## **Attitudes Towards Punishment in the European Union**

# Results from the 2005 European Crime Survey (ECSS) with Focus on Germany

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#### 1 Introduction: About the Project

#### 1.1 General Information and Historical Background of the Survey

Generally, the European Crime and Safety Survey [ECSS] is looking at European's experiences with crime and crime prevention, and the police. Furthermore, it helps measuring attitudes towards crime and punishment by analysing data about personal experiences with selected offences of representative population samples from various European countries. Thus, the ECSS aims at developing a tool for measuring crime in various European countries. This project is financed with funds from the European Union's Sixth Framework Programme.

In a wider perspective, the project is embedded in the International Crime Victims Survey [ICVS], thus mainly applying the ICVS methodology (see section 1.3 for further details). Actually, the ECSS is part of the current fifth sweep of the ICVS. The ICVS is itself the main item of an international comparative criminology project with standardised victim surveys. The ICVS was carried out in more than 70 countries all over the world during four completed sweeps since 1989 (1992, 1996, and 2000). Since its beginning, the ICVS has been supported and promoted by a number of governmental and intergovernmental international institutions (e.g., the United Nations Interregional Crime and Justice Research Institute [UNICRI], the Ministry of Justice of The Netherlands, the British Home Office, the Department of Justice of Canada, the United Nations Office on Drugs and Crime [UNODC], and the European Commission).

From a criminological point of view, the ICVS is largely contributing to improving the international knowledge of crime trends, thus providing an alternative source of data on crime trends that is independent from official

For an overview, see, e.g., Mayhew (1994) and Wetzels, Ohlemacher, Pfeiffer, and Strobl (1994).

For results of the sweeps, see, e.g., van Dijk, Mayhew, and Killias (1990), van Dijk and Mayhew (1993), Mayhew, and van Dijk (1997), and van Kesteren, Mayhew, and Nieuwbeerta (2000). For a more comprehensive overview of the state of affairs, problems, and the future of the survey, see Alvazzi del Frate (2002), Kury (2002), Nieuwbeerta (2002), and van Dijk and Shaw (2002). For the application of the ICVS in the developing world within the sweeps, see Zvekic and Alvazzi del Frate (1995), and Alvazzi del Frate and van Kesteren (2002).

statistics.<sup>3</sup> Additionally, the data offer internationally standardised indicators for attitudes towards crime (e.g., fear of crime, attitudes towards punishment and the police, etc.) in various socio-economic contexts as well as over the time. Since its first sweep in 1989, the ICVS has attracted growing interest, both from the research community and from policy decision makers.

In Europe, the ICVS development paralleled a major transition period with historical events and criminological developments, e.g., the fall of the Berlin wall in 1989 and the subsequent German reunification. Hence, the enterprise has offered new and outstanding perspectives for a hitherto largely unknown part of Europe as regards crime victim's data. Furthermore, it allows identifying tools for the collection of standardised information on European citizens' safety, fears and expectations as well as the regular monitoring of newly installed crime prevention initiatives based on the analysis of reliable crime information. Moreover, the ICVS project has already facilitated exploring crime levels across Europe and has provided insights into the relationship between citizens and the police.

As regards its content, the ICVS contains items on crime situations that cover a broad scope of possible victimisation experiences, which are particular for the modern urban context.<sup>7</sup> As a result, the concept of "urban safety" combines comprehensive and integrative strategies of crime prevention on all levels of the civil society since the late 1980s. In this regard, extensive and detailed knowledge of the crime situation that is both, valid and reliable, is the necessary prerequisite for any effective crime prevention programme. Consequently, the Economic and Social Council adopted the "Guidelines for the Prevention of Crime" in 2002, recommending the establishment of "data systems to help manage crime prevention more cost-

See, e.g., Biderman (1981), Block (1993a), Block & Block (1984), and van Dijk and Steinmetz (1983).

See Gruszczynska (2002) for an account of crime and victimisation in post-socialist countries.

<sup>&</sup>lt;sup>5</sup> Cf., e.g., van Dijk (1997).

For example, regarding crime reporting patterns, see Kilpatrick, Saunders, Veronen, Best, & Von (1987) and Mayhew (1993).

For the so-called concept of "urban crime", see Alvazzi del Frate and van Kesteren (2004).

effectively, by conducting regular surveys of victimisation and offending". Such regular, reliable, and valid data systems demand for a strict standardisation of crime definitions, survey methodology as well as reference periods for victimisation prevalence. This is exactly what the ICVS/ECSS provides as its biggest advantage, thus making it a useful tool for the comparison of European crime rates and citizen's attitudes towards crime and punishment.

According to the research consortium's project proposal, the ECSS addresses the following problem description of the European Union's Sixth Framework Programme:

The effective planning and evaluation of criminal justice policies at a European level depends on our understanding of the quantitative development, the level and structure of crime and public opinion on these issues. This understanding is hampered for example by differences in definition, recording procedures and the structure of crime and criminal justice statistics. Increasing the comparability of statistical data on crime and the operation of criminal justice can identify differences between the level of crime and crime types in the Member States. [...] The main problem is that this instrument [ICVS] has not been used in all Member States (or Acceding countries) and hence there are no overall EU comparable data. [...] At the EU-level there is a real need for describing and comparing the nature and volume of so-called 'volume' crime (car theft, theft from car, car vandalism, motorcycle theft, bicycle theft, burglary, attempted burglary, robbery, personal thefts, assaults & threats). 10

## 1.2 Aims and Objectives

Generally speaking, the main objectives of standardised victim surveys like the ICVS/ECSS include:<sup>11</sup>

 Providing comparative indicators of crime and victimisation risks as well as attitudes towards crime, punishment, crime prevention, and the performance of the law enforcement system;

<sup>&</sup>lt;sup>8</sup> Cf. Alvazzi del Frate and van Kesteren (2004, p. 2).

See, e.g., Block (1993b), Kury (1994), Kury, Obergfell-Fuchs, and Würger (2002), and Kury and Würger (1993a).

The Gallup Organisation Europe (2004a, p. 8).

<sup>11</sup> Cf. Alvazzi del Frate and van Kesteren (2004).

- Promoting crime surveys as an important research and policy tool at all levels;<sup>12</sup>
- Enhancing adequate research and policy analysis methodology;<sup>13</sup>
- Creating an opportunity for transparency in public debate about crime and reactions towards it;<sup>14</sup>
- Strengthening the citizens' participation in the evaluation of criminal policy and establishing a partnership in crime prevention;<sup>15</sup>
- Promoting international cooperation by providing an opportunity for a large number of countries to share methodology and experience through their participation in a well-coordinated international research project.<sup>16</sup>

In particular, the ICVS (and, thus, also the ECSS) serves three main aims: (1) Providing an alternative to police information on levels of crime; (2) harnessing crime survey methodology for comparative purposes; (3) extending information on who is most affected by crime.<sup>17</sup>

(1) Alternative to police information: Police records are problematic for comparing crime in different countries, because of (at least) the following three reasons hamper cross-country comparisons of police statistics: 18 (a) Victims' reports are almost the exclusive source of information. Thus, country differences regarding victims' report behaviour; (b) country differences in the disposition of the police to officially record a crime that is reported; (c) variations in legal definitions, recording practices, and rules for classifying and counting offences affect official police statistics. The ICVS/ECSS has tried to avoid these familiar limitations, e.g., by operationalising the included crimes, by and large, according to legal definitions. Furthermore, the survey's questionnaire method generally accepts respon-

That means, on the local, national, and international level (e.g., van Dijk, 1991; Villmow, 1985).

<sup>&</sup>lt;sup>13</sup> See, e.g., Southgate (1984).

See the fundamental work of DuBow, McCabe, and Kaplan (1979).

See, e.g., Alvazzi del Frate (1997), Baba and Austin (1989), and Schneider (2000).

<sup>&</sup>lt;sup>16</sup> Cf. Alvazzi del Frate (2002).

<sup>17</sup> Cf. van Kesteren, Mayhew, and Nieuwbeerta (2000, pp. 11-12).

Cf. Council of Europe (1999) for a general account; for specific aspects and problems, see, e.g., Aebi, Killias, and Tavares (2002), Block and Block (1984), and Wittebrood and Junger (2002).

dents' accounts of their victimisation experiences, thus allowing for a broader definition of crime than the police statistics.

- (2) **Harnessing crime survey methodology:** Despite all international methodological efforts in various national and international crime or victim surveys during the past 20 years or so, up to now research reports have only allowed for a limited comparative interpretation. Hence, a main objective of the new ICVS/ECSS is to provide a fully standardised questionnaire that allows for a truly comparable analysis of the data over the different countries as well as over the time.
- (3) **Extending information:** Police statistics usually provide only limited information on crime victim's characteristics.<sup>20</sup> On the other hand, the ICVS/ECSS provides a wide scope of social and demographic information on the participants (e.g., age, income levels, marital and occupational status, social networks, religious activities, etc.). Thus, it allows assessing specific crime risks for different groups.<sup>21</sup> Furthermore, the cross-national perspective of the ICVS/ECSS provides a first glance at differences as regards the determinants and consequences of victimisation experiences in different countries with different legal definitions and judicial systems.<sup>22</sup>

Summarising the expected advantages, the ICVS/ECSS can be regarded as the most reliable source available for displaying the nature and volume of crime on a personal and on the household level. Furthermore, it has been said to be "the most far-reaching fully standardized [crime and victim] survey" in Europe. <sup>23</sup> Hence, applying it in as many as possible EU Member States allows displaying a reliable picture of crime trends and public attitudes towards crime and punishment at the European level.

See Aebi, Killias, and Tavares (2002), Albrecht and Arnold (1991), and Zvekic (1996).

See, e.g., Robert, Zauberman, Pottier, and Lagrange (1999).

See Brantingham, Brantingham, and Butcher (1986), Corrado, Roesch, Glackman, Evans, and Leger (1980), Lynch (1991), and Stafford and Galle (1984). For an overview on the ICVS, see van Kesteren, Mayhew, and Nieuwbeerta (2000). Young (1988) provides a more critical account.

See Bennett and Lynch (1990), Block (1993a), LaFree and Kick (1986), Neapolitan (1997), van Wilsem (2004), and van Wilsem, de Graaf, and Wittebrood (2003).

<sup>&</sup>lt;sup>23</sup> Cf. Nieuwbeerta (2002, p. 3).

## 1.3 Methodology: Questionnaire, Sampling, and Participants<sup>24</sup>

Generally, the ICVS/ECSS targets only households with at least one respondent aged 16 years or above. Regularly, for each county the targeted number of respondents was about 2,000. The samples in each country but Estonia, Luxembourg, and Poland were divided into a larger national part (with a targeted size of 1,200 respondents) and a relatively smaller capital city part (with a targeted size of 800 respondents). Due to the small country size, the Luxembourg sample only consisted of about 800 participants.

All interviews were carried out with Computer Assisted Telephone Interview technique [CATI] via fixed telephone lines. The average duration of the interviews was 23.2 minutes. The samples of the study were uniformly selected along the same principles in each participating country in order to provide the most complete coverage with the least bias. Therefore, Random Digit Dialling [RDD] samples were used in most of the countries in order to carry out the interviews, i.e., telephone numbers were selected randomly. The eligible respondent was the household member with the most recent birthday, who was (a) at least 16 years of age and (b) resident of the respective country or the capital city.

As regards response rates and sample sizes, several actions were taken to increase the participants' cooperation throughout the survey: (a) Using a highly experienced and specifically trained field team; (b) applying a so-called 7+7 call design over an extended period of time.<sup>27</sup> The field period was extended to allow for a more flexible scheduling in order to also reach those people who are only seldom at home.<sup>28</sup> The analysed dataset for this

For all further information on the survey procedure and methodology see The Gallup Organisation Europe (2004b).

See Killias (1990) for an early account of the method's perspectives.

In Greece, Sweden, Finland, Denmark, Hungary, Ireland, Netherlands, and the United Kingdom the respective country samples were provided by the national field agencies.

That means, each telephone number was called at least seven times to establish an initial contact before dropping it, and at least seven repeated calls were attempted to establish contact with the eligible respondent within the household. (See the research report by Gallup Europe for details)

See, e.g., Semmens, Dillane, and Ditton (2002) for the (potentially) deteriorating effect of seasonality on survey results (in this case, regarding the participant's fear of crime).

report covers 18 European Union countries. Table 1 shows the sample sizes for these countries with respect to the participants' sex.

Table 1 General Descriptive Data of the Survey: Sample Sizes by Sex – Response Rates

	Nationa	l Sample	Capita	l Sample	Tota	l Sample		
Country	Male	Female	Male	Female	Male	Female	Total	Response Rate
Austria	426	772	280	526	706	1,298	2,004	45.7
Belgium	500	713	320	481	820	1,194	2,014	54.7
Denmark	488	710	337	449	825	1,159	1,984	44.2
Finland	396	816	239	550	635	1,366	2,001	56.9
France	441	775	313	487	754	1,262	2,016	46.9
Germany	519	683	365	458	884	1,141	2,025	43.3
Greece	475	741	349	455	824	1,196	2,020	43.6
Ireland	498	704	317	484	815	1,188	2,003	41.8
Italy	389	830	302	502	691	1,332	2,023	54.3
Luxembourg	294	447	24	35	318	482	800	36.2
Netherlands	489	720	346	455	835	1,175	2,010	46.1
Portugal	361	849	258	543	619	1,392	2,011	42.6
Spain	515	679	335	505	850	1,184	2,034	39.6
Sweden	498	712	331	471	829	1,183	2,012	55.0
UK	532	672	338	462	870	1,134	2,004	42.6
Estonia	n/a	n/a	n/a	n/a	755	932	1,687	n/a
Hungary	410	828	309	556	719	1,384	2,103	n/a
Poland	n/a	n/a	n/a	n/a	2,294	2,719	5,013	n/a
Total	7,231	11,651	4,763	7,419	15,043	22,721	37,764	46.2

Note. For Estonia and Poland no information was available about the recipients' sex. Hence, the total values can only be displayed for the other 16 countries.

As regards the content of the questionnaire, the ICVS/ECSS survey covers a broad range of crime statistics, comparable to most other state-of-the-art household crime surveys. Because crime survey methodology has had a hard time to cover organisational victims or victimless crimes, <sup>29</sup> the ICVS/ECSS questionnaire is limited to crimes that include an identifiable individual (but excluding children). The questionnaire includes sections on different "conventional" offences, always beginning with a definition of the respective offence.

The first group concerns crimes that include vehicles, owned by the respondent('s household): Theft of car, theft from car, car vandalism, theft of bicycle, and theft of motorcycle. The second group concerns so-called "break and enter" offences, i.e., burglary and attempted burglary. Other

As regards ecological or drug related offences, see, e.g., van Dijk and Shaw (2002).

than the first two groups of "non-contact crimes", the third group refers to personal victimisation by "contact crimes": Robbery, theft of personal property<sup>30</sup>, assault and threat.<sup>31</sup>

On the one hand, the respondents were asked about their household at large, inviting them to report all incidents known to them. On the other hand, the respondents were also asked about their very personal experiences with crime. All questions were generally open to record crimes during a rather long period: First, respondents were asked about their experience of crime over the last five years. In case they mentioned a specific incident, they were subsequently asked a number of follow-up questions about what exactly had happened at the last incident (e.g., details as regards time, participants, circumstances, damage, etc.).

The questionnaire also explores whether crimes had been reported to the police, as well as, if appropriate, the reasons for not reporting. In addition to the victimisation questions, all participants were also asked other, more general crime-related questions regarding their attitudes towards crime, punishment, and the police. Finally, the questionnaire covers a rather wide range of socio-demographic and economic information about the participants and their households.

NB: In our analyses, we defined ,,theft of personal property" as a "non-contact crime" (cf. footnote 50).

Sexual incidents were only asked for female participants. Furthermore, the questionnaire also includes questions on consumer fraud and bribery/corruption (these offences were not part of the analyses for this report).

#### 2 Structure and Methodology of Our Analysis

## 2.1 Preliminary Notes: Missing Values and Weighting

Generally, we applied a strict (or conservative) policy as regards missing values in all our steps of analysis. Firstly, of course, we excluded cases with true missing values from further analysis. Secondly, we also removed those values that contained no analysable information (i.e., answer categories like "don't know" and "refusal") as well as inexplicit or ambiguous answer categories (e.g., "any other sentence" for the item on *attitudes towards punishment*). All these missing values were excluded on a casewise basis.

Due to certain specific characteristics of the applied sampling procedure, the country data were somewhat biased, in particular, as regards sex and age. As described in detail elsewhere, different weighting variables were calculated in order to compensate these biases.<sup>32</sup> Nevertheless, we decided to use the unweighted data, because the focus of our analyses lay on more general aspects of the variable structure (i.e., mostly variable correlations). Compared to victimisation rates, these structures generally remain rather unaffected by such distortions of the dataset.<sup>33</sup>

## 2.2 Cross-country Comparison

For the cross-country section of our analysis, we focussed on the two items regarding the respondents' *attitudes towards punishment* or *sentencing* ("punitiveness").<sup>34</sup> With the first item, the respondents were asked about their preferred sentence category for a recidivist burglar.<sup>35</sup>

<sup>[</sup>Please include a reference to the respective part of the research report by Gallup Europe]

Nonetheless, we also did an ad hoc stability check of our regression model (see section 3.2.1) by using the respective weighted dataset, thus producing essentially unchanged parameters.

In the following, the term "punitiveness" will be used synonymously for these attitudes, since its use saves some space and improves the text's readability. The term has been established in the recent research literature, both for individual attitudes towards crime and punishment as well as for describing a general trend of the public opinion and the criminal policy (see, e.g., Doob, & Roberts, 1988, Kommer, 1994, Langworthy & Whitehead, 1986, Matthews, 2005, Neapolitan, 2001, Pratt, 2000, Sprott, 1999).

The respective item wording is: "People have different ideas about the sentences which should be given to offenders. Take for instance the case of a 21 year old man who is found guilty of burglary

Since we were mainly interested in country differences regarding the selection of the most punitive category, i.e., "prison", we pooled the other three more lenient answer categories and compared the country ratios for the resulting dichotomous variable (i.e., prison vs. other sentence). We then used an exact probability test, the binomial test, checking for each country separately whether the proportion of the two categories differs from the predefined probability based on the overall ratio. Thus, we found significant effects for about half of the countries, which could be (largely) verified by a subsequent asymptotic chi-square adjustment test.<sup>36</sup>

For our further analyses in this section, we concentrated on the most punitive category "prison" and the subsequent follow-up question. Those respondents, who considered an "unsuspended prison" sentence as most appropriate for the recidivist burglar, were additionally asked to select the respective prison term for the offence. Altogether, again omitting the missing values (as defined above), 14 prison term categories were offered, ranging from "one month or less" up to "life sentence". Since some of the original categories had not been chosen at all within the German sample, we pooled some categories, eventually producing the following eight categories: (1) One month or less, (2) two to six month, (3) six to twelve month, (4) one year, (5) two years, (6) three to five years, (7) six to ten years, and (8) more than ten years.

In the subsequent country comparison of this variable, the aim of our analysis was to find significant mean differences between Germany (as our reference country) and all other countries. First, we used an overall mean comparison test, the Kruskal-Wallis H-test<sup>37</sup>, to check for significant dif-

for the second time. This time he's taken a TV. Which of the following sentences do you consider the most appropriate for such a case?"). Disregarding the content-free and the ambiguous answers, the respondents were offered the following four sentence categories: (1) Community service, (2) fine, (3) suspended sentence, and (4) prison.

For both procedures, cf. Siegel (1956, p. 36ff and p. 42ff, respectively).

The Kruskal-Wallis H-test is a nonparametric equivalent to the one-way ANOVA. It tests whether several independent samples are drawn from the same population. The assumption is that the underlying variable has a continuous distribution. The procedure requires at least an ordinal level of measurement (cf. Siegel, 1956, p. 184ff).

ferences between at least two of the countries. After finding this overall-effect, we used the appropriate non-parametric post-hoc test, the Mann-Whitney U-test<sup>38</sup>, for the pairwise comparisons with Germany.<sup>39</sup>

## 2.3 Determinants of Attitudes Towards Punishment

In our main and final step of the analysis section for this report, we focussed on the determinants of the participants' attitudes towards punishment (or "punitiveness") within the German country sample (operationalised as described above). For this purpose, we decided to apply regression modelling, aiming at explaining as much as possible of the respective variable's variance. Since our set of relevant variables included different scales, we chose the categorical regression as the most appropriate procedure (also known as CATREG in SPSS). 40 This method extends the standard regression approach by simultaneously scaling nominal, ordinal, and metric variables within the same regression model. The categorical regression quantifies categorical data by assigning numerical values to the categories, resulting in an optimal linear regression equation for the transformed variables. Afterwards, the procedure treats these quantified categorical variables in the same way as numerical variables. Using nonlinear transformations allows variables to be analysed at a variety of scale levels to find the bestfitting model. Moreover, the procedure quantifies categorical variables in such a way, that the quantifications reflect the characteristics of the original

The Mann-Whitney U test is a nonparametric equivalent to the t-test, checking whether two independent samples are drawn from the same population. The test parameter U is the number of times a value in the first group precedes a value in the second group, when values are sorted in an ascending order. The significance level is based on the asymptotic distribution of a test statistic. Typically, a p-value of less than 0.05 is considered as sufficient. The asymptotic significance is based on the assumption that the data set is large (cf. Siegel, 1956, p. 116ff).

Comprehensive pairwise comparisons of all countries were not feasible: With 18 countries, there are 153 possible pairs to test (18\*17/2). Since reporting all these results would have exceeded the scope of this first research report (and since such an enumeration of results could be rather boring for the reader), we decided to focus on comparisons with Germany as our reference country. See also Hays (1993, p. 449ff) and Klockars and Sax (1986) for the related problem of increasing statistical error rates when applying post-hoc multiple comparisons.

The SPSS handbook provides detailed information on the application of the procedure (Meulman, Heiser, & SPSS, 2001). For a brief and concise overview of the method, see Höfer (2003, p. 96ff). Meulman (n. d.) provides a brief and readable introduction. More comprehensive and fundamental accounts of the methodology can be found at, e.g., Agresti (1990), Gifi (1990).

categories.41

As already mentioned, our main aim was to explain the respondents' *punitiveness* as operationalised by their selection of a certain sentence as appropriate for the recidivist burglar. Based on the research literature, we started with first regression models that included the sentence category as the dependent (or criterion) variable and 17 other variables as possible relevant predictors. After systematic successive elimination of the (in this respect) irrelevant, redundant, or less important variables, our final model for the German sample consisted of nine predictors. For this procedure, we applied the following elimination and selection criteria: 43

- We expected the criterion variable to be quantified in an at least ordinal fashion, i.e., with monotonically increasing values from category to category ("community service" ≤ "fine" ≤ "suspended sentence" ≤ "prison"). <sup>44</sup> If the resulting quantification of the criterion variable in a given model was not fulfilling this basic condition, the model was adjusted by removing variables.
- In any regression model, the model effect of a predictor variable should be significant. Hence, we eliminated all predictor variables

General accounts of the research literature on punitive attitudes are provided by Doob and Roberts (1984), Endres (1992), Kury, (1998), Kury, Kania, and Obergfell-Fuchs (2004), Obergfell-Fuchs and Kury (2004), and Reichert and Bilsky (2001). The underlying problem of why people want to see an offender punished is discussed, e.g., by Carlsmith and Darley (2002) and Carpenter, Matthews, and Ong'ong'a (2004). For a discussion of specific determinants of punitiveness, see, e.g., Capps (2002), Cook and Powell (2003), Cohn, Barkan, and Halteman (1991), Keil and Vito (1991), Languin, Widmer, Kellerhals, and Nills-Robert (2004), Langworthy and Whitehead (1986), Oswald, Hupfeld, Klug, and Gabriel (2002), Seltzer and McCormick (1987), Sprott (1999), Wanner and Caputo (1987), and Zamble and Kalm (1990). Punitive attitudes in the context of victim surveys are discussed by, e.g., Besserer (2002), Hough and Roberts (1998), Kuhn, (1993), and Kury and Ferdinand (1999) as well as by Kury, Obergfell-Fuchs, Smartt, and Würger (2002) with a mainly methodological perspective.

See, e.g., Höfer (2003, pp. 99ff).

For details on decision rules and the proper procedure for multivariate regression analysis see, e.g., Belsley, Kuh, and Welsch (1980), Hays (1993, chap. 15-16).

For a general overview of the research on sentence severity, see Albrecht (1994), Höfer (2003), Pfeiffer and Oswald (1989), Stalans and Diamond (1990), and Streng (1991). Methodological attempts to rank or quantify sentence severity can be found, e.g., at Buchner (1979), Erickson and Gibbs (1979), Harlow, Darly, and Robinson (1995), McClelland and Geoffry (1985), Rossi, Simpson, and Miller (1985), Sebba (1978), Sebba and Nathan (1984), and Spelman (1995). For research on the determinants of sentencing in judges, see, e.g., Oswald (1994, 1997), Oswald and Langer (1989), and Oswald and Bilsky (1991).

with a probability of error higher than one percent ( $\alpha > .01$ ). In one case, a variable with a higher probability remained in the model due to its rather high Delta-R-square value (see below).

- Furthermore, the predictors in the final model should be as relevant as possible for explaining the variation of the criterion. Thus, we decided to keep only those predictors with a substantial standardised regression weight (beta > .05).
- Since there could be hidden effects of a predictor variable that might go unnoticed by only looking at the variables beta coefficient, we also checked the loss of the overall explanation of variance of a given model after removing a predictor (Delta-R-square).

The following list summarises our methodological procedure for developing the final regression model for predicting the *punitiveness* in the German sample:

- **Step 1:** Defining the handling of missing values for each variable in the model (usually listwise, input mode if applicable);
- Step 2: Defining the scale for each variable (nominal, ordinal, or metric);
- Step 3: Discretising the variables by defining the number of categories for each variable and choosing the most appropriate form of distribution (generally, normal or uniform) accounting for the values' distribution as indicated in the variable's histogram plot;
- **Step 4:** Testing and validating the model by (a) checking each variable's effect on the criterion in a single predictor model (with only this variable as predictor in the model), (b) calculating the Delta-R-square for all variables (as described above), proving the stability of the model in ten runs with random subsamples (for each run approximately 50 percent were randomly drawn from the total sample);
- Step 5: Testing the model on different subgroups based on the respondents (a) sex and (b) victimisation status<sup>45</sup>;
- **Step 6:** Transferring the regression model to other country samples, thus further testing its validity and practicability.

The subsample models for the victimised groups included additional variables that were only available for victimised respondents (i.e., "crime reporting behaviour" and "seriousness", for details see the following results section).

## **3** Description of the Results

#### 3.1 Cross-country Comparison

First, we had a closer look at the sentence category distribution on the country level. Table 2 shows the descriptive data for the respective variable.

Table 2 Attitudes Towards Punishment – Selected Sentence Category: Descriptive Data by Country

	Comm	•	Fin	ie	Suspe		Priso	on <sup>a</sup>	Tota	al
Country	n	%	n	%	n	%	n	%	N	%
UK	671	35.9	132	7.1	125	6.7	942	50.4	1,870	100
Ireland	915	48.2	164	8.6	79	4.2	742	39.1	1,900	100
Greece	737	46.0	252	15.7	67	4.2	547	34.1	1,603	100
Netherlands	748	40.2	162	8.7	326	17.5	624	33.5	1,860	100
Sweden	898	47.8	247	13.2	137	7.3	596	31.7	1,878	100
Hungary	1,006	54.0	163	8.7	115	6.2	580	31.1	1,864	100
Estonia	765	50.6	141	9.3	169	11.2	436	28.9	1,511	100
Italy	1,255	68.8	104	5.7	6	0.3	460	25.2	1,825	100
Spain	984	58.1	290	17.1	48	2.8	371	21.9	1,693	100
Germany	1,023	53.2	229	11.9	270	14.0	401	20.9	1,923	100
Denmark	1,107	59.6	151	8.1	254	13.7	344	18.5	1,856	100
Portugal	1,410	76.9	90	4.9	32	1.7	301	16.4	1,833	100
Belgium	1,377	73.4	135	7.2	75	4.0	288	15.4	1,875	100
Luxembourg	570	74.6	54	7.1	30	3.9	110	14.4	764	100
Finland	1,142	59.5	276	14.4	230	12.0	272	14.2	1,920	100
Austria	1,182	61.9	221	11.6	239	12.5	266	13.9	1,908	100
Poland	2,482	69.7	391	11.0	201	5.6	485	13.6	3,559	100
France	1,418	75.1	117	6.2	112	5.9	240	12.7	1,887	100
Total	19,690	58.5	3,319	9.8	2,515	7.4	8,005	24.2	33,529	100

<sup>&</sup>lt;sup>a</sup> Sorted by descending percentages of the category "prison".

The table shows clearly that a majority (58.5 %) of all respondents selected "community service" as the appropriate sentence for a recidivist burglar. On the punitive side of the scale, after all, a total of about one fourth of the respondents (24.2 %) suggested an unsuspended prison term for the burglar. Regarding the latter as the most severe sentence category, the UK sample contained the largest fraction of highly punitive respondents of all countries (50.4 %), followed – at some distance – by Ireland (39.1 %), Greece (34.1 %), the Netherlands (33.5 %), and Sweden (31.7 %). As regards this indicator for *punitiveness*, Germany belonged to the middle-ranking countries (20.9 %). The least punitive respondents in this respect

came from France (12.7 %), closely followed by Poland (13.6 %), Austria (13.9 %), Finland (14.2 %), and Luxembourg (14.4 %).

Figure 1 simplifies the data by merging the first three, more lenient categories ("community service", "fine", and "suspended sentence"), contrasting them to the assumedly most punitive category, "unsuspended prison".

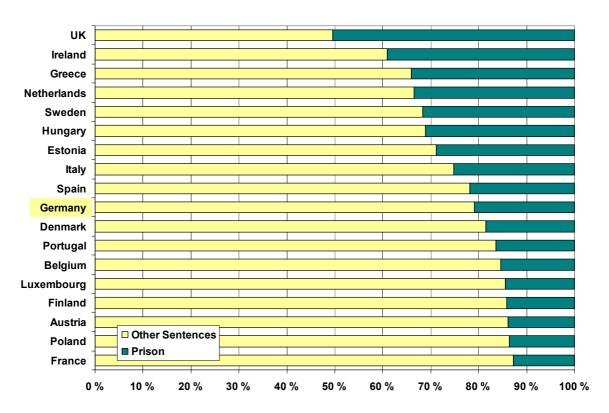


Figure 1 Attitudes Towards Punishment: Other Sentences vs. Prison (Sorted by Descending Percentages of the Category "Prison")

This way of displaying the data shows quite clearly the remarkable country differences as regards the selection of different available sentence categories. Whereas more than every second respondent from the United Kingdom selected an unsuspended prison term as the most appropriate sentence for the second time burglar (50.4 %), on the other hand, only about every eighth respondent did so in France (12.7 %).

-

See Besserer (2002) and van Kesteren, Mayhew, and Nieuwbeerta (2000, p. 86ff) for ICVS databased international country comparisons of punitiveness indicators. Kommer (1994, 2004) compares punitiveness data derived from the European Sourcebook Of Crime And Criminal Justice Statistics. See also van Wilsem (2004) for a complementary analysis of international ICVS data on victimisation combined with respective aggregate country statistics.

In our further analysis, we focussed on those recipients who selected the category "prison" sentence as well as their specification of the length of the prison term in the subsequent follow-up question. Table 3 shows the respective descriptive data for the countries.

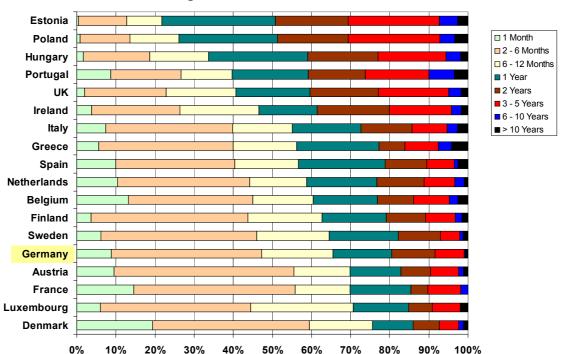
Table 3 Attitudes Towards Punishment – Prison Term: Descriptive Data by Country

	<1 m	onth	2 - 6	i m	6 - 1	2 m	1 ye	ear	2 ye	ears	3 -	5 y	6-1	0 y	> 10	) y *	tota	al
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Greece	25	5.6	154	34.4	73	16.3	94	21.0	30	6.7	38	8.5	15	3.3	19	4.2	448	100
Portugal	22	8.7	45	17.9	33	13.1	49	19.4	37	14.7	41	16.3	16	6.3	9	3.6	252	100
Poland	4	0.9	57	12.7	56	12.5	113	25.2	81	18.1	105	23.4	17	3.8	15	3.3	448	100
Italy	31	7.5	134	32.4	63	15.2	73	17.6	54	13.0	37	8.9	11	2.7	11	2.7	414	100
Estonia	2	0.5	52	12.3	38	9.0	122	28.9	79	18.7	98	23.2	20	4.7	11	2.6	422	100
Belgium	36	13.2	87	31.9	42	15.4	45	16.5	25	9.2	25	9.2	6	2.2	7	2.6	273	100
Spain	31	9.9	95	30.4	51	16.3	69	22.1	33	10.6	22	7.1	3	1.0	8	2.6	312	100
Luxembourg	6	6.1	38	38.4	26	26.3	14	14.1	6	6.1	7	7.1	0	0.0	2	2.0	99	100
Hungary	9	1.7	91	17.0	80	15.0	136	25.4	96	17.9	93	17.4	20	3.7	10	1.9	535	100
Ireland	28	3.8	164	22.5	148	20.3	108	14.8	136	18.6	115	15.8	19	2.6	12	1.6	730	100
UK	18	2.0	193	21.0	163	17.7	175	19.0	162	17.6	165	17.9	30	3.3	15	1.6	921	100
Finland	9	3.6	100	40.2	47	18.9	41	16.5	25	10.0	19	7.6	4	1.6	4	1.6	249	100
Sweden	35	6.1	228	39.9	105	18.4	101	17.7	62	10.9	28	4.9	5	0.9	7	1.2	571	100
Austria	24	9.5	116	46.0	36	14.3	33	13.1	19	7.5	18	7.1	3	1.2	3	1.2	252	100
Denmark	66	19.4	137	40.2	55	16.1	35	10.3	23	6.7	17	5.0	4	1.2	4	1.2	341	100
Netherlands	62	10.4	201	33.7	87	14.6	107	18.0	72	12.1	47	7.9	14	2.3	6	1.0	596	100
Germany	35	8.9	151	38.3	72	18.3	59	15.0	44	11.2	29	7.4	1	0.3	3	8.0	394	100
France	33	14.6	93	41.2	32	14.2	35	15.5	10	4.4	19	8.4	4	1.8	0	0.0	226	100
Total	476	7.4	2136	30.6	1207	16.2	1409	18.3	994	11.9	923	11.3	192	2.4	146	2.0	7483	100

<sup>\*</sup> Sorted by descending percentages of the category "prison term > 10 years".

In almost all of the countries, the respondents covered the full range of prison terms that were offered by the questionnaire item – even including "life sentence" (with France being the only exception). Over all countries, a prison term "from two to six months" was the most frequently selected category with almost one third of all participants (30.6 %). With some distance, a "prison term of one year" followed as second most frequent category (18.3 %). After all, 4.4 percent of the respondents who selected a prison sentence in the first place also suggested a prison term of at least six years for the burglar.

Figure 2 displays the data for the selected length of the prison term by country graphically with the lightly shaded bars indicating prison terms up to one year, and the darker shaded bars for terms from one year up. As one remarkable result, the participants from Poland, who were second most lenient after France concerning the general sentence categories (cf. Figure 1), were second most punitive when it came to specify the length of the prison



term for the recidivist burglar.<sup>47</sup>

Figure 2 Attitudes Towards Punishment: Prison Term
(Sorted by Descending Percentages of the Merged Categories "Prison Term > 1 year")

In order to confirm the hitherto only descriptive and graphical differences and to find the statistically significant differences between the countries, we performed an overall comparison, the Kruskal-Wallis H-test. Its highly significant p-value (p < .001) indicated that (at least) two countries differ significantly as regards the suggested lengths of the prison terms. Further post-hoc pairwise comparisons of all countries with Germany, using the Mann-Whitney U-test, showed the results as indicated in Table 4.

Note that this is, at least partly, the result of a selection of the participants (see section 4 for a discussion of the results).

Results of	Results of Mann-Whitney U-Tests (Germany vs. Other Countries)													
				Mean	rank									
Country	N	Mo	Mdn		Germany <sup>a</sup>	Diff.b	p							
Denmark	332	2	2	329.36	392.27	62.91	.000							
France	226	2	2	290.59	321.92	31.33	.030							
Austria	252	2	2	309.80	332.26	22.46	.120							
Luxembourg	99	2	3	247.10	246.97	-0.13	.993							
Sweden	571	2	3	486.10	478.51	-7.59	.666							
Belgium	273	2	3	340.07	329.80	-10.27	.486							
Finland	249	2	3	334.27	314.25	-20.02	.167							
Netherlands	596	2	3	505.22	480.80	-24.42	.176							
Spain	312	2	3	367.76	342.21	-25.55	.089							
Italy	414	2	3	427.30	380.54	-46.76	.003							
Greece	448	2	3	444.06	395.85	-48.21	.003							
Portugal	252	4	4	382.07	286.04	-96.03	.000							
Ireland	730	2	4	617.08	461.38	-155.70	.000							
Hungary	535	4	4	540.91	361.93	-178.98	.000							
Poland	448	4	4	515.87	314.20	-201.67	.000							
Estonia	422	4	4	507.05	302.95	-204.10	.000							
UK	921	2	4	724.15	503.38	-220.77	.000							

Table 4 Attitudes Towards Punishment – Length of Suggested Prison Sentence: Results of Mann-Whitney U-Tests (Germany vs. Other Countries)

Note. Mo = Mode, Mdn = Median, Diff. = Difference of mean ranks.

7,080

Total

3,778.25

3,089.86

-688.39

.000

If applying a strictly conservative probability of error (p < .001),<sup>48</sup> only the participants from Denmark selected significantly more lenient prison term lengths for the recidivist burglar. On the other hand, the values for the United Kingdom, Estonia, Poland, Hungary, Ireland, and Portugal differed significantly in the punitive direction. For the other countries, no significant differences with the German sample could be found. Finally, the comparison of the German values with the total of the other European countries in the survey revealed a significant difference insofar that Germany is less punitive.

## 3.2 Determinants of Attitudes Towards Punishment

First, the regression model as produced by the CATREG procedure will be described in some detail. Before showing the influence of all the predictor variables, we take a closer look at the quantification of the dependent vari-

 $<sup>^{</sup>a}$  N = 394, Mo = 2, Mdn = 3.

<sup>&</sup>lt;sup>b</sup> Countries sorted by ascending differences, i.e., countries that are more lenient than Germany are at the top, those that are more punitive than Germany are at the bottom of the table.

<sup>&</sup>lt;sup>c</sup> Germany vs. the remaining other countries.

<sup>&</sup>lt;sup>48</sup> Cf. Klockars & Sax (1986).

able. Then, we present the different steps and measures that were taken to validate and test the model. Finally, the regression model is tested on different subgroups of the German sample as well as on two other country samples for external validation.

#### 3.2.1 Description of the Final Regression Model

Finally, 1,662 of 2,025 respondents from the German survey sample were included in the regression analysis. The remaining 363 cases had been excluded by the CATREG procedure, e.g., in case the respondents had (real or user-defined) missing values for at least one of the variables that were included in the model.

As already mentioned above, the final model included nine predictor variables. <sup>49</sup> As could be expected, the demographic variables (1) *sex* and (2) *age* were most important for the model. Further significant demographic and socio-economic variables for the model were (3) *occupational status*, (4) *household size*, and (5) *income*. Additionally, the model also included three crime-related predictor variables, i.e., (6) a newly built variable *victimisation status* (not victimised, victim of non-contact crimes, victim of contact crimes) <sup>50</sup>, (7) the *level of self-security* <sup>51</sup>, and (8) the so-called "stan-

The following eight predictor variables were eliminated during the modelling process for the German sample: (1) Immigrant status (respondent or family), (2) frequency of going out for recreational purposes, (3) frequency of attending religious services, (4) respondent's assessment of his/her general health and (5) general happiness, (6) frequency of thoughts about criminal victimisation (general cognitive fear of crime), (7) assessment of risk of becoming a victim of a burglary during the next 12 months (specific cognitive fear of crime), and (8) the general satisfaction with the police.

The seven non-contact crimes were: (1) Theft of and (2) from car, (3) theft of motorcycle and (4) bicycle, (5) burglary and housebreaking as well as (6) attempting it, and (7) theft of personal property. Although the latter could also be regarded as a contact crime, we decided to assign it to the non-contact crimes, since the respective item wording in the questionnaire included also variants of non-contact theft from a locker or a wardrobe as examples ("[...] Apart from theft involving force there are many other types of theft of personal property, such as pickpocketing or theft of a purse, wallet, clothing, jewellery, sports equipment. This can happen at one's work, at school, in a pub, on public transport, on the beach, or in the street. [...]"). Another reason for our decision was the seriousness of this crime, since even pickpocketing is much less severe than the three (other) contact crimes, which are (1) robbery by force or threat, (2) sexual victimisation, and (3) assaults or threats by either a known or unknown person.

dard item" for *fear of crime* ("How safe do you feel walking alone after dark"). <sup>52</sup> Finally, the model also included (9) the respondents' assessment of their *general life satisfaction*. <sup>53</sup>

Table 5 shows the German sample's final regression model's standard parameters as well as some further indicators for the model's reliability and validity.

 Table 5
 Categorical Regression for Germany (Dependent Variable: Punitiveness)

	Standaro Coeffici					U	e Predi Model	ctor	
Predictors*	Beta	SE	df	F	p	Beta	р	$\mathbb{R}^2$	$\Delta R^2$
1. Age	230	.026	10	77.227	.000	181	.000	.033	.038
2. Sex	215	.025	1	74.925	.000	178	.000	.032	.038
3. Victimisation status	093	.024	2	15.099	.000	090	.000	.008	.007
4. Occupational status	089	.026	4	12.015	.000	077	.000	.006	.006
5. Fear of crime	.085	.025	2	11.742	.000	.053	.005	.003	.007
6. General life satisfaction	080	.024	3	10.992	.000	059	.001	.004	.005
7. Household size	.074	.026	3	8.145	.000	.083	.000	.007	.004
8. Income (quartiles)	057	.027	2	4.457	.012	075	.000	.006	.017
9. Level of self-security	.054	.024	3	5.027	.002	.048	.037	.002	.002

Note. Analysed N = 1,662,  $R^2 = .105$ ; \*Sorted by descending effect size (Beta).

The nine predictor variables that are included in the final model explained 10.5 percent of the dependent variable's variance (N = 1,662). The standardised regression coefficient (beta) indicates the relative size of the predictor's influence on the criterion variable (the higher the beta coefficient, the higher the respective variable's influence).

In this model, the best (i.e., most influential) predictors were the respondent's age (beta = -.230) and his/her sex (beta = -.215). Due to the prescribed elimination criteria (as described in the methodological section of

In the questionnaire, the participants were asked about their home protection devices, i.e., the measures they use in order to secure their homes. Since multiple responses were allowed, we built a new variable counting all these self-security measures.

See, e.g., Reuband (2000) on the usability of the item; cf. also Ditton, Farrall, Bannister, and Gilchrist (2000) and Farrall and Ditton (1999) for a very critical account on the item's validity.

This variable was adapted for the current ICVS/ECSS questionnaire from the "quality of life" section of the "Eurobarometer" survey. For a general overview of the survey series see, e.g., Reif and Inglehart (1991) and Saris and Kaase (1997). For a critical account of research on "quality of life" see, e.g., Rapley (2003). For recent comparative results on quality of life in Europe, see, e.g., Christoph and Noll (2003) and European Foundation for the Improvement of Living and Working Conditions & Delhey, J. (2004).

this report), all predictors have a beta coefficient of at least .05. Another elimination rule was the variable's maximum probability of error ( $\alpha < .01$ ). As can be seen, this was true for all predictors but for *income*. In this specific case, we kept the variable, because its elimination would have cost the model too much explanative power as can be inferred from the table's last column with the variable's Delta-R-square values ( $\Delta R^2$ ). Actually, *income* had the third highest respective value ( $\Delta R^2 = .017$ ) after *age* and *sex*.

Furthermore, we analysed a single-variable model for each of the predictor variables, carving out the predictive power of the respective variable. The parameters for these models can also be taken from Table 5.

#### 3.2.2 Quantification of "Attitudes Towards Punishment"

As already described, the CATREG procedure quantifies nominal- and ordinal-scaled variables by assigning numerical values to the respective categories. Figure 3 shows the quantification of the dependent (transformed) variable in the final model for the German sample.

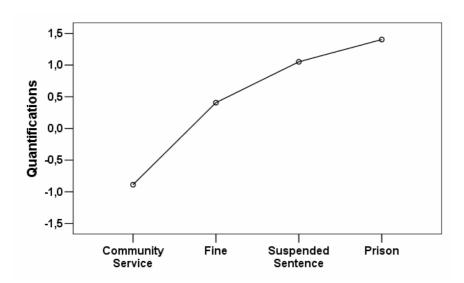


Figure 3 Quantification of the Dependent Variable: "Selected Sentence Category" (Germany)

As expected, the quantification algorithm produced monotonically ascending values that are consistent with common assumptions about increasing seriousness of the sentence: The lowest value is assigned to the category "community service" and the highest value to the category "unsuspended

prison" sentence with "fine" and "suspended prison sentence" in between.<sup>54</sup>

Although there has been basically no doubt in the research literature about "prison" being the most punitive of the four sentence categories that were available here, there has been less unanimity concerning the other three categories "community service", "fine", and "suspended sentence". <sup>55</sup> Nonetheless, we decided for this quantification, since the implied rank order is plausible at least from a common-sense point of view. In doing so, we assumed for our model that higher quantification values correspond with increasing *punitiveness*.

## 3.2.3 Predictor Variables and Their Influence on the Dependent Variable<sup>56</sup>

The aforementioned standardised regression coefficients (beta) can have either positive or negative values. A positive beta means that the higher the value of the (quantified) predictor variable, the higher the value of the (quantified) dependent variable. The absolute magnitude of the beta value shows the strength of the variable's influence. In the content of the current model, e.g., high positive beta values indicate a more punitive response with increasing values for the respective predictor variable (and vice versa for negative beta values).

For better readability, as well as due to space constraints, we decided to omit the pure model quantifications for the categories of each predictor variable as was done for the dependent variable (see Figure 3). Instead, the following figures directly show the interaction effects by displaying the predictor variable's categories on the x-axis and the respective quantified mean values of the dependent variable (i.e., "attitudes towards crime") on the y-axis. Thus, the reader can rather easily extract the essence of any given variable's influence on the German respondents' *punitiveness* as indicated by the model.<sup>57</sup>

<sup>&</sup>lt;sup>54</sup> Cf. footnote 44.

See, e.g., Boers and Sessar (1990) and Kilchling (1993); cf. also footnote 77 for further references.

Sorted by descending effect sizes (i.e., the beta coefficient).

For interpretation, higher values on the y-axis indicate that the respective respondents belonging to the corresponding predictor variable category are comparatively more punitive. While interpreting the figures, please note that (due to the different influence of the predictor variables) the depicted

#### 3.2.3.1 Age and Sex

Figure 4 displays the combined interaction effects of age and sex (N = 1,662, males = 725, females = 937).

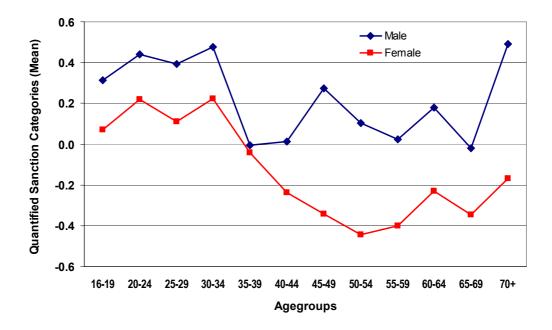


Figure 4 Predictor Variables "Age" and "Sex" by Quantified Dependent Variable (z-scores)

Generally, the German male respondents seemed to be more punitive than their female counterparts through almost all the age groups. Furthermore, there seemed to be a sex-by-age interaction effect with both sexes' *punitiveness* scores converging for the middle age respondents. As regards the age effect, it seemed that the younger respondents (up to 34 years) are significantly more punitive than all other age groups (with the effect being more articulate for the female group). This rather remarkable effect, which is (to a certain degree) inconsistent with other research findings, will be discussed in the closing section of this report.

#### 3.2.3.2 Victimisation Status

In the questionnaire, the participants were asked whether they had been victims of 10 different crimes during the last five years. Based on these data and on the aforementioned crime groups (contact vs. non-contact

y-axis' scale ranges are variably (with larger scale ranges indicating greater predictor variable influence on the depending variable).

crimes), Figure 5 shows the interaction effects. (N = 1,662, "not victimised at all" = 841, "victimised by non-contact crimes" = 469, "victimised by contact crimes" =  $352^{58}$ ).

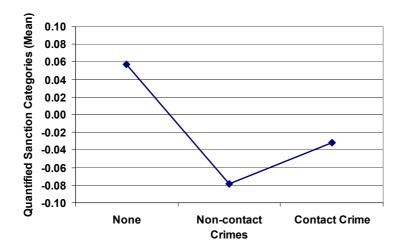


Figure 5 Predictor Variable "Victimisation Status" by Quantified Dependent Variable (z-scores)

Participants without previous crime victimisation experiences showed the highest level of *punitiveness* on average, followed at a distance by victims of contact crime and non-contact crime. This result (that might seem a bit surprising at first sight) will also be discussed in the final section.

#### 3.2.3.3 Occupational Status

Figure 6 shows the interaction effects for the predictor variable *occupational status* (N = 1,662, "working" = 886, "unemployed" = 90, "keeping home" = 118, "retired/disabled" = 425, "student" = 143).

In accordance with the research literature, we assume that being victimised by a contact crime is usually the more severe experience (cf. footnote 77). Hence, we assigned those respondents who had been victimised by both, contact and non-contact crimes, to the "contact crime group".

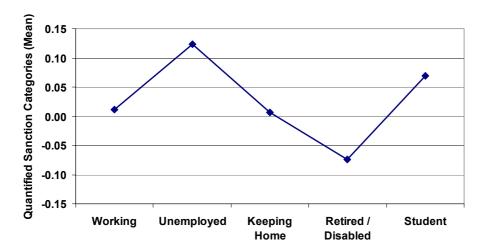


Figure 6 Predictor Variable "Occupational Status" by Quantified Dependent Variable (z-scores)

Mainly, unemployed respondents showed rather high scores for *punitive-ness*. The lowest scores could be found for the retired or disabled respondents. These results and possible underlying secondary effects will be discussed later.

#### 3.2.3.4 Fear of Crime

Due to our criteria for reducing the original pool of predictor variables for the final regression model (see above), only the so-called "standard item" made its way into the final model. This item has been used in a multitude of national and international research studies over the last decades.<sup>59</sup> The item wording in the current ECSS questionnaire was, "How safe or unsafe do you feel walking alone in your area after dark?" with four possible answers offered (N = 1,662, "very safe" = 452, "fairly safe" = 677, "a bit unsafe = 394, "very unsafe" = 139). In Figure 7, the respective data are displayed.

General overviews of the respective research can be found at Bernard (1992), Boers (1991), Ditton and Farrall (2000), and Hale (1996). Recent critical accounts including suggestions for further conceptual and methodological improvements are provided by Bilsky (1993), Ditton, Bannister, and Gilchrist (1999), Fattah (1993), and Jackson (2004a, 2004b). The determinants of fear of crime are discussed either more comprehensively (e.g., Bennett & Flavin, 1994, Farrall, Bannister, Ditton, & Gilchrist, 2000; Gabriel & Greve, 2003; Garofalo, 1981) or as regards special factors as sex (e.g., Gilchrist, Bannister, Ditton, & Farrall, 1998; Goodey, 1997), age (e.g., Greve, 2004), and previous victimisation experience (e.g., Bilsky & Wetzels, 1997; Garofalo, 1979; Skogan, 1986). Fear of crime in the context of the ICVS is discussed by Aromaa and Heiskanen (2002) and Kury and Ferdinand (1998).

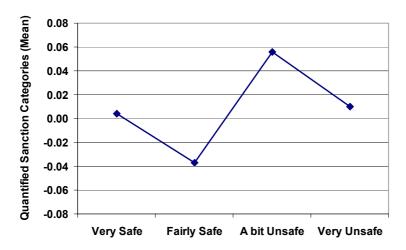


Figure 7 Predictor Variable "Fear of Crime" by Quantified Dependent Variable (z-scores)

Respondents who feel "very safe" and respondents who feel "very unsafe" seemed to have rather similar attitudes towards punishment. Furthermore, the zigzagging graph line hampered the identification of a proper pattern in this result. Hence, and since the effect sizes between the respective groups were comparably small, we dichotomised the variable into "feeling (fairly) safe" and "feeling (a bit) unsafe". Under these circumstances, and with all due caution, it could be concluded that respondents who feel less safe are also more punitive.

#### 3.2.3.5 General Life Satisfaction

In the survey questionnaire, all participants were asked about their *life satisfaction in general* with four answer categories to choose (N = 1,662, "not at all satisfied with my life" = 42, "not very satisfied" = 135, "fairly satisfied" = 1058, "very satisfied" = 427). Figure 8 shows the data.

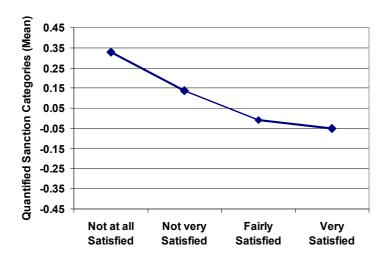


Figure 8 Predictor Variable "Life Satisfaction" by Quantified Dependent Variable (z-scores)

Looking at these data, one can say that the vast majority of the German respondents obviously seemed to be at least "fairly satisfied" with their life. Furthermore, the results showed that the more satisfied people are generally also less punitive. However, since the "unsatisfied" group was rather small, these results have to be interpreted with due caution.

#### 3.2.3.6 Household Size

Since in Germany it is not as common to live together with many other people in the same household than in various other (European) countries, we pooled all respondents claiming to live with "more than five (including oneself) people in their household" in one new group. This resulted in six household size categories (N = 1,662, "one person = 525, "two persons" = 565, "three persons" = 288, "four persons" = 198, "five persons" = 57, "more than five persons" = 29). Figure 9 shows the data.

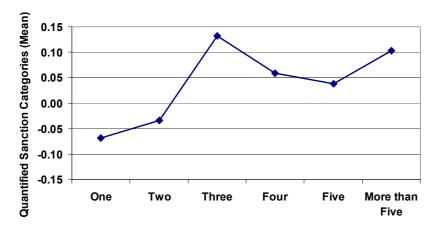


Figure 9 Predictor Variable "Household Size" by Quantified Dependent Variable (z-scores)

There seemed to be an increase in *punitiveness* with increasing household size only until there are three persons. This result and possible underlying explanation structures will be discussed later.

#### 3.2.3.7 Income

Since income has always been a critical questionnaire item,  $^{60}$  the respondents were asked to compare their gross household income in a two-step comparison with data derived from official statistics for Germany. Consequently, all valid answers could be classified according to four income quartiles. (N = 1,662, "lowest 25 percent" = 536, "26 to 50 percent" = 466, "51 to 75 percent" = 320, "highest 25 percent" = 340). Figure 10 shows the variables' interaction.

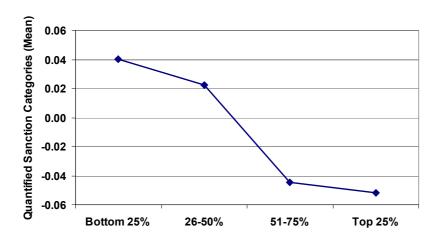


Figure 10 Predictor "Income Quartiles" by Quantified Dependent Variable (z-scores)

See, e.g., DeMaio (1980) and Tourangeau and Smith (1996).

The data showed a distinctive negative interaction effect, i.e., respondents with higher income tend to be less punitive.

## 3.2.3.8 Level of Self-security

People have different ideas about how to protect their homes and their family. In the survey questionnaire, the respondents were asked about the different measures and security devices they use. The interviewer offered ten typical security devices explicitly. Furthermore, the respondents could specify all other measures they took for their home protection and safety. Based on this data, we built a new variable, by counting the number of all different measures per person. This new variable was used as predictor for the regression analysis. Since only a few Germany respondents mentioned more than three different security measures, we pooled them into the new category "three or more security measures", thus resulting in altogether four categories (N = 1,662, "no security measures" = 182, "one security measure" = 296, "two security measures" = 357, "three or more security measures" = 827). The respective data for the interaction of this predictor variable with the respondents' *punitiveness* can be found in Figure 11.

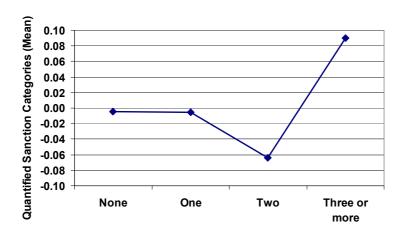


Figure 11 Predictor Variable "Self-security" by Quantified Dependent Variable (z-scores)

The level of *punitiveness* increased to a certain degree for participants who use three or more security measures, although the effect size was rather small. Furthermore, it was remarkable that almost every home uses at least one of the security devices or measures that were offered in the questionnaire (e.g., a special door lock) to protect their homes.

## 3.2.4 Testing and Validating the Regression Model

Since categorical regression models can turn out to be rather unstable, we tested the stability of our model and the included predictor variables by repeatedly applying it to ten random samples of about 50 percent of the total sample. Table 6 shows the results of this testing procedure (sorted by descending stability).

Table 6 Categorical Regression for Germany (Dependent Variable: Punitiveness): Model Stability Test (10 Subsamples, ~ 50%)

	Mo	del St	tabilit	y in R	andor	n Sub	sampl	les (n	<= 50	%)	
Predictors	<b>p1</b>	p2	р3	p4	<b>p5</b>	<b>p6</b>	<b>p</b> 7	<b>p8</b>	р9	p10	Validity
1. Sex	***	***	***	***	***	***	***	***	***	***	40/40
2. Age	***	***	***	***	***	***	***	***	***	***	40/40
3. Occupational status	***	***	***	***	***	***	***	***	***	***	40/40
4. Victimisation status	***	***	***	ns	*	**	***	*	***	***	31/40
5. General life satisfaction	ns	***	***	ns	***	***	***	***	***	**	31/40
6. Household size	***	***	***	***	**	***	*	ns	(*)	ns	26/40
7. Fear of crime: Emotional	***	***	ns	***	ns	*	***	(*)	(*)	**	23/40
8. Level of self-security	***	*	ns	ns	*	ns	*	(*)	ns	***	15/40
9. Income (quartiles)	***	*	ns	(*)	ns	*	ns	ns	*	*	13/40
Model R <sup>2</sup>	.134	.139	.120	.118	.091	.149	.119	.124	.119	.121	.123
<b>Quantification Punitiveness</b>	+	+	+	+	+	+	(+)	(+)	+	+	10/10
Note. ns = not significant. (*) $p < .10$ . * $p < .05$ . ** $p < .01$ . *** $p < .001$ .											

The Columns 2 to 11 display the level of significance for all nine predictor and for all ten subsample test runs (p1 to p10). The last column indicates the internal validity of each item as the summarised significance values through all test runs. <sup>62</sup> Hence, *sex* and *age* as well as *occupational status* seemed to be the most valid predictor variables, because their influence was highly significant for all test runs (p < .001). Four other predictors (*victimisation status*, *general life satisfaction*, *household size*, and *fear of crime*) proved to be rather (but not perfectly) reliable, since their model influence on the dependent variable was significant in at least eight of the ten test runs. The influence of *level of self-security* and *income* was less stable,

Since the optimal scaling algorithm, as any atheoretical data mining procedure, continuously assigns new (metric) values (in order to fit the model to the data), it runs the risk of overfitting the model to the given data. Hence, a thorough cross-validation process is of particular importance (cf. footnote 40 for references).

We assigned reliability values for the predictors based on the following schema: 1 point for (\*), 2 points for \*, 3 points for \*\*, 4 points for \*\*\*, thus resulting in a maximum of 40 points for each predictor.

not being significant in four out of ten cases, thus making it rather unreliable predictors for the regression model.

The table further shows the explanative power of the complete model as the sum of explained variance of the dependent variable (R-square) for each of the ten test runs. The explained variance over the ten runs ranged from 9.1 percent to 13.9 percent with an average of 12.3 percent.<sup>63</sup>

Since the categorical regression analysis technique (or rather the optimal scaling procedure that is included) assigns new numerical values for any new model, we also checked whether the quantification of the dependent variable remained in shape for each of the ten test runs (i.e., ordinal scale with monotonically increasing values from category to category). The last row of the table shows the evaluation of the dependent variable's quantification, which was good (i.e., the same as in the original model) in eight out of ten cases ("+"). Only two of the test runs produced a dependent variable quantification that was not fully satisfying ("(+)").

## 3.2.5 Testing the Model on Different German Subgroups

For further validation of the model, we tested it on different subgroups for two of the main predictor variables, i.e., sex and victimisation status. First, we checked how the model performed for the two sex groups (N = 1,662, male = 725, female = 937). Of course, the subgroup models for these two groups were calculated without sex as predictor variable.

## 3.2.5.1 Subgroup Models I: Sex

Table 7 shows the model parameters for the male subgroup.

NB: The model's explained variance for the complete German sample was 10.5 percent.

	Standardized Co	efficients			
Predictors*	Beta	SE	df	F	p
1. Age	232	.037	10	38.365	.000
2. General life satisfaction	107	.037	2	8.363	.000
3. Victimisation status	075	.037	1	4.054	.044
4. Fear of crime	.074	.037	2	4.109	.017
5. Occupational status	.072	.039	4	3.506	.008
6. Level of self-security	.060	.037	1	2.676	.102
7. Household size	.055	.039	2	2.004	.136
8. Income (quartiles)	041	.040	2	1.046	.352

Table 7 Categorical Regression for Germany (Dependent Variable: Punitiveness): Subgroup Regression Model I a: "Male"

Note. Analysed N = 725,  $R^2 = .080$ ; \*Sorted by descending effect size (Beta).

Besides *age*, only *general life satisfaction*, *occupation*, *fear of crime*, and *victimisation status* worked properly as predictor variables for the dependent variable *punitiveness*. All other predictor variables of the original model failed to reach a sufficient significance. Altogether, the model explained eight percent of the dependent variable's variance. Table 8 shows the respective model parameters for the female respondents.

Table 8 Categorical Regression for Germany (Dependent Variable: Punitiveness): Subgroup Regression Model I b: "Female"

	Standardized Co				
Predictors*	Beta	SE	df	$\mathbf{F}$	р
1. Age	251	.035	10	52.275	.000
2. Occupational status	130	.035	4	14.279	.000
3. Fear of Crime	.107	.032	2	11.146	.000
4. Victimisation status	106	.033	2	10.455	.000
5. Income (quartiles)	095	.037	3	6.486	.000
6. Household size	.093	.036	5	6.613	.000
7. General life satisfaction	073	.033	1	4.991	.026
8. Level of Self-security	.044	.032	2	1.854	.157

Note. Analysed N = 937,  $R^2 = .100$ ; \*Sorted by descending effect size (Beta).

Apparently, the model worked better for predicting the female participants' punitiveness scores. With the exception of level of self-security all of the original model predictor variables reached a sufficient level of significance. The complete model explained ten percent of the dependent variable's variance.

## 3.2.5.2 Subgroup Models II: Victimisation Status

See section 3.2.3 for a description of the variables' influence on the dependent variable.

In a second step, we tested three models based on the subgroups of the *victimisation status* (N = 1,662, "not victimised at all" = 841, "victimised by non-contact crimes" = 469, "victimised by contact crimes" = 352). Here, we, of course, omitted *victimisation status* itself as predictor variable. Table 9 shows the model parameters for the first group.

Table 9 Categorical Regression for Germany (Dependent Variable: Punitiveness): Subgroup Regression Model II a: "Not Victimised"

	Standar Coeffic				
Predictors*	Beta	SE	df	F	p
1. Age	242	.038	10	40.733	.000
2. Sex	222	.035	1	39.427	.000
3. General Life Satisfaction	109	.034	2	10.320	.000
4. Occupational status	101	.038	4	6.969	.000
5. Level of self-security	.076	.034	2	5.097	.006
6. Fear of Crime	.072	.035	2	4.194	.015
7. Household size	.065	.035	3	3.546	.014
8. Income (quartiles)	062	.036	2	2.958	.052

Note. Analysed N = 841,  $R^2 = .109$ ; \*Sorted by descending effect size (Beta).

The group of participants who had not been victimised was by far the largest of the victimisation subgroups, including more than half of the total sample. As expected, the model parameters for this subgroup did not differ much from the total sample. The effect's sizes and directions as well as the explained variance (R-square = .109 vs. .105 for the total sample) were comparable.

The subgroup models with participants who had been victimised contained two additional predictor variables, i.e., *crime reporting* and *seriousness of crime*<sup>65</sup>. The first variable is mathematically a ratio of the number of reported crimes by the number of victimisations. Thus, it can be regarded as an indicator of the participant's general willingness to report a crime. In the questionnaire, the participants were also asked to assess the seriousness of each crime victimisation they had experienced. Based on these data, each participant's average seriousness score was computed. Both variables were calculated separately for the seven non-contact and the three contact

As regards research on the assessment of seriousness of crime, see the fundamental study by Sellin and Wolfgang (1964). For recent international research on crime seriousness, see Kania, Brand, Zimmermann, and Walter (2003). For the differential seriousness of victimisation experiences as regards ICVS data, see van Dijk and van Kesteren (1996) and Schaefer and Lynch (2002).

crimes. Table 10 shows the respective model parameters for the victims of non-contact crimes.

Table 10 Categorical Regression for Germany (Dependent Variable: Punitiveness): Subgroup Regression Model II b: "Victimised by Non-contact Crimes"

	Standard Coeffici				
Predictors*	Beta	SE	df	F	p
1. Age	258	.046	10	32.043	.000
2. Sex	190	.048	1	15.818	.000
3. Household size	.127	.045	3	7.828	.000
4. Occupational status	122	.046	4	7.033	.000
5. Income (quartiles)	115	.047	2	6.002	.003
6. Reporting non-contact crimes	096	.044	2	4.639	.010
7. Seriousness non-contact crimes	.096	.045	2	4.550	.011
8. Level of self-security	.064	.045	2	1.980	.139
9. General life satisfaction	030	.044	2	.442	.643
10. Fear of crime	015	.047	2	.101	.904

Note. Analysed N = 464,  $R^2 = .156$ ; \*Sorted by descending effect size (Beta).

For this subgroup, the well-known three socio-demographic predictor variables (sex, age, occupation) were still strong. Also other variables carried more explanatory weight, e.g., household size, income as well as the two new group-specific variables, crime reporting and seriousness. General life satisfaction seemed to play no significant role in explaining the punitiveness of victims of non-contact crime. This was also valid for fear of crime.

Table 11 shows how the regression model worked out for the victims of contact crimes (i.e., robbery, assault & threat, and sexual incidents), who have had the (supposedly) most serious encounters with criminality,

	Standard Coeffici				
Predictors*	Beta	SE	df	$\mathbf{F}$	р
1. Age	306	.061	9	25.507	.000
2. Household size	.256	.068	2	14.173	.000
3. Reporting contact crimes	.214	.060	2	12.566	.000
4. Sex	157	.063	1	6.288	.013
5. General life satisfaction	137	.058	2	5.531	.005
6. Occupational status	.135	.064	4	4.480	.002
7. Fear of crime	.135	.061	3	4.947	.002
8. Level of self-security	106	.061	2	3.022	.051
9. Seriousness contact crimes	.060	.062	2	.940	.392
10. Income (quartiles)	.040	.068	1	.350	.555

Table 11 Categorical Regression for Germany (Dependent Variable: Punitiveness): Subgroup Regression Model II c: "Victimised by Contact Crimes"

Note. Analysed N = 256,  $R^2 = .256$ ; \*Sorted by descending effect size (Beta).

Age, sex, and occupation were still important predictors, with age being the most powerful predictor in the set. The influence of the participants' sex was noticeable reduced. Household size was the second most powerful predictor variable in the model, closely followed by the group-specific variable crime reporting. Furthermore, fear of crime was a more influential predictor variable for this victim group as it was for the total sample or for any other subsample we tested. Actually, the complete regression model for the contact crime victims with altogether ten predictor variables (seven of which are significant) allowed explaining 25.6 percent of the participants' punitiveness score's variance.

## 3.2.6 Transferring the Model to Two Other Country Samples

After testing the regression model within the boundaries of the German country sample, from which it was derived in the first place, we went on, trying to further validate it on different country samples. Since it is rather time-consuming to adjust a given regression model to a new country, and since the space for this report is limited, we decided to test and adjust the model not for all the countries in the set. Rather, we selected two countries, which contrast as much as possible as regards their participants' attitudes towards crime. The results from the cross-country comparisons (cf. section 3.1) suggested, on the one hand, France, with low average *punitiveness* scores, and, on the other hand, the United Kingdom, with comparably high average values for the *punitiveness* items. Methodologically, we proceeded

similar to the German sample, beginning with a model that included all 17 predictors (as described in section 3.2.1), then successively excluding variables according to the aforementioned criteria.

## 3.2.6.1 France

After the elimination procedure, eight predictor variables remained, of which the following five were identical with the German model: <sup>66</sup> Sex, age, income, victimisation status, and fear of crime.

Moreover, three new items from the original comprehensive pool of predictor variables were included in the regression model for France: *Immigrant status*, *frequency of going out for recreational purposes*, and the participants' *general satisfaction with the police*.

The model's quantification of the dependent variable, *punitiveness* (as operationalised by the selected sentence category), did not fully match the expected pattern that we found for the German sample (cf. Figure 3). Although the least and the most punitive category were identical ("community service" and "unsuspended prison", respectively), the "medium" sentence categories "fine" and "suspended prison term" were actually reversed. Table 12 shows the respective parameters for the regression model for the French Sample.

Hence, the following possible predictor variables from the German sample model have been removed: Level of self-security, occupational status, household size, and general life satisfaction.

Predictors*	Standardized Coefficients				
	Beta	SE	df	F	p
1. Age	164	.028	10	35.317	.000
2. Sex	158	.027	1	33.619	.000
3. Immigrant status	109	.026	2	16.879	.000
4. Frequency of going out	072	.029	3	6.271	.000
5. Fear of crime	.062	.028	3	4.982	.002
6. Income (quartiles)	059	.027	2	4.716	.009
7. General satisfaction with the police	056	.027	2	4.465	.012
8. Victimisation status	051	027	2	3 624	027

Table 12 Categorical Regression for France (Dependent Variable: Punitiveness)

Note. Analysed N = 1,361,  $R^2 = .077$ ; \*Sorted by descending effect size (Beta).

Due to the applied elimination criteria, all predictor variables in the model had a significant effect on *punitiveness* as the dependent variable. Again, we found *sex* and *age* the strongest predictors in the set, followed at a distance by the new predictor variable *immigrant status*, *frequency of going out*, and *fear of crime*. The eight predictor variables in the set together explained about eight percent of the French participants' *punitiveness* scores. Regarding the direction of the predictor variables' influence, we found the following effects (sorted by descending effect size)<sup>67</sup>:

- Respondents from the youngest age group were, again, the most punitive;
- as in the German sample, the male respondents showed higher punitiveness scores:
- as already said, the new variable *immigrant status* showed the third highest influence on *punitiveness* of all predictor variables in the model for France, with immigrants being the most punitive subgroup;
- we found a rather linear negative correlation between the new variable, the *frequency of going out*, and *punitiveness*, i.e., the more often the participants go out, the less punitive they are;
- fear of crime showed the expected effect (as for the German sample),
   i.e., the safer the respondents feel, the lower are their punitiveness scores;

It goes without saying, that all these results are only valid for the average sample and do not necessarily imply the same for any given single case.

- a similar correlation could be found between the respondents' income and their punitiveness scores, i.e., the higher the household income, the less punitive;
- the third of the new predictor variables, the *general satisfaction with the police*, showed a negative correlation with *punitiveness*, i.e., the more satisfied the respondents are with the work of the police in general, the lower are their demands for punishment;
- victims of non-contact crimes were the least punitive group, whereas both, victims of contact crimes as well as respondents without any victimisation experience, showed significantly higher *punitiveness* scores.

## 3.2.6.2 United Kingdom

For the UK sample, eight of the nine predictor variables from the German model remained<sup>68</sup>, completed by four new predictor variables: The respondent's *frequency of attending religious services*, *immigrant status*, *general happiness of life*, and *general satisfaction with the police*. Hence, the final regression model for the UK consisted of altogether twelve predictor variables.

As for the French sample, the quantification of *punitiveness* as dependent variable deviated from the German pattern (cf. Figure 3) with the two "medium" sentence categories ("fine" and "suspended prison term") reversed. The respective parameters for the UK regression model can be found in Table 13.

Only the variable *general life satisfaction* had to be removed due to the elimination criteria.

	Standardized Coefficients				
Predictors*	Beta	SE	df	F	p
1. Frequency of attending religious services	119	.025	3	22.544	.000
2. Income (quartiles)	103	.027	2	14.260	.000
3. Level of self-security	.094	.025	2	14.051	.000
4. Occupational status	094	.026	4	12.593	.000
5. Sex	092	.026	1	12.861	.000
6. Fear of crime	.092	.027	2	12.093	.000
7. Immigrant status	.087	.025	2	11.754	.000
8. Age	086	.026	10	10.773	.000

-.078

-.076

.071

-.057

2

2

4

9.265

8.571

7.506

5.091

.000

.000

.000

.024

.026

.026

.026

.025

Table 13 Categorical Regression for the UK (Dependent Variable: Punitiveness)

Note. Analysed N = 1,551,  $R^2 = .083$ ; \*Sorted by descending effect size (Beta).

9. General satisfaction with the police

10. Victimisation status

12. General life happiness

11. Household size

After the application of the elimination criteria, twelve significant predictor variables were included in the final model for the UK sample, explaining about eight percent of the dependent variable's variance. The sociodemographic indicators sex, age, and occupational status no longer dominated the model. Rather, one of the new variables, the participants' frequency of attending religious services, was the strongest predictor for punitiveness in the UK sample, closely followed by income and the level of self-security. Only then, we found occupational status, sex, and age as well as fear of crime and immigrant status. The direction of the predictor variable's influence was as follows:

- Participants who attend religious service showed higher average punitiveness scores;
- the group's *punitiveness* scores were decreasing with increasing household income;
- participants in the UK used on average more security measures for protecting their families and their homes. Furthermore, the influence of this self-securing behaviour on the participants' *punitiveness* seemed to be significantly greater in the UK (as compared to Germany and France). In this regard, groups of participants who use more security devices were generally more punitive;
- as regards the respondents' occupational status, students were the least punitive of all groups;

- comparable to the German and the French sample, male respondents in the UK were more punitive than their female counterparts;
- we found the youngest group being the most punitive, but also a second effect of increasing *punitiveness* at higher ages;
- the respondents' *punitiveness* increased with increasing group levels of insecurity, i.e., (*fear of crime*);
- participants who called themselves an *immigrant* were the least punitive of all groups, followed by those with members of their family being immigrants;
- the higher the group's *general satisfaction with the police work* was, the lower the respective respondents' *punitiveness* scores;
- participants who had not been victimised at all were the most punitive group, followed by victims of non-contact crimes. Surprisingly, victims of contact crimes were the least punitive (see discussion);
- with increasing *household size* the group's *punitiveness* scores were increasing;
- apparently, lower values for the respondents' assessment of their general life happiness went along with higher punitiveness scores for the respective groups.

## 4 Summary and Discussion of the Results, Conclusions and Outlook

For this first report, we focussed on the respondents' attitudes towards punishment or sentencing (*punitiveness*), represented in the survey questionnaire by two subsequent items. As regards our analysis methods, first we did a cross-country comparison with the German respondents as reference group (section 3.1). In a second step, we tried to explain the German respondents' punitiveness scores by using the predictive power of other variables in a categorical regression analysis with optimal scaling technique (section 3.2). After a thorough analysis and validation procedure of the regression model for the German total sample and different German subgroups, we tested the model on two additional contrast country samples, France and the UK, for a first external validation.

\*\*\*\*

As regards the general preference of a certain sentence category, the vast majority of all countries' respondents prefer the more lenient sentences "community service" and "fine" for the presented case scenario of a recidivist burglar. On the other hand, a total average of about one fourth of all countries' respondents selects the most severe sentence, an "unsuspended prison term". Altogether, we find remarkable country differences regarding the distribution of the selected sentence categories, ranging from France with 12.7 percent of its respondents selecting "prison" to the UK with 50.4 percent. With 20.9 percent, Germany ranks in the lower middle part of the analysed countries.

After this first descriptive step, we proceeded with inferential statistic analysis, comparing the German country sample's value for the dichotomised first item (i.e., "prison" vs. "other sentence") with the other countries. Both, an exact probability test (binomial test) and a subsequent asymptotic test for distributions (chi-square adjustment test), produced significant differences as regards the preferred sentence category for about half of the countries with the German sample.

For the further steps of the country comparison, we concentrated on the second questionnaire item, a follow-up question to specify the appropriate prison term (see section 3.1 for further details). Over all countries, almost two-thirds of the respondents prefer rather short prison terms of up to one year. On the other hand, a surprising number of 4.4 percent of the respondents suggest a prison term of at least six years for the recidivist burglar. Almost all country samples (except for France) cover the full range of available prison terms (including "life sentence"!).

Remarkably, the Polish respondents are, on the one hand, second most lenient as regards the first item, the general preference for distinct sentence categories. On the other hand, they are the second most punitive concerning the second item, the suggested prison term length. This could be an effect of the respective selection of participants from the first to the second item. Whereas the data for the first item include the responses of all participants, the data for the second item bases only on the most punitive respondents who had previously selected an unsuspended prison term.

In the respective inferential statistic analyses (using non-parametric tests for mean rank differences), we find only the respondents from one country, Denmark, being significantly more lenient than the German sample, but six country samples with significant higher values for punitiveness (UK, Estonia, Poland, Hungary, Ireland, and Portugal). Hence, Germany seems to have a rather low punitive profile as compared to other European countries.

\*\*\*\*

Afterwards, we analysed the determinants of the German participants' punitiveness scores by using categorical regression analysis methods (section 3.2). On the basis of a review of the respective research literature, we selected a choice of altogether 17 items from the dataset as the pool of pre-

People's sentencing decisions can be influenced by various interfering factors, e.g., the wording of the item (see Kury, 1994), the availability of alternative sanctions or the provided information about the case and the offender (see, e.g., Doob & Roberts, 1988; Lambert & Clarke, 2001; Reuband, 1992; St Amand & Zamble, 2001), or the participants' use of news media (e.g., Callanan, 2001; Dowler, 2003; Roberts & Doob, 1990).

dictor variables for the initial model. After a systematic successive elimination process, we finally found a regression model that included nine predictor variables and that was able to explain 10.5 percent of the variance of the participants' punitiveness scores (section 3.2.1). Unsurprisingly, the majority of these variables are demographic or socio-economic indicators.

The model's optimal scaling quantification of punitiveness as dependent variable is absolutely satisfying, since the numerical scores for the categories are ascending from "community service" over "fine" and "suspended prison sentence" to "unsuspended prison" with the highest value (section 3.2.2). Such quantification is basically in accordance with results and assumptions from the respective research literature.<sup>70</sup>

\*\*\*\*

Of all the nine predictor variables that are finally included in the regression model, the participants' *age* and *sex* are by far the most influential (section 3.2.3). Since these two "hard" demographic variables are dominating not only the general German model but also the models for the German subgroups and one of the contrast country models (see below), they seem to be the "Big Two" for predicting punitiveness.<sup>71</sup>

In the general German model, the younger respondent groups (up to 34 years) are the most punitive. This is surprising, since the research literature has usually assumed a positive correlation of age and punitiveness.<sup>72</sup> At least, we find a moderate increase in the respondents' punitiveness scores for the age groups above 50 years and older. This seeming inconsistency

See, e.g., Brillon (1993) for the influence of age on punitve attitudes as well as Verweij and Nieuwbeerta (2002) and Wood and Grasmick (1999) for gender influences.

Cf. footnote 44.

Age has regularly been reported to to be positively correlated to punitive attitudes, in particular to supporting the death penalty (e.g., Bohm, 1987; Borg, 1997). The study of Farnworth, Longmire, and West (1998) is one previous exemption from this rule, since they found less support for capital punishment among senior students as compared to freshman. On the other hand, this result might be less attributed to the participants' age but to a liberalising effect of a college education as such. See Applegate (1997, p. 64ff.) for a comprehensive overview of studies on correlates of punitiveness (i.e., sex, age, race, education, income, political orientation, conservatism, fear of crime, and victimisation), although mainly focussing on US-American research.

with previous findings might be due to an additional cohort effect, in the regard that today's younger people are generally more punitive than previous generations.<sup>73</sup> Such a cohort effect is maybe a consequence of the recently often heard-of rising general societal punitiveness<sup>74</sup> in combination with younger people's higher flexibility to adapt their attitudes to such ideological changes. Combining this assumption with the "traditional" positive correlation of age and punitiveness, we expect the young people of today to become even more punitive when growing older.

As regards the effect of the participants' *sex*, the German male respondents generally show higher average punitiveness scores through almost all the age groups, although there seems to be a sex-by-age interaction effect with converging punitiveness scores for the middle age groups.<sup>75</sup>

With some distance as regards explanative power, the *victimisation status* of the respondents is the third best predictor variable in the model. This variable can be regarded as another socio-demographic indicator (besides *age* and *sex*), but it includes additional subjective processes (of defining *crime* and *victimisation*). Finally, it can be counted to the few crime-specific predictors variables in the model (beside *fear of crime* and *level of self-security*). As a result, participants without previous crime victimisation experiences show the highest average level of punitiveness of all the groups, followed at a distance by victims of contact crime and non-contact crime. Although, this result might surprise common-sense assumptions at

As reported, e.g., by Streng (1979, 2004) for repeated surveys on German law students punitve attitudes.

See, e.g., Cullen, Clark, and Wozniak (1985), Garland (2000), Hassemer (2000), Matthews (2005),
 Pratt (2000, 2005), Reuband (2003), and Roberts and Hough (2002).

Previous research studies report rather inconsistent effects of the participant's sex on his/her punitve attitudes (see Applegate, 1997, p. 64ff. for an overview; cf. Sprott, 1999, for a critical and differentiating account of previous assumptions). Regarding the attitudes towards capital punishment in the USA, some researchers have reported higher levels of support for men (e.g., Ellsworth & Gross, 1994; Erikson & Tedin, 2003; Niven, 2002; Whitehead & Blankenship, 2000).

For an overview of research on victimisation, see, e.g., Fattah (1991) and Hindelang, Gottfredson, and Garafalo (1978). See also Orth (2003) for an innovative research methodology focusing on the special needs for punishment in victims of crime (rather than in the general public).

first sight, other researchers have found comparable results.<sup>77</sup> A possible explanation could be that those participants who have already experienced being a victim of crime, thus gain a more realistic view on criminality and criminals. On the other hand, the participants, who have no such personal experiences as basis for their judgements and attitudes, are more easily influenced by the so-called "public opinion", mainly distributed by mass media reports on crime.<sup>78</sup> Furthermore, it is only little surprise that victims of a contact crime are somewhat more punitive on average than other victims, since these are the assumedly most severe ways of becoming victimised.

As regards the influence of the fourth strongest predictor variable, *occupational status*, the data show that the groups of "unemployed" respondents and "students" have the highest punitiveness scores of all groups. In our opinion, these differences are mainly due to the much stronger *age* effect (as described before) as well as (at least partly) to the corresponding differences regarding the *general life satisfaction* (see below).<sup>79</sup>

Fear of crime has been a perennial issue in the political and criminological discussion during the last decades. Accordingly, the topic is addressed in the survey in several ways, applying different items, e.g., accentuating the emotional vs. the cognitive aspects of fear of crime as well as referring to general criminality vs. a specific crime (i.e., burglary). According to the elimination criteria, fear of crime is represented in the final regression model only by the "standard item" (see section 3.2.1 and 3.2.3.4 for details). This predictor variable is the fifth strongest in the model, although the results are somewhat odd, since the contrast group respondents (i.e., those who feel "very safe" and those who feel "very unsafe") have comparable scores for punitiveness. Regarding some of the minor differences as

See, e.g., Dull and Wint (1997, Kilchling (1993, 1995), Kury, Dörmann, Richter, and Würger (1992), Kury and Würger (1993b), and Sessar (1992). Regarding the latter, see also Kury's (1994) methodological objections and Sessars reply to it (1995).

See, e.g., Callanan (2001), Ditton, Chadee, Farrall, Gilchrist, and Bannister (2004), Eschholz, Chiricos, and Gertz (2003), Gebotys, Roberts, and DasGupta (1988), Pfeiffer, Windzio, and Kleimann (2005), and Roberts and Doob (1990).

For the group of "unemployed" respondents there might also be a hidden education effect (Kuhn, 1993, has found an inverse relationship between education and punitiveness; again, see Applegate, 1997, p. 64ff. for an overview of the research literature).

<sup>&</sup>lt;sup>80</sup> Cf. footnote 59.

artificial "noise", a significant difference can be showed for the dichotomised variable: Respondents who "feel (fairly) safe" are less punitive than those who "feel (a bit) unsafe. After this post-hoc modification of the variable groups (that, of course, increases the necessary caution for the interpretation), the results for *fear of crime* correspond well with other research.<sup>81</sup>

The respondents' *general life satisfaction* is actually the only predictor variable in the final model that is neither a pure socio-demographic nor a crime-specific indicator. Although, this makes the variable very interesting, the interpretation of its influence on punitiveness for the German sample is restricted, because of its comparably small variance, since almost all respondents seem to be at least "fairly satisfied" with their lives. Having this restriction in mind, we find the (rather unsurprising) result, that the more satisfied participants are generally, the less punitive.

Household size, as another demographic factor, is the third weakest predictor variable in the model. The results show increasing punitiveness up to three or more persons living in the same household. Probably, this is rather a correlate of the fact that (at least in Germany) a household size of three or more people basically means that there are children living together with their parents. Consequently, the largest increase occurs from two people to three people living in the household. Its plausible that parents become more worried about crime, thus more protective for their children and (apparently) more punitive – at least, when it is the first child and it is still young. 82

*Income* has a significant negative effect on the participants' punitiveness scores: The higher the respondents' household *income*, the lower their punitive attitude. This result hints in the same direction as the aforementioned effect for *general life satisfaction*. Since we also find a positive correlation

Cf. footnote 59 and 89, and see again Applegate (1997, p. 64ff.) for a synopsis of previous research on the (positive) correlation of fear of crime and punitiveness.

Surprisingly, the effect of being parents or of living together with (little) children on punitive attitudes has not yet been considered in empirical research. This would definitely be a worthwhile aspect to be included in future research studies.

between the latter variable and *income*, we suggest that a sufficient financial security has an improving effect on *life satisfaction*, thus also reducing *punitiveness*.<sup>83</sup>

The *level of self-security*, operationalised by the number of protective measures and devices used by the respective participant, is the weakest of all the nine significant predictor variables in the final regression model. Since the effect size is comparably small, the following interpretations can only be taken into account with due caution. The data show the remarkable result that almost every German seems to use at least one of the security devices or measures that were offered in the questionnaire (e.g., a special door lock) to protect his or her home. The participants' average punitiveness increases with more security devices. The main difference is found between those respondents who use two and those who use at least three devices. We think that there is also an underlying effect of the participants' *fear of crime* (which is positively correlated to the *level of self-security*) to be accounted for. It would be very interesting to further test such more advanced a-priori hypotheses in future research, e.g., using a theoretically based path analysis model. 84

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From a methodological point of view, we first tested the internal validity of the regression model by analysing each of the nine-predictor variable's influence in a single-variable model. Furthermore, we also checked each variable's Delta-R-square (see section 2.3 for details) as another indicator for the model's quality. As a further methodological check, we tested the model's stability on ten partial samples that were drawn from the total German sample. As a result of these analyses, three of the predictors (sex, age, and occupational status) were perfectly reliable through all test runs. Four others (victimisation status, general life satisfaction, household size, and fear of crime) were sufficiently reliable. The influence of the two

For an overview on the relation of income and punitiveness, see Freese (2004).

<sup>&</sup>lt;sup>84</sup> Cf. Keil and Vito (1991) for a methodological comparable attempt.

weakest predictor variables (*level of self-security* and *income*) was not stable enough to trust the respective results without caution.

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Later, the model was also tested and further validated on subgroups for the variables *sex* and *victimisation status*, as these variables had proven to be the main sources of influence for the respondents' *punitiveness*.

In the subgroup model for the male respondents, three of the eight predictor variables<sup>85</sup> fail to reach the necessary level of significance. The complete subgroup model explains eight percent of the variance of the male participants' *punitiveness* scores. On the other hand, the subgroup model for the female group works better in predicting the respective *punitiveness* scores: It explains ten percent of the variance with seven of the eight original predictor variables having a significant influence on *punitiveness*. According to the model, the main differences between both *sex* groups are found regarding the influence of *victimisation status*, *household size*, and *fear of crime* (all stronger for women) as well as for the *level of self-security* (stronger for men).<sup>86</sup>

The differences that we find for the subgroup models based on the respondents' victimisation status are even bigger than those for the sex groups. The subgroup model for the group of participants without any previous victimisation is very similar to the model for the total sample, both as regards the variable's effect sizes and directions as well as regarding the explained variance. Since this group includes more than half of all respondents, this result is not too surprising. The situation changes for the subgroup model based on the victims of non-contact crime: Although we still find the well-known socio-demographic predictor variables (sex, age, and occupational status) with a strong influence, some other variables also carry more explanatory weight, e.g., household size, income, and the two new crime-specific variables, crime reporting and seriousness. Finally, the subgroup

The predictor variable *sex* itself was, of course, omitted in the model.

Using ICVS data, Aromaa and Heiskanen (2002) have found main sex differences as regards fear of crime in the area of education and income (with women – as usually – being more fearful).

model for the victims of contact crime offers a drastically altered picture: *Age, sex*, and *occupational status* are still important, but *household size*, the group-specific variable *crime reporting*, and also *fear of crime* are by far more influential predictor variables for this victim group as they are for the total sample or for any other subsample we tested. Actually, the complete regression model for the contact crime victims with altogether ten predictor variables (seven of which are significant) explains 25.6 percent of the participants' punitiveness score's variance. Although this might be also due to a selection effect, which probably produces a more homogeneous group of participants, the explanatory power of the model is still surprisingly high.

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In the final step of our analysis for this report, we adjusted the regression model to two other countries, which contrasted (on average) maximally regarding the *punitiveness* scores, i.e., France, as the least punitive, and the United Kingdom, as the most punitive country. Therefore, we took again all 17 originally selected predictor variables. Then we applied the same elimination criteria as for the German sample.

The final model for France consists of eight predictor variables, which together explain about eight percent of the participants' *punitiveness*. Five of the predictor variables are identical with the German model (*sex*, *age*, *income*, *victimisation status*, and *fear of crime*), complemented by three new items (*immigrant status*, *frequency of going out*, and *general satisfaction with the police*). As for the German sample, *sex* and *age* are the strongest predictor variables, but also *immigrant status*, *frequency of going* out, and *fear of crime* have a rather strong influence. The direction of most of the predictor variables is similar to the German model effects. A bit surprisingly, immigrants are the most punitive group, which might be attributed to an underlying *age* and *sex* effect. Participants, who go out more frequently, are less punitive. Furthermore, the safer (or less fearful) a respondent feels as regards crime, the lower is the respective participant's *punitiveness* score on average. Probably, the two latter effects have a common

See Tournier (1997) for an account of the French situation.

denominator, i.e., participants who feel safe also go out more often. Finally, *general satisfaction with the police*, as the weakest of the three new predictor variables, shows a negative correlation with punitiveness. This effect might partly be mediated by the participants' *fear of crime*, since it seems to be reasonable to assume that believing in the police's work efficiency improves feelings of security. 89

The final model for the United Kingdom consists of altogether twelve predictor variables, which explain about eight percent of the punitiveness score's variance (as did the French model). Eight of the variables are identical with the German model, completed by four new predictor variables (frequency of attending religious services, immigrant status, assessment of general happiness of life, and general satisfaction with the police). Remarkably, the "hard" socio-demographic indicators sex, age, and occupational status do not dominate the UK model. Rather, one of the new variables, the participants' frequency of attending religious services, is the strongest predictor for punitiveness in the UK sample, closely followed by income and the level of self-security. Participants who attend religious service more frequently are the most punitive group. Accordingly, some authors from the respective research literature have assumed that some forms of religiosity often correspond with rigid moral norms and subsequent harsh punitive attitudes, at least for distinct types of crime. 90 Although this result can only be a very first hint (that should, of course, be handled with due caution), it seems to be promising to include religiosity in further studies on punitiveness. Another particularity of the UK sample is the comparable high average number of security devices per respondent. As in the other country models, participants who use more security devices are generally more punitive. This effect of the participants' self-securing behaviour seems to be significantly greater in the UK sample than in the German

See, e.g., Mesch (2000) and Miethe, Stafford, and Long (1987).

For the correlation of fear of crime and attitudes towards the police, see, e.g., Aromaa and Heiskanen (2002) for ICVS related data; cf. also Baker, Neinstedt, Everett, and McCleary (1983), Bennett (1994), Lamnek (1991), McIntyre (1967), Sprott and Doob (1997), Thomas and Hyman (1977), and Zamble & Annesley (1987) for general determinants of a participant's satisfaction with the police. Zvekic (1998) provides some results for countries in transition based on ICVS data.

<sup>&</sup>lt;sup>90</sup> See, e.g., Cook (1998a, 1998b) and Cook and Powell (2003).

or the French sample. 91 Remarkably, the effect of the UK respondents' occupational status deviates somewhat from the other countries, since the UK students are the least punitive of all groups. It would be interesting to verify this effect in a future study and with different samples – last but not least because we cannot offer a plausible explanation for this result. 92 Contrary to the French sample's model, the UK participants who view themselves as an immigrant are the least punitive of all groups. A further interpretation of this very remarkable country difference demands for a deeper understanding of the status differences and the different roles that immigrants play in the respective cultures. In this regard, a complementary socio-historical analysis would be surely beneficial.<sup>93</sup> Another surprising result of the UK model is that victims of contact crimes are the least punitive of all groups. This result is both, deviating from the effect that we found for the other countries as well as from the assumptions of the respective research literature. 94 The positive correlation of general life happiness with punitiveness is apparently similar to the effect of general life satisfaction that we already found within the German sample. The only difference seems to be that one "quality of life" item from the "Eurobarometer" is now replaced by another (cf. footnote 53).

Finally, both, the French as well as the UK model's quantification of *punitiveness* deviate from the German quantification pattern. Although the least ("community service") and the most punitive category ("unsuspended prison") are identical, the two "medium" categories are actually reversed ("fine" as more punitive than "suspended prison"). Hence, it seems that the average French and UK respondents have different rank orders as regards the seriousness of different sentence categories.<sup>95</sup>

See Ziegenhagen and Brosnan (1990) for a general account of the important factors for explaining citizen's self-protection behaviour.

Of course, one possible, although only partial explanation could be the much lower age effect within the UK sample.

According to Garland's thorough analysis of the evolution of penal systems (1985, 1993, 2001), concluding with his already famous notion of "cultures of control", such country-specific patterns might be regarded as "cultures of crime perception" (cf. also Neapolitan, 2001).

See, e.g., Hough and Roberts (1998) for a recent account of the UK situation based on the British Crime survey.

Again, we might attribute this result to the underlying different "country cultures" as regards the perception of crime and punishment (cf. footnote 93).

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Such fundamental and rather influential country differences, which are probably based on essential historical and cultural differences in the perception of crime and punishment, are in our opinion one of the most interesting results of international victim survey research.

Consequently, our next report paper that is currently in preparation will mainly focus on such basic differences (and possibly also on the respective similarities) between the European countries. In this upcoming paper, we are going to present a country typology that is based on a cluster analysis of various ECSS variables and that is subsequently validated using different country indicators regarding crime, justice, the police, economy, and education from international statistics.<sup>96</sup>

Neapolitan (2001) reports an interesting attempt to explain country differences based on theoretical concepts by clustering the patterns of aggregate indicators. In their ICVS based study on fear of crime, Aromaa and Heiskanen (2002) conclude that the inclusion of such socio-cultural aspects of the compared countries would help explaining some of the country differences (in particular those between Catholic countries from the Mediterranean region and Scandinavian countries).

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