surveys with the aim of discovering the extent of undeclared work in Germany.

Each survey has involved interviews with a representative sample of the population made up of nearly 1,100 people in the age range 18-74 years. Those interviewed were guaranteed that their answers about the extent to which they had carried out undeclared work would be handled anonymously.

The results showed that the trend in Germany is towards undeclared work constituting a shrinking proportion of the overall economy.

In 2008, the number of hours of undeclared work corresponded to 2.3% of the hours worked in the formal economy. This was both a lower number of hours and a smaller proportion of the economy than at the beginning of the study period. Four years earlier, in 2004, the corresponding proportion had been 3.1%, and back in 2001 the figure recorded was 4.1%. The proportion nevertheless varied from year to year, so that a fall in one year might be followed by a rise in the following year – but not to the same level as previously.

600,000 fewer full-time jobs

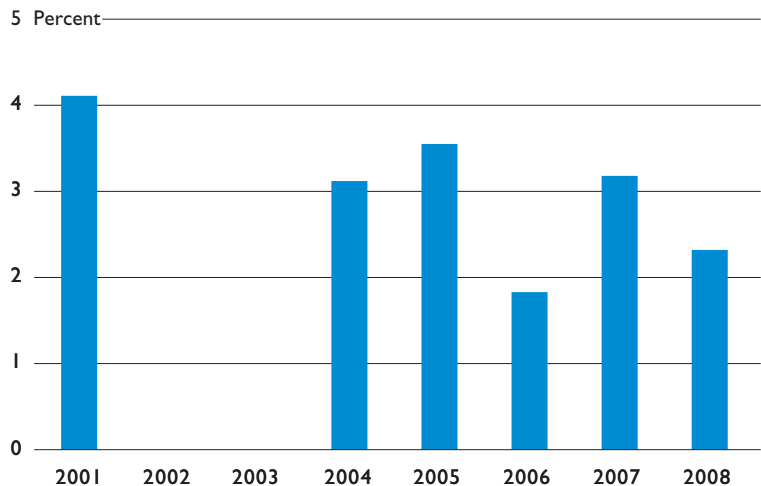
When the number of full-time jobs represented by the undeclared work is calculated, it is seen again that there has been a decrease over the period. In 2001 the hours of undeclared work were equivalent to 1.6 million full-time jobs. In 2008, that figure had fallen to around one million jobs – a fall of over 600,000.

Despite this decrease, the amount of labour supplied without payment of tax or social security contributions is still considerable.

If we imagine that just one third of this undeclared work had been taxed as it should have been, this would have meant

FIGURE 2

Undeclared work in relation to GDP



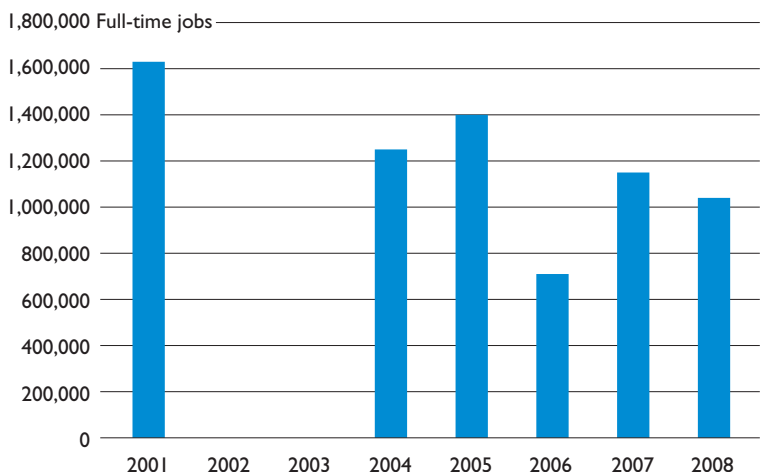
Note: The figure shows the number of hours worked in the undeclared sector in Germany as a percentage of the number of hours worked in the formal economy.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

The amount of undeclared work carried out varies from year to year, but the overall trend is towards less such work in Germany. In 2008, the undeclared hours worked corresponded to 2.3% of the number of hours worked in the formal economy. In 2001, the figure was 4.1%. Whether this trend will continue in the longer term, only time will tell.

FIGURE 3

Undeclared work calculated as full-time jobs



Note: The average weekly total of undeclared work carried out per German resident aged 18-74 years is recalculated as the equivalent number of full-time posts per year.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

When hours of undeclared work carried out are calculated as full-time jobs, it is found that undeclared work amounted to the equivalent of one million full-time jobs in 2008.

around 350,000 full-time jobs in the formal economy.

Efforts to combat tax fraud

The decline in the level of undeclared work has occurred during a period in which the German Bundestag has carried out tax and labour market reforms aimed at increasing employment and reducing the incentives to cheat on tax declarations.

The tax reform of 2000 reduced the level of tax on earned income by gradually lowering marginal tax levels and raising personal tax allowances over the period 2001-2005. In addition, the labour market reform of 2003 amended the Mini-Job scheme, making it more attractive for both employees and employers.

The declining trend in the extent of undeclared work may thus be an indication that these initiatives have proved effective.

Other factors which may have affected the amount of undeclared work done are the increased intensity of checks and the various campaigns against undeclared work which were run after the turn of the millennium. These could have affected the actual amount of undeclared work done, but they may also have made a difference to survey respondents' willingness to answer honestly to questions about whether they had undertaken undeclared work.

Any effect of the increase in VAT from 16% to 19% introduced on 1 January 2007 can be assumed to have pulled in the opposite direction.

Affected by the economic cycle

The explanation for the amount of undeclared work done may also be found in developments in the formal economy. It may be that an increased level of activity in the formal economy is balanced by a corresponding fall in activity in the informal economy.

Trends in the building and construction sector suggest that the two could be linked. In the period leading up to 2008 there was an improvement in the formal economy, while there was a fall in the level of undeclared work in the building sector. This could be an indication of a reciprocal relationship between the two economies.

Developments in undeclared work in the building sector are of particular interest, because this is the most prominent sector on the undeclared labour market. One major reason for the total amount of undeclared work diminishing could thus be that there has been a decline in the building sector.

However, the period studied is too short to make it possible to conclude that such a link exists generally.

What is undeclared work?

Undeclared work is defined here as comprising productive and, in itself, legal economic activity which should normally be declared and taxed, but which is not taxed because the buyer and seller agree not to declare the activity to the authorities.

This type of undeclared work is thus defined as a specific sub-section of the overall shadow economy, where both parties involved are aware that the tax authorities and other relevant authorities are not being informed of the work, and both derive financial benefit from this. They thus share in the 'savings' in VAT and tax, etc. The type of tax evasion where only one party knows of the fraud is not included here, and nor are illegal activities such as sale of narcotics and procuring.

Even though we use the term *undeclared work*, the definition includes both actual work, such as a car mechanic repairing a carburettor without issuing an invoice, and trade, such as a farmer selling a pig without issuing an invoice. In other words, undeclared work is used here as a general term for undeclared *activities*.

Payment may be made in cash, as in the examples above, or in the form of another activity, for example if a plumber installs new drains in a painter's bathroom, while the painter paints the plumber's living-room. In other words, *reciprocal services* of a certain dimension are also included in the concept.

One person in ten does undeclared work

Despite the fact that the total amount of undeclared work done is falling, there are still just as many members of the German population as previously who earn money in this way.

In 2008, 10% of those in the age group 18-74 years answered in the affirmative when asked if they had carried out undeclared work over the previous 12 months.

This proportion has remained more or less the same in all the interview surveys carried out by the Rockwool Foundation Research Unit since 2001.

The only exception was in 2006, when the survey showed a markedly smaller proportion, 6%. By 2007 the proportion had already climbed to 10% once more, and the results for 2006 must be interpreted with caution.

If we consider the overall pattern of results from 2001 to 2008, there is nothing to indicate fewer people in Germany doing undeclared work.

Twice as many men

The same situation of status quo is evident with regard to each of the two sexes and to the relationship of the sexes to each other. Approximately twice as great a proportion of men are active on the undeclared labour market as of women.

In 2008, 13% of men said that they had done undeclared work within the previous 12 months, as opposed to 7% of women. This distribution between the sexes has remained more or less the same in all the surveys since 2001.

On average over the period, 6% of women say that they have carried out undeclared work, and 13-14% of men.

The young are the most active

It is perhaps not surprising that the younger age groups are those most actively engaged in undeclared work. Such activity is especially prevalent among those aged under 30.

As Table 1 shows, 19% of people aged 20-29 years said in 2008 that they had carried out undeclared work. That is almost double the average for all those aged 18 to 74.

Participation by the age 40-59 group

TABLE I

Proportions of respondents who stated that they had carried out undeclared work in the previous 12 months

	Had carried out undeclared work					
	2001	2004	2005	2006	2007	2008
	Percent					
Men	15	13	14	8	16	13
Women	6	5	9	4	4	7
Age 18-19	17	24	14	8	10	18
Age 20-29	19	13	21	10	14	19
Age 30-39	13	12	13	8	13	8
Age 40-49	10	10	9	5	11	9
Age 50-59	7	5	9	6	9	8
Age 60-69	6	3	8	3	4	6
Age 70-74	1	3	3	1	2	4
Total aged 18-74	10	9	11	6	10	10

Note: Germany, ages 18-74.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

One person in ten does undeclared work. The picture remained essentially the same throughout the period 2001-2008.

was at or below the average of 10%, while participation by the older section of the population was below that figure.

This picture has remained relatively stable since 2001 except in the case of those aged 30-39, who appear to have had a level of participation which was a little lower in 2008 than seven years previously.

The potential for undeclared work – one in four would be willing

That the young are more active than the old, and that men are more active than women, is not simply a question of attitudes. It may also be connected with the opportunities that various groups in the population have to do undeclared work.

The Rockwool Foundation Research Unit asked people who had not done undeclared work whether they would be prepared to do it if they had the opportunity. The results are shown in Table 2.

Among all members of the German population aged 18-74 there were thus

TABLE 2

The potential for undeclared work. The proportions of respondents who said they had done undeclared work in the previous 12 months or who said they would be willing to do such work if they had the opportunity

	Had done undeclared work or would be willing to					
	2001	2004	2005	2006	2007	2008
	Percent					
Men	31	29	31	24	32	28
Women	21	20	26	17	21	22
Age 18-19	47	55	44	41	32	34
Age 20-29	40	34	42	28	37	40
Age 30-39	29	32	32	25	32	26
Age 40-49	26	23	29	19	28	23
Age 50-59	23	21	27	21	22	22
Age 60-69	17	12	20	13	18	19
Age 70-74	8	14	14	8	8	14
Total aged 18-74	26	24	29	20	26	25

Note: Germany, ages 18-74.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

When people are asked to state whether they have done undeclared work and whether they would be willing to do so, the differences between men and women and among age groups narrow markedly.

TABLE 3

Proportions of respondents who stated that they had carried out undeclared work in the previous 12 months

	Had carried out undeclared work					
	2001	2004	2005	2006	2007	2008
	Percent					
The self-employed and assisting spouses	12	2	10	13	19	13
Salaried employees	7	9	10	4	10	10
Skilled workers	19	17	14	8	17	12
Unskilled workers	8	9	14	7	8	7
Unemployed	21	17	19	10	15	12
Pensioners	4	4	6	3	3	4
In education (apprentices, university students, etc.)	27	15	15	7	15	23
Other (e.g. housewives, people doing national service)	9	6	11	5	6	10
Total aged 18-74	10	9	11	6	10	10

Note: Germany, ages 18-74.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

Skilled workers, people in education, the unemployed and the self-employed do more undeclared work than the average, while the opposite is true of unskilled workers, salaried employees and pensioners.

ten percent who were both willing to do undeclared work and had done so within the previous 12 months, but on top of these were around 15% who had not done such work, but would be willing to do so. Around a quarter of the population of working age are thus potential performers of undeclared work.

There is a difference between the genders, but among women who had not carried out undeclared work there was a greater proportion who would be positively disposed to doing so than there was among men who had not done undeclared work. If we consider potential performers of undeclared work, therefore, the difference between the genders narrows. The potential is only around a third greater among men than among women.

Similarly, the difference between age groups would be reduced if everyone had the same opportunities. In such a situation it would not be just a tiny proportion of those aged 70-74 who would do undeclared work, but around one in ten. And instead of just 5% of those aged 60-69 years, the proportion would be closer to one in five. In other words, the differences between the age groups would be considerably reduced.

Differences between professions

If we consider the proportions of undeclared work among the various labour market groups in Germany, we find that unskilled workers, salaried employees and pensioners were at a level around or below the average from 2001 to 2008.

Participation in undeclared work by the salaried employees did however rise slightly from around 7% in 2001 to 10% in 2008, while the unskilled and pensioners remained at relatively stable levels of 7-8% and 3-4% respectively (ignoring the figures for 2005).

It is to be expected that participation in undeclared work would be lower among pensioners, given that the proportion of people doing undeclared work decreases with age.

At the high end of the distribution of participation in undeclared work are skilled workers, the self-employed and the unemployed. In these groups, there are more people who do undeclared work than the average.

Nevertheless, there was a decrease in the proportions of skilled workers and the unemployed doing undeclared work between 2001 and 2008. In 2001, 21% of the unemployed admitted to having done undeclared work, whereas the figure had fallen to 12% in 2008; the corresponding figures for skilled workers fell from 19% to 12% over the same period.

The highest proportions among all groups were for people in education – significantly above the average at between 15% and 27%, if we ignore the low frequency found in 2006.

Differences in educational categories

If we consider the position in relation to education, the picture in most of the sur-

veys from 2001 until 2008 is that the group of respondents who have taken a long course of higher education, and the group who have no education or training qualifying them for work at all, both lie below the national average. This is probably connected with the fact that these groups have less to offer within the areas where undeclared work is typically carried out.

Respondents with training in commercial studies or a skilled trade (including apprentices), on the other hand, have an around average or above average propensity to do undeclared work, as do students. One reason for this is that skilled trades are an area where there is much demand for undeclared work, and students are of an age for this type of work.

Germans spending less time on undeclared work

In recent years, German residents have cut down noticeably on the amount of time they spend in doing undeclared work.

Between 2001 and 2008 the average weekly hours spent on undeclared work by those who do it fell by over three hours, from eight to five hours per week. In other words, the undeclared working week was shortened by a third.

Over the same period, the number of people in Germany who do undeclared work remained more or less constant. The fall in the total amount of undeclared work done in Germany was thus not due to there being fewer people engaged in such work, but to the fact that those who did it typically did fewer hours than previously.

Largest decrease among women

Working hours have fallen most for women. As Table 4 shows, their weekly undeclared working hours decreased by more than half, from almost 8 hours in 2001 to around 3.5 hours in 2008. Working hours fell more moderately among men, by around a quarter, from around 8.5 hours per week to 6.

When a German man begins to do undeclared work, then, he typically does considerably more per week than his female compatriot.

TABLE 4
Average time spent weekly on undeclared work by those who do it.
Men and women

	2001	2004	2005	2006	2007	2008
	Hours : Minutes per week					
Men	8 : 27	7 : 52	8 : 14	6 : 19	6 : 33	6 : 10
Women	7 : 51	6 : 46	4 : 28	6 : 34	5 : 23	3 : 38
Total	8 : 14	7 : 30	6 : 40	6 : 25	6 : 16	5 : 06

Note: The averages are for people in Germany aged 18-74 who stated that they had done undeclared work during the previous 12 months.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

People in Germany who do undeclared work shortened their undeclared working week from eight hours in 2001 to five hours in 2008.

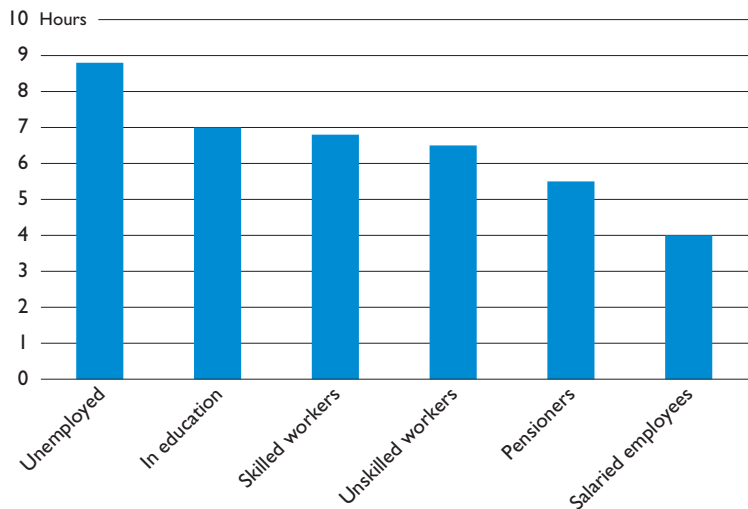
The difference between the genders is amplified by the fact that around twice as many men as women do undeclared work. There are more men that do undeclared work, and they do more such work, so that in total men work many more hours on the undeclared labour market than women.

The 30-39 years age group work most hours

There is no clear pattern that younger people work more hours and older people fewer when they do undeclared work. It is the group aged between 30 and 39 years

FIGURE 4

Average hours of undeclared work per week among those carrying out undeclared work, by labour market category



Note: The averages for 2001 and 2004-08 for people in Germany aged 18-74 who stated that they had done undeclared work during the previous 12 months.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

Pensioners and salaried employees do least undeclared work, while the unemployed top the undeclared work statistics for number of hours worked among those people who actually carry out such work.

that have the longest undeclared working week, at 8.5 hours, taken over the whole of the period 2001-2008.

Those aged 18 to 29 and 40 to 59 who do undeclared work do so on average between 6.5 and just under 7 hours per week, while those aged 60-74 years do one hour less.

If we ignore a single year in which the average was exceptionally high, the gap between the group aged 30-39 and the other groups narrows somewhat, so that overall there is not such a great difference between the various age groups in how many undeclared hours they work, once they have started such activity.

The unemployed are top of the list

An examination of the different labour market groups shows that the unemployed are top of the list. Those of them who do undeclared work spend an average of almost nine hours per week on it. They are followed by people in education and by skilled and unskilled workers, all of whom average 6.5 to 7 hours per week.

The fewest hours among those doing undeclared work are carried out by pensioners and salaried employees, with 5.5 and 4 hours per week respectively. Salaried employees lie consistently below the average over the whole period from 2001 to 2008, while pensioners had relatively high weekly levels in both 2001 and 2004 at nearly nine hours per week, after which there was a marked decline.

Little increase in general in undeclared pay rates

Pay for undeclared work has remained generally constant over the period of almost ten years covered by the surveys, judging from an average rate of 10 euro per hour in 2001 and 2004 and 11 euro in 2008. Over the same period, consumer price inflation has been around 14%.

In the intervening years of 2005 to 2007, however, average pay for undeclared work rose to 12-13 euro per hour; so if the pay had remained at that level, the picture presented would have been rather different.

The picture is repeated if wages for men and women are taken separately.

Whereas in 2001 there was a large difference in pay rates in favour of men, the gap narrowed thereafter. During the period 2004 to 2007, wages paid to women increased considerably, and in 2007 their average pay was higher than that of men.

In 2008, however, men's wages once more rose above those paid to women, and the relative difference between pay for men and women returned to the level of 2001. The average hourly rate of pay for

women of 16 euro recorded in 2007, when the survey sample was relatively small, and that of 15 euro for men found in 2005, must be viewed as the results of random variation in the sample interviewed.

In the relationship of pay to age, there is a general tendency for the youngest and the oldest to earn least. The fact that in some surveys the oldest were registered as earning as much on average as the middle-aged must again be regarded as a matter of chance, since the results are inevitably based on a relatively low number of responses from the oldest group of people who did undeclared work.

A difference between the skilled and the unskilled

There is a difference in earnings for undeclared work dependent on whether a person is a skilled or an unskilled worker.

Generally speaking, pay rates are above average for undeclared work carried out by the self-employed, salaried employees and skilled workers.

Unskilled workers, the unemployed and pensioners, on the other hand, are paid at rates below average.

For people in education, the rate of pay was more variable over the course of the period, being sometimes above and sometimes below the average. This may be because the group membership covers people attending skilled trades training courses as well as people attending courses of higher education. Unlike most people attending courses of higher education, many apprentices training for a skilled trade probably already have obtained some skills that can produce a relatively high rate of pay on the undeclared market even though they have not yet completed their training.

Payment through reciprocal services

Payment for undeclared work is often made not in cash but in the form of return services or other items of financial value. For example, a mechanic might repair a builder's car against having his garage wall plastered.

In fact, it seems that undeclared work is more often paid for in return services than in cash. In 2008, 40% of people doing such work were paid entirely in the form of return services, while only 23%

TABLE 5

Hourly rates of pay for undeclared work

	Had carried out undeclared work					
	2001 ¹⁾	2004	2005	2006	2007	2008
	Euro					
Men	11	11	15	12	12	12
Women	8	9	10	11	16	9
Age 18-29	9	9	14	10	12	9
Age 30-39	11	12	14	13	(13)	(10)
Age 40-49	13	10	12	(14)	(17)	13
Age 50-59	10	(11)	14	(11)	(13)	(13)
Age 60-74	9	(9)	12	(11)	(9)	(13)
Total aged 18-74	10	10	13	12	13	11

Notes: The averages are for people in Germany aged 18-74 who stated that they had done undeclared work during the previous 12 months. Figures in parentheses are based on fewer than 20 observations. ¹⁾ Figures given in DM in 2001 have been converted to euro at a rate of 1.95583.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

The average hourly rate of pay for undeclared work was 10 euro in 2001 and 11 euro in 2008. Inflation over the same period was 14%.

TABLE 6

Forms of pay for undeclared work

	Had carried out undeclared work					
	2001	2004	2005	2006	2007	2008
	Procent					
Cash payments	25	24	15	18	23	23
Exchange (return service/ goods)	37	55	54	54	47	40
Both cash and exchange	38	21	30	28	30	37
Total	100	100	100	100	100	100

Note: The averages are for people in Germany aged 18-74 who stated that they had done undeclared work during the previous 12 months.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

Return services are the most frequent form of payment for undeclared work. In the period from 2004 to 2006, over half of those doing undeclared work received payment exclusively in this form.

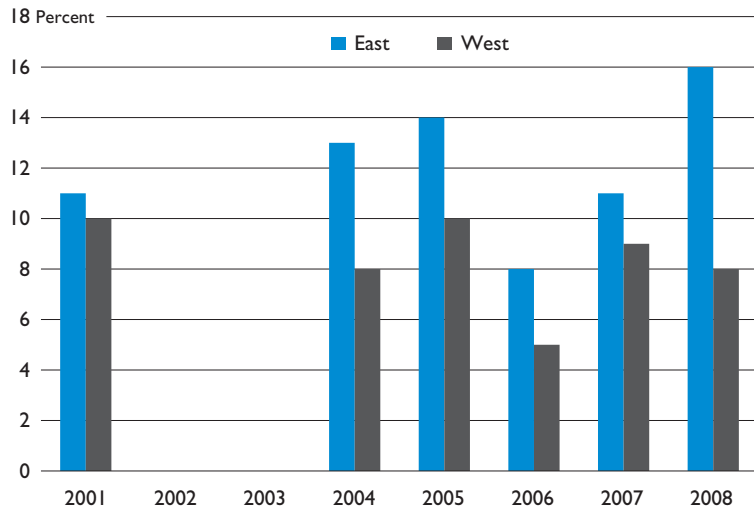
were paid entirely in cash. In 37% of cases both reciprocal services and cash were involved.

This pattern was found throughout the entire period from 2001 to 2008. In the years 2004 to 2007 return services accounted for an even higher proportion of payments, those made to around half the recipients.

More undeclared work in the east than in the west

FIGURE 5

Proportions of the population doing undeclared work in eastern and western parts of Germany



Note: Ages 18-74.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

A greater proportion of the population carry out undeclared work in the east than in the west, and the differences between the areas of the former East Germany and West Germany seem to be increasing.

More undeclared work is done in the eastern part of Germany than in the west, and it seems that the difference is increasing.

In the former East Germany, 16% of respondents stated in 2008 that they had carried out undeclared work in the previous 12 months, as opposed to 8% in the former West Germany.

Seven years earlier, in 2001, there was little difference between the two areas.

The divergence emerged in the more recent surveys, with trends in the direction of more undeclared work in the east and less in the west.

It is men and young people in particular who pull the average level up in the east.

In 2008, 22% of male respondents in the east, or about one man in every five, said they did undeclared work. This was a considerably higher proportion than in the west, where the proportion of men working without declaring it was around 10%.

Similarly, there is a considerable difference with regard to young people in the

east and the west. While approximately one person in four between the ages of 18 and 29 carried out undeclared work in the east, the figure was only around one in six in the west. The proportions were 28% and 16% respectively.

East German salaried employees

The same difference between east and west is found once again in comparisons between labour market categories.

For example, 17% of salaried employees from the east said in 2008 that they had done undeclared work, as against 9% in the west. Previously, the difference had been smaller. The former East Germans have therefore made a large contribution to the increasing trend towards doing undeclared work among salaried employees in Germany.

Among skilled workers and craftsmen, too, more do undeclared work in the east than in the west. However, incidence of undeclared work varies considerably among people in this category in Germany, although the overall trend appears to be downward. There are indications that it is those in the west that are responsible for the variations in the figures. In 2008, 10% of skilled workers in the west said that they had done undeclared work. The previous year, the figure was 18%, and the proportion had also varied considerably in previous years.

Similarly, significantly more of the unskilled in the east admitted to doing undeclared work than in the west; and while the level tended to fluctuate in the west, it was relatively stable in the east. In 2008, 19% of respondents in the east said that they did undeclared work, as against only 3% in the west.

However, respondents in the east were not more active on the undeclared labour market in all professional categories. Among the unemployed, the level was generally a little lower in the east than in the west, if the period 2001 to 2008 is considered as a whole.

As far as payment is concerned, wage rates for undeclared work were higher in the west than in the east throughout the entire period, being on average 13 euro

per hour in the west, and 9 euro in the east.

But do people actually carry out more undeclared work in the east?

There is no doubt that the proportion of the population who do undeclared work is higher in the east than in the west. In the east, more men do undeclared work, more women do undeclared work, more of the young do undeclared work, and so on.

However, if these comparisons are not actually being made between the same types of people, it may be incorrect to conclude that former East Germans are more willing to do undeclared work than their compatriots in former West Germany.

This is a problem that can arise if a number of factors are involved simultaneously. For example, if there is a greater proportion of highly-educated men in the west than in the east, it may be that educational level alone can explain the difference in men's undeclared work in the two regions.

In the same way, economic, social and employment-related differences between west and east may explain why relatively more people in the east do undeclared work than in the west.

However, it is possible to control for such possible differences using a multiple regression analysis, and in this case such an analysis shows that these factors alone

TABLE 7
Had done undeclared work in the previous 12 months. Percentages

	East	West
Men	22	10
Women	9	6
Age 18-29	28	16
Age 30-39	30	4
Age 40-49	11	9
Age 50-59	9	8
Age 60-74	6	5
Total	16	8

Note: Germany, ages 18-74. 2008.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

cannot explain the differences in level of undeclared work.

For comparable groups, it is found that differences remain between men in the west and men in the east. Men are simply more likely to do undeclared work if they live in the east as opposed to the west.

For women, the situation is different. If the factors listed above are controlled for, then we find that the probability of women doing undeclared work is the same in the east and the west. Thus, if the compositions of the population in the eastern and western parts of Germany were the same, then women in the two areas would be equally likely to do undeclared work.

What affects the probability of a person doing undeclared work?

If a person is male, young, unmarried and skilled in a trade, there is a greater probability of that person doing undeclared work than in the case of a person who is female, older, married and a salaried employee.

The Rockwool Foundation Research Unit has made analyses of the factors which affect the likelihood of a person doing undeclared work.

Through the use of a regression analysis it is possible to investigate whether there are underlying factors that play a role in the statistics showing, for example, that more men than women do undeclared work. These other factors might relate to other relevant differences between men and women beside gender – for example, differences in education and training. In other words, what appears to be a difference between men and women might in fact be a difference in their educational backgrounds.

A regression analysis can show whether there really are differences between men and women in their propensity to do undeclared work when the figures have been adjusted to take account of other socio-economic factors.

In the analysis, an investigation was made as to whether the probability of doing undeclared work was affected by the following variables: gender, age, marital status, whether one has children, profession, education, net income, number of months unemployed, living in the east or the west, home ownership and year of survey.

When all these variables have been controlled for, the figures show that it is still very certain that simply being a man in and of itself increases the probability of a person doing undeclared work.

Similarly, the probability of doing undeclared work increases considerably if a person is aged under 30, while it decreases if a person is over 60.

Spouses

Another significant factor is whether or not a person is married. Being married

reduces the probability of a person doing undeclared work.

The probability of working without declaring it is increased for people in skilled trades, as opposed to salaried employees.

However, it does not seem that factors such as income, length of unemployment spell, and home ownership either increase or decrease the likelihood of a person doing undeclared work.

Other variables

In addition to socio-economic variables, there might also be other conditions that affect the probability of a person doing undeclared work.

The Rockwool Foundation Research Unit has investigated three factors that might affect a person's decision to undertake undeclared work, namely perception of the risk of discovery and punishment, marginal rate of income tax, and the level of social acceptability of undeclared work and other behaviours.

Even when these factors are controlled for, it is still possible to say with certainty that men are more likely than women to do undeclared work.

On the other hand, it becomes less certain that age, marriage and profession affect the probability, at least not when the population is considered as a whole.

If the two sexes are considered separately, however, it remains the case that the probability of a man doing undeclared work is increased if he is young, and decreased if he is old and lives in the west.

In the case of women, the probability of doing undeclared work is increased for those who are middle-aged, and decreased for those who are married.

Every sixth hour worked in the building sector is undeclared

There is a significant amount of activity in the building sector which is not declared to the tax and other relevant authorities.

The undeclared hours in this sector are equivalent to almost 21 % of the hours officially recorded, and thus represent 17% of the total of hours worked in the building trade in the period 2006-08. Thus, roughly every sixth hour worked in this sector is undeclared.

The building sector is the one in which undeclared work is most widespread in Germany.

Other sectors with significant amounts of undeclared work are agriculture, etc. (including gardening), transport, and the hotel and restaurant sector. In these sectors, undeclared work amounts to 12.9%, 6.3% and 4.3% respectively of the number of hours officially worked.

In other sectors, there is less undeclared work, with least in manufacturing and production.

The building sector accounts for most

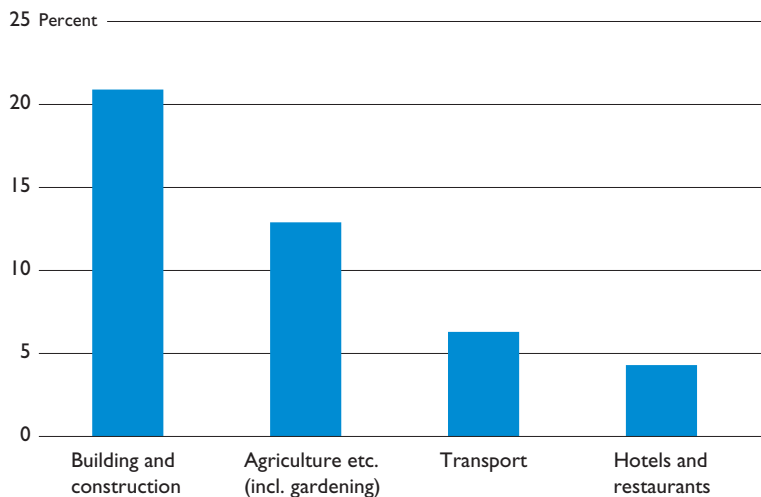
The building sector also accounts for most undeclared work in terms of distribution of such work across sectors. Over one third of all undeclared hours were worked in that sector in the period 2006-08.

Next come personal services (e.g. hair-dressing), transport (e.g. furniture removals), sales and repairs (e.g. mechanical work) and agriculture etc. (including gardening), at levels of around 10% each of undeclared work. The hotel and restaurant sector (e.g. waitressing) and financial and business services (e.g. setting up a computer) are on a level of around 5%, while manufacturing and production (e.g. tailoring) accounts for around 1 % of undeclared work.

Thus, undeclared work is not so much concerned with the production of goods for sale, but to a much greater degree with provision of labour and services. For example, undeclared work within the sales and repair sector is overwhelmingly carried out in connection with the repair of cars and cycles, whereas sales in this sec-

FIGURE 6

Undeclared hours as a percentage of time worked officially, Germany, 2006-08



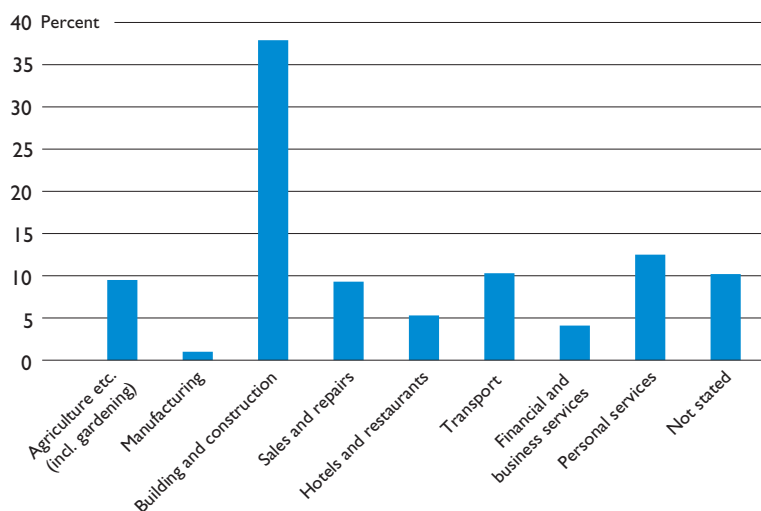
Note: The figure shows undeclared hours as a percentage of formally registered hours in various sectors. Averages for the years 2006-2008.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

Undeclared work is most widespread in the building and construction sector. In the period 2006-08, undeclared hours of work represented over one sixth of all the hours worked in this area.

FIGURE 7

Total undeclared hours distributed by sector, Germany, 2006-08



Notes: The figure shows undeclared hours by sector. The columns add up to 100%. Averages for the years 2006-08.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

Undeclared hours within building and construction account for over a third of all undeclared hours worked.

tor account for only a minor proportion of the undeclared work.

More in hard times?

It is easy to imagine that the extent of undeclared work would be affected by the situation in the general economy. Within building and construction, it seems as though such a connection may indeed exist. In other words, a reduction in activity in the formal economy may lead to increased activity in the undeclared economy.

The amount of undeclared work in that sector increased significantly from 2001 to 2004-05, at the same time as the situation in the formal economy was worsening.

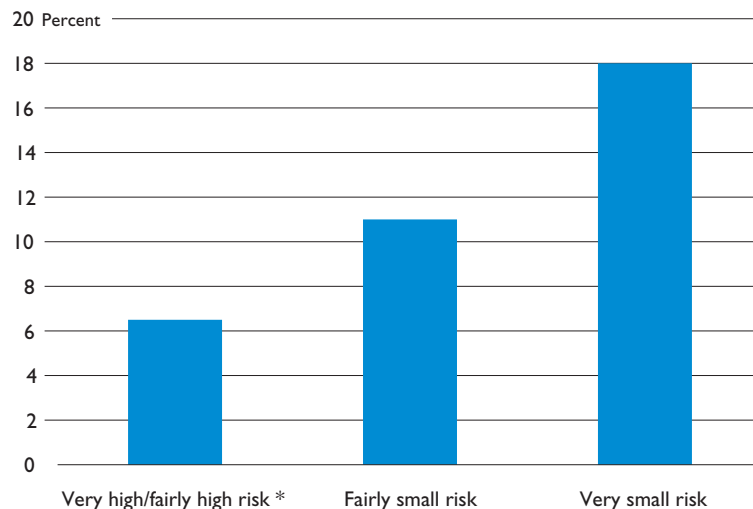
The amount of undeclared hours worked within building and construction then fell from 2004-05 to 2006-08, at which time the formal economy was improving.

However, the period of study is too short to be able to conclude that this relationship would always be found.

The risk of discovery makes a difference

FIGURE 8

Proportion of the population who do undeclared work, distributed according to the level of perceived risk of discovery, Germany, 2001 and 2004-08



Notes: Proportions of the population aged 18 to 74 years who stated that they had done undeclared work within the previous 12 months, shown according to respondents' evaluation of the risk of being discovered. Averages across all surveys conducted 2001-08. * This group also includes those respondents who did not answer this question.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

The less risk a person perceives there to be in doing undeclared work, the more likely it is that that person will do such work.

There is a link between a person's perception of the risk of being discovered doing undeclared work and whether or not that person actually does such work.

People who believe that the risk of their being discovered is small are more likely to do undeclared work than those who believe the risk is great.

Among those people who believe that there is a large or very large risk of discovery, an average of 6-7% were found to have carried out undeclared work across all the surveys from 2001 to 2008.

There are significantly more people who do undeclared work, 11%, among those who assess the risk of discovery as small – and among those who consider the risk to be very small, fully 18% do work that they do not declare.

The relationship between the perception of risk and the proportion of respondents who do undeclared work is still found even after controlling for other factors.

For example, men in general believe that the risk of discovery is less than women perceive it to be. This factor might mean that it was not the perception of discovery that actually affected the likelihood of doing undeclared work, but whether a person was a man or a woman.

However, after factors such as gender, age, profession, etc. are controlled for, it can still be concluded – with statistical certainty – that there is a smaller probability of a person stating that he or she has

carried out undeclared work if that person believes the chances of discovery to be large or very large. This holds for both men and women.

Do more checks have any effect?

Since it appears that the risk of discovery has an effect on undeclared work, it would be natural to conclude that increased effort put into uncovering undeclared work would also have an effect.

The results presented in this Newsletter indicate that the proportion of the population carrying out undeclared work has remained more or less the same over the period covered by the surveys, and has thus been unaffected by the increased efforts made in Germany to detect such work – even though the interview responses did suggest that these efforts had been noticed.

On the other hand, the fall in the number of hours of undeclared work which was also revealed in the surveys may be an indication either that people are being more careful and holding back from doing certain undeclared work, or that they have changed their view of where the boundaries lie.

If the population is divided into two groups – those who believe that there is a large risk of discovery, and those who believe the risk to be small – the latter group is found to be slightly the larger.

In 2008, 37% of respondents perceived the risk as very large or quite large, while

51% thought it was quite small or very small. 12% responded ‘don’t know’ or did not respond.

In other words, around half the population thought that the risk of discovery was quite small or very small.

Does the punishment make a difference?

The Rockwool Foundation Research Unit has also investigated whether the punishment involved has any effect on people’s behaviour on the undeclared labour market.

The results show that there is no clear link between the punishment people thought they would face – whether payment of unpaid tax, a fine or imprisonment – and their propensity to do undeclared work. It appears that it is the perception of the risk of discovery that influences people’s behaviour rather than the size of the punishment they expect.

It is interesting to note in this connection that a large proportion of the population believe that there is no punishment for doing undeclared work. For example, one third of the respondents in 2008 thought that there would be no punishment for doing undeclared work worth 2,500 euro, even though it is in fact likely that a fine would be imposed. One person in ten thought that there would be no punishment for failing to declare income from work worth 10,000 euro.

The tax rate makes little difference

In contrast to what might perhaps have been expected, there is no clear relationship between undeclared work and the marginal rate of tax a person pays.

All else being equal, a high marginal rate of tax ought to be an incentive to do undeclared work, since this would make the tax saving greater, and thus also the financial benefit. However, if the population is divided up according to the marginal rates of tax that people themselves state that they pay, then there is no clear tendency for people who pay high rates of tax to do more undeclared work than people who pay low rates of tax.

Interviewees were asked to say approximately how much they would have left out of an additional income of 100 euro per month after deduction of income tax and social security contributions.

In general, the proportion of the population doing undeclared work remained steady at between 9% and 12%, regardless of whether the marginal rate of taxation that they reported was high or low.

Only the group who state that they pay the second-highest marginal tax rate of 80-89% stand out from the crowd – that is to say, those who report that they would have 11-20 euro left after paying tax and social security contributions if they earned 100 euro extra. Of this group, 15% do undeclared work. This figure might be seen as supporting the theory that marginal tax rates make a difference.

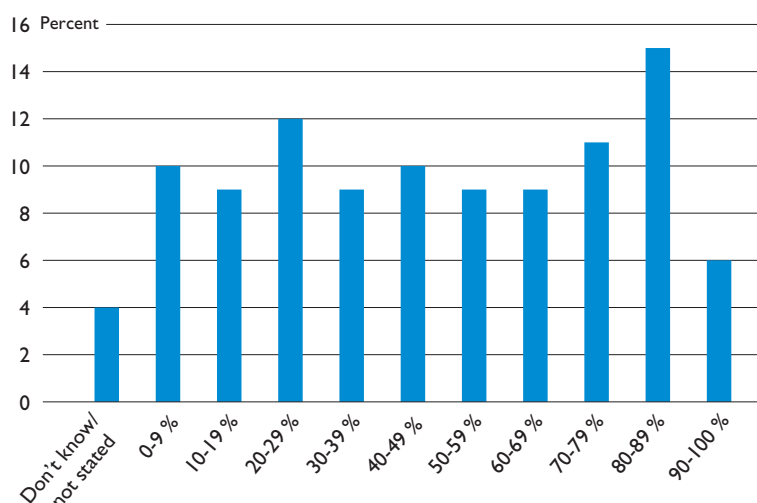
However, the theory is weakened by the finding that the group who say they pay the highest rate of marginal tax exhibit the second lowest frequency of undeclared work. The only group reporting a lower frequency are respondents in the 'don't know' / no response group.

Thus, there is no clear tendency for high marginal tax rates to increase the probability of doing undeclared work. And the two groups with the highest rates of marginal tax give responses which are directly contradictory to one another.

Even when other factors are controlled for, in the same way as described for other analyses reported in this Newsletter, marginal tax rates are not found to have any statistically significant influence on the likelihood of a person doing undeclared work.

FIGURE 9

Relationship between undeclared work and self-reported marginal rate of taxation



Notes: The figure shows the proportion of the population in Germany aged 18-74 years who stated that they had carried out undeclared work during the previous 12 months. Marginal tax consists of income tax and social security contributions. Figures are averages for the period 2004-08.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

There is no clear tendency for people who report that they pay high marginal rates of tax to be more likely to do undeclared work than people who say that they pay low marginal rates of tax.

Doing undeclared work is not regarded as such a bad crime

There is a greater level of acceptance of people doing undeclared work than there is of people travelling on a train or bus without a ticket.

The Rockwool Foundation Research Unit has investigated the level of acceptance of undeclared work among the German population in relation to attitudes to other infringements of the law.

The results of the 2008 survey show that one respondent in three condemns undeclared work out of hand when asked about their attitude to it.

They placed undeclared work on a level of 1 on a scale of acceptability of 1 to 10. A response of 1 on the scale indicated that the respondent did not find the behaviour acceptable under any circumstances. On the other hand, a response of 10 meant that the respondent found the behaviour fully acceptable in all circumstances.

On this scale, attitudes to undeclared work scored an average rating of 3.8; the closer the score is to 1, the less the average degree of acceptance.

Although many people were critical of undeclared work, attitudes towards this infringement of the law were more tolerant than they were towards travelling in a bus or train without paying. Every other respondent found this behaviour totally unacceptable; the average attitude score was 2.5, i.e. closer to a score of 1 than that for undeclared work.

Undeclared work was also found to be more acceptable than tax fraud in general. Every other person in the population considered 'ordinary' tax evasion to be totally unacceptable.

The behaviour that the greatest number of people found totally unacceptable – three people out of every four – was benefit fraud. The average score for this behaviour was right down at 1.6 – very close to 1, meaning it was virtually universally considered unacceptable.

Men and women

The general picture provided through the surveys conducted by the Rockwool Foundation Research Unit between 2001 and

TABLE 8
Acceptability of various infringements of the law

	Average acceptability score on a scale from 1 to 10 ¹⁾	Proportion finding the behaviour totally unacceptable ²⁾
Claiming social security benefits to which one is not entitled	1.6	73.1
Travelling on a train or bus without a valid ticket	2.5	49.4
Doing undeclared work of any kind	3.8	28.2
Undeclared work:		
Private individual for a private individual	4.8	22.0
Firm for a private individual	2.9	42.6
Private individual for a firm	2.1	59.7
Firm for a firm	1.8	66.7
Cheating on one's tax declaration if one has the opportunity	2.7	47.2

Notes: Germany, ages 18-74, 2008. ¹⁾ Based on a response on a scale from 1 to 10, where 1 is totally unacceptable and 10 is perfectly acceptable. ²⁾ Respondents who did not answer or who responded 'don't know' are included in these figures. Between 0 and 6% of respondents did not give a specific response on the scale of 1 to 10, the proportion varying according to the question and the year of the survey.

SOURCE: THE ROCKWOOL FOUNDATION RESEARCH UNIT

It is not as bad to do undeclared work as to break various other laws and rules, say the people of Germany. However, acceptance among the population of undeclared work depends on who does it, and who the work is done for. The exchange of services between individuals is considered more acceptable than firms exchanging services, for example.

2008 is that men take a more relaxed view of undeclared work than women do.

In the survey of 2008, however, no differences were found between the two sexes when respondents were asked their general view of undeclared work. The average score on the question was 3.8 for both men and women.

Morality increases with age

Acceptance of undeclared work was greater among the younger people surveyed than it was among the older ones.

A correlation thus exists between the participation of different age groups in undeclared work and their attitude to it. There were more people among the young who stated that they did undeclared work,

and the level of acceptance found was higher among the young.

If there is also a causal connection between attitude to undeclared work and the level of participation in it, then it might be that an age effect exists, meaning that the younger respondents in the surveys will become more disapproving of undeclared work as they grow older.

However, the results might also be an indication of a generation effect – in other words, norms of acceptability might have changed over time, and the older generation of today might simply be a more law-abiding generation than the younger one. If that is the case, then there is no reason to expect the younger respondents to change their attitude as they grow older.

Even though there are differences between young and old in their attitudes to undeclared work, the rank orders in which they place various infringements of the law are the same. All age groups see social security benefit fraud as the most unacceptable behaviour.

The more systematic, the lower the acceptance

Attitudes to undeclared work are also dependent on who does it.

There is much greater understanding of a person who makes the housekeeping budget stretch further by ‘exchanging favours’ now and again than there is with someone who has undeclared work as a regular part of their income. In other words, it is the degree to which undeclared work is a regular, systematic element of income that determines how many people find it acceptable.

When one private individual makes an agreement with another – for example, to

paint a car port without a formal invoice – then about three people out of four would find this acceptable, even though there are differences among respondents about where exactly the boundary lies. Thus, it seems that a majority of the population would accept that the tax or other authorities are not involved in private transactions. The average grade given to the acceptability of undeclared work arranged between private individuals was 4.8 in 2008.

In contrast, people find it much less acceptable that a firm carries out work for another firm without recording it in the accounts. The score given for this was 1.8, which is close to a total rejection.

Transactions between private individuals and firms fall into an intermediate category. A private person doing undeclared work for a firm scores 2.1 on the scale, while a firm doing undeclared work for a private individual is rated at 2.9 in average acceptability.

The higher level of acceptance of less systematic undeclared work may have something to do with social factors. If someone asks a close acquaintance to do the work of setting up a computer, there may be more than cash at stake – for example, a friendship.

In contrast, undeclared work arranged purely for the sake of financial advantage is more controversial.

In an overall analysis including all the variables mentioned above, it was found that when a person considered undeclared work in the category ‘private individual for private individual’ to be acceptable, it was more likely that the same person would also state that he or she had carried out undeclared work.

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Undeclared Work, Deterrence and Social Norms: The Case of Germany.

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Recent Publications in English by the Rockwool Foundation Research Unit

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The Unemployed in the Danish Newspaper Debate from the 1840s to the 1990s.

By Bent Jensen (The Rockwool Foundation Research Unit and University Press of Southern Denmark. Odense).

Immigrant and Native Children's Cognitive Outcomes and the Effect of Ethnic Concentration in Danish Schools.

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Source Country Differences in Test Score Gaps: Evidence from Denmark.

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