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Volume Author/Editor: Rafael Di Tella, Sebastian Edwards, and Ernesto Schargrotsky, editors

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Introduction

Rafael Di Tella, Sebastian Edwards,
and Ernesto Schargrodsky

Forty years since the publication of Gary Becker's seminal paper on crime and punishment, law and economics is now an important field of research in economics (Becker 1968). Its influence on policies, however, has varied across countries and over time. In the United States, for example, there is considerable interest in informing policies with academic research, as symbolized by the influence of Richard Posner, one of the leading scholars in the law and economics field and a judge on the United States Court of Appeals for the Seventh Circuit in Chicago. In other regions of the world, scholarly work on crime has a reduced influence on practice, which might be seen as paradoxical given that Americans are often viewed as particularly inclined to be practical.¹ One possible explanation for this is the strength and vitality of American-based academic research in the area of criminology.² Latin America, with its very high (and variable) crime rates, and small body of academic work seems to offer challenges and opportunities for the field. Indeed, the extreme macroeconomic dislocations and social inequities of the region present challenges to the application and generalization of research

Rafael Di Tella is the Joseph C. Wilson Professor of Business Administration at Harvard Business School, a research associate of the National Bureau of Economic Research, and a member of the Canadian Institute for Advanced Research. Sebastian Edwards is the Henry Ford II Professor of International Economics at the Anderson Graduate School of Management, University of California, Los Angeles, and a research associate of the National Bureau of Economic Research. Ernesto Schargrodsky is a professor and dean of the business school at Universidad Torcuato Di Tella.

1. On America's anti-intellectual bias, see Hofstadter (1963).

2. The influence of Becker's work is also present in the field of criminology, which obviously has a broader focus than law and economics and that has been as, or more, influential on practice. Note that work by economists has been influential, even though it could be considerably improved by better data and a closer attention to the progress made by research by criminologists. For an interesting review, see Bushway and Reuter (2008).

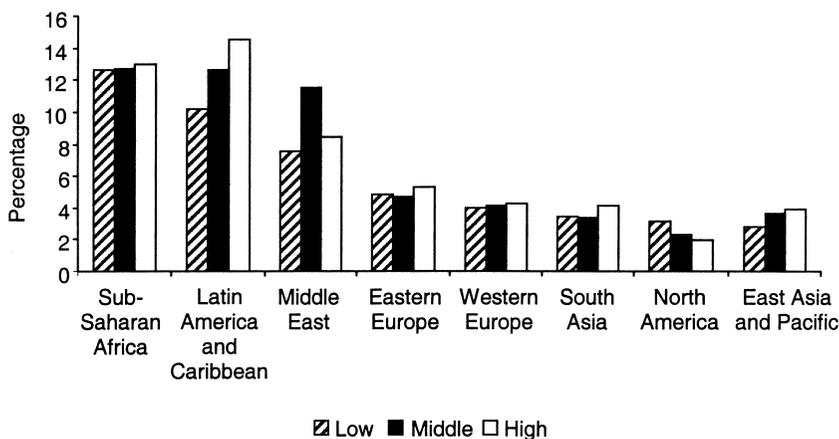


Fig. I.1 People who were assaulted or mugged, last twelve months, by income level

Source: From Di Tella, MacCulloch, and Nopo (2008).

on crime, but at the same time offer many opportunities given the strength of the dynamics involved and the extent of institutional experimentation. This book is an attempt at bringing the economics of crime to Latin America. It does so by presenting studies grounded in the economic approach to studying behavior pioneered by Becker that are either focused on Latin America, or that are focused on topics that are deemed particularly relevant for Latin America.

Latin America has one of the highest crime rates in the world. Ominously, during the last two decades these crime rates have been growing in several countries, making the problem of crime often the primary concern of citizens in the region. The passivity of the State, real or perceived, in the face of growing crime rates has increased skepticism about its ability (and willingness) to combat crime, while at the same time putting the spotlight on the possibility of police corruption and increasing the demand for a more punitive approach. Although comparing crime data across countries is often difficult (given the institutional differences in recording crime, as well as differences in the political economy of reporting and in the efficiency of public agencies), several pieces of evidence suggest crime is high in the region. Homicide rates in Latin America, for example, are more than double the world average (see Prillaman [2003]). The Gallup World Poll, which offers comparable survey data on victimization, suggests crime rates in Latin America are much higher than in the rest of the world, while confidence in the police is lowest. See figures I.1 and I.2 (from Di Tella, MacCulloch, and Nopo [2008]). The Latinbarometer survey offers more details and suggests that for 2007, 38 percent of Latin America's households report having been victims of a crime during the previous twelve months, 6 percentage points

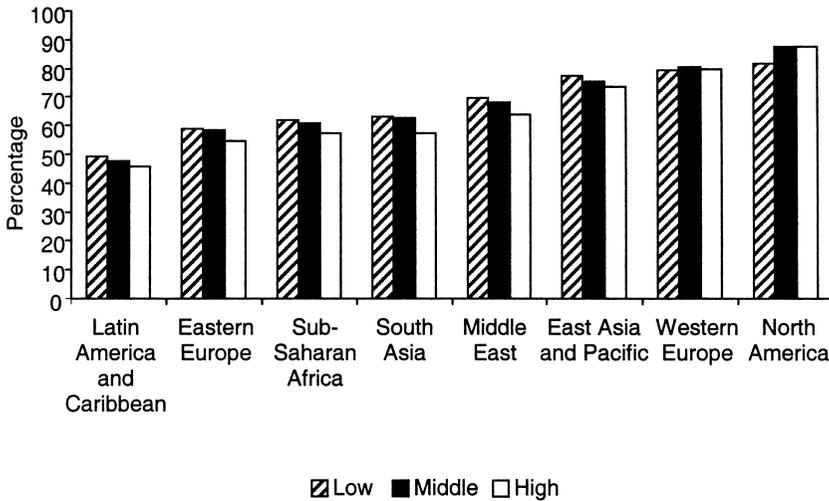


Fig. I.2 People who have confidence in local police force, by income level

Source: From Di Tella, MacCulloch, and Nopo (2008).

higher than the previous year, and 9 points higher than in 1995.³ These high levels of crime and violence impose significant costs on these societies. Londoño and Guerrero (1999) estimate that the costs of violence in Latin America in 1997 amounted to 14.2 percent of the region's gross domestic product, while Burki and Perry (1998) argue that Latin America's per capita income would be 25 percent higher if it had a crime rate similar to the rest of the world. There may also be high distributional costs of crime. Prillaman (2003) considers crime in Latin America as the primary obstacle for development of the region, affecting democratic consolidation, reducing economic growth, and undermining social capital. According to the Latinbarometer opinion polls, public safety is either the main concern of the population or the second most important concern behind unemployment (it is the main problem in almost half of the countries of the region including Argentina, Colombia, Brazil, and Venezuela).

These high levels of crime and the population's concern over this issue do not appear to have been accompanied by a significant investment in learning more about this problem and about the effectiveness of the policies destined to tackle it. Absent anything like a consensus over which set of practical policies might be more effective in reducing crime, the small body of available work by economists has singled out social polarization, unemployment, and inequality as the main causes of the high levels of crime in Latin America (see, for example, Fajnzylber, Lederman, and Loayza [2000], and Gaviria and Pages [2002]). However, this lack of systematic knowledge has

3. See www.latinobarometro.org.

not stopped the adoption of numerous reforms concerning criminal policy, including changes in the duration of prison sentences, reforms in the codes of procedure, changes in the criminal responsibility age for juvenile offenders, modifications on patrol schemes conducted by the police, numerous purges in the police force, and changes in the prison systems, to name a few.⁴ In this context, it is unsurprising that policies have changed back and forth, with several episodes of political overreaction in both directions, from emphasis on the protection of the defendant's human rights—"garantismo"—to more punitive stances—"mano dura." Needless to say, these policies have not been scientifically evaluated and its utilization or interruption has been based on intuitions, opinions, or ideological prejudices, rather than on rigorous studies. Of course, on some aspects of these policies there may never be full agreement, but what is striking is how little information is used in the formation of ideologies about how best to control crime.⁵

Formal policy evaluations are often difficult because of problems with data availability. Victimization surveys are scarce, incomplete, and infrequent. Without reliable victimization surveys, the only source of data have been the crime statistics issued by the governments. However, these statistics in many countries are not publicly available, lack periodicity and detail, and suffer when there is little trust in the police forces. The gap between official data on crime and victimization surveys has been found to be nonrandom, but dependent on socioeconomic levels and corruption perceptions (Soares 2004). Moreover, the importance of crime as a concern of potential voters has sometimes induced political manipulation in the content and timing of release of criminal statistics.⁶

It is possible to argue (optimistically) that the different approaches to fighting crime observed across developed countries, such as France and the United States, arise because of their different ideological traditions (e.g., a more punitive approach might be based on different beliefs about the role of luck versus effort in the determination of legal income, as in Di Tella and Dubra [2008]). However, it is difficult to make the case that the strange pany of crime-fighting initiatives observed in Latin America arises because of

4. In some occasions, these variations introduce "natural" experiments allowing policy evaluation. See Galiani, Rossi, and Schargrotsky (2010) for a study of the effect of conscription on criminal involvement, and Di Tella and Schargrotsky (2004) for an example involving the effect of police on crime.

5. To provide one example, in 1999 the Congress of the Province of Buenos Aires, Argentina, imposed mandatory pretrial detention for people with no fixed residence, if minors intervened in the commission of the crime, and if the crime was committed by various authors (among other conditions). These changes contributed to a dramatic increase in the number of people "preventively" in prison, which reached 85 percent of the prison population of the province. In May 2005, the National Supreme Court of Justice demanded that the Province of Buenos Aires weaken its "preventive prison" laws. No study has been conducted on the effects of these changes in policy (see *Clarín*, August 5, 1999, and October 31, 1999; and *La Nación*, May 4, 2005).

6. This lack of uniform and periodic series has forced researchers to only rely on homicide statistics collected by the World Health Organization from national health registries for international comparisons.

these societies' peculiar preferences and beliefs. A more plausible account simply emphasizes the fact that there is not an informed debate about these issues, in part because there is not enough knowledge about the topic as applied to Latin America (and perhaps more broadly) and in part because of the lack of a tradition of serious data collection and policy evaluation in these societies.

In summary, lack of reliable data and the absence of supporting scientific work have characterized the public debate on safety policies in Latin America. In other areas, such as macroeconomic volatility, Latin America has made progress thanks (at least in part) to academic efforts that lead to a consensus around fiscal responsibility.⁷ The book and the conference where these articles were presented are part of an attempt to improve the quality of current debates by bringing recent developments of the economics of crime to Latin America. The book is organized in three sections.

Overview: Latin American Exceptionalism?

The overview chapter (chapter 1, by Soares and Naritomi), presents a survey of the problem of crime in Latin America. It takes a very broad and appropriately reductionist approach to analyze the determinants of the high crime levels, focusing on the negative social conditions in the region, including inequality and poverty, and poor policy design, such as relatively low police presence. They make the case that, to some extent, crime rates in Latin America are not exceptionally high if we take into account these (very coarse) indicators of social and policy conditions. In other words, Soares and Naritomi are not surprised by the high crime rates because a lot of the variation in crime rates in the region is accounted for by variation in what their model specifies as the causes of crime. Their estimates suggest that a large fraction of the high violence levels can be explained by three factors: high inequality, low incarceration rates, and small police forces. Correcting some of these would bring violence in Latin America to, approximately, international levels. This is an important chapter because it suggests that a useful activity for economists might be as simple as to remind policymakers that somewhere in society somebody will keep track of the big, aggregate trends which, for example, trace back the high rates of crime in the region to police forces that are relatively small. Of course, crime and violence in Latin America have a complicated origin, with many subtle mechanisms at play, not all of them easily quantifiable, but the economists' reductionist approach allows us to understand the broad trends that serve as context.⁸

7. To give just one example, out of the first eighty-seven papers published in *Economía*, the flagship journal of the Latin American and the Caribbean Economic Association (LACEA), thirty-four were on macroeconomic topics (excluding trade) and one was on crime (Fajnzylber, Lederman, and Loayza 2000).

8. On some of these hard to measure, complex crime dynamics and their collective representation, see the contributions gathered in *Isla* (2007).

The Economics of Crime Meets Latin America

The second part of the book includes six chapters on the economics of crime in Latin America. The history of the region's growth (or lack thereof) suggests how poverty traps can arise in high crime settings, with crime being both a cause and a consequence of underdevelopment. The first three chapters illustrate three channels through which crime might generate poverty: by reducing investment, by introducing assets losses, and by reducing the value of assets remaining in the control of households. Of course there are many other possible channels, some of them potentially large in size.⁹ But these chapters illustrate what we believe is a key characteristic of crime in developing countries in general (and Latin America in particular): it introduces a very high cost to society. In contrast to crime in developed nations, where at least the perception (we are unaware of the existence of convincing estimates) is one of second-order costs, in Latin America crime takes up so many resources directly or indirectly that it represents a first-order impediment to development.¹⁰ The remaining three chapters in the section illustrate how crime might be affected, in turn, by features of underdeveloped economies (related to education, inequality, and demographic trends). Again, while there are many factors that can affect crime, these chapters emphasize three features in which Latin American countries present conditions that are extremely unfavorable relative to other regions and illustrate the general point that socioeconomic conditions in Latin America, together with the poor policy responses, make high crime and poverty traps quite likely.

A poverty trap may emerge with high costs of crime, and this can be expected in weak institutional environments. Thus, a hypothetical high level of crime in the United States has lower costs than the same crime rate in a poor country. This in turn makes high crime more likely to generate traps in poor countries. What are these high costs? A naïve view of the costs of crime would consider crime as just a transfer of a good from one person to another. If the criminal is poorer than the victim, there is even the presumption that crime might improve the distribution of income. Sensible people will disagree with this view on several grounds. The most obvious is that the transfer is not a lump sum but entails costly distortions in behavior, typically because the unpleasantness of crime exceeds the monetary value of the loss. Second, income gained in an illegal manner is not similarly valued by society (by definition), so the gain to the criminal is discounted while the loss to the victim is real (see chapter 3). And finally, the idea that

9. More broadly, there is a negative correlation between crime and the level of economic activity (see, for example, Cook and Zarkin [1985]).

10. Given that institutional details are important in understanding crime dynamics, we were fortunate to have available three pieces on broadly the same issue (the first three chapters on the costs of crime) in the context of the same country (Colombia).

the rich are the primary victims of crime seems counterfactual. And if they are not, one would need to know why this is the case and if this is the result of investments by the rich that should also be counted in the social cost of crime (see chapter 5).

One way that crime represents a cost to society is by reducing investment. Although this seems hard to measure, as so many things affect both investment and crime, the idea is intuitive and illustrated by the many Latin Americans who have acquired human capital traveling abroad but fear returning home, fueling the “brain drain.” Chapter 2 by Pshisva and Suarez propose an approach focused on a particularly salient crime: kidnappings. Exploiting variation in kidnappings that target firm managers in different regions of Colombia, they find that firms invest less when kidnappings directly target them, while there is no effect when there are other forms of violent crime that do not explicitly target firms—homicides, guerrilla attacks, and general kidnappings. The estimated effect on one firm is larger for kidnappings suffered by other firms in the same industry. Investment at firms with substantial foreign ownership is particularly sensitive to kidnappings of foreign managers and owners.

Chapter 3, by Gaviria, Medina, Morales, and Núñez, tackles the difficult problem of estimating the full cost of crime. Given that these costs typically exceed the value of the lost property, researchers have developed general measures that are typically of two types: either a global measure that is based on an evaluation of well-being (e.g., happiness) or a measure that uses prices that incorporate all the available information (e.g., from a market equilibrium).¹¹ Chapter 3 follows the latter approach and is based on hedonic price models, where disamenities like crime are built into real estate market prices. They exploit the fact that households in the city of Bogotá are willing to pay considerable amounts to avoid violent crime. In the highest socioeconomic level, households pay up to 7.2 percent of their house values in order to prevent average homicide rates from increasing one standard deviation. The results suggest that security ends up creating an urban private market that effectively auctions security to the highest bidders. These segmented markets imply significantly different levels of access to public goods among the rich and poor.

Chapter 4 by Ibáñez and Moya contributes to the study of the costs of crime and violence by pointing out that in some cases the amount of insecurity is so high that households are displaced, inducing considerable asset losses. They do so again in the Colombian context, where a conflict of political origin has degenerated in a situation where the state no longer has exclusive control of violence in the area, which is what effectively happens in some impoverished urban areas in Latin America. They collect both qualitative and quantitative evidence on the processes of asset losses and asset

11. Cook and Ludwig (2006) is an example of some of the dimensions that are relevant to welfare evaluations in the area of crime (in their particular case, gun ownership).

reaccumulation following an initial shock. They document that full recovery of the assets is relatively rare: 75 percent of households do not recover their asset values, becoming locked in low income trajectories.

Chapter 5 by Di Tella, Galiani, and Schargrotsky focuses on the impact of a given increase in crime across different income groups. Interestingly, the research literature has not reached anything like a consensus on this issue, in part because, typically, only a small fraction of the population is victimized so that empirical tests often lack the statistical power to detect differences across groups (see, for example, Levitt [1999]). A second difficulty is that crime-avoiding activities vary across income groups. Thus, a lower victimization rate in one group may not reflect a lower burden of crime, but rather a higher investment in avoiding crime. Di Tella, Galiani, and Schargrotsky take advantage of a dramatic increase in crime rates in Argentina during the late 1990s to document several interesting patterns. First, the increase in victimization experienced by the poor is larger than the increase endured by the rich. The difference appears large: low-income people have experienced increases in victimization rates that are almost 50 percent higher than those suffered by high-income people. Second, for home robberies, where the rich can protect themselves (by hiring private security, for example), they find significantly larger increases in victimization rates among the poor. In contrast, for robberies on the street, where the rich can only mimic the poor, they find similar increases in victimization for both income groups. The data also offer direct evidence on pecuniary and nonpecuniary protection activities by both the rich and poor, ranging from the avoidance of dark places to the hiring of private security, with a clear association between changes in protection and mimicking and changes in crime victimization. The evidence is consistent with crime being displaced when potential victims protect themselves (a negative externality from the rich to the poor). Obviously there may be large potential gains from effective, centralized crime control policies (both within and across countries, as the problem is particularly acute when we cross legal jurisdictions), so this is a pressing question for future research.

Chapters 6 and 7 are more directly focused on the determinants of crime. Chapter 6, by De Mello and Schneider, analyzes the role of demography and policy interventions in explaining the large drop in homicides experienced by São Paulo, Brazil, in recent years. They attribute a positive role to several policy interventions including the creation of municipal police forces, the implementation of dry laws, gun control policies, the use of crime geo-referencing and criminal identification systems, and increases in incarceration. However, they argue that these factors cannot really account for the geographic and dynamic crime patterns. Instead, they explain that demographic changes fit well with the pattern of increase and reduction in homicides in São Paulo and other areas of Brazil. This chapter illustrates a different approach to the study of crime, one that relies on estimating the role of long-run underlying trends to calculate the proportion of current crime rates that can be attributed to forces beyond the immediate control

Table I.1 Latin America's prisons

| Country | Prison population | Growth in incarceration (%) | Inmates per 100,000 inhabitants | Jail occupancy level (%) | Prisoners without sentence (%) |
|-------------|-------------------|-----------------------------|---------------------------------|--------------------------|--------------------------------|
| Argentina | 60,621 | 188 | 154 | 97.7 | 53.8 |
| Bolivia | 7,310 | 35 | 79 | 165.5 | 74.4 |
| Brazil | 422,590 | 269 | 220 | 149.4 | 34.3 |
| Chile | 45,843 | 118 | 276 | 155 | 22.5 |
| Colombia | 63,648 | 90 | 135 | 130.6 | 34.9 |
| Costa Rica | 8,246 | 146 | 181 | 97.7 | 14.2 |
| Ecuador | 11,358 | 42 | 86 | 146.3 | 44.4 |
| El Salvador | 12,113 | 126 | 179 | 240.8 | 35.9 |
| Honduras | 11,589 | 103 | 161 | 140.4 | 63.5 |
| Mexico | 212,841 | 148 | 193 | 132.5 | 40.9 |
| Nicaragua | 6,060 | 80 | 107 | 132.7 | 21.4 |
| Panama | 11,345 | 156 | 339 | 137.3 | 58.6 |
| Paraguay | 6,037 | 103 | 95 | 116.3 | 69.5 |
| Peru | 39,684 | 152 | 141 | 187.3 | 63.9 |
| Uruguay | 6,947 | 129 | 193 | 146.2 | 63.1 |
| Venezuela | 19,853 | -14 | 74 | 117.4 | 61.6 |

Notes: The second column shows the prison population growth rate between the first and last year of available data, which are: Argentina (1992 and 2006); Bolivia (1996 and 2005); Brazil (1992 and 2007); Chile (1992 and 2007); Colombia (1992 and 2007); Costa Rica (1992 and 2007); Ecuador (1992 and 2004); El Salvador (1992 and 2005); Honduras (1992 and 2005); Mexico (1992 and 2007); Nicaragua (1992 and 2006); Panama (1992 and 2007); Peru (1992 and 2007); Uruguay (1992 and 2006); and Venezuela (1993 and 2005).

of policymakers. The approach produces remarkable results, so the chapter spends considerable effort in understanding whether the magnitudes involved are empirically plausible. Given the large demographic changes in Latin America and the huge interest in learning from the successful São Paulo experience, the analysis appears particularly relevant for the region.

Chapter 7 by Alzúa, Rodríguez, and Villa focuses on the role of prisons. This is an area where there are perhaps some of the biggest institutional differences between Latin America and developed countries and there is huge need for more research (Coyle 2004). Indeed, the poor prison conditions in Latin America suggest the possibility that they increase the likelihood of recidivism for released prisoners (see table I.1 for background information; see Isla and Miguez [2003] for an account of prisons in Argentina; and Di Tella and Scharfrodsky [2009] for an evaluation of electronic monitoring as a substitute for prison). Alzúa, Rodríguez, and Villar study one aspect that is important, namely in-prison conflict and the role of educational programs. This appears important in practice as several basic education and vocational training programs are in place in prisons in the region and a large proportion of criminals have low educational attainment. The authors gather data on prisons in Argentina, noting that lack of incentives

leads to few teachers being willing to work in prison educational programs, limiting their supply. This feature allows the authors to provide an ambitious attempt at estimating the causal effect of education on violence. The authors show that participation in formal education programs lead to decreases in participation in violent conflicts and in-prison misbehavior. These are bad outcomes per se, but they are also potentially connected to ulterior recidivism. And, of course, increased educational attainment is potentially linked to better opportunities in the legal labor market upon release.

International Evidence

In the final section we include five chapters that study questions in the crime literature that can be expected to be particularly relevant in Latin America, even though they may use data from outside the region (mainly the United States and Europe). The chapters were selected with two criteria in mind. First, they illustrate the broad range of approaches that have been fruitful in the study of crime in developed countries and that could be used to contribute to a better methodological analysis of the high crime rates in the region and the policies useful to reduce it. Second, they are related to topics that are expected to be important to policymakers in the region. While the estimates presented are not tested for validity in Latin America (further research will have to return to this issue), they have the property of dealing with issues and dynamics that can be expected to be general in nature.

The five chapters are focused on three areas that are central to economics and that are particularly relevant to crime: markets (chapter 8), industrial organization (chapter 9), and incentives (chapters 10, 11, and 12). The first chapter (chapter 8, by Dills, Miron, and Summers) focuses on illegal markets for drugs. Given the importance of drugs in Latin America, and given the study of markets is an area where economists can be expected to have substantive comparative expertise (as emphasized in Bushway and Reuter [2008]), the chapter sets the stage for one class of possible contributions to the study of crime in Latin America. It provocatively starts by presenting a pessimistic view of the state of knowledge in the field, arguing that the broad trends in crime over the last forty years suggest that few things have worked. According to Dills, Miron, and Summers, the picture is grim because even the most successful theories (ranging from arrest rates to gun laws), which find some support in recent US data, fail when evaluated over a longer horizon or with cross-country data. In contrast the authors focus on what happens to supply and demand when an artificial law prevents market clearing, connecting drug prohibition and violent crime. It leads naturally to a demand for further work along (at least) two lines. First, as the authors emphasize, a large part of the problem arises because government prohibition policies affect the nature and amount of dispute resolution that takes place through legal (noncriminal) means, reminding us that the full cost of

sending a transaction into the shadow economy must include the cost of enforcing informal contracts. Second, and given that part of the demand for drugs arises in the United States, the chapter indirectly raises the possibility that policies might impose large negative externalities across countries (with very different levels of income—on this important issue, see also chapter 5 by Di Tella, Galiani, and Schargrotsky, and chapter 10 by Draca, Machin, and Witt).

The second chapter (chapter 9 by O’Flaherty and Sethi) focuses on the industrial organization of violence. One of the hallmarks of the economics of crime is that it has produced a considerable body of work assigning rational motives to criminals but less work where the focus of the analysis is the use of rational strategies by these actors (to achieve their objectives). This is paradoxical as it is much more difficult to believe that criminals make a rational, informed choice when they decide to become criminals than when, later on, and conditional on having become criminals and having obtained a certain amount of information through firsthand experience on the functioning of the police and of potential victims, decide on a particular approach to commit a crime. A possible explanation is that, given their secret nature, we have relatively little information on the details of these criminal organizations and their strategies. One approach that has received some attention has been to go inside gangs and other criminal organizations to gather some of these data (see, for example, the well-known work of Levitt and Venkatesh [2000] and Venkatesh [2002]; for an alternative research strategy, see Akerlof and Yellen [1994]).¹² An alternative research approach is to deduce aspects of these criminal strategies through the type of criminal acts they undertake. This is broadly the approach undertaken by O’Flaherty and Sethi, who study in detail a significant increase in murders in Newark, New Jersey, where changes in violence played a central role. Using a careful combination of theory and empirics, the authors study the role of strategic complementarities, preemptive killings, and investment in weapon lethality to explain the basic trends in the data. A basic finding is that areas with high murder respond more to changes in fundamentals such as the arrest rate, the conviction rate, and a shrinking police force, than those with low murder rates.

The last three chapters (chapters 10, 11, and 12) deal broadly with applications of the theory of incentives to the problem of crime, including how crime might be displaced by increasing the probability of apprehension through increased police presence (keeping sentences constant) in chapter 10, the effects of severe sentencing (chapter 11), and the incentives to report crimes as punishment varies (chapter 12). In the first of these (chapter 10),

12. In some types of criminal activities (for example, with “victimless” crimes) surveys have been used productively. See Gertler, Shah, and Bertozzi (2005) for an example using Mexican data.

Draca, Machin, and Witt study a thorny potential problem in the successful implementation of policies that reduce crime, namely the problem of (geographical or temporal) displacement. Their approach takes advantage of the large (34 percent) increase in police deployment in central London for the six weeks following the terrorist attacks of July 2005 to circumvent the problem caused by the simultaneous determination of police allocation and common crime. During this period, sentencing does not change so this exercise only looks at variation in crime following variation in the probability of detection. Despite having a credible identification strategy and an impressive data to study the problem, the authors fail to find evidence of large amounts of crime being displaced, either to the geographically contiguous areas or to the period after the six weeks of increased police presence. Although it is natural to assume that an extra visible police (in uniform) in a fixed location has little effect on overall crime as it might geographically or temporally displace crime, the results in this chapter suggest that an increased police force, smartly deployed, might in fact reduce total crime, echoing the arguments made for Latin America by Soares and Naritomi in chapter 1, using aggregate data.

Chapter 11 by Mocan and Gittings also focuses on incentives, turning their attention to variation in sentencing. Their focus is on the death penalty and its potential effect scaring off criminals and deterring future crimes. Even though in Latin America there is no formal death penalty, the estimates are of some interest given that it is possible that changes in the death penalty are salient and might well be the main way tougher sentences are communicated to potential offenders. And, of course, people incarcerated are sometimes killed, or become infected with life-threatening illnesses such as HIV-AIDS, which might play a role similar to that of an informal death penalty (see, for example, Katz, Levitt, and Shustorovich [2003], who proxy prison conditions in the United States through the risk of death in prison and find a deterrence effect; for a discussion of prison HIV and prisons as well as overcrowding in Latin America see, for example, Schifter [2002] and Carranza [2001]; Isla and Miguez [2003] offer a rich description of prison conditions in Argentina).¹³ Mocan and Gitting estimate a large number of models linking crime (murder rates) and outcomes related to the death penalty (executions, commutations, and removals). They take a cautious

13. There are some famous cases of prison slayings. For example, in October 1992, Sao Paulo police were sent in to stop a rebellion at Carandiru, one of the country's most notorious prisons, and shot dead more than 100 inmates. See, for example, "Inside Latin America's worst prison," *BBC News*, Tuesday, 15 December, 1998. The same article reports the existence of routine death threats and that the director of Carandiru claims to be unable to control the prison "Of course I don't have control of the situation. It would be ridiculous to say I did. The prison has 7,500 inmates and only about 1,000 prison officers, divided into four shifts." In 2007 in Argentina, approximately 1 percent of total homicides took place inside of jails or prisons (from the Ministry of Justice's web page, accessed on June 23, 2009).

approach, allowing several possible objections to the main results, and still obtain a negative effect of punitiveness on crime. Changing the measurement of the main variables, and excluding various U.S. states from the analysis allows the authors to show the robustness of the result. Given that most murderers do not face capital punishment, the interpretation of the estimated effects within a rational model is not direct (although it is possible that the existence of the death penalty is taken as a summary indicator of the punitiveness of the state's legal system). Note also that the results are in contrast to previous research that finds no effects of the death penalty on crime (including Katz, Levitt, and Shustorovich [2003], although they use a somewhat different sample). Ultimately, it is worth pointing out that the death penalty is a hotly debated topic in the United States, with both sides being somewhat impermeable to "scientific" arguments. This is probably for good reason, as it is obviously hard to provide moral justifications for sentencing based on general deterrence. But the chapter does remind us that scientific exercises can help us gain some understanding of the models we use to predict crime changes more broadly.

The final chapter (chapter 12) by Iyengar is an excellent example of how incentives are pervasive in the analysis of crime and how even carefully designed policies can go wrong when these are not accounted for at every step of the crime-punishment link. Mandatory arrest following reports of domestic violence was implemented in the United States through state level laws following the results of the Minnesota Domestic Violence Experiment (MDVE). This experiment randomly assigned a police response of arrest or nonarrest (such as counseling) to domestic violence calls, and showed that arresting the suspect resulted in less future violence. In contrast to these predictions, Iyengar shows that the subsequent passing of mandatory arrest laws in several U.S. states coincided with increases in the gap between intimate partner homicide and other kinds of homicide. Interestingly, such gaps did not emerge in states with recommended arrest laws. Iyengar suggests that this may be because abuse victims may be less likely to contact the police in the face of a mandatory arrest law, resulting in fewer police interventions and escalating domestic violence. To explain the difference in results, Iyengar points out that the Minnesota experiment was implemented conditional on the reporting of incidents, and that the public was not aware that randomization in the treatment was involved. The chapter is relevant for the Latin American region both because of the focus on domestic violence (a common problem), and because of the emphasis on the incentives to report criminal acts. It also points out a class of potential difficulties in the implementation of randomized studies in the area of crime.

Although crime rates in Latin America are extremely high and have been growing in many countries in the last two decades, there are cities within the region that have experienced a different dynamic (see chapter 1). For ex-

ample, Bogotá, which in 1994 had the highest homicide rate among capital cities in Latin America, in 2008 has a homicide rate substantially lower than that of Caracas, Rio de Janeiro, and Washington, DC, and similar to that of Lima and Mexico City. The city of São Paulo, which imitated some of the Bogotá policies, experienced on December 7, 2007 (a week after our conference) its first day without a homicide since the 1950s. Part of their strategies seems to have been simply an investment in the capacity of the state to attack these problems, which resulted in a combination of more intense and effective repressive measures together with social support programs. Research is needed to better understand these experiences, as well as the conditions that led to the worsening performance in other areas of the region. In this book we hope to contribute toward this enterprise.

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