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Do Victims of Crime Fear Crime More?

Empirical Evidence from the Survey of Living Conditions (2005) of Trinidad and Tobago

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Abstract

This paper uses micro-level data from the Survey of Living Conditions (2005) to examine an ongoing research question related to whether the victims of crime fear crime more than non-victims. To a lesser extent, we also explore some of the social and economic factors that impacts on an individual's fear of crime through the use of probit models. Our results indicate that people's fear of crime does appear to reflect whether they themselves were victims of crime. However, we go beyond the existing literature to suggest that victimization matters when individuals did not report the crime to the police or reported it but action was not taken. Thus, our study has direct policy implications on the role of the police effectiveness in reducing fear of crime.

Keywords: fear of crime, victimization, endogeneity, micro econometrics

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1. Introduction

The fear of crime is an enduring research topic that has drawn considerable attention both in the popular press and in the academic literature over the last thirty years worldwide. Recently the World Bank Report (2007) showed that murder rates in the Caribbean are higher than in any other part of the world. The same report confirms that individuals stop undertaking certain activities (for example, exercising, night entertainment) and they refrain from going to selected places due to their fear of crime. Fear may be therefore viewed as a “quality of life” issue. Specifically, in T&T (T&T) -a twin-island republic located in the Caribbean region- violent crime rates have almost quintupled during the last three decades. This is despite the fact that local authorities have introduced numerous strategies and measures to fight crime. Thus, it is not surprising that the level of fear and anxiety of individuals and society in T&T has intensified.

This paper employs an interesting dataset to explore the fear of crime in T&T, and extract policies and strategies that can be used to prevent or lessen the anxiety associated with crime. To that end, our primary aim is to examine the empirical importance of individual and family victimization history on fear of crime. We hypothesise that own victimization experience or exposure to others who have been victimized through, for example, personal contacts (e.g. siblings) have the effect of causing the individual to up-rate their perceptions of either the probability of further victimisation or its consequences. We note, however, that the perceptions held by victims who reported the crime to the police and effective police action was taken might differ systematically from the perceptions of victims who did not report the crime or reported it but arrest of the perpetrator was evaded. Consistent with previous research, a number of individual, economic and demographic characteristics are also included in the model as statistical controls (for a review, see Hale 1996).

The rest of the paper is organised as follows: in Section 2 we present the data. Section 3 outlines the empirical methodology. The results are presented and discussed in Section 4. The paper concludes with implications for policy and the some of the various strategies and procedures that can be put in place to prevent or reduce the fear of crime.

2. Data

The data employed in this study is drawn from Section 9 (Personal Safety and Crime) of the Survey of Living Conditions (SLC) (2005). The respondent to this Section of the SLC is the Head of the Household. The SLC is a national survey which was conducted during the months of June, July and August of 2005. The fieldwork and data entry were conducted by the Central Statistical Office of T&T. The questionnaire was administered to 3,621 households. The largest fraction of the sample is located in the North of the country (46%), while the smallest is from Tobago (5%).

Dependent variable

What is fear of crime and how can it be measured? In the academic literature the definition of fear of crime is not uncontested. For instance, Conklin (1971) defined fear of crime as “a sense of personal security in the community”. Garofalo’s (1981) working definition was “an emotional reaction characterised by a sense of danger and anxiety elicited by perceived cues in the environment that relate to some aspect of crime for the person”. More recently, Pain, et al. (2000) defined it as “the wide range of emotional and practical responses to crime and disorder which individuals and communities may take”. Similarly, a number of authors have also expressed concerns about the measurement of the fear of crime (Farrall et al. 1997 summarise this literature). Generally speaking, a common way to measure the fear of crime concept is to use qualitative research methods to derive appropriate indicators (Ditton et al. 1999). Specifically for this study, data is used from the respondents’ answers to question directly related to their fear of crime¹:

Question. *Are you or any member of your household fearful of crime at this time?*

1. *Yes*
2. *No*

¹ We recognize, however, that using a binary variable labeled “fear” does not enable the respondent to distinguish among a subjective probability of victimization, an assessment of the likely loss if they are victimized and differences in the risks in relation to different types of offences.

Information regarding fear of crime according to type of violent crime is shown in Table 1. In Trinidad persons located in the northern part of the country fear murder and manslaughter more than in other parts of the country. Assault and battery and rape are feared most by persons living in the southern part of the country and consistent with reports of kidnapping and abduction, these types of violent crime are feared most by those living in the central part of the country. On the other hand, the type of property crime that is feared most according to regions in T&T is illustrated in Table 2. Of note is that robbery is most feared by individuals in the north, while anxiety in central is caused by burglary.

Table 1:
Type of violent crime that is feared most by region

	Murder	Manslaughter	Assault & Battery	Rape	Kidnapping	Abduction	Domestic Violence
<i>North</i>	0.689	0.003	0.038	0.087	0.175	0.006	0.003
<i>South</i>	0.610	0.002	0.049	0.089	0.243	0.008	-
<i>Central</i>	0.593	-	0.019	0.050	0.326	0.012	-
<i>Tobago</i>	0.924	-	-	0.045	0.015	-	0.015
<i>p-value</i>	<i>0.000</i>	<i>0.874</i>	<i>0.068</i>	<i>0.073</i>	<i>0.000</i>	<i>0.746</i>	<i>0.409</i>

Table 2:
Type of property crime² that is feared most by region

	Robbery	Larceny/Theft	Arson	Burglary
<i>North</i>	0.815	0.093	-	0.093
<i>South</i>	0.684	0.066	0.026	0.224
<i>Central</i>	0.557	0.045	0.023	0.375
<i>Tobago</i>	0.667	0.333	-	-
<i>p-value</i>	<i>0.001</i>	<i>0.342</i>	<i>0.883</i>	<i>0.000</i>

Explanatory variables

Individuals were asked whether they or anyone from their household was a victim of crime over the past twelve months. 9% of the respondents admitted victimisation within the last year. From those admitting victimization, only 35% reported the incident to the police and was followed by police action. The rest either reported to the police but no action was taken (37%) or did not report the crime (28%). According to sex, 51% of the sample is male, 38% of the respondents are married and the average age of the respondent is approximately 41 years old. With respect to religion,

² Robbery is theft from a person one on one. Burglary is theft from a dwelling or business when there is no one inside the dwelling or business. Larceny is theft by falsely taking property, usually money, that is not yours as by embezzlement or writing bad checks.

the high percentage is of the Roman Catholic faith (25%), and 3% of the sample indicated that they had no religious affiliation at the time of the interview. T&T is multi-ethnic, but two major ethnic groups make up 75% of the sample [i.e. African (38%), Indian (37%)]. The average years of education of the sample is 9.5 years, suggesting that most of the sample would have some amount of secondary level education. The mean income level per household is TT\$1,681 per month, slightly higher than the minimum monthly wage (i.e. the minimum wage in T&T is TT\$10.00 per hour).

3. Statistical framework

Let C take the value of one if the individual is fearful of crime and zero otherwise. Suppose that C is a linear function of victimization V and other variables:

$$C_i = b_0 + b_1 V_i + b_2 X_i + u_i \quad (1)$$

where u is an error term, i indexes individuals, and X is a vector of variables that affects individuals' fear of crime, including age, sex, marital status, ethnicity, religion, years of education, individuals' gross monthly income and region. Equation (1) can be estimated by a single equation univariate probit model:

$$c_i^* = a_1 X_i + \delta V_i + e_{1i} \quad (2)$$

$$E(e_1) = 0$$

$$\text{var}(e_1) = 1$$

where c^* is an unobserved latent variable. Empirically, we observe the binary variable c^* that takes the value one if the individual is fearful of crime ($c_i^* \geq 0$) and zero otherwise ($c_i^* < 0$). V is a binary variable taking the value one if the individual has experience victimization over the past twelve months and zero otherwise. V can be further segregated to victims who reported the crime to the police and those who did not. For those who reported the crime to the police, we can observe whether action was taken. Our main interest here is the significance and magnitude of the coefficient δ . Given that V is a dummy variable the marginal effect (ME) of being a victim of crime on the probability of being fearful of crime is the sample average of changes in the marginal predicted probability of being fearful of crime with discrete changes in V keeping all other variables X at their observed values, that is:

$$ME = \frac{1}{n} \sum_{i=1}^n [\Phi(\hat{\alpha}_1 X_i + \hat{\delta} V_i | V = 1) - \Phi(\hat{\alpha}_1 X_i + \hat{\delta} V_i | V = 0)] \quad (3)$$

where Φ is the standard normal distribution function, $\Phi(\hat{\alpha}_1 X + \hat{\delta} V)$ is the marginal predicted probability of being fearful of crime and is computed for each observation using the estimated coefficients, and n is the number of individuals in the sample.

4. Results

Table 3 shows the probit estimates of the probability of being fearful of crime. An examination of model 1 illustrates that individuals who have been victims of crime have a higher probability of being fearful of crime than non-victims. This suggests that victimization generates experience, from which learning that changes the probability of further victimization or its consequences may occur. Previous studies, however, yielded mixed results. For instance, studies by Rountree and Land (1996), Parker and Ray (1990) and Skogan (1987) found that there exists a relationship between being a victim of crime and the fear of crime. In contrast, work by Bennett and Flavin (1994), McGarrell et al. (1997) and Quann and Hung (2002) failed to establish a statistical relationship. More interesting results come from model 2, when the victim variable is disaggregated (i.e. we observe whether the victim reported the incident to the police and action was taken by the police; the victim reported the incident to the police and action was not taken by the police; the victim did not report the incident).

The findings show that in comparison to those persons who were not victims of crime, the probability of individuals who were victims of crime being fearful of crime was not affected, if they reported the incident to the police and action was taken by the police. On the other hand, when individuals have not reported the incident or reported the incident, but action was not taken, they have a higher probability of being fearful of crime than those who have not being victims of crime. This result suggests that the police can have a key role to play in reducing anxiety regarding crime, when they do take action. However, a detection rate which decreased from 33% in 1970 to 19% in 2007 may serve to discourage victims of crime from even reporting the incident. Shaw et al. (2003) confirmed that few persons report crimes due to reasons such as the level of crime and negative opinions of the capabilities of the police force. On the other hand and from the view of the police, it must be discouraging to make

arrests and carry out investigations when cases take a long time to be brought before the courts or when criminals either go free or are given a slap on the wrist for felonies.

Furthermore, our result indicates that gender does not impact on fear of crime in T&T. Other studies have shown that gender is one of the key predictors of fear (e.g. Hanson, et al. 2000). According to Crowell and Burgess (1996) women's anxiety over crime stems primarily from their susceptibility to sexual aggression and this fear then influences fear of other types of crime. Indeed studies show that women are more afraid of rape than murder (Warr and Stafford 1983; Ferraro 1996). It is possible that we obtained a non-significant result with regard to gender in our study since murder has been the type of violent crime that has been increasing annually and given a significant amount of dramatic exposure by the media. So it is likely that both men and women are equally fearful of crime in T&T.

We also found that age does not influence fear of criminal victimization. While our result is similar to that obtained in some studies (e.g. Moore and Shepherd 2007; Ziegler and Mitchell 2003), certain other research work do indicate that age plays a role in anxiety over crime. The seeming contradiction among these studies has been attributed to the methodological variations of these studies (for example, how age is categorized when it is not a continuous variable). Further, the fear of crime varies from crime to crime according to age. Evans (1995) found that while younger people fear crimes like rape and sexual assault mainly, aged persons tend to be more fearful of most crimes, except for rape, due to their feelings of vulnerability. Using data from T&T, Chadee and Ditton (2003) established that anxiety over crime did not increase proportionally with age.

We found that people who are married tend to be less fearful of crime than those who are not married. Schafer et al. (2006) suggested that this may be due to lifestyle and activity modifications, as well as a decreased sense of physical vulnerability. Race was also included in our equation since existing studies have found that fear of crime vary according to ethnic background (Hough 1994). Our results indicate that among the different ethnic groups, people of Indian origin are more fearful of crime than persons of African descent. Micro data on the perpetrators of violent crime obtained from CAPA³ indicate that more violent crimes were committed by persons of African descent than any of the other ethnic groups. The

³The Crime and Problem Analysis (CAPA) Unit of the Ministry of National Security.

results in Table 3 also demonstrate that those with religious affiliation tend to be more fearful of crime than those who have no religious affiliations. Intuitively, having a religious affiliation should translate to less fear of crime. We do recognize that individuals who fear crime may rely on and turn to religion to alleviate such fears suggesting a positive bias in the estimated religion coefficient. Our paper makes no effort to correct for this.

Our findings suggest that as people become more educated they are likely to be more fearful of crime, while income has no impact on persons and their anxiety over crime⁴. Studies such as Evans (1995) and Silverman and Kennedy (1983) found that low educational and income levels tend to increase anxiety over crime. In the case of education, it is likely that we received this result due to the type of violent crime that have dominated (both being committed and reported in the media) during the past few years, namely murder and kidnapping. Educated persons would tend to be more informed about occurrences in the country through the print and other media, than a less educated person.

Finally, with respect to area of residence, it was found that households which are situated in the southern part of the country or in Tobago tend to be less fearful of crime than those situated in the northern part of the country. This is in line with data on the location of crimes committed in T&T. Much of the crimes occur in areas identified as 'hot spots' by the police, which are in large measure located in the northern part of the country. Thus, we can assume that respondents from these (risky) areas are both more likely to have been victims of crime in the past and more likely to be victims in the future and this would tend to influence their perceptions. There is support for this finding in that studies have found that individuals who reside in cities and other urban regions tend to be more anxious about crime than those who live in rural areas (Horton 1988).

⁴It can be argued that individuals with high income levels may be viewed as potential targets for criminals and as a result they may experience higher anxiety over crime. Consequently, they are more likely to employ crime prevention measures and systems (e.g. employ security guards, install burglar alarm and surveillance equipment). Our result of no significant impact of income may stem from these effects nullifying each other.

Table 3:
 Probit estimates of the probability of being fearful of crime
 (1: fearful of crime; 0: otherwise)

Variables	Model 1		Model 2	
	ME	Std.er.	ME	Std.er.
Victim of crime	0.092*	0.024	-	-
Victim of crime, reported & action taken	-	-	0.048	0.042
Victim of crime, reported & no action taken	-	-	0.092*	0.036
Victim of crime & crime not reported	-	-	0.142*	0.032
Male	0.005	0.017	0.006	0.017
Age	0.000	0.000	0.000	0.000
Married	-0.050*	0.019	-0.051*	0.019
<i>Ethnicity (African)</i>				
Indian	0.133*	0.019	0.132*	0.019
Chinese	0.038	0.115	0.038	0.115
Caucasian	-0.051	0.129	-0.050	0.128
Mixed	0.025	0.020	0.027	0.020
Religion affiliation	0.188*	0.071	0.187*	0.071
Years of education	0.005*	0.002	0.005*	0.002
Income>minimum wage	-0.028	0.019	-0.028	0.019
<i>Region (North)</i>				
South	-0.099*	0.022	-0.099*	0.022
Central	-0.038	0.027	-0.036	0.027
Tobago	-0.087*	0.043	-0.086*	0.043
Predicted probability	0.804		0.805	
Log likelihood	-1150.957		-1149.372	
LR chi2(14)	108.220*		-	
LR chi2(16)	-		111.380*	

*Significant at the 5% level.

5. Conclusions

The fear of crime is a concern which is part of the whole problem of crime, but it is a condition that can be treated separately. While some of the actions taken by individuals due to the fear of crime may be desirable to a certain extent, there are some actions, such as loss of freedom, heavily burglar-proofed homes and acquiring guns and other weapons of defence, which tend to have a corrosive and frequently debilitating effect on individuals and society. The results of this study indicate that past victimization, especially when no police action was taken or the crime was not reported, perpetuated and increased the fear of crime. The latter finding has direct policy implications on the role of police effectiveness in reducing fear of crime. Additionally, there must be effective clearing up of crimes reported so that individuals would be encouraged to report the incident to the police. To date attempts at solving crime has been relatively unsuccessful – the detection rate decreased drastically from 33% in 1970 to 19% in 2007. The judicial machinery must move swiftly and

effectively to bring criminals to justice so that the police are encouraged to investigate and take action when crimes are committed. The findings also reveal that individual characteristics (e.g. marital status, race, education) and location influence anxiety over crime whereas income was found to exert an insignificant effect. Any further research on the fear of crime must include a survey specifically designed to elicit more specific and detailed information regarding the anxieties that persons face in the face of rising crime levels.

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