

Federal Reserve Bank of Cleveland

# Does School Quality Affect Juvenile Crime?

by Amy Pandjiris

This essay investigates whether students who attend higher-quality schools commit fewer crimes. If so, improving school quality might be worth considering as an approach to reducing juvenile crime. The author finds some evidence that higher-quality schools are associated with lower probabilities of committing some types of crime.

According to a 1999 Gallup poll, Americans ranked crime as the most important problem facing the nation. In fact, in nearly every public opinion poll of the late 1990s, crime was ranked ahead of the environment, unemployment, and the deficit as the main problem facing the country today.

Certainly, the monetary costs of crime are significant. Using data from the National Crime Survey, Richard Freeman estimated that for all reported crimes in 1992, the average cost to victims was \$532 per crime, totaling \$17.6 billion, or 0.3 percent of U.S. GDP—enough to run 1,200 New York City public schools, employ its 80,000 teachers, and educate over one million schoolchildren for a year and a half (Freeman 1996). Crime also forces societies to spend resources on crime prevention and control; money that could be invested in productive new businesses must be allocated instead for security alarms, prisons, and police officers. In 1995, the United States spent \$48.6 billion on police protection, \$39.8 billion on corrections, and \$24.5 billion on court and legal activities (U.S. Department of Justice, Bureau of Justice Statistics). Crime also results in “lost” output to the economy as a whole because it entails the suboptimal use of potential resources: When criminals commit property crimes, instead of using resources to add

to wealth, they use resources only to redistribute it. Yet despite the high costs of crime and people’s growing concern over it, there is substantial uncertainty about how crime can be prevented.

A substantial amount of research has focused on determining why juveniles commit crimes. Roughly 17 percent of those arrested are under the age of 18 (*Sourcebook of Criminal Justice Statistics Online* 2000). While the overall crime rate has been falling over the past two decades, juvenile crime has risen to an unprecedented level. Total property crimes per 100 people, for example, fell 40 percent from 1980 to 2000, but juveniles were still committing roughly one-fourth of them (see figure 1). From 1985 to 1992, the rate at which white males aged 14 through 17 committed murder increased nearly 50 percent, and for black males in the same age range, the rate increased 300 percent (Blumstein 1995). From 1994 to 1995, young people committed 7 million assaults, 3.6 million drug sales, 1.7 million robberies, 2 million burglaries, and 2 million thefts (Mocan and Rees 1999).

Not only does this level of juvenile crime impose large costs on society, it presages extensive future costs as well. Juveniles engaged in crime are not learning the skills that will enable them to generate wealth one day; rather, they are honing skills that enable them to redistribute wealth others have created. Illegal behavior as a juvenile may also increase the likelihood of committing crimes as an adult, and sociologists and psychologists agree that the most serious adult offenders are boys who began their criminal careers at a very early age. An individual’s employment options may become more limited after committing a crime; studies have shown that past criminal involvement adversely impacts

## Essays in Economics

The Federal Reserve Bank of Cleveland sponsored an undergraduate essay competition, Essays in Economics, in 2001. Amy Pandjiris, then a senior at Oberlin College in Ohio, wrote the winning essay, which we reprint here.

**Essays in Economics** was created to promote economics education and to encourage students to apply economic reasoning to current policy issues. The competition was open to all juniors and seniors enrolled in Fourth District colleges or universities.

future employment opportunities (Bound and Freeman 1999; Freeman and Rodgers 1999). To cover the future costs of one youth’s life of crime, a 1999 report by the Office of Juvenile Justice and Delinquency Prevention claims society would need to invest \$1.7 million to \$2.3 million today.

The costs of juvenile crime combined with the adverse effects on young peoples’ futures clearly justify further research into effective strategies for reducing crime committed by juveniles. This *Commentary* explores one possible strategy: improving school quality.

### ■ Why Should School Quality Affect Juvenile Crime?

Gary Becker was one of the first scientists to describe the decision to participate in illegal activities as an economic one. He suggested that illegal behavior was “the result of a utility-optimizing individual’s reaction to incentives.” His now highly influential theory of criminal behavior asserts that people choose to

engage in crime after comparing the costs and benefits of crime with those of legal employment. If the net benefits of criminal activity outweigh those of legal opportunities, choosing to join the illegal sector is a rational decision. Individuals will assess benefits and costs differently, depending on their knowledge, personal preferences, abilities, skills, and so on. For juveniles, who will not realize their highest earning potential until later in life, the current legal wage is not likely to be a critical factor in their decisions to commit crime, but the present discounted value of future wages and their perceptions of the costs and benefits of committing the crime probably are relevant.

Becker's theory suggests some ways to reduce crime. First, we could lower the net benefits of criminal activity. For example, society could make it more costly to commit a crime by allocating more money to law enforcement, thereby increasing the probability of getting arrested. Alternatively, society could increase the benefit of participating in the legal sector. Deterrence might take either form as long as it leads to a decrease in the probability of committing a crime.

Becker's theory can be used to explore the relationship between school quality and juvenile crime. School quality might improve students' future opportunities in the legal sector by allowing them to develop better human capital. Better opportunities translate into higher future legal wages, which would lower the net benefits of crime for a young person today. It seems likely that school quality could also affect people's perceptions of the costs and benefits of committing a crime. For example, contact with role models and exposure to developmental opportunities in the legal sector might enable students to gain confidence in their future role in the legal sector.

A higher-quality school may also provide curricular or extracurricular activities that make young people more likely to attend school regularly. If young people are at school, they may have fewer opportunities to commit crime. In addition, curricular or extracurricular opportunities that adolescents value and enjoy may cause them to re-evaluate the opportunity cost of committing crime, meaning the more students want to attend their school, the higher a value they will place on losing the opportunity. Realizing they may not be

able to return to school if caught committing a crime might decrease their propensity to commit one, if the school has value for them.

Finally, a higher-quality school may better socialize students to the norms of society. Both peer influences and a validating instructional environment may provide them greater self-esteem and a sense of purpose not tied to crime. Attending the higher-quality school might actually change a young person's tastes for crime, altering the perceived benefit of committing one (Ginsberg and Benjamin 1986). For example, if the school has a low student-teacher ratio, the classroom teacher may be able to provide students with more individualized attention. If they fall behind or feel discouraged, the higher-quality school might be better equipped to intervene. This may prevent students from thinking they are "bad at school" and considering alternatives in the illegal sector.

## ■ Does School Quality Affect Juvenile Crime?

If school quality has anything to do with juvenile crime, we ought to see a correlation between school quality and the crime rate. The results of a study I conducted suggest there is a relationship between the two—for some types of crime.

I investigated the effects of school quality on four types of illegal behaviors: destruction of property, assault, selling drugs, and theft and other property crimes. Data on the rate at which individuals commit these crimes were obtained from the *National Longitudinal Survey of Youth 1997*, which asks respondents whether they have engaged in these illegal activities since the date of their interview the previous year. The survey follows a nationally representative sample of approximately 9,000 people, who, at the end of 1996, were between 12 and 16 years of age (my study is based on a subset of 800 of the survey participants, for which both school-quality and juvenile-crime data were available).

Determining appropriate measures of school quality is more difficult. I chose three indicators of school quality: the student-teacher ratio, the presence of an apprenticeship program, and the type of admission policy, that is, whether students are assigned to the school or whether they can elect to attend it (the latter referred to as a *school of choice*). These indicators were selected primarily

because they can be directly influenced by the actions of policymakers. Data for indicators of school quality come from the *School Survey* portion of the longitudinal youth survey, which is completed by administrators at the schools that the survey's student respondents attend.

The student-teacher ratio is a commonly heralded indicator of school quality. Whether a school offers apprenticeship programs is included because such programs create marketable, job-oriented skills, and their presence may indicate how well a school is developing a student's human capital. This change in school quality may also be relatively inexpensive to implement. The type of admission policy as an indicator of school quality was included because it allows students to choose their school and is now a popular trend in educational reform. Schools of choice include public schools that are officially designated as such, public magnet schools, other non-comprehensive public schools (ones offering a specialized curriculum), Catholic and other religious schools, and private schools with no religious affiliation. Students (or their parents) must expend extra effort and expense to enter a school of choice, so, presumably, such schools are more desirable to attend.

School quality is correlated with many other factors such as income, which makes it harder to isolate the effects of school quality on crime. I attempt to account for this by controlling for individual and family influences, neighborhood characteristics, and the effects of peers, allowing me to isolate the effect of school quality. I control for household income, the individual's race and sex, the number of times the respondent eats dinner with his or her family in an average week, the racial composition of the respondent's county, the median household income of the respondent's county, the percentage of peers who plan to attend college, whether the respondent has a sibling in a gang, and whether the respondent has witnessed a shooting before the age of 12.

The results of my study suggest that students at higher-quality schools have a lower probability of committing the less serious crime of property destruction than students at lower-quality schools. School quality did not have a significant effect on the probability of committing more serious crimes, such as assault, or more lucrative ones, such as selling drugs or theft and other property crimes.

**FIGURE 1**

NOTES: Property crimes are offenses of burglary, larceny-theft, and motor vehicle theft. Data are not included for the property crime of arson. Juvenile crime figures are for offenses reported to the police that resulted in the arrest of persons under 18 years of age.

SOURCES: U.S. Department of Justice, Federal Bureau of Investigation.

Specifically, after controlling for individual, family, neighborhood, and peer effects, students attending schools with apprenticeship programs commit approximately 43 percent fewer minor crimes than students attending schools without the programs. Students attending schools of choice commit approximately 44 percent fewer minor crimes. The student-teacher ratio showed no relationship to the probability of committing any of the types of crimes examined.

That school quality seems to affect the less serious crime of property destruction, but not more serious crimes, such as assault, can be interpreted in several ways. One interpretation is that crimes against property are fundamentally different than crimes against persons. This may extend to the kind of individual that participates in each type of crime. An individual who specializes in graffiti, for example, may be quite different from one who commits assault, and the difference may affect the way school quality influences her decision to commit a crime. If a school begins to offer an apprenticeship program, the program may be able to influence a novice who is deciding

whether to destroy property but may not influence an individual who is committing a crime against persons.

Another interpretation is that the psychic and monetary returns associated with the destruction of property may be substantially smaller than those associated with assault, selling drugs, and theft. If the returns from assault, selling drugs, and theft are higher, it follows that school quality may exert less influence on an individual's decision to commit more serious crimes. It is possible that the psychic and monetary returns from destruction of property are low enough that school quality positively influences an individual's decision to destroy property.

### Conclusion

School quality may be able to influence a young person's decision to commit low-level crimes but may not have an effect on his or her decision to participate in more serious crimes. While limited, my analysis suggests that improvements in school quality could occupy a unique and potentially powerful place in juvenile crime control policies. Unlike traditional crime-control measures, such as increasing the num-

ber of police officers, improvements in school quality may have the dual benefit of decreasing the current level of juvenile crime and improving the overall quality of the workforce in the long run. Policymakers should consider this added, long-term benefit when creating and evaluating crime-control policies.

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