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民主化真的會增加犯罪率嗎？

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國科會結案報告：Does Democracy Increase Crime?

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Crime is as old as mankind, and the cost of crime is always a major issue in public policy. Miller et al. (1993) and Anderson (1999) estimated that the cost of crime in the U.S. is approximately \$200 billion and \$1705 billion per year. Alvazzi Del Frate's study on Russia (1994) also concludes that "Russian society is experiencing a growing fear of, and lack of protection from crime". There is no doubt that crime has become a significant social and economic problem, both in U. S. and around the world.

A number of social scientists have tried to explain the causes and possible remedies of crime. Variables such as deterrence (Levitt 1996, 1997, Mustard 2003), inequality (Levitt 1999 and Soares 2003), labor market conditions (Grogger 1997, Raphael & Winter-Ebmer 2001 and Gould, Weinberg and Mustard 2002) are among the most studied by economists, perhaps because these factors are well suited to the economic model of crime. Variables studied by sociologists and criminologists include social capital (Rosenfeld et al 2001), cultural factor (Gartner 1990), inequality (Avison 1986, Hagan and Peterson 1995) and demographic factors (South and Messner 2000), etc¹.

There are also some economic theories that try to link democracy and crime. For example, Garoupa and Klerman (2002) analyze public and private law enforcement when the government is motivated by rent-seeking rather than maximize social welfare and find that a rent-seeking government is more aggressive than a social-welfare-maximizing government in enforcing law against minor crimes rather than major crimes, hence the minor crime rate would be lower compared to major crime rates. They also argue that this comparison can also be applied to distinguish democracy and non democracy. Their model provides some testable implications for the question asked here. However, there

¹ Wilson and Petersilia (2002) is a very superb collection of essays on what do and do not reduce crime

has not yet been any attempt to identify the relationship between democracy and crime empirically, or broadly speaking, the institutional effect on crime. This is why Lafree (2003) argues that connecting the two in mainstream criminology would be a “search in vein”.

In order to investigate this question, this paper is organized as the following: the rest of this section will be devoted to motivate the topic since there is no previous literature that explicitly links democracy and crime. We also briefly describe the model of Garoupa and Klerman (2002) to explain how democracy and non democracy affect their deterrence, hence crime rates, toward different crimes. Section II briefly explains the data sets and the summary statistics. Section III test the model and shows that empirically, democracy “relatively” increases the incidence of petty crimes more than that of serious crimes. I also argue that it is democracy per se rather than transition or political instability that causes the finding. Section IV argues that deterrence, measured by prison length, clearance rates, and prisoners per crime is a major part of the cause of this empirical phenomenon. Section V concludes the paper. The appendix provides a more detailed description of the data.

Why Democracy and Crime? A Motivation

According to the Freedom House Survey, in 1973, 32% of the world population lived in free states, 21% in partly free states, and 47% in not free states. By 1998, the numbers were 40%, 26.5%, and 33.5%, respectively.

Looking at the numbers above, we might wonder: “Why does democracy march so slowly if it is so desirable?” One potentially interesting reason is that people generally believe democracy is the origin of social chaos and crime. This point of view is very popular among Asian (or other non-democratic) countries. For example, Mahathir, the Prime Minister of Malaysia, claimed that:

In the former Soviet Union and the Eastern European countries, Democracy was introduced along with free market, the result is chaos and increased misery.... Should we enforce democracy on people who may not be able to handle it and

destroy stability?

Furthermore, fear of crime associated with democracy does not exist in non-democratic countries alone. Wilson (1997) states that:

The power of the state has been weakened... They [high rates of crime] reflect a profound, worldwide cultural change: prosperity, freedom, and mobility.... But the enlarged spirit of freedom and the suspicion of the state have made it impossible to use (harsh) criminal system...

He also suggests that Islam and East Asia might have a solution for this by “allowing enough liberty for economic progress while reserving the state, just like Singapore, to achieve both affluence and social control”.

There is more anecdotal evidence that supports this hypothesis. For instance, Alexeyeva et al. (1994) and Alvazzi Del Frate et al. (1998) document that within the period of democratic transition (1989-1994), the crime rates of Moscow, Bulgaria, and Hungary have gone up approximately 138%, 300%, 175% respectively. The time series evidence shows that these countries suffer from increasing crime rates while moving to democracy, although this trend can at most only support that the effect is transitional rather than democracy per se. So, the question I want to ask is essentially the following:

Does democracy affect crime? If so, in what way?

Rent seeking vs social- welfare- maximizing

In the law enforcement literature, the optimal policy is usually derived by maximizing social welfare, which is the sum of offender’s benefit minus the harm caused by the crime, and minus the law enforcement expenditure. However, a government that is motivated entirely or partially by rent-seeking, rather than social-welfare-maximizing is quite common in public choice scholarship (Gradstein 1993). Garoupa and Klerman (2002) adapt this idea and analyze public and private law enforcement when the government is motivated by rent-seeking and by maximizing social welfare. They then argue further that “... even we believe that most modern, democratic governments seek to

maximize social welfare, the model of a rent-seeking government is still important as a tool for understanding non-democratic government". They further explain that a rent-seeking government is different from a social welfare maximizing one in that (1) it takes the benefit that the law enforcement can bring (such as fine) into consideration, (2) it consider only part of the harm, mainly non-monetary because it can not be taxed, that affect the government, (3) it does not consider the benefit that the offender reaps from crime (again, presumably it goes underground and can't be taxed). These descriptions of a rent-seeking government are very similar to what McGuire and Olson (1996) have argued, that the dictator chooses the level of provision of public goods in order to maximize his/her own revenue. Hence in this paper, we will use rent-seeking and social-welfare-maximizing to represent non democracy and democracy.

Let us then briefly describe the intuition and conclusion of Garoupa and Klerman (2002). In their model, they assume a risk neutral individual that faces gain of committing crime b , which is uniformly distributed across $(0, 1)$, and the expected cost of being caught, f (fine) times p (probability of being caught). Hence it is clear that a person will commit the crime if $b > pf$, and the number of crime committed is $n(p, f) = \int_{pf}^1 db = 1 - pf$. It

indicates that the more the expected punishment, the less the crime rates. For a democratic government, its objective function is to maximize social welfare, which is equal to $\int_{pf}^1 (b - h)db - xp$, where xp is the cost function of law enforcement, and h is the

harm borne by the victims. As for the non-democratic government, its objective function is to maximize own revenue, which is equal to $\int_{pf}^1 (pf - ah)db - xp$, where a is fraction of

the harm borne directly by he government. We can think a as the portion of the harm that is non-monetary, like fear, mental trauma, etc. The intuition would be that since this is the part that can not produce any revenue, and deterrence cost money, hence the non democratic government will not take it into consideration. Then by comparing social welfare maximizing government's optimal public law enforcement policy and rent-seeking one's, they solve that there are five levels of harms denoted as $h_0 < h_1 <$

$h_2 < h_3 < h_4$, and find that for the least harmful act ($h < h_0$) and the very harmful act (h_4), both government pursue the same policy: they decline to define the least harmful act as crime, and set probability of catching the very harmful act equal to one. The most interesting part comes from the comparing the enforcement policy of the middle harm crime: when an act is less harmful ($h_0 < h < h_1$), democratic government refuse to criminalize it because the benefit is simply too low to justify the cost. But the non democratic government will criminalize it because the revenue generated is greater than the cost. For the moderately low harm crime ($h_1 < h < h_2$), both government imposed sanction but a non democratic government set higher deterrence on them because it generate more revenue (after taking into account the crime reduction that deterred by the sanction and the cost of deterrence)², as the moderately high harm crime ($h_2 < h < h_4$), it is the opposite. Hence we can calculate a h_3 such that below it, the non democratic government is pursuing a more aggressive enforce policy than the democratic government, and vice versa when h is above h_3 . Hence they conclude that non democratic governments are more aggressive in enforcing law against minor crimes rather than major crimes, compared to democratic ones. Because the number of crime is equal to $1 - pf$, hence the number of minor crimes should be higher, and major crime lower in democratic countries.

What are the implications of this model? If h_0 is pocket lifting, and h_4 is homicide, then we should expect to see that compared to the democratic governments, the non democratic governments would have punish pocket lifting more severely and hence its crime rates are lower, and vice versa. The effect of democracy on crime would be negative for murder and positive for theft. However, if h_4 denotes some very serious crime such as genocide, and the harm caused by homicide is less than the critical point h_3 , then we can only see from the data that as the crime severity increase, the democratic government would increase its punishment more quickly than the non democratic government, that is we can only confirm a “relative” rather than “absolute” tendency. In the following sections, we will show that for homicide, democracy does decrease its crime rate, and for theft robbery, burglary and theft, it is the opposite. As to rape and serious assault, it is somewhat ambiguous; indicate that perhaps the harms caused by

² This is similar to a basic conclusion in microeconomics: sometimes you need to raise price to increase revenue, but sometimes you need to do the opposite, it all depends on elasticity.

these two crimes are around h_3 , the critical point. We also match the coefficient of democracy on crime and crime severity to show that “relatively” the positive effect of democracy on crime decrease as severity goes up, the other implication implied by the model. Furthermore, like any other law enforcement literature in economics, deterrence plays a major role in their model. We will also show that for democracy, punishments for major crimes are relatively more serious than for minor crime, compared to non democracy. Also, the variations of punishment can explain a large portions of the effect of democracy on crime we obtain.

To outline the relationship between crime records and democracy, examinations of country level data lead to the conclusion that democracy increases crimes with lower severity indices like burglary, all crime, and other theft, but decreases serious crime like homicide, which support their model. The exact severity rating below which democracy starts to increase rather than decrease crime remains unclear, but we know democracy decrease homicide for sure. However, we do uncover the empirical regularity that the effect of democracy on crime decreases with crime severity; in the other words, the correlation between “crime severities” and “effect of democracy on crimes” is negative. A meta-analysis is used to correct the omitted variables problem which occurred in different dataset-method combination, and shows that a one unit increase of crime severity will decrease the effect of democracy on crime for 0.04. Furthermore, we use change in deterrence correlated with democracy to explain this phenomenon. This is robust under three different deterrence measures: average length of prison sentence, clearance rate, and average prisoners per crime. Using a simple calibration, we estimate that the effect of deterrence accounts for 40-90% of the effect of democracy on petty crimes like robbery, burglary, all crime, and other theft, but has less power to explain the effect on serious crimes like homicide, rape, and serious assault.

Overall, this paper has uncovered the empirical relationship between democracy, crime rates, crime severity, and deterrence, and hence directs further research toward estimation of the institutional effect on variables of particular social concern such as education and other public goods. .

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