

Economic Theories of Crime and Delinquency

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This brief literature review highlights three key economic frameworks that can be used to explain a persistent social problem in modern society, crime and delinquency: the rational model, the present-oriented or myopic model, and the radical political economic model. Based on a cost-benefit analysis, an individual's decision to engage in crime in the rational model is consistent in the short- and long-term. Present-oriented individuals, however, focus on the short-term benefits without particular concern for the long-term consequences of their actions. The radical political economic model focuses on the following key political and socio-economic factors that sustain crime: relative deprivation, poverty and inequality, unemployment, and class conflict. The conclusion includes a conceptual map integrating the three frameworks.

KEYWORDS *Crime and delinquency, economic theory, rational model, present-oriented model, radical political economic model*

INTRODUCTION

According to the Uniform Crime Report of 2007 published by the Federal Bureau of Investigation, the violent crime rate per 100,000 inhabitants in the United States fell by 11% in the period of 1988–1998 and 17.7% in the period of 1998–2007. The percent change in the last 5 years (2003–2007) was –1.9% (Federal Bureau of Investigation, n.d.). Though crime rates fluctuate over different periods of time, the persistent nature of crime and delinquency

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exposes the challenges in understanding and addressing this important social problem.

Crime is not limited to certain areas or to certain socioeconomic classes of society. Criminal activities take many forms, including theft, homicide, assault, fraud, embezzlement, and blackmail. So why does crime persist? Are there underlying factors that can explain criminal behavior? Can we lower the incentives for criminal behavior? Do criminals take opportunity costs of committing a crime into account? The social science field has long been interested in these questions.

This literature review focuses on the discipline of economics and its assumptions about individual decisions to commit crime. The standard assumption is that individuals who commit crimes are rational decision makers who expect to gain something from criminal activity, and this gain is greater than the expected costs associated with being caught. Most of the research in this area focuses on the effects of incentives to engage in criminal behavior and on the use of cost-benefit analysis to assess alternative policies to reduce crime (Witte & Witt, 2000). Not all crime can be categorized as rational behavior. Socioeconomic factors are also assumed to affect crime, and alternative theories to explain criminal activities are used to challenge the standard assumption of rational behavior.

The main objective of this review is to identify the key economic frameworks that are used to explain crime and delinquency. The three key frameworks include the rational model of crime, the present-oriented or myopic model of crime, and the radical political economic model of crime. The review concludes with a conceptual map that seeks to integrate the three frameworks (Figure 1).

METHODOLOGY

The literature for this review was identified through a number of different ways. Books and journal articles on economic theories of crime and delinquency were first identified through a search using the University of California, Berkeley (UCB) library systems. Keywords used in the searches included *theor* and crim**, *theor* and delin**, *econ* and theor* and crim**, *economic theories of crime*, *theories of crime and delinquency*, and *economic theories of crime and delinquency*. The results were sorted by subject, further refining the search. These keywords were also used to locate relevant literature from the EconLit database. Other search engines such as Google, Google scholar, and amazon were used to identify literature. A number of working papers were also retrieved from the Economics of Crime working group at the National Bureau of Economic Research. The references cited in all these sources provided additional information (snowball technique).

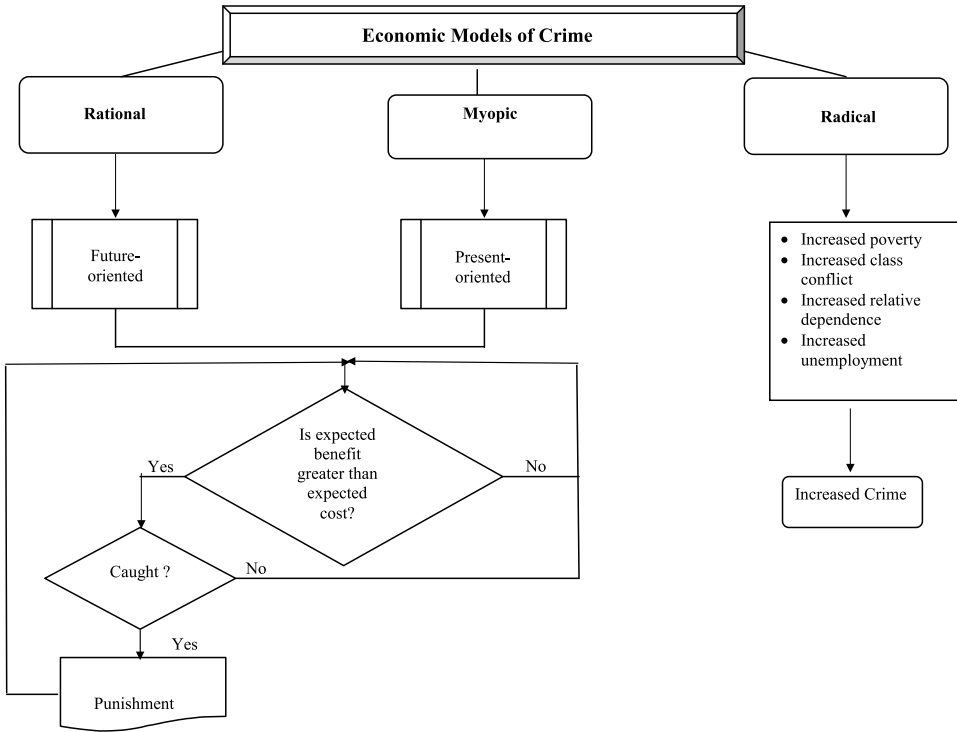


FIGURE 1 Economic models of crime.

In addition, scholars in the field were identified through a search of university department Web sites. The scholars at the department of economics at UCB were contacted and asked to recommend classic and current literature in the field. These scholars provided additional assistance with the search process.

Despite an extensive search of literature, this review cannot claim to be all-inclusive. It focuses only on research on crime in the United States, and this research concentrates primarily on optimal incentives and punishment strategies to reduce crime. The main economic theories or models are based on this research.

Economists have begun to question whether the standard assumption of rational behavior holds when considering why individuals engage in criminal activity. Can we really assume that all criminals make rational decisions to commit a crime? Individual preferences, psychic factors, and other motivations for crime may play an equally large role in explaining crime. However these factors are much harder to incorporate into economic models of crime. Hence, there is limited empirical research in this area. It will be interesting to see how the growing field of behavioral economics can help to explain crime and delinquency.

MODELS OF CRIME

The three main economic models of crime are the rational model, the present-oriented or myopic model, and the radical political economic model. Each model emphasizes different factors that influence individual decisions to commit crime and different ways of combating crime.

The Rational Model of Crime

Economics can be defined as a discipline that studies how scarce resources are allocated by the forces of supply and demand to meet different needs in society. In the same way, economists argue that crime is a result of individuals' making choices between using their scarce resources of time and effort in legitimate or in illegitimate activities. A key assumption is that when making these choices, individuals are rational and choose the best option based on the available information and resources. Individuals are perceived to be promoting their self-interest by rationally selecting options that provide them with the greatest benefits that are expected to exceed the costs associated with these options.

Theories of crime based on the rational model were proposed as early as the eighteenth century by enlightenment philosophers such as Bentham and Beccaria. Bentham made the following argument:

The profit of the crime is the force which urges man to delinquency: the pain of the punishment is the force employed to restrain him from it. If the first of these forces be the greater, the crime will be committed; if the second, the crime will not be committed. (Eide, 2000, p. 346)

The profit from crime is traditionally measured in terms of monetary benefits but can also include physical, psychic, and other benefits. The "punishment" or costs of crime include the risk of detection, apprehension, and conviction and the severity of punishment. Economists do not refute that environmental, psychological, and biological factors may affect criminal activity. Nevertheless, they argue that individuals are free to choose between different courses of options available to them. Therefore, as long as there is a rational element of choice available, individuals who decide to commit a crime will react to changes in the probability of apprehension and the severity of punishment (Dollery & Wallis, 1996).

This framework leads to a key concept, namely, the "opportunity cost" of crime. Any decision that involves a choice between two or more options has an opportunity cost. An opportunity cost can be defined as the value of the next best alternative within the context of making a decision. Put differently, an opportunity cost can be viewed as the benefits an individual could have received by taking an alternative decision or action. In essence,

the true cost of crime for a potential criminal is the opportunity cost of spending time in prison. The opportunity cost varies among individuals irrespective of the length of incarceration.

The rational framework distinguishes between static and dynamic models of crime. In a static model, individuals compare the costs and benefits of engaging in crime in a single time period. In a dynamic model, the individual considers multiple time periods. Decisions made in the past, for example, impact the decision-making process in the present. Dynamic models thus account for the element of time unlike static models.

THE STATIC MODEL OF CRIME

Becker (1968) was the first to translate the argument of Bentham into an economic theory of crime in his seminal article on crime and punishment. Becker argues that “a useful theory of criminal behavior can dispense with special theories of anomie, psychological inadequacies, or inheritance of special traits and simply extend the economist’s usual analysis of choice” (p. 170). Becker developed a static model in which the individual considers a single time period when making a decision on whether or not to commit a crime. He contends that a cost/benefit analysis can be used to inform an individual’s decision to commit a crime.

As individuals do not have perfect information, Becker assumes that rational individuals will seek to maximize the expected benefits. Individuals do so by comparing the benefit they would derive from a criminal activity with the benefit derived from engaging in legal activities. An implicit assumption is that there are no risks in terms of the returns from legitimate work. In Becker’s model, benefit is defined as a positive function of income. Thus, an individual will commit a crime only if his or her expected benefit from the offense is positive. The primary focus of the model is the deterrent effect of the criminal justice system in this decision process.

Another assumption in Becker’s model is that of stable preferences. This assumption allows one to predict how individuals respond to changes in parameters of being caught and punished; for example, whether the act of crime or deviance can be made less attractive to an individual and whether crime or deviant behavior can be averted. Becker addresses this issue by focusing on the probability and severity of punishment and its impact on the total amount of crime. Becker argues that the probability and severity of punishment can reduce the number of crimes by acting as deterrents to crime. The individual’s attitude toward risk determines which of the two deterrents would be more effective in reducing crime. For example, an individual who is risk-averse may react more strongly to changes in the probability of apprehension than to changes in the magnitude of the punishment, all other things being equal. An increase in the costs of crime reduces the expected gain from committing an offense and thus lowers the incentive to offend.

EXTENSIONS TO THE STATIC MODEL

Later economic models of crime employ the theory of supply and theory of behavior toward risk. These models are similar to portfolio models, wherein an individual allocates assets or resources among different risky and non-risky options. Ehrlich (1973) expands Becker's basic model by ascribing monetary equivalents to different psychic costs and benefits of legitimate and illegitimate activities. He also assumes that, in a given time period, a criminal faces only one of two possibilities: The individual is caught and punished, or the individual is not caught and, therefore, not punished (Pyle, 1983). Ehrlich assumes a one-period time frame in which the individual chooses how to allocate his time for each sequential period. The uncertainty in the model concerns only which of the two possibilities mentioned previously will transpire. An additional limitation is that individuals allocate a fixed amount of time to leisure. The remaining time is allocated to either legitimate or illegitimate activities. Ehrlich assumes that the benefits from illegal activities thus depend only on the time allocated to that activity. The amount of time a rational individual decides to spend in an illegal activity will again depend on the relative rewards from the activity and the costs involved in terms of the probability of apprehension and severity of punishment.

The introduction of fixed leisure time in this model implies that the time allotted to legitimate and illegitimate activities changes in equal and opposite directions. An increase in the probability of apprehension reduces the amount of time an individual spends on illegal activities except in cases wherein the individual already specializes in legal or illegal activities (Pyle, 1983). A considerable increase in the probability of apprehension is needed to reduce the time allocated to illegal activities in the case wherein the individual specializes in crime. The effect of changes in the severity of punishment again depends on the individual's attitude toward risk. A risk-averse individual will obviously spend less time on illegal activities if there is an increase in the severity of punishment. However, a definite conclusion cannot be reached in the cases where an individual prefers risk (risk lover).

Block and Heineke (1975) argue that the decision to commit an offense cannot be studied only with regard to how it affects an individual's level of monetary wealth. They argue that the psychic costs of crime and employment must be specified explicitly. Their model focuses on property crimes, so an individual has to choose between employment (legal) and theft (illegal). Such a specification has vital behavioral implications. They note that an individual's allocation of effort between labor and theft is dependent not only on their attitude towards risk but on his or her preference for honesty or crime. Block and Heineke show that individuals who are risk-averse and have a preference for honesty reduce their offending if the probability of apprehension or severity of punishment is increased. However if individuals have a preference for crime even though they are risk averse, changes in deterrents may have little impact on their behavior (Pyle, 1983).

DYNAMIC MODELS OF CRIME

Though the rational models presented earlier are set in a static framework, an individual's decision to commit a crime also has an impact on the future payoffs from choices made in the past or present. Dynamic models integrate past experience with forward-looking behavior. The former deals with how past arrests impact decisions made in the present. The latter examines how decisions made in the present affect future consequences related to employment and expected benefits.

Using the dynamic model, there is evidence that important factors can be used to predict criminal behavior. For example, juvenile records are sealed at the age of 18 years, and sanctions by juvenile courts tend to be milder than those in the adult courts. As such, one would expect higher crime rates among youth younger than age 18 (Imai & Krishna, 2004). Indeed, Levitt (1997) finds that there is a clear drop-off in the age of arrest after 18 in states wherein juvenile courts issue milder sanctions compared to adult courts than in states wherein juvenile sanctions are more severe. Individuals thus seem to change their behavior when they anticipate the possible future consequences of their actions.

Flinn (1986) includes the formation of human capital in a time-allocation model. Flinn argues that human capital is accumulated at work. As a result, if time spent on crime lowers time spent at work, the amount of human capital accumulated by an individual is reduced. This diminishment leads to lower future earnings and consequently less time in legal work. Crime and work are assumed to be substitutes in this model. Therefore, reduced time at work leads to an increased involvement in criminal activities.

Williams and Sickles (2000) extend Ehrlich's (1973) model by including social capital to measure the effect of social norms on an individual's decision to engage in crime. The authors assume that participation in crime decreases the value of an individual's stock of social capital, namely, marriage and employability. In other words, individuals with families or good jobs have more to lose if they are caught in a criminal act than individuals without these resources. The main conclusion is that criminals behave rationally when they take into consideration the consequences of current actions on future outcomes. Similarly Imai and Krishna (2004) find that the incentives to commit crime are reduced when the risks of apprehension can jeopardize future employment.

The Present-oriented or Myopic Model of Crime

Human beings are generally impatient. Most people would prefer to experience immediate rewards and postpone the associated costs. Relaxing the assumption of rational behavior allows economists to study cases wherein criminals appear to behave in a non-rational, impulsive, or myopic manner. When deliberating about the trade-offs between the present and the future,

individuals who attach greater weight to the present are said to have more “present-oriented” preferences (O’Donoghue & Rabin, 1999).

Economists use hyperbolic discounting to formally examine present-oriented behavior. Hyperbolic discounting is assumed to reveal irrational behavior because decisions made in this setting are not time-consistent. Time inconsistency refers to a situation whereby an individual’s preferences change over time, such that what is preferred at one point in time is inconsistent with what is preferred at another point in time. One common way this is revealed is when an individual displays undue concern with the immediate rather than distant future. A rational individual, conversely, compares present and future gains and shortfalls by seeking to match short-term and long-term preferences. A rational individual who does not give added weight to short-term benefits from a criminal activity will most likely be someone who displays patience.

The desire for immediate gratification may, however, lead an individual to commit a crime that has negative expected returns in the long-term (Kleiman, 2005). When the costs of crime are delayed, the immediate benefits support the offender’s impulsiveness, resulting in more crime (McAdams & Ulen, 2008). The threat of punishment does not deter present-oriented individuals because the gains from the illegal activity are closer to the present whereas the related punishment that he or she might suffer lie in the more distant future (Banfield, 1977).

Lee and McCrary (2005) use a large, individual-level, longitudinal data set of felony arrests maintained by the Florida Department of Law Enforcement to measure the deterrence effects of criminal sanctions in the period 1989 to 2002. In particular, they examine whether there is any significant drop in offense rates among juveniles once they turn 18 years, as they are treated as adult offenders and face longer sentences. Their assumption is that sufficiently patient individuals will lower their offending rates as soon as they turn 18. However, they find that criminals do not make behavioral adjustments in anticipation of this change in the severity of punishment. This finding suggests that potential offenders are very impatient, myopic, or both.

Nagin and Pogarsky (2003) use data on college students to examine under what circumstances individuals would cheat. They find that less cheating occurred when the risk of apprehension was greater but not when there were higher penalties. Furthermore, they find that the prevalence of cheating was higher among more present-oriented individuals. Similarly, Nagin and Paternoster (1994) use a student questionnaire and find that present-orientation is significantly related with the probability of committing a number of crimes.

Urban ethnographers such as Fleisher (1995) and Anderson (1999) find that crime-prone youths are overly present-oriented for any type of traditional crime deterrence to be successful. The following quote from a young prisoner in a paper by DiIulio (1996) summarizes the present-oriented concept well:

“You never think about doing thirty when you don’t expect to live to thirty” (p. 17). Nagin and Paternoster (1994) argue that individuals who are more present-oriented invest less in social bonds. As such, they are less deterred by the prospects of breaking those bonds and committing a crime. The astonishing degree to which youths commit crimes for not only profit but status, image, and even fun has yet to be fully considered by economists.

The rational economic models of crime described earlier suggest that crime can be reduced by increasing the expected costs of criminal activities. The ability to increase this cost depends largely on the extent to which potential criminals discount their future welfare. If individuals are more concerned with their present welfare rather than their future welfare, an increase in the length of incarceration may have little impact on criminal behavior (Lee & McCrary, 2005). In essence, the most effective sanctions of the rational model will do little to dissuade the present-oriented or myopic offender. Therefore effective enforcement policies for this type of offender should focus on lowering the immediate benefits or increasing the immediate costs of a criminal activity to discourage present-oriented or myopic behavior (Kleiman, 2005).

The Radical Political Economic Model of Crime

The rational and present-oriented models of crime focus primarily on the individual’s decision to allocate time between legal and illegal activities. The radical political economic models, conversely, focus on key political and socioeconomic factors that sustain crime. The key factors in this model are relative deprivation, poverty and inequality, unemployment, and class. These factors are all interrelated.

RELATIVE DEPRIVATION

The factor of relative deprivation focuses on the relative differences in income among the different classes in society. According to this view, individuals identify themselves with the group they belong to in society. The degree of deprivation is defined as the distance between the particular group’s experiences compared with that of the larger society, which is regarded as a proxy for what the group is entitled to. In neoclassical economics, individuals determine their chances of employment and income based on their level of education and a relatively open labor market. In the relative deprivation model, individuals perceive their fate to be similar to that of their peers (Nickerson, 1983). When Danziger (1976) and Danziger and Wheeler (1975) studied the relationship between the relative deprivation approach and criminal activities (burglary and robbery), they found that there is a positive relationship between income inequality and criminal activities.

Poverty and inequality. Differences in poverty rates and wealth are commonly viewed as factors influencing variations in crime rates. Proponents of the federal Great Society programs in the 1960s believed that poverty amelioration would eventually lower crime by enhancing the living conditions of the poor and thereby reduce their involvement in criminal activities (Nickerson, 1983).

To examine the link between inequality and crime, the income differences between the rich and the poor can be used when measuring crime rates in different cities (Ehrlich, 1973; Fleisher, 1976). However Nickerson (1983) questions this approach based on evidence that most crimes occur within poor communities and that the poor are often the victims themselves rather than the well-off. These crimes of opportunity may be explained by the lower costs associated with committing a crime in familiar territory.

Gordon (1973) argues that capitalism and its associated inequalities generate crime. Gordon views criminal behavior as part of the structure of capitalist societies and in the socioeconomic conflicts resulting from that structure. As a result, crime is an outcome of the poor's trying to create a better existence for themselves. The challenge here lies in clearly differentiating between Ehrlich's relative poverty formulation and Danziger's relative deprivation approach.

Unemployment. Different models examine the different relationships between unemployment and crime. Some economic models assume that unemployment either lowers the opportunity costs of crime or that it increases the need to supplement income from sources other than legal employment. Radical theories suggest that unemployment increases poverty. The resulting deprivation then lowers the costs of criminal activities and punishment. The indirect result is that conflict increases (Nickerson, 1983).

However, how do individuals form expectations about their earnings potential in the labor market? If there is a considerable gap between what the individual believes is attainable (group experience) and what is unattainable (larger society experience), an individual perceives this gap as relative deprivation. Hence the opportunity costs of crime may be reduced because the returns from regular employment are seen as minimal. In contrast, if the larger society also suffers from unemployment, the shortage of employment opportunities may still be considered equitable. Nickerson (1983), in support of this argument, notes that crime rates during the Great Depression were stable or falling.

Thornberry and Christenson (1984) use data from a longitudinal cohort study of delinquency in Philadelphia and find that unemployment significantly impacts criminal involvement. They find that crime rates, especially property crime, are higher during periods of high unemployment. Other studies (Witte & Tauchen, 1994; Levitt, 1996; Witt, Clark, & Fielding, 1999) also find a positive relationship between unemployment and crime. Interestingly, Cantor and Land (1985) find a negative relationship between unemployment

and property crime in the United States because a general slowdown in the economy increases time spent at home and, therefore, the ability to guard one's property.

One weakness in connecting employment with crime is that the two activities are assumed to be independent of each other. Some criminals (e.g., drug dealers) switch between legal and illegal work depending on available opportunities. This weakness becomes particularly challenging when disadvantaged youths are considered. Freeman (1999) finds that among youths who report committing crimes, only those close to being arrested reduce legal work. This finding is supported by evidence from ethnographic work such as Anderson's (1999), which explains how youth in inner-city Philadelphia regard the drug economy as their main source of employment.

Participants in the illegal economies engage in a number of different income-producing crimes in addition to legal work. Freeman (1995) applies an ecological model of foraging animals to crime-prone youths. Such youths are assumed to have a reservation wage for crime and a reservation wage for legal work. A reservation wage is the lowest wage rate at which an individual would be willing to accept a particular type of job. The youths choose between the two when the potential benefit from one activity exceeds the reservation wage of the other. The fact that youths can shift between crime and an unskilled job reveals that the relationship of youths to crime can expand or contract dependent upon the rewards from legal work or criminal activities (Witte & Witt, 2000). One way to understand the permeable boundary between crime and legal work is to view young criminals as actively seeking to optimize their income and take advantage of all available economic opportunities.

Class. The attempt to relate criminal activities to specific ideas of class conflict is often based on a Marxian analysis. The use of laws is assumed to systematically discriminate against the poorer classes. Taylor, Walton, and Young (1975) suggest that deviant behavior may be a reaction to the challenges of living in a conflicted society. Class bias is revealed in the attention that crimes, such as burglary or theft, receive in comparison with white collar crime, although the latter type of crimes represent a larger proportion of monetary losses than the former type (Simon & Witte, 1982). This finding supports the liberal perspective that crime is really a response to societal prejudice against the poor.

Gordon (1973) contrasts white-collar crimes typically committed by the richer classes of society with those committed by the poor. The former type of crimes tends to be more nonviolent in nature because they are crimes that must be committed in secret. The latter crimes often require direct confrontation or intimidation and sometimes the silencing of the victims to escape apprehension. Gordon quotes Robert Morgenthau (1969), who writes: Those growing up in the ghetto "will probably never have the opportunity to embezzle funds from a bank or to promote a multimillion dollar stock fraud

scheme. The criminal ways which we encourage (them) to choose will be those closest at hand—from vandalism to mugging to armed robbery” (p. 20). Nickerson (1983), however, argues that Gordon’s explanation oversimplifies criminal activities and requires a closer examination of the link between social conditions and criminal behavior.

DISCUSSION AND CONCLUSION

From a rational perspective, individuals make a choice about how best to spend their time. In making the choice, they assess the costs and benefits of spending their time in legal or illegal work. Individuals thus choose to commit a crime only if the expected benefits from that choice exceed the expected costs associated with it. The rational model thus focuses on an individual’s incentives to commit crime. This focus reflects a faith in the ability to shape individual behavior through the use of negative incentives or deterrents. An individual-oriented approach relies on the probability of apprehension and the severity of punishment as tools to keep individuals from participating in criminal activities.

One key criticism of the rational model is that the planful and thoughtful decision-making process does not fit the opportunistic, impulsive, and even rash nature of criminal activity. Present-oriented individuals generally do not make rational decisions when they focus on short-term benefits and ignore the long-term consequences of their actions. One important result is that the deterrence tools used in the rational model will not deter present-oriented offenders, all other things being equal. An effective deterrence strategy should target an individual’s short-term preferences that need to be identified across individuals with different motivations and reasons for engaging in crime.

The radical theories focus on the link between crime and socioeconomic factors (e.g., poverty and inequality, relative deprivation, unemployment, and class structure) whereby an increase in these factors leads to increased crime. However these links are quite complex, and the causal relationships are debatable. For example, does poverty lead to more crime, or does more crime lead to persistent poverty? More research is needed on how the social and economic environment affects the costs and benefits of criminal activity. A greater understanding of the role of norms and values, opportunities, and abilities in predicting crime is also needed.

Most economic research on crime and delinquency has focused on how lawbreakers can be deterred through the criminal justice system and on the relationship between legal employment and illegal activities. This relationship between work and crime may be far more intricate than many economic models have implied thus far. Determining optimal enforcement policies becomes even more problematic when individual choices are aggregated

across a wide range of individuals. The increase in juvenile crime has also revealed the inadequacies of the economic models in explaining non-rational behavior and crime. Economists also need to consider how best to include environmental and behavioral factors (e.g., peer group pressure, family and community, status) in research that seeks to explain this phenomenon.

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