Faculty Research Grant Closing Report

Qiang Xu, Department of Criminal Justice, Principal Investigator
Project: Crime in South Bend: A Geographic Analysis of Patterns and Trends
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1. Description of grant-supported activity.
The faculty research grant supported my research activities in the summer of 2008, including data acquisition, data preprocessing and part of the data analyses. The data collected from South Bend Police Department were transformed and sorted to fit the need of this project. Crime records were further organized based on type, year and time of the day. Physical addresses of crime were entered into SPSS and transformed later to match the file format of ArcGIS. I was also able to conduct some preliminary analyses in the summer of 2008, including the aggregate-level analysis of serious violent crime and property crime in South Bend from 2000 to 2005.

2. Were you able to complete the project? Describe any difficulty you had.
I have managed to complete the project according to the plan outlined in my research proposal. Following the preliminary analyses in the summer of 2008, I did further analyses on the specific types of serious violent crime and property crime and the changes of crime patterns over the years. Important social economic factors were incorporated into the crime mapping processes so that we can compare the crime concentrations with important neighborhood characteristics, such as age, poverty and housing value. I was able to complete the analyses of individual offenses by examining the spatiotemporal change and evaluate the risk of victimization.

One of the difficulties I have encountered in this project is the possible human errors in the police crime data. For instance, I found out some addresses of homicides were recorded by police based on convenient practice rather than the actual locations. I had to treat those data as missing as they didn’t reflect the actual locations of homicide. Therefore, when I discussed and interpreted the findings, I had to acknowledge this limitation for homicide analyses.

As the project moved on, I have developed further analyses based on the original research proposal. One of the further steps is to look at the migration of public housing (including government subsidized housing) and whether it is correlated to the migration of crime over time. The main difficult to find the accurate information about public housing and my inquiries with the South Bend Housing Authority since October 2008 yielded limited results as they didn’t main regular records back to the year of 2000. Although this is not part of the original research plan, I still think it is an important area for me to explore and follow up in the further study.

3. Did, or will, the project result in a specific product -- a manuscript, composition, syllabus, etc? If so, please describe and indicate state of development.
The funded project resulted in two manuscripts for now and I am still developing the third one based on the results. One of the manuscripts was presented at the 31st Applied Geography Conferences in Wilmington, DE in October 2008, and was published in the peer reviewed conference publication.

I am submitting the second manuscript to the International Journal of Applied Geospatial Research and plan to present the third manuscript at the upcoming conference of the Midwestern Criminal Justice Association in September 2009.

Finally, most of project analyses and results will be incorporated into a proposed new GIS course syllabus to be offered to the upper-level undergraduate students from different academic units.