Time Study of Regional Arrests in Oklahoma

Michael McLaughlin, Jessica Trillo, Colby Brown – Department of Geography and Environmental Sustainability, University of Oklahoma

Abstract

- The purpose of this research is to obtain a spatial and temporal understanding of arrests in Oklahoma on a regional and county level. To achieve this purpose we collected and processed arrest data from the Oklahoma State Bureau of Investigation from 2002 to 2013. The results of our analysis showed that the North and Northeast regions had an overall decline in arrests whereas the Central region showed an increase in total arrests over the same time period. The benefit of this research is to assist law enforcement in the appropriate allocation of resources.

Data and Method

The data needed to complete this study was found on the Oklahoma State Bureau of Investigations website. Once we acquired the data we applied the county level arrest information to the map which was created in ArcMap. After we analyzed the data we compared the regional arrest values across eleven years seen in Figure 1. This analysis was able to show us the change in arrests over time from 2002 to 2013.
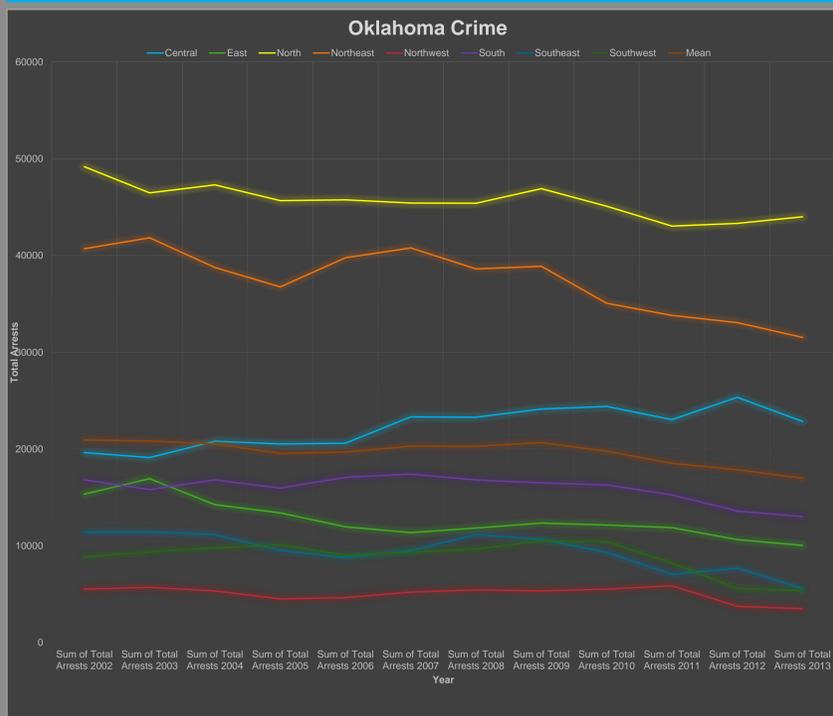
Results

Figure 1: This chart shows the trend lines for the eight different regions of Oklahoma for the years 2002-2013.
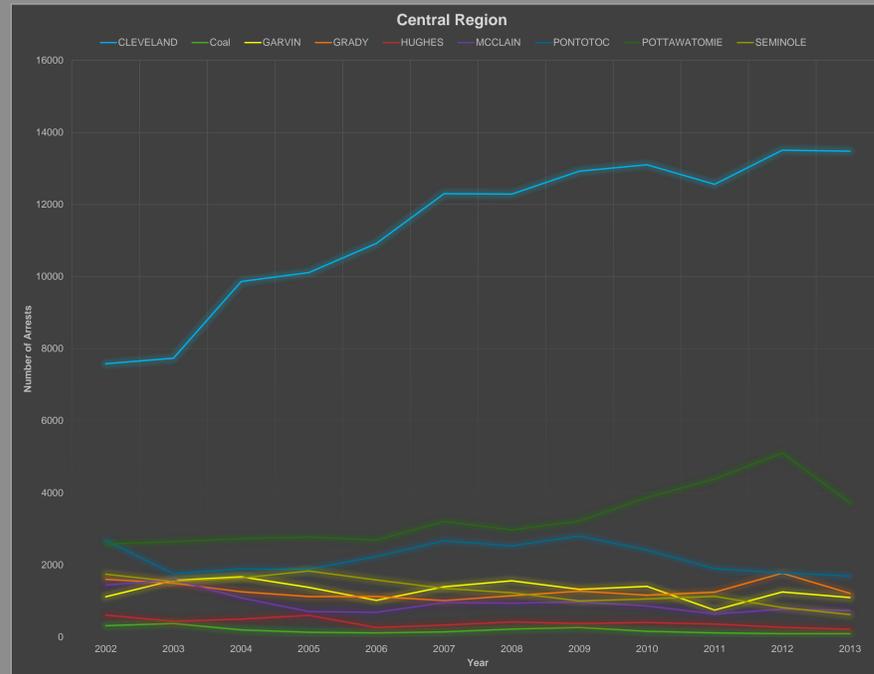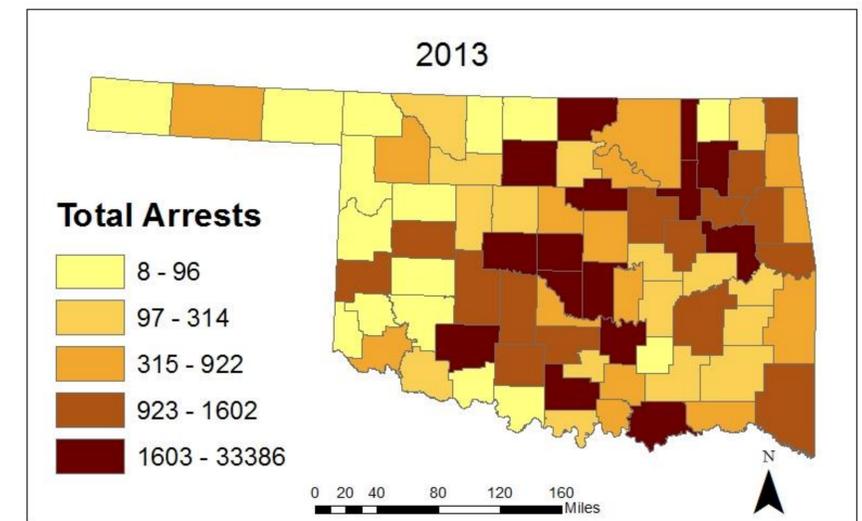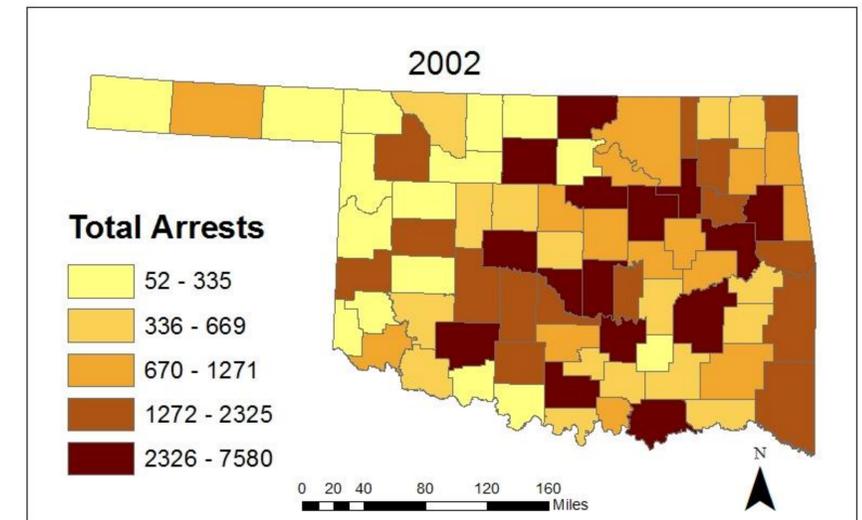
Figure 2: This chart shows the trend lines for the nine different counties in the Central region for the years 2002-2013. Central region has the biggest increase in crime since 2002.

- Overall the trend seen in Figure 1 is a decrease in arrests excluding the Central Region which shows an overall increase. We believe a large part of that statistic is contributed by Cleveland county due to their vast population. According to the Census, Cleveland is ranked 3rd on the Largest Population Increases from 2010 – 2013 with a gain of 13,583 people. Raising their total population to 269,340. In that same time frame they have had an increase of 5.3% per year.

- The map of total arrests shows a grouping of counties in central Oklahoma that have an elevated number of arrests when compared to their surrounding counties. This grouping is also seen in the northeastern area of the state. Over the course of the past eleven years this pattern has remained relatively consistent.

Map 1: This map shows the break down of arrests by county. Each break point accounts for 20% of the total arrests in Oklahoma.

Discussion

This research will help assist law enforcement to better allocate their resources in the future. According to our research, they may want to use more resources in the central region and other urban areas that are showing an increase in arrests. The increase in arrests in these areas is due to the rapidly growing population of these counties.