

Enemy of the State:
Are Free Markets Connected To The Efficacy Of ALPR Regulations?
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Abstract:

The action film “Enemy of the State” depicts a realistic world where excessive eavesdropping and spying by a government, or rogue faction within it, targets an American citizen who is in the wrong place and wrong time. Nearly two decades after the movie, law enforcement, politicians and citizen groups are debating whether or not there should be restrictions on a key type of surveillance: the automated license plate reader or ALPR. Backers of ALPRs contend that such a device could be used to capture criminals and terrorists. Supporters of ALPR regulation question (1) the effectiveness of the device, (2) the ability to secure such data generated by the device from those who would abuse it, (3) the chilling impact these devices can have on civil liberties. Analysis of the states and a city which have regulated ALPRs generally show a decline in the crime rate, neutralizing the argument that rules and restrictions on ALPRs hamper their effectiveness. Such data should be noted by states with strong support for free markets, which have not chosen to limit government powers that ALPRs provide, despite their potential to chill economic freedom.

Key Words:

License Plate Reader, Economic Freedom, Surveillance, Security, Regulation, Civil Liberty

From The Silver Screen To Real Government Screening

The movie “The Enemy of State,” written by David Marconi and directed by Tony Scott, features a pair of characters played by Will Smith and Gene Hackman, who are pursued by rogue government agents seeking to cover up a political murder. The victim, an elected official, is assassinated for not approving legislation legalizing a powerful surveillance system, claiming it would take away all privacy rights held by Americans. Smith’s character, despite having little to do with the case, finds his life turned upside down by these nefarious characters, which seem to be able to spy on every single aspect of his life. Even a phone call made by Smith’s character leads a building to be blown up (IMDB 2015).

At the conclusion of the film, media host Larry King, playing himself, asks “How do we draw the line - draw the line between protection of national security, obviously the government's need to obtain intelligence data, and the protection of civil liberties, particularly the sanctity of my home (IMDB 2015)?”

Thomas Reynolds, the villain who is played by Jon Voight, observes “We never dealt with domestic. With us, it was always war. We won the war. Now we’re fighting the peace. It’s a lot more volatile. Now we’ve got ten million crackpots out there with sniper scopes, sarin gas and C-4. Ten-year-olds go on the ‘net, downloading encryption we can barely break, not to mention instructions on how to make a low-yield nuclear device. Privacy’s been dead for years because we can’t risk it. The only privacy that’s left is the inside of your head. Maybe that’s enough. You think we’re the enemy of democracy, you and I? I think we’re democracy’s last hope (IMDB 2015).”

Three years after the film was made, 9/11 occurred. Concerned for their safety, Americans have increasingly agreed with Reynolds’ position, approving greater powers to law enforcement. These include enabling government cameras with automated license plate readers (ALPRs) to track cars, which could be stolen or used otherwise to commit crimes. While certainly a powerful tool in the arsenal of law enforcement, concerns have been raised because most of the monitored cars are driven by people who aren’t committing crimes at all, or never have been. And such information can be used in other ways, either by dishonest bureaucrats, or hackers who can easily penetrate government security. These concerns are often voiced by civil libertarians, who see the encroachment of government power as a threat to private individuals and perhaps one’s economic livelihood, as Will Smith’s character experienced in the film.

Such concerns have led several states to regulate the data compiled by these ALPRs. But are there any common characteristics among these states? We provide research on these states, to see if there is a connection to a wide range of political and economic factors, including economic freedom.

One might get the impression that this focus on government actions and individual rights is outside the realm of economics. But this paper will show that free markets are linked to civil liberties worldwide. And they will be analyzed to determine what role they play in ALPR policy. This also includes studies to determine whether states that choose to curtail this

particular government surveillance power are linked to the presence or absence of economic freedom, or political parties which claim to support free markets.

Additionally, we study the efficacy of regulating ALPRs. Some oppose regulations as an infringement on the powers of police to execute the law. We look at states (and one city) that regulated such surveillance of license plates, dumping data on the vast number of non-criminals in the system, to see if such laws hamper the ability of cops to catch car thieves.

Do ALPRs “Deliver?”

Using cameras for surveillance of cars is nothing new, as pictures were snapped of those vehicles running red lights as early as the 1960s. But the technology was honed by those wishing to sort mail by addresses. An Italian defense contractor adapted the technology for police cars to read license plates, and its American subsidiary (Elsag North America) worked it into the realm of law enforcement (Angwin and Valentino-Devries 2012).

It's not the first time a country used the technology in its law enforcement efforts. Great Britain years earlier, developed a version to combat the Irish Republican Army (IRA) in the 1990s (Aegerter 2013). These were called Automated Number Plate Reader (ANPR) and were used to solve a number of high-profile murder cases, including that of a British policewoman during a case of armed robbery. But the technology is relatively similar.

According to Li (2014, 1), “LPRs consist of high-powered video cameras that capture images of license plates and the software to read those images.” With such an LPR system, hundreds of cameras snap thousands of photos of car license plates a minute. Computers then scan the data and look for matches with auto thefts and crime records tied to the licenses, identifying any connections (Weise and Toppo 2013).

A report of a license plate number can pinpoint a location, and can stop a car thief, foil a kidnapping, or even thwart a terrorist, like the Washington DC snipers from 2002 (*Information Management* 2012), though such technology was not purchased by the region for another two years (Klein and White 2011). Just in a single Sacramento shopping mall, cops claimed to have retrieved 51 stolen cars in a little over two years, thanks to photos of 3 million license plates over that period of time (Weise and Toppo 2013), though critics might note that the number of stolen cars represents 0.0017% of all license photos taken by such cameras.

Such LPRs have been a boon to law enforcement agencies, which now have greater powers to track down criminals. New LPR technology for four cars enabled Gwinnett County, Georgia police to make 50 arrests in a single month (Kavanaugh 2011), including several wanted by the police, which could not have been made without the technology. And a study of Mesa, Arizona found that LPRs had success in hot spot crackdowns for several offenses (Koper, Taylor and Woods 2013). Law enforcement also contends that the technology, used around the crime scene, can be instrumental in identifying suspects or witnesses to interview (Healey, Toppo, and Meier 2013). And some towns like the San Francisco suburb of Tiburon, California boast that they've nearly eliminated car stealing (Weise and Toppo 2013).

It's no wonder that a RAND Corporation study found that more than 70 percent of all police departments use license plate readers (Li 2014). Research by the non-profit group Police Executive Research Forum found a similar percentage in their research on ALPR usage (Healey, Toppo, and Meier 2013). In addition, at least 85 percent of all police departments plan to purchase or expand the use of these ALPRs, in that study by the Police Executive Research Forum (Weise and Toppo 2013). Given these success stories supported by rigorous analysis, who could be opposed to such technology?

But Lum et.al. (2010) found is that there are some problems with ALPRs. They discovered that many law enforcement departments rushed to purchase these, despite scant evidence of their effectiveness. "We also discovered this rapid adoption is occurring in a low-information environment; the evidence-base for the effectiveness and effects of LPR is weak. Indeed, only one other rigorous evaluation, conducted by colleagues at the Police Executive Research Forum (PERF) has ever been conducted on LPR technology, and very few agencies have engaged in any type of assessment of this technology. Further, we discovered a relative dearth of empirical information about the realities of community concerns with LPR," the authors write (Lum et.al. 2010, vii).

Moreover, their own study paints a very different picture of the technology's prowess. "Our randomized controlled experiment mirrored the findings from the PERF experiments in that the use of LPR in auto theft hot spots does not appear to result in a reduction of crime generally or auto theft specifically, during the period of time measured," the authors conclude (Lum et.al. 2010, vii).

Spying On Suspects And Innocents

There is also the concern that America, in its zeal to stop crime and possibly terrorism, might become more like the USA in the world of the "Enemy of State" film. As Pyle notes, Americans demand a perfect law enforcement system, catching terrorists (and criminals) before they can ever commit their acts. "What we are likely to get instead is bureaucratic bloat with numerous agencies competing with each other, drowning each other in more information than they can possibly digest," he writes (Pyle 2003). Indeed, Cole and Dempsey (2002) note how thanks to anti-terror legislation from 1996 and 2001, it is now easier for government agencies to conduct surveillance in America, sometimes not even following the relaxed rules that were passed.

A two-year study of what the police collected in Riverside County in California alone revealed roughly six million license plate scans for two million different cars (Angwin and Valentino-DeVries 2012). And local law enforcement isn't alone. The Justice Department has been scanning and saving all kinds of data on licenses from LPRs, building a massive database with the information (Barrett 2015a).

And while there are issues about the cops putting a GPS surveillance device on a car, there's less of an expectation of privacy when a vehicle is driven on public roads, according to Klein and White (2011), making the LPR a popular tool with police.

There's the old adage "if you aren't guilty of something, you have nothing to worry about" when it comes to enhanced law enforcement powers. But there are all kinds of ways that a person innocent of a crime could be compromised should such data be discovered. This includes the person who drives to a substance abuse clinic. Such data could involve tracking individuals headed to a legitimate political protest, leading to enhanced abilities of the state to squash dissent, should those powers be abused. As Barrett (2015b) discovered in his research, a government agency actually considered spying on cars at gun shows.

A report by the American Civil Liberties Union (ACLU) concluded that 99 percent of entries gathered from U.S. law enforcement are innocent people (Aegerter 2013, Healey, Toppo and Meier 2013). Perhaps that's why the ACLU and the Electronic Frontier Foundation (EFF) filed suit in Los Angeles County's Superior Court, to determine how LPR data is being used. Brian Hauss, an ACLU attorney, noted that the 2012 Supreme Court case *U.S. v. Jones* found that the decision by a law enforcement agency to stick a Global Positioning System (GPS) on a car to track its movement was in violation of the Constitution's Fourth Amendment. "The Supreme Court held that you have a reasonable expectation of privacy in your movements over a period of time," Hauss noted (Li 2014, 1).

Even police seem uncertain of what to do with all of the data grabbed, not just where to store it, but for how long. Just in the nation's capital, government agencies could hold years of information. And such scanners, costing tens of thousands of dollars, coupled with data storage, aren't cheap. Moreover, there would need to be additional security to reduce the chances that a hacker could access that information.

According to *The Washington Post*, there were more than 250 cameras in the District of Columbia, capturing 1,800 vehicle images a minute (*Information Management* 2012). Currently, the District stores such data for at least three years, though surrounding locales hold onto such information for a slightly shorter time frame (*Information Management* 2012). In fact, the ACLU argues that in an overwhelming majority of states, there are no limits on how long such data can be stored (Weise and Toppo 2013).

And law enforcement isn't the only group benefitting from such technology. Private companies, either providing non-government law enforcement like repo men, private investigators or even those employed to track data are using LPR information. In fact, companies Vigilant Solutions and Digital Recognition Network (DRN) admit to selling this data to such private entities, as well as make it available to groups like the National Center for Missing & Exploited Children (Li 2014).

DRN has engaged in a campaign of pushing back against critics' claims about LPRs. The company, for example, points out that the ACLU itself has publicly fought for the right for pictures to be taken in public (Li 2014). And Vigilant Solutions' attorney contends that the whole idea behind license plates is to identify, not conceal (Li 2014). Police contend that there can't be an expectation of privacy on public streets (Healey, Toppo and Meier 2013).

"It is big brother, and the question is, is it the big brother we want, or the one we don't want" says George Washington law professor Olin Kerr (Klein and White 2011).

And voters are expressing greater concerns about such surveillance. “In a new HuffPost/YouGov poll, 40 percent said they’d prefer a presidential candidate who wants to place more limits on government surveillance, while just 16 percent said they’d rather have a candidate who didn’t support such limits,” writes Edwards-Levy (2015). “The remaining 43 percent were undecided, or said it didn’t matter.” She goes on to note that Democrats have a greater preference for an “anti-surveillance candidate” than Republicans.

But there may be a solution. Ten states passed laws since 2007 that state explicitly that LPR data collection only be used for law enforcement purposes. Another two states have directives from the Attorney General with similar limits on the use of LPRs only for law enforcement agencies (Greenberg 2015). An additional 11 states are considering similar legislation that restricts the use of LPRs only for law enforcement. Georgia’s, in particular, calls for the tracking data must be purged after 90 days, unless one is suspected of a crime (Pezold et.al. 2015).

It is hoped by these states and their lawmakers that they can have the best of both worlds, with more power to law enforcement, limited only to criminal cases. But unless the private sector element of LPR technology is considered, similar problems with privacy are likely to persist.

The Role of Free Markets in the ALPR Debate

To this point, the discussion has focused on civil liberties, and had little to say about free markets directly. But theorists have argued that there is a connection between the two. In the book *The Road To Serfdom*, Friedrich A. Hayek (1944) contends that a loss of economic freedom occurs alongside a loss of personal freedom. Milton Friedman (1962) also claims that economic freedom and personal freedom are intertwined.

Not all agree with such an optimistic connection about the two freedoms. Bilson (1982, 95) writes that some supporters of a stronger role for the government in the economy claim that “the right to govern may be a capital good which is protected by through repression.” In other words, limits on civil liberties and political rights are needed to protect the capitalist system. Repression is just part of the cost of doing business, according to this viewpoint, even if it seems contradictory that political freedom must be curtailed to support economic freedom.

Yet in evaluations of the relationship between free markets and personal freedom, the findings have shown a connection between the variables. Bilson’s (1982) analysis looks at Gastil’s measure of political freedom, based on civil liberties and political freedom, employed by Freedom House. His research also involves looking at broader models of economic freedom and a country’s party system, where monopolies of the state for both are contrary to liberty (Bilson 1982). Despite relatively mixed results when looking at the relationship between a number of political and economic variables, his findings show that when civil liberties decline, so too does capitalism in a country (Bilson 1982, 101).

More recent analyses show the bonds of economic freedom and civil liberties to be stronger. Dawson’s (1998) study of the subject using panel data analysis reveals “The evidence suggests that economic freedom works through both a direct effect on total factor productivity and an

indirect effect upon investment...the evidence also suggests that economic freedom and civil liberties influence growth through an effect on human capital investment....The evidence supports Friedman’s conjecture that a change in one type of freedom initiates a change in the other, even after controlling for the effects of economic performance on institutional change (Dawson 1998, 617).”

Similarly, Tures (2006) finds support for the Friedman hypothesis for a variety of political freedom measures, ranging from civil liberties and political rights (Freedom House) and the dispersion of power in political institutions (Polity data) to measures of open and competitive elections (Vanhanen’s Polyarchy measure).

Shields (2007) further supports the findings connecting civil liberties with economic freedom, using other data measures and controls. She adds “More specifically, civil liberties in a country are more strongly correlated with free market indicators than political rights. This could be because civil liberties include the rights of individuals to form private businesses without the undue influence of government. Civil liberties also include things such as freedom of employment, freedom to choose your vocation, right to form civic and business organizations...Political rights deal with the ability of individuals to elect and endow their officials with power. Thus, civil liberties more directly deal with the right of people to conduct transactions freely in the marketplace (Shields 2007, 183).”

Nor is her research divorced from our subject of government surveillance. She criticizes America’s decline in its economic freedom ranking published by the Cato Institute, attributing at least part of the drop to an increase in government surveillance powers over the population (due to government size as well). She cites examples like the USA Patriot Act as a possible culprit, noting Russell Hardin’s contention that “it seems likely that the rate of invention of new techniques for surveillance will far outrun the rate for new technologies for controlling the use of surveillance (Hardin 2004, 94).” And that’s a potential threat for market forces.

Analysis Of ALPRs

Studies Of Which States Regulate ALPRs

Our initial analysis (Bowen et.al. 2015) examined whether or not there is a connection between states that regulate ALPRs and the state’s level of economic freedom. We did find that while states with more economic freedom were more likely than expected to put restrictions on ALPRs, the results were not statistically significant at the .05 level.

	Dependent Variable (Y) ALPR Limitations			
Independent Variable (X)		Yes=1	No=0	Row Total

Economic Freedom	Category 1: More Economic Freedom	6	14	20
		4.705882	15.29412	
	Category 0: Less Economic Freedom	6	25	31
		7.294118	23.70588	
	Column Total	12	39	51
Pearson Chi-Square Statistic		0.765633	3.841	
		Not Statistically Significant at the .05 Level		

We also looked at several additional variables and whether or not they are linked to states that regulate ALPRs. States with budget concerns, high levels of political corruption, and strong crime levels were not more likely to put restrictions on ALPRs (Bowen et. al. 2015). Nor did political variables that we analyzed play a role. A state that regulates ALPRs is not more likely to be Republican or Democrat in its presidential votes, governors, or control of state legislatures (Bowen et. al. 2015).

Such findings involving these political and economic variables hold not only for states that passed laws that curb the use and data storage from ALPRs, but those states proposing to do so (Bowen et.al. 2015).

Efficacy Of ALPR Regulation: Car Thefts

However, in this analysis, we are looking not at which states regulate ALPRs, but how effective those regulations have been. In particular, we are looking at the theory of whether or not restrictions on law enforcement data collection increase crime or not. Our independent variable for the theory is whether or not police or other law enforcement agencies are limited somewhat by the government from collecting data, and our dependent variable, or variable to be explained in the theoretical model, is whether or not crime increases.

The independent variable for the hypothesis is whether or not a state has restricted the use of ALPRs and the dependent variable is the motor vehicle theft rate, since ALPR supporters typically link their success stories to stopping the stealing of cars.

In our measure, we look at states and the timing of the restriction, as gathered by *Government Tech* magazine (Knell 2015). Our dependent variable is made available by the FBI's data on motor vehicle theft.

Our results focus on several states (Arkansas, California, Maine, New Hampshire, New Jersey, Utah, Vermont and Virginia) that passed laws restriction the data storage of ALPR information, as they have at least four years of data to see (before and after regulation). Other states with at least a year of ALPR regulation (Colorado, Florida, Maryland and Tennessee) are also analyzed, though not in graphic form, because they have had their restriction in place for such a short period of time in our dataset. An additional study looks at a large municipality for evidence of a connection.

The seven states with ALPR regulations for at least two years before the end of this state all experienced declines in their stolen car data. Of the states with the shortest time for regulating ALPRs, half saw the numbers decline after ALPR regulations were passed, but the others experienced a short-term increase. As with states having passed the regulation longer ago, the theft increase was only temporary. In all cases of theft increases, these were only temporary and these states reduced their stolen car rate after a short adjustment.

Four states only had the ALPR restrictions the year before our data project was completed. All we could do was list whether these states increased their motor vehicle theft rate. Two of these states (Colorado and Maryland) saw declines, while the others (Florida and Tennessee) experienced increases. If these latter two states follow the trend set by others, they can expect their theft rate to also decline.

Tables

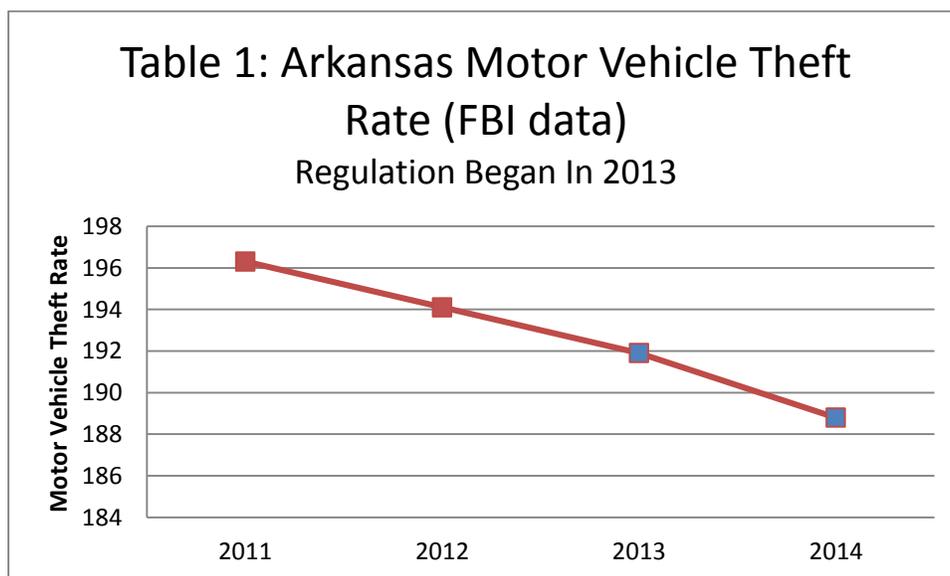


Table 2: California Motor Vehicle Theft Rate (FBI data)

Regulation Began In 2011

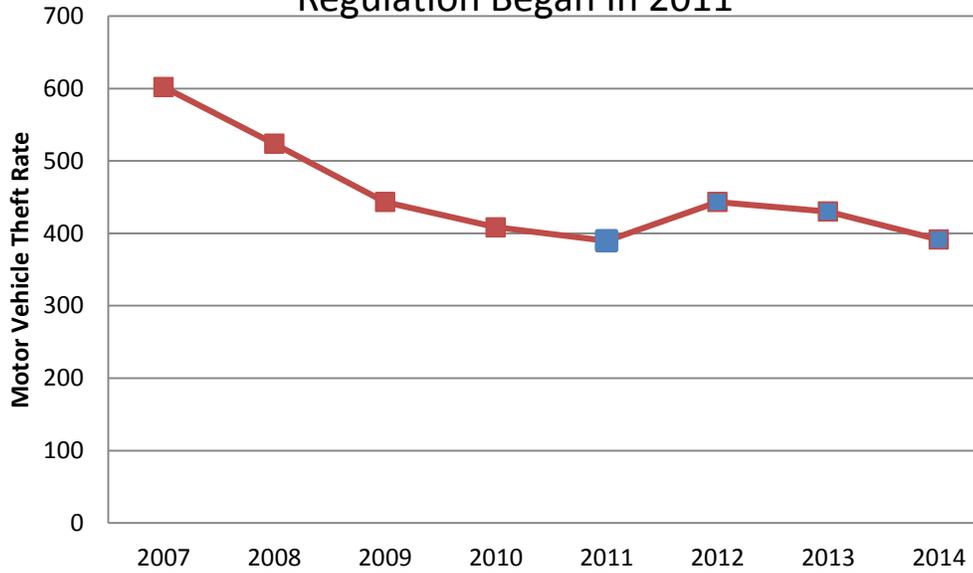


Table 3: Maine Motor Vehicle Theft Rate (FBI data)

Regulation Began In 2009

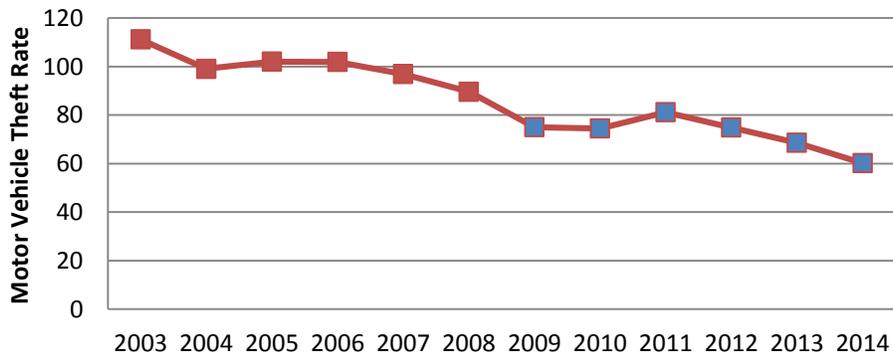


Table 4: New Hampshire Motor Vehicle Theft Rate (FBI data)

Regulation Began In 2007

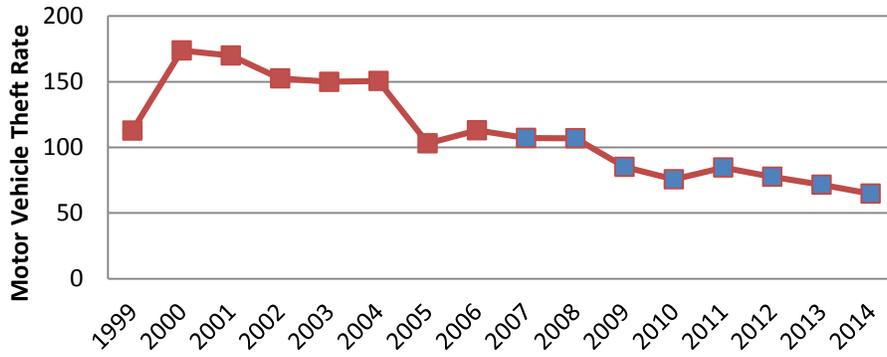
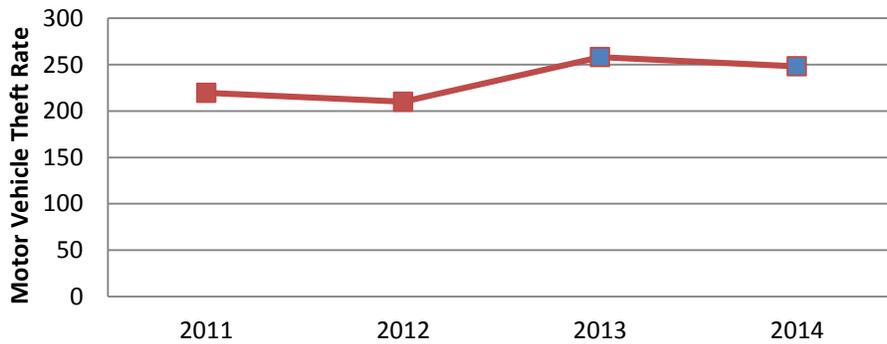
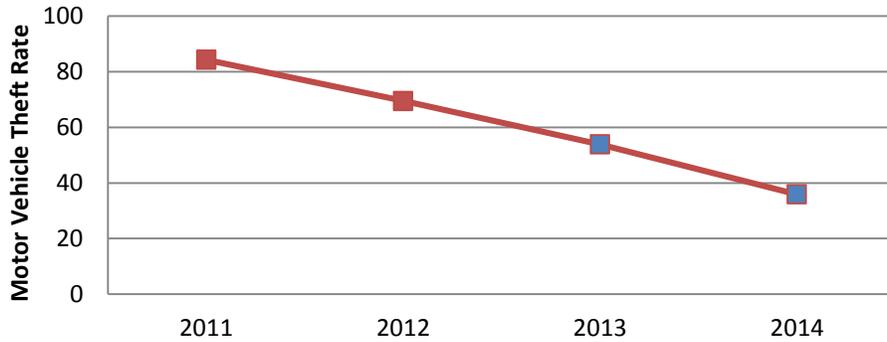


Table 5: Utah Motor Vehicle Theft Rate (FBI data)

Regulation Began In 2013



**Table 6: Vermont Motor Vehicle Theft Rate (FBI data)
Regulation Began In 2013**



**Table 7: Virginia Motor Vehicle Theft Rate (FBI data)
Regulation Began In 2013**

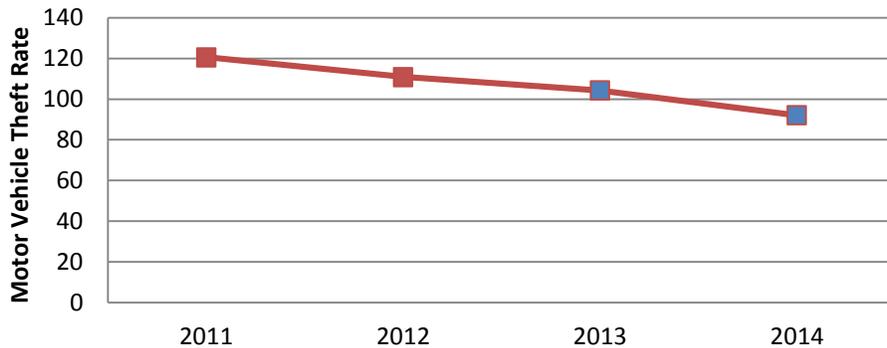


TABLE 8:		
OTHER STATES	YEAR	MOTOR VEHICLE THEFT RATE
Colorado	2013	261.3
Colorado	2014	237.6
Florida	2013	178.1
Florida	2014	214
Maryland	2013	225.9
Maryland	2014	219.2
Tennessee	2013	183.2

Tennessee	2014	192.4
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As noted earlier, there are a dozen states which have regulated ALPRs. Of these, one (Minnesota) did so in 2014 and the other, North Carolina, joined the ranks of those with such surveillance restrictions in 2015, after our data analysis. Those in our analysis have generally shown that regulating ALPRs rarely, if ever, leads to an increase in auto thefts.

**City Case Study: “Grand Theft Auto L.A.”
Additional Analysis by Abigail Bowen**

The use of automated license plate readers has been controversial across the nation, with many states ultimately choosing to regulate their utilization. Previous data analysis failed to reveal what variables are statistically significant in their limitation. The purpose of this paper is to analyze the effects of some of this regulation, rather than its cause.

The following is a case study regarding the impact of California’s decision to regulate law enforcement’s usage of license plate readers. The focus of this case study will be LA County.

In 2008, Los Angeles County Sheriff Lee Baca began a pilot program in his department. The program was known as Advanced Surveillance and Protection, abbreviated as ASAP. The ASAP program focused on the utilization of new law enforcement technology, including automated license plate readers. Lieutenant Scott Edson of the Los Angeles County Sheriff’s department wrote an article discussing the ASAP program and how they would utilize automated license plate readers. Lt. Edson (2016) revealed that the Sheriff’s department had 17 mobile ALPR units and 10 mounted units, and was in the process of procuring 13 more mobile units (2008).

Three years later, the state of California passed regulation on the utilization of automated license plate readers in the state. California vehicle code 2413 “Provides that the California Highway Patrol (CHP) may retain data from a license plate reader for no more than 60 days, unless the data is being used as evidence in felony cases. Prohibits selling or making available ALPR data to non-law enforcement officers or agencies. Requires CHP to report to the legislature how ALPR data is being used” (NCSL 2016). The purpose of this case study is to analyze the effect had by the aforementioned statute on the Los Angeles County grand theft auto rates and its arrest rate for grand theft auto.

The data used was found through the Los Angeles County Sheriff’s Department Crime and Arrest Statics Summaries for 2005 through 2013 (Los Angeles County 2015). The change in incidence of grand theft auto, the change in arrests for grand theft auto and the change in percentage of arrests from incidents of grand theft auto in LA were all analyzed over the given time span.

The following figures display the trends over time.

Table 9: Change in Arrests for Grand Theft Auto in LA County Over Time

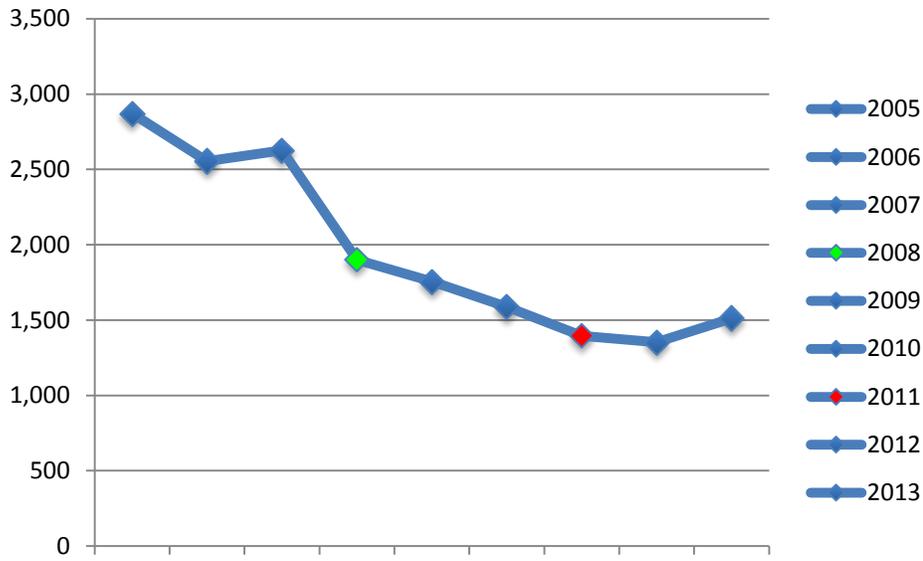
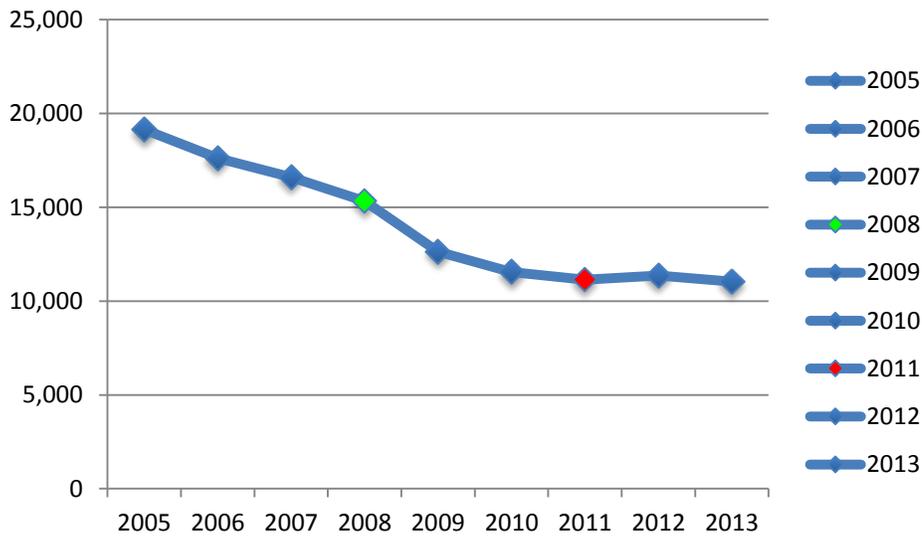


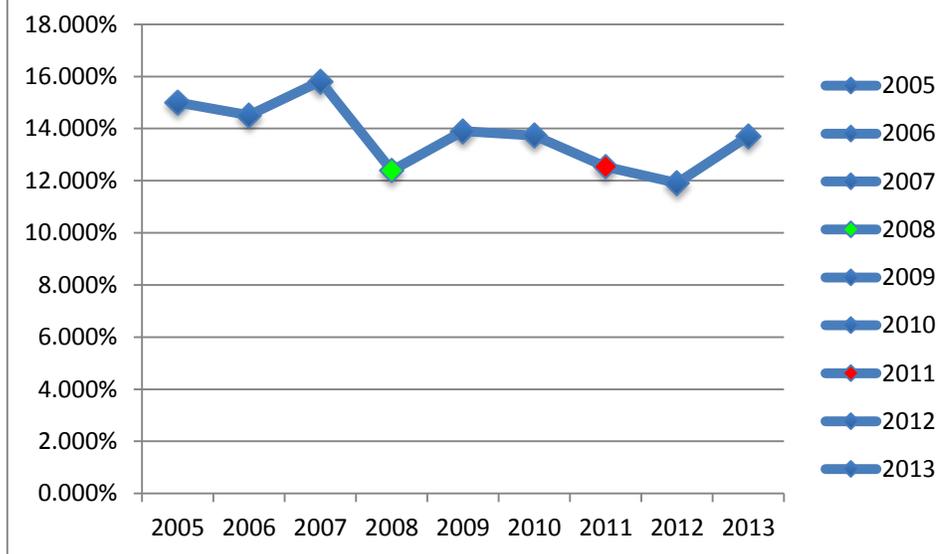
Table 10: Change in Incidence of Grand Theft Auto in LA County Over Time



The incidence of grand theft auto and the number of arrests for grand theft auto have each decreased over time in Los Angeles County. From 2008, the year that the ASAP program launched, to 2009 the number of grand theft auto incidents decreased from 15,331 to 12,637, a difference of 2,694 incidents. Meanwhile, from 2008-2009, the number of arrests went from 1,900 to 1,756, a difference of only 144. While the incidence of grand theft auto decreased markedly, the number of arrests for the crime hardly shifted. The percentage of arrests out of all reported incidence of grand theft auto in LA County grew from 12.39% to 13.90%, an increase of over an entire percentage point. These numbers could suggest the efficacy of automated

license plate readers in leading to arrests for grand theft auto.

Table 11: Change in Percentage of Arrests from Incidents of Grand Theft Auto in LA County Over Time



From 2011, when the California state regulation was passed, to 2012, the percentage of arrests out of the incidence of grand theft auto decreased from 12.53% to 11.91%. The difference of 0.62% may not be large, and could be attributed to outside influences, but it could also suggest that the regulation of automated license plate readers impacted the ability of the LA County Sheriff's Department to arrest criminals for grand theft

auto in their jurisdiction.

Conclusion

Pressure On The Economically Free States

As noted earlier, we were unable to find a connection between economic freedom in states and the regulation of ALPRs. There are 20 states that are economically free (in the top two quintiles of economic freedom), but only six have chosen to put limits on such data collection efforts. To these, we can add North Carolina, which also limited ALPR data storage in the year following our data collection efforts.

That leaves us with a number of economically free states that have not opted for such restrictions. In eight cases (Alaska, Arizona, Delaware, Indiana, Nebraska, North Dakota, Oklahoma, and South Dakota) these states have not introduced laws to try and limit ALPR data collection. Five others (Georgia, Louisiana, Massachusetts, Missouri and Texas) have at least introduced such legislation on ALPR restrictions, but have not been successful in passing these bills.

Many of these states that are economically free pride themselves on being free market friendly, and claim to support businesses in the excesses of the state. Yet when it comes to such an opportunity to limit police actions within the state, such principles are dispensed with. It may be the case that the governing authorities and legislators are too afraid of crime to want any restrictions on law enforcement. Of course, such thinking runs afoul of Benjamin Franklin's quote that "those who trade liberty for security deserve neither."

Yet this research has shown that liberty and security need not be mutually exclusive goals. In this case, we have found that restricting large amounts of data collection by ALPRs has not increased the crime rate. In fact, these states either see declines in stolen car rates or only short-lived increases, followed by declines in vehicle theft. Dr. Franklin may be pleased to learn that in this case, Americans can enjoy liberty and security.

Accepting ALPR Regulation

While locales have bragged about virtually eliminating car theft thanks to ALPRs, it doesn't mean that criminals won't eventually adapt their techniques. Domash (2009) found that car thieves are reverting back to their practices of yesteryear: stripping cars for parts, something documented in a 1933 *Time Magazine* article about the practices and preferences of Chicago gangs. They discovered that not only are the parts more valuable than the sum of the car, but there was a more readily accessible market that car manufacturers and even cops would use to profit from the system (*Time*, 1933). Nearly 100 Cook County cars in a short period of time would find themselves "stripped" in those days. And whether a car is raided for parts, or if that market for parts involves license plates, we may find limits to metadata, and a frustrated police with a database made up entirely of innocents.

There's some growing acceptance that some sort of regulation is needed, even from law enforcement. "The International Association of Chiefs of Police (IACP) says the data is safe if agencies have strict rules for access to, use of, and purging of the data," write Healey, Toppo, and Meier (2013). "The scanner provides a list only by license number, with a photo of the plate. To link that with the car owner's name, address, and other personal data requires inquiry by an authorized person to the motor vehicle records center says David Roberts of the IACP technology center (Healey, Toppo, and Meier 2013)."

In fact, Cole and Dempsey (2002) point out that government can actually fight terrorism more effectively by following the laws that limit their powers and respect the constitutional rights of individuals, a finding Pyle (2003) supports.

Such lessons learned from this analysis are not limited to tracking license plates. The next battle may well involve a similar surveillance technology known as “Stingray.” This device can impersonate a cell phone tower in order to gain access to the handheld communication device, without the owner’s knowledge. Made by Harris Corporation, this technology’s use hasn’t been revealed to the public (Li 2014).

As the “Enemy of State” movie demonstrated, such surveillance technology is only expanding; attempts to restrict its bulk data gathering are still in their relative infancy. There is concern that without such tools available to law enforcement, criminals will take over. But our analysis of motor vehicle thefts, one category of crime that ALPRs purported help stop, show no signs of this theft rate increasing for more than a short-term blip. If anything, states putting limits on the collection and storage of data generated by ALPRs see their stolen car rate decline. With this evidence in hand, there’s no excuse for the states that claim to provide economic freedom to abstain from passing legislation that provides some rules and time limits on the storage of data on non-criminals and/or non-suspects.

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