

Vengeance

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December 2008

Vengeance is an emotion that can potentially help explain some economic behaviors. This paper investigates the extent of vengeful feelings and their determinants using data on more than 89,000 individuals from 53 countries. Country characteristics as well as personal attributes of the individuals influence vengeful feelings. The magnitude of vengeful feelings is greater for people in low-income countries, in

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“Thou shalt give life for life, eye for eye, tooth for tooth, hand for hand, foot for foot.”
Exodus 21:23-24

“An eye for an eye makes the whole world blind”
Attributed to Mahatma Gandhi.

I. Introduction

In an effort to better explain some seemingly-perplexing individual behavior, economists have developed theoretical models that incorporate deviations from self-interest. For example, Rabin (1993) formulated a framework which explicitly incorporates emotions. Inlex0.2 Tc-o4(k which e0-1.ua.4

The desire to punish others produces high levels of cooperation and enhances collective action (Fehr and Gächter 2002; G rerk, Irlenbush, and Rockenbach 2006), and there is evidence suggesting that people derive sa

have behaved in a manner that is considered unfair, harmful, or against the norms.

Specifically, although vengeance is assumed to be an integral part of human behavior, no

evidence on vengeance exists based on field data

difficulty of measurement. A common procedure to measure an i

education of the person, the rank of family income in the income distribution of the country and the burglary rate in the area of the residence of the person. Furthermore, I present evidence indicating that having been victimized by burglary triggers vengeful feelings against a burglar,

This paper documents that the degree to which people want retaliation depends on both personal attributes and a number of country characteristics. For example, vengeful feelings are stronger for people in low-income countries, in countries with low levels of education, low levels of rule-of-law, in countries that experienced a war in recent history and in countries which are fragmented ethno-linguistically. Females, older people, working people, people who live in high-crime areas of their country and people who are at the bottom 50% of their country's income distribution are more vengeful. There is also evidence indicating that vengeful feelings recent past is associated with stronger vengeful feelings than having been victimized in more distant past.

There are also implications for the crim

case?” The alternatives given are: fine, prison, community service, suspended sentence, any

percent in Egypt, Ukraine, Paraguay and Georgia, 16 percent in Canada and Indonesia, 12 percent in the U.S. and Philippines, about 4 percent in Norway and Slovenia, and 1 percent in Belgium and Spain.

III. Vengeful Feelings at the Country Level

The information displayed in Table 1 is not a

were victimized and who were not. Further, I will address the issue of potential differences between the individuals who were victimized and who were not victimized in the next section when I analyze the individual-level data. However, as a first approximation, the strength of vengeful feelings at the country level can be measured as the difference between the proportion of individuals who would like to assign a particular prison sentence for a burglar given that they themselves were victims of burglary, and the proportion of individuals who were not victimized but who would like to see the same sentence handed out to a burglar. For example, in Brazil 8 percent of the individuals, who were not victims of burglary, consider a prison term of at least 4 years as the appropriate punishment for a burglar who stole a color TV as a second offense. On the other hand, 14 percent of the people who were victimized by a burglar in Brazil believe that the same punishment is appropriate. The six percentage-point difference can be attributable to the effect of vengeful feelings due to having been victimized by a burglar.

If being burglarized does not trigger vengeful feelings towards a burglar, then the proportion of individuals who desire a certain level of punishment should be the same among

descriptive statistics presented in Table 3 below do not reveal differences in personal characteristics of individuals by victimization, it is important to control for potential confounding. Thus, I estimate individual-level regressions depicted by Equation (1) below.

$$(1) P_{ij} = \delta_0 + \delta_1 V_{ij} + X_{ij}$$

it intends to limit, rather than strengthen, the power of the state (David and Brierley 1978, Finer 1997, La Porta et al., 1999). In comparison, French civil law, Scandinavian civil law and German civil law are designed as instruments of the state to expand its power; and socialist law is a manifestation of the state's intent to create institutions to maintain power and extract resources without much regard for protecting economic interests (La Porta et al. 1999). To control for the structure of the existing legal system in the country, I include variables to measure

country, the *percentage of young people* in the population and the proportion of seats held by women in the parliament are additional variables that are added to control for country attributes.

Ethno-linguistic fragmentation of the country, the extent of individualistic culture prevailing in the country, and prevalence of the rule-of-law in the country are additional control variables to capture some cultural dimensions of the countries. The Rule-of-Law index is obtained from the World Bank.⁸ It measures “the extent of which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.” Kaufmann, Kraay and Mastruzzi (2007). The range of the index is from -2.5 indicating the weakest rule-of-law environment, to 2.5 representing the strongest. In our sample, the lowest score of rule-of-law is -1.71 and it belongs to Zimbabwe. Kyrgyzstan and Belarus have scores of 1.99 and 1.81 respectively. Norway and Denmark have scores of 2.16 and 2.16 respectively.

loyalty.¹⁰

education, of those who were victimized this year or last year and who were not victimized during the same time period are similar. The same is true for victimization before last year, indicating that there are no obvious and systematic differences in observable characteristics between those who were victimized and those who were not. In fact, the burglary rate in the locality of those who were victimized are lower than the burglary rate in the locality of people who were not victimized.

V. Results

Table d displays the results of the ordered probit models, where the dependent variable consists of 6 categories, measuring the severity of desired punishment. These are: 1) if the person declared that the appropriate

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results of column III are based on the specification that includes country fixed effects, instead of the country characteristics. Again, the magnitudes and the statistical significance of the estimated coefficients do not change.

The existence of vengeful feelings is identified by comparing the reactions of individuals who have identical observable personal characteristics but who differ in their victimization experience. The first two coefficient reports at the top of Table 4 demonstrate evidence of *vengeful behavior*. Specifically, individuals who were victims of burglary

Although the rule of law in the country and the extent of individualism in the country are highly

The results of Table 4 indicate that people who were victims of burglary demand stiffer penalties for a burglar in comparison to individuals who were not victimized. An interesting question is whether or not other types of victimization trigger vengeful feelings towards burglars as well. In other words, do people who were victims of other crimes, such as theft or robbery, demand stiffer punishments for a

the identified vengeance eff

penalty, while the second is about *vengeance*. Put differently, while men demand stiffer penalties, women react more strongly than men in response to being victim

Table 6B reports the results

vengeful. People who live in countries where per-capita income is le

behavior involves a combination of

Table 8 shows that there is no difference in the severity of the vengeful feelings between

player in an ultimatum game is around 40% of

Although it has been argued that revenge is an integral part of human psyche, and vengeful behavior is common, there has been very limited research to quantify its extent. The investigation of the existence of vengeance, its extent and its determinants may be i

only for the

can be reflections of a number of country characteristics, ranging from the effectiveness of the legal system to economic conditions and culture.

Individual-level analyses compare the reactions of observationally equivalent individuals, who differ in terms of their victimization experience. The results show that people's desire to impose stiffer punishment is positively related to their own victimization experience.

Controlling for a large set of personal characteristics ranging from education, the rank of the family income, the country to the crime rate of the region of the country, along with a host of country attributes, having been a victim of burglary increases one's willingness to impose harsh prison sentences on a hypothetical 20 year old burglar.

The strength of vengeful feelings are influenced by country characteristics, such as per-capita income, the extent of individualism and rule-of-law in the country, the extent of ethnolinguistics fragmentation in the country and the existence or a war in recent history as well as uninterrupted democracy. Vengeful feelings towards a burglar are not influenced by having been a victim of robbery, theft or bicycle theft, suggesting that the identified vengeance effect is not a reflection of a general demand for law and order or the demand for protection. The findings, which are summarized in Table 7, indicate that the

These results have implications

Table 1
The Proportion of People in Each Country
Who Would Like to Impose the Following Punishment for Burglary

(Table 1 concluded)

ASIAN COUNTRIES					
Japan	0.120	0.040	0.016	0.003	1,155
Indonesia	0.274	0.160	0.058	0.012	569
Philippines	0.300	0.121	0.061	0.014	1,960
India	0.302	0.170	0.099	0.009	1,398
China	0.734	0.391	0.205	0.039	1,373
Mongolia	0.441	0.211	0.068	0.003	762
Kyrgyz Republic	0.186	0.096	0.028	0.004	1,564
AFRICAN COUNTRIES					
Uganda	0.515	0.270	0.116	0.016	1,209
Egypt	0.380	0.183	0.070	0.005	573
South Africa	0.467	0.247	0.106	0.008	1,578
Tunisia	0.281	0.104	0.035	0.010	
Zimbabwe	0.571	0.330	0.167	0.069	801
Botswana	0.557	0.397	0.296	0.142	388
LATIN AMERICAN COUNTRIES					
Costa Rica	0.346	0.258	0.191	0.072	1,116
Brazil	0.194	0.095	0.047	0.011	1,469
Argentina	0.161	0.049	0.021	0.005	1,700
Bolivia	0.272	0.143	0.056	0.018	767
Paraguay	0.313	0.188	0.098	0.027	480
Colombia	0.200	0.073	0.016	0.001	790

Table 2
Descriptive Statistics

Variable Name	Definition (source)	Mean (Std. Dev) N=70324	Mean (Std. Dev) N=84338	Mean (Std. Dev) N=89037
Victim of Burglary- This or last year				

(Table 2 concluded)

Population less than 25	Percentage of population less than 25 years of age (K)	38.145 (9.601)
Average Country Education	Average education of adults in the country in the survey year (L)	8.666 (2.192)
Women in Parliament	Percentage of women in parliament of the corresponding country (F)	19.025 (10.699)
War	Dummy Variable (=1) if a war occurred during 1960s to 1980s, 0 otherwise (C)	0.357 (0.479)
Western Europe	Dummy Variable (=1) if the country is in Western Europe, 0 otherwise	

Table 3

Descriptive Statistics of Personal Characteristics by Victimization Status

(Table 4 continued)

(Table 4 concluded)

Africa	1.050** (0.472)	0.611 (0.571)	0.899*** (0.032)
Latin America	0.166 (0.455)	-0.103 (0.533)	0.507** (0.228)

Table 5
Ordered Probit Estimates with additional Indicators of Victimization
Dependent variable: Severity of Punishment for Burglary

Variable	Robbery	Personal Theft	Bicycle Theft	Assault
Victim of Burglary This/Last Year	0.080*** (0.020)	0.086*** (0.021)	0.082*** (0.019)	0.076*** (0.020)
Victim of Burglary Before Last Year	0.032** (0.016)	0.034** (0.016)	0.032* (0.017)	0.032** (0.017)
<i>Victim of the Crime listed in the</i>				
<i>04c(47c)003 0296uc7 Elary #20.02 61</i>				

047j47c

Single

(Table 5 continued)
-0.050**

Table 6A
The Preference for Punishment by Gender

Table 6B
The Preference for Punishment by Personal Education
Probit Regressions

Table 7
Differential Strength of Vengeful Feelings by Groups

PERSONAL CHARACTERISTICS	Percentage increase in the desire to impose <i>any prison sentence</i> due to victimization among people in the world with the characteristic listed in rows	Percentage increase in the desire to impose <i>a prison sentence of at least 2 years</i> due to victimization among the people in the world with characteristics listed in rows	Percentage increase in the desire to impose <i>a prison sentence of at least 4 years</i> due to victimization among people in the world with the characteristic listed in rows

(Table 7 concluded)

Table 8
Differential Impact of More Frequent Victimization
Among Victims with Various Characteristics



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Appendix-Table 6C
The Preference for Punishment by Personal Income
Probit Regressions

	Preference for any Jail or Prison Time	
	If the family Income is in the top 50% of Income Distr.	If the family Income is in the bottom 50% of Inc. Distr.
Victim of Burglary- This or last year	0.037***	(0.010)

Appendix-Table 6D
The Preference for Punishment by Age
Probit Regressions

	Age 40	Age<40
Victim of Burglary- This or last year	0.024***	

Appendix-Table 6E
The Preference for Punishment by Labor Market Status
Probit Regressions

Preference for any Jail or Prison Time		
	Working	Non-working
Victim of Burglary- This or last year	0.030***	

Appendix-Table 6G

Appendix-Table 6H
The Preference for Punishment by Country Individualism
Probit Regressions

	Preference for any Jail or Prison Time			
	Highly- Indiv. Society		Collectivist Society	
Victim of Burglary- This or ltst year	0.024***	(0.008)	0.031***	(0.011)
	[0.024***]	(0.008)	[0.031***]	(0.011)

Appendix-Table 6I
The Preference for Punishment by the level of the Rule-of-Law
Probit Regressions

Preference for any Jail or Prison Time

High Rule of Law	Low Rule of Law
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Appendix-Table 6J
The Preference for Punishment by the Ex

Appendix-Table 6K

