

Crime Change along the U.S.-Mexico Border: County and Municipality Levels (U.S. 1980-2010 & Mexico 2007-2009)

Background

According to La Paz Agreement of 1983, 100 kilometers (approximately 62.137 miles) north and south of the international border between the U.S. and Mexico is official border territory. This border and the region around it have been affected enormously by various factors over the last decades. The year 1980 marks the rise of drug cartels in Mexico via their connection with Pablo Escobar in Colombia as well as the emergence of the Mexican financial crisis due to their little credit, high domestic interest rates, and negative terms of trade. These factors have in returned influenced Mexican nationals to make the decision to immigrate to the U.S. All of these factors are correlated with crime one way or another along with other factors such as unemployment, weapons, and border security to name a few.

Goals & Limitations

The original goal of this project was to compare how the change of the potential crime factors along the border had changed and affected crime since 1980. However, based on the lack of available data, I had to adjust the goal of the project. So these maps are the beginning to try to understand and observe any patterns on how crime has changed over time.

Most of the limitations were due to the lack of data. Sometimes, data was available but it was not at the level of interest or for the years of interest. U.S. crime data for 2010, for example, uses crime data from 2009 (the latest) and I calculated the rate per 1000 persons using the population data from 2010.

Methodology

- Created the border by dissolving the 4 border states into a polygon, transformed it into a polyline, and then cut it.
- Selected the counties and municipalities within 100 kilometers of this border (48 counties and 94 municipalities).
- Joined tables with U.S. crime data to the counties layer. Created new fields and calculated crime rate per 1000 persons.
- Joined tables with Mexico crime data to the municipalities layer. Created new fields and summed monthly crimes. Municipalities with no information had a -9 value.

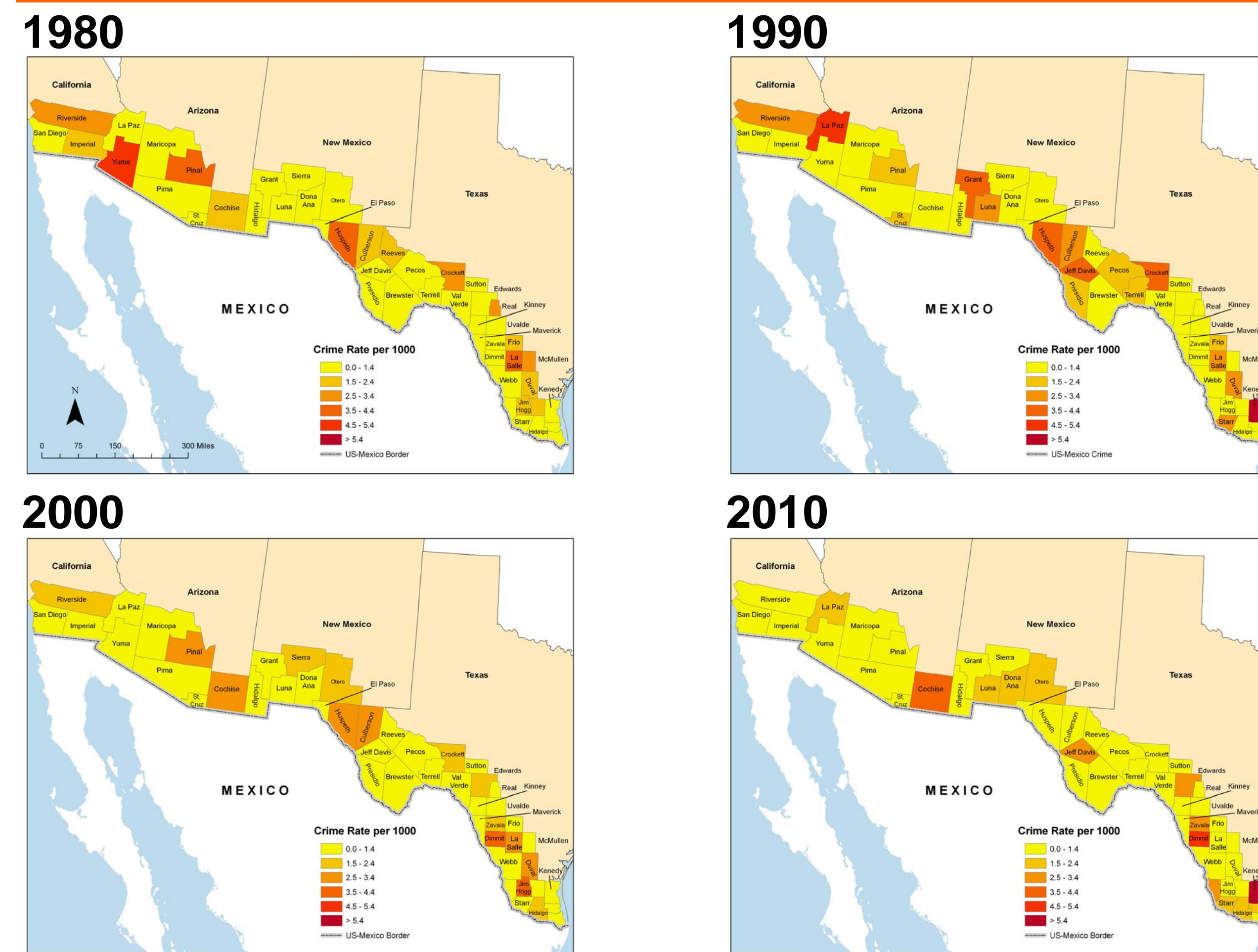
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Map Projection North America Albers Equal Area Conic

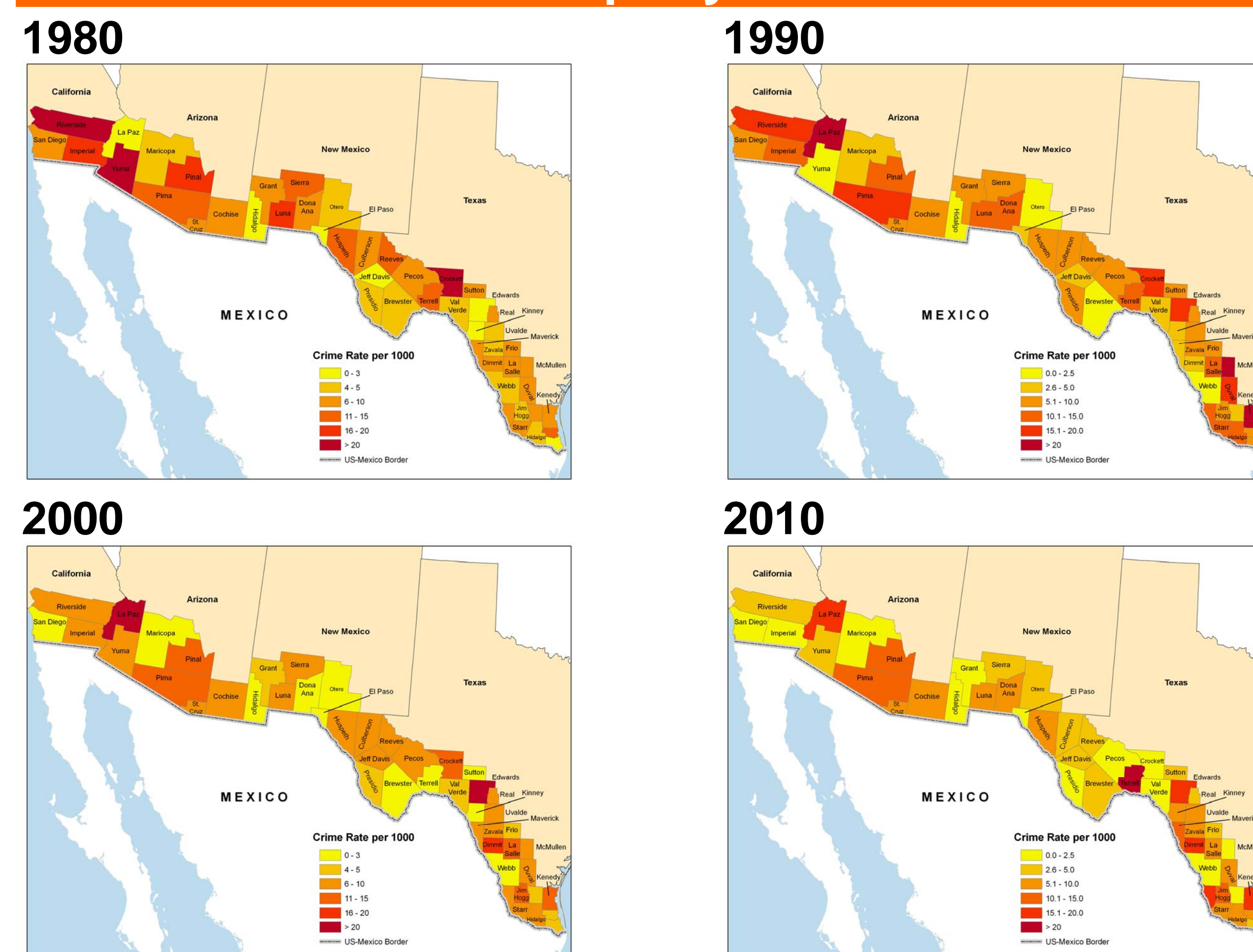
Sources
U.S. Census www.census.gov
U.S. Department of Justice www2.fbi.gov
The Disaster Center www.disastercenter.com
Mexico's Presidency www.presidencia.gob.mx

U.S. Violent Crime



Violent crime aggregates four different types of crime: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault.

U.S. Property Crime



Property crime aggregates three different types of crime: burglary, larceny-theft, and motor vehicle theft (NOTE: 2010 property crime also includes arson).

Mexican Homicides

Last month, Mexico's National Security released data on the number of homicides per municipality presumed to be related to organized crime. From the 94 municipalities along the border, 20 did not have any data (as indicated on the maps). Information was given by month for December 2006 through December 2009. For the purposes of this analysis, the data was summed for each year.

The data disaggregated homicides into executions, and aggressions and confrontations. **Executions** refer to homicides with extreme violence. The Executive Secretariat of the National System of Public Security concluded that based on the characteristics of the presumed victim, the criminal, or both were members of a criminal organization.

Homicides classified as **aggressions and confrontations** refer to those resulting from an attack by members of a criminal organization against any governmental authority—federal, state or municipal. This group of homicides also includes those that resulted from confrontations between members of two different armed organizations, such as the drug cartels.

For the purposes of this analysis, the different categories of homicides were aggregated.

Conclusion

On the U.S. side of the border, both violent and property crime has decreased since 1980. There does not seem to be a pattern or concentration of where the crime is located.

However, on the Mexican side, it is clear that not only has crime increased in the last couple of years but it is also concentrated on the west side. Two possible correlated factors: 1) the U.S. border fence is mainly along CA, AZ and NM; 2) most of the weapons are manufactured along the Texas border (east side).

Bottom line, in order to draw more concrete conclusions, data on the factors mentioned earlier need to be collected.

