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Gun Crime and Gun Control: The Hawaiian Experience

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An expert panel of the National Academy of Sciences recently issued a report concluding (among other things) that the effectiveness of existing gun-control measures could generally not be determined from the available evidence.¹ The panel opined that the data are incomplete, but more importantly, that it is difficult to sort out the causal effects of such laws from other factors that influence the rates of gun crime and misuse.² Whether the objectives of gun control—to separate guns from violence, thereby reducing the deadliness of assaults and robberies—can be achieved has not been proven. But the stakes are high, involving thousands of lives and perhaps up to \$100 billion per year of social costs,³ and arguments continue to rage about which approaches are most promising. In the absence of hard direct evidence, the arguments often emerge from generalizations about human behavior.

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¹ See Charles F. Wellford, John V. Pepper, and Carol V. Petrie, eds, *Firearms and Violence: A Critical Review* 4 (Nat'l Academies 2005) ("The inadequacy of data on gun ownership and use is among the most critical barriers to better understanding of gun violence.").

² See *id.* at 2–3 ("The complex methodological problems inherent in unraveling causal relationships between firearms policy and violence have not been fully considered or adequately addressed.").

³ Philip J. Cook and Jens Ludwig, *Gun Violence: The Real Costs* 114–15 (Oxford 2000).

Regulations on gun commerce, possession and use in the United States tend to be quite limited. At the federal level, the main legislation is the Gun Control Act of 1968 ("GCA").⁴ The GCA limits interstate shipments of guns to federally licensed dealers in an effort to insulate the states from each other, so that gun markets in lax states will not undercut more stringent regulations in others.⁵ It also establishes record keeping requirements for dealer sales.⁶ Certain categories of individuals are prohibited from possessing a gun, including convicted felons.⁷ Federally licensed dealers are required to conduct a background check on buyers to determine if they fall into a restricted category.⁸ But there is a significant loophole in even this modest set of requirements. People who are not "engaged in the business" of selling guns are not required to obtain federal firearms licenses, nor required to abide by the GCA's paperwork and background-check requirements.⁹ Gun buyers and sellers make a substantial number of transactions each year in the exempt "secondary market,"¹⁰ a loophole that may undermine any effects of primary-market regulations on the availability of guns to teens, convicted criminals, and other prohibited groups. While some states and localities have enacted more restrictive gun regulations that apply to the secondary market, such regulations may be undermined by the ease with which guns can be transferred across state lines.¹¹

⁴ Gun Control Act of 1968, Pub L No 90-612, 82 Stat 1213, codified at 18 USC § 921 et seq (2000). For a general overview of the Act, see Franklin E. Zimring, *Firearms and Federal Law: The Gun Control Act of 1968*, 4 J Legal Stud 133 (1975) (evaluating the effectiveness of the Act); Jon S. Vernick and Lisa M. Hepburn, *State and Federal Gun Laws: Trends for 1970-1999*, in Jens Ludwig and Philip J. Cook, eds, *Evaluating Gun Policy: Effects on Crime and Violence* 345, 350 (Brookings Institution 2003) (summarizing the history of and changes in gun control laws).

⁵ See 18 USC § 923 (setting out the process for obtaining such license).

⁶ 18 USC § 923(g)(1).

⁷ 18 USC § 922(d)(1).

⁸ 18 USC § 922(s)-(t).

⁹ Consider 18 USC §§ 922-23 (consistently using the language "engaged in the business" when describing the obligations of gun vendors).

¹⁰ Philip J. Cook, Stephanie Molliconi, and Thomas B. Cole, *Regulating Gun Markets*, 86 J Crim L & Criminol 59, 68 (1995).

¹¹ See Philip J. Cook and Anthony A. Braga, *Comprehensive Firearms Tracing: Strategic and Investigative Uses of New Data on Firearms Markets*, 43 Ariz L Rev 277, 298-99 (2001) (describing the close link between more stringent gun control regulations and imports of out-of-state guns); Daniel W. Webster, Jon S. Vernick, and Lisa M. Hepburn, *Relationship Between Licensing, Registration, and Other Gun Sales Laws and the Source State of Crime Guns*, 7 Injury Prevention 184, 188 (2001) (finding that the stringency of gun sales statutes largely explained the variance in the number of out-of-state guns found in those states).

What have these regulations accomplished, and what might be achieved by enhancing the current regulatory structure in various ways? Two perspectives dominate current debates. The “sociological perspective” asserts that people at high risk for misusing guns simply cannot be deterred from acquiring guns, particularly by modest gun laws that can be overcome by highly motivated individuals.¹² The “economic perspective” asserts that even violence-prone people will consider the time, hassle, and monetary cost of acquiring a gun in deciding what weapon to use (if any).¹³ As with all other markets, these firearm “consumers” are heterogeneous, with some more determined than others to have a gun; the logical result is that the extent of gun misuse will fall as the effective price goes up. Whether or not a particular gun regulation is effective will depend on whether and to what extent it is successful in raising the price.

Where is the evidence to help test the two perspectives? They generate different predictions in the hypothetical situation where a gun-control measure succeeds in making guns more scarce: the sociological perspective asserts that the dangerous people will do whatever is necessary to get their guns anyway, while the economic perspective predicts that at least some of them will give up trying to obtain guns.

Efforts to regulate gun availability in Hawaii present an intriguing case because these regulations are relatively restrictive, and because Hawaii is less vulnerable to having those controls undercut by illicit interstate shipments. Hawaii is, after all, surrounded by a large “moat,” so that gun trafficking is more complicated than simply driving a car full of guns across state lines. A further barrier to smuggling guns into Hawaii is a by-product of its efforts to protect local plants and animals from mainland diseases: travelers and cargo are subject to inspection,¹⁴ something that is of course not true in the Lower 48.

Our empirical analysis of Hawaii’s experiences focuses on two central events within the state. First, we pay particular attention to a 1981 state law that, among other things, enhanced the state’s permit-to-purchase system by requiring a ten day

¹² See, for example, James B. Jacobs, *Can Gun Control Work?* 213–14 (Oxford 2002) (“To change the patterns of violence in a violent society will require more than a better gun policy, it will require changing society.”).

¹³ See Philip J. Cook and James A. Leitzel, “Perversity, Futility, Jeopardy”: *An Economic Analysis of the Attack on Gun Control*, 59 *L & Contemp Probs* 91, 94–101 (1996) (considering multiple methods of raising the effective price of guns).

¹⁴ See Haw Rev Stat § 150A (1993).

waiting period for permits as well as fingerprinting and photographing of prospective gun buyers, and requiring that guns bought in Hawaii be registered.¹⁵ We believe that this 1981 law represents a significant one-time shift in the state's system of regulating firearms, one that could arguably have a substantial impact on gun transfers in the secondary market. We attempt to examine the impacts of this law on homicide, suicide and gun prevalence by comparing Hawaii's trends in these measures before and after the 1981 law goes into effect with observations in comparison groups of states around the same time. We also consider whether Hawaii was insulated from the wave of gun violence that plagued much of the rest of the country during the "crack epidemic" of the 1980s and 1990s,¹⁶ and, if so, whether any differences between Hawaii and other states during this period could plausibly be attributed to Hawaii's system of firearm regulations.

I. BACKGROUND AND MOTIVATION

The empirical study of guns and crime owes much to a seminal paper written in 1968 by Franklin Zimring.¹⁷ Zimring's study provided evidence suggesting that criminal attacks are more lethal when they involve guns rather than knives and other weapons.¹⁸ Evidence for this type of "instrumentality effect" means that, in principle, policy measures that successfully reduce gun involvement in crime would help save lives.

In practice, the empirical evidence for the effectiveness of firearm regulations of ownership or sales—what most people mean by "gun control"—has been meager. For example, handgun acquisition and import has been banned in the city of Washington, DC since 1976.¹⁹ Washington's gun homicide rate fell after the 1976 ban for several years, but later escalated to the point that Washington became the "murder capital of the world" in the

¹⁵ Act Relating to Firearms, 1981 Haw Sess Laws 239, codified at Haw Rev Stat § 134. Prior to the 1981 law, the registration requirement applied only to guns brought into the state from outside.

¹⁶ For a general discussion of the crack epidemic and its effect on gun violence, especially among youths, see Philip J. Cook and John H. Laub, *The Unprecedented Epidemic in Youth Violence*, in Michael H. Tonry and Mark H. Moore, eds, *Youth Violence* (Chicago 1998).

¹⁷ Franklin Zimring, *Is Gun Control Likely to Reduce Violent Killings?*, 35 U Chi L Rev 721 (1968).

¹⁸ *Id* at 735.

¹⁹ DC Code § 7-2502.01 (2005).

early 1990s, with most of those murders involving guns.²⁰ Chicago enacted a similar ban in 1982, and there too the evidence suggests little long-term effect.²¹ The prevalence of gun ownership in Chicago dropped slightly for a few years, but then returned to its pre-ban level and more.²²

Optimists in the gun control debate point to studies demonstrating that in states with gun licensing and registration laws, a larger proportion of crime guns are imported from other states with more lax regulations.²³ Similarly, a study of Virginia's one-gun-a-month law found that the fraction of crime guns in other states that originated in Virginia declined after this law went into effect.²⁴ The fact that criminals are forced to turn to alternative sources of guns as a result of these laws has been interpreted as evidence that availability has declined. While plausible, that conclusion remains speculative because these studies lack direct measures of the effective price of guns.

The evidence from the Brady Act²⁵ also leaves us somewhat short of a clear test between the two perspectives. Beginning in 1994, the Brady Act required Federal Firearms Licensees ("FFL") to conduct background checks on prospective gun buyers and, at least during the first few years of the law, impose a waiting period for handgun sales as well.²⁶ Prior to this point buyers simply had to stipulate on a form that they were eligible to purchase a gun, leaving open the possibility of what became known as "lie and buy."²⁷ Yet the Brady Act had no detectable effect on gun homicides.²⁸ This conclusion comes from Jens Ludwig and

²⁰ The victimization rate for black males ages ten through twenty four in the District of Columbia rose from 65.3 per 100,000 in the mid 1980s to 512 per 100,000 in the early 1990s. Philip J. Cook and John H. Laub, *After the Epidemic: Recent Trends in Youth Violence in the United States*, 29 *Crime & Justice* 1, 19 (2002).

²¹ *Id.*

²² Philip J. Cook and Jens Ludwig, *Principles for Effective Gun Policy*, 73 *Fordham L Rev* 589, 609 (2004).

²³ Webster, Vernick, and Hepburn, 7 *Injury Prevention* at 188 (cited in note 11) (finding that comprehensive regulations of the sale of guns "can affect the availability of guns to criminals").

²⁴ Douglas S. Weil and Rebecca C. Knox, *Effects of Limiting Handgun Purchases on Interstate Transfer of Firearms*, 275 *JAMA* 1759, 1761 (1996).

²⁵ The Brady Handgun Violence Prevention Act ("Brady Act"), Pub L No 103-159, 107 Stat 1536 (1993), codified at 18 USC § 921 et seq (2000).

²⁶ 18 USC § 922(s)-(t).

²⁷ Brady Campaign to Prevent Violence, *Saving Lives by Taking Guns Out of Crime*, available at <<http://www.bradiycampaign.org/facts/research/?page=savinglives&menu=gvr>> (last visited May 12, 2005).

²⁸ Jens Ludwig and Philip J. Cook, *Homicide and Suicide Rates Associated with Implementation of the Brady Handgun Violence Prevention Act*, 284 *JAMA* 585, 588 (2000).

Philip J. Cook's study of the Brady Act,²⁹ which exploits the fact that some states were exempt from Brady's requirements because these states already had sufficiently stringent FFL regulations in place. Ludwig and Cook find no difference in homicide trends around 1994 between the states that were required to change their FFL practices as a result of the law (the "treatment" group) and those states that were exempt from Brady (the "control" group).³⁰

More relevant for our immediate purpose is evidence for the Brady Act's effect on interstate gun trafficking into Chicago, a city that is located in a "control" state that was not required to change FFL practices as a result of Brady. Following enactment of the Brady Act, the fraction of crime guns in Chicago that had originated in Brady "treatment" states declined by nearly three-quarters, which suggests that the Brady Act made it more difficult to traffic guns from these lax-regulation states into more tightly-regulated jurisdictions like Chicago.³¹ This dramatic change in gun trafficking patterns did not result in a reduction in gun use in crime, however.³² Once again we lack a direct measure of gun availability on the streets of Chicago, so it is not clear whether the apparent failure in this case was the result of little change in effective price, or a highly inelastic demand for guns. The former possibility preserves the economic perspective, while the latter supports the sociological perspective.

A. Economic Perspective

A key component of the economic perspective is the heterogeneity of buyer and seller behavior within markets.³³ In most markets, there is at least some variation across consumers in their desire for a given good. The strength of these desires translates into what the consumer is willing to give up in order to obtain the good, whether in terms of money, time, or exposure to risk of arrest—what Mark Moore terms the "effective price."³⁴ So long as consumers are heterogeneous in their desire for a good, such as guns, then the demand schedule for that good (which

²⁹ *Id.*

³⁰ *Id.*

³¹ Cook and Braga, 43 *Ariz L Rev* at 303–07 (cited in note 11).

³² *Id.* at 307 n 138.

³³ For a superb summary of the "economic perspective," see Cook and Leitzel, 59 *L & Contemp Probs* at 94–101 (cited in note 13).

³⁴ Mark H. Moore, *Policies to Achieve Discrimination on the Effective Price of Heroin*, 63 *Am Econ Rev* 270, 270 (1973).

relates the total quantity consumed to the price) will slope downward. So long as the demand schedule for guns slopes downward, an increase in the effective price for guns should reduce use. This decline in gun use may be large or small, depending on the distribution of consumer preferences (that is, the slope of the demand curve). Furthermore, some highly motivated criminals, a group that we would very much like our policies to affect, will continue to obtain guns despite a marginal increase in gun price. But the logic of heterogeneous consumer demand and downward sloping aggregate demand schedules suggests that policies that are able to increase the effective price of guns will reduce overall gun acquisition and use by some degree.

Heterogeneity in individual motivation is relevant for the supply side of the gun market as well. Many guns enter into the so-called "secondary market"—defined as all sales other than by FFL, which as noted above are largely unregulated under current laws³⁵—when law-abiding owners legally sell their used guns. If there is variability across owners in their willingness to part with their guns in exchange for cash, at a low price we may expect only those owners least attached to their guns to be willing to sell. But when the price increases, the number of owners on the supply side of the market willing to sell their guns increases, and so the number of guns in circulation in the secondary market goes up accordingly. Ultimately some of these guns may make their way into the hands of high-risk people. Put differently, the logic of variability in seller motivation suggests an upward-sloping supply schedule for guns in the secondary market, so that increased supply will require an increase in price.

The economic perspective implies that marginal incentives matter for at least some people, so that, in the aggregate, changes in policy that affect incentives can also influence behavior to some degree. Support for this general proposition comes from studies of how people make decisions about drinking, drug use, sexual activity, driving, and other risky behaviors.³⁶ Of course, general evidence for the relevance of incentives in other areas is not definitive proof that the same sorts of behavioral responses are at work with guns, since, in principle, decisions about gun acquisition and use could be fundamentally different.

³⁵ Cook, Molliconi, and Cole, 86 J Crim L & Criminol at 68–73 (cited in note 10).

³⁶ For a general discussion, see Jonathan Gruber, *Risky Behavior Among Youths: An Economic Analysis* (Chicago 2001).

B. Sociological Perspective

In contrast to the economic perspective, the sociological perspective implicitly assumes homogeneity in behavior. We do not mean to imply that all sociologists make such strong assumptions across all behavioral domains, but this perspective does figure prominently in debates about gun policy and, as it turns out, is articulated most often by sociologists. This line of thinking often leads to an over-extrapolation from the behavior of the most highly motivated gun users, and a tendency to readily dismiss any regulation that could ever be overcome by anyone.

Gun crime is disproportionately concentrated among young, low-income people who live within disadvantaged urban communities.³⁷ Many sociologists doubt that dangerous people in dangerous neighborhoods can be deterred from acquiring guns, despite a growing body of evidence in support of deterrence more generally.³⁸ For example, Joseph Sheley and James Wright conclude that for a majority of the inner-city youth they surveyed, “self-protection in a hostile, violent and dangerous world was the chief reason to own and carry guns.”³⁹ As a result, “the perception that one’s very survival depends on being armed makes a weapon a necessity at nearly any cost.”⁴⁰ Note that this last statement implies an aggregate demand for guns in disadvantaged communities that is totally unresponsive to the effective price, which is at odds with a key assumption of the economic/policy analytic perspective. As a result, Sheley and Wright argue that the strong motivation on the part of juveniles to carry guns will persist: “until we rectify the conditions that breed hostility, estrangement, futility or hopelessness, whatever else we do will come to little or nothing . . . stricter gun control laws, more

³⁷ Alfred Blumstein, *Disaggregating the Violence Trends*, in Alfred Blumstein and Joel Wallman, eds, *The Crime Drop in America* 13, 29–39 (Cambridge 2000) (tracking the increase of gun violence in the 1980s and early 1990s in the FBI Supplementary Homicide Reports).

³⁸ See, for example, Steven D. Levitt, *Deterrence*, in James Q. Wilson and Joan Petersilia, eds, *Crime: Public Policies for Crime Control* 435 (ICS 2002) (reviewing the empirical evidence for deterrence and finding its effects non-trivial, though certainly not a complete explanation of behavior); Daniel S. Nagin, *Criminal Deterrence Research at the Outset of the Twenty-First Century*, 23 *Crime & Justice* 1 (1998) (“Evidence for a substantial deterrent effect is much firmer than it was two decades ago.”).

³⁹ James D. Wright and Joseph F. Sheley, *Teenage Violence and the Urban Underclass*, 4 *Peace Rev* 32, 33 (1992).

⁴⁰ Joseph F. Sheley and James D. Wright, *Motivations for Gun Possession and Carrying Among Serious Juvenile Offenders*, 11 *Behav Sci & L* 378, 387 (1993).

aggressive enforcement of existing laws, a crackdown on drug traffic, police task forces directed at juvenile gangs. . . .⁴¹

Sometimes law professors ally themselves with sociologists in adopting this perspective. Consider, for example, the argument made by James Jacobs of New York University's law school:

The people who commit such (gun) crimes are often young, poor and heavily involved with drugs. They may kill people in botched robberies or for no apparent reason. They often kill one another. Their stray bullets may kill or injure bystanders. From their own experiences in juvenile detention centers, reformatories, adult jails and prisons, and in the criminal subculture, individuals in this category have many sources—family members, friends, gang associates, drug dealers, and professional fences—from whom they can purchase or borrow handguns. It seems highly unlikely that any gun control regime could prevent such individuals from obtaining firearms.⁴²

Under this perspective, if highly-motivated individuals account for most of the gun violence problem, then any law that can be overcome by a highly-motivated person is of doubtful utility. For example, Jacobs argues that

While the Brady Law aims to prevent a person with a felony record from purchasing a firearm from a licensed dealer, its background-checking system can be circumvented by use of false identity documents. Since the Brady machinery is based on a name check, it is possible for an ineligible person to obtain a firearm by giving a false name. Of course, the would-be purchaser has to show picture ID, but false ID is readily available. . . .

⁴¹ Wright and Sheley, 4 Peace Rev at 34 (cited in note 39).

⁴² Jacobs, *Can Gun Control Work?* at 216 (cited in note 12). Similarly, Jacobs argues:

Professors Cook and Ludwig suggest, almost in passing, that if the price of firearms increased . . . some poor young offenders would not have the money or choose not to spend their money on a gun . . . [B]ut I fear that the demand for firearms will prove far more inelastic than Cook and Ludwig imagine. Young men, albeit poor, living in tough neighborhoods will come up with an additional \$10, \$20, or \$30 to purchase a firearm if they perceive that it is essential to their survival, status, or criminal opportunities.

Another strategy for defrauding the Brady system is for a potential purchaser, who knows he is ineligible to purchase a handgun from an FFL, to recruit a 'straw purchaser' (a spouse, friend, or fellow gang member, with no disqualification) to purchase the handgun and then transfer it to him.⁴³

The sociological perspective may have its origins in the discipline's traditional focus on the role of societal forces on behavior, which seems to crowd out the role of individual agency on the basis of more person-specific benefits, costs and preferences. Professor Albert Alschuler has suggested to us that lawyers sometimes adopt a similar perspective as a result of the influence of Oliver Wendell Holmes, who viewed the law from the perspective of a "bad man" who would exploit every loophole.⁴⁴

Whatever its origins, the sociological perspective yields a very different explanation for why previous gun-control laws have not had greater effects on gun crime than does the economic perspective. Sociologists and their allies on this issue argue that people who are at risk for misusing guns are all highly motivated to obtain guns and so will invariably overcome whatever obstacles government regulation may put in front of them. The economic perspective raises the possibility that perhaps previous gun laws have had little effect in practice on the "street price" of

⁴³ Id at 106–07. Another example of the logic that animates this perspective comes from Defense Secretary Donald Rumsfeld's comments in Kuwait in December, 2004. In response to a soldier who asked, "Why do we soldiers have to dig through local landfills for pieces of scrap metal and compromised ballistic glass to up-armor our vehicles?" Rumsfeld replied "You go to war with the army you have," and "You can have all the armor in the world on a tank and it can be blown up." Fred Kaplan of *Slate* articulates the economic/policy analytic counter-perspective on this issue: "Yes, some soldiers will get killed no matter the precautions, but the idea is to heighten their odds—or at least not diminish them—as they're thrust into battle." Fred Kaplan, *Rumsfeld vs. The American Soldier*, *Slate* (Dec 8, 2004), available at <<http://slate.msn.com/id/21110818>> (last visited May 15, 2005). Put differently, armor might not prevent all casualties from improvised explosive devices but on the margin can make a difference. Id.

⁴⁴ Our thanks to Albert Alschuler for this point:

If you want to know the law and nothing else, you must look at it as a bad man, who cares only for the material consequences which such knowledge enables him to predict, not as a good one, who finds his reasons for conduct, whether inside the law or outside it, in the vaguer sanctions of conscience.

Oliver Wendell Holmes, *The Path of the Law*, 10 Harv L Rev 457, 459 (1897). Alschuler describes the influence of Holmes's argument on his own thinking about the law: "Montesquieu called his classic eighteenth-century study *The Spirit of the Laws*, yet somewhere along the way I had ingested Holmes's *The Spirit of the Loophole*." Albert W. Alschuler, *Law Without Values: The Life, Work, and Legacy of Justice Holmes* 146–47 (Chicago 2000).

guns, due to the secondary market loophole in the existing regulatory system, the ease of interstate gun trafficking, or some other reason.

Two of the authors, Philip J. Cook and Jens Ludwig, provide evidence in support of the economic perspective in two recent studies concerning the effects of the prevalence of gun ownership on gun misuse. In the first, we find that the frequency with which male teens carried guns was closely related to gun prevalence in their communities, other things being equal.⁴⁵ In the second we demonstrate that changes in gun prevalence in a community are closely linked to changes in homicide and gun homicide rates.⁴⁶ In both cases we speculate that the link between prevalence and misuse is availability—that guns are more readily available to youths and violent criminals when they are prevalent, and that availability is important to weapon choice.⁴⁷

The rest of this paper seeks to provide an empirical test of these two competing visions by examining the efficacy of local gun laws in a state that has natural protection from the problem of gun trafficking: Hawaii. Unlike jurisdictions such as Chicago or Washington, DC, where the technology of gun trafficking is as simple as driving a car full of guns across state lines, interstate trafficking into Hawaii requires navigating thousands of miles of ocean via plane or boat, followed by a vigorous system of inspecting passengers and cargo implemented by the state to prevent the spread of diseases from foreign plants and animals.⁴⁸ Under the economic perspective, the high costs of gun trafficking into Hawaii compared to other states could plausibly make Hawaii's gun laws more effective than those enacted in other states. Those who adopt the sociological perspective will be doubtful of this proposition because motivated people will find ways to smuggle guns even into Hawaii.

⁴⁵ Philip J. Cook and Jens Ludwig, *Does Gun Prevalence Affect Teen Gun Carrying After All?* 42 *Criminol* 27, 48–49 (2004).

⁴⁶ Philip J. Cook and Jens Ludwig, *The Social Costs of Gun Ownership* 32–33 (NBER Working Paper 10736, 2004).

⁴⁷ See *id.* at 34 (“The most likely mechanism [through which household gun ownership affects homicide] is through influencing the supply of guns to prohibited individuals.”); Cook and Ludwig, 42 *Criminol* at 49 (cited in note 45) (“The nature of that causal influence [community gun ownership on adolescent involvement with guns] is not identified by the statistical results, but it seems plausible.”).

⁴⁸ See Haw Rev Stat § 150A (setting out Hawaii's extensive quarantine laws).

II. HAWAII'S FIREARM REGULATORY SYSTEM

Hawaii's geographic isolation makes its gun supply regulations uniquely difficult to overcome compared to those in other states. This circumstance motivates our choice to focus in the following discussion on laws that cover the supply side rather than demand side of the gun market.⁴⁹ Hawaii's supply-side regulations have been unusually restrictive compared to other states dating back to the 1930s, when Hawaii was a U.S. territory rather than a full-fledged state.⁵⁰ Given the crime data that we have available to us (back to 1970) and our empirical approach, both of which are discussed in detail below, our main focus will be on changes to Hawaii's gun laws that occurred during the past several decades.

Table 1, taken from our examination of the archives of Hawaiian state statutes from 1955 until the present, summarizes the history of Hawaii's gun regulations.⁵¹ Table 2 provides a brief summary of how key Hawaii firearm laws compare to federal law. The two tables together show that before 1970, Hawaii required that all handgun purchasers obtain a permit. This requirement applied to both primary market sales (by FFL) and for sales made in the secondary market as well. However, the force of these requirements is questionable, given that they include no formal waiting period required to conduct such checks and there is no specific punishment specified for selling to someone without a permit.

Our reading of Hawaii's firearms laws suggests that the most significant change in the state's regulatory system occurred

⁴⁹ Demand-side laws would include measures that, for example, allow for sentence enhancements when a gun is used in crime. We do not expect such laws to have a greater effect in Hawaii than in other states.

⁵⁰ See Table 1 (presenting an overview of Hawaii's firearm laws over the past seventy years).

⁵¹ The information shown in Table 1 is taken from three separate sources. The Hawaii Revised Statutes is released every 6–12 years and contains the state statutes of Hawaii consolidated, revised, and annotated, at that point in time. The versions used in this timeline are 1968, 1976, 1988, and 2003. See Haw Rev Stat § 134 (1968); Haw Rev Stat § 134 (1976); Haw Rev Stat § 134 (1998); Haw Rev Stat § 134 (2003). The timeline also draws upon the annual Session Laws of Hawaii. The session laws are the annual laws of Hawaii passed by the state legislature. Each new version of the Hawaii Revised Statutes takes the previous version, assimilates the annual session laws, and provides a complete revision of the state statutes. This timeline takes into account the broad revised statutes as well as the individual annual Acts of the state legislature in order to attempt to provide a thorough timeline. The timeline also draws on information from personal interviews with officials at the local Hawaii police departments as well as the Attorney General's office.

with the 1981 Session Laws.⁵² Starting in mid-1981, Hawaii required a waiting period (ten days) for permits to purchase as well as mandatory fingerprinting and photographing of the prospective purchaser and permission for sellers to access mental-illness records.⁵³ The law also required for the first time that a permit be acquired to purchase long guns, and that all newly purchased firearms be registered with the state, and not just guns brought into the state from outside as in previous legislation.⁵⁴ The law did *not* appear to require the registration of firearms already in circulation.⁵⁵

What might this 1981 change in firearm laws accomplish? While many gun purchasers and sellers may ignore the law's new requirements, we expect that the cost to buyers of acquiring a handgun in either the primary or secondary markets should increase, at least on average. Buyers now are either forced to wait ten days to acquire a permit or violate the law and ignore the state's background check requirement, which increases the legal risk associated with acquiring a gun. Similarly, the requirement that a buyer's gun be registered with the state, and that the buyer be fingerprinted and photographed, imposes direct paperwork costs and discourages acquisition of the gun for use in crime. Assuming that there is heterogeneity in the motivation of gun users, the combination of a waiting period, background check, and paperwork is likely to affect the purchasing decisions of at least some individuals with criminal intent.

In short, we might expect that the 1981 law change could reduce, to some degree, the number of new and used guns acquired in Hawaii's primary and secondary gun markets, although the law should have little effect on the existing stock of guns because there is no registration or other requirements imposed on current owners. Note that we might also expect some effect on suicides to the extent to which the new waiting period helps facilitate identification of potential buyers who are ineligible on the basis of their prior mental health history,⁵⁶ or more generally helps deter those who are under the sway of a powerful but fleeting suicidal impulse.

⁵² 1981 Haw Sess Laws 239.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ Private telephone conversation between Joseph Peters and Paul Perrone, Chief of Research and Statistics at the Hawaii Attorney General's office (October 2004).

⁵⁶ See 1981 Haw Sess Laws 239, codified at Haw Rev Stat § 134-7(c).

III. DATA

The estimates presented below are based on annual state-level data for 1970 to 1999. Our key outcome measures include state homicide and suicide rates (both also broken down separately by gun involvement) obtained from the Vital Statistics system, which is based on a census of death certificates in the U.S. maintained by the National Center for Health Statistics.⁵⁷ We focus on deaths of people by state of occurrence, rather than state of residence. For most states the distinction between the two is minor, although for states that receive a large number of tourists (such as Hawaii) the distinction can be more pronounced. We believe that deaths by state of occurrence provide a more accurate measure of a given state's overall violence problem.

Another measure of interest is the prevalence of gun ownership within a state. Given that Hawaii does not require that all guns be registered, even after the 1981 law, we cannot measure gun prevalence from official government data on gun ownership. With only a few exceptions, most surveys of gun ownership are intended to be representative at the national (not state) level, and so cannot support state-specific estimates for gun ownership rates. We instead measure the prevalence of gun ownership in Hawaii and other states using the best available proxy: the proportion of suicides that involve a firearm ("FSS"). Professors Deborah Azrael, Philip J. Cook, and Matthew Miller have shown this proxy to be highly correlated with gun ownership rates across states at a point in time.⁵⁸ Professors Philip J. Cook and Jens Ludwig have also shown this proxy to be highly correlated with changes within states over time in gun prevalence.⁵⁹

We also track annual robbery and burglary rates to account for other criminogenic conditions that may affect the overall volume of crime and violence within a state. Burglary and robbery rates come from the Federal Bureau of Investigation's Uniform Crime Report ("UCR") system.⁶⁰ We also draw on state level data

⁵⁷ Vital Statistics, United States Department of Health and Human Services Mortality Detail Files, available at <<http://wonder.cdc.gov>> (last visited May 13, 2005).

⁵⁸ Deborah Azrael, Philip J. Cook, and Matthew Miller, *State and Local Prevalence of Firearms Ownership: Measurement, Structure, and Trends*, 20 J Quantitative Criminol 43, 56 (2004) ("Of the readily computed proxies for the prevalence of gun ownership, one, the percentage of suicides committed with a gun, performs consistently better than the others in cross-section comparisons.").

⁵⁹ Cook and Ludwig, *The Social Costs of Gun Ownership* at 13–14 (cited in note 46).

⁶⁰ United States Department of Justice, Federal Bureau of Investigation, *Uniform*

for the percent of a state's population that is urban, living in poverty, and is African-American, obtained from the Census Bureau.⁶¹ Because these variables come from the decennial census, we linearly interpolate data for inter-censal years. Descriptive statistics for our data are presented in Table 3.

IV. RESULTS

Social scientists define the causal impact of some policy intervention on a jurisdiction like Hawaii as the difference between some outcome measure of interest (e.g. the homicide or suicide rate) that the state experiences after the policy intervention is implemented and the outcome the state would have experienced absent the law. The challenge for policy analysts is that in reality we cannot observe this latter counter-factual outcome; given that Hawaii enacted a new gun control law in 1981, we can only observe homicide rates in Hawaii in 1982 with that law in place, and cannot directly observe what would have happened in Hawaii that year had the law not been enacted. Causal inference thus requires that analysts estimate what the state's outcomes would have been under this counterfactual scenario, which in this case we attempt to do using data from other states.

How should we choose which states to use to estimate counterfactual outcomes for Hawaii, and how do we know whether our choice is reasonable? One criterion for answering these questions is to choose a set of comparison states for Hawaii that experience similar levels of criminal activity (especially with respect to gun violence) or, at least, trends in outcomes for criminal activity *before* Hawaii enacted its policy intervention of interest. If, after all, we expect our comparison states to provide a valid estimate for what would have happened after Hawaii changed its gun laws, then at the very least we should expect the outcomes in such states to look similar to Hawaii beforehand.

Our analysis suggests that different combinations of Western states may provide a reasonable estimate for what would have happened in Hawaii during the 1980s and 1990s absent any changes in the state's firearm regulations. Table 4 shows that

Crime Reports for the United States, 1961–1999. Electronic data from the Inter-University Consortium on Political and Social Research, University of Michigan, available at <<http://www.icpsr.umich.edu>> (last visited May 13, 2005).

⁶¹ United States Census Bureau, *Statistical Abstract of the United States 2004–05*, Table 21 (percent of population that is African-American, by state); Table 688 (percent of population that is living in poverty, by state); Table 25 (percent of population that is living in an urban environment, by state).

during the 1970s Hawaii's rates of homicide, including gun homicide, are quite similar to those in two groups of states: a combination of Washington, Alaska, and Oregon, which we will refer to as the "West Coast" group, and a combination of Washington, Oregon, Arizona, and Colorado which we will refer to as the "West Region."⁶² These two groups of states are much more similar to Hawaii during the 1970s with respect to homicide rates than is the U.S. as a whole, which is also true for rates of other crimes such as robbery and burglary. Unfortunately, none of these groups of states seems to mirror Hawaii's experience with suicide during the 1970s very well, as seen in Table 5 (discussed more below). We are thus somewhat more confident in our ability to learn something about any of the impacts of Hawaii's gun regulations on homicide than on suicide patterns.

Our main empirical findings are summarized by Table 4. While Hawaii and our West Coast and West Region states were quite similar with respect to homicide and other crime rates during the 1970s, from the 1970s to the 1980s the gun homicide rate declined by more than one-half in Hawaii but changed relatively little in these other comparison states. Interestingly, Hawaii and these other states experience quite similar changes over this period in non-gun homicides, robbery and burglary rates, and our proxy for household gun ownership rates (fraction of suicides with a gun, or FSS). This pattern suggests that something unusual happened in Hawaii from the 1970s to the 1980s that affected the availability of guns to high-risk people but that did not affect criminal behavior more generally—something, perhaps, like the 1981 gun law.⁶³

There are several reasons one might be skeptical of attributing the large drop in homicides to the new firearm laws. One possible explanation for the pattern of findings in Table 4 is that the homicide rates in Hawaii may have been following a different

⁶² Note that California is excluded from our two candidate comparison groups because the Golden State had quite different levels and trends in gun violence and crime more generally during our study period.

⁶³ We also run more formal difference in difference regressions to observe the percentage change in all of Hawaii's homicide and suicides measures after the 1981 firearm laws. These regressions provide similar evidence of a large and significant drop in gun homicides compared to more modest and at times statistically insignificant change in other crime and suicide outcomes. These regressions are available from the authors upon request.

We also note from Figures 1 and 2 that the largest decline in gun homicides for Hawaii was in the years closest to the implementation of Hawaii's new firearm laws. This suggests that the decline was not likely due to some other policy implemented later in the decade.

trend from the West Coast or West Region states during the 1970s, and so the difference across states from the 1970s to 1980s simply reflects a continuation of this trend. If this were the case, we would expect that some other policy affected homicides before 1981. But Figure 1 shows that the homicide trend (as well as level) is quite similar in Hawaii and our West Coast and West Regions during the 1970s. The results are similar for gun homicides specifically.⁶⁴ Further, consistent with the idea that our comparison groups of states are not as reliable for drawing inference about the effects of gun laws on suicides in Hawaii, Figure 2 shows that the trends in suicides appear to diverge somewhat during the 1970s for Hawaii versus our West Coast or West Region groups of states.

A different concern stems from the dramatic effects of crack cocaine on crime rates in the U.S. starting in the mid-1980s, which is thought to be responsible for the increase in homicide rates observed through the early to mid 1990s.⁶⁵ If crack was not a problem in Hawaii, then the longer-term comparisons across states shown in Table 4, which compare the 1970s to the 1980s across groups of states, may overstate any beneficial effects from Hawaii's 1981 law changes because crack will be driving up homicide rates during the 1980s in the comparison states but not in Hawaii.

Whether crack cocaine was a significant problem for Hawaii over this period is not entirely clear. Our discussions with local law enforcement and academics in the state suggest that Hawaii did not suffer the same epidemic of crack use and attendant violence as did the mainland. Rather, the sources we interviewed suggested that the main problems in the state have focused on a form of methamphetamine called "ice."⁶⁶ On the other hand, Figure 3 suggests that Hawaii experienced an increase in arrests for heroin and cocaine that was almost as large in proportional

⁶⁴ Available upon request from authors.

⁶⁵ See Alfred Blumstein, *Youth Violence, Guns, and the Illicit-Drug Industry*, 86 *J Crim L & Criminol* 10, 26-32 (1995) (outlining the effects the drug industry has on the sources of crime); Cook and Laub, *The Unprecedented Epidemic in Youth Violence* at 53-54 (cited in note 16) (citing the explosion of crack use in the 1980s as the most common explanation for the increase in youth violence, though by no means a complete explanation); Stephen D. Levitt, *Understanding Why Crime Fell in the 1990's: Four Factors That Explain the Decline and Six That Do Not*, 18 *J Econ Perspectives* 163, 179-81 (2004) (noting the link between the waning of the crack epidemic in the 1990s and a decrease in homicide rates).

⁶⁶ Sources include Katherine Irwin, PhD, Assistant Professor, Department of Sociology, University of Hawaii, Manoa, and Michael Hallstone, PhD, Assistant Professor, Justice Administration, University of Hawaii, West Oahu.

terms as in the rest of the United States. For example, from 1985 (when most experts believe the crack epidemic began in big cities along the mainland coasts) to 1991 (the peak homicide year for the U.S. as a whole), the number of cocaine/heroin arrests in the U.S. as a whole increased by a factor⁶⁷ of 2.3, compared to an increase of a factor of 2.2 for Hawaii.

The data summarized by Figure 1 would seem to suggest that either crack did not hit Hawaii very hard, or that the impacts of crack on lethal violence were muted by Hawaii's system of gun laws, or some other reason. The figure shows that in our West Coast and West Region groups of states, there was a pronounced increase in homicide rates during the crack period (late 1980s through the early 1990s) that was not mirrored in Hawaii's homicide statistics. These differences seem to be driven by differences in homicide rates of juveniles, who were more actively involved in crack distribution and violence than were adults.⁶⁸ Support for this claim comes from Figure 4, which shows that homicide rates during the crack period were generally similar in Hawaii and the West Coast and West Region for people 25 and older, who were not very involved with crack distribution or violence.

On the other hand, evidence arguing against a "crack" counter-explanation for our findings in Table 4 comes from the fact that robbery rates across our groups of states did not experience different trends from the 1970s to the 1980s. In contrast, robbery rates seem to have surged alongside homicide rates in the U.S. as a whole during the crack epidemic.⁶⁹

A final counter-explanation that we consider is the possibility that some other factor systematically changed violence patterns in Hawaii around the time of the 1981 law. An empirical test that could definitively rule out this sort of explanation is not possible. However, suggestive evidence comes from Table 6, which presents five-year averages (1976-80, 1981-85, 1986-90) for homicides in Hawaii by circumstance (domestic homicides, felony-type homicides, non-felony homicides, and circumstance unknown). The table suggests that the decline in homicides ob-

⁶⁷ By "factor" here we mean "change as a multiple of the original baseline level," so an increase of a factor of 2.3 means that at end of time period the rate is 2.3 times the rate at the beginning of the time period.

⁶⁸ Cook and Laub, *The Unprecedented Epidemic in Youth Violence* at 53 (cited in note 16) ("Young black males . . . were the primary purveyors of crack in most cities.").

⁶⁹ Blumstein, *Disaggregating the Violence Trends* at 14 (cited in note 37) (showing a strong correlation between homicide and robbery rates between 1972 and 1998).

served in Hawaii from the 1970s to the 1980s is uniform across types of homicides given the stability over time in the share of homicides accounted for by each circumstance category. This would seem to rule out an important role for law enforcement or social policy interventions that are designed to target specific types of violent events, such as a drug war or rampant domestic violence, and point instead to a more general change in Hawaii's environment—including, perhaps, gun availability.⁷⁰

CONCLUSION

What do our results taken together mean? Any case study of just one state's experience provides limited power to rule out competing explanations for the effects of a gun law or any other policy intervention. Our study of Hawaii's experiences with gun control is no exception, although we believe this exercise is still of some policy interest given the state's unique geography and laws.

Bureau of Alcohol, Tobacco, Firearms and Explosives ("ATF") crime-gun trace data show that most crime guns confiscated in states with relatively restrictive laws governing gun ownership and sales tend to have been first purchased from a FFL in a state that has more lax laws.⁷¹ Under the economic perspective, this would suggest that Hawaii's gun laws might be more effective than those enacted in other states because the costs of interstate gun trafficking are presumably higher in Hawaii than other places. On the other hand, under the sociological perspective, highly motivated criminals and gun traffickers will simply circumvent the additional challenges associated with smuggling guns into Hawaii, and so gun laws will be as ineffective in Hawaii as they are elsewhere.

With respect to homicides and gun homicides in particular, Hawaii looked quite similar to our West Coast and West Region groups of states during the 1970s. But then during the 1980s Hawaii's experience with homicide was much different than

⁷⁰ The change in Hawaii's gun law in 1981 took effect in July. The sharp drop in homicides observed in Figure 1 from 1980 to 1981 is not inconsistent with some effect of the legal change if the drop is either concentrated during the second half of 1981, or if the publicity surrounding the impending law changed gun commerce, policing, and other aspects of the environment even before the law went into effect.

⁷¹ See Cook and Braga, 43 *Ariz L Rev* at 304-07 (cited in note 11) (noting the increase in out-of-state guns in Chicago when Illinois implemented the Brady Act); Webster, Vernick, and Hepburn, 7 *Injury Prevention* at 188 (cited in note 11) (finding that the proximity to states with weak gun laws increase the proportion of a city's crime guns originating from out-of-state gun dealers).

these other states, a difference that is driven by a change in gun homicides. The change in homicide rates in Hawaii during the 1980s, relative to other states that had similar homicide patterns during the 1970s, coincides with Hawaii's implementation (in 1981) of a stricter set of regulations governing firearm permits and sales.

While these case study results are far from definitive, we believe that there is a case to be made that Hawaii's experiences are more consistent with the predictions of the economic perspective than of the sociological perspective. The unusually sharp and abrupt drop in gun homicides right at the time of the 1981 law is peculiar. Yet, Hawaii's trend in gun homicides diverges from what is observed in our West Coast and West Region even when we compare across decades, rather than just for the five years around the time of the 1981 Hawaii law, or when we exclude data from 1981 from the analytic sample.

Another and perhaps more serious challenge to our findings is the possibility that crack cocaine hit the West Region and West Coast states but not Hawaii, a fact which might inflate homicide rates during the 1980s in the former compared to the latter. While we cannot rule out this sort of explanation with certainty, the similarity in robbery rates across these groups of states in both the 1970s and 1980s provides perhaps the strongest evidence against a crack-driven counter-explanation to our findings.

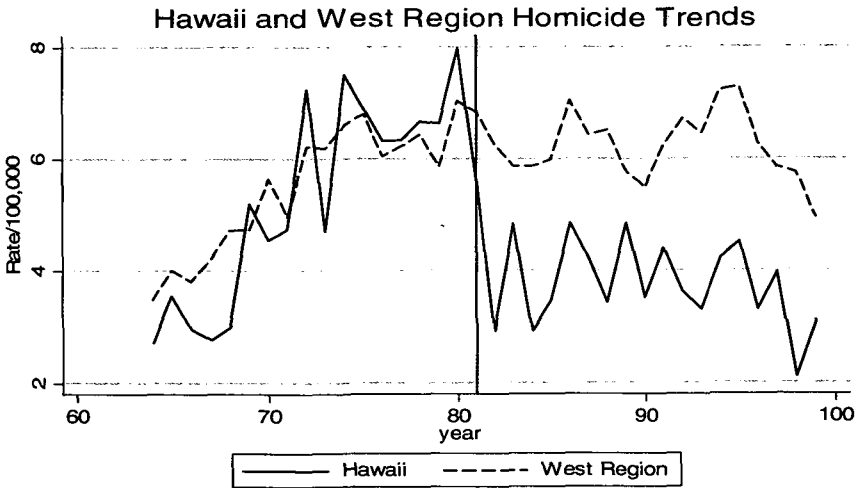
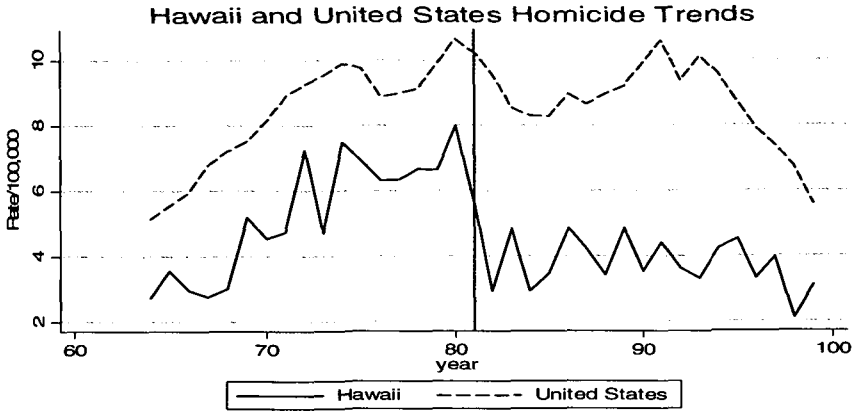
The general pattern of homicide changes observed in Hawaii during the 1980s relative to other states is consistent with what we would expect if Hawaii's 1981 gun law had some effect. If this difference in homicide patterns across states is due to Hawaii's change in firearm regulations, this would be more consistent with the economic than sociological perspectives, since the latter predicts that firearm regulations should have little effect on gun availability and criminal misuse.

Of course, no case study of a single jurisdiction can hope to provide definitive evidence of the causal impact of regulatory changes. Yet it is interesting to note that previous case studies of other jurisdictions that have substantially tightened their system of firearm regulations often show little change in gun misuse—Chicago's experiences being perhaps the most noteworthy example.⁷² The fact that our case study of Hawaii shows a more pronounced change in gun homicides than do studies of mainland

⁷² Cook and Ludwig, 73 *Fordham L Rev* at 608–09 (cited in note 22).

jurisdictions such as Chicago is, given the unusually high costs of interstate gun trafficking into Hawaii, also consistent with the predictions of the economic perspective. We hope that the suggestive findings presented here help motivate additional scholarly inquiry into the unique natural experiment afforded by changes in firearm regulations within the state of Hawaii.

FIGURE 1
Homicide Comparisons of Hawaii and Various Regions



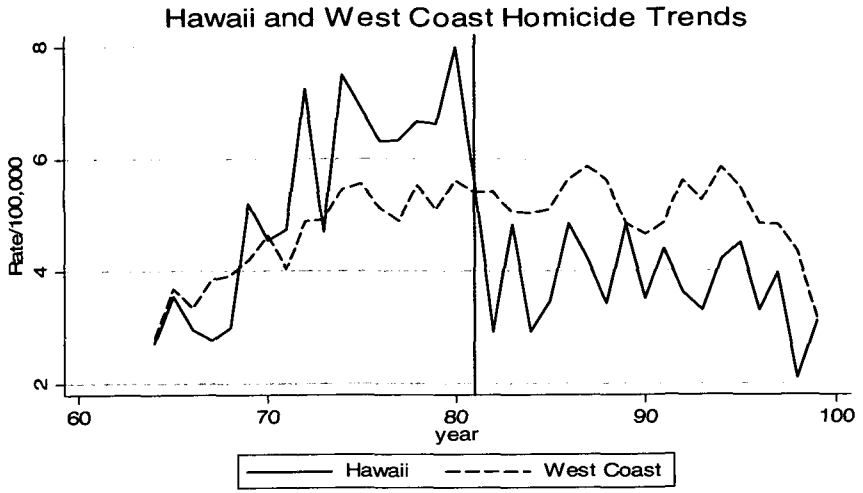
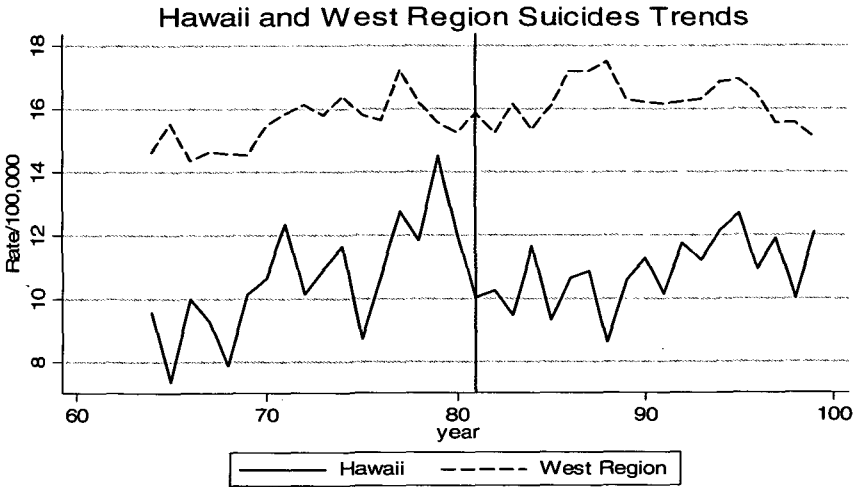
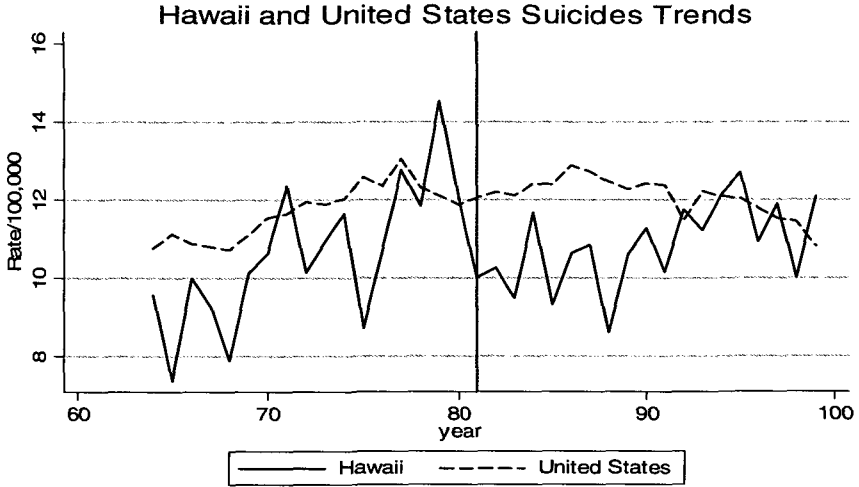


FIGURE 2
Suicide Comparisons of Hawaii and Various Regions



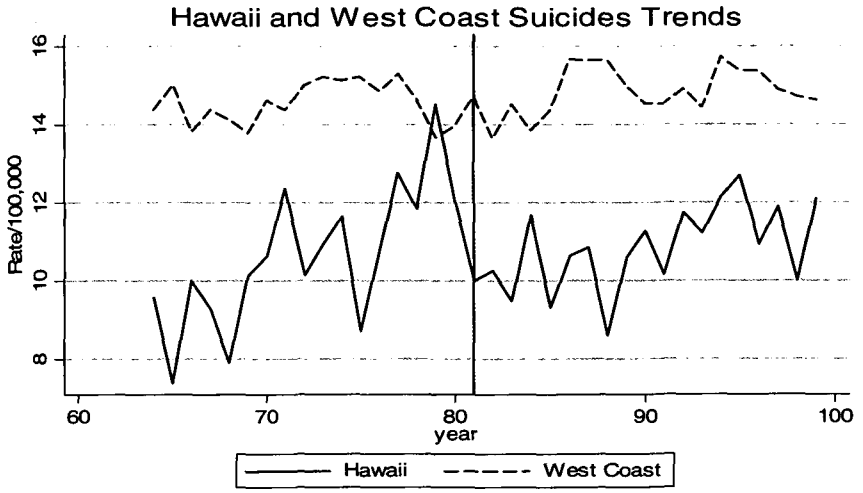


FIGURE 3
Heroin and Cocaine Arrest Comparison 1982-2003

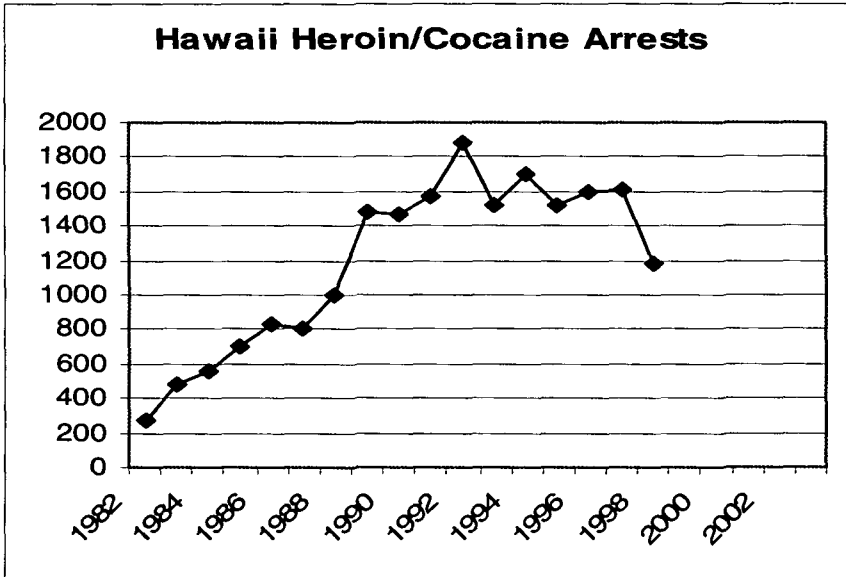
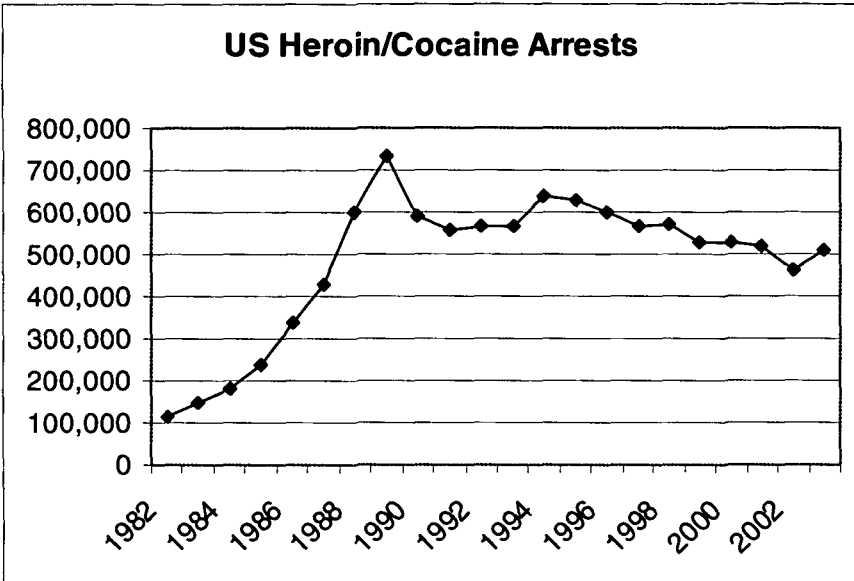


FIGURE 4
Homicide Comparisons of Hawaii and Various Regions
(Age 25+)

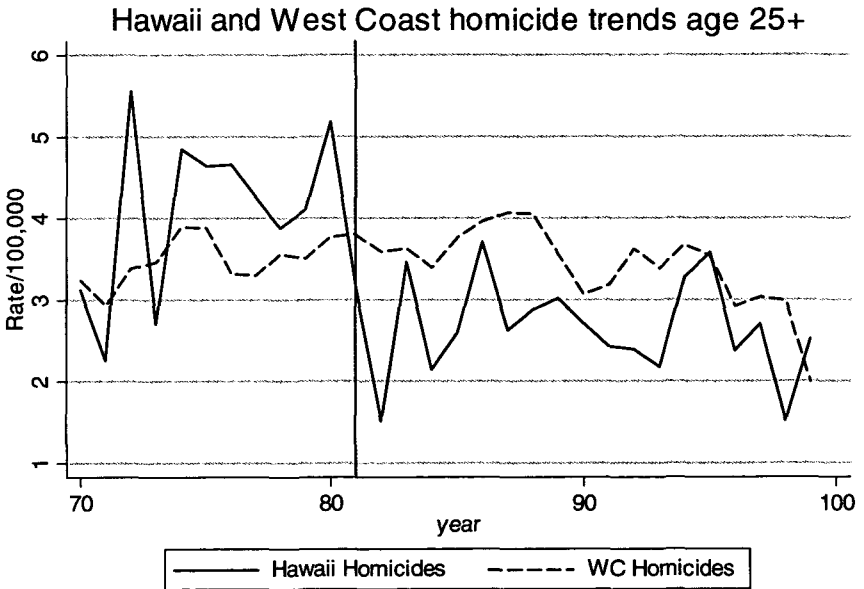
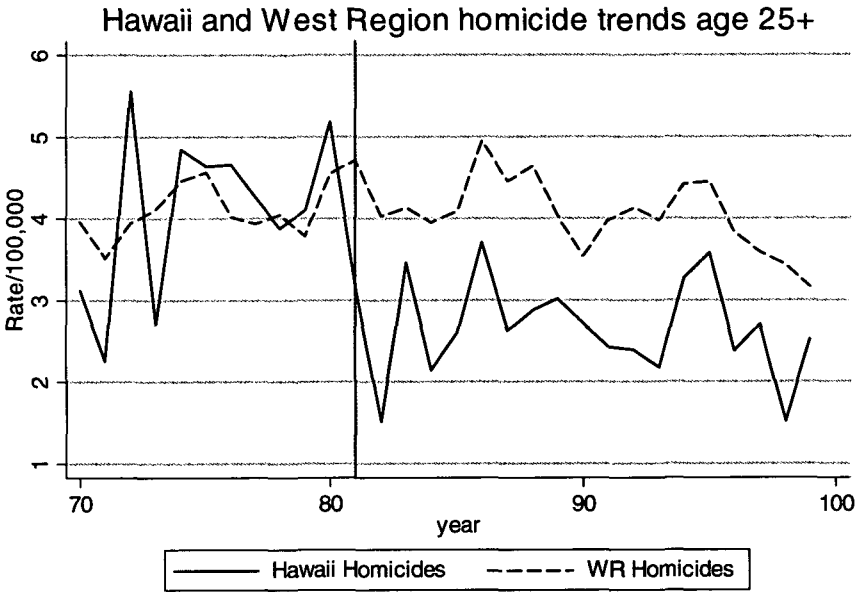


TABLE 1
Overview of Hawaii's Firearm Laws⁷³

YEAR	STATUTES AND DESCRIPTIONS
Pre-1970	<p>Hawaii Revised Statutes 1968 (chapter 134).⁷⁴</p> <p>The pre-1970 statute description is taken from the 1968 version of the Hawaii Revised Statutes. A comparison of the 1968 version and the 1955 version reveals few substantive differences in state firearm laws with respect to this timeline. A review of the 1935 version yields similar results. In all, little has changed between the summary of the 1968 Revised Statutes listed in 1-6 below and previous state/territory statutes going back to 1935.</p> <ol style="list-style-type: none"> 1. Permit, obtained through the chief of police, is required for handgun acquisition (purchase, gift, inheritance, etc). The permit must be used within 10 days of issuance. Permits are required for both dealer sales and private sales. Acquisition of handguns without the permit is punishable by up to \$500 and one year in jail. 2. Registration of <i>all</i> firearms is required when <i>entering</i> the state of Hawaii. The registration must be done within 48 hours of arrival. Failure to comply can result in a fine up to \$250. 3. In the case of a <i>private</i> transaction, all firearms require the signature of the seller and the buyer as well as information on the firearm itself for a complete application. This may or may not have an impact on limiting felon acquisition on firearms. 4. It is unlawful for persons under the age of 20 to acquire any firearm, punishable by up to \$500 and one year in jail. 5. Ownership of firearms and ammunition by fugitives, persons convicted of violent crimes, or drugs is unlawful. Punishable by up to \$1000 and one year in jail.
1968	<p>Session Laws of Hawaii Act 19 (approved April 30, 1968).⁷⁵</p> <p>An act was passed in the 1968 legislature indicating an increase in crimes involving firearms. The act punished those who knowingly gave, sold, or lent a fire-</p>

⁷³ All current Hawaii firearm laws are documented in the Hawaii Revised Statutes Chapter 134.

⁷⁴ Haw Rev Stat § 134.

⁷⁵ 1968 Haw Sess Laws 19.

YEAR	STATUTES AND DESCRIPTIONS
	<p>arm to fugitives, persons convicted of violent crimes, or drugs. Punishable by up to \$1000 and 10 years in jail.</p> <p>This law would have an effect on felons getting guns by punishing dealers, but it seems to be repealed in the 1971 law below.</p>
1971	<p>Session Laws of Hawaii Act 78 (approved May 24, 1971).⁷⁶</p> <p>The 1968 law listed above is changed and the person providing the firearm is no longer punished. Persons with criminal records who obtain firearms are punished by a minimum of one year in prison, but not more than two.</p>
1975	<p>Session Laws of Hawaii Act 144 (approved May 27, 1975)⁷⁷</p> <p>Saturday Night Specials can no longer be obtained.</p>
1976	<p>Hawaii Revised Statutes 1976 (chapter 134).⁷⁸</p> <p>The Hawaii Revised Statutes 1976 volume is released. The 1968 statutes listed above remain largely in place. The only pertinent difference for the purpose of this timeline is that persons over the age of 18 (not 20) can acquire rifles and shotguns. Also, persons restricted from acquiring firearms for criminal reasons are guilty of a felony if found in possession.</p>
1981	<p>Session Laws of Hawaii Act 239 (became law July 7, 1981, without Governor's signature, pursuant to Hawaii Constitution Article III, Section 16).⁷⁹</p> <p>The legislature made several changes of interest to the portion of the Hawaii code governing firearms this year, as documented by the 1981 Session Laws.</p> <ol style="list-style-type: none"> 1. <i>All</i> firearms acquired by purchase, gift, inheritance, or any manner, from a licensed dealer or private transaction; require a permit to purchase (not just handguns). 2. In the case of a <i>private</i> transaction, handguns require the signature of the seller and the buyer as well as information on the firearm itself for a complete application. Pre-1981, <i>all</i> guns required the signature of both the buyer and seller in a private transaction, but the law is changed to only require this for handguns. This law probably has little or

⁷⁶ 1971 Haw Sess Laws 78.

⁷⁷ 1975 Haw Sess Laws 144.

⁷⁸ Haw Rev Stat § 134.

⁷⁹ 1981 Haw Sess Laws 239.

YEAR	STATUTES AND DESCRIPTIONS
	<p>no bearing on gun availability, but was included in the timeline anyway.</p> <p>3. The permit application requires fingerprinting and photographing of the prospective firearm buyer. For the first time, applicants must sign a waiver allowing the chief of police to access mental health records.</p> <p>4. The permit can be issued no earlier than 10 calendar days from the date of application. This indicates the first waiting period for both handguns and long firearms.</p> <p>5. Registration of <i>all</i> handguns is required, whether brought into the state, or acquired via permit. All guns brought into the state must be registered within 48 hours (consistent with past statutes), and <i>all</i> handguns acquired via permit must be registered within five days of purchase (new statute). Violations result in a petty misdemeanor.</p> <p>6. Ownership of firearms is not restricted from just fugitives, or persons convicted of violent crimes or drugs. Firearms are also banned for any person who:</p> <ol style="list-style-type: none"> a. Has been committed. b. Has been admitted to a psychiatric facility. c. Has been acquitted of a crime on the grounds of a mental disease, disorder or defect. d. Is or has been under treatment for significant behavioral, emotional, or mental disorders.
1982	<p>Session Laws of Hawaii Act 168 (approved May 28, 1982).⁸⁰</p> <p>Permit applications become uniform throughout the state.</p>
1988	<p>Hawaii Revised Statutes 1988 (chapter 134).⁸¹</p> <p>The 1988 revised statutes retain the 1981 and 1982 session laws listed above. Few new changes are made from the 1981 re-write.</p>
1992	<p>Session Laws of Hawaii Act 286 (approved June 19, 1992).⁸²</p> <ol style="list-style-type: none"> 1. Several brands of assault weapons are outlawed. 2. Ammunition magazines in excess of ten rounds are

⁸⁰ 1982 Haw Sess Laws 168.

⁸¹ Haw Rev Stat § 134 (1988).

⁸² 1992 Haw Sess Laws 286-87.

YEAR	STATUTES AND DESCRIPTIONS
	<p>outlawed.</p> <p>3. Waiting period is changed to 14 days.</p>
1993	<p>Session Laws of Hawaii Act 215 (approved June 10, 1993).⁸³</p> <p>No person with a restraining order can possess a fire-arm.</p>
2003	<p>Hawaii Revised Statutes (chapter 134).¹⁸⁴</p> <p>Most laws stayed the same as in 1988, except those added in the 1992 session. Some of the penalties were increased, but most affected the demand side of fire-arm acquisition.</p>

⁸³ 1993 Haw Sess Laws 215.

⁸⁴ Haw Rev Stat § 134 (2003 Cumulative Supplement).

TABLE 2
Comparison of Hawaii and Federal Firearm Laws

STATUTE	HAWAII ⁸⁵	UNITED STATES
Permit to Purchase	Handguns: pre-1970 Rifles: June 24, 1981	No
Firearm Registration ⁸⁶	Handguns: pre-1970 Rifles: pre-1970	No
Waiting Period	All Firearms: June 24, 1981	February 28, 1994 ⁸⁷
Background Check	All Firearms: June 24, 1981	February 28, 1994 ⁸⁸
Saturday Night Special Ban	May 27, 1975	No
Assault Weapons Ban	June 19, 1992	September 13, 1994 ⁸⁹

⁸⁵ See Hawaii Statutes cited in Table 1.

⁸⁶ Registration for guns brought into the state dates to pre-1970, but registration of new guns bought in-state starts with 1981. See Table 1.

⁸⁷ Brady Handgun Violence Prevention Act, codified at 18 USC § 921 et seq.

⁸⁸ *Id.*

⁸⁹ Violent Crime Control and Law Enforcement Act of 1994, Pub L 103-322, 108 Stat 1796, 1996-2010 (1994), codified at 18 USC § 922(v), repealed as of Sept 13, 2004, by the Violent Crime Control Act § 110105, 108 Stat 2000.

TABLE 3
Descriptive Statistics for State Data⁹⁰

	Full Sample (All States)	Hawaii Only	West Region WA, OR, AZ, CO	West Coast WA, OR, AL
<i>Full Period (1964-1999)</i>				
Homicide Rate	8.56	4.48	5.99	4.91
Gun Homicide Rate	5.63	2.05	3.58	2.83
Non-Gun Homicide Rate	2.94	2.43	2.41	2.08
Suicide Rate	11.92	10.82	15.97	14.75
Gun Suicide Rate	6.73	3.04	9.44	8.49
Non-Gun Suicide Rate	5.19	7.78	6.54	6.25
FSS	55.0	27.9	58.7	57.4
Robbery rate	199.1	102.9	126.9	120.3
Burglary rate	1180.5	1340.4	1420	1352.5
% Urban	71.6	82.9	74.6	69.2
% Black	11.9	2.0	2.8	2.4
% in Poverty	12.5	9.2	11.2	10.3

⁹⁰ Descriptive statistics calculated from state level data, weighting by state population. Statistics measured in rate per 100,000 except FSS which is measure in percentage of households which own a gun.

TABLE 4
Ten Year Crime Averages for Various Regions⁹¹

	Entire US	Hawaii	West Region	West Coast
<i>1971-1980</i>				
Homicide Rate	9.48	6.53	6.25	5.13
Gun	6.36	3.49	3.87	3.10
Homicide Rate Non-Gun	3.12	3.05	2.39	2.03
Homicide Rate Robbery rate	201.8	128.4	132.6	114.9
Burglary rate	1389	1702	1749	1604
FSS	53.95%	30.30%	58.11%	56.50%
<i>1981-1990</i>				
Homicide Rate	9.04	4.06	6.20	5.27
Gun	5.64	1.52	3.36	2.86
Homicide Rate Non-Gun	3.40	2.53	2.84	2.41
Homicide Rate Robbery rate	228.1	111.4	141.5	143.67
Burglary rate	1353	1345	1690	1672
FSS	57.57%	29.46%	59.93%	58.61%
<i>1991-1999</i>				
Homicide Rate	8.38	3.61	6.28	4.90
Gun	5.80	1.52	3.98	2.87
Homicide Rate Non-Gun	2.60	2.09	2.30	2.03
Homicide Rate Robbery rate	218.3	108.9	132.2	128.3
Burglary rate	1012	1091	1122	1061
FSS	57.06%	25.26%	60.30%	59.53%

⁹¹ Descriptive statistics calculated from state level data, weighting by state population. Statistics measured in rate per 100,000 except FSS which is measure in % of households which own a gun.

TABLE 5
Ten Year Suicide Averages for Various Regions⁹²

	Entire US	Hawaii	West Region	West Coast
<i>1971-1980</i>				
Suicide Rate	12.18	11.61	15.98	14.72
Gun Suicide Rate	6.71	3.55	9.34	8.36
Non-Gun Suicide Rate	5.48	8.05	6.64	6.36
FSS	53.95%	30.30%	58.11%	56.50%
<i>1981-1990</i>				
Suicide Rate	12.39	10.28	16.33	14.77
Gun Suicide Rate	7.33	3.04	9.85	8.66
Non-Gun Suicide Rate	5.06	7.24	6.48	6.11
FSS	57.57%	29.46%	59.93%	58.61%
<i>1991-1999</i>				
Suicide Rate	11.75	11.44	16.11	14.96
Gun Suicide Rate	6.92	2.90	9.78	8.95
Non-Gun Suicide Rate	4.83	8.54	6.34	6.01
FSS	57.06%	25.26%	60.30%	59.53%

⁹² Descriptive statistics calculated from state level data, weighting by state population. Statistics measured in rate per 100,000.

TABLE 6
Five Year Averages for Various Homicide Circumstances in
Hawaii

	1976-1980	1981-1985	1986-1990
<i>Homicide Five-Year Average</i>			
Domestic	14.2	9.2	11.4
Felony	11.8	9.6	10.4
Non-Felony	41.9	26.0	31.6
Unknown	14.6	9.4	12.0
<i>Five-Year Average, Share of Total Homicides</i>			
Domestic	21.58%	21.71%	23.36%
Felony	17.20%	21.31%	19.27%
Non-Felony	61.07%	57.72%	58.56%
Unknown	21.28%	20.87%	22.24%