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A Re-Examination of the Role of Gender in Determining Digital Piracy Behavior

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Abstract

This paper empirically investigates determinants of digital piracy in Germany going beyond the use of an undergraduate students' sample. To this end we rely on a survey comprising behavior and attitudes at the individual level. The sample is representative of the part of the German working population with high-speed internet access based on gender and age composition. It also maps the share of foreign nationals in Germany. Self-selection in the drawing of our sample is handled by a control experiment. In contrast to existing studies, we sharply discriminate between the frequency and the extent of pirating digital media. We find no significant gender difference in the propensity to pirate. However, male individuals are prone to pirate at a significantly larger scale. We attribute this finding to male individuals acting more frequently as hubs in the social prestige enhancing distribution of pirated media. It is particularly important in the light of the recent development of the distribution process from peer-to-peer online networks to offline forms of file swapping. Our findings are confirmed by recent piracy related crime statistics of the Federal Office of Criminal Investigation (Bundeskriminalamt).

Keywords: Piracy, intellectual property, survey, digital economy

JEL Codes: O34, L86, K42, D12

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1. Introduction

In the United States losses from copyright piracy of digital media are estimated to exceed US$ 70 billion annually (Chiang and Assane 2009). Similar estimates can be found for the European Union (EU). In a recent joint report by the European Commission and the European Patent Office the latest facts and figures on digital piracy[1] in Europe are reviewed. Accordingly, while at the world level sales of illegal music recordings account for 14 percent of the phonographic market, they have even outstripped the sales of genuine products since 2003 in the UK. By 2008 just one in 20 internet downloads is legal. Within the European Union pirated goods accounted for 10 percent of sales of music and 16 percent of motion picture sales at the beginning of the century. The Commission estimates that in the music sector alone implied VAT losses incurred by EU governments amount to $100 million per year. The total number of employees in the German recording industry steadily decreased from 112,000 in 2001 to 87,000 in 2007.[2] With regard to software piracy, figures of the industry's annual losses in Western Europe (that is, in the EU, Norway, and Switzerland) exceed $3 billion (European Commission and European Patent Office 2007). Whether or not this means that digital piracy also implies (net) social costs and welfare losses (cf. Dejean 2009) is beyond the scope of the present study.

About one decade ago, the European Commission (1998) noted in a Green Paper on combating counterfeiting and piracy in the single market:

> *Counterfeiting and piracy in the Single Market are a phenomenon the nature and characteristics of which are little understood*. (p. 8).

What has changed since then?

From an empirical economist point of view, we would say not so much. There has been made some progress on the theoretical frontier[3] and in cross-country studies.[4] However, an issue that hitherto has received only little attention from applied economists is the variation in digital piracy behavior between individuals – let

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1 Digital piracy is the unauthorized use of copyrighted information goods. Varian (2000) defines an information good as anything that can be digitized. Primarily, music, movies, and software fall into this category. Digital products can be copied at almost no cost and are subject to non-commercial copying by final consumers. Because the copy of a copy typically does not deteriorate in quality, copies can become available on a large scale basis as in file-sharing networks (Peitz and Waelbroeck 2003, 2006). When a legal copyright exists, those who want to access the copyrighted original work (that may or may not be digitized) must pay the copyright holder an access price. If an individual obtains access without paying this price, that person is said to have incurred an act of piracy (Andrés 2006).

2 Figures reported by the German council of music funds; http://www.musikindustrie.de

3 See Peitz and Waelbroeck (2006) for a critical review.

4 See Holm (2003), Banerjee *et al.* (2005), Van Kranenburg and Hogenbirk (2005), and Andrés (2006). A comprehensive survey of empirical studies dedicated to assess the consequences of digital piracy on the revenue of the cultural industry is Dejean (2009).

alone European individuals. Notable exceptions are Chiang and Assane (2009), Holm (2003), Rob and Waldfogel (2006), and Zentner (2006). While the first three studies rely on student data, Zentner (2006) is based on a survey that is representative for the population of seven European countries. However, the study suffers from not taking into account the actual quantity of media purchased and pirated by individuals in the survey (Dejean 2009, p. 337). In general, quantitative research on digital piracy that is based on micro-level data is rare. Still the majority of the few studies in this vein are conducted and recognized outside the economics literature (see, e.g., Al-Rafee and Cronan 2006, Moores and Chang 2006, Hinduja 2007, and Goles *et al.* 2008).

The present study contributes to the literature in the following points. First, we follow an integrated approach in considering the major occurrences of digital piracy in the contemporary world: music, movies, software, and video games. Second, several studies claim that gender affects digital piracy. In particular, it is either found that male individuals are "more likely to pirate" (Sims *et al.* 1996, Hinduja 2003, Higgins 2006) or that gender explains a notable part of measured piracy behavior[5] (see, among others, Solomon and O'Brien 1990, Holm 2003) or that male individuals show a lower willingness to pay for legally acquired copyright goods (Chiang and Assane 2009). Here, we follow a different strategy by discriminating between the frequency and the extent of pirating and controlling for demographic factors, respectively. In contrast to existing studies our sample does not rely on undergraduate students as sole respondents but is representative for the German working population with high-speed internet access. Finally, recent piracy related crime statistics of the Federal Office of Criminal Investigation (*Bundeskriminalamt*) reinforce our findings, suggesting that our results are not driven by a gender-related self-reporting bias (Barber and Odean 2001, Bengtsson *et al.* 2005).

2. Data and Empirical Approach

Our sample is stratified so as to match the gender composition of German employees subject to social insurance contributions. The corresponding five years average female employee share is supportive for the 40 percent used in our query.[6] With regard to the age composition of our sample, we replicate the age structure of the German population using a broadband technology to access the internet. As reported in TNS Infratest (2007), the use of fixed and/or other broadband[7] technologies is the most prominent for individuals in their twenties. Besides this core of users, the second largest group is made of the first half of thirty-somethings and

[5] Piracy behavior is measured, for example, as the share of illegal copies in a subject's collection of music, computer games and software programs (Holm 2003, p. 3).

[6] Annual reports and statistics on the structure of the German working population are available online from the Federal Employment Office: http://www.pub.arbeitsamt.de/hst/services/statistik/.

[7] In particular, this implies the Universal Mobile Telecommunications System (UMTS) standard.

teenagers. For individuals of age beyond 39 the share of broadband users significantly falls. Our survey is representative of this type of age structure of German high-speed "onliners." Detailed summary statistics on the age structure of our sample is given in the first columns of Table 2 below. Our share of foreign respondents and respondents with a migration background living in Germany maps the share of about one fifth of the German population as reported in the latest official statistics (Statistisches Bundesamt 2007, p. 37).

We conducted our survey during the seven months from April to October 2006. The participants were recruited online and offline.[8] More than 1,500 e-mails containing a URL directing to our survey's webpage were sent. The questionnaire took 5-10 minutes to get filled out. The online platform was designed so as to let participants choose between a questionnaire in German or English. Questions were asked open-ended as well as in the form of questions with a given set of alternative answers. See Appendix B for detail. Since some questions concerned illegal activities, anonymity was assured. As soon as our sample was stratified to match the structure outlined above, we ended the survey. This was the case in October 2006 when 222 subjects had participated.

One may be concerned that the survey sample is plagued by a serious self-selection bias as one may suspect the sketched recruitment process to draw participants who tend to be involved in digital piracy activities and, therefore, are interested in the survey. We controlled for this bias by an implicit control experiment. Both the (offline, i.e., physically) distributed flyers and the sent e-mails only contained the following information: the URL of the survey's webpage and a note that it would be greatly appreciated if the readers were to participate in a research project – without any further definition of the project. As we offered no participation fees, the incentive to participate essentially consisted of the "warm glow" derived from contributing to an academic research project. Our survey web tool (http://www.befrager.de) allowed us to quantify the termination rate of participants after they were informed about what the survey is actually about (that is, after the first survey page containing the language choice). Only 21 out of a total of 243 persons directed to our survey's page (i.e., 8.6%) terminated the filling of the questionnaire after the choice of language. This outcome of our implicit control experiment makes us confident to not rely on a sample plagued by a severe selection bias.

The retrievable information from our query can be summarized in three broad categories: information on the extent and frequency of pirating digital media (dependent variables), on demographic characteristics (binary variables), and on attitude (categorical variables). A detailed overview is given in Appendix A. As our starting point, we consider the following two specifications:

[8] Apart from the survey's URL no further information on the query was communicated in the recruitment process (neither online nor offline).

$$FREQ_i = \alpha + \sum_{j=1}^{N_D} \beta_j D_{j,i} + \sum_{h=1}^{N_A} \gamma_h A_{h,i} + \varepsilon_i \qquad (2.1)$$

$$XSAVE_i = \alpha + \sum_{j=1}^{N_D} \beta_j D_{j,i} + \sum_{h=1}^{N_A} \gamma_h A_{h,i} + \varepsilon_i, \qquad (2.2)$$

where $FREQ_i$ and $XSAVE_i$ refer to the i-th individual and are the self-assessed pirating frequency[9] and the annual amount of money saved by pirating. $D_{j,i}$ is a set of $N_D = 7$ individual demographic characteristics. $A_{h,i}$ denotes $N_A = 4$ subject specific variables reflecting motives and attitude toward digital piracy. Finally, ε_i are standard i.i.d. error terms.

As our dependent variable $FREQ_i$ in (2.1) represents the outcome of a typical categorical rating neither a multinomial nonlinear probability model nor OLS measure up to the nature of these data. This is due to the fact that both methods cannot cope with the ordinality of the data. For example, LS estimates always treat intervals between categories identically. However, they may vary in length for our survey's respondents. Therefore, we also consider an ordered Probit specification with three thresholds

$$FREQ_i = \begin{cases} 1 \quad \text{for} \quad FREQ_i^* = 0 \\ 2 \quad \text{for} \quad 0 < FREQ_i^* \leq \tau_1 \\ 3 \quad \text{for} \quad \tau_1 < FREQ_i^* \leq \tau_2 \\ 4 \quad \text{for} \quad FREQ_i^* > \tau_2 \end{cases} \qquad (2.3)$$

$$\text{with} \quad FREQ_i^* = \alpha + \sum_{j=1}^{N_D} \beta_j D_{j,i} + \sum_{h=1}^{N_A} \gamma_h A_{h,i} + \varepsilon_i,$$

where thresholds are denoted by τ, and $FREQ_i^*$ is the latent variable.

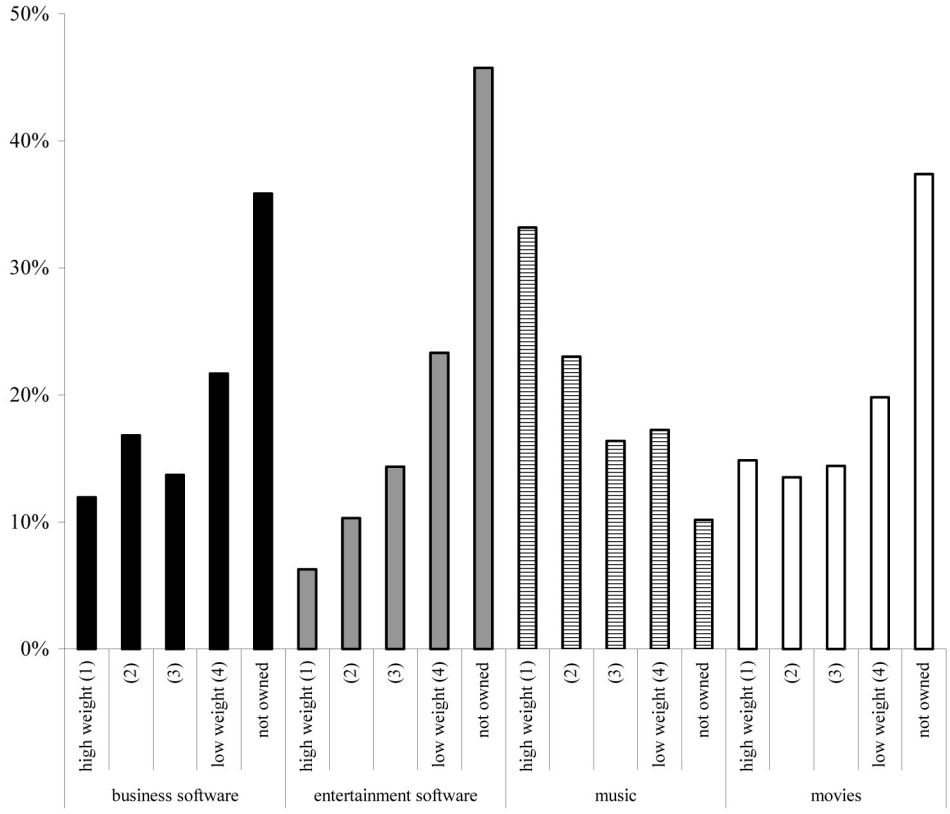
Similarly, as the distribution of $XSAVE_i$ is clearly left censored at a zero value we consider a standard censored (Tobit) regression model to estimate (2.2).

[9] The assessment ranges from 1 = never to 4 = often; see Appendix A and Appendix B for further detail.

3. Findings

As can be seen from Figure 1, German internet users place the highest weight on music when it comes to assess the relative importance of different categories of pirated digital media in their collections. In line with the European trend only 10 percent of respondents do not own illegally acquired music files. The second most relevant portfolio share (in terms of quality and saved cost) is made up of movies followed closely by business software. Nearly one half of German internet users do not own pirated entertainment software like video games. Less than 10 percent put a high weight on this type of digital products in their collections.

Figure 1. Weighted portfolio shares of illegally acquired digital media by type



Note: Weighted by quantity and amount of money saved.

In order to avoid issues of collinearity and to assess the particular relevance of the "student status" in pirating digital media,[10] we estimate two sets of specifications of models (2.1), (2.2), (2.3), and a censored version of (2.1), respectively: Specifications i to vi control for the age structure of the German population with broadband internet access using three distinct age dummies, while specifications vii to xii rely on a student dummy only.

[10] Holm (2003), for example, emphasizes the timely computer skills of students and their relatively large size of network of friends with skills and interest in computers and access to digital media copies.

We start our interpretation of results with models explaining the individual frequency of pirating digital media $FREQ_i$ (Table 3 and 4). This dependent represents a general and ordinal self-assessment ranging from 1 = never to 4 = often. Overall the specifications explain up to one fifth to one fourth of the variation in $FREQ_i$. Obviously, the individual age matters. Other things equal, the age group representing the youngest subjects (< 21 years old) is associated with a higher frequency of pirating digital media. This fixed age effect is estimated significantly throughout and decreases with age. In contrast, the student dummy is estimated to have a statistically significant effect only in specifications, where we do not control for the self-assessed weight of the reason for pirating being the budget constraint. It is, therefore, straightforward to presume that in specifications x and xi $STUD$ instruments issues of affordability. A finding in stark contrast to the literature that claims that male subjects are "more likely to pirate" (Sims *et al.* 1996, Hinduja 2003, Higgins 2006) is the following: As can be seen from Table 3 and 4, gender is found to have no effect on the individual frequency of digital piracy that is statistically different from zero. In terms of size the negative impact of being of German nationality is the most profound. It is followed by a highly significant positive effect from having access to a DSL connection. We also find a sizable and significant negative impact from the perceived degree of complexity implied by pirating digital products. The perceived probability to get prosecuted for pirating and the budget constraint impact significantly negative (at a 5 percent level). Both effects are of similar size.

Our regressions' output for explaining the individual extent of digital piracy $XSAVE_i$ (Table 5 and 6) gives a somehow different picture. It justifies our strategy of separating frequency and extent. As can be seen from specifications iii to v and, in particular, from specification vi, the age group *AGE2125*, representing respondents in their early twenties, stands out. It is this age group which can be seen as predominantly responsible for the overall extent of digital piracy – both in terms of statistical significance and size. Although we estimate significant coefficients, cost saving motives (*BUDGET*) play but a minor role in the explanation of the individual extent of digital piracy. The positive impact from a DSL connection has neither a robust (it is merely significant in our censored regressions) nor a particularly strong effect.

Our most remarkable finding, however, is that male individuals – given that they pirate at all – do it at a significantly larger scale.[11] This result is also in line with most of the findings of the existing literature that attribute a notable part of measured piracy behavior to gender differences (Sims *et al.* 1996, Hinduja 2003, Higgins 2006, Solomon and O'Brien 1990, Holm 2003). The explanations of these gender differences are diverse. However, they are all rooted in the argument that females have higher ethical standards than males. [12]

[11] Throughout our estimation results reported in Table 5 and 6, *MALE* clearly shows the largest and most significant coefficient estimates (apart from the *AGE2125* dummy).

[12] Chiang and Assane (2009) consider both gender and ethics variables in their innovative study on the willingness to pay of students for legal digital music purchases in the presence of illegal versions. In their Heckit model estimates they find the marginal effect (M.E.) of being of male sex in the decision to be willing to pay to be clearly outnumbered by the corresponding M.E. on the amount (see their Table 2). As the estimates do not include interaction terms, the authors do not ascribe the gender difference to higher ethical standards of female students.

We do not subscribe to this view: Given that higher ethical standards are at the heart of the gender differences we would expect a difference both in the extent as well as in the frequency of pirating. But given that we find a profound gender difference for the extent and no gender difference for the frequency of pirating, how can this be reconciled with the existing evidence to make a common sense?

The answer is to be found in the combination of the recent development of the digital economy and the role played by male individuals. We will discuss both successively.

As Peitz and Waelbroeck (2003) note digital products involve interactions. For music and video files "about which people like to talk" they particularly imply social interaction. In times of "hard-drive parties" turning from a widely unrecognized phenomenon into a fad, it is above all social interactions that come to the fore. The following statement by British music producer Cliff Jones makes the point:

> *The latest cultural import from America is the hard-drive party. It involves takeaway pizza, beer and the swapping of the contents of 500Gb hard drives, packed full of thousands of music tracks. My own neighbour, resolutely middle-class, with two young children at a church school, proudly told me last weekend that he has 80,000 classic tracks on a drive he got free from a friend. At a rough guess, that's £60,000 of stolen music.*
>
> The *Sunday Times*, August 10, 2008

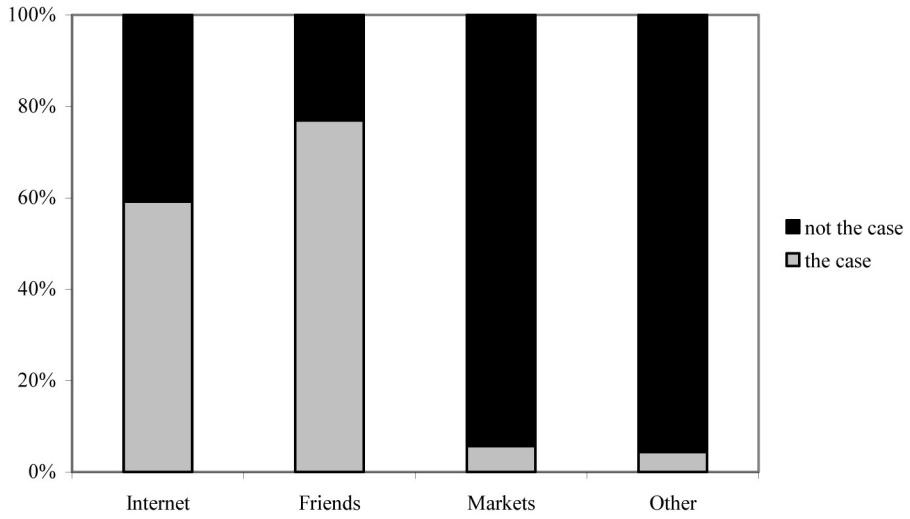
The differentiation by Peitz and Walbroeck (2003, p. 1) according to which digital piracy is done in two ways, either by downloading from the internet or by using networks of friends sharing digital products on a "small-scale basis" seems no longer valid. A terabyte, that is, approximately 200,000 digitized recordings, is a standard unit of exchange at hard-drive parties. In these dimensions and in such social gatherings, it is no longer the social prestige of the legal owner that is increased (Peitz and Waelbroeck 2003, p. 10) but the social prestige of the first owner – whether legal or illegal owner. Our survey is obviously designed to address the issue of end-user piracy rather than piracy for profitable resale (e.g., Banerjee 2003). However, by explicitly considering friends as a channel of getting hold of illegally acquired media, we also take into account offline forms of file swapping in social networks. To the best of our knowledge our study is the first to consider this Zeitgeist phenomenon.

According to our survey, in Germany the most frequently used channels of distribution and hubs of pirated digital media are friends; see Figure 2.

Given that male individuals act more frequently as such hubs in social networks, we can explain both of our findings (i.e., a profound gender difference for the extent and no difference for the frequency of pirating). Indeed information drawn from our survey points into this direction (Table 7). While male individuals

on average get hold of illegally acquired digital media more frequently through the internet, females do so more frequently through their circle of friends. These differences can easily be found to be significant at a 5 percent level of significance in corresponding mean difference tests.

Figure 2. Channels of distribution and hubs of pirated digital media



Finally, one may be concerned that the reported results are plagued by a self-reporting bias inasmuch as males frequently overestimate their self-reported performance (see, among others, Barber and Odean 2001, Bengtsson *et al.* 2005). However, in contrast to this explanation of males showing a higher piracy extent, our hypothesis ascribing differences to social networking activities is consistent with recent crime statistics. Suppose that our gender differences found in the piracy extent (not frequency) are primarily due to males over-reporting their digital piracy behavior, then we would expect no gender differences in the statistics of criminal complaints, that is, in the actual (not reported) piracy extent. The German Federal Office of Criminal Investigation (*Bundeskriminalamt*) reports that charges filed against pirating individuals in the case of 'copyright infringement', including online and offline file swapping, and 'private software piracy'[13] showed an average damaging sum of € 2,300 and € 676 per charge, respectively (own calculation based on figures reported in PKS 2008, 2009). The median damage sum falls in both cases in the category of € 250–500 amount of loss. These are sizable figures, showing that trifle amounts are not criminally prosecuted in Germany. In the case of copyright infringement about four fifth of complaints of offense were made against male individuals (77.6 percent). For private software piracy even more than four fifth, that is, 80.5 percent, of charged individuals were male. These figures clearly speak against the explanation of males notoriously overestimating their self-reported piracy behavior.

[13] Statistical codes are 71500 "Straftaten im Zusammenhang mit Urheberrechtsbestimmungen (UrheberrechtsG, MarkenG, § 17 UWG, GebrauchsmusterG, GeschmacksmusterG, KunsturheberrechtsG, PatentG, HalbleiterschutzG)" and 71510 " Softwarepiraterie (private Anwendung z.B. Computerspiele)", respectively (PKS 2008, 2009).

4. Conclusion

In this paper we empirically investigated determinants of digital piracy. To this end we conducted a representative survey comprising the behavior and attitudes of some 200 German individuals. Although we did not address the issue of causality, for example, in a quasi-experimental set-up, our study overcomes issues of selectivity and offers a new explanation of gender differences: As we identified a gender gap for the extent but not the frequency of pirating, this explanation ascribes male subjects the role of hubs and female subjects the role of beneficiaries from indirect appropriation in the spread of pirated media. Our survey's data reinforce this hypothesis. As findings were confirmed by recent crime statistics, gender related self-reporting bias seemed not to be an issue.

Table 1. Summary statistics: dependent variables

	XSAVE	*FREQ*
Mean	409.95	2.369
Max	10,000.00	4.0
Min	0.00	1.0
Range	10,000.00	4.0
Std. dev.	934.91	0.922
Median	125.00	2.0
N	222	222

Note: For detail on definition and construction of variables

see Appendix A and Appendix B.

Table 2. Summary statistics: independent variables

	AGE20	*AGE2125*	*AGE2635*	*STUD*	*MALE*	*NATION*	*DSL*	*PPROS*	*TRIAL*	*COMPLX*	*BUDGET*
Mean	0.122	0.604	0.239	0.689	0.590	0.842	0.802	2.347	3.179	2.853	3.281
Max								5.0	5.0	5.0	5.0
Min								1.0	1.0	1.0	1.0
Range								4.0	4.0	4.0	4.0
Std. dev.	0.328	0.490	0.427	0.464	0.493	0.365	0.400	0.998	1.203	1.320	1.257
Kurtosis	6.361	1.179	2.502	1.669	1.134	4.530	3.293	2.170	2.178	1.903	1.972
Skewness	2.315	-0.424	1.226	-0.818	-0.366	-1879	-1.514	0.139	-0.139	0.285	-0.228
Median								2.0	3.0	2.750	3.50
N	222	222	222	222	222	222	222	222	209	208	208

Note: For detail on definition and construction of variables see Appendix A and Appendix B.

Table 3. Determinants of the individual *frequency* of digital piracy: OLS specifications

	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii
AGE20	1.306***	1.330***	1.219***	1.300***	1.131***	1.070***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
AGE2125	1.190***	1.208***	1.111***	1.225***	1.033***	0.908***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
AGE2635	1.014***	0.988***	0.904***	0.983***	0.805***	0.727***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
STUD	–	–	–	–	–	–	0.157	0.192	0.200	0.249*	0.219*	0.077
							(0.23)	(0.16)	(0.13)	(0.06)	(0.07)	(0.55)
MALE		0.176	0.123	0.053	0.105	0.060		0.160	0.096	0.035	0.087	0.014
		(0.16)	(0.33)	(0.67)	(0.40)	(0.64)		(0.21)	(0.47)	(0.79)	(0.47)	(0.91)
DSL			0.300**	0.367**	0.405***	0.431***			0.395**	0.415***	0.502***	0.498***
			(0.04)	(0.03)	(0.00)	(0.00)			(0.01)	(0.00)	(0.00)	(0.00)
PPROS				-0.174**	-0.144**	-0.120**				-0.160**	-0.131**	-0.103*
				(0.01)	(0.02)	(0.05)				(0.01)	(0.03)	(0.09)
NATION					-0.848***	-0.612***					-0.894***	-0.637***
					(0.00)	(0.00)					(0.00)	(0.00)
TRIAL						-0.076						-0.079
						(0.14)						(0.13)
COMPLX						-0.140***						-0.156***
						(0.00)						(0.00)
BUDGET						-0.111**						-0.121**
						(0.02)						(0.02)
N	222	222	222	222	222	207	222	222	222	222	222	207
R^2 adj. (%)	5.22	5.64	6.77	9.75	20.54	28.51	0.18	0.43	2.81	5.23	17.26	25.27
Ln L	-288.91	-287.91	-286.06	-281.93	-267.29	-234.49	-295.68	-294.90	-291.70	-288.39	-272.81	-240.13

Notes: *, **, *** denotes significance at 10, 5, 1% level of significance; p-values are given in parentheses and are based on White heteroscedasticity-consistent variance-covariance matrices (White 1980); all specifications i – xii include a constant.

Table 4. Determinants of the individual *frequency* of digital piracy: Ordered Probit specifications

	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii
AGE20	1.980***	2.010***	1.890***	2.030***	1.907***	2.486***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
AGE2125	1.840***	1.859***	1.758***	1.940***	1.774***	2.239***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
AGE2635	1.649***	1.620***	1.539***	1.664***	1.497***	2.003***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)						
STUD	–	–	–	–	–	–	0.177	0.218	0.231	0.293*	0.275*	0.105
							(0.26)	(0.17)	(0.14)	(0.06)	(0.08)	(0.56)
MALE		0.206	0.145	0.052	0.136	0.108		0.187	0.113	0.036	0.118	0.032
		(0.17)	(0.33)	(0.74)	(0.40)	(0.54)		(0.20)	(0.44)	(0.81)	(0.45)	(0.85)
DSL			0.377**	0.404**	0.568***	0.692***			0.484***	0.520***	0.678***	0.742***
			(0.04)	(0.03)	(0.00)	(0.00)			(0.01)	(0.00)	(0.00)	(0.00)
PPROS				-0.230***	-0.212***	-0.193**				-0.204***	-0.188**	-0.159*
				(0.00)	(0.01)	(0.02)				(0.01)	(0.01)	(0.06)
NATION					-1.088***	-0.825***					-1.128***	-0.844***
					(0.00)	(0.00)					(0.00)	(0.00)
TRIAL						-0.115						-0.119
						(0.11)						(0.10)
COMPLX						-0.221***						-0.231***
						(0.00)						(0.00)
BUDGET						-0.175**						-0.178**
						(0.01)						(0.01)
N	222	222	222	222	222	207	222	222	222	222	222	207
Pseudo-R^2 (%)	3.25	3.58	4.28	5.88	10.56	16.33	0.23	0.50	1.70	2.98	8.08	13.15
Ln L	-274.35	-273.41	-271.42	-266.88	-253.63	-220.86	-282.92	-282.13	-278.73	-275.11	-260.66	-229.26

Notes: *, **, *** denotes significance at 10, 5, 1% level of significance; p-values are given in parentheses and are based on Huber/White-robust (quasi-maximum likelihood) sandwich variance-covariance matrices (Huber 1967, White 1980); the Pseudo-R^2 is of Aldrich/Nelson-type (LR-index).

Table 5. Determinants of the individual *extent* of digital piracy: OLS specifications

	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii
AGE20	272.22***	327.21***	268.91**	284.01**	286.44**	253.01	–	–	–	–	–	–
	(0.00)	(0.00)	(0.02)	(0.01)	(0.01)	(0.14)						
AGE2125	495.86***	529.45***	479.78***	501.17***	503.93***	488.33***	–	–	–	–	–	–
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)						
AGE2635	220.09***	163.17**	119.16	134.08	136.65	160.38	–	–	–	–	–	–
	(0.00)	(0.05)	(0.25)	(0.22)	(0.20)	(0.31)						
STUD	–	–	–	–	–	–	209.70**	292.09**	296.26**	305.40***	305.31***	221.19**
							(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)
MALE		383.12***	355.58***	342.46***	341.17***	361.14**		381.01***	348.71***	337.17***	337.32***	351.23**
		(0.00)	(0.00)	(0.01)	(0.01)	(0.02)		(0.00)	(0.00)	(0.01)	(0.01)	(0.02)
DSL			154.46**	156.90**	155.51***	193.15**			198.27***	202.12***	202.38***	231.13**
			(0.03)	(0.03)	(0.02)	(0.03)			(0.01)	(0.01)	(0.01)	(0.02)
PPROS				-32.67	-33.10	-42.82				-30.28	-30.20	-34.30
				(0.57)	(0.56)	(0.45)				(0.59)	(0.59)	(0.55)
NATION					12.23	146.84					-2.63	123.74
					(0.89)	(0.20)					(0.98)	(0.25)
TRIAL						39.58						36.72
						(0.56)						(0.58)
COMPLX						-24.93						-24.64
						(0.59)						(0.59)
BUDGET						-149.18**						-141.70*
						(0.05)						(0.05)
N	222	222	222	222	222	207	222	222	222	222	222	207
R^2 adj. (%)	1.05	4.60	4.53	4.20	3.80	5.96	0.63	4.08	4.34	4.00	3.55	5.27
Ln L	-1830.40	-1825.88	-1825.40	-1825.27	-1825.26	-1703.80	-1831.88	-1827.44	-1826.64	-1826.83	-1826.53	-1705.61

Notes: *, **, *** denotes significance at 10, 5, 1% level of significance; p-values are given in parentheses and are based on White heteroscedasticity-consistent variance-covariance matrices (White 1980); all specifications i – xii include a constant.

Table 6. Determinants of the individual *extent* of digital piracy: Tobit specifications

	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii
AGE20	631.50**	670.45**	618.40**	650.59**	661.97**	726.31*	–	–	–	–	–	–
	(0.03)	(0.02)	(0.04)	(0.03)	(0.03)	(0.05)						
AGE2125	938.95***	952.55***	908.96***	952.91***	965.12***	1051.10**	–	–	–	–	–	–
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)						
AGE2635	632.63**	548.74**	510.30*	537.59*	547.82*	683.80*	–	–	–	–	–	–
	(0.02)	(0.05)	(0.08)	(0.06)	(0.06)	(0.06)						
STUD	–	–	–	–	–	–	216.21*	396.57**	301.05**	317.03**	317.13**	226.11**
							(0.05)	(0.02)	(0.02)	(0.01)	(0.01)	(0.04)
MALE		392.13***	372.03***	347.71**	345.19**	398.85**		383.28***	353.81***	334.68**	334.48**	373.71**
		(0.00)	(0.01)	(0.01)	(0.01)	(0.01)		(0.00)	(0.01)	(0.01)	(0.01)	(0.02)
DSL			114.24	114.48	108.27	168.95			185.21**	188.71**	188.33**	232.79**
			(0.17)	(0.18)	(0.19)	(0.10)			(0.04)	(0.03)	(0.03)	(0.04)
PPROS				-65.20	-68.16	-59.38				-52.33	-52.46	-37.12
				(0.28)	(0.26)	(0.32)				(0.41)	(0.40)	(0.56)
NATION					50.63	210.06					3.73	164.67
					(0.67)	(0.12)					(0.97)	(0.21)
TRIAL						58.03						49.19
						(0.43)						(0.50)
COMPLX						-50.22						-55.91
						(0.30)						(0.25)
BUDGET						-158.39**						-152.73**
						(0.04)						(0.05)
N	222	222	222	222	222	207	222	222	222	222	222	207
Ln L	-1651.33	-1647.46	-1647.24	-1646.78	-1646.76	-1564.93	-1654.63	-1650.95	-1650.37	-1650.01	-1650.01	-1568.88

Notes: *, **, *** denotes significance at 10, 5, 1% level of significance; p-values are given in parentheses and are based on Huber/White-robust (quasi-maximum likelihood) sandwich variance-covariance matrices (Huber 1967, White 1980); the Pseudo-R^2 is of Aldrich/Nelson-type (LR-index).

Table 7. Means (shares) and variances of sources of pirated digital media by gender

	MALE	*FEMALE*
Mean | source = internet	0.64	0.53
Mean | source = friends	0.73	0.83
Var | source = internet	0.23	0.25
Var | source = friends	0.20	0.14

References

Al-Rafee, S. and T. P. Cronan (2006), Digital Piracy: Factors that Influence Attitude Toward Behavior, *Journal of Business Ethics* 63, 237-259.

Andrés, A. R. (2006), The Relationship between Copyright Software Protection and Piracy: Evidence from Europe, *European Journal of Law and Economics* 21, 29-51.

Banerjee, D. S. (2003), Software Piracy: A Strategic Analysis and Policy Instruments, *International Journal of Industrial Organization* 21, 97-127.

———, Khalid, A. M., and J.-E. Sturm (2005), Socio-economic Development and Software Piracy. An Empirical Assessment, *Applied Economics* 37, 2091-2097.

Barber, B. M. and T. Odean (2001), Boys will be Boys: Gender, Overconfidence, and Common Stock Investment, *Quarterly Journal of Economics* 116, 261-292.

Bengtsson, C., Persson, M., and P. Willenhag (2005), Gender and Overconfidence, *Economics Letters* 86, 199-203.

Chiang, E. P. and D. Assane (2009), Estimating the Willingness to Pay for Digital Music, *Contemporary Economic Policy* 27, 512-522.

Dejean, S. (2009), What Can We Learn from Empirical Studies About Piracy?, *CESifo Economic Studies* 55, 326-352.

European Commission (1998), Green Paper Combating Counterfeiting and Piracy in the Single Market, Commission of the European Communities, Brussels, COM(98).

European Commission and European Patent Office (2007), ECAP II Regional Handbook on IP Enforcement for Customs, Brussels, Munich.

Goles, T., Jayatilaka, B., George, B., Parsons, L., Chambers, V., Taylor, D., and R. Brune (2008), Softlifting: Exploring Determinants of Attitudes, *Journal of Business Ethics 77*, 481-499.

Higgins, G. E. (2006), Gender Differences in Software Piracy: The Mediating Roles of Self-Control Theory and Social Learning Theory, *Journal of Economic Crime Management* 4, 1-30.

Hinduja, S. (2003), Trends and Patterns Among Online Software Pirates, *Ethics and Information Technology 5*, 49-61.

———, (2007), Neutralization Theory and Online Software Piracy: An Empirical Analysis, *Ethics and Information Technology* 9, 187-204.

Holm, H. J. (2003), Can Economic Theory Explain Piracy Behavior?, *Topics in Economic Analysis & Policy* 3, 1-15.

Huber, P. J. (1967), The Behavior of Maximum Likelihood Estimates under Nonstandard Conditions, *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability* 1, 221-223.

Moores, T. T. and J. C.-J. Chang (2006), Ethical Decision Making in Software Piracy: Initial Development and Test of a Four-Component Model, *MIS Quarterly* 30, 167-180.

Peitz, M. and P. Waelbroeck (2003), Piracy of Digital Products: A Critical Review of the Economics Literature, CESifo Working Paper, No. 1071.

———, (2006), Piracy of Digital Products: A Critical Review of the Theoretical Literature, *Information Economics and Policy* 18, 449-476.

PKS (2008), *Polizeiliche Kriminalstatistik 2008. Bundesrepublik Deutschland*, 56. Ausgabe, BKA Kriminalistisches Institut Wiesbaden, Bonifatius, Paderborn.

———, (2009), *Polizeiliche Kriminalstatistik 2009. Bundesrepublik Deutschland*, 57. Ausgabe, BKA Kriminalistisches Institut Wiesbaden, Bonifatius, Paderborn, forthcoming.

Rob, R. and J. Waldfogel (2006), Piracy on the High C's: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students, *Journal of Law and Economics* 49, 29-62.

Sims, R., Cheng, H., and H. Teegen (1996), Toward a Profile of Student Software Piraters, *Journal of Business Ethics* 15, 839-849.

Solomon, S. and J. O'Brien (1990), The Effect of Demographic Factors on Attitudes Toward Software Piracy, *Journal of Computer Information Systems* 30, 40-46.

Statistisches Bundesamt (2007), *Statistisches Jahrbuch für die Bundesrepublik Deutschland 2007*, SFG: Elsevier, Wiesbaden.

TNS Infratest (2007), *(N)onliner Atlas 2007 – Eine Topographie des digitalen Grabens durch Deutschland*, Königsdruck, Berlin.

Van Kranenburg, H. and A. Hogenbirk (2005), Multimedia, Entertainment, and Business Software Copyright Piracy: A Cross-National Study, *Journal of Media Economics* 18, 109-129.

Varian, H. R. (2000), Buying, Sharing and Renting Information Goods, *Journal of Industrial Economics* 48, 473-488.

White, H. (1980), A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity, *Econometrica* 4, 817-838.

Zentner, A. (2006), Measuring the Effect of File Sharing on Music Purchases, *Journal of Law and Economics* 49, 63-90.

Appendix A

List of abbreviations and variables

Dependent variables

XSAVE	–	Amount of money saved by pirating digital media per year
FREQ	–	Self-assessment of the frequency of pirating (ranges from 1 to 4; with 1 = never)

Independent variables: binary

AGE20	–	Individual aged < 21 years
AGE2125	–	Individual aged between 21 and 25 years
AGE2635	–	Individual aged between 26 and 35 years
STUD	–	Individual enrolled at a university as student
MALE	–	Gender dummy (with 1 = male)
DSL	–	Individual with a DSL internet access
NATION	–	Individual is of German nationality

Independent variables: categorical

PPROS	–	Perceived probability to get prosecuted for pirating digital media (ranges from 1 to 5; with 5 = very high)
TRIAL	–	Self-assessed weight of the reason for pirating being to try out the product (ranges from 1 to 5; with 1 = the only reason is trial; see Appendix B)
COMPLX	–	Self-assessed degree of implied complexity of pirating digital media (ranges from 1 to 5; with 1 = very easy; see Appendix B)
BUDGET	–	Self-assessed weight of the reason for pirating being the budget constraint (ranges from 1 to 5; with 1 = the only reason is the budget constraint)

Appendix B

The original questionnaire included a few more questions, for example, on the religious background of subjects. The ones displayed in the following are the ones selected to construct the variables of our study (Appendix A).

Gender?

- male
- female

Age?

- under 20
- 21 to 25
- 26 to 35
- over 36

Profession or occupation?

- secondary education
- higher education
- worker/employee
- self-employed

Nationality?

Please tell us your country of origin. Choose from the list below.

--- Choice of 10 (groups of) countries

In this questionnaire digital media always include business software (e.g., MS-Office products, Photoshop), entertainment software (e.g. video console games), music, and movies.

Do you own a PC and/or notebook?

- yes
- no

What kind of internet access do you use at home?

- DSL
- ISDN
- cable modem (analogue)
- none
-

The digital media that you did not obtain legally primarily (in terms of quantity / price) exist of:

Please tick "1" for "to a very high degree the case" to "4" for "merely the case" or "none"

	1	2	3	4	none
business software	○	○	○	○	○
entertainment software	○	○	○	○	○
music	○	○	○	○	○
movies	○	○	○	○	○

How do you usually get hold of illegally acquired digital media?

- ○ through the internet
- ○ through friends
- ○ through markets
- ○ [ ]

How often do you yourself engage in accessing digital media without paying for it?
(e.g., using a file sharing platform or program)

- ○ Never
- ○ hardly ever
- ○ Sometimes
- ○ Often

How much money (in €) do you save per year through illegally obtained digital media?

[ ]

What are your personal motives for illegally acquiring digital media?

Please choose from "1" (to a very high degree the case) to "5" (absolutely not the case)

	1	2	3	4	5
These products are too highly priced	○	○	○	○	○
I just want to try out the products	○	○	○	○	○
I cannot afford these media	○	○	○	○	○
I only use it for a short period	○	○	○	○	○
It is easy to get hold of these products illegally	○	○	○	○	○
There is only a slim chance of getting caught	○	○	○	○	○
Most people I know do it the same way	○	○	○	○	○

Please, assess the probability of getting prosecuted for illegally obtaining digital media. It is…

- ○ very improbable
- ○ improbable
- ○ possible
- ○ probable
- ○ very probable

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