SUMMARY

A regional city has enlisted our help in curbing citywide gangs and violence. Before delving into solving the problem, our group established a set of assumptions. In order to compensate for population fluctuation, we normalized the data so that it would reflect incidents of violent crime per 100,000 people. We also agreed that the crime rate would be the dependent variable in our model and therefore not have an impact on the other variables. After setting some ground rules, we began constructing a mathematical model from which to draw conclusions on how to reduce violence. By organizing a linear regression, we were able to derive an equation that allows us to calculate the number of violent crimes per 100000 people in terms of the unemployment rate and the graduation rate. The variables were chosen because they exhibited the most statistical significance without overloading the equation with too many variables.

The next step was to research specifically how these two independent variables affected the dependent variable in real situations. We collected information from many different studies and articles to gain an understanding of the data and explain the statistical relationships between our variables. A particularly important discovery we made was that students who drop out of high school tend to become involved with gangs and violence. We also noted that in many states, the rate of violent crimes varies directly with the unemployment rate.

Bearing our research and model in mind, we have come to the conclusion that by forming tighter community bonds and providing extrinsic incentives for students, we can raise the graduation rate and thus quell gang violence or any other violent crimes. To lower the unemployment rate, we propose the institutionalization of vocational schools as an alternative option to public schools. We also sought to lower unemployment through the creation of public works programs. Our research shows that by keeping people employed, we can lower the number of violent crimes. To further exemplify these findings, we conducted a case study between our given city and the city of Dayton, Ohio.

Although our model can accurately predict the number of violent crimes per 100,000 people, it is contingent upon knowing the graduation rate and the unemployment rate. It is important to note that thus far the model is most useful for setting guidelines and goals to reduce the number of violent crimes and not projecting data into the future as is often the use of regression equations. However, with more research regarding future graduation and unemployment rates, our model could certainly be used to predict how many incidents of violence will occur. Assuming the success of our violence reduction programs, our model would prove that we can expect fewer violent crimes as a result of our efforts.

Problem B

INTRODUCTION

The mayor of a local city has expressed an interest in eradicating gang-related violence and violent crimes in general. After analyzing the given data, we have come to the conclusion that there are several important factors that contribute to the level of gangs and violence, most prevalently the unemployment rate and high school dropout rate. By working towards a lower unemployment rate and a lower high school dropout rate, our group expects to see a decrease in incidents of violence. However, before conclusions can be drawn regarding how to curb and eventually reverse these trends, we must first examine the extent of these issues and more specifically their impact on the occurrence of incidents of violence.

VARIABLES

While constructing our model, there were several important variables we needed to consider. Before doing our analysis and condensing our data to the most significantly related variables, we assumed every variable to be relevant.

INCIDENTS OF VIOLENCE

This variable tells us how many violent crimes occurred in one year. It is composed of the number of homicides and the number of assaults. In our model, this figure is contingent upon the graduation rate and the unemployment rate; it is a dependent variable.

RATE OF INCIDENTS OF VIOLENCE

This is a variable we derived from the given statistics. In order to compensate for population changes, we set up a ratio for the number of incidents of violence per 100,000 persons.

HOMICIDES

This is the number of homicides in a given year. We did not include this figure in our model.

RATE OF HOMICIDES

The rate of homicides is the number of homicides per 100,000 people. This variable is not included in our model.

ASSAULTS

This is the number of assaults in a given year. We did not include this figure in our model.

RATE OF ASSAULTS

The rate of assaults is the number of assaults per 100,000 people. This variable is not included in our model.

CITY POPULATION

The city population is the number of persons living within the city. Although this variable was not directly included in our model, the two independent variables of our model are ratios which depend on the city population.

COUNTY POPULATION

The county population is the total population for the given county in which the city is located. This variable was not included in our model.

UNEMPLOYMENT

This figure is the number of unemployed persons seeking a job. This variable was not directly included in our model but the unemployment rate was.

UNEMPLOYMENT RATE

This figure is derived from a ratio of the number of unemployed persons divided by the

total city population. In our model, this is an independent variable.

HIGH SCHOOL ENROLLMENT

The high school enrollment is the number of students in the city who are enrolled in high school in a given year. This variable was not included in our model.

HIGH SCHOOL DROP OUTS

This is the number of students that legally drop out of high school. We did not include this variable in our model.

HIGH SCHOOL GRADUATION RATE

This is the percentage of enrolled high school students within the city population that graduate from high school. This figure was included in our model and is an independent variable.

HIGH SCHOOL DROP OUT RATE

This is the percentage of enrolled students within the city that are assumed to have dropped out of high school. This variable was not included in our mode. Note that the drop out rate and the graduation rate do not add to 100% because some students drop out before the legal age or without documentation. Also, some students may move or transfer to a different municipality.

JUVENILE INMATES

Juvenile inmates are under the age of 18 and therefore are kept at separate juvenile detention facilities, as opposed to a standard prison. This variable was not included in our model.

PRISON POPULATION

The prison population is the total number of inmates including juvenile inmates. This variable was not included in our model.

RELEASED ON PAROLE

This is the number of inmates including juvenile inmates that are released on parole in a given year. This variable was not included in our model.

PAROLE VIOLATION

This is the number of parolees who violate the terms of parole. It includes juvenile parolees. We did not include this variable in our model.

RATE OF PAROLE VIOLATION

The rate of parole violation is a ratio derived from the number of parole violators divided by the total number of parolees.

ASSUMPTIONS

1. The city does not have any of our programs already in place, or at least not to any significant extent. We assume this because we have nothing to indicate otherwise, and so without the assumption, we would have no way of making predictions because there would be no baseline.
2. As a whole, our city is comparable to that of a city of the same size (e.g. Dayton- see Case Study). We assume this because of the comparable populations, and this was the only information we were given that could relate it to another city.
3. Any factors other than the given variables are inconsequential. Without this assumption, all the variables could be affected by one another and other variables that were not accounted for. This would make it difficult to perform an analysis of the data.
4. Though it was unclear to us whether some of the given data was representative of the entire county or only the city itself, we determined that, based on comparisons to similarly sized cities, the data was from specifically the city and not the encompassing county.

5. Dropouts reported in the dropout rate are only those who have legally dropped out. We must assume this in order to explain why the dropout rate and graduation rate did not add up to 100%.
6. The number of incidents of violence is comprised from the sum of the amount of homicides and the amount of assaults. We assume this based on the fact that the sum of the homicides and assaults in a given year was equal to the number of violent crimes in the same year.
7. Only those that are actively searching for a job can be considered unemployed. We assume this because this is the definition of unemployment.
8. All independent variables (graduation rate, unemployment rate, etc.) are independent of crime, which is the dependent variable. We assume this because we need a way to quantify the dependent variable.

MODEL AND ANALYSIS

We knew that the primary purpose of any model we developed would be to project the rate of violent crime (as well as the more specific rates of homicide and assault) into the future based on the expected changes in the other areas of data that were discussed earlier. With that in mind, we determined that the most effective method for deriving our model would be to employ a linear regression analysis, a type of statistical analysis that takes a set of known independent variables and their values (from the past) and finds the variables that have the largest amount of potential predictive capacity in terms of a single, dependent variable (in our case, the number of violent crimes committed in a given year). Essentially, we were looking to explain our single dependent variable (the violent crime rate) using the other, independent variables that we were given data for. The analysis can be used to determine which variables have enough of a relation to the dependent variable to be used as predictors in the final product of the regression analysis, which is an equation that can be used to get an approximate value for the dependent variable. The regression assigns coefficient values to all of the qualifying independent variables, and puts them on one side of the equation along with a constant. In general, equations with fewer variables are considered to be stronger; more variables with insignificant levels of statistical

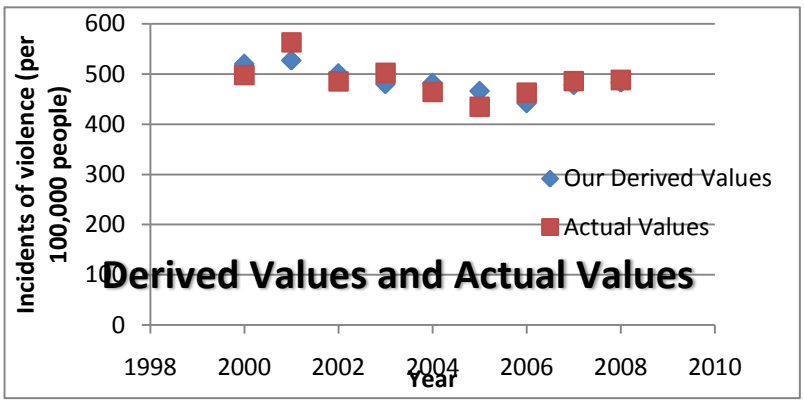
relevance to the dependent variable only weaken the model, as more variables will mean a greater likelihood for outlying or irrelevant data points that could skew the entire prediction. Because performing a regression with a large number of variables can become exceedingly complex, we used the statistics analysis program "Statistics Package for the Social Sciences" (SPSS) to analyze our numbers. Not only was this massively time-saving, it also provided us with a number of different means for measuring the effectiveness and accuracy of our model, which will be discussed later.

We also measured the relationships between individual variables by using the same software to calculate the correlations (specifically Pearson correlations) between every possible pair of variables. This gave us an excellent basis for comparing the relative strengths of the variables in terms of their correlation with the dependent variable. Moreover, these correlations shed light on some interesting phenomena in our data. The number of violent crimes could be broken into two subcategories: homicides and assaults. Specifically, we saw significant correlations between the high school graduation rate and the number of assaults at -0.742, as well as between the unemployment rate and the number of homicides at 0.524. However, neither of these had a particularly hefty effect on the other dependent variable (graduation rate did very little for the instances of murder per 100,000 persons just as unemployment was all but inconsequential to the number of assaults per 100,000 persons). We also found the variety of data that we had regarding prisons (juvenile inmates, prison population, number of parolees, percentage of parole violators, and parole violators) to be largely irrelevant to our independent variables, as the correlations were generally quite weak.

Based on our findings with the correlations, we determined that it did not make sense to simply throw every variable we had into the regression. Instead, we chose the variables that had shown the strongest correlations with our dependent variables: graduation rate and unemployment rate. These variables also stood out as ones that would be immune to fluctuations in the city's population. There were other variables that had notable levels of correlation, notably the dropout rate, though we felt that it was too closely related to the graduation rate and therefore would not be useful in the grand scheme of our model. Regardless, we tested a number of different combinations of variables in our equations and confirmed our hunches from earlier--the prison-related statistics were useless to the models, as was the implementation of the redundant pairs of variables. In the end, the simplest solution prevailed, and our model was as follows:

Our model's usefulness was substantiated by various statistical measurements that are used to measure the strength of such models and were calculated by the statistics software. In particular, our *R* value, which indicates the collective correlation between the independent variables and the dependent variable was fairly high at .751. Our R^2 value, a measure of the total variance in the data explained by our equation, was a solid .563, which may not seem high, though in the social sciences this is considered to be a significant value. The model is statistically significant to a level of 0.083, which tells us that there is at most an 8.3% chance that the null hypothesis would be true and that our model would be no more useful than simply predicting the mean of the data for every year in the future. Because we were able to economize on the number of variables used as predictors in the equation, we can be sure that there is quite a small chance of our equation being compromised by outlying or extraneous data. However, this chance is certainly smaller than if we had incorporated a large number of variables that made only marginal contributions. We were also able to avoid falling victim to fluctuations in the city's population by normalizing our crime data and calculating the number of violent crimes, assaults, and homicides per 100,000 people using the following equation:

The following graph represents both the actual values, normalized per 100,000 people, and our derived values which we acquired from our model.



In terms of the weaknesses of our model, we did face a decidedly insubstantial amount of data. A single eight year block of time could be home to a number of economic microcosms that could influence unemployment or the funding of schools, i.e. the bursting of the Internet bubble in the early 2000s or the more recent recession of 2008. We were also forced to make a number of assumptions in order achieve data that would work with our regression analysis. Among a number of other things, we were forced to assume that the city in question was representative of other cities of similar size, and so when we were trying to determine whether or not our crime data (among other things) was based on just our particular city or the entire county, a decision which we made based on seeing similar crime statistics in other similar cities. The fundamental weakness of our model is that its usefulness as a predictor is limited by our own ability to foresee the future effectiveness of the programs that we intend to put into place to combat the violence. That is to say, one can't use the future to predict the future.

Inability to project into the future notwithstanding, our model is not without utility. It provides us with an idea of what kind of issues in our city need to be addressed, as well as being useful as a means of setting goals. If the desired crime rate is plugged in to one side of the equation, one can solve for the other two independent variables and determine what benchmarks would need to be reached in order to achieve the desired result, i.e.

This is the standard Cartesian equation of a line. There are infinitely many solutions on this line but we can pick one variable and solve for the other, thus allowing us to set goals for achieving this lower number of violent crimes

High school dropouts plague communities across the United States, and our city in question is no exception. We found definitive correlations between both high school graduation rates and dropout rates, those being -.721 and .644, respectively. The correlation between graduation rate and incidences of violence is negative, indicating that a higher graduation rate would yield less violent crime, and, conversely, the correlation with the dropout rate was positive, showing that more dropouts tend to result in more violent crime.

We believe that when teens drop out of school, there is a greater opportunity for them to become involved with gangs and illicit activities, which in turn can lead to violence. According to Ernest L. Chavez PhD of Colorado State University, "20 percent [of dropouts] had cut someone with a knife." This figure directly supports our hypothesis, indicating that a substantial number of dropouts do turn to violence. A study by Dr. Laurie Drapela of Washington University (2006) also finds that high school dropouts have "higher arrest rates, greater involvement in violence, and higher usage of drugs." But why do teenagers drop out of high school? "Youth crime, gang involvement and violence are additional reasons students drop out" of high school, according to Kathryn Barr, an eHow News Correspondent (2010). Many teens will drop out of high school because of pressure from gangs. However, many teens drop out of high school not to pursue such transgressions of the law but rather to help support their families. It can be tough for one or even two parents to earn a sufficient paycheck to support an entire family, and many former students have cited this as their primary reason for dropping out of high school (CEC.org 2010).

Considering the aforementioned research, our team has come up with several suggestions to curb the dropout rate. Youth centers provide children with a safe environment and a pathway to a productive future, according to the White Light Group, a student union and inner city youth center foundation. Instituting more youth centers will instill in children an intrinsic desire to remain in school. Another example of youth services providing outreach and opportunities to children is the Boys and Girls Clubs of America (BGCA), who has conducted studies confirming that violence peaks between the hours of 3:00 pm and 6:00 pm, and, thus, by providing students with after school activities we can reduce the number of violent crimes committed during this particular block of time. A 2009 study conducted by Amy J. Arbretren of Public/Private Ventures confirms that high levels of attendance to Boys and Girls Clubs meetings leads to higher attendance in school, increased academic effort and success, and decreased numbers of

negative peers as friends. A Columbia University study found that those who attended BGCA meetings compared with their peers had grade point averages 11% higher and missed 87% less school. In addition to providing children with a safe haven after school, BGCA creates a sense of community among the youth, which would be an exceptional deterrent to the territoriality of gang culture.

If children require some extrinsic motivation, however, programs such as Chicago's Cash for Grades can provide a tangible reason for doubtful students to remain in school. The program rewards students with cash for grades depending on the letter grade. The Perfect Attendance Incentive program, also enacted by the Chicago Public School (CPS) system, rewards students with laptops, gift cards, and even family vacations. The CPS district reported a quadrupling of the number of students who did not miss a single day of school.

Our plan for students who feel the need to drop out of high school to economically support their families is to set up career-specific vocational schools. The vocational schools can be used in conjunction with standard public education. We propose that after the 10th grade, students can take a general education test to apply to a career-specific vocational school. Juliet Miller and Susan Imel of the U.S. Department of Education state that "students with low motivation to attend school have shown improvement in school attendance and retention after participating in career education." This makes sense, considering that students who *choose* to attend career and vocational schools will be more motivated to graduate and not drop out. Students also may be more inclined to stay in vocation because the information they are learning is pertinent to their career path; many students feel that the information they learn in public school is useless, as a vast majority of the information learned in traditional school is not necessary information for most careers. Allowing students to choose to attend vocational schools, and thus choose their particular career path, will ensure that all of the information learned is pertinent and interesting to them. Another important method to cut down on incidents of violence is to lower the unemployment rate. Our statistics have shown us that there is a direct correlation between unemployment and the number of incidences of violence, though in a different, decidedly intriguing way. While there was not a strong correlation between the unemployment rate of our town in question and the number of annual assaults, which composed the majority our instances of violent crime, there was a very strong correlation between unemployment and the number of murders in a given year. This correlation, between the

unemployment rate and the number of homicides was .524, one of the strongest that we saw between any two of our variables. But why does this link exist? A study conducted at Hebrew University in Jerusalem by Eric Gould suggests that unemployment causes many people to turn to violence. While wages fell and the economy worsened between 1979 and 1997, the number of violent crime crept up 35% (Gould 2003). This leads our team to believe that unemployment can devastate a person financially and psychologically, which can drive people to commit violent crimes. Consider the example of Jiverly Wong, a former resident of Birmingham, NY. Jiverly had been employed at a vacuum repair business until it folded in 2009; Jivelry lost his job when the facility closed for good. Soon after, Jiverly went on a killing spree, ending 13 people's lives and subsequently his own at a local business. And he wasn't alone; two other shooting sprees related to unemployment occurred within two weeks of each other. Charles Forelle, a Wall Street Journal Correspondent, stated that "40 states saw unemployment rates and violent-crime rates change at the same time" in 1998. If we can lower the unemployment rate, we will see lower amounts of violent crimes in our city.

We have devised a solution plan that we feel will stimulate the economy of our city, create more jobs, lower the unemployment rate, and thus lower the number of violent incidents. Along with increasing the graduation rate and decreasing the amount of high school dropouts, we feel that instituting vocational schools can help to lower the unemployment rate. "The number of new jobs requiring a college degree is now less than the number of young adults graduating from universities," says Richard K. Vedder of Ohio University in December of 2009. This means that if students complete vocational school, the jobs do exist for the vocational school graduates to fill; thus, unemployment rates will fall. Many unemployed individuals will look to receive education as a way to join the workforce. Unfortunately, most unemployed cannot afford a four year university. Vocational schools will provide a low cost, yet more relevant, source of education for the unemployed. Another tried and true method to lower the unemployment rates is to create new public works jobs. One of the best examples in history of this is the Works Progress Administration enacted by President Franklin D. Roosevelt in 1935. Between 1935 and 1943, the administration created nearly eight million jobs (Colorado.gov 2003). Public works projects could include not only cleaning up parks and maintaining roadways but even building the vocational schools we discussed earlier.

To try to verify the effectiveness of our model, we searched to find a city of comparable size and with comparable statistics. Within the statistics of an actual city we can see the shortcomings and successes of our proposed reforms, which in turn will allow us to accurately predict to what extent each program will be implemented. The city of Dayton, Ohio is very similar to the city given to us in the prompt; with a population of about 154,000 it is only slightly above that of our city. After researching Dayton, Ohio, we have concluded that the city of Dayton has implemented many programs similar to the ones we have proposed. First, Dayton has an extensive "Boys and Girls Clubs" program with three chapters at various locations across the city. These clubs reach out to the youth of Dayton by providing them with a safe place for students of all ages to interact with each other. In addition, Boys and Girls Clubs help to build strong community ties . We are proposing the implementation of a similar system in our city in an attempt to prevent children from becoming affiliated with gangs, which will reduce the number of violent incidents.

Dayton has an unemployment rate of 10.2 percent, which is similar to the average of our given city's unemployment rate of 11. 3 percent; this average is taken from the unemployment rates between the years 2000 and 2008. The city of Dayton has taken numerous measures to try to stem their unemployment problem. Their solution was to implement a large-scale public works program that employs people as basic laborers to build roads, sewage systems, maintain streets, collect waste, and contribute to other similar public works projects. This generates many jobs for many of Dayton's unemployed. Dayton's unemployment rate should not result in more crime incidents than our city's; if anything, the low unemployment rate should correlate to a decrease in violent crime.

We hypothesize that the Boys and Girls Clubs will help decrease the crime rate. We found that Dayton's average number of assaults per year between 2003 and 2008 were approximately 657 while our city averaged approximately 708 assaults per year. Despite the decrease in average number of assaults, Dayton averages many more homicides per year than our city does. Dayton averaged approximately 34 homicides per year between 2003 and 2008, but our city only averaged approximately 16 homicides per year between 2000 and 2008. Dayton's susceptibility to homicide is due to the gang presence in the city, which in turn is causing an increase in violent crimes. This gang culture has trickled down to the youth of Dayton, and this is a way in which the Boy's and Girls' Clubs have not been implemented to their full extent.

Our research of Dayton tells us to what degree we must implement each program. The lack of success of programs such as the Boys and Girls Clubs prove that it is imperative that all children have a safe place to go after school. Moreover, Dayton's public works system works well in terms of employing relatively uneducated people. Therefore, our city will mirror Dayton's program to give people a steady source of income and a reason not to resort to violence. Through the implementation of these programs we can expect a reasonable decrease in the amount of crime in our city.

CONCLUSION

Despite the fact that we can figure out the effects of graduation rates and unemployment rates on the amount of crime incidents, we cannot predict future crime statistics. This is because we are not aware of the future unemployment rates and graduation rates. Both of those rates are pertinent to our model, and not knowing them hinders our ability to predict the future. We can predict the unemployment rates and graduation rates in the future, yet those will only be estimation based upon research and data trends. Thus, none of the values will be exact, and our model will be unable to predict very accurately. However, the most value the model has is to reduce future violent crimes as it will provide rough sketches of future data, create goals, along with providing plans of action that will decrease the amount of violent crimes per every 100,000 people.

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Data Descriptions

	Mean	Std. Deviation
Vcrimes	724.4444	45.76055
assaults	708.6667	43.31570
Homicides	15.7778	5.89020
percentparoleviol	.6137	.20496
prisonpop	158762.0000	6117.45650
releasedparole	125788.0000	8353.45788
paroleviol	86087.5556	6100.77219
rateunemploy	11.2556	1.04177
gradrate	.8818	.02756
dropoutrate	.0168	.00663
countypop	417157.1111	8563.54664
citypop	148791.0000	2044.33137
unemploy	16742.2466	1502.73426
hsdropouts	151.8889	54.11664
hsenrollment	9155.7778	453.72012
juvenileinmates	2819.5000	1003.58492
Crimesper100000	487.1222	34.94051
Assaultsper100000	476.5556	33.57313
Homicidesper100000	11.7111	5.09913

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.751	.563	.418	26.65841	.563	3.871	2	6	.083

ANOVAb

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5502.690	2	2751.345	3.871	.083
	Residual	4264.026	6	710.671		
	Total	9766.716	8			

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1216.159	317.797		3.827	.009			
	rateunemploy	6.979	9.047	.208	.771	.470	.204	.300	.208
	gradrate	-915.862	341.962	-.722	-2.678	.037	-.721	-.738	-.722

MAYOR, CITY COUNCIL CRACK DOWN ON VIOLENCE

--Recent increase in violent crimes has caused the Mayor and his advisors to devise a new plan to reduce violent crimes.

The City has been plagued by violent crimes for many years, leading the Mayor to feel that it is time to rid the City of violence. The Mayor's concerns rest specifically with the amount of homicides and assaults.

The Mayor and his team have identified the two most significant factors that contribute to the amount of violent incidents. They have concluded that the unemployment rate and the high school graduation rate are most directly affecting the incidents of violence.

In order to decrease high school drop outs, the Mayor is creating local youth service clubs. These safe havens are expected to foster their academic and social progress. The Mayor is hoping to spring more interest in school, and create a sense of community to combat gang territoriality.

In addition, the Mayor has developed a new educational system that will help to increase the high school graduation rate. After completing 10th grade, every student will be given the option to enroll in a vocational school in lieu of continuing with traditional high school after passing a standard achievement test. The vocational school will prepare students specifically for the job of their choosing. The Mayor expects to see a decrease in the high school drop out rate as students will show more interest in their studies.

All of their studies will revolve solely around preparing for their future career. Vocational schools are expected to prepare students so that they can go directly into to workforce in currently understaffed fields. The Mayor hopes that this will decrease the unemployment rate.

In another attempt to decrease unemployment rates, the Mayor is launching Public Works plans that he expects to stimulate many jobs. The Public Works program will employ men and women of any age to perform local tasks.

The plans are currently being finalized and the Mayor will provide more details in the days to come.

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Correlations

		Number of Crimes	Number of Number of Assaults	Number of Homicides	Rate of Parole Violation	Population of Prison	Number of Parolees	Number of Parole Violators	Rate of Unemployment	Rate of Graduation	Rate of Drop Outs	Population of County	Population of City	Number of Unemployed	Number of Drop Outs	Number of High School Enrollees	Number of Juvenile Inmates	Violent Crimes per 100,000 People	Number of Assaultsper100000	Homicidesper100000
Number of Crimes	Pearson Correlation	1	.993	.468	-.173	-.337	.109	.355	.175	-.744	.644	-.542	-.489	.107	.625	-.580	.022	.984	.970	.856
	Sig. (2-tailed)		.000	.204	.655	.376	.781	.348	.653	.022	.061	.132	.181	.785	.072	.102	.967	.000	.000	.003
Number of Assaults	Pearson Correlation	.993	1	.359	-.167	-.324	.119	.363	.087	-.742	.642	-.565	-.529	.011	.622	-.580	.042	.987	.985	.804
	Sig. (2-tailed)	.000		.343	.667	.395	.760	.337	.823	.022	.062	.113	.143	.978	.074	.102	.937	.000	.000	.009
Number of Homicides	Pearson Correlation	.468	.359	1	-.116	-.233	-.030	.090	.715	-.318	.285	-.055	.091	.752	.287	-.242	-.066	.392	.291	.736
	Sig. (2-tailed)	.204	.343		.765	.547	.938	.818	.030	.404	.458	.888	.816	.020	.454	.531	.902	.297	.447	.024
Rate of Parole Violation	Pearson Correlation	-.173	-.167	-.116	1	.237	-.030	-.160	.303	.519	-.361	.611	-.495	.239	-.275	.684	-.220	-.053	-.043	.037
	Sig. (2-tailed)	.655	.667	.765		.539	.938	.681	.428	.153	.340	.081	.176	.535	.473	.042	.675	.893	.912	.925
Population of Prison	Pearson Correlation	-.337	-.324	-.233	.237	1	.824	.499	-.537	.553	-.326	.773	.473	-.476	-.238	.734	-.924	-.392	-.379	-.399
	Sig. (2-tailed)	.376	.395	.547	.539		.006	.171	.136	.123	.392	.015	.199	.195	.537	.024	.008	.297	.315	.287
Number of Parolees	Pearson Correlation	.109	.119	-.030	-.030	.824	1	.866	-.600	.023	.183	.394	.319	-.566	.256	.310	-.942	.033	.041	-.027
	Sig. (2-tailed)	.781	.760	.938	.938	.006		.003	.088	.954	.638	.294	.403	.112	.505	.417	.005	.932	.917	.945
Number of Parole Violators	Pearson Correlation	.355	.363	.090	-.160	.499	.866	1	-.479	-.274	.562	-.003	.040	-.486	.613	-.090	-.882	.306	.309	.185
	Sig. (2-tailed)	.348	.337	.818	.681	.171	.003		.193	.475	.115	.993	.919	.184	.079	.818	.020	.424	.419	.634
Rate of Unemployment	Pearson Correlation	.175	.087	.715	.303	-.537	-.600	-.479	1	.006	-.084	-.006	-.264	.989	-.093	-.066	.543	.204	.126	.524

	Sig. (2-tailed)	.653	.823	.030	.428	.136	.088	.193		.987	.830	.989	.492	.000	.811	.865	.265	.599	.746	.148
Rate of Graduation	Pearson Correlation	-.744	-.742	-.318	.519	.553	.023	-.274	.006	1	-.847	.800	.302	.054	-.798	.859	.191	-.721	-.713	-.663
	Sig. (2-tailed)	.022	.022	.404	.153	.123	.954	.475	.987		.004	.010	.429	.891	.010	.003	.717	.028	.031	.052
Rate of Drop Outs	Pearson Correlation	.644	.642	.285	-.361	-.326	.183	.562	-.084	-.847	1	-.678	-.368	-.145	.992	-.756	-.738	.644	.636	.567
	Sig. (2-tailed)	.061	.062	.458	.340	.392	.638	.115	.830	.004		.045	.330	.710	.000	.018	.094	.061	.065	.112
Population of County	Pearson Correlation	-.542	-.565	-.055	.611	.773	.394	-.003	-.006	.800	-.678	1	.369	.055	-.587	.973	-.928	-.553	-.568	-.346
	Sig. (2-tailed)	.132	.113	.888	.081	.015	.294	.993	.989	.010	.045		.329	.888	.097	.000	.008	.122	.110	.362
Population of City	Pearson Correlation	-.489	-.529	.091	-.495	.473	.319	.040	-.264	.302	-.368	.369	1	-.119	-.375	.252	-.687	-.636	-.669	-.452
	Sig. (2-tailed)	.181	.143	.816	.176	.199	.403	.919	.492	.429	.330	.329		.761	.320	.513	.132	.066	.049	.221
Number of Unemployed	Pearson Correlation	.107	.011	.752	.239	-.476	-.566	-.486	.989	.054	-.145	.055	-.119	1	-.156	-.026	.494	.114	.029	.473
	Sig. (2-tailed)	.785	.978	.020	.535	.195	.112	.184	.000	.891	.710	.888	.761		.689	.947	.320	.771	.941	.199
Number of Drop Outs	Pearson Correlation	.625	.622	.287	-.275	-.238	.256	.613	-.093	-.798	.992	-.587	-.375	-.156	1	-.670	-.758	.629	.620	.565
	Sig. (2-tailed)	.072	.074	.454	.473	.537	.505	.079	.811	.010	.000	.097	.320	.689		.048	.081	.070	.075	.113
Number of High School Enrollees	Pearson Correlation	-.580	-.580	-.242	.684	.734	.310	-.090	-.066	.859	-.756	.973	.252	-.026	-.670	1	-.935	-.563	-.557	-.443
	Sig. (2-tailed)	.102	.102	.531	.042	.024	.417	.818	.865	.003	.018	.000	.513	.947	.048		.006	.114	.119	.232
Number of Juvenile Inmates	Pearson Correlation	.022	.042	-.066	-.220	-.924	-.942	-.882	.543	.191	-.738	-.928	-.687	.494	-.758	-.935	1	.114	.144	-.057
	Sig. (2-tailed)	.967	.937	.902	.675	.008	.005	.020	.265	.717	.094	.008	.132	.320	.081	.006		.829	.786	.915
Violent Crimes per 100,000 People	Pearson Correlation	.984	.987	.392	-.053	-.392	.033	.306	.204	-.721	.644	-.553	-.636	.114	.629	-.563	.114	1	.994	.849

Group 2791

	Sig. (2-tailed)	.000	.000	.297	.893	.297	.932	.424	.599	.028	.061	.122	.066	.771	.070	.114	.829		.000	.004
Number of Assaults per 100000 People	Pearson Correlation	.970	.985	.291	-.043	-.379	.041	.309	.126	-.713	.636	-.568	-.669	.029	.620	-.557	.144	.994	1	.798
	Sig. (2-tailed)	.000	.000	.447	.912	.315	.917	.419	.746	.031	.065	.110	.049	.941	.075	.119	.786	.000		.010
Number of Homicides per 100000 People	Pearson Correlation	.856	.804	.736	.037	-.399	-.027	.185	.524	-.663	.567	-.346	-.452	.473	.565	-.443	-.057	.849	.798	1
	Sig. (2-tailed)	.003	.009	.024	.925	.287	.945	.634	.148	.052	.112	.362	.221	.199	.113	.232	.915	.004	.010	