

## **EXECUTIVE SUMMARY**

This Executive Summary has been prepared in order to provide an abridged version of the report entitled "City of Urbana, Illinois – Traffic Stop Data Analysis (2007 through 2009)". For further explanation of all terms and analysis procedures in this summary, a review of the full report is needed.

### **The Relationship Between Race and Stops**

In this section, the results indicate that Whites made up approximately 53% of the stops in the entire data set, while Blacks accounted for approximately 1/3 of the stops and all other races were under 10% of the stops. For the question of whether individuals were being ticketed at the same rate regardless of race, the results show that citations and warnings were given in approximately the same ratio across races with the exception of Hispanic drivers. Using a secondary data set, it was concluded that Hispanics are given a higher ratio of citations due to the fact that they are more likely to be ticketed for offenses which are much more likely to receive citations as opposed to warnings (i.e. no driver's license, DUI, and Uninsured Motor Vehicle).

### **The Relationship Between Police Beat and Stops**

In this section, the report first looks at the frequencies for stops in each individual Beat. It was found that Beat 61 made up more than 25% of all stops in the data set, while all other Beats made up between 15% and 20% of the data set. With regards to the relationship between a Beat and a person's race, it was stipulated that since this investigator has no knowledge of the racial makeup of each beat, no conclusions would be drawn with regards to the relationship. For instance, it was found that approximately 35% of all Asian stops occurred within Beat 63, while only approximately 10% of all Black stops occurred within Beat 63. Without knowledge of the racial composition of this area, no conclusions can be made and it is left up to the reader to formulate their own conclusions regarding this section.

With regards to gender, conclusions could be made considering that gender composition would be expected to be uniform throughout Beats. The results indicate that there does not appear to be a difference in the proportion of male/female stops in any Beat. In all Beats, males were stopped more than females at an approximate rate of 60% male to 40% female.

As with race, age differences between each Beat were to be expected since, due to the presence of a University, it was to be expected that different areas would hold different age groups. For example, in Beat 61, approximately 50% of all stops were made on individuals between the ages of 20 to 29. However, approximately half of the stops made on individuals between the ages of 85 to 89 were made in Beat 65. Therefore, it is upon the reader to conclude whether this information accurately depicts the age composition of each area, given their own knowledge of the city. However, in all Beats, the number of stops increased as the age group became younger.

With regards to differences within each beat and whether a citation or warning is given, the results indicate that on the whole, citations are given approximately 60% of the time while warnings are given approximately 40% of the time, though there is some variation in these percentages. For example, Beat 62 gave citations and warnings at approximately the same rate, while Beats 61 and 65 give citations approximately 64% of the time. Beats 63 and 64 show that citations are given approximately 56% of the time, while warnings are given approximately 43% of the time.

Each Beat was also examined to determine whether the number of Calls for Service in that specific Beat had any relationship with the number of stops made in that Beat. The results indicated that if Beat 61 was removed from the analysis, the number of stops followed a similar pattern to the number of Calls for Service. Beat 61 consistently showed the highest amount of stops, but in no instance did Beat 61 have the highest number of Calls for Service. The results also indicate that the number of Calls for Service had very little relationship to whether an individual received a citation or warning as a result of the stop.

Similar to the Calls for Service, each beat was examined to determine whether the number of Crime Reports had any relationship with the number of stops made in that Beat. In this analysis, less of a relationship was found than with Calls for Service. Beat 64 consistently had the highest amount of Crime Reports but never did it have the highest amount of stops (in all analysis, it had either the third or fourth amount of stops). As with Calls for Service, the number of Crime Reports had little relationship with whether a citation or warning was given.

### **Examination of Beat 61 Individually**

When looking at Beat 61 individually, it was found that Whites and Blacks were stopped at approximately the same rate (45% to 42.3%, respectively), while all other races were stopped less than 10% of the time. Thus, due to the higher minority population (and the smaller White population) it was expected that to exclude Beat 61 from the calculation of the ratio of minority stops would result in a lower ratio for the city as a whole. This was true, as the average ratio for all three years dropped from 1.51 to 1.39 when Beat 61 was excluded.

Beat 61 was also examined with respect to each Geo-Code within the Beat and the racial differences in the number for stops for each Geo-Code. As with the examination of the Beats as a whole, the racial differences in number of stops for each Geo-Code should be interpreted with the reader's knowledge of the racial composition of each Geo-Code. For example, Geo-Code 54606 showed that Whites were stopped approximately 48% of the time while Blacks were stopped approximately 34% of the time, resembling the distribution of the data set as a whole, while Geo-Code 51808 showed a more even distribution of White and Black stops (47.7% and 42.5%, respectively). No conclusions can be made without an understanding of the racial makeup of these Geo-Codes.

### **The Relationship Between Time of Day and Stops**

After recoding the data, it was found that approximately 1/3 of all stops were made between the hours of 8:00 PM and 11:59 PM, while most other time frames only constituted approximately 15% of all stops (the time frame of 4:00 AM to 7:59 AM only constituted approximately 5% of all stops). The results also indicate that approximately half of all stops were made between the hours of 8:00 PM and 3:59 AM. This time frame only makes up 1/3 of the entire day. With regards to the differences in receiving a citation or a warning, the results indicate that between the hours of 8:00 PM and 3:59 AM, citations and warnings are given at approximately the same rate (52% and 48%, respectively). In all other hours of the day, citations are given approximately 2/3 (or more) of the time.

### **The Relationship Between Day of the Week and Stops**

The results dealing with the day of the week and the number of stops indicate a fairly even distribution of stops made on each day with the exception of Sunday, which held less than 10% of all stops while every other day held approximately 15% of all stops. When breaking up the days into weekdays and weekends (Friday, Saturday and Sunday being considered as "weekend"), the results show that approximately 60% of stops are made during the week, while 40% are made during the weekend days. When looking at whether a person will more likely receive a citation or warning based on the day of the week, the results indicate that far more warnings are given on the weekends than the weekdays.

### **The Relationship Between Driver Age and Stops**

When looking at the relationship between driver age and the number of stops, a strong trend is apparent as younger drivers are stopped more than older drivers. The data was broken up into 16 different age groups and each younger group was stopped more than the group before it. The only difference was the last age group (ages 15 through 19) who showed a decrease in the number of stops. There is also a strong trend as to whether a driver will receive a citation based on their age. The oldest age groups received citations approximately 35% of the time, while the middle age groups received citations between 50% and 59% of the time. The youngest age groups received citations between 60% and 63% of the time. A significantly positive relationship is thus found between age and the result of the stop.

### **The Relationship Between Gender and Stops**

Overall, the results indicate that males are stopped a larger frequency than females are, with males being stopped approximately 58% of the time and females being stopped approximately 42% of the time. However, although there is a difference in the number of times males are stopped compared to

females, there does not appear to be any significant difference in whether a person will receive a citation or warning based on their gender.

### **The Relationship Between Age of Vehicle/Equipment Violation Stops and the Rate of Ticketing**

Looking at the frequencies for all three variables in this analysis, the results indicate that vehicles made between the years 1992 and 2010 constituted approximately 90% of all stops in the data set with 1/3 of all stops being made on vehicles made between the years 1997 and 2001. The results also indicate that approximately 25% of all stops were made for equipment violations while the remaining 75% of all stops were made for either a moving violation or a license plate/registration violation. Lastly, the results show that citations are given approximately 60% of the time throughout the entire data set.

The correlation results show that a person stopped for an equipment violation is significantly less likely to receive a citation than a person stopped for a moving violation or a license plate/registration violation. The correlation between the age of a vehicle and the result of the stop shows that newer vehicles are more likely to receive citations than warnings, though this relationship is not significant at all.

When looking at the regression for these two variables, we find that both are significantly related to whether a person will receive a citation or a warning when controlling for the other. However, the amount of variation in whether a person will receive a citation or a warning cannot be completely explained using only these two variables. Only 6.8% of the variation can be explained with only these two variables. Even when adding the variables "Race" and whether a person was stopped for a moving violation, the model only explains 8.2% of the variation.

When adding all variables examined in the report, only 10.8 percent of the variation is explained. Other variables therefore must play a role in determining whether a person will receive citation or a warning. These variables must be identified and included in the model in order to effectively determine the criteria for receiving a citation as opposed to a warning.

It was also found in this section that individuals who have a vehicle which is older than 20 years old AND are stopped for an equipment violation are significantly more likely to receive a citation than a warning. However, it was also shown that these variables combined only accounted for approximately 6.5% of the variation and that, again, other variables must be included to fully understand why a person will receive a citation as opposed to a warning.