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Teen Births Keep American Crime High Despite the Good Economy

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Abstract

The United States has a high teenage birth rate relative to other developed countries. Children born to teen mothers are more likely to have characteristics associated with subsequent criminal activity. I assess to what extent lagged teen birth rates can explain why among developed countries the US had the highest prevalence of assault and burglary and the second-highest prevalence of larceny in 1988. I use internationally comparable crime rates measured from the 1989-2000 International Crime Victims Survey. The high US level of assault in 1988 is fully explained by the proportion of the most crime-prone age group that was born to a teen mother; this variable also influential for burglary. However, for burglary and larceny the high US GDP per capita is a powerful force reducing relative US crime. I also ask why crimes decreased significantly in the US by 1999. The relatively slow decline in the US teen birth rate has tended rather to increase US crime, particularly assault. Rapid US GDP growth and the evolution of the age structure explain most of the relative decline in burglary and larceny.

In the 1980s the crime rate in the United States was high by rich country standards, for both violent and property crimes. Of thirteen developed countries surveyed in 1989 in the International Crime Victims Survey (ICVS), the United States had the highest prevalence of burglary, assault and rape, and the second highest prevalence of larceny and robbery. The United States has also had higher teen birth rates than other developed countries. The children of young mothers are more likely to be unwanted, more likely to grow up in poverty, more likely to live in unstable families, and more likely to be poor as adults. All these characteristics make them more likely to commit crimes. A major focus of this paper is to test whether high teen birth rates increase crime with a suitable lag.

Crime fell in the United States in the 1990s, however, and by 1999 the United States ranked only 11th of thirteen countries in larceny, 5th in burglary, 12th in robbery, and 9th in assault. The relative rape prevalence had also fallen, although large standard errors preclude an exact ranking. Relative teen birth rates cannot explain this fall, since the teen birth rate has fallen more slowly in the United States than elsewhere. To form a complete picture of relative crime rates in the United States, I also examine factors influencing this decline, especially GDP per capita and age structure. For all of the analysis I use individual-level socio-economic and demographic information from the four years of the ICVS, supplemented with country-level data from the UN and the OECD. I identify the effect of the country-level variables, such as the proportion of youth born to a teen mother, from within-country variation.

I am not aware of other papers linking geographical or temporal variation in crime rates to the teen birth rate, although this analysis is related to recent papers on the link between abortion, unwanted children, and crime, and the large literature linking an individual's childhood circumstances to his or her later delinquency.[i] This is also one of very few papers to seek to explain differences in cross-country crime rates quantitatively. For crimes other than homicide,

the ICVS data are the only source of internationally comparable crime rates. Using these data allows me to put the US crime levels and trends, and the degree to which they can be explained, into international perspective for the first time. [ii]

An advantage of cross-country analysis is that economic and other experiences of the countries surveyed in the ICVS are more disparate than those of regions within countries. Variation is either greater or in a different range, thus allowing identification of more effects.[iii] Another advantage of cross-country analysis is that it reduces, although does not eliminate, the endogeneity problem stemming from criminals' possibly moving to regions where the economy is favorable. Although the absolute fall in the US crime rate has been analyzed extensively, a final advantage of country data is that it is not necessary to use simulation to judge whether the US crime trend has been explained.

I include country fixed effects in both probit and linear models of the probability of having been a victim in the previous calendar year, controlling for individual and country attributes, year dummies and a non-US trend. I focus on the crimes of assault, burglary and larceny, since survey to survey movements by country are not reliable for the less common crimes of robbery and rape. I focus on teen mothers rather than unmarried mothers because stable cohabitation outside wedlock is very common in northern Europe. (Data on births to mothers with no partner, rather than no husband, are not available.)

I find that the fraction of the most crime-prone age group that was born to a teen mother plays an important role in explaining the high levels of US assault and burglary in 1988. For assault, teen births more than explain the gap with the rest of the world. The effect works through assaults on men by assailants known to the victim, suggesting that sons of teen mothers are more likely to find themselves in confrontational situations with friends and relatives. The teen birth variable explains half the gap for burglary, although this effect is not precisely estimated. The

relative evolution of the age structure explains half the gap for assault and larceny. For burglary and larceny, however, GDP per capita has a strong negative effect: this means that, given the high US GDP, the high US burglary and larceny prevalence remains a mystery.

The evolution of the relative US teen birth rate tends to increase the relative prevalence of assault, and to a lesser extent, burglary. The teen birth rate more than offsets the quarter of the decline in assault explained by changing population vulnerability as reflected in age structures. Half the relative decline in US burglary is explained by GDP and the age structure. All of the relative decline in larceny is explained, through GDP, age structure and a closing of the US-non-US gap in vulnerable possessions such as cars.

The importance of the proportion of youth that was born to a teen mother could have several interpretations. Young mothers may be too immature to provide good parenting, and they are more likely than older mothers to have no stable partner. This implies less parental attention as well as potential future family instability, which might traumatize the child. If children born to teen mothers are more likely to be unwanted than those born to older mothers, this would also affect the parenting quality, and potentially crime, as speculated by Donohue and Levitt (2001). Teen mothers are more likely than other mothers to be poor as the child grows up, which also hinders an ideal upbringing.

Children of poor teenage mothers are less likely to have been able to invest in education and make connections to help them obtain well-paying jobs, and are hence themselves more likely to be poor. This could in turn lead them towards economically motivated crime. Although GDP has been controlled for, the well-being of the lower part of the income distribution has not. The inclusion of inequality in a later version will help test whether children of teens commit crimes due to their own poverty later in life. The policy implications are rather different, depending upon whether it is teen motherhood itself or the associated poverty which leads to

crime. A final possibility is that male crime leads to single motherhood due to a lack of eligible husbands, and that this might possibly lead to more teenage motherhood. However, since the teen birth rates lag the crime rates by 20-25 years, this avenue of endogeneity seems unlikely.

Although theoretically the effect of the economy on crime is ambiguous, my results confirm those of other papers indicating that a good economy reduces crime. The results for the decline in the US crime rate may be compared to two recent papers using a yearly panel of American states and reported crime statistics from the Uniform Crime Reports. Gould, Weinberg and Mustard (2002) find that the unemployment decline of the 1990s can fully explain the fall in property crime, and explains one third of the decline in violent crime. Wages play a smaller role, although they argue that in the long term wages must be more important. Raphael and Winter-Ebmer (2001) find that the unemployment decline explains all of the 1990s decline in larceny, 28 percent for burglary, less for auto theft and robbery, and none for assault. They do not consider wages. For both papers, these results are conditional on state income, which is found to have a positive effect on crime in one paper, and negative in the other.

A future version of the paper will also examine the impact on crime of immigration rates. Abortion availability could also be measured, as could female participation rates.

Theoretical and Empirical Work on Crime Determinants

Criminologists and other social scientists have written extensively on the link between a child's upbringing and his or her later propensity to commit crimes. An important component of this is the link between delinquency and family disruption, which can be viewed in three ways. Trauma theories focus on the loss of parent through death or separation, and the trauma caused to the child, while life course theories consider more broadly the whole course of a life potentially disrupted by family change. Selection theories, on the other hand, consider that family income or

child-rearing methods could be jointly determined with family structure, and have their own direct effect on the child. Juby and Farrington (2001) find support for life course theories. In related work, Donohue and Levitt (2001), find that increased access to abortion reduces crime with a lag of about twenty years, and suggest that unwanted children are likely to have worse parenting and be more likely to engage in crime later on.[iv]

Economic variables are expected to have their principal impact on crimes committed for economic gain, notably larceny, burglary and robbery. Theoretically, their effect is ambiguous, however. Poor economic conditions create hardship and reduce the opportunity cost of crime, but these economic conditions affect potential victims as well, reducing the probable gain from crime. A high unemployment rate would increase the number of people at home, reducing the opportunity for burglary. Conditional on the mean state of the economy, however, one would expect inequality to increase crime, as high inequality would increase both reduce the opportunity cost and increase the potential gain.

The literature on the effect of economic variables on crime using data from a single country, typically using a panel of regions within the country and officially reported crime rates, have varying results. In addition to the papers already cited, papers for the United States, England and Wales, and Germany find either a positive or insignificant relation between wages and crime, and either a negative or insignificant relation between unemployment and crime. Butcher and Piehl (1998) find that inequality has an unexpected negative effect on crime, while immigration has an insignificant effect. Entorf and Spengler (2000) find that immigration increases larceny.[v]

Demographic variables also have an impact on crime. Criminals tend to be concentrated in young age groups, with the average age of the perpetrator of property crimes being younger than the typical violent criminal. The demographic composition of the population is also

important from the perspective of potential victims. The young, the old, and women may inherently be more vulnerable, but they may alter their behavior to avoid crime. Van Kesteren et al. (2000) examine the effects of individual-level variables in the ICVS on crime prevalence for the 2000 wave.

Data and Descriptive Statistics

Four waves of the International Crime Victims Survey were conducted, in 1989, 1992, 1996 and 2000. Interviews were conducted by phone in most countries. I focus on the probability of having been a victim in the previous calendar year in one's own country: for some crimes and some countries a large proportion occurred abroad. I refer to this probability as the prevalence of crime. Since I do not know exactly where abroad the crime occurred, country crime rates are biased down by the omission of crimes against travellers. Focusing on the probability of experiencing any crime (prevalence), and not taking into account the number of crimes (incidence), tends to lower the US crime rate relative to other countries (see van Kesteren et al. 2000)

Burglary includes attempted burglary, but does not include crimes reported in response to the specific question about garages in 1992. Assault includes threats of physical harm that caused fear, and assaults by unknown assailants, acquaintances, friends and family. I define a broad larceny category to include each of the following five thefts (occurring without violence or threat of violence) inquired about separately: theft of personal possessions, theft from one's car, theft of car/truck/van, theft of bicycle, and theft of moped/motorcycle.

England and Wales, the Netherlands, Finland, the United States and Canada are surveyed in all four waves. Switzerland, Belgium, France, Sweden and Australia are surveyed three times, while Japan is surveyed twice. Nine other countries are surveyed only once.[vi]

Table 1 shows descriptive statistics on crime prevalence for the three crime categories in the first year of crime prevalence data, 1988, and the last, 1999, with the associated standard errors.[vii] The fourth category, "known assailant" refers to the subset of assaults committed to assailants known to the victim, at least by sight. I present unweighted values – the survey weights that make the household size representative affect the values little. I also do not weight by population size. The first row shows the large declines in crime prevalence in the United States. Larceny, for example, fell from 15.1% to 9.9%. The second row shows the prevalence for the nine other countries surveyed in both 1989 and 2000, while the third row shows the US rank amongst these countries. By contrast with the United States, larceny prevalence in the other countries rose 1.5 percentage points. The burglary prevalence remained roughly constant, given the standard errors, while assault rose 1.6 percentage points, compared to a 1.7 percentage point decline in the United States. Assault by known assailants fell by 0.6 percentage points in the United States and rose by 1.1 percentage points elsewhere.

The fourth row of numbers shows the prevalence rates for the twelve countries surveyed in 1989, and the twelve (slightly different) countries surveyed in 2000. The US larceny prevalence in 1988 was 50% above the mean of the other countries. US burglary and assault prevalences were around double the mean for other countries in 1988. By 1999, however, the US prevalence in all crimes was similar to that of other countries. The rankings are shown in the bottom row. Figure 1 shows the evolution of the assault rate for the five countries presented in all four years of the ICVS. The Appendix Table shows the crime prevalence for the pooled survey years for all countries.[viii]

Several countries, including the United States, have national crime victimization surveys. Table 2 shows how the crime incidence (crimes per person) found in the ICVS compares to the incidence in the National Crime Victimization Survey (NCVS) in the United States. The NCVS

has a much larger sample than the ICVS, but differs in several ways. The incidences for larceny and burglary are similar. The incidence of assault is considerably higher in the ICVS than the NCVS, but given the differences in questions asked, in the order the questions are asked, and in the way assault is compiled from the raw data, this does not seem a cause for undue concern. In the ICVS the prevalence of all crimes in the United States fell between 1988 and 1991: for burglary and larceny this is consistent with results from the National Crime Victimization Survey, while the latter survey indicates an increase in assault between the two years.[ix]

Although the United States was surveyed in all four years, in 1992 a reduced survey was conducted, and some questions of interest were not asked. In particular, respondents were not asked whether they owned a car, bicycle or motorcycle, although they were asked if they had experienced a theft of one of these, and respondents were not asked questions about their assailant. Therefore, in order to investigate certain issues, a smaller sample dropping the United States in 1992 is studied. Table 3 shows the means of the individual-level variables for both the full sample, and the sample without the US in 1992.

Table 4 shows the means of the country variables in 1988 and 1999. The age variables are the share of the age group in the population over 14. The United States age structure is initially similar to that of the other countries, but ages more slowly. The United States has the highest the proportion of youth age 20-24 born to a teen mother, a proportion which rose from 16.4% in 1988 to 17.3% in 1999. By contrast, the proportion fell in other countries. Austria is the country with the next highest proportion born to teens, with 14.2% of the 20-24 age group in 1996. Figure 2 shows the evolution of this variable for the five countries present in all four years of the ICVS. In Table 4, the (log) GDP per capita figures show the much greater growth in the United States compared to other countries. For more information on the data, see the Data Appendix.

Econometric Approach

I pool the individual data from all years and countries, and estimate the probability of being the victim of a crime, controlling for individual characteristics of potential victim i in country j at time t, X_{ijt}, country dummies c_j, year dummies T_t, country-level variables Z_{jt} and a non-US time trend defined to be zero in 1988, t_{jt}.

$$P(\text{victim})_{ijt} = \beta_0 + X_{ijt}\beta_1 + Z_{jt}\beta_2 + c_j + T_t + t_{jt} + \varepsilon_{ijt}$$

I estimate both linear probability and probit models. In the linear probability specification, identification of the country-level variables is coming from the countries surveyed in more than one year.[x] I include the other countries to contribute to identification of the individual-level variables, and because the coefficients identified from the other countries can still be used to explain the crime levels for countries not contributing to identification. The regressions are unweighted. I begin merely with country dummies and the non-US trend, and see how much the individual and country characteristics can explain of the country levels of crime relative to the US, and of the non-US trend.

Identification of the country-level variables, at least in the linear probability case, comes from within-country changes, which may be in a smaller range than the cross-section country differences represented by the country dummies. This is true of the proportion of youth born to teens and of GDP per capita. For GDP there could be the additional question of whether crime changes induced by business cycle fluctuations within country imply that long-term growth differences would translate into long-term crime changes. Since the data are not yearly, the fluctuations in GDP used here are medium-term fluctuations.

While the age structure of a country is fairly exogenous to crime if the homicide rate is not too high, some of the other variables may be endogenous. A problem with the individual-level variables is that they refer to the time of the survey whereas the crime is in the past. For example, if people who are assaulted in the city react by moving to the country, the effect of the city in increasing assault probability will be underestimated.[xi] Country-level variables could also be endogenous. A high crime rate could be a drag on the economy, for example, by requiring spending from education to be diverted to the justice system. This would bias the coefficient on GDP down. Conversely, even internationally, criminals may move to where the economy is doing well and crime opportunities are higher. This would bias the coefficient on GDP up.

The more subtle potential effect of crime on (lagged) teen births has already been discussed.[xii] Finally, people in certain countries may be more reluctant than in the United States to report assault by friends and family. If countries with higher teen birth rates tend to be countries where domestic violence is more openly discussed, the causal effect of the proportion of youth born to teens will again be overstated, particularly for assault on women.

Results

Table 5 reports for the four crime categories the coefficients on the individual variables in a probit specification containing year and country dummies, a non-US trend, but no country-level variables. Marginal effects and t-statistics are reported. Women who do not work were victims of fewer crimes. The relatively richer the respondent, the more likely they were to have experienced larceny, while by contrast burglary and assault afflict the less well-off. For all crimes except assault by known assailant, those who declined to give their relative income had significantly lower prevalences – these may be the particularly wealthy who can afford to protect themselves against crime. The older the person the less likely they were to be the victim of a crime (the

omitted age is 16-19). The age pattern varies according to the crime, and is large relative to the mean prevalence, except for burglary, where the magnitude is important only beginning at age 60. The bigger the city, the higher the burglary and larceny prevalence is. This effect is not strong for assault, since there is no city size effect for assault by known assailant.

Assault

Table 6 reports coefficients other than those on the individual variables for the crime of assault. Standard errors and (for the probits in the first five columns) marginal effects are reported. To save space, standard errors are not provided for the country coefficients, but those significant at the 5% level are highlighted in bold font. At the bottom of the table the unweighted average country coefficient and its t-statistic are reported.

Column one reports the coefficient on the non-US trend, and the coefficients on the country dummies, for a specification with no individual controls. This column shows the relative rise in non-US assault prevalence is 0.26 percentage points per year, and all countries except Australia and New Zealand had significantly lower assault rates than the omitted United States. The definition of the trend means the country dummy coefficients may be thought of as referring to 1988.

In the specification of column two, I add the individual-level controls from Table 5. This causes the coefficient on the trend to fall by a quarter, although the decline is not statistically significant. Unreported regressions show the change is due to the addition of the age dummies: the international age structures are changing in such a way as to make the United States population relatively less vulnerable. Coefficients on the country dummies are affected little.

In the third column I add country-level controls for the age structure, to reflect the fact that youth engage in crime to a much greater extent than older individuals. I do not control for the

full set of age groups, as I am concerned about preserving degrees of freedom at the country level. Countries with large 25-29 age groups have significantly more assault, while countries with many individuals 60 or over have significantly less assault. Differences in age structure (conditional on the age structure of victims) are sufficient to explain the gap between the US and certain countries, notably England and Wales, West Germany, Norway and Sweden, and the average gap with the rest of the world is cut in half, from 1.6 percentage points to 0.8 percentage points. Ageing populations are reducing assault in rich countries, but because the US population is ageing less quickly, the coefficient on the trend rises slightly.

In column four I control for the proportion of the age group 20-24 that was born to a teen mother, to proxy for poor conditions in childhood for an age group usually thought to be the most crime-prone. This proportion is positive and significant, with a magnitude that suggests an increase of one percentage point increases assault by 0.3 percentage points. (Unreported regressions show that the proportion of the age group 25-29 that is born to a teen mother has a coefficient of 0.18, significant at the 10% level. The proportion is insignificant for other age groups.) Addition of the teen birth variable increases the coefficient on the trend to 0.0031, but more importantly goes a long way toward explaining the high relative prevalence of assault in the US. The average of the country coefficients is now a large positive 0.03, although not significant. Coefficients for all countries become less negative, since the US has the highest proportion of youth born to a teen mother, and only Austria and Portugal retain significantly negative coefficients.

In the fifth column I add GDP per capita to the covariates, and column six reports the linear probability estimate of the column five specification. The coefficients are similar in the two columns, and show GDP to have an insignificant effect. In the linear probability version there

remains a larger unexplained non-US trend. One possible explanation for the trend is that discussion of domestic violence is becoming more acceptable relative to the United States. [xiiixiv]

In Table 7 I look separately at assaults committed by assailants known to the victim (columns 1-3), and assaults committed by assailants not known to the victim (columns 4-5). I am obliged to use the smaller sample here, without the United States information for 1992. Columns 1 and 3 show that the gap in the levels is more pronounced for assaults by a known assailant: the average country coefficient is –0.011 for assaults by a known assailant, compared to –0.007 for assaults by an unknown assailant. In the rest of the world, both types of assault are rising relative to the United States. Controlling for individual variables in columns two and five explains a little of the levels and about a quarter of the trends.

In columns three and six I add all the country-level covariates. The effect of the youths born to teens can be seen in column three to be important for assaults by a known assailant, and can be seen to be small and insignificant in column six for assaults by an unknown assailant. Conditional on all the covariates, no country has a significantly lower rate of assault by known assailant than the United States, and about half have a significantly higher rate (column three). The average gap is a positive four percentage points, though it is not significant.

In unreported regressions I repeat column three by gender; this indicates that the effect of the proportion of youth born to a teen is much stronger for male victims than female victims. This suggests that this variable does not have its effect through creating a vulnerable class of women. This is further confirmed by other unreported regressions where I control for whether the respondent was the only person over 16 in the household (interacted with gender). Although the coefficient is a significant 0.0058 for men, and there is a further 0.0033 effect for women (significant at the 10% level), the aggregate teen birth variable is unaffected. It is therefore more

likely that the aggregate variable reflects the number of perpetrators, or perhaps a propensity of youths born to teens to get into fights.

Burglary

Table 8 reports specifications for burglary that are parallel to those in Table 6 for assault. With no individual controls, burglary prevalence in the rest of the world increased by 0.25 percentage points per year relative to the United States. All countries except Australia and New Zealand had significantly lower burglary prevalences in 1988, while Australia and New Zealand had indistinguishable prevalences. Controlling for individual characteristics in the second column reduces the trend by an insignificant amount and renders Australia's country coefficient significantly negative. [xv]

In column three I control for the aggregate age structure. This cuts the trend in half and renders it insignificant. The level gap is reduced slightly. These effects are due to the surprising positive and significant coefficient on the proportion of the population 60 or over.

In the fourth column I add the percent of youth born to a teen mother. The coefficient on this variable is not statistically significant, yet it makes a considerable contribution to explaining the 1988 gap between the US and the world: the average country coefficient falls from 1.8 percentage points to 1.0 percentage points, although the standard errors also rise. The coefficient on the trend increases. It is possible that there is a genuine effect of the variable, but that the standard errors preclude an effect of this magnitude being significant: the coefficient is about half the size of the coefficient in the assault regressions.

In column five I include GDP per capita, which is significantly negative at the 6% level: a ten percent increase in GDP implies a 0.7 percentage point fall in the burglary prevalence (or 0.6 percentage points in its linear probability counterpart, column six). Since the United States has

the highest GDP, GDP plays an important role in explaining the 1988 gap, reversing the effect of the teen birth variable, and leaving point estimates on the country dummies similar to the raw coefficients in column one. The average country coefficient is –0.02, significant at the 10% level. GDP only explains 16% of the non-US trend despite the fast US GDP growth of the sample period, but the coefficient on the proportion aged 60 or over falls considerably, and may have been capturing some of the GDP effect in column three. More than half of the original trend is explained by the covariates.

Larceny

Table 9 reports results for larceny with specifications corresponding to those in Tables 6 and 8. The first column shows that the rest of the world's larceny prevalence is increasing at the rate of 0.6 percentage points per year relative to the United States. All countries except Spain and the Netherlands had a significantly lower larceny prevalence than the omitted United States in 1988, and only Spain has a positive point estimate.

In the specification of column two, I add the individual controls. The average level gap falls by one percentage point, and the coefficient on the non-US trend falls by 29%, although the decline is not statistically significant. If I add the individual controls one by one, it emerges that the change in the coefficient is due to the addition of the age dummies (these results are not reported). Thus, as in the case of assault and to a lesser extent burglary, the US age structure must be evolving in a way that makes the population less vulnerable relative to other countries.

In the third column I add country-level controls for the age structure. As for burglary, the proportion aged 60 or over surprisingly tends to increase crime. Since the United States has a below average over 60 population, the average level gap falls another percentage point, to 1.9 percentage points. Compared to the raw gap in column one, half has been explained. As other

countries are ageing faster, these variables explain one third of the non-US trend. The proportion of the age group 20-24 born to a teen mother has a small and statistically insignificant coefficient in column four.

In the fifth column I add GDP per capita to the covariates. This variable is significantly negative, with a point estimate implying that a 10 percent increase in GDP per capita would reduce larceny prevalence by 1.5 percentage points (the linear probability specification in column six yields the same coefficient). Because the United States has the highest GDP, the country dummy coefficients become more negative with the addition of GDP, and the average country coefficient becomes significantly negative once more, with a larger absolute value (4.9 percentage points) than the raw value of 3.9 percentage points in column one. Adding GDP reduces the non-US trend, by an amount equivalent to 13% of the original trend. As in the case of burglary, however, the effect of GDP may be partly reflected in the coefficient on over 60 year olds, since this coefficient falls considerably when GDP is included. The successive addition of the individual and country variables thus accounts for 80% of the non-US larceny trend in this table.

In order to retain the observations for the US in 1992, the covariates in the Table 9 regressions did not include whether the individual owned a car, bicycle or motorbike. Obviously, an individual with such possessions has a higher chance of being the victim of larceny. In Table 10 I use the smaller sample to explore this. Column one repeats the specification with no individual covariates, with results very close to those of Table 9 column one. In column two I add dummies for whether the respondent owned a car, bicycle or motorbike (the coefficients on these are not reported). The addition of these variables reduces the magnitudes of the country coefficients slightly, since Americans own more, but also reduces the coefficient on the trend, since the rest of the world is catching up to the US. This accounts for 21% of the trend.[xvi] In the

third column I control for the other individual-level coefficients, which reduces the level gap slightly, and the trend by a further 18%. In the fourth column I add the aggregate age structure, teen birth variable, and GDP per capita. The results of this column are very close to those of column five in Table 9, except that more of the trend has been explained: a statistically significant 94%.

Conclusions

I have found that when the proportion of youth born to a teen mother rises, more men are victims of assault by assailants known to them. This is likely to indicate a higher propensity of such men to find themselves in situations of confrontation. The United States has the highest teen birth rate of any rich country, and this, coupled with the effect uncovered here, is sufficient to explain why the assault rate in the United States was the highest among rich countries in the 1980s. The relatively slow decline in the teen birth rate in the 1970s has retarded the decline in the assault prevalence in the United States in the 1990s. The analysis suggests that when the cohort born in the early 1990s, when there was a spike in the teen birth rate, moves through the crime-prone ages, the assault rate could rise temporarily.

There is weaker evidence that some of the high United States burglary rate of the 1980s can be explained by the lagged teen birth rate, and that the relatively slow decline in the teen birth rate also retarded the decline in burglary in the 1990s. The proportion of youth born to a teen does not appear to affect larceny, however. Unlike for assault, GDP per capita has a strong negative effect on burglary and larceny, and since the United States has the highest GDP per capita, its burglary and larceny rates remain significantly higher than elsewhere conditional on GDP.

One quarter of the relative decline in assault the United States can be explained by the changing vulnerability of populations as represented by the age of potential victims. However, most remains unexplained. By contrast, half of the relative decline in burglary can be explained by the relative evolution of GDP and age structures, and all of the relative decline in larceny can be explained by GDP, age structure, and ownership rates of vulnerable possessions such as cars.

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Data Appendix

ICVS Data: Interviews were conducted by phone in most countries. Households were selected randomly, and based on some household composition information supplied by the person answering the telephone, one household member aged 16 or over was chosen randomly. The response rate in 2000 was 64%, counting both non-response and non-contact: no substitution for the selected individual in the household was permitted. Respondents were asked if they had been a victim of several different crimes in the last five years, and were then asked more exactly when it occurred, where it occurred, and many other questions.

I do not include information on Scotland or Northern Ireland, in the former case due to a lack of country data (which could possibly be rectified for a future version), and in the latter case due to concerns about willingness to respond. The Spanish data are in fact for Catalonia only.

I consider an assailant to be known to the victim if the victim knew the assailant by sight or name. I include reports of assault elicited by the 2000 follow-up question specifically mentioning domestic violence to respondents who had said they had not been victims of assault. I do not drop respondents who did not answer the questions concerning their household income relative to the quartile cutoffs, but create a variable for missing income. I also create a variable for missing city size, since there is no information for Japan in 1988. For some countries in some years there are only two categories for city size and income: in these cases I distribute the values across to the more detailed categories based on the distribution in the years for that country where there are four categories.

Aggregate Data: I use OECD GDP per capita based on purchasing power parity and match this to the year that the crime prevalence is measured (the year before the survey). I use five-yearly United Nations Development Programme age data to construct the percent of each country's population over 14 that is aged 15-19 and 20-24. From the same source I compute the percent of those aged 15-24 or 20-24 in the year for which crime is measured that had been born to a teenage mother (this is based on lagged native-born fertility statistics). I use British data for England and Wales, and Spanish data for Catalonia.

[i] Donohue and Levitt (2001), Juby and Farrington (2001).
[ii] Wolpin (1980) studies three countries, although he acknowledges that his data are not entirely comparable.
[iii] For example, even a state like Massachusetts, with low teen births by US standards, has teen birth rates consistently above the average of other rich countries (National Vital Statistics, various issues).
[iv] However, based on their reading of Akerlof, Yellen and Katz (1996), Lott and Whitley (2001) argue that increased availability of abortion could increase the number of out of wedlock births, and hence crime.
[v] See also Beki, Zeelenberg and van Montfort (1999), Fowles and Merva (1996), Hale (1998), Savolainen (2000) and Witt, Clarke and Fielding (1999).
[vi] The ICVS has also gathered data on cities in eastern Europe and in developing countries.
[vii] The common crime I do not study in this paper is car vandalism.
[viii] Despite a large fall in the homicide rate in the 1990s, in 1997 the American homicide rate was more than twice that of the next traditional OECD country, Finland, and more than four times the rate of the third country, New Zealand. See the World Health Organisation statistics at www3.who.int/whosis.
[ix] For results from the National Crime Victimization Survey, see the Department of Justice web site www.ojp.usdoj.gov/bjs.
[x] Japan does not contribute to the identification due to the necessity of including a dummy for no information on city size, which is essentially a dummy for Japan in 1988.
[xi] Dugan (1999) presents evidence that victims move in response to a crime.
[xii] Another influence on lagged teen birth could be lagged GDP: a good economy could increase the opportunity cost of having a child (Centers for Disease Control, 200).
[xiii] Using the smaller sample without the United States in 1992, I include individual dummies for ownership of a car or bicycle in the assault regression (these results are not reported). Ownership of a car reduces assault prevalence by 0.7 percentage points, while ownership of a bicycle increases it by 0.4 percentage points. I did not include ownership of a motorcycle in case this might indicate membership in a biker gang. The inclusion of the dummies did not affect the country trend or levels.
[xiv] I have also experimented for all crimes with using unemployment rates, or male youth unemployment rates, but standardized values cannot be obtained for all countries in the sample, and unemployment is a worse predictor of crime than GDP. I therefore do not report results using unemployment.
[xv] In the criminology literature it has been observed that type of residence explains the cross-section cross-country variation in burglary. In unreported regressions I find that type of residence dummies are insignificant when the other individual controls are included.
[xvi] It is slightly disturbing that the closing of the ownership gap comes partly from a fall in the percentage of Americans reporting that they have a car.

Table 1: Evolution of Crime Prevalence Over Time

Country	Larceny		Burglary		Assault		Known Assailant	
	1988	1999	1988	1999	1988	1999	1988	1999
United States	0.151 (0.008)	0.099 (0.010)	0.076 (0.006)	0.036 (0.006)	0.051 (0.005)	0.034 (0.006)	0.029 (0.004)	0.023 (0.005)
Others surveyed both 1989, 2000	0.102 (0.003)	0.117 (0.002)	0.038 (0.002)	0.036 (0.001)	0.025 (0.001)	0.041 (0.001)	0.010 (0.001)	0.021 (0.001)
US rank	1	9	1	5	1	8	1	5
All other countries	0.106 (0.002)	0.118 (0.002)	0.034 (0.001)	0.034 (0.001)	0.027 (0.001)	0.038 (0.001)	0.010 (0.001)	0.018 (0.001)
US rank	2	11	1	5	1	9	1	5

Notes: Proportion of respondents victimized in previous calendar year. "Known Assailant" refers to the prevalence of assault where the assailant is known to the victim. Standard errors are in parentheses. The ten countries surveyed in both 1989 and 2000 are England and Wales, Netherlands, Switzerland, Belgium, France, Finland, United States, Canada, Australia, Japan. In 1989 Norway, Spain and West Germany were surveyed in addition to these ten countries. In 2000 Portugal, Denmark and Sweden were surveyed in addition to these ten.

Table 2: Comparison of ICVS and NCVS Crime Rates for the United States

	Larceny		Burglary		Assault	
	1988	1999	1988	1999	1988	1999
ICVS	0.244	0.161	0.108	0.067	0.096	0.070
NCVS	0.304	0.164	0.074	0.034	0.036	0.027

Notes: Crimes per person. For the National Crime Victimization Survey larceny is the sum of theft and motor vehicle theft; assault is the sum of aggravated and simple assault.

Table 3: Means of Individual Variables

Variable	All countries	United States	All countries	United States
Sex (female=1)	0.54	0.58	0.54	0.58
Working?	0.57	0.61	0.57	0.61
Working*sex	0.26	0.31	0.26	0.31
Top 25% income	0.22	0.23	0.21	0.21
Second 25%	0.25	0.27	0.25	0.27
Third 25%	0.25	0.21	0.25	0.22
Bottom 25%	0.17	0.17	0.17	0.18
Income missing	0.12	0.13	0.12	0.12
Age 16-19	0.04	0.04	0.04	0.05
Age 20-24	0.07	0.07	0.07	0.06
Age 25-29	0.10	0.10	0.10	0.10
Age 30-34	0.11	0.12	0.11	0.12
Age 35-39	0.11	0.12	0.11	0.12
Age 40-44	0.10	0.11	0.10	0.10
Age 45-49	0.09	0.08	0.09	0.09
Age 50-54	0.08	0.07	0.08	0.08
Age 55-59	0.07	0.06	0.07	0.06
Age 60-64	0.07	0.06	0.07	0.06
Age 65-70	0.06	0.05	0.06	0.06
Age over 70	0.11	0.11	0.11	0.12
City < 10,000	0.32	0.25	0.32	0.26
City 10-50,000	0.27	0.40	0.26	0.39
City 50-100,000	0.08	0.10	0.08	0.11
City 100-500,000	0.14	0.10	0.14	0.10
City 500-1000,000	0.05	0.04	0.05	0.04
City > 1 million	0.08	0.06	0.08	0.05
City size missing	0.06	0.04	0.06	0.06
1989	0.28	0.37	0.29	0.51
1992	0.22	0.28	0.20	0
1996	0.18	0.18	0.18	0.25
2000	0.32	0.18	0.32	0.24
Own car?	--	--	0.82	0.92
Own bike?	--	--	0.70	0.61
Own motorcycle?	--	--	0.15	0.13
Observations	84233	5312	82650	3834

Note: City size is missing for Japan in 1989.

Table 4: Means of Country-Level Variables

	United States		Other countries surveyed both 1989, 2000		All other countries	
	1988	1999	1988	1999	1988	1999
% Age 15-19	0.092	0.089	0.091 (0.009)	0.077 (0.007)	0.092 (0.011)	0.076 (0.007)
% Age 20-24	0.103	0.084	0.098 (0.007)	0.078 (0.007)	0.098 (0.006)	0.079 (0.008)
% Age 25-29	0.114	0.087	0.100 (0.010)	0.086 (0.007)	0.099 (0.009)	0.087 (0.007)
% Age 60 or over	0.219	0.208	0.221 (0.022)	0.245 (0.024)	0.227 (0.023)	0.248 (0.023)
% Age 20-24 born to teen mother	0.164	0.173	0.073 (0.033)	0.065 (0.032)	0.069 (0.033)	0.067 (0.030)
Log GDP per capita	10.14	10.36	9.90 (0.12)	10.08 (0.08)	9.86 (0.15)	10.04 (0.14)
Observations	1	1	9	9	12	12

Notes: Standard deviations in parentheses. The ten countries surveyed in both 1989 and 2000 are England and Wales, Netherlands, Switzerland, Belgium, France, Finland, United States, Canada, Australia, Japan. In 1989 Norway, Spain and West Germany were surveyed in addition to these ten countries. In 2000 Portugal, Denmark and Sweden were surveyed in addition to these ten.

Table 5: Individual-level Determinants of Victim Status

	Larceny	Burglary	Assault	Known Assailant
Sex (female=1)	-0.010 (-2.6)	-0.003 (-1.4)	-0.011 (-6.3)	-0.004 (-3.6)
Working?	-0.005 (-1.2)	-0.003 (-1.3)	-0.002 (-1.1)	-0.003 (-2.9)
Working*sex	0.020 (4.1)	0.005 (1.9)	0.010 (4.2)	0.008 (4.8)
Second income quartile	-0.015 (-5.1)	-0.001 (-0.5)	-0.001 (-1.0)	-0.000 (-0.1)
Third income quartile	-0.022 (-7.0)	-0.002 (-1.0)	0.003 (2.1)	0.003 (3.1)
Bottom income quartile	-0.089 (-8.1)	0.005 (2.4)	0.011 (5.4)	0.010 (7.0)
Income missing	-0.033 (-8.9)	-0.004 (-2.0)	-0.007 (-3.4)	-0.001 (-1.0)
Age 20-24	-0.021 (-3.9)	0.000 (0.1)	-0.011 (-5.1)	-0.006 (-4.5)
Age 25-29	-0.052 (-10.6)	-0.005 (-1.7)	-0.019 (-10.4)	-0.008 (-7.1)
Age 30-34	-0.066 (-14.2)	-0.007 (-2.2)	-0.019 (-10.4)	-0.007 (-6.4)
Age 35-39	-0.072 (-15.8)	-0.007 (-2.3)	-0.022 (-12.2)	-0.007 (-6.3)
Age 40-44	-0.068 (-14.5)	-0.007 (-2.3)	-0.022 (-12.1)	-0.009 (-7.6)
Age 45-49	-0.064 (-13.5)	-0.007 (-2.0)	-0.024 (-13.7)	-0.010 (-9.0)
Age 50-54	-0.075 (-16.2)	-0.008 (-2.4)	-0.024 (-14.1)	-0.010 (-9.8)
Age 55-59	-0.090 (-20.4)	-0.006 (-1.9)	-0.026 (-15.3)	-0.010 (-9.1)
Age 60-64	-0.098 (-23.0)	-0.016 (-5.1)	-0.027 (-15.7)	-0.012 (-11.3)
Age 65-70	-0.105 (-25.6)	-0.015 (-4.7)	-0.029 (-16.7)	-0.012 (-11.8)
Age over 70	-0.120 (-30.9)	-0.021 (-7.8)	-0.033 (-20.9)	-0.015 (-15.0)
City < 10,000	-0.057 (-14.2)	-0.021 (-10.5)	-0.011 (-5.5)	-0.001 (-0.7)
City 10-50,000	-0.030 (-7.2)	-0.013 (-6.1)	-0.007 (-3.4)	0.000 (0.1)
City 50-100,000	-0.013 (-2.6)	-0.012 (-4.9)	-0.004 (-1.7)	0.001 (0.4)
City 100-500,000	-0.006 (-1.3)	-0.008 (-3.4)	-0.003 (-1.2)	-0.002 (-1.1)
City 500-1000,000	0.007 (1.3)	0.002 (0.8)	0.001 (0.3)	-0.002 (-1.0)
Pseudo R squared	0.06	0.04	0.07	0.07
Observations	84233			82650

Notes: Marginal effects are reported from probit regressions. t-statistics are in parentheses. All regressions also include a dummy for missing city size, year dummies, country dummies, and a trend for non-US countries. The omitted age is 16-19; the omitted city size is over one million inhabitants; the omitted quartile is the highest quartile. "Known Assailant" refers to assaults by an assailant known to the victim.

Table 6: Determinants of Assault (all assailant types, including threats)

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Probit	Probit	Probit	Probit	Linear prob
% Age 15-19	--	--	0.226	0.347	0.236	0.398
			(0.273)	(0.273)	(0.327)	(0.395)
% Age 20-24	--	--	-0.192	-0.104	-0.041	-0.067
			(0.227)	(0.230)	(0.252)	(0.314)
% Age 25-29			**0.547**	**0.597**	**0.589**	**0.821**
			(0.146)	**(0.186)**	**(0.187)**	**(0.237)**
% Age 60 or over			**-0.331**	**-0.381**	**-0.399**	**-0.635**
			(0.146)	**(0.147)**	**(0.150)**	**(0.146)**
% Age 20-24 born to teen	--	--	--	**0.344**	**0.345**	**0.397**
				(0.123)	**(0.123)**	**(0.146)**
GDP per capita (log)	--	--	--	--	-0.019	-0.007
					(0.031)	(0.035)
Post 1988 non-US trend	**0.0026**	**0.0019**	**0.0022**	**0.0031**	**0.0030**	**0.0042**
	(0.0006)	**(0.0005)**	**(0.0007)**	**(0.0007)**	**(0.0008)**	**(0.0009)**
England-Wales	**-0.013**	**-0.008**	0.009	**0.050**	0.036	0.043
Netherlands	**-0.016**	**-0.011**	**-0.010**	0.042	0.032	0.028
West Germany	**-0.013**	**-0.013**	0.006	**0.084**	**0.067**	0.056
Switzerland	**-0.026**	**-0.021**	-0.012	0.048	0.044	0.040
Belgium	**-0.024**	**-0.019**	-0.007	0.036	0.029	0.035
France	**-0.016**	**-0.013**	-0.002	**0.052**	0.041	0.039
Finland	**-0.016**	**-0.014**	-0.004	**0.033**	0.024	0.028
Spain	**-0.014**	**-0.014**	-0.007	**0.071**	0.046	0.043
Norway	**-0.018**	**-0.012**	0.009	**0.058**	**0.049**	0.047
Sweden	**-0.018**	**-0.014**	0.009	**0.078**	**0.065**	0.058
Italy	**-0.030**	**-0.026**	**-0.022**	-0.009	-0.012	0.010
Austria	**-0.027**	**-0.022**	**-0.020**	**-0.015**	**-0.017**	**-0.022**
Portugal	**-0.031**	**-0.026**	**-0.025**	**-0.021**	**-0.024**	-0.030
Denmark	**-0.023**	**-0.019**	**-0.012**	0.026	0.019	0.022
Canada	**-0.011**	**-0.011**	**-0.014**	-0.000	-0.003	-0.007
Australia	-0.006	**-0.007**	**-0.012**	0.003	-0.000	-0.001
New Zealand	-0.008	-0.004	-0.009	-0.002	-0.009	-0.010
Japan	**-0.034**	**-0.029**	**-0.027**	-0.003	-0.007	0.025
Individual covs	no	yes	yes	yes	yes	yes
Average of country coeffs	**-0.019**	**-0.016**	**-0.008**	0.030	0.021	0.022
	[t=-9.6]	**[t=-8.7]**	**[t=-3.4]**	[t=1.4]	[t=0.7]	[t=1.3]
R-squared	0.02	0.07	0.07	0.07	0.07	0.02

Notes: Standard errors are in parentheses. Marginal effects are reported for the probits. 84233 observations. The individual controls are those of Table 5. All regressions also include year dummies. The omitted country is the United States. In all specifications country dummies are jointly significant.

Table 7: Determinants of Assault by Assailant Type – Smaller Sample

	(1)	(2)	(3)	(4)	(5)	(6)
	Known Assailant			Unknown Assailant		
% Age 15-19	--	--	0.387 (0.205)	--	--	-0.158 (0.230)
% Age 20-24	--	--	-0.189 (0.157)	--	--	0.181 (0.181)
% Age 25-29	--	--	**0.418** **(0.113)**	--	--	0.195 (0.137)
% Age over 60	--	--	**-0.287** **(0.094)**	--	--	-0.039 (0.113)
% Age 20-24 born to teen	--	--	**0.243** **(0.079)**	--	--	0.092 (0.086)
GDP per capita (log)	--	--	0.008 (0.020)	--	--	-0.024 (0.021)
Post 1988 non-US trend	**0.0015** **(0.0004)**	**0.0011** **(0.0003)**	**0.0021** **(0.0005)**	**0.0012** **(0.0004)**	0.0008 (0.0004)	0.0006 (0.0006)
England-Wales	**-0.010**	**-0.007**	**0.052**	-0.003	0.000	0.001
Netherlands	**-0.011**	**-0.008**	0.045	-0.004	-0.002	0.004
West Germany	**-0.010**	**-0.008**	**0.125**	-0.002	-0.002	0.002
Switzerland	**-0.014**	**-0.011**	**0.065**	**-0.011**	**-0.008**	0.004
Belgium	**-0.013**	**-0.010**	**0.048**	**-0.010**	**-0.006**	-0.001
France	**-0.011**	**-0.009**	**0.049**	-0.003	-0.000	0.007
Finland	**-0.010**	**-0.008**	**0.037**	-0.005	-0.004	0.001
Spain	**-0.010**	**-0.008**	**0.101**	-0.003	-0.004	-0.000
Norway	**-0.009**	**-0.006**	**0.082**	**-0.009**	-0.005	0.002
Sweden	**-0.011**	**-0.009**	**0.103**	-0.005	-0.003	0.005
Italy	**-0.015**	**-0.012**	0.002	**-0.014**	**-0.012**	-0.010
Austria	**-0.013**	**-0.010**	-0.005	**-0.012**	**-0.009**	**-0.010**
Portugal	**-0.014**	**-0.011**	-0.005	**-0.016**	**-0.012**	**-0.014**
Denmark	**-0.013**	**-0.010**	0.031	**-0.008**	-0.005	-0.000
Canada	**-0.006**	**-0.005**	0.003	**-0.007**	**-0.006**	-0.004
Australia	**-0.006**	**-0.005**	0.003	-0.000	-0.002	-0.001
New Zealand	**-0.007**	**-0.005**	-0.002	-0.001	0.001	-0.004
Japan	**-0.016**	**-0.012**	0.029	**-0.018**	**-0.015**	-0.012
Individual covs	no	yes	yes	no	yes	yes
Ownership var	no	no	no	no	no	no
Average of country coeffs	**-0.011** **[t=-8.9]**	**-0.009** **[t=-8.2]**	0.042 [t=1.7]	**-0.007** **[t=-4.1]**	**-0.005** **[t=-3.4]**	-0.002 [t=-0.2]
R-squared	0.03	0.07	0.07	0.02	0.06	0.06

Notes: Standard errors are in parentheses. 82650 observations. Marginal effects for probits. The individual controls are those of Table 5. All regressions also include year dummies. The omitted country is the United States. In all specifications country dummies are jointly significant.

Table 8: Determinants of Burglary

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Probit	Probit	Probit	Probit	Linear prob
% Age 15-19	--	--	0.604	0.556	0.098	0.115
			(0.374)	(0.374)	(0.440)	(0.411)
% Age 20-24	--	--	-0.468	-0.444	-0.249	-0.172
			(0.282)	(0.284)	(0.302)	(0.328)
% Age 25-29			**0.664**	**0.661**	**0.646**	**0.659**
			(0.224)	**(0.224)**	**(0.224)**	**(0.247)**
% Age 60 or over			**0.271**	0.242	0.141	-0.048
			(0.138)	(0.142)	(0.151)	(0.143)
% Age 20-24 born to teen	--	--	--	0.144	0.177	0.220
				(0.155)	(0.156)	(0.152)
GDP per capita (log)	--	--	--	--	-0.069	-0.056
					(0.035)	(0.037)
Post 1988 non-US trend	**0.0025**	**0.0021**	0.0012	**0.0015**	**0.0011**	**0.0027**
	(0.0006)	**(0.0006)**	(0.0007)	**(0.0008)**	**(0.0008)**	**(0.0009)**
England-Wales	**-0.014**	**-0.011**	-0.011	-0.002	-0.019	-0.021
Netherlands	**-0.017**	**-0.015**	**-0.009**	0.008	-0.008	-0.005
West Germany	**-0.025**	**-0.025**	**-0.018**	-0.008	-0.021	-0.037
Switzerland	**-0.026**	**-0.023**	**-0.018**	-0.005	-0.008	-0.010
Belgium	**-0.020**	**-0.016**	**-0.015**	-0.005	-0.014	-0.016
France	**-0.021**	**-0.018**	**-0.017**	-0.007	-0.017	-0.019
Finland	**-0.036**	**-0.034**	**-0.032**	**-0.028**	**-0.034**	**-0.052**
Spain	**-0.020**	**-0.021**	**-0.022**	-0.010	-0.026	-0.030
Norway	**-0.032**	**-0.030**	**-0.030**	**-0.028**	**-0.030**	**-0.048**
Sweden	**-0.028**	**-0.026**	**-0.025**	-0.019	**-0.025**	-0.035
Italy	**-0.020**	**-0.019**	**-0.019**	-0.011	-0.019	-0.028
Austria	**-0.032**	**-0.030**	**-0.030**	**-0.029**	**-0.032**	**-0.067**
Portugal	**-0.026**	**-0.022**	**-0.022**	**-0.019**	**-0.031**	**-0.064**
Denmark	**-0.021**	**-0.019**	**-0.014**	-0.003	-0.014	-0.019
Canada	**-0.013**	**-0.014**	-0.008	-0.001	-0.009	-0.013
Australia	-0.003	**-0.008**	-0.005	0.004	-0.007	-0.001
New Zealand	-0.003	-0.000	0.001	0.008	-0.016	-0.011
Japan	**-0.032**	**-0.030**	-0.027	-0.018	-0.023	-0.025
Individual covs	no	yes	yes	yes	yes	yes
Average of country coeffs	**-0.022**	**-0.020**	**-0.018**	-0.010	-0.020	-0.028
	[t=-11.0]	**[t=-10.2]**	**[t=-6.1]**	[t=-1.0]	[t=-1.9]	[t=-1.6]
R-squared	0.03	0.04	0.04	0.04	0.04	0.01

Notes: Standard errors are in parentheses. Marginal effects are reported for the probits. 84233 observations. The individual controls are those of Table 5. All regressions also include year dummies. The omitted country is the United States. In all specifications country dummies are jointly significant.

Table 9: Determinants of Larceny

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Probit	Probit	Probit	Probit	Linear prob
% Age 15-19	--	--	0.416	-0.416	-0.469	-0.711
			(0.594)	(0.597)	(0.694)	(0.598)
% Age 20-24	--	--	0.738	0.738	**1.239**	**1.460**
			(0.488)	(0.490)	**(0.530)**	**(0.556)**
% Age 25-29	--	--	**1.271**	**1.271**	**1.188**	**1.156**
			(0.396)	**(0.398)**	**(0.400)**	**(0.420)**
% Age over 60	--	--	**0.478**	**0.478**	0.268	-0.127
			(0.223)	**(0.227)**	(0.243)	(0.243)
% Age 20-24 born to teen	--	--	--	0.000	0.041	0.112
				(0.256)	(0.257)	(0.258)
GDP per capita (log)	--	--	--	--	**-0.151**	**-0.151**
					(0.060)	**(0.062)**
Post 1988 non-US trend	**0.0063**	**0.0045**	0.0021	0.0021	0.0013	0.0023
	(0.0012)	**(0.0011)**	(0.0013)	(0.0015)	(0.0015)	(0.0015)
England-Wales	**-0.029**	**-0.013**	-0.007	-0.007	-0.049	-0.041
Netherlands	-0.011	0.000	0.014	0.014	-0.023	-0.018
West Germany	**-0.035**	**-0.035**	-0.024	-0.024	-0.058	-0.062
Switzerland	**-0.051**	**-0.038**	-0.009	-0.009	-0.018	-0.005
Belgium	**-0.061**	**-0.045**	**-0.036**	-0.036	**-0.055**	-0.048
France	**-0.034**	**-0.020**	-0.011	-0.011	-0.041	-0.033
Finland	**-0.061**	**-0.056**	**-0.030**	-0.030	**-0.062**	**-0.067**
Spain	0.011	0.009	0.012	0.012	-0.052	-0.045
Norway	**-0.063**	**-0.048**	**-0.043**	-0.043	**-0.058**	-0.042
Sweden	**-0.016**	-0.004	0.011	0.011	-0.022	0.005
Italy	**-0.027**	**-0.017**	-0.012	-0.012	-0.038	-0.027
Austria	**-0.081**	**-0.067**	**-0.065**	**-0.065**	**-0.082**	**-0.117**
Portugal	**-0.076**	**-0.053**	**-0.067**	**-0.067**	**-0.100**	**-0.168**
Denmark	**-0.032**	**-0.018**	-0.001	-0.001	-0.029	-0.022
Canada	**-0.025**	**-0.025**	-0.010	-0.010	-0.030	**-0.039**
Australia	**-0.023**	**-0.032**	**-0.025**	-0.025	**-0.048**	**-0.061**
New Zealand	**-0.030**	-0.017	-0.013	-0.013	**-0.060**	**-0.080**
Japan	**-0.066**	**-0.047**	**-0.032**	-0.032	-0.051	-0.041
Individual covs	no	yes	yes	yes	yes	yes
Average of country coeffs	**-0.039**	**-0.029**	**-0.019**	-0.019	**-0.049**	-0.051
	[t=-7.4]	**[t=-5.5]**	**[t=-2.7]**	[t=-0.9]	**[t=-2.2]**	[t=-1.7]
R-squared	0.01	0.06	0.06	0.06	0.06	0.04

Notes: Standard errors are in parentheses. Marginal effects are reported for the probits. 84233 observations. The individual controls are those of Table 5. All regressions also include year dummies. The omitted country is the United States. In all specifications country dummies are jointly significant.

Table 10: Determinants of Larceny – Smaller Sample

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Probit	Probit	Probit		
% Age 15-19	--	--	--	-0.578 (0.687)		
% Age 20-24	--	--	--	**1.111** **(0.527)**		
% Age 25-29	--	--	--	**1.106** **(0.397)**		
% Age over 60	--	--	--	0.203 (0.241)		
% Age 20-24 born to teen	--	--	--	-0.114 (0.256)		
GDP per capita (log)	--	--	--	**-0.151** **(0.060)**		
Post 1988 non-US trend	**0.0067** **(0.0012)**	**0.0053** **(0.0012)**	**0.0041** **(0.0011)**	0.0004 (0.0015)		
England-Wales	**-0.035**	**-0.017**	-0.008	**-0.053**		
Netherlands	**-0.018**	**-0.021**	-0.008	-0.044		
West Germany	**-0.039**	**-0.041**	**-0.040**	**-0.073**		
Switzerland	**-0.056**	**-0.047**	**-0.037**	-0.037		
Belgium	**-0.066**	**-0.060**	**-0.045**	**-0.065**		
France	**-0.039**	**-0.029**	**-0.018**	-0.051		
Finland	**-0.065**	**-0.067**	**-0.061**	**-0.074**		
Spain	0.006	**0.036**	**0.020**	-0.058		
Norway	**-0.066**	**-0.066**	**-0.051**	**-0.067**		
Sweden	**-0.022**	**-0.024**	**-0.011**	-0.042		
Italy	**-0.033**	**-0.027**	**-0.022**	**-0.051**		
Austria	**-0.084**	**-0.080**	**-0.068**	**-0.085**		
Portugal	**-0.079**	**-0.062**	**-0.046**	**-0.098**		
Denmark	**-0.037**	**-0.035**	**-0.020**	-0.044		
Canada	**-0.031**	**-0.026**	**-0.028**	**-0.038**		
Australia	**-0.028**	**-0.018**	**-0.033**	**-0.053**		
New Zealand	**-0.036**	**-0.029**	**-0.020**	**-0.062**		
Japan	**-0.069**	**-0.067**	**-0.052**	-0.070		
Individual covs	no	no	yes	yes		
Ownership var	no	yes	yes	yes		
Average of country coeffs	**-0.044** **[t=-7.3]**	**-0.038** **[t=-6.3]**	**-0.030** **[t=-5.1]**	**-0.059** **[t=-2.7]**		
R-squared	0.01	0.03	0.06	0.06		

Notes: Standard errors are in parentheses. Marginal effects are reported for the probits. 82650 observations. The individual controls are those of Table 5. All regressions also include year dummies. The omitted country is the United States. In all specifications country dummies are jointly significant.

Appendix: Means of Crime Prevalence, Pooled Years

Country (Years surveyed)	Sample size	Larceny		Burglary		Robbery		Assault	
England,Wales (1989,1992,1996,2000)	7934	0.137 (0.004)	9	0.051 (0.002)	5	0.009 (0.001)	6	0.045 (0.002)	5
Netherlands (1989,1992,1996,2000)	7705	0.160 (0.004)	2	0.045 (0.002)	6	0.007 (0.001)	11	0.038 (0.002)	7
West Germany (1989)	4961	0.106 (0.004)	13	0.026 (0.002)	12	0.008 (0.001)	9	0.032 (0.002)	10
Switzerland (1989,1996,2000)	6111	0.106 (0.004)	12	0.027 (0.002)	13	0.006 (0.001)	12	0.025 (0.002)	13
Belgium (1989,1992,2000)	5810	0.091 (0.004)	15	0.038 (0.003)	7	0.009 (0.001)	7	0.024 (0.002)	14
France (1989,1996,2000)	3325	0.125 (0.006)	11	0.035 (0.003)	9	0.008 (0.002)	10	0.037 (0.003)	9
Finland (1989,1992,1996,2000)	7997	0.102 (0.003)	14	0.012 (0.001)	18	0.006 (0.001)	13	0.042 (0.002)	6
Spain – Catalonia (1989)	1718	0.158 (0.009)	3	0.034 (0.004)	11	0.024 (0.004)	1	0.030 (0.004)	12
Norway (1989)	930	0.073 (0.009)	18	0.009 (0.003)	19	0.004 (0.002)	17	0.024 (0.005)	15
Sweden (1992,1996,2000)	4671	0.161 (0.005)	1	0.023 (0.002)	15	0.005 (0.001)	15	0.038 (0.003)	8
Italy (1992)	2014	0.150 (0.008)	4	0.038 (0.004)	8	0.013 (0.003)	3	0.007 (0.002)	18
Austria (1996)	1503	0.078 (0.007)	17	0.013 (0.003)	17	0.001 (0.001)	18	0.018 (0.003)	16
Portugal (2000)	1984	0.073 (0.006)	19	0.024 (0.003)	14	0.011 (0.002)	4	0.009 (0.002)	17
Denmark (2000)	2971	0.130 (0.006)	10	0.035 (0.003)	10	0.004 (0.001)	16	0.030 (0.003)	11
United States (1989,1992,1996,2000)	5312	0.140 (0.005)	7	0.061 (0.003)	3	0.014 (0.002)	2	0.047 (0.003)	4
Canada (1989,1992,1996,2000)	7771	0.143 (0.004)	6	0.053 (0.003)	4	0.010 (0.001)	5	0.047 (0.002)	3
Australia (1989,1992,2000)	5847	0.139 (0.005)	8	0.070 (0.003)	2	0.008 (0.001)	8	0.054 (0.003)	1
New Zealand (1992)	2023	0.145 (0.008)	5	0.073 (0.006)	1	0.005 (0.002)	14	0.047 (0.005)	2
Japan (1989,2000)	3646	0.079 (0.004)	16	0.013 (0.002)	16	0	19	0.004 (0.001)	19
Total	84233	0.125 (0.001)	--	0.0384 (0.0007)	--	0.0079 (0.0003)	--	0.0355 (0.0006)	--

Notes: Proportion of respondents victimized in previous calendar year. Standard errors are in parentheses. The column next to each crime indicates the country's rank.