Socioeconomic Determinants of Violent Crime Rates in the U.S.

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Abstract:

This paper looks into socioeconomic factors affecting three racial groups within the United States, and the possibility of their effects on rates of violent crime. This study incorporates US census data in conjunction with FBI crime statistics in order to identify a correlation between select sociological variables experienced by different racial groups, and the rates of violent crime committed within those groups. Based on metropolitan areas by state for the year of 2012, the results of this study show that socioeconomic and family factors have a significant effect on violent crime rates regardless of race. Furthermore, violent crime rate gaps between minority groups could decrease if the socioeconomic characteristics of their minority groups were improved to that of the White racial group.

JEL classification: Z10, K42
Key Words: Homicide, Socioeconomic, Race

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1.0 INTRODUCTION

For much of the 20th century, criminologists, economists, and sociologists alike have studied years of societal and crime data in order to attempt to identify socioeconomic variations that could serve as predictors of violent crime or crime in general. Homicide is viewed as one of the most serious index crimes that the FBI reports in their yearly Uniform Crime Reports (UCR). The reason being that although arrest data is normally subject to criticism for reporting inaccuracy, homicide is more likely to be reported to the police and subsequently result in an arrest (Mosher, Miethe, and Phillips, 2002). A thesis identified by Blau and Blau (1982) that unites these years of research is the notion that economic disadvantage is associated with violent crime and homicide. According the Julie A. Phillips (2002), homicide is the leading cause of death for Black males aged 15-24, and the second leading cause of death for Latinos males in the same age group. This being so, there has to be identifiable reason for the large racial homicide differential in the United States.

When attempting to explain the racial homicide differential, scholars generally point to the fact that minorities (in many cases Blacks specifically) are more likely than Whites to be unemployed, poor, grow up in single parent homes, and live in poor neighbourhoods. They are more likely to live in segregated, more crime ridden communities than their White counterparts. As stated by Phelps (2002), Empirical studies support that these socioeconomic characteristics contribute to higher overall levels of homicide rates across cities and metropolitan areas of the US. By looking the work done by Phillips (2002) and Tcherni (2011), this study aims to better understand which structural and socioeconomic variables in particular are most related to rates of violent crime in the US. By focusing on the works of Phillips (2002) and Tcherni (2011), this study was able to come up with the theoretical framework for the model. The main determinants identified through this framework for use in the model are as follows: family structure, poverty, education, employment, income inequality, gun regulation, and the population of the three main racial groups (Black, White, Latino). If the analysis finds that predicting variables to be identifiable, significant policy changes could be called upon in order to decrease the rates of violent crime across the country.

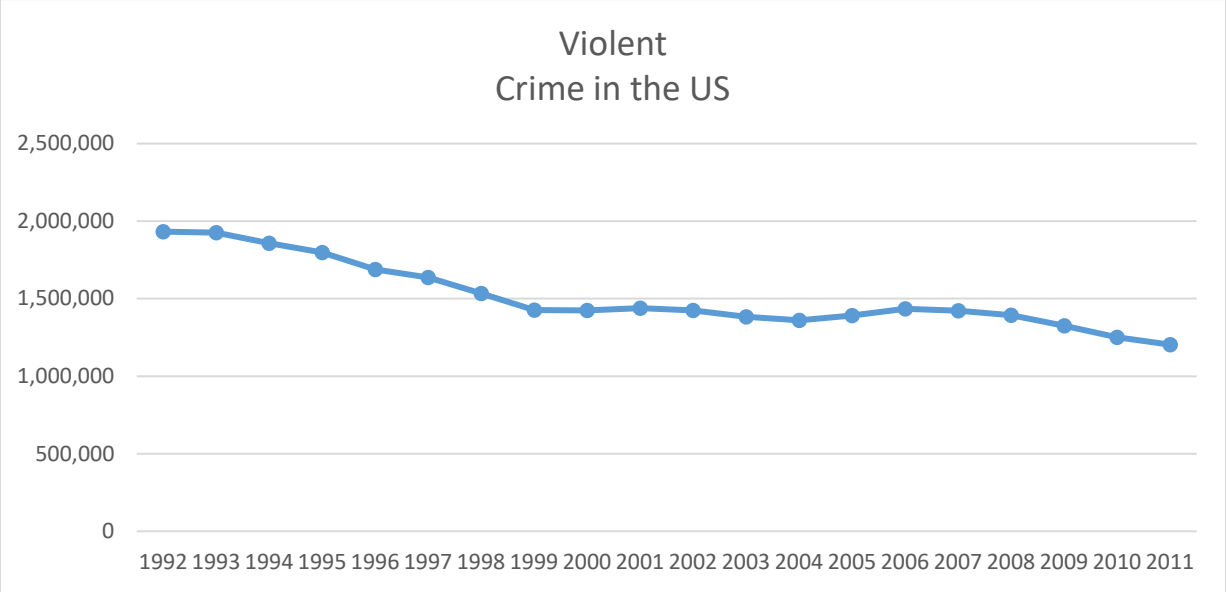
The rest of the paper is organized as follows: Section 2 shows trends in observed variables. Section 3 gives a brief literature review. Section 4 outlines the empirical model and

discusses the Data, while the empirical results are detailed in section 5, followed by a conclusion in section 6.

2.0 TREND

Figure 1 shows the violent crime occurrences in the United States from 1992-2011. Excluding a slight rise in the period of time after 2003 and ending in 2007, the trend of occurrences of violent crime has been on the decline. One would think that the economic downturn of 2008 would spur a rise in violent crime for the observed year of 2009, however, the amount of homicides following that time period dropped further.

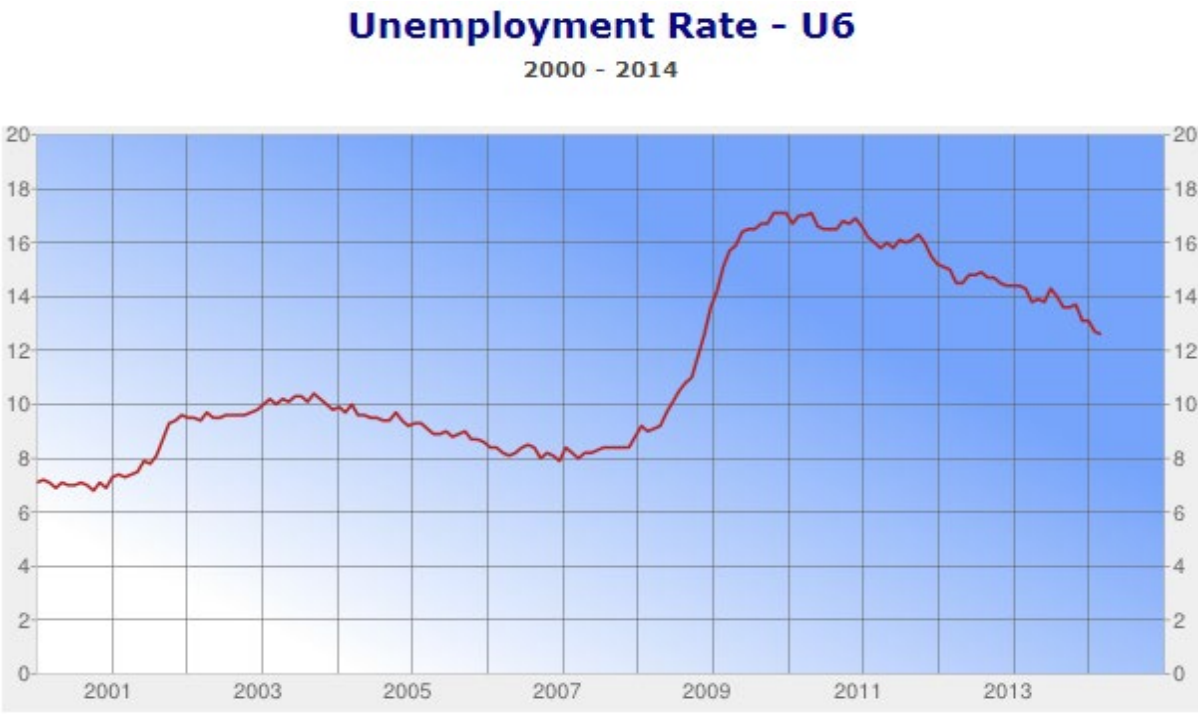
Figure1



Source: www.FBI.gov

Unemployment serves as an explanatory variable when it comes to crime rates because people who do not have jobs get desperate and can turn violent to get what they need. The research done for this paper suggests that unemployment levels in a community are indicative of crime rate, however, it is the structural disadvantage of not being able to get a job that is a better indicator. **Figure 2** below shows the trend in the unemployment rate in the US over the past 14 years. On a national level, you would expect to see crime rates start to rise in correlation with this more extended rise in the unemployment rate. However, according to the **Figure 1** above,

this is not true. There is a possibility that the scope of focus is too broad and not narrow enough to escape being bogged down by averages in order to capture the differences in cities or states alone.

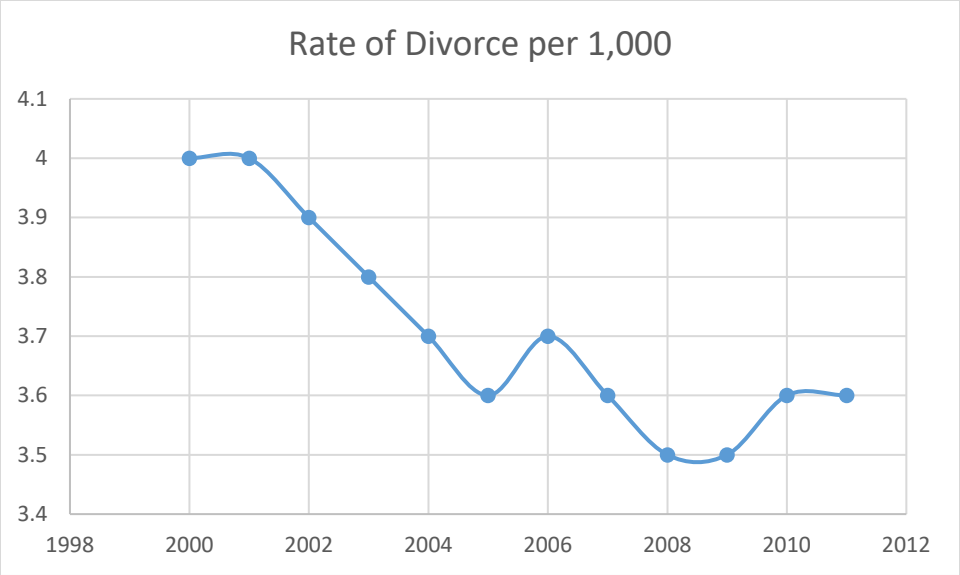


Source: http://portalseven.com/employment/unemployment_rate_u6.jsp

Lastly, the trend in the rate of divorce **Figure 3**, in our country is constantly changing. Leading up to 2005, there was a sharp decline in the amount of people getting divorced in our country per 1,000 people. From 2005 to 2006 there is a slight increase until falling back down to a lower rate of under 3.5 during the financial crisis, possibly because people couldn't afford to support their families alone, choosing to stay together instead of splitting up. Once the economy moved into recovery however, this trend started to reverse. Divorce is an important variable in discussing determinants of homicide rates. Divorce breaks up families and deviates time and focus away from raising children properly. This makes them susceptible to getting involved in the wrong crowds and potentially becoming a criminal that commits and act of homicide. Divorce also creates animosity between ex-spouses and/or the ex-spouses' new lovers. Love is a powerful emotion, and if emotions flare enough it can lead to violent behaviour and even homicide. Divorce would likely be a leading indicator, seeing as though the children growing up in a divorced household still have another 5-10 years before they can start to potentially engage

in illicit activity, so the trend in divorce would likely not coincide with the rate of violent crime. However, the number of separated households would be much more likely to align with the rate of violent crimes because they take into account households that were already separated and not ones that have recently been separated.

Figure 3



Source: www.cdc.gov

Violent crime, and homicide rates in particular have been on the decline in our country in the last decade. Gun laws have gotten more strict in many states across the country allowing fewer guns to people that do not deserve to have them. Abortion was legalized in 1973, accounting for as much as 50 percent of the recent drop in crime (Donohue and Levitt 2000). Overall, things are looking up. However, the homicide rate gap between different races is significant and must be studied in order to implement policies and changes that would bring about a decrease in the racial homicide gap.

3.0 LITERATURE REVIEW

Over the years there have been many proposed explanations for the differences in crime rates between different racial groups. Poverty has come to be largely identifiable with groups that commit crime. Those people who have little to lose have much more to gain through crime, especially in the form of robbery related crime. Brush (2007) stated that inequitable allocations

of resources can incite criminal activity, because people may be driven to crime by a lack of necessary resources. Eitle et al. (2006) asserts that poverty concentration may not be the optimal measure when used to explain variation in race-specific homicide rates. In referencing the work of Wilson (2003), Eitle et al. (2006) argues that the outcomes of disadvantage are economic/structural disadvantage (in the form of lack of access to jobs…etc.) as well as socio-psychological, in that they have low aspirations and negative social dispositions. This can contribute to the explanation for homicide rates in that violent behavior is seen as a normal adaptive response in such disadvantaged positions, and in disadvantaged communities, the social control system for such behavior is not there. Poverty on its own cannot serve to be an explanation of homicide rates. However, distribution of wealth or income inequality is often cited as being a strong explanatory variable for crime as well.

Similar to poverty, employment is a measure of how many people are currently working at a job. Unemployment is the amount of people who are not in a job, but are still in the labor force looking to get work. Harris et al. 2012 put forth the assumption of the fact that predominantly White localities rarely ever approach the levels of disadvantage found in predominantly Black and Hispanic areas. This makes it difficult to compare the race specific levels of violence. However, there exists a considerable amount of variation between sizes of racial differences in levels of structural disadvantage. Agnew (1999) alleged that group level structural disadvantage produces greater social and psychological strains among group members, which then produces differences in rates of violent crime between groups. Unemployment, like poverty, erodes local systems of informal social control, and can foster subcultures that favor violence.

Chintrakarn and Herzer (2012) summarize in their work that most studies on income inequality are confirmatory in that economic incentives for crime is much higher in areas with greater inequality. Income inequality is the measure of how evenly wealth is distributed throughout an area. High inequality in a region means that individuals there are either very rich or very poor. Areas with lower inequality are all living on similar wages. In places with high income inequality, those who are poor have little to lose from attempting to take from those who have much more to lose. Whether they do so in a violent manner or not is something that can be observed through the measured homicide rate in the respective area. In her paper, Brush (2007) found that there was a significant positive relationship between the Gini coefficient and crime

rates when controlling for other variables. However, Chintrakarn and Herzer (2012), running a different measure of income inequality, found that the long-run effect of income inequality had a crime reducing effect. They explained this by stating that rising income inequality may be associated with increased demand for protection from crime, reducing the returns to crime. This may account for a drop in homicides against Whites, but it doesn't explain homicide levels experienced by Black and Hispanics.

Phillips (2002) harped on social disorganization theory, which suggests that African-Americans and Hispanics are not inherently predisposed to violent crime. Instead, it is the social conditions where they live that lead to high homicide rates. This theory implies that if the socioeconomic characteristics of African-American, Hispanic, Asian, and Caucasian neighborhoods were controlled for, the racial/ethnic homicide differentials would be reduced or disappear. Therefore, there have to be other variables that explain the homicide differentials. Wall and Web (2008) identify education as being an important indicative variable of homicide rates, saying that in neighborhoods with low levels of education the homicide rates are much higher. This is because the youth living in these areas have fewer employment prospects, have low expectations for their future, and thusly believe they have little to lose if they engage in violent crime. Poverty and education can be linked in this way, Tcherni (2011) talks about how poverty creates social disorganization in an impoverished area. She goes on to explain that poverty stricken regions lack the funds for educational programs and after school activities, and due to lack of supervision in those communities, the youth have opportunities to occupy their free time with what they chose. More often than not, what they chose to do is what other people in the community are doing, and in places where there is social disorganization, that more often or not is vice, prostitution, drug trade and use…etc. It is a cyclical scenario, and the young people exposed to it are exposed to higher incidences of interpersonal conflicts that can lead to violence and occasionally homicide.

Family structure is another important variable to look at when analyzing causal variables in regard to homicide. Divorce or separation is a major structural force that often results in the disruption of a traditional two-parent family and creates a "broken home" (Tcherni 2011). Single parents lack the economic resources, time, or energy necessary to maintain their own lives, never mind the life of theirs or someone else's children. These children grow up in a much less socially controlled environment, and can potentially develop negatively. Not only can this be taken from

the child's point of view, but as Tcherni (2011) references, on an interpersonal level, family disruption can increase violence because of the documented relationship between divorce and elevated levels of interpersonal violence involving estranged spouses or ex-spouses and their new partners.

Firearm possession is a legal right in this country. In most states your right is only valid if you have the proper licensing. Seeing as though most gun crime occurs with an illegal firearm, this paper did not focus on licensed firearm owners. Instead, this study looked at gun law strictness by state. The theory behind this is that those states with lower levels of gun control could potentially have a smaller rate of homicides committed. Deterrence is a powerful tool, and states that have more relaxed gun laws are more likely to have people carrying guns on their person at all times. In addition, many of these states have adopted "Castle Doctrine" laws, which allow an individual the right to be anywhere they are, and anyone that threatens that is liable to be shot. According to Cheng and Hoekstra (2012), these laws alter incentives by reducing the expected cost of using lethal force, as well as increasing the expected cost of committing a violent crime. In their paper, Cheng and Hoekstra (2012) find that the level of homicides in states with this doctrine actually increased. Therefore, the variable for gun control could potential be very telling in this model.

These variables, structural and socioeconomic, will be analyzed within the model in conjunction with population differences between the three main racial groups (Black, White, and Latino). O'Flaherty and Stehi (2010) report that African Americans are six times as likely as a White American to die at the hands of a murderer, and roughly seven times as likely to murder someone compared to their White counterpart. Young Black men are at even more risk, roughly 15 times as likely to be murdered as young White men. According to the US Bureau of Justice Statistics, Blacks are about 2.7 times as likely as Whites to be poor, 2.2 times as likely to drop out of high school, and 2.7 times as likely to grow up in a single parent household. Hispanics are more likely to be murdered than Whites, but less likely to be murdered than Blacks. This is strange seeing how Hispanics and Blacks share similar poverty and dropout rates. This study aims to identify the variables that are predictive of violent crime rates in general, and to better understand where the difference lies between different racial groups.

4.0 DATA AND EMPIRICAL METHODOLOGY

4.1 Data

The study uses year end annual data of the 50 United States from the years of 2005, 2009, and 2012. Data were mainly obtained from the United States Census Bureau website, the FBI's Uniform Crime Reporting website, and ancillary data was collected from the Brady Campaign for Gun Violence protection website, as well as the Population Reference Bureau's website. Summary statistics for the data from years 2005, 2009, and 2012 can be found in tables 1, 2, and 3 respectively.

Table 1 Summary Statistics 2005

Variable	Obvs.	Mean	Std. Dev.	Min	Max
Violent Crime rate	51	420.69	221.37	111.00	1,380.00
Total Population	51	5,813,863	6,566,296	508,798	36,154,147
Family Structure	51	12.64	1.36	9.70	15.00
Poverty	51	9.94	2.88	5.30	16.80
Education	51	28.18	3.86	17.30	36.20
Employment	51	4.33	0.75	2.70	6.20
Gun Regulation	51	17.39	22.92	0	85.00
Income Inequality	51	0.45	0.023024	0.41	0.537
Black Population	51	12%	12.90%	0%	60.00%
White Population	51	76%	14.10%	0.24%	94.03%
Hispanic Population	51	9%	9.42%	0%	42.69%

Table 2 Summary Statistics 2009

Variable	Obvs.	Mean	Std. Dev.	Min	Max
Violent Crime rate	51	406.54	205.62	119.90	1,348.90
Total Population	51	6,019,736	6,780,646	544,270	36,961,664
Family Structure	51	12.93	1.45	9.10	16.00
Poverty	51	9.97	2.80	5.50	17.30
Education	51	29.74	4.01	18.60	37.20
Employment	51	5.92	1.25	2.60	9.30
Gun Regulation	51	17.39	22.92	0	85
Income Inequality	51	0.45	0.02243	0.402	0.532
Black Population	51	12%	11.40%	0%	53.22%
White Population	51	78%	13.56%	0.27%	95.75%
Hispanic Population	51	10%	9.89%	0.01%	45.57%

Table 3 Summary Statistics 2012

Variable	Obvs.	mean	Std. Dev.	Min	Max
Violent Crime rate	51	371.27	178.66	122.7	1243.7
Total Population	51	6,155,177	6,974,697	576,412	38,041,430
Family Structure	51	13.55	1.56	10.6	17
Poverty	51	15.22	3.27	10	24.2
Education	51	29.97	4.01	17.2	37.2
Employment	51	5.44	1.16	2.3	7.9
Gun Regulation	51	17.39	22.92	0	85
Income Inequality	51	0.46	0.02	0.417	0.534
Black Population	51	11.19%	10.95%	0.40%	49.50%
White Population	51	76.93%	13.69%	24.90%	95.10%
Hispanic Population	51	10.97%	10.03%	1.30%	47%

4.2 Empirical Model

Following Phillips (2002) this study adapted and modified the study of homicide rates by race (Black, White, and Latino). This model has a different focus, in that it excludes culture specific variables, as well as measures for segregation, work environments, and information that focuses on specific metropolitan areas. In contrast, this study puts much more emphasis on socioeconomic variables of the 50 states studied. This study has taken a cross-sectional data approach over three separate years, (2005, 2009, and 2012). These years were chosen in accordance with years that represent three different economic situations in the United States. According to Phillips (2002), both White and Black homicide offending and victimization rates are higher in places with relatively high levels of structural disadvantage and social disruption. Therefore, this study uses data from three different years in order to represent varying levels of country wide prosperity, hardship, and recovery. 2005 was chosen as a year in which the country was experiencing strong economic growth, 2009 was chosen as a year in which the country was enduring a recession as a result of the burst of the housing market bubble, and 2012 was chosen as a year in which the country was recovering from the recession that started in 2008.
The model for this study could be written as follows:

$$\boldsymbol{VCR = \beta_0 + \beta_1 Fam + \beta_2 Pov + \beta_3 Edu +}$$
$$\boldsymbol{\beta_4 Employ + \beta_5 Gun + \beta_6 Inc + \beta_7 Race + \in}$$

VCR, the dependent variable in focus, is the rate of violent crime in each state per 100,000 people. The definition of the violent crime rate is consistent with the definition put in place by the US Department of Justice and the FBI. More specifically, it is a measure comprised of four offenses: murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault. Violent crimes are those offenses that involve force or threat of force. The study done by Phillips (2002) specifically focused on the rate of homicide, and in particular, homicide differentials between the different races. However, this study instead focuses on violent crime in order to encompass a wider variety of crime sources. Violent crime was also chosen in order to bypass the potential for under-reporting of homicide data as victims or witness of more “minor” crime might be more apt to report what they know to the police.

Independent variables, a complete list of which can be found in table 4, consist of eleven variables obtained from various sources. Table 4 provides data source, acronyms, descriptions, and expected signs. First, State, is purely the state in which the date is sampled from on a year to year basis. Second, POP is a measure of the size of the population of each corresponding state, this data is obtained from the US Census. The third variable FAM is a measure of family structure and stability. This variable is the sum of families that have been divorced as well as separated obtained from the US Census. Numerous empirical studies in the past as well as social control theory suggest that there is an important association between family disruption and rates of homicide (Phillips 2012). Socioeconomic status is captured with the fourth variable POV as a measure of the amount of poverty in the state, or the percent of families living below the poverty line as specified by the US census. In addition to level of poverty as a determinant of socioeconomic status, the fifth variable EDU is a measure of the level of educational attainment of people in each state. This variable is measured as the percent of people ages 25+ that have attended some college or have obtained an associate's degree. Deprivation is often a motivator for crime, and in order to measure for this, the sixth variable INC as a measure of income inequality is utilized. The Gini coefficient measures the amount of income inequality on a scale of 0-1, and is used to find relative deprivation. Socioeconomic disadvantage is also analyzed through the use of the seventh variable EMPLOY, or the rate of employed individuals aged 16 and up. According to Phillips (2002), strain or blocked opportunity theory suggests that absolute and relative deprivation may lead to frustration that is ultimately manifested in aggressive behavior. For this reason, these variables that measure absolute and relative deprivation have been chosen for their theoretical direct relationship with aggressive behavior and therefore violent crime. For the eighth variable, relative severity of state gun control laws is observed. This is measured on a scale of 0-100 in order to identify if ease of access to guns has a positive effect on violent crime or acts as a deterrent. The last three variables BPOP, WPOP, and HPOP are variables that identify the percent of the population in the area that is Black, White, or Hispanic. Phillips (2012) notes that Massey and Denton (1993) among others, argue that a way in which residential segregation contributes to violence is through social and cultural isolation of certain minority groups. These variables are used in order to infer if certain levels or "mixes" of these races contributes to violence more than others.

Table 4 List of Variables

Acronym	Variable & Definition	Expected Sign of Coefficient	Source
State	State		Census
POP	Population		Census
VCR	Violent Crime Rate		UCR
FAM	Family Structure (% divorced + Separate) ages 15+	+	Census
Pov	Poverty (% of families below the poverty line)	+	Census
EDU	Education attainment (Some college or associate's)	-	Census
EMPLOY	Employment (Rate of unemployment ages 16+)	+	Census
GUN	Gun Regulation (Strictness of state's gun laws 0-100)	+/-	Bradley Campaign
INC	Income Inequality (Gini coefficient 0-1)	+	PRB
BPOP	Black Population (% of total population)	+/-	Census
WPOP	White Population (% of total population)	+/-	Census
HPOP	Hispanic Population (% of total population)	+/-	Census

5.0 EMPIRICAL RESULTS

The empirical estimation results for years 2005, 2009, and 2012 are presented in Tables 5, 6, and 7 respectively. The empirical estimation shows the positive and negative relationships between the different measures of socioeconomic status, deprivation, and culture on the level rate of violent crime by each state over the three years mentioned. In looking at the summary statistics represented on tables 1, 2, and 3, it can be seen that the average violent crime rate from 2005 to 2012 has diminished. This comes as a surprise and counters strain or blocked theory, which would have predicted that in times of economic struggle, people would be forced to violent behavior reflective of their deprived economic position. Average total population grew from year to year as expected. It was predicted prior to this study that the family structure variable would vary in accordance with economic up/downturns. Times of plenty leading to a higher rate of divorce, and times of hardship leading to fewer divorces. In looking at just these three years, it is clear that the family structure variable increased through all of the years, less so in 2009 and more so in 2012, but the observation of just three years is limiting in this respect. The poverty rate variable would be expected to have risen in 2009 and started to decline in 2012, however, the rate rose slightly from 2005 to 2009, and jumped largely in 2012. Education rose throughout the selected years slowly, however, the importance of education in today's rapidly evolving business environment is growing in importance, so this growth makes sense. The rate of unemployment fluctuated as predicted, rising in times of hardship (2008) and lowering in times of prosper (2012 recovery). Gun regulation was constant throughout, and income inequality, on average, stayed stable. Lastly, in looking at populations of racial groups, the racial group with noticeable gain in share of the population over time was the Hispanic group.

Table 5: Regression results for 2005

Variable	Coefficient	T-Statistic	Prob.
Constant	-984.1005 -1150.71	-0.85521	0.3975
POP	-3.90E-06 -4.30E-06	-0.90783	0.3694
FAM	32.37741 -21.92392	1.476807	0.1476 *
POV	-19.76344 -14.24142	-1.38774	0.1729 *
EDU	-5.910443 -8.815974	-0.67042	0.5064
EMPLOY	91.05329 -39.49224	2.3056	0.0264 **
GUN	-1.448057 -1.780168	-0.81344	0.4208
INC	3634.847 -2106.852	1.725251	0.0922 *
BPOP	-251.1255 -388.5348	-0.64634	0.5218
WPOP	-812.8811 -409.1994	-1.98652	0.0539 **
HPOP	333.2198 -359.7567	0.926237	0.3599
Included observations: 51	R^2 0.628299		

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively. Standard errors in parentheses

Table 6: Regression results for 2009

Variable	Coefficient	t-Statistic	Prob.
C	-1399.406 -1045.436	-1.33859	0.1883
POP	-7.52E-06 -3.99E-06	-1.88606	0.0666 **
FAM	26.05308 -22.58604	1.153503	0.2555
POV	-13.39048 -13.98415	-0.95755	0.344
EDU	1.542578 -8.412557	0.183366	0.8554
EMPLOY	33.23722 -22.07038	1.505965	0.1399 *
GUN	-0.967734 -1.967244	-0.49192	0.6255
INC	3736.791 -2075.194	1.800695	0.0793 **
BPOP	444.2756 -278.9252	1.592812	0.1191 *
WPOP	-483.6879 -233.4551	-2.07187	0.0448 **
HPOP	566.6886 -276.4834	2.04963	0.047 **
Included observations: 51	R^2 0.607642		

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively. Standard errors in parentheses

Table 7: Regression results for 2012

Variable	Coefficient	t-Statistic	Prob.
C	-602.845 -967.5089	-0.62309	0.5368
POP	-6.13E-06 -3.57E-06	-1.71778	0.0936 *
FAM	23.57642 -21.92439	1.075351	0.2887
POV	-6.198955 -11.28384	-0.54937	0.5858
EDU	0.232686 -8.403453	0.027689	0.978
EMPLOY	-5.682873 -28.91051	-0.19657	0.8452
GUN	0.758426 -2.05516	0.369035	0.714
INC	1785.959 -1976.053	0.903801	0.3715
BPOP	746.0034 -391.1891	1.907015	0.0637 **
WPOP	-217.5048 -244.4618	-0.88973	0.3789
HPOP	556.4607 -283.7764	1.960913	0.0569 **
Included observations: 51	R^2 0.538446		

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively. Standard errors in parentheses

The objective of this study was to analyze state by state data over three separate years in order with the goal of identifying potential socioeconomic indicators of violent crime. The years used were chosen to represent three different stages of the United States economy, (boom, recession, recovery), and see if these factors had any effect on the independent variables in those years, and then consequently the dependent variable of violent crime.

Though many of these variable had expected outcomes from previous empirical studies and social theories, not all of them were realized in this study. In looking at the regression outcomes from year to year, not all of the expected correlations remained constant. In table 5 (2005), FAM, EDU, EMPLOY, and INC all followed the predicted correlations, however, surprisingly, poverty did not. In the year 2005, it was found that FAM, POV, and INC were significant at the 10% level, and EMPLOY and WPOP were significant at the 5% level. Moving forward to table 6 (2009) a year of recession in the US, the EDU variable does not align with the predicted outcome. FAM, EMPLOY, and INC still reflect previous predictions, however, POV and EDU do not. It would be theorized that a higher rate of education would decrease the level of crime in an area, however, this outcome opposes that idea. In this year, EMPLOY has statistical significance at the 10% level, and INC, WPOP, and HPOP, show significance at the 5% level. Moving on to the last year of the study, (2012) Table 7, it can be seen that EMPLOY this time has dropped out from predicted correlation as well, leaving only FAM and INC as the only variables that maintained their predicted correlations with violent crime. In this year, the only variables that are statistically significant are BPOP and HPOP at the 5% level.

Although not statistically significant at each of the three years incorporated into this study, it appears that the variables that most constantly align with the predictions of correlation made in this study are the FAM and INC variables. In 2005, a 1 unit increase in family structure (divorce & separated) yields an increase in violent crime rate by 32.377. In 2009, a 1 unit increase yields a 26.053 increase in violent crime, and in 2012, a 1 unit increase yields an increase in violent crime of 23.5754. Focusing on income inequality, in 2005, a 1 unit increase in income inequality yields a 3634.847 increase in violent crime, while in 2009, that number jumps to have an effect of 3736.791 on violent crime, and finally in 2012, the yield on violent crime decreases to 1785.959 per a 1 unit increase in income inequality. Coefficients on populations by race were mostly inconsistent, however, WPOP was negative throughout all 3 years, signifying

that as the population percentage of Whites rose, the rate of violent crime in that area would decrease. In all years excluding 2012, gun strictness laws decreased the rate of violent crime, aligning with preconceived notions that controlled access to guns lowered the rate of crime.

Interpreting these results in terms of relative change in the independent variable leads to three main points of focus. First, the variable INC or income inequality maintains statistical significance in two out of the three years of focus (2005, 2009). Between the two of these years, income inequality was significant at 10% and 5% respectively. Both years, income inequality resulted in the expected positive correlation between INC and VCRIME. Secondly, the variable EMPLOY or rate of unemployment is statistically significant in two out of the three years of focus as well, (2005, 2009). Significance in these two years was 5% and 10% respectively. Similarly, as expected, the positive correlation between EMPLOY and VCRIME help constant and consistent with the work done by Phillips. Lastly, population by race was significant throughout all three years of observation, however, their statistical significance varied in each year, as did the specifics of which race population variable. All three race variables (BPOP, WPOP, HPOP) were expected to be unforeseeable in how they were to correlate with VCRIME. As it turns out, WPOP was significant in two out of the three years (2005, 2009) at 5% in each year. HPOP was significant at 5% in two of the three years (2009, 2012), and BPOP was 5% significant in 2012. Though the signs were anticipated to be unpredictable, WPOP maintained a negative correlation with VCRIME in the years of 2005 and 2009, while HPOP and BPOP had a positive correlation with VCRIME in each respective variable's years of statistical significance. The Variables for family structure and poverty were significant at the 10% level in the year of 2005 alone. These findings will be further analyzed in the conclusion section that follows.

6.0 CONCLUSION

This study attempts to determine if there are socioeconomic variables that have a quantifiable effect on violent crime rates across the United States of America. This study was modeled after a study done by Julie A Philips, published in 2002, entitled *White, Black, and Latino Homicide Rates: Why the Difference?*. This study differs from Phillips' work in that the goal was to identify which specific socioeconomic variables had the greatest quantifiable correlations to the dependent variable "violent crime" that was used in place of "rate of homicide". Criminological theories discussed today suggest that most of the difference in rates of

homicides across racial groups is due largely to the different socioeconomic conditions in which the different racial demographics live (Phillips 2002). For this reason, this study also differs from Phillips' in that the focus was not on variation between the three different racial groups, but rather between different societal conditions and make-ups (by state), and using the variables BPOP, HPOP, and HPOP to serve as a descriptor of the demographic make-up on a state by state basis. Using Philips' research, as well as guidelines suggested by criminology theory, the set of variables selected for this study were believed to be the best socioeconomic predictors of violent crime rates.

As expected, income inequality as well as rate of unemployment were variables that had statistically significant effects on rates of violent crime. Income inequality is commonly referred to as the gap between the rich and the poor. Areas with a high measure of inequality are areas in which very poor people are situated amongst wealthy individuals. On the other hand, the rate of unemployment is a measure of the rate of individuals who are currently in the labor force and are out of work. Both of these variables are measures of absolute and relative deprivation. Phillips' work highlights that strain or blocked opportunity theory suggests that these types of deprivation lead to frustration that can be manifested in aggressive behavior. Therefore, it can be said that those individuals who live in areas where there are large amounts of unemployed individuals searching for jobs that might not exist, are statistically more likely to live in an area with a higher rate of violent crime. Furthermore, it can also be said, that individuals living in areas where there are high concentrations of poverty and wealth mixed together, are also more likely to live in an area with higher rates of violent crime. These findings and the direction of their correlations agree with previous studies, including, but not limited to Phillips' work on variation in homicide rates.

Although the measures of family structure (FAM) and level of poverty (POV) prove to be statistically significant solely in 2005, it is important to include these variables in the discussion. Poverty for this study measured the rate of people living under a certain level of income (the poverty line) that is set by the US Government. Areas with higher rates of poverty often experience similar hardships and frustrations that those individuals living in areas with higher levels of income inequality experience, as well as those living in areas with higher unemployment. In fact, high unemployment can be directly related to levels of poverty, and for this purpose, this study incorporated data from years of varying economic conditions in order to

examine for between years with varying rates of unemployment. This study reveals that rate of poverty is an identifiable determinant in the levels of violent crime, however, contrary to previous studies, it is found in this model to be negatively correlated with the rate of violent crime. The margin of error for two out of three of the coefficient results for poverty can swing this variable in a positive direction, therefore it is inconclusive as to if poverty is relatable to violent crime in a positive manner. Family structure in this study was a proxy for the sum of the rate of families divorced or separated. Social control theory states that there is an important association between rates of family separation and homicide rates. As predicted, there was a consistent positive correlation between family structure and violent crime. Although this variable wasn't statistically significant through all years, the results agree with previous studies, and this study finds that family structure is an important positively correlated determinant of violent crimes rates.

Measures of the three main ethnic groups were statistically significant in different years. Direction of correlation was not predicted prior to this study, however, two of the three groups had constant correlations throughout the three years observed. The variable measuring White population was consistently negative throughout the three years of observation, while the Hispanic population was positive throughout the three years. The measure of the Black population varied slightly, in that it was negative in 2005 and then positive in 2009 and 2012. Although much more detailed and specific study would have to be done to determine the complexities behind this observation, these results can be explained with a more simple "on the surface" interpretation. As Phillips pointed out, statistically speaking, large numbers of Hispanics and Blacks live in extremely disadvantaged neighborhoods. This, holding true, means that Hispanics and Blacks are more likely to live in disadvantaged areas with higher rates of poverty and unemployment, which this study has identified as determinants of violent crime rates. Whites in this country, historically speaking, have been on the other side of the spectrum. Living in better areas yields better chances of making a better living, and getting away from areas with higher rates of violent crime.

In summary, this study finds a clear connection between poor socioeconomic conditions and higher rates of violent crime, (identifying income inequality and unemployment specifically). Previous research indicates that the additional variables used in this study are equally important in determining the rates of violent crimes in different areas, however, this

study's results did not yield the same. This is most likely caused by the lack of access to perfect data, and imperfections in data reporting. This conclusion provides for some promising ideas for policymakers, specifically in regard to policies that would improve socioeconomic conditions for all minority groups. For example, things like improving levels of education across the board, lowering the rate of unemployment, and reducing the levels of poverty experienced in this country could have a significant impact on the rates of violent crime committed in this country. Future research should go into greater detail by looking at data by each specific racial group with focus on smaller geographical areas and communities.

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Nicaragua

By: Jacob Gesin

Outline

- Background
- Economic information & statistics
- Problem
- History & how it came to be this way
- Recent history
- Forward looking

Background

- Population: 5,848,641
  - Capital: Managua, 934,000
- Government type: Republic
- Chief of State: Daniel Ortega – Sandinista Liberation Front
- Language: Spanish
- Currency: Cordoba → 24.77/$1USD
- Principal industries: agriculture, chemicals, machinery and metal products, knit and woven apparel
- Exports: commodities (coffee, beef, gold, cotton, sugar, tabacco)
- Main trading partners: US 55.6%, Canada 8.6%, Venezuela 7.3%, El Salvador 4.2%

Economic Data

- GDP: $27.86 billion US, real growth rate 4.2%
  - GDP per capita (PPP) $4,500
  - Inflation: 7.4%
- Budget: 2.885 billion in revenue, 2.918 in expenditure
- Unemployment: 7.2%
- Population below poverty line: 42.5%
- Income inequality: 40.5 (Gini index)
- Public debt: 57.4% of GDP
- External debt: $8.16 billion

Economic Data (Cont)

- Health expenditure: 10.1% of GDP
- Infant mortality rate: 20.36/1000
- Labor force: 3.039 million
  - 28+% agriculture
  - 19% industry

Current Problem(s)

- Dependency on export crops for economic development
- Marginalized domestic food production
  - Half of the population lacks food security
- Corruption

History

- Three main periods:
  - Zelaya's liberal nationalist agrarian policy 1894-1909
  - Somoza's agro-capitalism 1910-1978
  - Sandinista idealism 1979-1990
- Primary causes highlighted:
  - US manipulation and conflict
  - World Bank & IMF interests
  - Dictatorships and corruption

Zalaya's Liberal Nationalist Agrarian Policy 1894-1909

- Realized high demand for coffee in the world market. Shifted all resources to support the agro-export sector
- High coffee prices drove all farmers away from normal food production
- Zalaya transferred 1,300,000 hectares of land to 30 elite families for coffee production
- Thousands of peasants left landless, turn to cheap seasonal labor
- Legislation ruling 3 options: military, public project work, or coffee production
- Malnutrition, declining health, scarcity of food

Somoza's Agro-Capitalism 1910-1978

- Corrupt dictator with a capitalist philosophy
- Economic growth driven by agro-capitalism masked the decline in food production and distribution.
  - More than 50% of the population without food security
- Reinforced the class structure, expanding Nicaragua's competitive advantage in coffee and cotton.
- High prices yielded high profit, but no wealth was put into fiscal budget.
  - Rampant corruption, no trickledown effect. Top 5% enjoyed 28% of the income, bottom 50% got 15%
- Forced people off their land, gave it to an elite few, and ordered them to work as wage labor

Somoza's Agro-Capitalism (Cont)

- In 1978, 37% of the active rural population was landless, half couldn't find work
- Coffee has potential for other crops to be grown with it, cotton does not.
  - Somoza orders remaining fertile land to be planted with cotton.
- Profits gained were not reinvested
  - Redistribution to agro-export producers as subsidies and incentives
- Wealthy crop producers grew wealthier, the poor fell deeper into poverty
- "Comparative advantage" meant specialization in agro-exports at the expense of food crop production

Sandinistas 1979-1990
Nicaraguan revolution

- Violent ousting of Somoza dictatorship
- Agrarian reform again. Goals of self-sufficiency in basic grain production by 90s and 2000s
  - Failure, incompatible with export oriented structure of the agro-export sector
- Further complicated by:
    - Being challenged by anti-Sandinistas
    - U.S. backed Contras
    - Economic blockade by U.S. government
- Centralization of economic planning and market controls seen by U.S. as communist influence.
- Highly dependent on multilateral aid and loans.

Sandinistas 1979-1990 (Cont)

- Coffee prices drop
  - IMF and World Bank encouraged new countries to produce coffee
- Financial assistance from the Soviet Bloc
- Not able to solve budget problems
  - Turned to printing money as a solution
- Hyperinflation – devastating
- Stagnant poverty rates, malnutrition, high debt
- Extremely volatile economy, needed diversification

Recent History: Post Sandinistas

- 1990: National opposition union (US backed) defeats FSLN in elections, Violeta Chamorro becomes president
- 1992: HUGE earthquake, 16,000 left homeless
- 2002: Daniel Ortega re-elected
- 2004: World bank wipes 80% of Nicaragua's debt to the institution.
- 2004: Russia writes off Nicaragua's multibillion dollar soviet era debt
- 2006: Free trade deal with US CAFTA
- 2006: Plans unveiled to build ship canal linking Atlantic and Pacific oceans
- 2006: Daniel Ortega re-elected again
- 2009: Ortega announces plan to change constitution to allow him to stand for another term
  - Then lifted
- 2011: Ortega re-elected for another 5 year term.

Reflecting

- Attempts to use export agriculture as an engine of growth led to reallocation of land, labor, credit, and knowledge of food cultivation.
- Nicaragua's economy is largely based off of volatile world market prices of coffee and cotton
- Dependency on food aid and foreign loans
  - Caught in the system, having to bend to demands of international entities
- Political corruption, questionable U.S. foreign policy, and natural disasters extremely detrimental

Looking Forward

- Daniel Ortega must be monitored
- Delegation of power to rural communities
- Resolve land tenure program
- Strengthen the financial sector
- Initiate a micro-finance system
- Improve infrastructure
- Introduce nutrition programs

Looking Forward (Cont)

- Increase off-farm employment
- Buffer stock of grains and food
- The Nicaraguan government affirmed at the World Food Summit in 2000 of its commitment to reducing the prevalence of extreme poverty by half by 2015, as well as reducing child malnutrition, expanding sanitation services, and reducing illiteracy.

Questions?

Indonesia: Attracting Direct Investment

Jacob Gesin
Camila Espinal

Agenda

- Country Background
- Economic History
- SWOT Analysis
- Attracting Investment

Population Description

- 235 million on 13,000 islands
- Fourth most populous nation
- Density: 61% on 7% of the land
  - Java, Bali, and Madura
- 300 ethnicities, 750 languages & dialec
- 86% Muslim, 11% Christian

Resources & Climate

- Labor
- Natural resources
  - Agriculture
  - Logging
  - Mining
  - Oil and gas
  - Natural rubber

Politics

- Presidential republic
- VP and President elected directly
- President selected council
  - Economics, social issues, and security
- MPR main legislative body
  - Two lower houses: DPR & DPD
- Divided into 33 provinces

Associations

- Active members of:
  - Association of Southeast Asian countries
  - Asia Pacific Economic Cooperation
- Improving relations with Australia

Asia-Pacific Economic Cooperation

Early Economic History

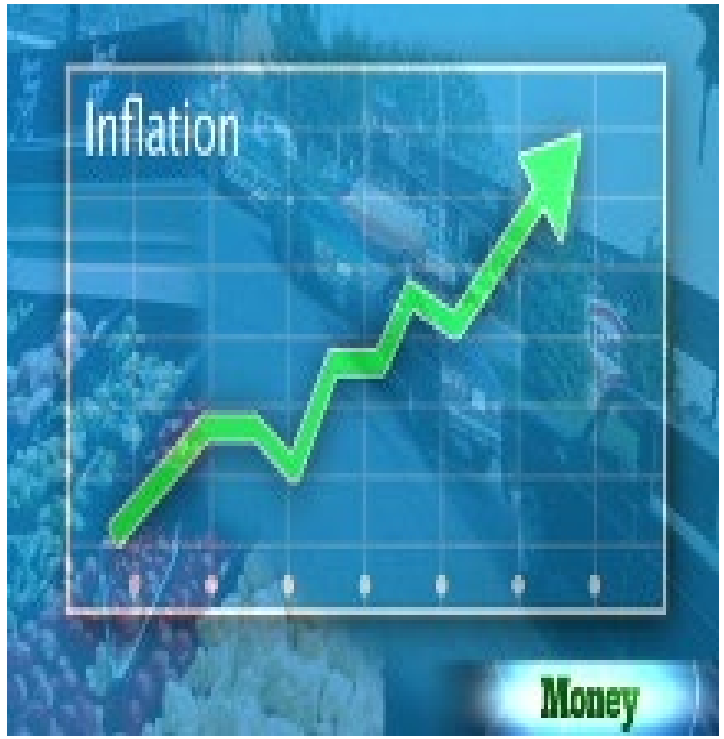
- 1350 AD Hindu "Golden Age"
- 16th century, Europeans appear
  - Dutch East India Company 1602
    - Export sugar, coffee, spices
  - Negative experience?
- WW2 colonial rule ended
- Independence in 1949

1949-1965

- President Sukarno elected by parliament
- Sukarno's goals:
  - Reduce dominance of Dutch Companies, and some Chinese Companies
  - FINEC (Financial Economic Agreement)
    - Java Bank nationalized, becomes Central Bank of Indonesia
    - Followed by more nationalization
  - Benteng (Fortress) regulation
- 1963 Congress elected Sukarno president for life

1949-1965 Continued

- "Indonesian-style socialism" in a "Guided Economy"
- State owned companies and trading houses
- State owned business – Foreign loan driven
  - Fertilizers, cement, paper, chemicals, shipbuilding
- Massive deficits, Inflation.
- Agriculture > 50% GDP
- Close to collapse in 1960



Suharto Regime 1965-1997

- Policies influenced by IMF and World Bank
- Foreign Investment Law 1967
- Domestic Investment Law 1968
- Inter Governmental Group on Indonesia (IGGI)
  - Established by Netherlands
- Rehabilitation of dilapidated infrastructure

Suharto Regime continued

- Initial removal of barriers
- Oil boom 1970s reversal of policy
- Reinvestment of oil revenues
  - Health, education, infrastructure
  - Infant mortality drop 50%
- 1974 riots of “over-presence” of foreign investment
  - Foreign investors forced into minority shares in JVs

Oil shock 1978

- Rising prices accelerated local preference regulations
  - Rupiah devalued
- Oil price tumble 1982
- Oil & gas exports dropped to 70% in 1983, then 40% in 1988
  - External debt rose to $57billion
  - Debt service ratio reached 40% in 1989
  - Policy focus shifted
    - Import substitution → export promotion

Trade reform 1980s

- Foreign and domestic investment restrictions relaxed
  - Singapore, Malaysia, Indonesia "Growth Triangle" 1989
- Strong growth
  - Agriculture 51%GDP → 17%
  - Industry 28% → 42%
  - World Bank's list of "high performing Asian economies"
  - Poverty fell to 11% by 1996
- 1992 membership to ASEAN Free Trade Area
- 1995 membership to WTO

Suharto Corruption

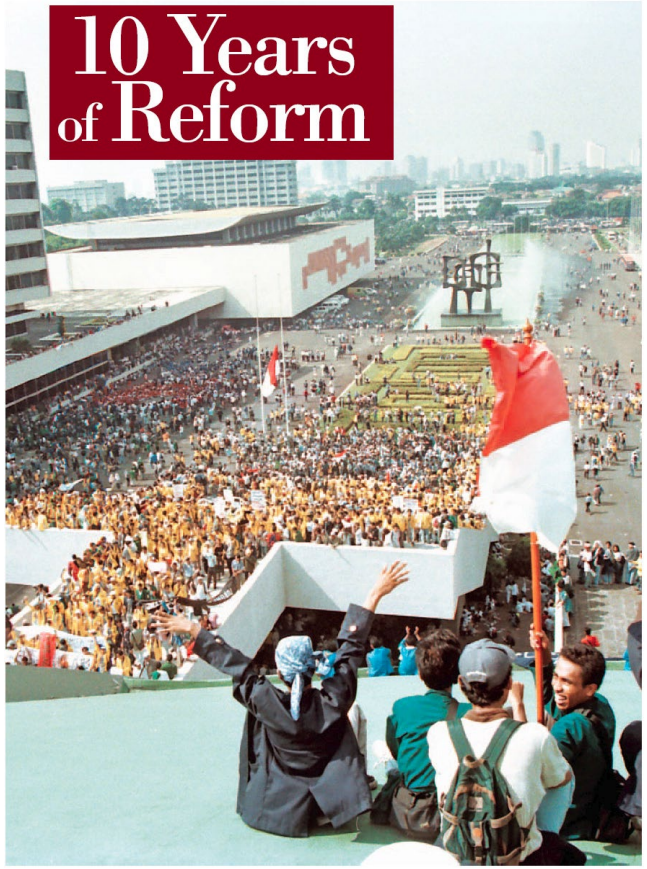
- Favoritism towards family and associates
  - Suharto family owning 17% market capitalization, 417 companies
  - State banks had 40% of all assets in 1997
    - High share of problem loans
- World bank total lending $25 billion
  - Viewed as a success
  - Progress from 50% to 300% GDP per capita over 30 years

Asian Financial Crisis 1997-1998

- Thai currency floated
- The managed float Rupiah came under attack
  - Rupiah and Jakarta Stock Exchange plummeted
  - Real GDP 13% contraction
  - 70% inflation
- IMF approved $10 billion Stand-By Arrangement
  - Jakarta Initiative Task Force (JITF)
  - Indonesia Bank Restructuring Agency (IBRA)
- Capital Flight

Reformasi

- B.J. Habibie
  - IMF credit, not World Bank
  - Openness in governance
  - 1999 rupiah appreciated to 7,000 per US$
  - Inflation & interest rates fell
  - Anti Corruption Commission 2004
  - Decentralization of 1/3 government spending
- Reforms slow to implement

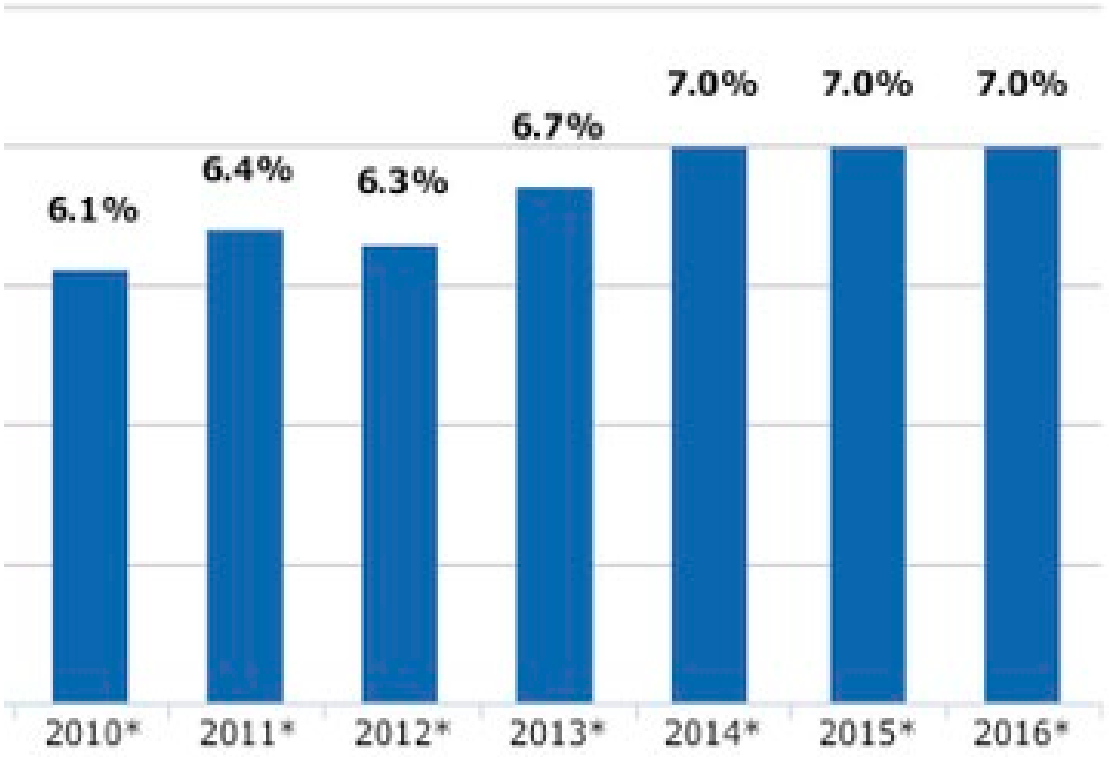


Economy Since 2006

SWOT Analysis

Strengths

- GDP growth
- Inflation Under Control and Falling
- Decreasing poverty rates
  - 1999: 23.43%
  - 2005:15.97%
  - 2013: 13%
- Decreasing Debt
  - 2000: 90% → 50%
  - Oil exports
  - Growth on domestic demand



Weaknesses

- High Unemployment Rates
  - From 5.92%(Q1 2013) → 6.25%(Q4 2013)
- Low Productivity
- Low Investment on:
  - Education
  - Infrastructure
- Size Restrictions
- Inflexible Labor Market
- Corruption

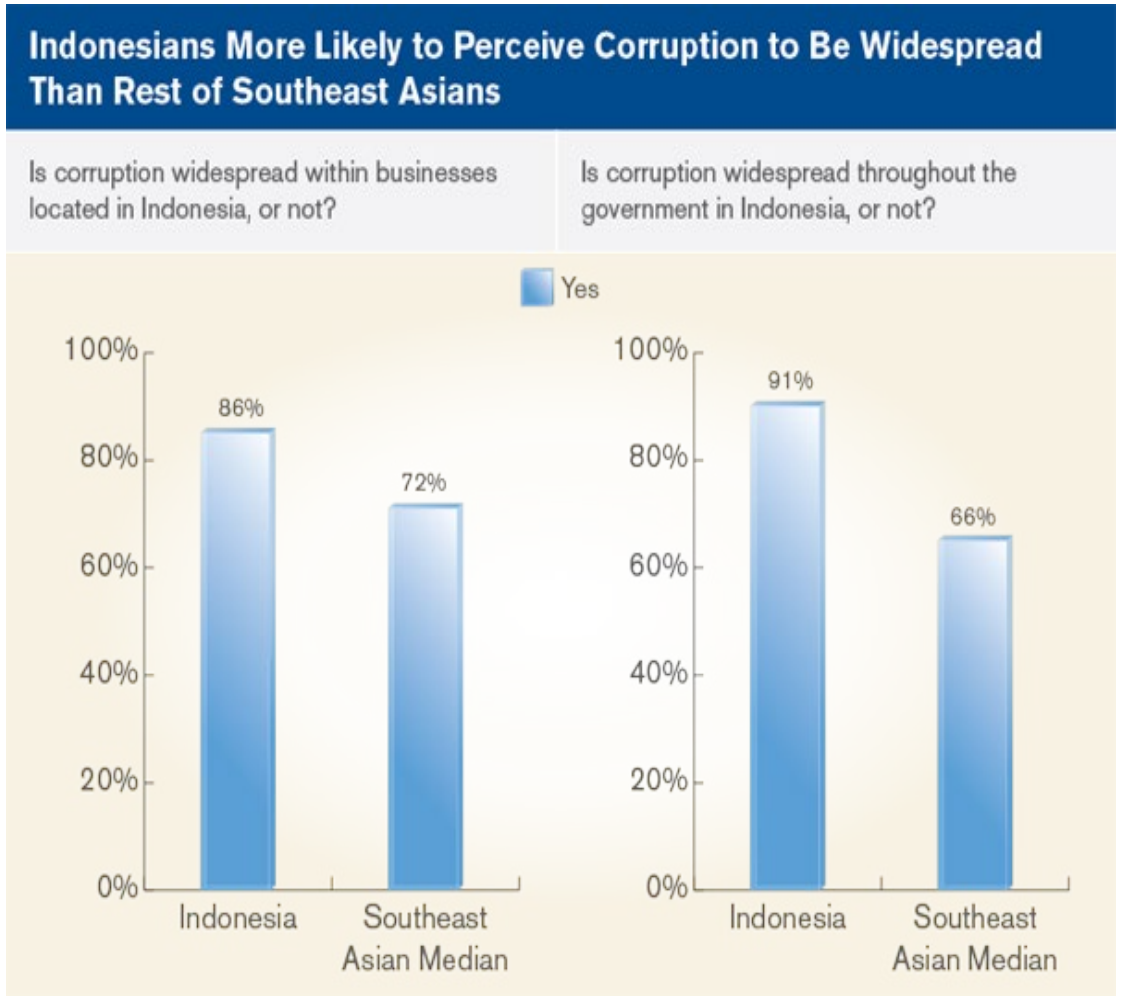
Problematic Factors for Doing Business in Indonesia

Problematic Factors for Doing Business	Weighted Average Rank*		
	2010-2011	2011-2012	2012-2013
Corruption	16.0	15.4	14.2
Inefficient government bureaucracy	16.2	14.3	15.4
Inadequate supply of infrastructure	8.4	9.5	8.7
Policy instability	6.0	7.4	5.4
Access to financing	7.8	7.2	5.4
Inadequately educated workforce	5.4	6.3	4.1
Poor work ethic in national labor force	4.9	6.2	7.2
Government instability/coups	6.4	6.1	5.0
Inflation	6.7	6.1	5.6
Tax regulations	5.6	6.0	5.1
Tax rates	2.7	4.2	3.3
Restrictive labor regulations	5.3	3.6	6.8
Crime and theft	3.6	2.7	4.3
Poor public health	2.7	2.5	2.0
Foreign currency regulations	2.2	2.3	5.2

Opportunities

- Rich Natural Resources
  - Oil
  - Gas
  - Coal
  - Copper
  - Minerals
- R&D
  - Regulations Protecting Intellectual Capital
- Real Exchange Rate Appreciation

Threats



- Increasing Levels of Corruption
- Lack of Confidence
- High Levels of Competition
  - India
  - Malaysia
  - Thailand

Indonesia's Rank & Score: The Global Competitiveness Report 2012-2013

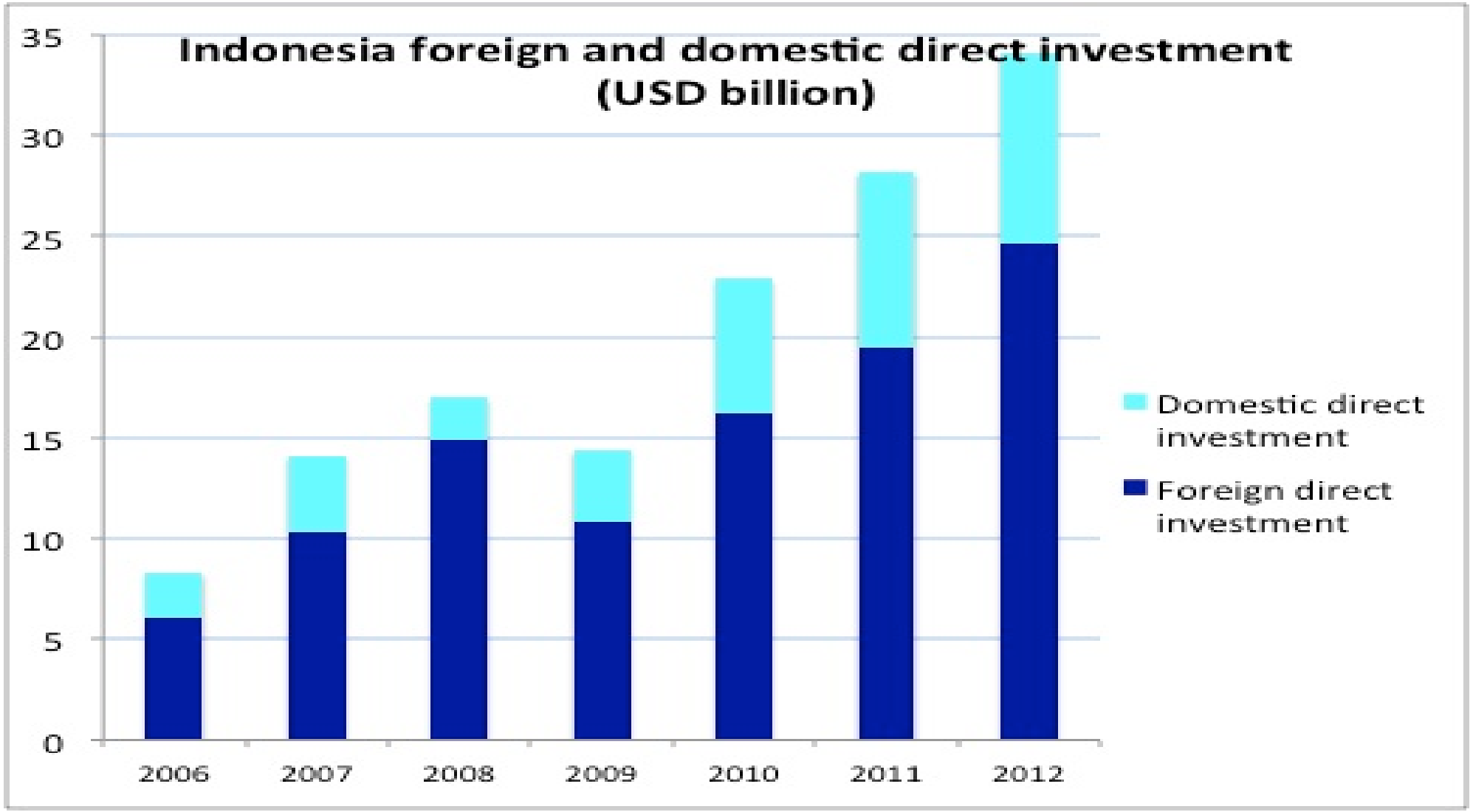
	GCI 2010-2011		GCI 2011-2012		GCI 2012-2013		CHANGE[1]	
	Rank*	Score	Rank**	Score	Rank***	Score	Rank***	Score
Overall	***44***	***4.4***	***46***	***4.4***	***50***	***4.4***	↓	↔
A. Basic Requirements	**60**	4.6	**53**	4.7	**58**	4.7	↓	↔
Institutions	61	4.0	71	3.8	72	3.9	↓	↑
Infrastructure	82	3.6	76	3.8	78	3.7	↓	↓
Macroeconomic Environment	35	5.2	23	5.7	25	5.7	↓	↔
Health & Primary Education	62	5.8	64	5.7	70	5.7	↓	↔
B. Efficiency Enhancers	**51**	4.2	**56**	4.2	**58**	4.2	↓	↔
Higher Education & Training	66	4.2	69	4.2	73	4.2	↓	↔
Goods Market Efficiency	49	4.3	67	4.2	63	4.3	↑	↑
Labor Market Efficiency	84	4.2	94	4.1	120	3.9	↓	↓
Financial Market Development	62	4.2	69	4.1	70	4.1	↓	↔
Technological Readiness	91	3.2	94	3.3	85	3.6	↑	↑
Market Size	15	5.2	15	5.2	16	5.3	↓	↑
C. Innovation & Sophistication Factors	**37**	4.1	**41**	3.9	**40**	4.0	↑	↑
Business Sophistication	37	4.4	45	4.2	42	4.3	↑	↑
Innovation	36	3.7	36	3.6	39	3.6	↓	↔

Foreign Investment

- History of foreign direct investment with Dutch companies
- Top three locations for U.S investors in 1950s
- 1980s and 1990s investment boom
  - Korean Taiwanese companies relocated
  - Textiles exports doubled
- Asian Financial Crisis
  - FDI inflows to Indonesia collapsed
  - Foreign companies relocated to other countries
- In 2006 Japanese companies dominated direct investment in Indonesia

Foreign Investment Rules and Regulations

- 1967 Capital Investment Coordination Agency(BKPM)
  - Easy Investment Permission
- Tax Incentives
  - Tax Holiday
    - Corporate Tax
    - Withholding tax on dividends
- Batam
  - 1978: 'Bonded Zone'
  - 1889: Status confirmed by law
  - 1994: Growth Triangle Agreement


Indonesia foreign and domestic direct investment
(USD billion)
35
30
25
20
15
10
5
0
2006
2007
2008
2009
2010
2011
2012
Domestic direct investment
Foreign direct investment

Questions/ Feedback?