

# Georgia Drug Arrest Trends:

## The Supply-Side Model of Drug Interdiction in Georgia



Submitted to: Governor's Criminal Justice Coordinating Council  
September 30, 2013

## **Applied Research Services Staff**

John Speir, Ph.D.

Tammy Meredith, Ph.D.

Kevin Baldwin, Ph.D.

Sharon Johnson, M.S.

Deena Isom, M.S.

## **Applied Research Services**

663 Ethel Street, NW

Atlanta, GA 30318

404-881-1120

[www.ars-corp.com](http://www.ars-corp.com)

This project was supported by Award No. 2011-BJ-CX-K004 awarded by the Bureau of Justice Statistics, Office of Justice Programs. The opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the Department of Justice.



## Introduction

The present report serves as the preamble to a larger study of Georgia’s Multi-jurisdictional Drug Task Forces (MJTF). In this quasi-experimental analysis of MJTF and non-MJTF jurisdictions, we examine arrest and conviction data from the state Computerized Criminal History (CCH) database as well as a number of other sources. One reason for pursuing this longitudinal study first is to ensure this particular period does not present any temporal issues that could confound the analysis. Specifically, Georgia has, along with the rest of the nation, seen significant decreases in crime over the past few years. As this study will report, Georgia’s overall arrest rates have plummeted since the 2008 recession. While declining arrest rates are predictable given the drop in reported crime rates, the recession may have had a particular period effect that needs to be taken into consideration during the propensity matching phase of the MJTF study. In essence, this report accomplishes the following as a means of providing a context for the larger study and report:

- Introduce the Supply-Side theory of drug interdiction
- Introduce our use of “Criminal Career” methods to study crime trends in Georgia
- Discuss and distinguish between Participation and Frequency as components of crime rates

- Discuss use of CCH data within the context of criminal career methods as a means of testing the effectiveness of Supply-Side approaches
- Discuss falling crime rates as a counterfactual
- Demonstrate the effectiveness of the supply-side approach and the differential effectiveness of the MJTFs by demonstrating:
  - Increased number of high-level drug arrests (larger quantities, trafficking offenses) in MJTF counties, as compared to non-MJTF counties
  - Larger decreases in smaller-level offenses (users), especially first-time offenses in MJTF counties, as compared to non-MJTF counties
- Discuss how drug prices have fluctuated in Georgia and the relationship of this fluctuation to drug interdiction methods.

## The Supply-Side Model of Drug Interdiction

For the past fifty-plus years the United States has pursued a supply-side drug interdiction strategy in an effort to reduce or eliminate the availability of illegal drugs. Relying on the economic principle of supply and demand, supply-side interdiction efforts work by limiting supply through law enforcement efforts, thereby increasing the price of drugs. High prices,

combined with a limited supply, should in turn deter from the market persons who are just experimenting with drugs, while restricting the drug market to hard-core, chronic addicts or the wealthy. The supply-side approach to our drug abuse problem raises several questions that have typically been addressed via reference to the price elasticity of drugs or by an analysis of household substance abuse surveys to measure the extent and age to which new persons are participating in illegal drug activity. Most supply-side studies conducted to date have relied on self-report demand surveys and local treatment data (National Research Council, 2010). Although Georgia does have drug costs data per unit and drug, there has been no detectable change in drug prices during the past 10 years at the state-level, making this data suspect at best and unusable at worst. Taken together, these data problems make it impossible to measure demand, treatment, and cost using traditional methods.

As an alternative approach, the present study relies on 20 years of computerized criminal history records (CCH) or “rap sheet” data to study longitudinal trends in drug arrests and the degree to which arrestee profiles have changed over the past two decades. This approach affords the opportunity to address several key questions, as follows:

- Do new drug arrestees (first-time arrestees) have different participation rates over time? The supply-side strategy suggests that few new first-time arrestees would become involved in drugs as a result of prohibitive price structures and law enforcement efforts.
- Is there an increase (or stabilization) in the arrest rate among chronic drug arrestees willing to both pay the rising cost of drugs and face the increased drug enforcement? The supply-side argument suggests that this would be the case, as drug arrests over time involve more chronic and likely substance-addicted offenders.
- Are drug arrestees getting older? According to the National Research Council’s (2010) report on drug demand, cocaine and heroin drug markets have recently changed, in that both buyers and sellers are much older now.
- Are there any differences in first-time drug arrest rates in economically declining or depressed counties where there is less coordinated law enforcement and substance abuse treatment infrastructure?

### **The Criminal Career Framework**

The term “criminal career” refers to the longitudinal sequence and pattern of crimes committed by an individual offender over the course of his/her lifetime. In a criminal career approach to research (also referred to as lifespan developmental criminology), knowledge of the life events of individual offenders is critical to explaining crime trends and crafting effective intervention strategies. We can study these trends using criminal history data, the method employed in the present study, as well as

elucidating the difference between participation and frequency.

The crime rate, both in Georgia and elsewhere, is a function of two things: participation and frequency. Participation refers to the proportion of Georgia residents committing crimes; frequency refers to the extent of activity among active criminals. We will study both using the epidemiological standard, the number of occurrences (in our case, crimes) per 100,000 residents. By way of illustration, Georgia's index crime rate of 5,000 per 100,000 residents could be the result of 5,000 people each committing one index crime during the study year or 500 people committing 10 crimes during the same year. The challenge to policy makers is to understand the difference between participation and frequency. Each is influenced by different factors and therefore each calls for a different set of policy responses.

Understanding what prevents people from ever getting involved in crime (participation) will help craft policies that divert people from initiating what could become a criminal career. Reducing the frequency of offending requires that we interrupt an active offender's career through some criminal justice system intervention (e.g., prison, community supervision, mandatory treatment). Without an accurate understanding of crime trends and an understanding of the difference between participation and frequency, comprehensive and therefore effective intervention is impossible.

For example, the unprecedented decrease in Georgia's crime rate over the past six years could be the result of many things, including, but not limited to, the following:

1. A decrease in the number of new offenders participating in crime.
2. A decrease in the number of crimes committed by active offenders.
3. A decrease in the length of the criminal careers of active offenders.
4. Shift in offending to less serious crimes.

Each of these explanations has different crime control implications. For example, it is possible that the participation rate has remained unchanged, but a low Georgia unemployment rate has created an abundance of low-skilled jobs, thus interfering with the frequency to which active offenders are available to commit crime (they are busy working instead). On the other hand, Georgia has also led the nation with get tough crime control measures, including "two strikes" legislation, longer sentences, and reductions in parole releases. Together, these legislative and policy changes could have reduced the size of the active offender population (because many are in prison), shortened the length of criminal careers (because they stay in prison longer), or deterred offenders from committing more serious crimes, forcing them to shift to less serious offender activity. It is only by gaining an understanding of what

drives crime rates that policy makers will be in a position to influence them.

Since Marvin Wolfgang's 1972 seminal Philadelphia birth cohort study, researchers have attempted to identify and explain patterns of criminality over the lifespan. Prior to Wolfgang's work, longitudinal studies of a birth cohort were non-existent in the study of crime and delinquency. Wolfgang's study included 9,945 boys born in 1945 and residing in Philadelphia from age 10 to 18. Using school, police, juvenile court, correctional, and selected service records, the research team was able to track most cohort members from birth to their 18th birthday. Wolfgang's concept of the chronic offender reshaped our thinking about offender patterns and gave birth to an entire field research and policies regarding criminal careers. Of the total study cohort, 35% (3,475 juveniles) came into contact with police at least once. However, of the 10,214 offenses committed by members of the cohort, 8,601 (84%) were committed by only one-half of the delinquents. The active chronic, delinquents, those arrested five or more times, accounted for 52% of all offenses. That is, *6% of the entire cohort committed more than half of the crime*. This study prompted investigation into policies grounded in the theory of *selective incapacitation*, whereby one would simply have to identify and incapacitate chronic offenders to see a dramatic decrease in crime rates. Since these findings emerged, researchers have looked

for ways to predict criminality, detect patterns of specialization and escalation, and identify factors that influence dropping out of crime (referred to as desistance).

### **Elements of the Criminal Career Framework**

Researchers typically address four dimensions that characterize a criminal career:

**Participation:** The distinction between those who do and those who do not participate in crime.

**Frequency:** The rate, frequency, or chronicity of criminal activity among active offenders. It is typically measured as the number of crimes an individual offender commits in a year.

**Patterns of Offending (Specialization and Escalation):** The pattern of offense seriousness among active offenders. The question of interest is whether offenders get involved in increasingly more serious crime over time or if they tend to specialize in one type of criminal conduct.

**Career Length:** The length of time an offender is actively engaged in crime. This is measured from the age of onset (first offense) to the point of desistance (last offense).

Scientists believe that understanding and addressing these dimensions separately will help in our search for the factors that cause crime. Effective crime control strategies would then focus on those causes of crime, with the ultimate goal of inhibiting criminal activity. The progression of knowledge would eventually provide us with the ability to accurately target offenders for appropriate sanctions that maximize the likelihood of ending a criminal career.

### Participation

The participation dimension refers to the distinction between those who do and those who do not commit a criminal act. Criminological research is replete with fifty years of studies that identify the factors associated with participation in crime. The factors include parental supervision, adult-child interaction, parental criminality, family size and structure, social class, I.Q. and academic achievement, substance abuse, mental health problems, employment, peer-group influences, and countless other social and personal factors. For example, Wolfgang and his colleagues found a nexus of factors contributing to what the authors refer to as a “disadvantaged position” – namely, non-white youths of low socioeconomic status with lower grade completion, school achievement, and I.Q., and with a high number of residential and school moves.

Crime control and prevention policies that address participation should be significantly different from policies that deal with offenders actively involved in crime. As Blumstein et al. (1986) note, reducing participation is probably more a function of social service, educational, and mental and substance abuse intervention, while frequency (*the second key career component*) is more amenable to intervention via the criminal justice system.

### Frequency

The frequency dimension refers to the number of crimes an offender commits over a period of time. Since Wolfgang et al. (1972), who reported that 6% of the adolescent study cohort accounted for over 50% of the crime committed by the cohort, other researchers investigating juvenile crime document similar findings (Dunford and Elliott, 1984; Farrington, 1983; McCord, 1981; Blumstein and Moitra, 1980; Hamparian et al., 1978; Shannon, 1978; Tracy et al., 1985; West and Farrington, 1977). Most studies estimate between 5% and 19% of the population accounts for over one-half of all crime (Elliott et al., 1982 and Wolfgang, 1983).

In a similar vein, researchers continually report that the best single predictor of future arrests for an individual is previous arrests (Blumstein et al., 1986; Gottfredson and Gottfredson, 1994; Zimring and Hawkins, 1995). Other predictors of frequency of offending include age of onset, drug use, and unemployment (Blumstein et al., 1986). Research on individual arrest rates

(crimes per year per person) finds higher levels of offending among property than violent offenders as well as significantly higher levels of offending among people who have been incarcerated (Blumstein et al., 1986). Finally, while significant, sex, age, and race differences exist at the participation stage, demographic influences drop out of the picture once offenders make the decision to become active in crime (Blumstein et al., 1986).

### **Practical Implications of Criminal Career Research**

The practical (and frankly most sought after) outcome of good criminal career research is the development of effective intervention strategies that, when applied with fidelity, reduce crime. Criminal justice decision makers can use this knowledge to help craft their responses to individual offenders such as:

- To incapacitate him (to interrupt his career);
- To treat him (to modify his career); or
- To classify him, that is, to make an informed prediction about his future offending based on where he is in his criminal career.

Blumstein et al. (1988) make a very clear distinction between policies targeting *participation* and policies crafted specifically for modifying *frequency*. They suggest that larger community-wide prevention strategies targeting the entire population are more appropriate for

reducing participation, while crime control strategies aimed at identifying, rehabilitating, or incapacitating offenders will have a more pronounced effect on offender frequency.

Although strategies aimed at participation and frequency offer considerable opportunities for reducing crime, the authority and responsibility for each are quite different (Blumstein et al., 1986; 1988). The social service sector is better equipped to deal with participation, while frequency falls more appropriately under the venue of the criminal and juvenile justice systems. Wolfgang's uncovering of the chronic offender has turned efforts toward selectively targeting chronic offenders (or those thought to be on the path to becoming chronic offenders) in an effort to interrupt (or end) their careers. The almost exclusive focus on this policy implication alone has unfortunately overshadowed the other aspects of the criminal career concept – incapacitation.

Criminal justice decision makers attempt to modify criminal careers through rehabilitation or treatment. The National Institute of Justice Panel on Research and Rehabilitative Techniques (Martin et al., 1981) articulated the popular belief of the 1970s and 1980s that modifying criminal careers was impossible since treating offenders could not be shown to change behavior. Times have changed considerably, in that at present a large body of research consistently demonstrates that clinically relevant



treatment can and does reduce criminal behavior. Perhaps the most well-known and well-supported interventions are problem-solving courts (e.g., drug courts) and applications of the Risk-Needs-Responsivity (RNR) model. Outcome research studying these interventions has consistently demonstrated that in fact what is most effective in reducing criminal behavior is when evidence-based interventions are applied to cases posing the highest risk of recidivism (Andrews, 1994; Andrews et al., 1990a; Andrews et al., 1990b; Gendreau & Ross, 1979). In accordance with this body of research, we have in Georgia a number of policies and programs aimed at modifying (reducing or ending) criminal careers through application of evidence-based practices.

### **Criminal Career Research in Georgia**

Georgia represents a unique site for conducting criminal career research. First, Georgia consistently ranks high among states for both juvenile and adult crime and arrest rates, resulting in one of the largest criminal history repositories in the nation. Secondly, Georgia is one of the fastest growing states in the nation, with a growing ethnic and racially diverse population. Finally, Georgia ranks among the top states in the nation, along with California, New York, and Florida, in the number of criminal fingerprints processed each year, and was the first state to have an Automated Fingerprint Identification System (AFIS) used to create and update criminal history records.

Given these characteristics, Georgia offers an excellent opportunity to study criminal history records (CHR) as a means of conducting public policy research. What follows is an exploration of 20 years of CHR data in Georgia as a means of exploring trends in drug offenses in Georgia.

### **Do Trends in Georgia Support the Supply-side Model?**

Before we can properly assess the potential impact of Supply-side drug interdiction models in Georgia, we first need to address the fact that crime rates, both in Georgia and throughout the nation, have fallen considerably over the last number of years. Over the past six years in particular, Georgians have witnessed an unprecedented drop in serious crime. According to the latest crime statistics, Georgia's Violent Crime Index (measured as the number of murders, rapes, robberies, and aggravated assaults reported to police per 100,000 residents) continues to decline. As shown in Figures 1 through 5, the Georgia Violent Crime Index has decreased 25% since 2007, while Georgia's Property Crime Index (measured as the number of larcenies, burglaries, and motor vehicle thefts reported to police per 100,000 residents) has decreased 8% during that same time frame. Among major offense types, only burglary has seen a slight increase at 1%.

Figure 1. UCR Violent Crime Index: Georgia, 1990-2011

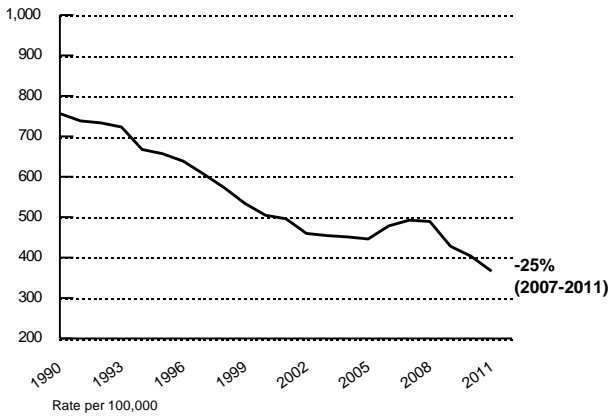


Figure 4. UCR Property Index: Georgia, 1990-2011



Figure 2. UCR Murder Rate: Georgia, 1990-2011



Figure 5. UCR Burglary Rate: Georgia, 1990-2011

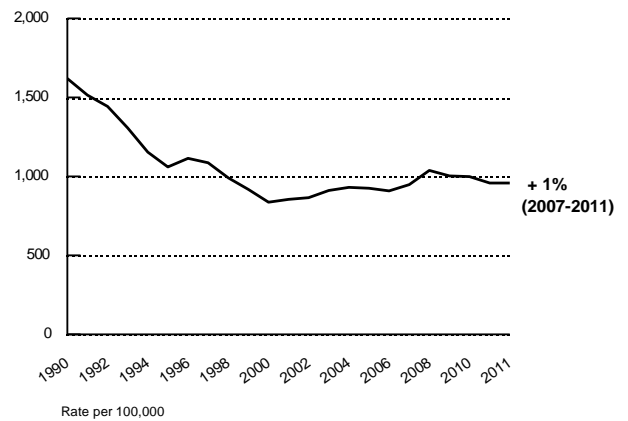
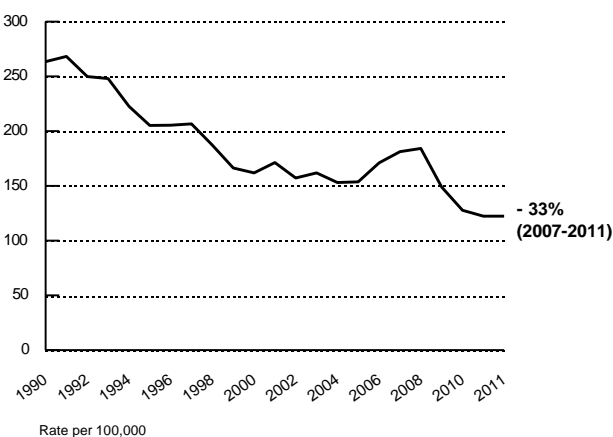


Figure 3. UCR Robbery Rate: Georgia, 1990-2011



### Decline in Georgia CCH Arrests

Decreases in reported crimes have in turn led to a significant drop in *arrests* for serious violent and property crimes across the state. As shown in Figure 6, Georgia has experienced a significant reduction in *adult felony arrest rates* (per 100,000 adult residents) since 1990 and a 3% drop since 2007. This drop is not attributable to an increasing Georgia population. The total CCH felony arrest episodes has dropped 4% since 2009 (Figure 6a). Only misdemeanors have undergone an increase in the past five years, jumping 6% (Figure 7). Because

misdemeanors are the only arrests that exhibited an increase, this trend deserves attention. The reader must keep in mind that CCH arrests reflect fingerprinted arrests. Every year, the Attorney General publishes a list of all offenses that law enforcement must fingerprint upon arrest. While this list does not change markedly each year, the Attorney General has added new misdemeanors to the list over the last few years, which could account for some increase in misdemeanor arrests. At the same time, sheriffs and police have expanded their use of live-scan fingerprint technology. It is plausible that this technology has led to increased fingerprinting for offenses that may not fall under the mandatory fingerprint list, such as low-level misdemeanors (non-DUI traffic). In sum, the increased misdemeanor arrests could be an artifact of reporting requirements and technology rather than a real increase in misdemeanor arrests.

Figure 6. CCH Felony Arrest Rate (Most Serious), 1990-2011

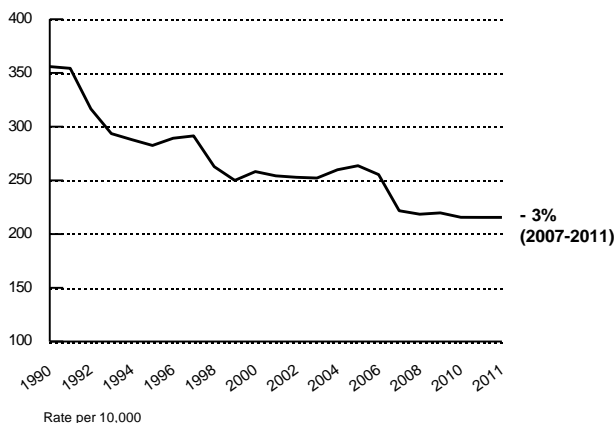


Figure 6a. Total # of CCH Felony Arrest Episodes, 1990-2012

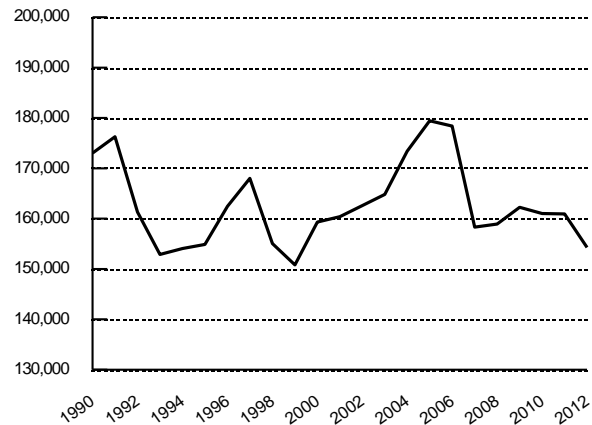
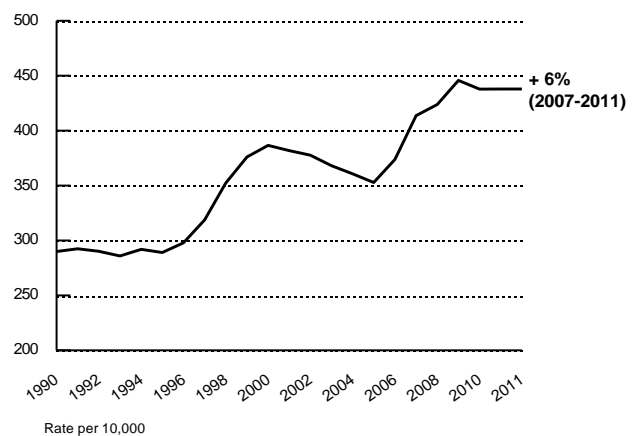


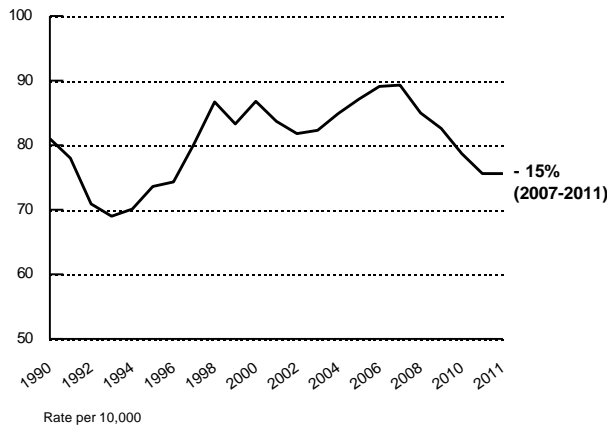
Figure 7. CCH Misdemeanor Arrest Rate (Most Serious), 1990-2011



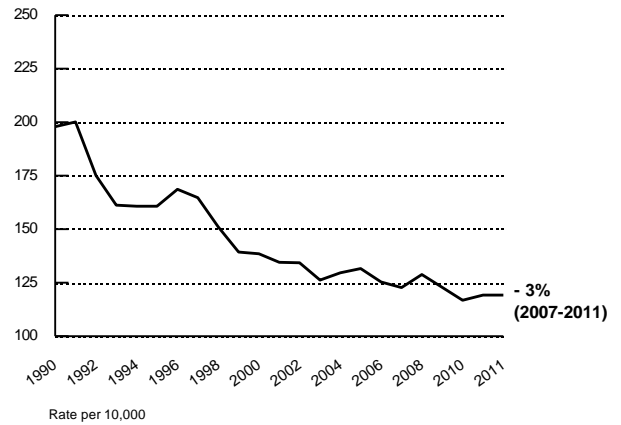
As shown in Figures 8 to 10, all major offense types have undergone a significant drop over the past five years. Among felony drug arrests, Georgia has seen a 15% drop in arrests since 2007, while felony property and violent crime arrest rates have fallen only 3% and 5%, respectively. The drop in drug crimes does raise questions. Although Georgia has seen an abatement of the crack epidemic of the 1990s, the rise of methamphetamine abuse over the past 12 years has engendered new problems. This seems particularly interesting following Georgia's 2000-2006 increase in felony drug

arrest rates just prior to the recession. Figure 10a shows another perspective on the possible recession period. The county felony arrest rates are broken down into four groups based on overall economic vitality, which measures the extent to which counties are prospering or declining (levels A-D, in alphabetical order of decreasing economic vitality). The first conclusion is that C and D counties appear to experience the most significant drop in arrest rates compared to counties with higher economic vitality. While not conclusive, this decline in drug arrests suggests that the recession could have had an adverse impact on poorer counties with low economic growth.

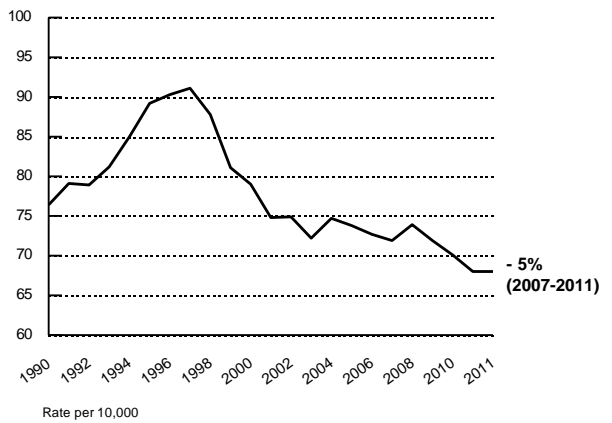
**Figure 8. CCH Felony Drug Arrest Rate (Most Serious): 1990-2011**



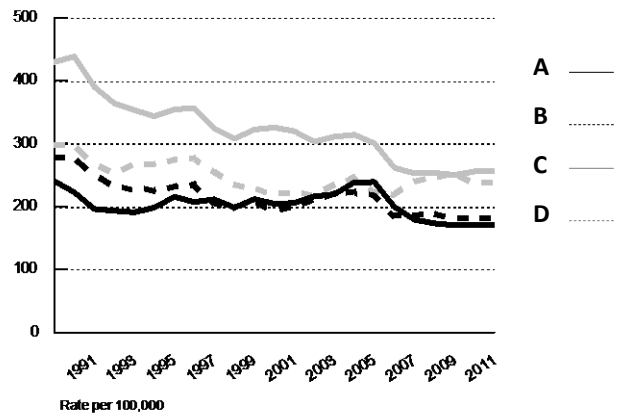
**Figure 9. CCH Felony Property Arrest Rate (Most Serious): 1990-2011**



**Figure 10. CCH Felony Violent Arrest Rate (Most Serious), 1990-2011**

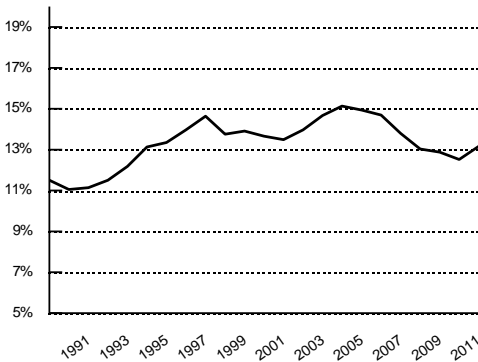


**Figure 10a. Felony Arrest Rates by Economic Vitality Index Rank, 2000-2011**



The arrest rates indicate that drugs arrests have changed per capita, but has law enforcement seen fewer drugs at arrest? That is, among Georgia arrestees, what percentage involves a drug charge? Historically, states have relied on UCR arrest statistics to report arrest activity. However, the UCR captures the most serious charge at arrest as defined by the UCR, and not whether the arrest involved a drug-related charge. These statistics can mask the extent to which people are arrested with or for selling drugs. The CCH data captures all charges, including whether drugs were involved. Figure 11 displays the percent of all arrests, felonies and misdemeanors, that include at least one drug charge, even if it is misdemeanor marijuana possession, which is the only Georgia illegal possession misdemeanor.

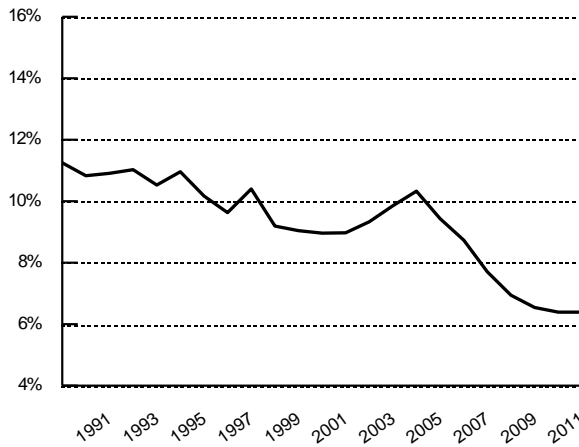
**Figure 11. Percent (%) of All Arrests with At Least One Drug Char 1990-2011**



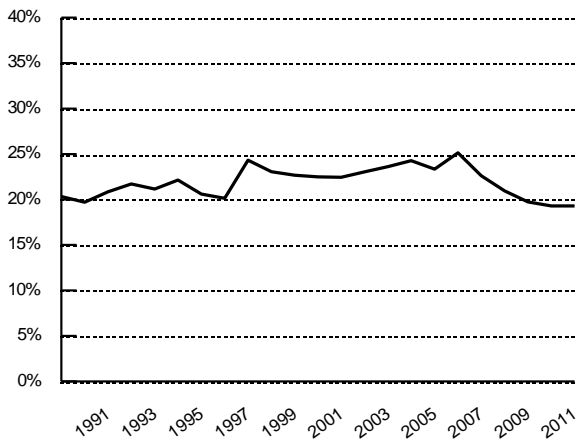
Overall, the percent of all arrests involving a drug charge has remained stable, ranging from 11% to 15% of all arrests. The picture changes however, when isolating felony drug charges by removing misdemeanor marijuana possession charges. Figure 12 shows a marked decline in felony drug charges since 2003, falling from

10% to 6%. Figure 13 reveals that 1 of 4 felony arrests involved drugs in 2007. Between 2007 and 2011 this percentage dropped 5%, to just around 20% of arrests. In conclusion, as arrests have fallen, the percentage of arrests involving drugs, whether as the most serious charge or not, has declined as well. There are a limited number of plausible explanations for these consistent trends. One could conclude that drug interdiction efforts have changed the prevalence in drug arrests and is responsible, at least in part, for the overall reduction in reported crime. Alternatively, the timing at which the decline occurs suggests that the recession could have weakened Georgia’s drug interdiction efforts. While people are still found with drugs during the commission of other offenses (e.g., traffic, property/violent crimes), the decline could be attributed to less targeted drug interdiction efforts (e.g., fewer task force resources, undercover operations, drug units). Let’s explore the possible impact of the Great Recession on Georgia’s crime rates.

**Figure 12. Percent (%) of All Arrests with At Least One Felony Drug Charge, 1990-2011**



**Figure 13. Percent (%) of All Felony Arrests with At Least One Felony Drug Charge, 1990-2011**



**Recession Effects and Georgia Arrest Trends**

Historically, economic downturns are associated with increased criminal activity, arrests, and incarceration. However, the 2008 recession and the economic impact on local communities had the opposite effect, particularly in how law enforcement services are delivered. Although the national economy has recovered to a limited extent, most agree that state and local economies generally lag far behind the national economy in terms of increased tax revenues. According to

Melekian (2011), the effect of deep cuts in local budgets may affect law enforcement for another five years. Melekian also contends that local officials may not return to budget levels previously allocated to public safety following the impact of this protracted recession. Melekian contends that law enforcement agencies, faced with fewer resources, will continue to support emergency response and reported crime reports. However, the community demand for these services may come at the expense of criminal investigations, traffic support, and other crime prevention strategies.

Supporting the hypothesis that the recession has reduced somewhat law enforcement efforts, the COPS program using survey findings suggest that the recession has had a significant impact on law enforcement. A 2011 COPS review of independent surveys found that most law enforcement agencies had experienced budget cuts in 2009-2010 and that most expected more reductions in 2011. At the same time, 97% of the agencies reported that they had already experienced flat or declining budgets over the 12 years preceding the recession. COPS hiring program data suggest that approximately 6,000 officers were laid off between 2009 and 2011. The International Association of Police estimates 10,000 layoffs, while the Fraternal Order of Police reported layoffs exceeding 12,000 to 15,000 officers. It is premature to translate these staff reductions into operational impact. However, it underscores that most

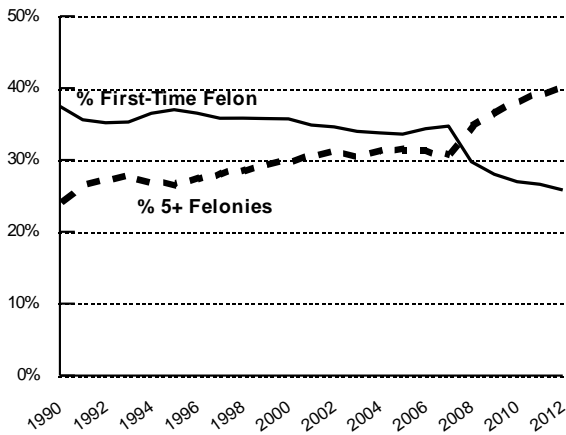
agencies were forced to adjust, which requires re-prioritization of law enforcement services. This period effect needs to be considered in the research design of the Georgia Drug Task Force (DTF) Study, particularly in selecting comparison sites. It is plausible that the recession left sites with a DTF with the only organized drug interdiction program in a given jurisdiction, while non-DTF sites were forced to shift priorities away from drug interdiction efforts.

### **Testing the Supply-side Model**

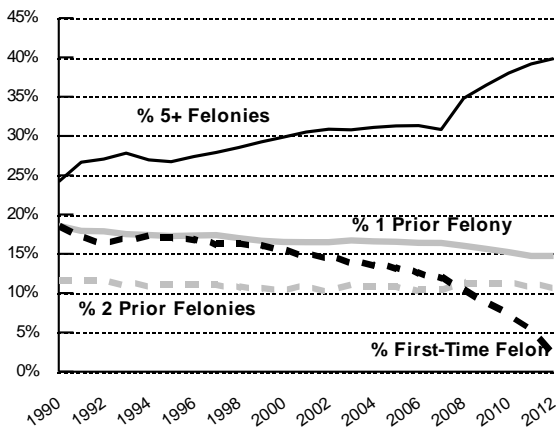
As noted previously, participation is defined herein as the rate of new first-time felony arrestees over time. In terms of drug-related offending, a supply-side model would predict that the cost of drugs in terms of price, availability, and threat of potential arrest would result in a reduction of the percentage of first-time felony arrestees, while leading to an increase in arrests of chronic drug abusers. Figure 14 displays the percent of all felony arrests in which the person is arrested for the first time compared to those who are chronic arrestees (those-with five or more felony arrests). In 1990, 38% were first-time felony arrestees, while those with five or more priors accounted for 25% and arrestees with two to four priors accounted for 37% of felony arrests (62% repeat arrestees). By 2010 the trends had reversed. Repeat arrestees account for 75% of all arrests and first-timers account for only 25%. We not only have more repeat offenders today,

but the increase stems primarily from the increase of offenders arrested for a felony that have at least four prior felony arrests. Additionally, this increase in chronic offenders has occurred in just the past five years, a period which has also seen a pronounced drop in first-time felony arrests. Again, timing may be an issue, and suggests that the recession effect has not only carried over into who is being arrested, but also for what charges. Figure 15 shows the percent of felony arrestees for first-timers and those with varying numbers of prior arrests. The observed decrease applies to first-timers only, in that there is no observable change in those arrested with one or two prior felonies. At the same time, the figure depicts a corresponding increase in felony arrests involving arrestees with five or more priors. The consistent decline in first-time arrests is even more dramatic when examining the number of first-time offenders arrested per 10,000 offenders, as depicted in Figure 16. Since 1990, the first-time arrest rate has dropped 67% between 1990 and 2011, dropping 34% in the five years between 2007 and 2011.

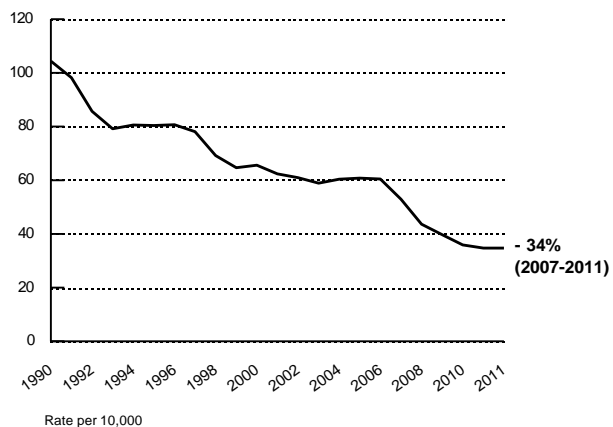
**Figure 14. First-Time Felon as Percentage (%) of all Felony Arrestees, 2012**



**Figure 15. First-Time & Chronic Felons as Percentage (%) of all Felony Arrestees, 1990-2012**



**Figure 16. First-Time (Participation): Felony Arrest, 1990-2011**



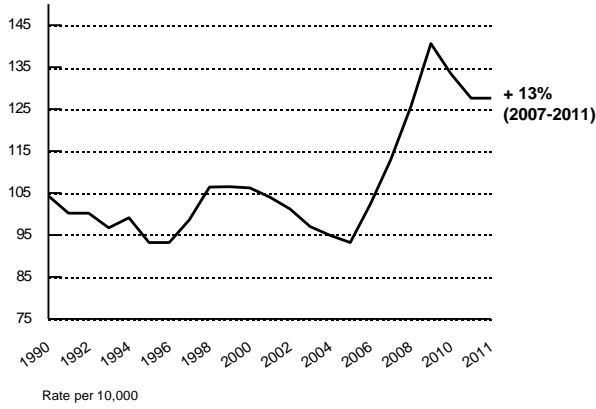
### First-Time Participation: A Closer Look

Taken together, these patterns suggest that the recent declines in crime are attributable in large part to fewer first-timers entering the system. To further investigate this apparent decline in first-timers entering the system, we next examine arrest rates among first-timers for the major felony crime types. As can be seen in Figures 17-20, decreases of thirty percent or greater are seen over the last five years in both first-time felony property and first-time felony violent offenses. While decreases are also seen among chronic offenders, the decreases are not as dramatic, with a 7% decrease in the arrest rate overall for chronic offenders and a 17% drop in felony property arrests and a 12% decrease among felony drug arrests involving chronic offenders please see figures 21 through 24). Defying overall trends among chronic offenders however was the arrest rate for violent felonies committed by chronic offenders, which actually demonstrated an increase over the last five years of five percent. Examining the larger picture, these decreases for felony arrests have been accompanied by a corresponding increase in first-time misdemeanor arrests, with increases in property offenses accounting for most of the increase among misdemeanor-level offenses.

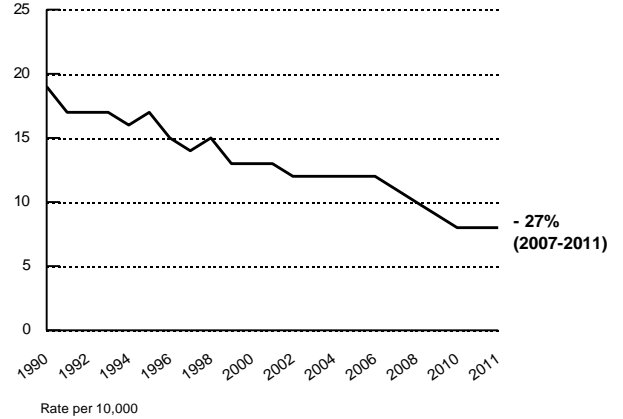


Georgia Drug Arrest Trends - The Supply-Side Model

**Figure 17. First-Time Arrest (Participation): Misdemeanors 1990-2011**



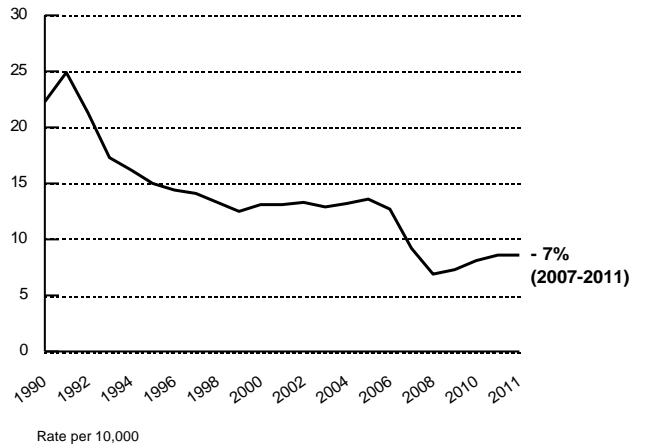
**Figure 20. First-Time Arrest (Participation): Felony Drug (most serious), 1990-2011**



**Figure 18. First-Time Arrest (Participation): Felony Property, 1990-2011**



**Figure 21. Chronic Felons Arrest Rate, 1990-2011**



**Figure 19. First-Time Arrest (Participation): Violent Felony 1990-2011**



**Figure 22. Chronic Property Felon Arrest Rate, 1990-2011**

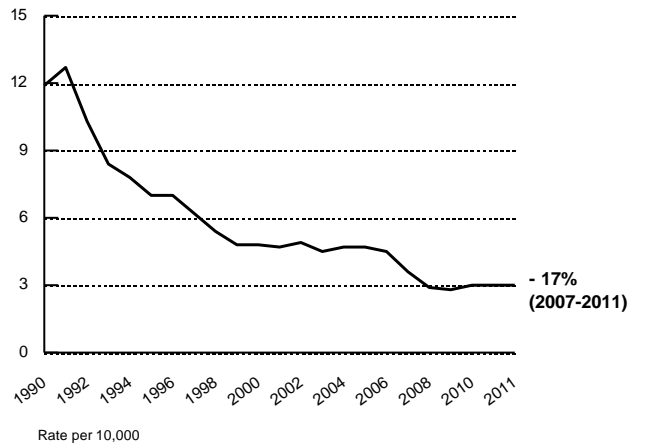


Figure 23. Chronic Violent Felon Arrest Rate, 1990-2011

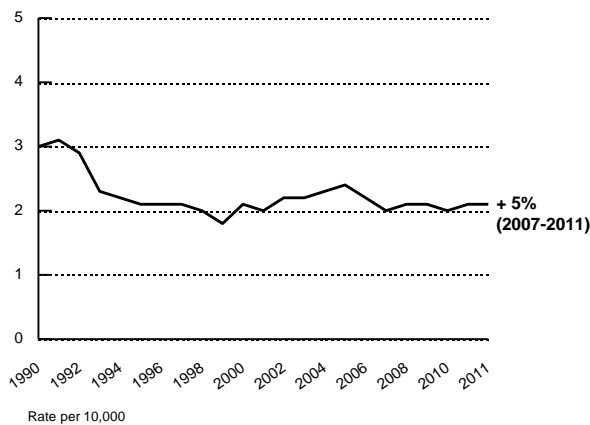
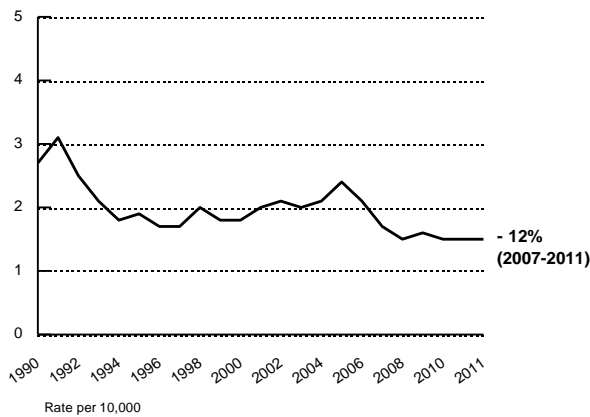


Figure 24. Chronic Drug Felon Arrest Rate, 1990-2011



Invoking supply-side interdiction again, this theory would predict that as the cost associated with obtaining drugs increases, younger and less affluent (and also likely less substance-dependent) users would effectively be priced out of the market. This strategy finds wide use among states in terms of the use of ever-increasing taxes on tobacco products, which studies suggest have in and of themselves led to a decrease in the purchase and use of tobacco by youth. Taking a look at our arrest data broken out by age and type of offense, we find that while drug possession and drug sales arrests have decreased overall, these decreases are more

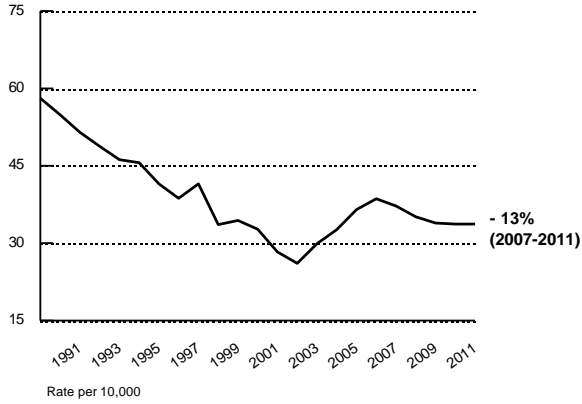
pronounced among arrestees between the ages of 17 and 24 than they are among arrestees ages 25 and older (please see figures 25 through 28). These trends are perhaps even more apparent as we examine figures depicting the age of drug offense arrestees at four points in time – 1990, 2000, 2007, and 2012. As is evident in figures 29 through 34, older arrestees account for a larger proportion of arrestees as we move from 1990 through 2012. This is perhaps best illustrated as we draw a vertical line extending up from the X-Axis at age 40. The proportion of offenders age 40 and above (that is, those to the right of this line) increases rather dramatically in the 22 years between 1990 and 2012.

Figure 25. Arrestees Age 17-24: Arrest Rate with at Least On Drug Possession Charge, 1990-2011

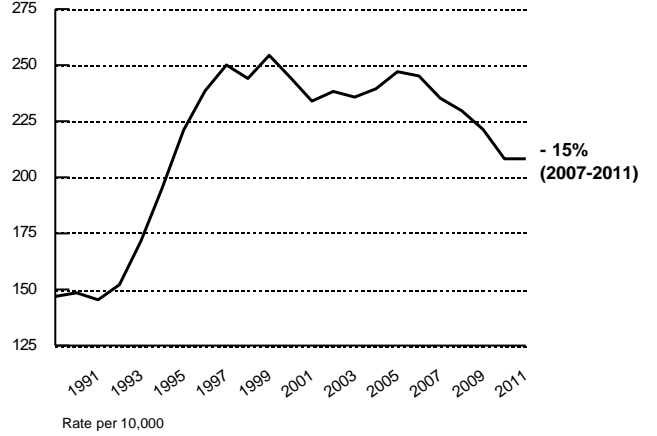


Georgia Drug Arrest Trends - The Supply-Side Model

**Figure 26. Arrestees Age 25 and Over with At Least One Drug Charge, 1990-2011**



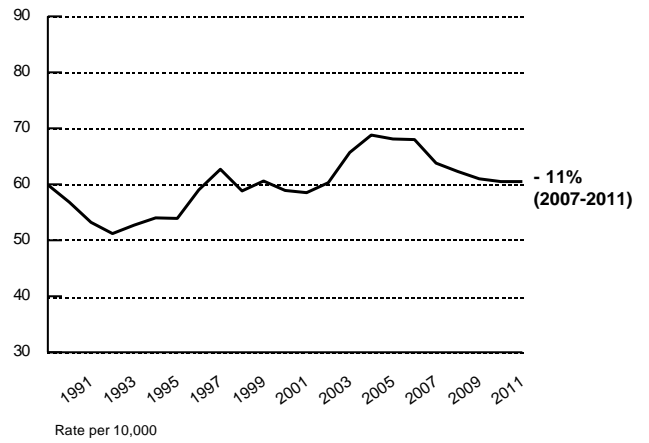
**Figure 29. Arrest Rate Among Arrestees Age 17-24 With At Least One Drug Charge, 1990-2011**



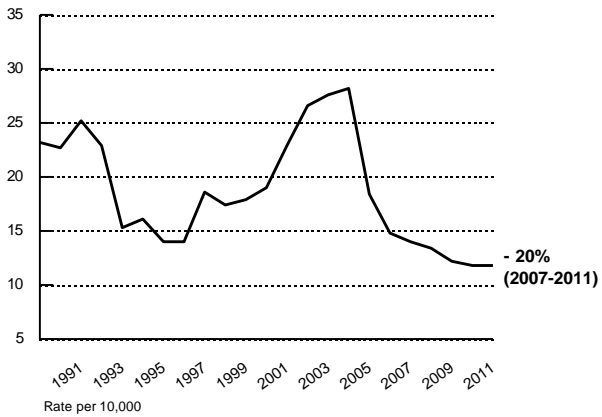
**Figure 27. Arrestees Age 17-24 with At Least One Drug Sales Charge, 1990-2011**



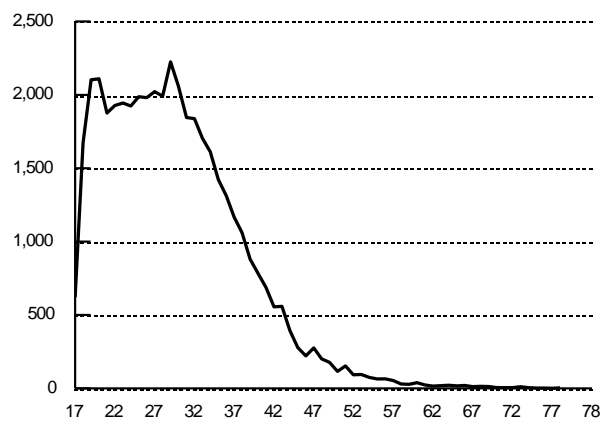
**Figure 30. Arrest Rate Among Arrestees Age 25 and Over With At Least One Drug Charge, 1990-2011**



**Figure 28. Arrestees Age 25 and Over with At Least One Drug Sales Charge, 1990-2011**



**Figure 31. # of Felony Drug Charges by Age of Arrestee, 1990**



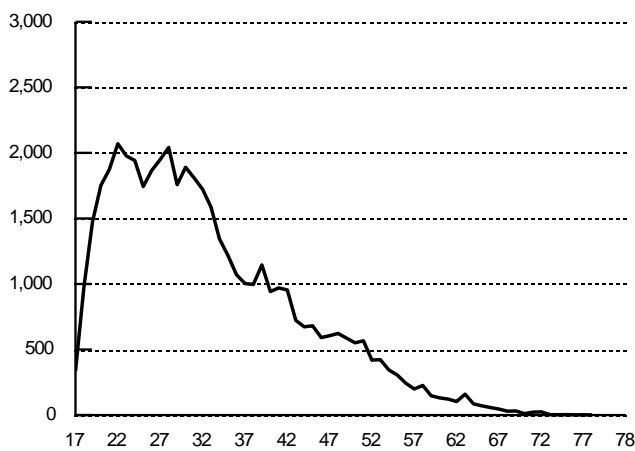
**Figure 32. # of Felony Drug Charges by Age of Arrestee, 2000**



**Figure 33. # of Felony Drug Charges by Age of Arrestee, 2007**



**Figure 34. # of Felony Drug Charges by Age of Arrestee, 2012**



While the age trends elucidated above are strongly suggestive that a supply-side policy is effective in Georgia, these findings are by no means conclusive. There are still far too many factors that are unmeasured which could account for this change. For example, a critical component of the Supply-side model is drug price elasticity. As the price of drugs increase due to intensified interdiction, first-timers and younger users desist, leaving only the older, long-term drug involved offenders. It is difficult to link a drop in first-time offenders and increases in age to drug interdiction with certainty, although this is surely consistent with a supply-side model. Let's now take a closer look at price elasticity in Georgia.

### Georgia Price Elasticity

As noted above in our description of the Supply-side model of drug interdiction, a decreased supply of drugs is thought to lead to increased prices for drugs, the supply of which has been limited due to successful interdiction efforts. If interdiction efforts have successfully limited supply, drug prices therefore ought to demonstrate increases during the period of time interdiction efforts have been in place or intensified.

Looking at price trends for popular drugs of abuse in Georgia, Table 1 on the next page shows the statewide prices for selected drugs and quantities for 2005 and 2012. Unfortunately, county-specific and/or Drug Task Force (DTF)

Table 1.  
Standardized Statewide Drug Price (\$\$) Estimates: Selected Drugs & Quantities  
Georgia Bureau of Investigation

	Gram		Ounce		Pound	
	2005	2012	2005	2012	2005	2012
<u>Marijuana</u>						
Sinsemilla			\$300	\$300	\$3,500	\$4,500
Commercial	\$30	\$30	\$125	\$125	\$1,200	\$3,000
Hashish			\$200	\$200	\$3,000	\$3,000
<u>Cocaine</u>						
Powder	\$100	\$100	\$900	\$1,000	\$11,000	\$11,000
Crack	\$125	\$125	\$900	\$850	\$12,500	\$12,500
<u>Methamphetamine</u>						
Powder	\$100	\$100	\$900	\$800	\$9,000	\$9,000
Ice		\$110	\$1,200	\$1,600	\$12,000	\$18,000

GBI does not report grams for all drugs

price data is not available. Data indicate that overall, while the price of some drugs packed at the distribution quantities (pounds) has increased, prices for lower quantities have not changed significantly for a number of drugs. As methamphetamine (hereinafter referred to as “meth”) has increased in use to rival cocaine prevalence and law enforcement has focused resources on this drug, it is not surprising that meth prices have increased. Ice has increased 33% at the gram level, while increasing 50% at the pound level. Increasing drug costs is consistent with a supply-side model, but the increase in meth costs occurred at a time when Georgia experienced a dramatic increase in methamphetamine use. These trends can be explained, at

least in part, by the high addiction potential of meth and the post-high withdrawal symptoms and cravings that accompany meth abuse. According to the GBI crime lab and the National Forensic Laboratory Information System (NFLIS), the GBI saw a significant increase in methamphetamines in

their analysis, concurrent with a significant decline in cocaine interdiction (although cocaine still surpasses methamphetamine in overall numbers of arrests and seizures). Since the GCIC started distinguishing methamphetamine from cocaine arrests, methamphetamine arrests increased significantly in 2012 while cocaine activity has seen a steady decline. See Table 2.

Taken together, findings regarding price elasticity of certain substance of abuse in Georgia do not by themselves provide significant support for the effectiveness of

Table 2.  
Cocaine and Methamphetamine Samples vs. Cases, 2010 - 2013  
Georgia Bureau of Investigation

	2010		2011		2012		2013	
	Samples	Cases	Samples	Cases	Samples	Cases	Samples	Cases
Cocaine	10,577	9,203	8,793	7,650	9,009	7,551	6,144	5,114
Methamphetamine	5,270	4,262	5,183	4,187	6,807	5,361	6,598	5,347

Supply-side interdiction efforts in Georgia. Two limitations of our ability to explore the relationship between drug prices and interdiction efforts however are the lack of county-level of DTF-level costs (allowing for a much more fine-grained analysis of drug prices) and the complexity of market and social factors that together determine pricing structures in any open-market system.

## Conclusions

This report had as its aim to provide both an introduction to and a context for the larger report describing our quasi-experimental analysis of the impact of DTF membership on drug offenses at the county level in Georgia. We have introduced in this report a number of concepts and methods in an attempt to frame our study findings, elucidating the Supply-side interdiction model that characterizes DTF efforts and describing the use of crime career analysis as a means of understanding the relative contribution of participation and frequency to crime rates. We have also described the reduction in crime and arrest rates in Georgia over the last few years, taking into account the potential effects on these rates by the Great Recession and by drug arrest trends using Georgia Computerized Criminal History (CCH) data. We have demonstrated that certain decreases consistent with Supply-side models are apparent in terms of drug arrests, over and above the observed decreases in crime and arrest rates in Georgia.

Unfortunately, the lack of specific county-level data, combined with the complexity associated with explaining price fluctuations, has precluded our ability to demonstrate a relationship between the prices of common drugs of abuse with Supply-side interdiction efforts in Georgia. In essence, we have laid the groundwork necessary to address our two main hypotheses regarding DTFs in Georgia, which are as follows:

1. Participation in a DTF will be associated with an increase in arrests for higher-level drug possession (e.g., larger quantities seized) and trafficking
2. Participation in a DTF will be associated with a decrease in arrests for lower-level drug possession arrests

Using a quasi-experimental method and Propensity Score Matching, we will pair DTF counties with comparable non-DTF counties and assess the above questions.

## References

- Andrews, Donald A., James Bonta, and Robert D. Hoge, 1990a. Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior* 17:19-52.
- Andrews, Donald A., Ivan Zinger, Robert Hoge, James Bonta, Paul Gendreau, & Francis Cullen, 1990b. Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology* 28(3): 364-404.
- Andrews, Donald A., 1994. An overview of treatment effectiveness: Research and clinical principals. Ottawa, Canada: Carleton University.
- Applied Research Services, 2000. Sexual assault offender accountability in Georgia: a ten year perspective. A Report of the Georgia Statistical Analysis Center.
- Applied Research Services, 2001. Informing Crime Control Strategies with Criminal Career Research. A Report of the Georgia Statistical Analysis Center.
- Blumstein, Alfred and Jacqueline Cohen, 1979. Estimation of individual crime rates from arrest records. *Journal of Criminal Law and Criminology* 70(4): 561-585.
- Blumstein, Alfred and Soumyo D. Moitra, 1980 Identification of .career criminals. From .chronic offenders. in a cohort. *Law and Policy Quarterly* 2(3): 321-334.
- Blumstein, Alfred and Jacqueline Cohen, Jeffrey A. Roth, and Christy Vishner, 1986  
Criminal careers and .Career Criminals.(Vol. I). Washington, DC: National Academy Press.
- Blumstein, Alfred, Jacqueline Cohen, Somnath Das, and Soumyo D. Moitra, 1988 Specialization and seriousness during adult criminal careers. *Journal of Quantitative Criminology* 4: 303-345.
- Blumstein, Alfred and Richard Rosenfeld, 1998. Assessing the Recent Ups and Downs in U.S. Homicide Rates. *National Institute of Justice Journal*, October.
- Cohen, Jacqueline, 1984. Research on criminal careers: Individual frequency rates and offense seriousness. In Alfred Blumstein, Jacqueline Cohen, Jeffrey A. Roth, and Christy Visher (eds.) *Criminal Careers and .Career Criminals.*, Vol I pp. 292-418. Washington, D. C.: National Academy Press.
- Dunford, Franklyn W. and Delbert S. Elliott, 1984. Identifying career offenders using self-reported data. *Journal of Research in Crime and Delinquency* 21: 57-87.
- Elliott, Delbert, David Huizinga, and Suzanne Ageton, 1982. Explaining delinquency and drug use. Beverly Hills: Sage Publishing.
- Farrington, David P, 1983. Further analyses of a longitudinal survey of crime and delinquency . Final report to the National Institute of Justice, June 1983. U.S. Department of Justice.
- Farrington, David P., 1986. Age and Crime. From Michael Tonry and Norval Morris (eds.) *Crime and Justice: An Annual Review of Research*, Vol. 7, pp. 189-250. Chicago:University of Chicago Press.
- Farrington, David P., Howard N. Snyder, and Terrence A. Finnegan, 1988. Specialization in juvenile court careers. *Criminology* 26: 461-185.
- Gendreau, Paul and Robert Ross, 1979. Effective correctional treatment-bibliotherapy for cynics. *Crime and Delinquency* 25(4): 463-489.

- Gottfredson, Stephen D. and Don M. Gottfredson, 1994. Behavioral Prediction and the problem of incapacitation. *Criminology* 32 (3): 441-474.
- Hindelang, Michael, 1971. Age, sex, and the versatility of delinquent involvements. *Social Problems* 18: 522-535.
- Martin, Susan E., Lee B. Sechrest, and Robin Redner (eds.), 1981. *New directions in the rehabilitation of criminal offenders*. Washington, D.C.: National Academy Press.
- Mazerolle, Paul, Robert Brame, Ray Paternoster, Alex Piquero, and Charles Dean, 2000. Onset age, persistence, and offending versatility: Comparisons across gender. *Criminology* 38: 1143-1172.
- McCord, Joan, 1981. Longitudinal perspectives on patterns of crime. *Criminology* 19(2):211-218.
- Melekian, Bernard, 2011. *The impact of economic downturn on American police agencies*. Department of Justice, Office of Community Oriented Policing.
- Nagin, Daniel and David P. Farrington, 1992. *Onset and persistence of offending. of adult criminal careers to juvenile careers*. US Department of Justice.
- Tracy, Paul E., Marvin Wolfgang, and Robert M. Figlio, 1983. *Delinquency in two birth cohorts*. University of Pennsylvania. U.S. Department of Justice.
- West, Donald J. and David P. Farrington, 1977. *Delinquent way of life-third report of the Cambridge study in delinquent development*. London, UK: Heinemann.
- Wolfgang, Marvin E., Robert M. Figlio, and Thorsten Sellin, 1972. *Delinquency in a birth cohort*. Chicago: University of Chicago Press.
- Wolfgang, Marvin E., 1983. Violent juvenile- a Philadelphia profile in Kenneth R. Feinberg.s (ed) *Violent Crime in America*, pp. 17-24. Washington, D.C.: National Policy Exchange.
- Zimring, Franklin E. and Hawkins, Gordon, 1995. *Incapacitation: Penal confinement and the restraint of crime*. New York: Oxford University Press.