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**Working Paper**

## Comparing the determinants of concern about terrorism and crime

DIW Discussion Papers, No. 904

**Provided in Cooperation with:**

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*Suggested Citation:* Brück, Tilman; Müller, Cathérine (2009) : Comparing the determinants of concern about terrorism and crime, DIW Discussion Papers, No. 904, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin

This Version is available at:

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# Discussion Papers

# 904

Tilman Brück • Cathérine Müller

**Comparing the Determinants of  
Concern about Terrorism and Crime**

Berlin, June 2009

Opinions expressed in this paper are those of the author and do not necessarily reflect views of the institute.

## IMPRESSUM

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ISSN print edition 1433-0210  
ISSN electronic edition 1619-4535

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# Comparing the Determinants of Concern about Terrorism and Crime

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## Abstract

Both crime and terrorism impose costs onto society through the channels of fear and worry. Identifying and targeting groups which are especially affected by worries might be one way to reduce the total costs of these two types of insecurity. However, compared to the drivers of the fear of crime, the determinants of concerns regarding global terrorism are less well known. Using nationally representative survey data, we analyse and compare the individual determinants of concern about global terrorism and crime, and show that worries about terrorism are driven by similar determinants as those about crime, which could have important policy implications. We furthermore provide an insight into the structure of the determinants of concerns regarding other public and private goods.

**Keywords:** Terrorism, Crime, Fear, Attitudes, GSOEP

**JEL Classification:** H40, D01, D81, F52

This is a preprint of an article submitted for consideration in *Global Crime* 2010 [copyright Taylor & Francis]; *Global Crime* is available online at [www.informaworld.com/globalcrime](http://www.informaworld.com/globalcrime)

## Acknowledgements

We appreciate helpful comments from anonymous referees, Carlos Bozzoli, Daniela Glocker, Jürgen Schupp, Jean-Pierre Tranchant, and seminar participants in Berlin, Ankara and Lisbon. The data was kindly made available by the German Socio-Economic Panel (GSOEP). Financial support from the European Union's 7<sup>th</sup> Framework Programme is gratefully acknowledged. The usual disclaimer applies.

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## 1. Introduction

The ultimate aim of terrorism is to create fear and anxiety beyond the relatively narrow group of physical victims.<sup>1</sup> This atmosphere of fear and anxiety affects the behaviour, mental health, well-being, and preferences of people even if they are not direct victims.<sup>2</sup> Similarly to crime, fear of terrorism thus induces costs both to the individual and the society as a whole,<sup>3</sup> though crime does not *intend* to cause fear.

The motivation behind this analysis is the idea that gaining more insight into which groups are most affected by fear can help design policy measures that target especially these groups and thus reduce fears for a given threat level.

Having said this, the literature on the determinants of the fear of terrorism is quite sparse, in contrast to that on the fear of crime. Our paper hence aims to compare and contrast the determinants of these fears, applying methods from the literature on crime to the literature on terrorism. Furthermore, by comparing the determinants of concerns about terrorism not only to those of crime but also to those of other concerns regarding public and private goods, we will contribute to a broader understanding of the determinants of worries in general.<sup>4</sup>

Our analysis shows that worries about public goods are almost entirely driven by age and gender. Worries about crime and terrorism are additionally affected by the educational level and household size; and worries about private goods, such as health and one's economic situation, are also affected by variables indicating social links and economic status. The determinants of worries about terrorism and crime thus differ in terms of quality from the determinants of concerns about other public and private goods.

The paper is structured as follows: Section 2 motivates this study on the determinants of concerns about crime and terrorism. From the discussion of some relevant literature, we derive our research questions. In Section 3 we introduce the data and methods, while in section 4 we present descriptive and regression results. Section 5 concludes.

## 2. Motivation

The importance of crime and terrorism to governments and citizens can be deduced from the discussions about appropriate anti-crime and anti-terrorism policies over the years. In the aftermath of 9/11 and the London bombings in July 2005, several anti-terror policy measures have been suggested, such as compulsory identity cards, tapping phones and opening mail of people being suspected to be involved in terrorist activities. Another measure is the installation of (more) video surveillance cameras (Closed Circuit Television (CCTV)). Looking at the experiences with camera surveillance – already widely used in the UK – the opinions about the effectiveness of CCTV on reducing crime are mixed.<sup>5</sup> However, CCTV does contribute to reducing *worries* about becoming a victim of crime.<sup>6</sup>

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<sup>1</sup> Enders and Sandler (2007)

<sup>2</sup> See e.g. Slovic (1999); Weber (2003); Loewenstein et al. (2001); Lerner et al. (2003); Sjöberg (2007); Boehnke et al. (1998); Frey et al. (2007); Kirschenbaum (2006); Garcia-Montalvo (2007); Davis and Silver (2004)

<sup>3</sup> Dolan and Peasgood (2007)

<sup>4</sup> Throughout the paper we use the terms 'concern' and 'worry' interchangeably and refer to the definition of worries "as cognitions that a state of an object (self, in-group, society, or world) in one or more domains of life (health, security, environment [...]) will become or remain discrepant from its desired state." by Boehnke et al. (1998).

<sup>5</sup> Gill and Spriggs (2005)

<sup>6</sup> Gill et al. (2007)

The aim of this paper is not to discuss how to reduce the risk of terrorist incidents or crime. It is rather making one step towards reducing the costs imposed by insecurities such as crime and terrorism by reducing the level of worries. In order to reduce these costs, first those groups most concerned about insecurity need to be identified.

Respondents in surveys usually clearly distinguish between objects of worries (worrying about oneself and people close, or about the society or whole world) and life domains (for example health, the environment, safety) when asked to express their concern levels. However, it has been found that worries about 'safety' issues are distinctively different from other domains: when asked about issues regarding the 'safety' domain the distinction between different objects of worries seems not to be very clear, even when explicitly asked about society or world issues. Captured in the 'safety' domain are worries such as being a victim of violent crime, about politically motivated violence and terrorist attacks in the respondent's country.<sup>7</sup>

Given that crime and terrorism are both captured in the safety domain and thus share the common characteristic of unclear differentiation in objects of worries, and the importance both issues have had in the last years – and still have – for policy making, we analyse to which extent these two worries are driven by the same determinants. There exists a large literature analysing the determinants of worries about crime. It shows that, although part of expressed worries can be explained by actual threat levels, much of the concern is caused by subjective and social structural factors<sup>8</sup>. According to the so-called vulnerability hypothesis, especially old people, women, people of low socio-economic status and ethnic minorities feel vulnerable and report higher levels of fear of crime.<sup>9</sup> However, the relationship between age and fear of crime has been questioned in the recent academic literature. Different findings have been attributed to different methodologies, for example in the categorisation of age and the way fear has been measured.<sup>10</sup> Also high levels of social processes – activities, actions, and operations where people interact – have been found to be related to lower levels of fear of crime.<sup>11</sup> For example, it has been shown that people living alone tend to express higher levels of fear of crime.<sup>12</sup> Besides regional differences, urbanization has proven to impact on expressed concern levels.<sup>13</sup> Other aspects determining the level of worries about crime are the total household income and the level of educational attainment.<sup>14</sup>

The literature on the determinants of other worry domains seems to be rather sparse. However, there are some trends for demographic factors influencing the level of concern and worries. Generally (and similarly to the fear of crime), being young, male, having a higher socio-economic status and higher education have a negative impact on expressed concern levels. These trends might be partially explained by the facts that worries are largely driven by probability assessments<sup>15</sup>, and that men usually judge risks less pessimistically and smaller than women.<sup>16</sup> Regarding the issue of concern about terrorism, it has been similarly found

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<sup>7</sup> Boehnke et al. (1998)

<sup>8</sup> Box et al. (1988)

<sup>9</sup> *ibid.*

<sup>10</sup> For an overview of different studies see e.g. Baur (2007)

<sup>11</sup> Box et al. (1988)

<sup>12</sup> Kury and Obergfell-Fuchs (2003)

<sup>13</sup> Dittmann (2005); Allen (2006)

<sup>14</sup> Allen (2006); Schupp (2002)

<sup>15</sup> Baron et al. (2000)

<sup>16</sup> Lerner et al. (2003); Slovic (1999)

that one year after the attacks on 9/11, higher levels of concern about terrorism are predicted by gender, age, area of residence, ethnicity, income and education.<sup>17</sup>

In addition to socio-demographic indicators, we are interested in the role of variables indicating social structures. We believe that the impact of these variables might be twofold: The number of people living in the same household, the number of friends, and whether people live alone or in a partnership serve as indicators for possible social support if an event occurred, and should thus have a negative impact on expressed concern levels. On the other hand, worries might not only involve one-self but extend to other people close to us. In that respect, an increase in expressed concern levels is also possible.

### 3. Data and Estimation

Our dataset was collected for the German Socio-Economic Panel Survey 2007, a special data collection conducted by the German Institute for Economic Research in collaboration with TNS Infratest Sozialforschung. The data collection took place in the context of a pre-test conducted to prepare and test new batteries of questions and modifications of questions for introduction in SOEP in 2008. For this survey, 2,600 participants of an Online Access Panel were contacted per email and asked to complete the questionnaire “Private Life and Community” between June 14<sup>th</sup> and July 2<sup>nd</sup>, 2007. 1,057 participants responded (40.7 percent).

In our analysis we include variables drawn from the literature discussed above. These are: age, gender, education, house ownership and income as indicators of socio-economic status, the number of people in the household, number of friends and living arrangement (living with partner or not) as variables indicating social structure, regional differences to control for possible cultural differences (living in former East or West Germany), the size of the community, and an indicator for being foreign or from foreign origin. Table A1 in the Appendix provides an overview of the variables of our analysis.

The exact wording<sup>18</sup> for the dependent variable is: “What is your attitude towards the following areas – are you concerned about them?” The domains listed are (in the order and wording of the questionnaire): your own economic situation, your health, environmental protection, maintaining peace, global terrorism, crime in Germany, and hostility towards foreigners and minorities in Germany. This set-up hence allows us to make a systematic comparison of different domains of concern, overcoming common problems of the comparability of the analyses of different domains in different surveys.

All worry items are to be answered on a three-point scale including very concerned, somewhat concerned, not concerned at all. The dependent variable thus captures a general feeling of worry. In the fear of crime research, participants are frequently asked how safe they feel walking alone in the home area after dark, which was argued to lead to a gender bias.<sup>19</sup> In contrast our study design should not suffer from gender bias. Furthermore, since the questions on concerns were part of a broader survey we do not believe to have a selection bias towards more concerned people.

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<sup>17</sup> Boscarino et al. (2003)

<sup>18</sup> Question from the English questionnaire “Living in Germany”, a survey on the social situation of households. Translation by SOEP.

<sup>19</sup> Farrall et al. (2000)

Given the ordinal nature of the dependent variable, we estimate the model with a nonlinear probability model. This means that we compute the odds of not being concerned at all vs. being somewhat concerned/largely concerned as well as the odds of not being concerned at all/being somewhat concerned vs. being largely concerned.<sup>20</sup> The generalized ordered logit model estimates the coefficients and a constant for each of these two comparisons between the categories. The probability to be above category one or two in our model is given as:<sup>21</sup>

$$P(Y_i > j) = \frac{\exp(\alpha_j + X_i\beta_j)}{1 + [\exp(\alpha_j + X_i\beta_j)]}, j = 1, 2 \quad (1)$$

If the coefficients are the same for both comparisons, the parallel regression assumption (also ‘proportional odds’ or ‘parallel line’ assumption) for ordered logit (and probit) models, which are usually implemented for ordinal data, is met. It restricts the influence of the coefficients on the probability to be in a certain category to be the same for all categories. If the parallel lines assumption is not violated by any of the variables, the probability to be in a category above being not concerned at all (somewhat concerned/very concerned), and not concerned/somewhat concerned (largely concerned) would be written as:

$$P(Y_i > j) = \frac{\exp(\alpha_j + X_i\beta)}{1 + [\exp(\alpha_j + X_i\beta)]}, j = 1, 2 \quad (2)$$

The partial proportional odds model is a special case of the generalized ordered logit model. It allows those coefficients that violate the assumption to influence the probability to be in a certain category differently, and lets those that do not violate the assumption be the same for all categories. Only relaxing the assumption for those variables that violate it makes it more efficient than the generalized ordered logit model.

## 4. Results

### 4.1 Descriptive Statistics

Table 1 gives an overview over the distribution of concern regarding global terrorism and other topics. Comparing the percentages of expressed large concerns, global terrorism ranks first. It is followed by worries about hostility towards foreigners and minorities and crime in Germany.

[Table 1 about here]

Interestingly, concerns about private goods such as health and personal economic situation are the ones where the percentages of respondents expressing large concerns are well below average, and well above when reporting no concerns at all. All worries about public goods including those of the ‘safety’ domain document similar percentages in respondents expressing no concerns at all. They differ in the share of respondents being somewhat and very concerned.<sup>22</sup>

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<sup>20</sup> Long and Freese (2003)

<sup>21</sup> Williams (2006)

<sup>22</sup> Similar to other studies we find all items of the worry scale to be positively correlated (data not shown). This is usually attributed to self-reported worries being affected by the tendency of the respondent to generally worry



Table 2 gives more detailed information on the distribution of concerns regarding global terrorism. We find that women less often report to be not at all or somewhat concerned. More often they display large concerns about global terrorism. The same pattern we observe for age.<sup>23</sup> Higher education is indicated by ‘High school diploma/A-levels and above’. It correlates with higher shares of respondents being not or somewhat concerned. The picture is more mixed regarding the community size and the number of people in the household. The share of those that are somewhat worried is higher for people living with a partner than for those that do not. Respondents with a foreign background report lower concern levels. Since the number of respondents being foreign or from foreign origin is very small, we will test whether that picture holds when controlling for other variables. We also find regional differences: respondents living in the former East Germany display a larger share of no concern and a smaller share of people being very concerned.

[Table 2 about here]

## 4.2 Regression Results

Testing our model we found that some variables in the regressions violate the parallel lines assumption. We therefore use a partial proportional odds model, thus relaxing the assumption of equal coefficients across all categories. Table 3 gives an overview of the coefficients for the partial proportional odds models for concerns regarding global terrorism and crime in Germany as ‘safety’ worries, maintaining peace, environmental protection and hostility towards foreigners and minorities in Germany as other worries regarding public goods; and concerns about ones economic situation and health as worries about private goods. The upper part of the table shows the beta coefficients that contrast the first category (no concern at all) on the one hand with the other two categories (somewhat/very concerned) on the other hand. Positive coefficients indicate that rising values of an explanatory variable raise the probability of moving into a higher category than the current one, i.e. worrying more than not at all. This probability however decreases with rising values of the explanatory variable when the coefficient is negative. For most variables in the regressions the coefficients are the same when contrasting the first two categories (no concern/somewhat concerned) with the last (very concerned), i.e. they meet the parallel lines assumption. For reasons of clarity, the lower part of the table therefore only displays those variables which violate this assumption, and shows their value and sign for contrasting the probability to worry at most somewhat versus being very concerned. Table 4 shows the marginal effects of all variables on the concern levels for the ‘safety’ domain.<sup>24</sup>

[Table 3 about here]

We find age and gender to be very strong predictors for the expressed concern levels in almost every life domain. Except for concerns regarding one’s own economic situation, age is always positively statistically significant, which was expected from other analyses and surveys.<sup>25</sup> As expected, women express larger concerns about every subject in this analysis.

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more or less (Boehnke et al. 1998). Worries about security and post-materialistic issues are higher inter-correlated than they are with individual worries.

<sup>23</sup> While age is a continuous variable, we constructed age groups for this table for simplicity.

<sup>24</sup> The marginal effects for the worry levels regarding the other public, and the private goods can be obtained by the authors upon request.

<sup>25</sup> The negative coefficient for personal economic worries confirms the findings of the poll for the BBC by ICM Research, ‘Health ‘the top worry as we age’’, BBC News website, November 29, 2004, <http://news.bbc.co.uk/1/hi/uk/4043187.stm> (accessed April 23, 2008).

Comparing the determinants of worries about crime and global terrorism, we find that these worries are driven by similar variables. They are both significantly and positively affected by age and the number of people living in the household; and negatively by being male and having a higher educational level. The share of women expressing large concerns about terrorism and crime are about 37.2 and 32.6 percent, respectively. The same probabilities for men are about 9.5 and 11 percentage points lower, respectively. The impact of age on higher levels of concern about terrorism is much larger than that on worries about crime. The difference of the probability of respondents between those under the age of 26 years and above the age of 50 years to report high concern levels are 11 percentage points for concerns about crime compared to 26.5 percentage points for concerns about global terrorism.

[Table 4 about here]

Having higher education decreases the probability of being very concerned about crime and terrorism from about 31.5 and 36 percent to about 17.2 and 29 percent, respectively. Since we controlled for the socio-economic status, we believe that the education coefficient is a good indicator for people estimating risks differently as proposed by Weber (2003).<sup>26</sup> This means that the effect of higher educated people estimating risks more “positively” than less educated people is smaller for assessing the risk of terrorism than that for crime. This could reflect the perception of the risk to become the victim of a terrorist attack as much more “random” than the perception of the risk to be affected by criminal activities. Being foreign or from foreign origin reduces the probability to express large concerns about global terrorism by 17 percentage points. It is also negatively correlated with worries about crime, though not significant. Living with a partner reduces large worries about crime by about 10.6 percentage points. Although not significant, we find that living with a partner is also negatively correlated with expressed worries about global terrorism.

Comparing the determinants of worries about crime and terrorism to those of worries about other public and private goods, we find a pattern in the determinants that reflects the structural division into private and public goods. While there is a tendency that some respondents generally worry more than others, worries about ‘safety’, pure public and private goods do differ in that they are driven by different subjective and social-structural variables.

We find that worries about the public goods (environment, global peace and hostility towards foreigners and minorities) are neither significantly affected by economic variables, nor by variables indicating social links (the number of people in household, living with a partner, number of friends) or education. Apart from a few (geographical) exceptions, those worries are solely driven by age and gender, confirming the general pattern of older people and women worrying more. We also find that the effect of gender is particularly large regarding concerns about these public goods. Being male increases the probability to worry not at all about those issues up to 18 percentage points.<sup>27</sup>

Worries about private goods are additionally affected by geographical variables and variables indicating social links. For example, the number of friends significantly increases the probability to only worry somewhat about ones economic situation instead of being very

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<sup>26</sup> In order to disentangle the socio-economic effect of higher education from the effect it might have on risk assessment, we combined information given on income, created income group dummies and used them to control for the socio-economic status. However, for simplicity they are not displayed in the regression outputs. Besides income groups we also used house ownership as a proxy for the socio-economic status of a respondent. It is negatively correlated with all concern items except for those about peace. Nevertheless, it only has a significant impact on individual worries which could be expected.

<sup>27</sup> Detailed results of the estimations can be obtained from the authors upon request.

concerned by about two percentage points; on the other hand, the number of people living in the same household significantly increases the worry level concerning the economic situation three times as much. We also find that education has a very large and significant influence on the level of expressed concerns regarding private goods. Having a higher education decreases the probability to express large concern levels about one's economic situation by 12 percentage points, and increases the probability to be not concerned at all about one's health by 8 percentage points. Together with the significant impact of the socio-economic status, it seems likely that in the context of these two worry items, different subjective risk estimates do also reflect lower feelings of vulnerability.

## **5. Conclusion**

Worries about safety issues, other public, and private goods are driven by different individual characteristics and social-structural variables. Overall, age and gender are very good predictors for worries on all life domains. While these are the only determinants of the worry level about public goods, worries about safety are also driven by the number of household members and education.

Especially older people and women are prone to express large concern levels regarding both the issues of crime and global terrorism. Looking at the role, which social structures might play in explaining worry levels, we find that people seem to extend their worries on other people like friends and family members, rather than seeing them as a source of possible support in times of need.

The worry levels about crime and global terrorism are explained by similar variables to a similar extent. At the same time, the determinants of those worries also very much differ from those of worries about other goods, especially from those about other public goods. This suggests on the one hand that worries about crime and terrorism are perceived similarly within the 'safety' domain, but perceived differently than worries about other public and private goods.

A large difference between the determinants of concerns about crime and terrorism can be found in the effect of education through the channels of estimating risks. Although the impact of education on the probability to be very concerned about global terrorism is only half the size of that to be very concerned about crime, the perception of risk through education could be one possibility to influence worry levels. Looking at the impact and significance of the analysed determinants on worry levels, and thinking about the possibilities to influence any of these, the perception of the risk is the only one we can affect. Explaining and clarifying the "true" risk of global terrorism and crime could be one of the steps to take in order to reduce the costs of these types of insecurity.

If the determinants of concerns about terrorism and crime are similar, it is also conceivable that worries about crime and terrorism can be addressed in similar ways. Thus experiences made with fear reduction concerning crime, like implementing CCTV, might be another helpful step towards finding policy measures that could reduce costs incurred by fear and worries about terrorism.

## References

- Allen, Jonathan (2006), 'Worry about Crime in England and Wales: Findings from the 2003/04 and 2004/05 British Crime Survey', Home Office Online Report 15/06, <http://www.homeoffice.gov.uk/rds/pdfs06/rdsolr1506.pdf> (accessed July 22, 2008).
- Baron, Jonathan; Hershey, John C. and Kunreuther, Howard (2000), 'Determinants of Priority for Risk Reduction: The Role of Worry', *Risk Analysis* Volume 20(4): 413 – 428.
- Baur, Jenelle (2007), 'Fear of crime: The impact of age, victimisation, perceived vulnerability to victimisation and neighbourhood characteristics', *ACPR Issues* No. 6.
- Boehnke, Klaus; Schwartz, Shalom; Stromberg, Claudia and Sagiv, Lilach (1998), 'The Structure and Dynamics of Worry: Theory, Measurement, and Cross-National Replications', *Journal of Personality* 66(5): 745-782.
- Boscarino, Joseph A.; Figley, Charles R. and Adams, Richard E. (2003), 'Fear of Terrorism in New York After the September 11 Terrorist Attacks: Implications for Emergency Mental Health and Preparedness', *International Journal of Emergency Mental Health* 5(4): 199-209.
- Box, Steven; Hale, Chris and Andrews, Glen (1988), 'Explaining Fear of Crime', *The British Journal of Criminology* 28(3): 340-356.
- Brück, Tilman (2007), *The Economic Analysis of Terrorism*, Abingdon: Routledge.
- Davis, Darren and Silver, Brian (2004), 'The Threat of Terrorism, Presidential Approval, and the 2004 Election', paper presented at the Annual Meeting of the American Political Science Association, Hilton Chicago and the Palmer House Hilton, Chicago, IL, September 02, 2004.
- Dittmann, Jörg (2005), 'Fear of crime in Europe', paper presented at 5th Annual Conference of the European Society of Criminology, Krakau, Poland, August 30 –September 3, 2005.
- Dolan, Paul and Peasgood, Tessa (2007), 'Estimating the Economic and Social Costs of the Fear of Crime', *British Journal of Criminology* 47(1): 121-132.
- Enders, Walter and Sandler, Todd (2006), *The Political Economy of Terrorism*, Cambridge: Cambridge University Press.
- Frey, Bruno; Luechinger, Simon and Stutzer, Alois (2007), 'Calculating Tragedy: Assessing the Costs of Terrorism', *Journal of Economic Surveys* 21(1): 1-24.
- Garcia-Montalvo, Jose (2007), 'Voting after the bombing: Can terrorist attacks change the outcome of democratic elections?', SSRN, <http://ssrn.com/abstract=1002833> (accessed December 12, 2007).
- Gill, Martin and Spriggs, Angela (2005), 'Assessing the impact of CCTV', Home Office Research Study No. 292 (London: Home Office, 2005).

- Gill, Martin; Bryan, Jane and Allen, Jenna (2007), 'Public Perceptions of CCTV in Residential Areas: 'It Is Not As Good As We Thought It Would Be'', *International Criminal Justice Review* 17(4): 304-325.
- Kirschenbaum, Alan (2006), 'Terror, Adaptation and Preparedness: A Trilogy for Survival', *Journal of Homeland Security and Emergency Management* 3(1).
- Kury, Helmut and Obergfell-Fuchs, Joachim (2003), 'Kriminalitätsfurcht und ihre Ursachen', *Sicherheit und Kriminalität* 1/2003: 9-18.
- Lerner, Jennifer S.; Gonzalez, Roxana M.; Small, Deborah A. and Fischhoff, Baruch (2003), 'Effects of Fear and Anger on perceived Risks of Terrorism: A national field Experiment', *Psychological Science* 14 (2): 144-150.
- Loewenstein, George; Weber, E. U.; Hsee, C. K. and Welch, N. (2001), 'Risk as Feelings', *Psychological Bulletin* 127(2): 267-286.
- Long, J. Scott and Freese, Jeremy (2003), *Regression Models for Categorical Dependent Variables using Stata. Revised Edition* (College Station, Texas: Stata Press, 2003).
- Schupp, Jürgen (2002), 'Entwicklung der Kriminalität in Deutschland – Sinkende Sorgen in Deutschland?', paper presented at 'Soziale Indikatoren' for the Deutsche Gesellschaft für Soziologie, Leipzig, Oktober 8, 2002.
- Sjöberg, Lennart (2007), 'Emotions and Risk Perception', *Risk Management* 9 (4): 223-237.
- Slovic, Paul (1999), 'Trust, emotion, sex, politics, and science: Surveying the risk-assessment battlefield', *Risk Analysis* 19(4): 689-701.
- Wagner, Gert G.; Frick, Joachim R. and Schupp, Jürgen (2007), 'The German Socio-Economic Panel Study (SOEP) – Scope, Evolution and Enhancements', *Schmollers Jahrbuch* 127 (1): 139-169.
- Weber, Elke U. (2003), 'Origins and Functions of Perceptions of Risk', paper presented at NCI Workshop on 'Conceptualizing and Measuring Risk Perceptions', Washington, DC, February 13-14.
- Williams, Richard A. (2006), 'Generalized Ordered Logit/ Partial Proportional Odds Models for Ordinal Dependent Variables', *The Stata Journal* 6(1): 58-82.

## Tables

**Table 1: Distribution of concerns in percentages**

	<b>very concerned</b>	<b>somewhat concerned</b>	<b>not concerned at all</b>	<i>Sum (percent)</i>	<i>N</i>
<b>global terrorism</b>	33.27	48.85	17.88	<i>100.00</i>	<i>1,046</i>
<b>crime in Germany</b>	28.21	52.61	19.18	<i>100.00</i>	<i>1,053</i>
<b>environmental protection</b>	24.31	58.15	17.54	<i>100.00</i>	<i>1,049</i>
<b>maintaining peace</b>	26.55	53.87	19.58	<i>100.00</i>	<i>1,047</i>
<b>hostility towards foreigners and minorities in Germany</b>	31.29	50.00	18.71	<i>100.00</i>	<i>1,042</i>
<b>your own economic situation</b>	18.82	48.19	32.98	<i>100.00</i>	<i>1,052</i>
<b>your health</b>	10.91	48.01	41.08	<i>100.00</i>	<i>1,054</i>
<i>Average weighted by valid responses for each item</i>	<i>24.75</i>	<i>51.38</i>	<i>23.87</i>	<i>100.00</i>	

Source: special data collection for the German Socio-Economic Panel Study 2007, own calculations

**Table 2: Distribution of concern regarding global terrorism**

<b>Variable</b>	<b>no concern</b>	<b>some concern</b>	<b>large concern</b>	
	<i>percent</i>	<i>percent</i>	<i>percent</i>	<i>number of respondents</i>
<b>Gender</b>				
male	20.21	51.96	27.84	485
female	15.86	46.17	37.97	561
<b>Age Group</b>				
17-25	27.18	51.46	21.36	103
26-45	23.12	50.59	26.28	506
46-55	10.46	50.21	39.33	239
56-66	8.59	41.41	50.00	198
<b>Indicator for higher education</b>				
Abitur (equivalent to high school diploma/A-level) or higher	23.65	53.11	23.24	241
Other (below Abitur)	16.15	47.58	36.27	805
<b>Community Size</b>				
Up to 1.999	11.32	54.72	33.96	53
2.000 - 4.999	18.56	47.42	34.02	97
5.000 - 19.999	16.47	52.16	31.37	255
20.000 - 49.999	15.90	52.31	31.79	195
50.000 - 99.999	16.96	47.32	35.71	112
100.000 - 499.999	21.51	46.24	32.26	186
500.000 and more	20.95	41.89	37.16	148
<b>Number of household members</b>				
1	23.11	45.80	31.09	238
2	19.10	47.48	33.42	377
3	15.27	55.17	29.56	203
4	10.65	49.70	39.64	169
5	19.15	42.55	38.30	47
6 or more	16.67	58.33	25.00	12
<b>Living with partner</b>				
yes	16.84	50.00	33.16	784
no	20.99	45.42	33.59	262
<b>Self and both parents speaking German as mother tongue (indicator for being foreign or from foreign origin)</b>				
yes	17.57	48.58	33.86	1,019
no	29.63	59.26	11.11	27
<b>Region</b>				
living in former West Germany	16.47	48.93	34.61	838
living in former East Germany	23.56	48.56	27.88	208

Source: special data collection for the German Socio-Economic Panel Study 2007, own calculations

**Table 3: Beta Coefficients for the partial proportional odds model**

Variable	Concern Item						
	public goods					private goods	
	'safety' issues		other public goods			your own economic situation	your health
global terrorism	crime in Germany	environmental protection	maintaining peace	hostility towards foreigners and minorities in Germany			
<b>Categories "no concern" vs. "some" or "large concerns"</b>							
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
age	0.038*** (0.005)	0.045*** (0.007)	0.016*** (0.005)	0.024*** (0.005)	0.027*** (0.005)	-0.008 (0.005)	0.031*** (0.006)
gender	-0.383*** (0.122)	-0.445*** (0.122)	-0.649*** (0.169)	-0.982*** (0.167)	-0.674*** (0.164)	-0.209* (0.122)	-0.475*** (0.124)
no. of household members	0.175*** (0.063)	0.156*** (0.060)	0.012 (0.063)	0.078 (0.067)	0.096* (0.058)	0.246*** (0.067)	0.037 (0.056)
living with partner	-0.203 (0.160)	0.026 (0.197)	0.083 (0.160)	-0.065 (0.161)	-0.052 (0.160)	0.094 (0.160)	-0.178 (0.158)
region	-0.227 (0.158)	0.068 (0.151)	-0.394* (0.201)	-0.036 (0.196)	-0.096 (0.156)	0.239 (0.154)	0.261 (0.176)
metropole	-0.147 (0.230)	0.075 (0.185)	0.209 (0.178)	-0.068 (0.231)	-0.019 (0.185)	0.597*** (0.199)	-0.003 (0.191)
number of friends	0.004 (0.012)	0.009 (0.010)	-0.006 (0.011)	-0.005 (0.011)	0.0056 (0.010)	-0.002 (0.012)	0.017 (0.012)
education	-0.288* (0.147)	-0.597*** (0.155)	-0.023 (0.157)	-0.042 (0.155)	-0.033 (0.147)	-0.535*** (0.158)	-0.396*** (0.148)
owner	-0.010 (0.138)	-0.119 (0.138)	-0.004 (0.143)	.0076 (0.142)	-0.220 (0.138)	-0.299** (0.139)	-0.328** (0.141)
foreign	-0.731** (0.339)	-0.257 (0.349)	0.196 (0.301)	-0.599 (0.449)	0.891** (0.373)	0.126 (0.396)	0.498 (0.420)
constant	0.771 (0.785)	-0.157 (0.816)	0.549 (0.689)	0.453 (0.802)	-0.335 (0.839)	2.36*** (0.679)	-0.428 (0.697)
<b>Categories "no concern" vs. "some" or "large concerns"</b>							
age	^	0.019*** (0.006)					0.012 (0.008)
gender			-0.115 (0.147)	-0.466*** (0.147)	-0.366*** (0.139)		
living with partner		-0.434** (0.177)					
region			0.044 (0.190)	0.357** (0.178)			-0.240 (0.272)
metropole	0.289 (0.199)			0.479** (0.200)			
number of friends						-0.077*** (0.026)	-0.026 (0.0259)
constant	-1.6941** (0.784)	-1.313 (0.823)	-2.35*** (0.688)	-1.030 (.823)	-2.843*** (0.839)	-0.226 (0.669)	-2.122** (0.775)
LL	-1,017.066	-1,010.276	-981.5896	-1,000.814	-1,036.64	-988.679	-965.0038
N	1,045	1,052	1,048	1,046	1,041	1,052	1,053
AIC	2,074.132	2,062.553	2,009.179	2,059.627	2,113.28	2,025.358	1,978.008
BIC	2,173.167	2,166.68	2,123.136	2,203.257	2,212.239	2,144.361	2,097.033

Source: special data collection for the German Socio-Economic Panel Study 2007, own calculations  
 Partial proportional odds model fitted with ologit2; Significance: \*\*\* at 1%, \*\* at 5%, \* at 10% level;  
 Parallel lines assumption tested at 10 percent level; Income and non-response to income controlled for  
 ^ empty cells refer to the same beta coefficient as in the first vs. the second/third category (upper part of table)



**Table 4: Marginal effects for ‘safety’ worries**

	global terrorism			crime in Germany		
	not at all	somewhat	large concerns	not at all	somewhat	large concerns
age	-0.002 (0.001)	-0.007*** (0.001)	0.009*** (0.002)	-0.004 (0.003)	-0.001 (0.003)	0.005*** (0.002)
gender	0.024 (0.018)	0.071*** (0.025)	-0.095*** (0.031)	0.049 (0.0325)	0.059 (0.044)	-0.108*** (0.032)
no. of household members	-0.009 (0.007)	-0.033*** (0.012)	0.0423*** (0.015)	-0.015 (0.010)	-0.024 (0.015)	0.039*** (0.015)
living with partner	0.012 (0.011)	0.038 (0.030)	-0.050 (0.039)	-0.002 (0.018)	0.108*** (0.041)	-0.106** (0.045)
region	0.013 (0.013)	0.043 (0.030)	-0.056 (0.039)	-0.006 (0.014)	-0.011 (0.024)	0.017 (0.038)
metropole	0.008 (0.015)	-0.076* (0.046)	0.068 (0.047)	-0.007 (0.017)	-0.012 (0.030)	0.019 (0.046)
number of friends	-0.000 (0.001)	-0.001 (0.002)	0.001 (0.003)	-0.001 (0.001)	-0.001 (0.002)	0.002 (0.003)
education	0.017 (0.015)	0.054* (0.028)	-0.071* (0.037)	0.070 (0.047)	0.073 (0.061)	-0.143*** (0.039)
owner	0.001 (0.007)	0.002 (0.026)	-0.002 (0.033)	0.012 (0.015)	0.018 (0.023)	-0.030 (0.034)
foreign	0.041 (0.025)	0.129** (0.055)	-0.170*** (0.065)	0.024 (0.029)	0.040 (0.063)	-0.064 (0.087)
LL	-1,017.066			-1,010.276		
N	1,045			1,052		
AIC	2,074.132			2,062.553		
BIC	2,173.167			2,166.68		

Source: special data collection for the German Socio-Economic Panel Study 2007, own calculations  
 Partial proportional odds model fitted with ologit2; Marginal effects computed using margeff command  
 Significance: \*\*\* at 1%, \*\* at 5%, \* at 10% level; Income and non-response to income controlled for

## Appendix

**Table A1: Summary statistics on the sample**

Variable		Obs	Mean	Std. Dev.	Min	Max
<b>Dependent Variables</b>						
<b>“What is your attitude towards the following areas – are you concerned about them?”</b>						
your own economic situation		1,052	1.86	0.71	1	3
your health		1,054	1.70	0.66	1	3
environmental protection		1,049	2.07	0.64	1	3
maintaining peace		1,047	2.07	0.68	1	3
global terrorism		1,046	2.15	0.70	1	3
crime in Germany		1,053	2.09	0.68	1	3
hostility towards foreigners and minorities in Germany		1,042	2.13	0.70	1	3
<b>Continuous Variables</b>						
age	Age of respondent	1,057	42.17	12.83	17	66
no. of household members	Number of people in household	1,057	2.47	1.22	1	9
number of friends	Number of friends	1,056	5.43	5.30	0	80
<b>Categorical Variables</b>						
gender	1 = male; 0 = female	1,057	0.46	0.50		binary
living with partner	1 = living in marriage or marriage-like relationship; 0 = other	1,057	0.75	0.43		binary
region	1 = living in former East Germany; 0 = living in former West Germany	1,057	0.20	0.40		binary
metropole	1 = Living in a community with 500.000 people and more; 0 = otherwise	1,057	0.14	0.35		binary
education	1 = having abitur (equivalent to high school diploma/A-level); 0 = otherwise	1,057	0.23	0.42		binary
owner	1 = owning the place one lives in; 0 = renting	1,057	0.43	0.49		binary
foreign	1 = respondent and both parents speak German as their mother tongue; 0 = otherwise	1,057	0.026	0.16		binary

Source: special data collection for the German Socio-Economic Panel Study 2007, own calculations