

SOME STATISTICAL ANALYSIS OF GREEK CRIME DATA

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Abstract

The increase of criminal activity worldwide calls for cooperation in order to combat crime. All over the world, scientists, including Statisticians, of many seemingly unrelated fields are cooperating in order to find methods to prevent or to reduce crime.

In this paper we analyze Greek crime data. The data are reported crimes per month or per year for the periods 1987-1997 (for the monthly data) and 1982-1997 (for the annual data). Some of the examined crimes are Commonly Dangerous Crimes, Robbery, Theft, Murder, Rape, Arson, Personal Vengeance, Drug Violations, Smuggling of Antiquities and Beggary. Data about the offenders are also examined.

Multivariate methods such as Principal Component Analysis (PCA), and Clustering methods are employed in order to map the crime activity in Greece and point out the areas where certain crimes seem to be increased. Quality Control is employed in order to make inferences about the months when different crimes are more possible to occur.

Keywords: Crime Data, Cluster Analysis, PCA.