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CAPE GIRARDEAU POLICE DEPARTMENT: A WORKPLACE AND NEEDS ANALYSIS

By

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AN INTERNSHIP PAPER

Submitted in partial fulfillment of the requirements
for the degree of
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ABSTRACT

Magnan, Kevin Jerome, M.S. Southeast Missouri State University, May 2014. Cape Girardeau Police Department: A Workplace and Needs Analysis. Major Professors: Diana Bruns, Carl Kinnison, Wayne Bowen.

The purpose of the present internship was to determine if the Cape Girardeau Police Department, specifically the patrol unit, is adequately staffed to handle the needs of Cape Girardeau. Literature on the subject of police department assessments reveals that no accepted standards exist for assessing a police departments staffing or performance. Furthermore, many agree to the extent of complexity and difficulty in accurately assessing a police department staffing levels and performance. The Cape Girardeau Police Department anticipates that this analysis will provide a blueprint of where the Department currently stands. The results of this internship make numerous recommendations for the Department. Although the final recommendations contain limitations, the methods for analyzing staffing levels support the conclusion that the Cape Girardeau Police Department patrol unit is understaffed.

Executive Summary

Findings

- Jefferson City and Cape Girardeau City experience very comparable violent crimes, but Cape Girardeau City's property crimes are nearly double Jefferson City while employing 10 less officers.
- Average number of patrol officers working each 12-hour shift is seven.
- 81 hourly shifts or 21.09% of hourly shift required more than eight officers.
- 52.63% of officers are assigned to the patrol function.
- 9.8% of calls for services required more than 60 minutes to complete.
- The CAD system fails to provide necessary data to perform this analysis correctly.

Recommendations

- According to the ICMA workload-based method, Cape Girardeau Police Department is understaffed. At the minimum, one to three officers should be added to each of the four patrol units to account for the potential workload requirements and to improve on maintaining a workload percentage below the Saturation Index.
- To achieve 60% of officers assigned to the patrol function, the Department would need to add 14 additional officers to the patrol unit (moving officers from their current assignment to the patrol unit is strongly discouraged).
- The CAD system requires improvements. Whether a new system is implemented or improvements are made to the current system, the data limitations of the current CAD system impede any future analysis.
- Incorporate daily reports into officer duties. Daily reports will allow for a broader picture of officer duties and productivity as well as providing complementing data to use with CAD data.
- Community involvement within any Department process is strongly advised and beneficial. It adds transparency, accountability, and improves the overall perception of the police. Involving key stakeholders or community groups offers convenience and allows the community input.
- Future analysis should examine the difference in crime rates between zones, the impacts of the large commuter population, and officer compensation and salary.

CHAPTER 1: Introduction ad Historical Background

Department History

Some form of law enforcement has been present throughout the history of Cape Girardeau, Missouri. When the city was founded in 1806, the position of City Marshal was created to enforce all city ordinances. During the tenure of the City Marshal, there was no established salary. Instead, the City Marshal was paid on a fee basis for his patrols, citations, arrests, and participation in city meetings. The position of City Marshal remained the forefront of policing in Cape Girardeau until March of 1859 when the Cape Girardeau Police Department was established. The Department was comprised of a Captain of Police and a Lieutenant as his assistant. As the city grew over the years, the Department accordingly grew in size and responsibility.

Early 1900s

In 1906, the city and its citizens named Willis Martin Chief Law Enforcement Officer of the City of Cape Girardeau. A new building was erected during the year 1909 at the corner of Fredrick and Independence Street which housed the police station, jail, and fire department. In 1918, the City of Cape Girardeau replaced the previous alderman form of government with the commission form. During this period, the Cape Girardeau Police Department transitioned from a fee based system to a more conventional officer salary. Additionally, qualifications for officers were established. The qualifications included being 21 years of age, male, able-bodied, and a sober and discrete person. Finally, during this period, officer's duties expanded to include directing and controlling traffic (Hetzel, 2000).

The police and fire departments shared the building on Fredrick and Independence Street from 1909 until 1960 when the police department moved to a building on Sprigg and Independence Street, which was formally utilized by the Grace Methodist Church. Throughout the years between 1909 and 1960, the Department grew to approximately 24 officers, commanded by several Chiefs of Police. The Department expanded its resources to include three police cars and two motorcycles at their disposal. The police cars were equipped with two-way radios while the motorcycles had one-way radios. Police vehicles were also equipped with riot guns, machine guns and tear gas for emergencies. Although the city of Cape Girardeau is located in an auspicious location where criminals can flee to numerous other states in under a few hours, the city experienced low crimes rates, consistently low burglary rates, and effective police patrols (Hetzel, 2000).

Department in the 1970s

Consistent with the City of Cape Girardeau's growth, the police department had grown too large for its headquarters building on Sprigg and Independence Street. Plans were drafted in 1973 for the Department to move headquarters to its current location at the corners of Sprigg and Merriwether Street. In 1976, the Department's headquarters was completed at a cost of approximately $825,000 and began to be used that fall. The building featured a street level garage for prisoner transport, a sophisticated communications tower with dual control radio and telephone technologies, an armory, a complete photo and evidence laboratory, prisoner processing room, municipal court

office, training room, interrogation room, indoor firing range, and a federally approved jail that can hold up to 32 prisoners (Hetzel, 2000).

The 1970's were a time of growth for both the City of Cape Girardeau and the Cape Girardeau Police Department. Cape Girardeau's population grew to approximately 32,000 and the police department's forces consisted of more than 52 officers, both male and female, and 10 civilians. Recognized as the largest department between Saint Louis and Memphis, the Cape Girardeau Police Departments faced many of the same challenges of larger, more populated cities. Chief of Police Henry Gerecke, in 1975, began reorganizing the Department into a classical chain of command structure as well as refitting officers with new uniforms and equipment styled after the Los Angeles, California Police Department. Additionally, police officer training became a top priority for the Department and remains a top priority to this day.

In 1976, the Department upgraded its communication systems and equipment to one of the most advanced systems within the state of Missouri. The Department had 24 vehicles, each with two-way police radios and 32 channel programmable radios that provided communication capabilities to regional law enforcement agencies and emergency preparedness officials. The Department also developed a permanent record system for complaint and arrest records. During the 1980s, the Department established five man special response teams who were trained by the Federal Bureau of Investigations and equipped with radios, semi-automatic weapons, shotguns, and a full range of crowd controlling chemical munitions and equipment. In May 1985, the Cape

Girardeau Police Department, in conjunction with the City of Cape Girardeau, was instrumental in establishing and implementing the Senior Citizens Victim Crime Fund. This program provided financial assistance to senior citizens who experienced property loss or damages due to crimes committed against them (Hetzel, 2000).

With the growing national popularity and success of Community Oriented Policing, which advocates for officers to engage more with the community in a collaborative effort to reduce crime, the Department began transitioning to this philosophy during the early 1990's by assigning two officers to work closely with residents and businesses to identify community problems and develop responses to the problems. The community response to the concept of community oriented policing was both enthusiastic and promising, and the Department continues to focus on this philosophy as a method of addressing crime. During the late 1990's, the Department grew to 72 sworn officers and 30 civilian employees responsible for a myriad of police activities ranging from patrol, to felonies to nuisance avoidance. In summary, Cape Girardeau Police Department has evolved from a 2 person police department in the early 1900's to a police agency serving 75,000 citizens in Cape Girardeau County (Hetzel, 2000).

Previous Department Analysis

In September of 2001, the Police Executive Research Forum (PERF) released a report examining the Cape Girardeau Police Department. The Department hired PERF in early 2001 to conduct a management study and report on the departmental operations,

organizational structure, staffing and deployment of personnel, policies and written directives, information flow, management style, and much more in order to assess the strengths and weaknesses of the Department. PERF also compared their analysis of the Department to other similar departments and to nationally accepted best practices. PERF found that the Cape Girardeau Police Department operated successfully but some improvements could still be made. PERF also determined that Department personnel were proficient, productive, dedicated, talented, courteous, and professional. However, the evaluation inevitably determined numerous improvements could be made. It should be noted that some of the recommendations by PERF were a result of financial constraints which were not within the control of the Department or were not feasible at the time of the report (Police Executive Research Forum, 2001).

The PERF team conducted many on-site interviews and discussions with members and former members of the Department, as well as with city leaders and external stakeholders such as citizens. Much of the input from past and present Department personnel focused on their dissatisfaction with the level of concern and response to a number of commonly themed issues. Departmental personnel identified a longstanding, low-level of trust in the Department's previous leadership. This was marked by poor internal communications and funding issues. Despite the creation of 13 review teams made up of Department employees, the perception of micro-management, overabundant supervision, disconnection between management and lower ranking officers, and failure to clearly convey Department priorities were identified as problems to overcome (Police Executive Research Forum, 2001).

Fiscal limitations, an issue for any department, were a source of frustration and hardships and contributed to the low morale throughout the Department, from the rank and file officers to the Chief of Police. Officers voiced their concerns about equipment needs, some of which have since been addressed, and salaries that were lower than other departments in the region. Additionally, fiscal constraints have contributed to the high employee departures seen at the Department. In a 13-month period prior to the PERF study, 28 police officers left the Department. While some of the employee turnover were legitimate retirements or dismissals that may not have had anything to do with lower salaries or lack of equipment, many former Department employees interviewed by the PERF team readily voiced their concerns of low morale, equipment shortfalls, officer safety issues, biased treatment of employees and low salaries. PERF noted that the department had initiated changes regarding some of the issues presented, but several areas were still a concern for the Department and its employees (Police Executive Research Forum, 2001).

At the time of this study, PERF commended the city for making strides in raising officers' salaries, but noted that PERF's review of salaries indicated that the City of Cape Girardeau's salary structure was still lower than most comparable departments. Based on PERF's comparison with six other Missouri cities (Columbia, Gladstone, Jefferson City, Joplin, Lee's Summit, and St. Joseph), Cape Girardeau's entry-level salaries were lower than all other comparable cities for police officers ($23,795), corporals ($25,147), sergeants ($29,120), and lieutenants ($32,011). It should be noted that, although the comparisons accurately identify Cape Girardeau as the lowest salary paid officers, the

extent of the salary differences were difficult to determine without knowing the number of officers occupying the highest and lowest salary ranges for each comparison city (Police Executive Research Forum, 2001).

PERF Organizational Structure Analysis

The Department followed a typical organizational structure found in police departments across the United States. There were two bureaus, the Operations Bureau and the Support Services Bureau, each headed by a captain who reported to the Chief of Police. PERF's assessment found that the organizational structure used by the Department was logically grounded and consistent with accepted practices. PERF did, however, offer minimal suggestions for reorganization of some auxiliary divisions, the licensing services and the creation of a civilian clerk position. PERF's analysis found that the 12-hour shift rotations patrol officers work often leads to feelings of exhaustion. However, due to the amount of time off this shift allows, officers consistently voiced their preference for the 12-hour shift and subsequent time off over a 8 or 10 hour shift (Police Executive Research Forum, 2001).

PERF's analysis determined that the calls for service and officer workload were not evenly distributed between the four city zones and the Department needed to assess zone make-up and adjust existing boundaries. Based off their analysis of patrol workload by time of day, day of week, and a review of actual officer availability, PERF identified that the current sworn officer staffing of patrol needed to be enhanced. The analysis found that, based off of workload and accounting for officer availability such as training,

annual, sick and other leave, the Department should have allocated 10 officers to each shift so that routinely 7 of the 10 officers were always present. Although the workload changes during certain hours, specifically between midnight and 5 a.m., operating with a 12-hour shift schedule did not allow for staffing increases or decreases. Furthermore, the Department utilized a four-week rotation between day and night shifts. PERF stated that this rotation intensified officer fatigue and studies show that it takes approximately 28 days for the human body to fully adjust to a change in sleep patterns (Police Executive Research Forum, 2001).

Community Oriented Policing Initiative

In early 1990, the Department instituted a Community Oriented Policing unit with two police officers. The program grew to include a sergeant and three offices assigned to the community policing and nuisance abatement unit. PERF found that these officers indeed made improvements in the community. Additionally, by increasing patrol staffing, there would be a greater opportunity for patrol officers to engage in community policing if the increases to staffing reduced the amount of time officers spent answering calls for service. The additional officers would greatly increase the potency of community policing efforts. In review of the traffic unit, PERF's assessment found that the traffic unit accounted for nearly 70% of traffic enforcement activities. While this was due to the traffic unit's assigned functions, patrol officers were missing an opportunity to be better connected to their community by assisting in traffic enforcement. Therefore, patrol officers should also be encouraged to view traffic enforcement in their zone as a responsibility. Furthermore, if officer staffing was increased, this would be another

opportunity for officers who have more time away from calls for service to engage in traffic enforcement and community policing (Police Executive Research Forum, 2001).

In conclusion, PERF reported on several additional areas of the Department. The staffing levels of criminal investigation, narcotics investigation, and internal investigations were adequate, though possibly requiring the use of additional clerical staffing. With the Department's integration of a new computer-aided-dispatch and records-management system in 2000, PERF indicated that the Department must ensure that this system is used to its maximum capacity in areas of access, crime analysis, management information and use of mobile data terminals. Lastly, the Department's commitment to training was not readily observed. The Field Training Officer Program was not coordinated effectively. Although the Department met the required 48 hours of biannual in-service training, the Department training needed to focus on career development and not minimum training hours. PERF suggested the Department incorporate training programs targeted at both officers' interest and Departmental needs. During this time, police departments around the nation were creating new training programs and curriculum. Therefore, PERF recommended that Cape Girardeau Police Department should continuously develop and adapt training programs as a way to continue to provide avenues for officers to improve and meet the needs of their community (Police Executive Research Forum, 2001).

Cape Girardeau City Characteristics

According the U.S. Census Bureau (2014), the city of Cape Girardeau's population is approximately 35,544, the 16th largest city in Missouri. The city covers 28.43 square miles between the Mississippi river and Interstate 55, and Jackson and Scott City, Missouri. Among the total population of Cape Girardeau, 47.9% of the population are male and 52.1% of the population are female. In terms of ethnicity, 83.0% are white, 12.1% are African American, 2.7 % are Hispanic or Latino, and 2% are Asian (U.S. Census Bureau, 2014). Additionally, it is estimated that as many as 90,000 people travel to Cape Girardeau daily from the numerous cities within Cape Girardeau County for work, shopping, education, and health care. The Bill Emerson Bridge, officially opened in 2006, carries 26,000 vehicles in and out of Cape Girardeau each day across the Illinois and Missouri border. For the year 2012, the Department reported 3 murders, 12 reported rapes, 162 aggravated assaults, 66 robberies, 500 burglaries, 2,052 larceny thefts, 76 motor vehicle thefts, and 20 arsons (Fields, 2012).

The Cape Girardeau Police Department separates the city into four zones patrolled by four platoons (A through D). The four city zones are separated at the intersection of West End and Independence Street and feature significantly different characteristics. Zone One, encompassing the northwestern part of the city, is completely residential and boasts the largest square footage of any zone. Zone Two, the city's north eastern region, includes Southeast Missouri State University, the Show Me Center, and the recently completed Isle Casino. Zone Three covers the south eastern corner of the city and is made up of the city's downtown district, the Bill Emerson Bridge, and

includes the lowest income families. Finally, Zone Four represents the south western corner and remains the most commercial area of the city, including the West Park Mall and Wal-Mart (Fields, 2012).

Department Configuration

As of January 2014, the Cape Girardeau Police Department employs 76 officers and 18 civilians under a budget of approximately $6.9 million, an increase of nearly $500,000 from the 2012 budget. The Department's administrative staff consists of the chief of police, an assistant chief, and a captain. Reporting to the administrative staff are four lieutenants, each in charge of their own division. Eight sergeants and nine corporals are responsible for lower-level management, supervising the remaining 52 police officers. Officer demographics reveal that the majority of officers are white males, while four officers are white females, three officers are African American males, and two officers are African American females. According to the Cape Girardeau Police Department Annual Report (2012), officer's ages fall within the ranges of 26 to 45, while a significant number of officers were age 50 or older and a minority of officers were age 21-25. When reviewing years of service, the vast majority of the Department officers were in the ranges of 1-5, 6-10, and 10-15 years of services. Finally, the Department boasts that 54% of officers hold a Bachelor's or Master's degree (Fields, 2012).

Organizational Structure

The Department's organizational chart resembles a hierarchical command structure with the chief of police as the commanding officer. Under the chief are the

Police Reserve Division, Operations Bureau, Administrative Assistant, and Support Services Bureau. The Operations Bureau provides the administrative foundation, professional standards, and technical innovations necessary to remain a leader in professional public services. It encompasses the Patrol Division, Detective Division, and Special Operations Division. The Patrol Division includes Platoon A, B, C, and D, the Special Response Team, and the Traffic Unit. Within the Detective Division are the Criminal Investigation Unit, Scientific Investigation Unit, and Professional Standards Unit. The Special Operations Division is comprised of the Direct Results Team, Special Events, School Resource Officers, DARE officer, and Animal Control and Nuisance Abatement Platoon. Under the Support Services Bureau is the Administrative Secretary, Auxiliary Services Division and Training and Community Affairs Division. The Auxiliary Services Division is made up of civilians who provide the Department with a number of essential services, including the Records Unit, Jail Unit, Equipment and Property, Fleet, and Licensing Services. The Training and Community Affairs Division includes the Training Unit, Community Services Unit, Safe Communities, and Volunteer Program (Cape Girardeau Police Department, 2013).

Patrol Division

The four Patrol Division platoons maintain a uniformed presence in the city 24 hours a day. Each platoon is comprised of one sergeant, one corporal and eight patrolmen, two of which operate as evidence technicians as well as patrolmen. In 2012, the Patrol Division received 53,783 calls for service, up from 51,427 in 2011 and 49,338 in 2010. The Patrol Division also wrote 10,952 reports, increasing from 10,824 in 2011

and 10,750 in 2010, and arrested 3,864 individuals, compared to 3,880 in 2011 and 3,766 in 2010. Finally, the Patrol Division cited 317 juveniles. Additionally, the Patrol Division is assigned two police K-9 units and in 2012 they were involved in almost 200 cases. The four platoons work in rotating 12-hour shifts from 7 A.M. to 7 P.M. and 7 P.M. to 7 A.M. To compensate for roll call and briefings before and after a shift, one officer from each platoon is scheduled to work 6 A.M. to 6 P.M. and 6 P.M. to 6 A.M. to compensate for the delay between shift changes (Fields, 2012).

Traffic Unit

The Department's Traffic Unit is comprised of one sergeant, one corporal, and five officers. Traffic officers patrol all four zones of the city, enforce traffic laws, respond to and reconstruct traffic incidents. During 2012, the Traffic Unit, in conjunction with the Patrol Division, issued 7,001 traffic citations, a significant increase from 6,211 in 2011 and 5,587 in 2010. The Traffic Unit also responded to 2,070 crashes, an increase from 1,954 in 2011 and 1,876 in 2010. Additionally, the Traffic Unit is responsible for administering driver testing to determine if drivers are under the influence of alcohol or drugs. In 2012, the Traffic Unit, in conjunction with the rest of the Department, held two sobriety check-points. The Community Policing Unit, started in the early 1990's, work with neighborhood residents and groups to establish a link between them and the Cape Girardeau Police Department, service agencies, and the local government. Beginning in May of 2002, the Department, in partnership with the Transportation Security Administration, provides security and screens passengers and luggage at the Cape Girardeau Regional Airport located in zone four of the city (Fields, 2012).

Criminal Investigations Division

The Criminal Investigations Division consists of one sergeant, three corporals, six investigators, and one civilian records clerk. Three detectives are assigned to solely investigate drug cases and one investigator is specialized in forensic examinations of computers, internet crimes, and sex crimes. Additionally, one investigator is assigned to investigate juvenile crimes. In 2012, the Criminal Investigations Division was assigned 1,233 cases, clearing 25% of them (Fields, 2012). Nationally, the clearance rates for violent and property crimes in 2012 was 32.9% (Uniform Crime Report, 2013b). The Scientific Investigations Unit, comprised of one supervisor and one records clerk, is responsible for maintaining all physical evidence, photographs, and fingerprints collected by the Department. During 2012, the Scientific Investigations Unit coded 2,840 pieces of evidence (Fields, 2012).

The Professional Standards Unit investigates internal and external complaints of employee misconduct. During 2012, four Professional Standards investigations were conducted against four officers. Two of the complaints were found unfounded and two complaints were upheld. The Cape Girardeau/Bollinger County Major Case Squad, created in 1970, is made up of several Department officers as well as officers and detectives from seven other law enforcement agencies and has enjoyed a 93% clearance rate since 1980. The Major Case Squad was activated twice in 2012 for two high profile cases which took place in Southeast Missouri. The first case involved the homicide of Jeffrey Robbins at his home in Bollinger County. The Major Case Squad worked on the case for seven days until they were deactivated; the case is still active. The second was

for a deadly shooting that occurred at a night club in Cape Girardeau. The shooter, Malcom Harrism, was arrested less than 20 hours after the Major Case Squad was activated (Fields, 2012).

In a formal interview conducted January 2014 with the Department's recently appointed Chief of Police, Wes Blair, the Chief explained the Department's current goals: 1. To reduce crime, particularly violent crime in zones three and four. 2. Improve on internal technological improvements such as internal ticket writing. 3. Receive approval for a new headquarters building. 4. Add personnel, specifically police officers and jailers. The Chief stated that the Department's future direction is to become more community-oriented which will better enable citizens to be more engaged in the community.

One specific improvement the Department hopes to accomplish is to increase neighborhood watches in the city for the reason that there are only two official neighborhood watches. When asked how this workplace and needs analysis will benefit the Department, Chief Blair anticipates that this analysis will provide a blueprint of where the Department currently stands in order to improve on the services offered to its constituency. The PERF study, completed in 2001, is too outdated to provide any actionable solutions. Therefore, the Department requires a new analysis to review staffing allocations and assess where Departmental resources are needed. The Chief expects the outcomes of this analysis will be used to realign the Department in order to

achieve optimal efficiency, request additional personnel from City Council, and realign the outdated city zones (Chief W. Blair, personal communication, January, 2014).

Centered on the PERF study and the established needs of the Department, this analysis will focus on staffing allocations and salary comparisons for the four Patrol Platoons, the Traffic Unit and the Community Policing Unit. If time and resources permit, this study may also look to review the Detective Division, specifically the Criminal Investigative Division. By incorporating data from the PERF study, previous Department reports and current Department statistics, this analysis will review performance variables involving calls for service, arrests, traffic citations, traffic accidents, written reports, average officers per shift, as well as other factors.

This analysis will also look to conduct benchmarking with other appropriate city police Departments. Finally, national standards for policing, previous staffing studies, and relevant scholarly and practical resources will be used to ensure this analysis conforms to nationally agreed upon practices for law enforcement agencies. As for the researcher, this analysis will provide extensive opportunity for experience in data collection, organizational structuring, personnel allocation, and budgeting. Finally, this analysis will require the researcher to acquire, interpret, and use a multitude of government, academic, and professional resources to guide the development of the study.

CHAPTER 2: Literature Review

Introduction

Assessing police agencies is a phenomenon that began in the early 20th century with the advent of the Wilsonian professional policing era (Shane, 2008). Since then, there have been numerous attempts to quantify and assess police department's effectiveness on varying scales. The recent economic turmoil in the United States has sparked new interests in assessing police departments in terms of cost-benefit analysis for communities, staffing levels, and resource allocation to combat crime. This literature review will explore a number of potential methods for developing and measuring police performance. In addition, the recent economic impacts on police departments across the country will be reviewed to develop an understanding of the current conditions and the future strength of police departments. Finally, literature on staffing levels, personnel, and resource allocation based on police workload will be reviewed.

Economic Impacts on Police Staffing

The Police Executive Research Forum's (PERF) 2013 report assessing the impacts of the economy on police departments revealed new information about the condition of future expectations of departments' in terms of staffing and resource allocation. PERF has conducted four of these surveys from 2008 to 2012 when the economic recession began. Of the 700 agencies surveyed 2013, 416 agencies successfully completed them. Aside from the latest survey, the 3 others conducted since 2008 revealed grim findings for police department's budgets. In 2010, 78% of agencies reported budget cuts according to the PERF survey. However, the recent 2012 survey

reported 51% experiencing budget cuts. While the majority of departments are still experiencing budget cuts, a reduction of 27% in one year is a considerable improvement for police agencies. Similarly, in terms of personnel recruitment, 32% of responding agencies said they had discontinued recruitment of new officers. In 2012, that figure dropped more than half, at 15%. Furthermore in terms of recruitment, 59% of respondents from 2010 reported that they had delayed or reduced the size of their recruitment class, while only 29% in 2012 reported the same. This is a significant change for police departments facing sworn officer deficits and high retirement rates. Police department administrators also predicted improvements in officer pay raises, less reductions in police services, and higher response times when comparing answers from 2010 to 2012 (PERF, 2013; PERF, 2010).

Across the board, police executives since 2008 have firmly believed that staffing levels of sworn officers should remain unaffected. Ninety percent of respondents in the PERF study said that sworn officers should be the last thing to cut in the budget and more than 75% of respondents said they believed maintaining the patrol function of agencies should be a top priority. When asked how officer staffing will change from 2011 to 2012, 76% of responding agencies expected their numbers to stay the same while 17% expected fewer officers and 8% expected more officers. PERF's 2013 study has identified troubling concerns that several years of economic hardships and tightening budgets may have contributed to officer employment (PERF, 2013; PERF, 2010).

Understanding Police Staffing Levels

Police staffing models are generally focused on five factors that are used in the determination of employing police officers and these factors were recently analyzed by the International City/Council Management Association. The five factors include crime trends, a per-capita approach, minimum-manning levels, authorized/budgeted levels, and workload-based models. As the police have professionalized over the years, the goals of policing have shifted from reactionary enforcement of laws to crime reduction. Subsequently, crime levels and trends have become benchmarks for police departments to compare with previous years as well as other agencies across the country.

As crime levels and trends increase, cities, police agencies, and citizens acknowledge these trends and dispatch more officers to combat crime. While this approach may appear appropriate and even rational, it is an inefficient staffing model. This type of staffing approach presents the mindset that departments ineffective at combating crime deserve more officers while effective crime fighting departments are punished with fewer officers. This approach also fails to incorporate the vast array of influential factors that affect crime rates other than police officers. Some criminologists have gone as far as to discount police officers for having any impact on crime rates (McCabe, 2013).

The minimum-manning staffing approach sets levels by past practices, established policies, supervisory discretion, or a combination of the three. As a result, this approach also extends to deciding the number of officers to work each shift by determining the "soft" minimum and "hard" maximum. Often these figures will become standard

practices or unwritten staffing rules, and be difficult to change by supervisors. Possibly one of the most common and recognizable staffing models is the per-capita approach. This staffing model uses officer-to-population ratios as a simple method to approach or determine staffing levels. While this approach is common across the country, organizations such as the International Chiefs of Police Association do not recommend this method, although they still release data on these statistics. According to the Bureau of Justice Statistics 2003 report, departments across the United States report staffing levels of 1.9 to 2.6 per 1,000 residents, with an average ratio of 2.5 full-time officers for 1,000 residents. This staffing method is easy to understand and explain, therefore, many communities rely on it for staffing purposes even though it is inefficient and unreliable (McCabe, 2013).

The authorized/budget approach to officer staffing is a variation of minimum-manning in that this approach has cities or towns that predetermine the approach staffing levels that fit within the budget. This approach, similar to the per-capita method, is simple and commonly used by communities because it offers a historical context allowing cities and towns to review the previous year's budgets within the current financial situation and make comparable staffing decisions. In this approach, department staffing can become obscured in political and bureaucratic 'red tape'. Using the previous fiscal budget does not provide a solid foundation upon which to determine the necessary staffing for police agencies. The last of the staffing models, actual workload, relies heavily on the actual demand for police services and matches that demand with adequate police resources. The actual workload model examines calls for service received by the

department though 9-1-1 services. Therefore, this model falls short in understanding the complete picture of actual workload because it ignores other elements of community demands and officer involvement. While the International City/County Management Association (ICMA) is a strong advocate for actual workload staffing models, the ICMA also suggests that workload demands should be modeled and placed in the framework with calls for service for a comprehensive assessment of community needs from the department. While this model presents the most accurate and efficient method to staffing, understanding the entire workload demands require complex data retrieval and analysis that departments may not have access to (McCabe, 2013; Wieczorek, Dale, & Chelst, 2011).

Beginning in 2008, the ICMA has offered consulting services to numerous communities across the United States. As of this report, 61 cities in 26 states have requested the ICMA to conduct data analysis for staffing. The ICMA relies on information captured by the department's computer-aided dispatch (CAD) systems for one year's worth of CAD calls for service and dispatch data to examine demand for police services. The ICMA analysis focuses on three specific areas: workload, deployment, and response time. These three areas are synonymous with patrolling which constitutes the majority of personnel and financial commitment of nearly any department. Within the year of CAD data used by ICMA, detailed workload analysis comes from two four week sample periods, usually from the beginning of summer and beginning of winter. The goal of the data analysis is to identify the total amount of time spent handling a call to form charts and tables that represent the demand for police services in

hourly increments across a 24-hour day for both weekdays and weekends. Within the calls for service, the ICMA researchers use the actual number of officers present and working during shifts as opposed to the scheduled officer workload. These numbers more accurately represent the actual workload of the shift and allow the researchers to create a working percentage of available resources (McCabe, 2013; Wieczorek, 2011).

The ICMA data analysis studies focus strongly on workload and indicate that ensuring the proper amount of police resources available throughout the day is the goal of an effective and efficient staffing model. Along with workload, however, the ICMA also reviews population, crime, patrol staffing, total numbers of calls for service, response time, total service time calls for service, FBI Uniformed Crime Report (UCR) index, rate of 911 calls for service per 1,000 population and the 90th percentile response time for calls for service in order to determine department staffing recommendations. As a general guideline for their department analyses, the ICMA uses the 'Rule of 60' to evaluate police departments staffing, allocation, and deployment.

The 'Rule of 60' has 3 components:

> First, approximately 60% of the total sworn officers of a department should be assigned to a patrol function. This benchmark will be different for each community and will grow as departments and communities grow.
>
> Second, the average workload of a department staffing should not exceed 60%. In the ICMA's study of 61 cities and towns, even the busiest communities did not exceed more than 60% of their resources towards patrol workload (which includes

> engaging in public initiated calls for service, police-initiated calls for service, administrative, directed patrol, and out-of-service time). The remaining 40% of unallocated time should be spent engaged in community policing activities and remaining available for emergency situations.
>
> Third, the total service time (officer-minutes) should not exceed a factor of 60, meaning that officers should not spend an hour or more on a call (unless specifically assigned) (McCabe, 2013, pp. 10-11).

When compared to more simpler staffing models such as per-capita or minimum-manning, the 'Rule of 60' method represents a much more comprehensive, data driven, and efficient method for police staffing allocations and deployment options. The ICMA uses these three factors as the basis for assessing an agency's staffing decisions. Within the data from the 61 cities and towns that the ICMA assessed from 2008-2013, six variables were statistically significant with number of officers per 100,000 in a department. Calls for service (9-1-1 calls) and police staffing were statistically significant, suggesting that as calls for service increased, departments increased. Furthermore, average service time for both publicly initiated and police officer initiated calls for service were inversely correlated with staffing levels, suggesting that as officer staffing increased, total service time decreased. In order for the ICMA to gather the most useful data, the researchers selected weekdays and weekends in summer and winter to arrive at the most strenuous time for departments during peak times for crime as well as officer vacations and time off (McCabe, 2013).

The ‘Rule of 60’ has significance beyond broad staffing allocations. From an officer’s perspective, once a certain level of calls for service activity is reached, called the saturation point, officers begin to shift from a proactive mindset to a reactive one. Instead of having officers patrolling the streets engaged with the community and looking for crime and quality of life conditions, officers are strictly responding to one call after another. In this situation, uncommitted time is spent waiting for the next call for service. The ICMA believes this saturation threshold is 60%. The ratio of dedicated time (such as responding to calls for service) compared to discretionary time (such as talking with business owners about neighborhood issues) is referred to as the Saturation Index (SI).

The ICMA considers that patrol staff is optimally deployed when the SI is slightly less than 60%. When the SI is greater than 60%, the department’s patrol officers are operating in a reactive mindset, overburdened with calls for service and workload demands. However, if the SI is significantly less than 60% it indicates patrol staffing is inefficient and there is an opportunity to reduce or reallocate department resources. This is not to say that a department should never exceed 60%. The ICMA states that the SI should not allow for situational considerations. The SI’s 60% level is meant to be used as a benchmark and not as a definitive line that cannot be crossed (McCabe, 2013).

To ensure adequate staffing levels for a SI of 60%, peak workloads for each individual hour during the day must be considered. In reviewing 61 cities, the ICMA calculated the peak workload for each hour during the weekday and weekend to determine the amount of staffing needed to maintain the SI under 60% (peak workload/60% = required staffing). For example, at 12:00 a.m. the peak workload was

7.52 hours, resulting in the need for 12.5 officers staffed to maintain the SI under 60%. This same calculation is made for each hour of a 24-hour period. However, the staffing models are not complete at 12.5 officers. Staffing officers is not as simple as determining the necessary officers for peak workload and creating a schedule. The ICMA recognized that staffing challenges are too significant to overlook for any department. In a typical shift, it is common for approximately 25% of officers assigned to not be available for patrol because of numerous conflicting responsibilities. With this in mind, department administrators must compensate for these losses in personnel. In the previous example where 12.5 officers were needed, the department would need to staff 17 officers to compensate for the loss of approximately 25% due to other responsibilities (12.5 officers/.75 = 17 officers rounding to the nearest whole number (McCabe, 2013).

While this method is rarely used by police departments, the ICMA strongly believes it is the most effective and efficient method to determine staffing for police agencies. Using antiquated, simplistic models for formulating staffing needs to make one of the most financially important decisions for a police department is irresponsible to both officers and citizens. Applying data driven staffing models may seem cumbersome and unrealistic for departments working with lower budgets as a result of economic hardships. However, the results of data driven staffing models are better allocated staffing and resource deployment (McCabe, 2013).

Distribution of Police Services

The distribution of police services refers to the discrepancies different regions of communities face when it comes to the resources available to the police and the priorities

of the place as it relates to race and class of its constituency. Thatcher (2010) sought out to investigate the distribution of police protection in the United States by these two measure, race and class, but found that the data for this type of experiment was not readily available. For one reason, there are many different ways to characterize the level of police protection provided by a police department. Those ways include measuring police strength using the number of officers and civilians a department employ, arguably one of the simplest approaches. However, this approach ignores non-personnel costs as well as personnel quality.

Another approach, measuring police strength using an agency's total expenditures, has the disadvantage that revenue and costs vary greatly across the county, both in terms of general and specific law enforcement costs. This approach also makes difficult assumptions that total expenditures remove variation in personnel quality and other important resources. Still other approaches attempt to measure the quality of police services by using response time, services offered, and police demeanor towards citizens. However, these methods lack nationwide data and consensus on which measures are more valid in terms of the quality of police services offered. Thatcher (2010) acknowledges that each measure offers different ways to investigate the distribution of police services but also present risks in their reliability.

For this study, Thatcher (2010) uses the number of police officers and civilians employed by the department to measure the distribution of police protection since this measure is the most instinctive and accessible. Once the method for measuring the distribution of police protection was determined, Thatcher still had to determine the need

for police services in communities. Three approaches were identified: the number of police per capita, the number of police per index crime, and the number of police per violent crime. These different methods are necessary in that different conclusions are possible depending on the measure. For example, the distribution of police services under the per capita measure appears progressive while the measure of relevant social problems appears regressive. Data was acquired through the Federal Bureau of Investigations Uniform Crime Report (UCR) which compiles information on police personnel and crimes reported by police agencies. The data was arranged in ten year periods from 1970 to 2000 from departments providing general-purpose police services, namely municipal police departments and county sheriffs.

Thatcher (2010) found that previous complaints suggesting black and poor communities receive less police protection than wealthier white communities, which had previously been found to be unsubstantiated, may actually have more truth than formerly thought. Wealthy police jurisdictions were found to receive more police protection per crime than poor jurisdictions. Furthermore, the whitest jurisdictions receive much more protection than the least-white jurisdiction per crime. In the most compelling cases, the whitest jurisdictions comprising 5% of the population employs 10 times as many police per index crime as their largely-nonwhite counterparts. These inequalities, however, only become apparent when looking at the distribution of police across cities instead of within them.

Thatcher used these results to suggest that the wealthier communities are able to essentially buy extra protection for their communities. While this study found that the

level of police protection disproportionally favors whites and wealthy households, the distribution of police per capita is found to be equal. Police per capita was not found to be unfairly distributed among poor or wealthy communities. Furthermore, nationwide, the jurisdictions with the largest nonwhite populations were found to have more police per capita than primarily white jurisdictions. Thatcher calls for a change in how the police are funded across the country from the current system where funding is received from their respective city to reflect the model of education policy where the state and federal government identify the needs of each community and fund appropriately. Thatcher suggests a large federal role in police finance could reduce distribution inequalities of police services. Regardless of what changes occur it is very difficult to reallocate police services substantially and rapidly enough to contend shifts in crime rates that wealthy and poor communities face.

Assessing Police Performance

O.W. Wilson and William H. Parker were perhaps some of the first researchers to experiment with police performance measurement. However, their measurements were not tactical or strategically linked to priorities or missions. Their initial efforts did, however, create an impulse for a new generation of police leaders to look at revolutionizing how departments gauge success and attribute accountability. One of the lessons learned by early researchers, such as Wilson, was that police agencies are rich in data that can be used for numerous reasons. More recently, researchers and police administrators have determined crime is not the sole measure of police performance or the only standard police leaders can use to determine success of their officers. Police

officers duties far exceed just crime control and, when limited resources are considered, it is apparent police departments across the country are reevaluating their capacity to improve on their services. Therefore, the fundamental question of the police is what are the prospects for improving efficiency and effectiveness in law enforcement agencies by increasing the emphasis on performance measurement (Shane, 2008)?

Law enforcement agencies face difficulties, particularly from their own officers when implementing performance measures. Employees in nearly all fields resist change because it is something new and it instills concerns of job security and an unknown sense of what the future holds. Historically, police performance measures experienced arbitrary, inconsistent, and subjective measures that provided little to no help to police administrators or street officers. Recently, measurement models have overcome these deficiencies. Personnel performance appraisals have become more reasonable, consistent and objective. They link individual performance to aspects of personnel management which motivates employees to perform better. At the department level, modern personnel performance measures help improve service delivery through productivity, efficiency, effectiveness, quality, and timeliness. They also support citizen and community participation in law enforcement activities by stimulating community commitment to the department's goals and improve civil discourse by providing the public with factual and specific measures.

In order for performance measures to be successful, they must have a basis for performance. This approach identifies six interrelated factors to provide a basis for performance measurement: (1) developing the police business plan, (2) Structuring

performance management, (3) collecting and analyzing data, (4) creating performance measures, (5)identifying meaningful measures, and (6) defining common terminology (Shane, 2008).

The police business plan should be thought of as a primary product of the performance measurement impacting different levels within the police organization from the chief's office to street officers. The business plan should guide police agencies goals, values, mission statement, training, future improvements, communication, and community involvement. Today's performance measurement models must be innovative in ways that provide the results necessary to create an effective police business plan. Therefore, performance measurement models must look beyond controlling crime. However, there exists no single, best practice approach used by police agencies. Instead, incorporating an approach that involves multiple dimensions of assessing police performance will go further in depicting police officer performance beyond simply crime rates by using timely response, courtesy, use of force, transparency, and other measures that are important to citizens.

In order for agencies to adequately conduct performance measurements, collecting, storing, and analyzing departmental data must occur successfully otherwise the decisions and police models drawn from the data will be unreliable. Data analysis should produce two types of results: basic descriptive statistics and inferential statistics. Descriptive statistics are useful for creating reports, graphical representations, percentages or ratios of performance measures. Inferential statistics are more useful for

police administrators to produce more exact or narrow results within certain variable ranges, such as crime rates, response rates, and time of day (Shane, 2008).

When creating performance measures, police administrators have room for discretion in terms of soft and hard measures where soft measures are qualitative, perception based, and hard measures are quantitative, numerical based. Police supervisors should still consider best practices, ethical high ground, and constituents in developing performance measures. Meaningful measures must be identified by police administrators to allow for the business plan to be successfully implemented. Meaningful measures differ from department to department but consist of crime control, quality of life, and legal legitimacy. Furthermore, active citizen involvement is crucial in helping to shape performance measures, expectations, and outcomes departments should strive to meet. A performance measure is the most meaningful when it connects lower-level activities with higher-level goals.

No performance measure exists without limitations and hurdles to overcome. For police performance, Shane (2008) identifies three areas of limitation in particular that exist. First, data collected and analyzed by the department only shows part of the picture and does not address why the results occurred. Further investigation is necessary to determine what went right and wrong and what is attributable to the agency. Second, some outcomes are inaccessible or unmeasurable to the police, such as measuring crimes that did not occur. Thus, departments should focus on the differences between the baseline and the targeted results. Third, agencies must be vigilant in procuring and analyzing data, but they must also expect errors in data that are known and able to be

fixed as well as errors that are unavoidable. Data should guide police and public leaders but should not be solely relied upon in making decisions. While data is crucial to the current and future effectiveness of policing, it does not dismiss the need for discretion, judgment, and leadership but trusted officials and police executives.

Implementing a Performance Measurement System

In 2006, PERF developed an agency-level performance measurement guide for law enforcement executives. PERF stated that there was a strong need for a comprehensive, agency-level performance measurement system within each law enforcement community. Citizens demand and are entitled to information on the effectiveness of government agencies and providing a performance management system for law enforcement helps to appease the citizen demand by offering transparency to further improve community satisfaction and trust in the police. Performance measurement systems also aid in making citizens feel that they are being heard and allows them the opportunity to assess whether police agencies are effectively making good use of public funds. Not only would the public gain from law enforcement agencies implementing a performance measurement system, but departments also benefit from such measurements.

Improved agency effectiveness and efficiency, accountability, and achieving goals and objectives are all possible with a performance measurement system. PERF's agency-level performance measurement system consists of overall performance expectations, tools to help measure progress toward meeting expectations, and organizational structures to hold department employees accountable for their actions and decisions. While this

system provides detailed and specific performance measures, PERF also incorporated general enough recommendations to be relevant to many different types of agencies and be customizable for a broad range of agencies and communities (Milligan & Fridell, 2006).

The PERF agency-level performance measurement system consists of three major components: (1) performance expectations, (2) measures, and (3) accountability structures. Performance expectations refer to desirable outcomes law enforcement have for a performance measurement system. PERF separated performance expectations into three major outcomes: community safety and security, perceptions of safety and security, and confidence, trust, and satisfaction with the ultimate outcome being community health. These expectations are, again, designed to be generalized for use in a variety of departments. Next, measures were developed by PERF so that agencies could assess their progress towards meeting their performance expectations. Furthermore, data derived from measures can be used in the future to reallocate resources towards more pressing community concerns, if they arise or change (Milligan & Fridell, 2006).

PERF measures recorded data from two sources, survey and non-survey data. Survey data is meant to allow departments to gather information from their constituents they would otherwise have no knowledge of, such as public opinion surveys about the effectiveness of the police and citizen self-reported criminal victimization surveys. Non-survey data incorporates data which law enforcement agencies should already be collecting from a variety of data sources city, state, and federal. PERF understands that data and analysis can be overwhelming for departments and, thus, recommends

department only analyze data necessary for key indications of department and community goal. Departments should not attempt to gather information which does not align with a specific performance expectation. Measuring data is often a struggle for some departments that do not have the immediate capacity and resources to effectively understand performance measures. The recommendations by PERF suggest that departments develop a series of measures for each outcome and use data collected over an extended period of time, longitudinal, to more completely and accurately picture an agency's progress towards their performance expectations (Milligan & Fridell, 2006).

No one measure is effective in assessing police performance. Consequently, PERF has developed a series of measures for police department assessment. Measuring community safety and security relies on survey data from citizen and business victimization surveys since not all crimes are reported. PERF also found that traffic safety issues are a serious concern for community safety and security and, therefore, the non-survey data from traffic incidents is a crucial piece of information to include in this measure. The second series of measures – measuring confidence, trust, and satisfaction – incorporates both survey and non-survey data to develop this measure. Finally, measuring community health is perhaps the most difficult to accurately measure because communities differ greatly across the country. This measure relies on the ability of police to impact community health such as median price of homes in relation to crime and nuisance problems. In this measure, any variable which police have little to no impact on are not measured (Milligan & Fridell, 2006).

Finally, the last component of PERF's agency-level performance measurement system, accountability structures, ensures the efforts of the agency are aimed at achieving their performance expectations. PERF describes two components of accountability structures that focus on both the agency and the individual. Organizational-level accountability structures include data driven command staff accountability in the form of COMPSTAT, strategic planning, quality assurance functions, and budget measurement. Individual-level accountability structures, instead, deal with the behavior of individual members of the police agency. At this level, accountability structures include internal affairs, personnel performance evaluations, and personnel measurement systems (Milligan & Fridell, 2006).

In a case study to experiment with PERF's agency-level performance measurement system, PERF reviewed Prince William County Police Department's implementation on a performance measurement system. Based off this pilot study, a number of lessons were learned. First, agencies have two options when implementing a performance measurement system. Either the agency incorporates the law enforcement outcomes set forth in PERF's recommendations, or the agency uses a process to identify their own achievement outcomes developed by the department and its community. If an agency seeks to develop its own outcomes, it is recommended to involve the community, identify appropriate community members to facilitate the community's voice, involve agency personnel, and educate and train participants involved in the performance measurement approach.

The next lesson learned was that the key to an effective measure of performance measurement system is PERF's multi-outcome approach to arrive at an overall picture as opposed to arriving at individual outcomes. This not only creates a more complete and practical picture for agencies but it also places the picture in a more understandable context. Other recommendations based on this case study were to start small at first, prioritize measures, borrow measures used by similar agencies, collect consistent data, share the information with other agencies for to improve communication and collaboration, and understand that the process is complex and difficult so agencies should seek to improve on the process over time (Milligan & Fridell, 2006).

When reviewing accountability structures, the Prince William County case study results revealed recommendations to help guide agencies in their development and implementation. A culture of integrity is crucial to effective accountability structures. Consistent measurement and regular monthly reporting were also found to be beneficial. Finally, combining outcomes to employee personnel evaluations both recognized employee's contribution to agency advancement and displays evidence of the process at work.

As a result of the case study, PERF found some general recommendations for further improvement of implementing a performance measurement system. First, goals should not be set too high, especially at the start. Education and training are equally important to the success of the system, as well as ensuring full participation from police administrators, also referred to as buy-in. Also, the implementation should be phased over an extended period of time to avoid overwhelming individuals and make a statement

that the system will become engrained in the agency's culture. Finally, a performance management system should avoid using the initial results as a justification for action; an agency-level performance measurement system should look at the big picture of the department and avoid overreaction to small, incremental changes (Milligan & Fridell, 2006).

Analyzing Basic Police Patrol Activities

Valuing officers, especially patrol officers, is not an easy task by police departments because an officer's value is very hard to fairly and accurately quantify due to the array of jobs and tasks officers complete, some of which are not recorded. This creates problems for agencies who attempt to fairly measure and evaluate their personnel. Herndon (2005) states that the key is to develop realistic measures that will demonstrate whether the officer is working and if the work the officer is engaging in is beneficial to the community. However, departments must avoid systems that mandate specific numbers as performance criteria, often referred to as quotas. However, realistic measures of patrol officers can still gauge an officer's productivity by analyzing certain activities related to patrolling.

Officer reports are powerful tools for police agencies that contain valuable pieces of information for performance measurement and data analysis. Officer's daily reports collect raw data for use in monthly productivity reports that provide useful performance measures. The information in daily reports is separated into two control areas, items the officer has no control over (calls for service) and items that the officer has complete control over (officer initiated activities). Through examining these two areas of patrol

officer functions, departments can compare officer productivity with their overall shift. The officer monthly report totals the officer's daily reports for each month for use in the monthly analysis. It is important for departments to maintain a strict uniform standard for compiling monthly reports. The monthly productivity report records officer's monthly activity for supervisors to review. Supervisors can make comparisons and identify the impacts activities have on patrol shifts. Over time, monthly reports will allow a broader picture of performance levels for an array of variables including shift time, day, month, weather, geographic area, and many others. However, because of the differences in variables, shift differences should not be compared for risk of biased, unfair, and inaccurate conclusions. Finally, annual reports reflect the most useful data for police administrators. Annual reports produce data for longer-term longitudinal analysis to provide insight to police administrators of useful performance measures (Herndon, 2005).

Measuring Police Performance in a Normative Framework

Moore and Braga (2004) identify the demand from citizens for a reliable measure of police performance but also argue that measuring police performance from a business mindset is incorrect and, instead, assert that political philosophy and the challenges of practical politics should lead the front for police performance measures. In general, police performance has been treated as a technical or managerial problem to be worked out through a combination of practical business methods (developing a "bottom line") or statistical methods (conducting program evaluations) (Moore & Braga, 2004). The

problem with these measures is that it is difficult to capture the value produced by police departments.

In a bottom line approach, measuring the financial costs of policing is easy; however, measuring the social benefits of the police is a complex process. The value of policing is not fully captured in crime statistics or operational measures (Moore & Braga, 2004). Moore and Braga (2004) see police performance measure in a different light and believe it is a normative and political problem. In order to develop standards for police performance, agencies must identify claims of good and bad, right and wrong, improving and failing. The important question to answer in developing police performance measures, therefore, is for citizens and elected representatives to determine what is intrinsically valuable or what communities place value on within the context of government police agencies. Moore and Braga (2004) argue that assessing police performance should be completed from the viewpoint of a 'Rawlsian citizen' who decides what values should be attached to a police department (Moore & Braga, 2004).

Constructing a police performance measure under the 'bottom line' approach attempts to measure the satisfaction of individual customers' who use, benefit from, or pay for the services of the police and they place value in those services through financial measures. The first issue this approach creates is the classification of a customer for a police department, where the department considers the customers desires in relation to satisfaction and accountability. For private companies 'bottom line' approaches to performance measurement, customer satisfaction is an established measure of a business' effectiveness. Customers for private businesses spend money on services and products

that are essential to the businesses survival and private businesses strive to satisfy their customers so customers continue to spend money. When we review the idea of customer satisfaction in terms of government police agencies, however, who the customer or customers are is not always clearly distinguishable. Police officer customers may be those who call for police assistance. The issue with this distinction is that individuals who call for police assistance may do so for any number of reasons and, many times, are intentionally hidden from the police. The tension between the individual caller's desire for police services and the social responsibility from the police create a conflict of interest that is not always in-line with customer satisfaction (Moore & Braga, 2004).

Furthermore, when police officers are on patrol, there is a strange terminology when responding to calls and returning to patrol. Offices who are responding to citizen calls are marked as 'out of service' and are usually instructed by their supervisors to resolve calls as quickly as possible so they may return to 'in service' to wait for another call. This raises an obvious question of who are officers 'in service' to if not customers? This dilemma between both the caller and society's interest in having the police respond and behave according to the request as well as being available to respond to other, arguably more important, community emergencies creates issue with viewing citizens as 'customers'. Moore and Braga (2004) contend that this dilemma raises the issue of customer satisfaction in policing and suggests that identifying citizens as 'clients' to be more appropriate. Satisfying clients is important to police, but is not the ultimate goal and does not disproportionately influence police officers (Moore & Braga, 2004).

Within the same framework of citizens as customers or clients, police agencies must answer to larger and more abstract constituencies that demand more broad police presence and accountability. Police managers often have to explain to communities while they would like to allocate more resources to protecting neighborhoods, there are other neighborhoods with greater needs because of more crime victimization. The issue police agencies face when answering to communities is often in their point of view or perspective. To every community, quality of life issues and crimes will be of upmost importance, even if other neighborhoods face worse conditions. These community perceptions place police in uncomfortable and controversial situations. Police agencies have to juggle satisfying individual citizens and neighborhoods while remaining accountable to their own employees and goals. Citizens can also occupy the role of owner or investor in their police departments. As owners and investors, they are interested in how the department is doing in satisfying individual clients and communities as well as building relationships to strengthen the future of the department. Citizens occupying this role are more interested in overall, longitudinal performance measures of their departments (Moore & Braga, 2004).

Another customer not yet discussed is the individuals who police officers come in contact with when arresting or issuing citations. Offenders are considerably different than ‘customers’ or ‘clients’ because of the differences in their interaction with the police and society. Police departments, then, are not simply in the business of providing services to clients but also are tasked with imposing duties and fulfilling legal obligations. So it is important for police performance measures to both consider service

to customers, communities, and encounters with offenders. An important feature of offender encounters as opposed to customer or client encounters is the goal of an offender encounter is not to make the offender happy; instead, the goal is to have the offender comply with the particular legal obligation that is being imposed. In the context of police performance measures, another customer exists that is considerably different from citizens, neighborhoods, and offenders. These customers are citizens who, through a complex and highly imperfect political process both authorize and finance the operations of police agencies. Performance measures for this customer rely on the entire constituency of the political geographic sector as well as complex issues and topics that exert political influence. Customer satisfaction in this regard relies on goals the community establishes that influence political agendas. For example, a community could decide that reducing corruption is just as important as reducing fear of crime or quality of life issues (Moore & Braga, 2004).

Moore and Braga (2004) developed six measures of police performance based on a normative framework that they feel are important dimensions of measures for communities. The first, reducing crime and criminal victimization, is, without a doubt, the single most important contribution the police can be expected to make in an effort to improve society's well-being. This measure is regarded so highly because society judges it to be very important. Two important issues arise when reducing crime and criminal victimization are measures within the 'bottom line' of policing framework. First, it is increasingly difficult to measure levels of crime and victimization and a dark figure of crime will most certainly always exist. Second, public and academic individuals believe

it is impractical to measure police performance based off levels of crime because the police have little ability to control crime. If this is true, then measuring the police based off a variable that they cannot control is an error in attributing any reductions or increases of crime to the police. It is unfair and ineffective for citizens to hold police accountable to crime statistics and it is fallacious for politicians to hold police administrators accountable for crime levels. Regardless of the factual impact the police have on crime rates, the issue of determining the value of policing only in terms of crime is that the police are beneficial for society in the vast amount of other contributions and services they provide along with addressing crime (Moore & Braga, 2004; Moore & Braga, 2003).

The second measure is holding offenders accountable for their actions. Even people who are skeptical of the police's impacts on crime understand and commend officer's efforts to enforce the law and call offenders to account for their actions. In this view, officers are measured for both proactively finding and arresting offenders as well as successfully building cases against offenders by way of evidence. The third dimension of police performance is reducing fear and enhancing security. While reducing crime and criminal victimization and calling offenders to account have some unknown figures, there is still ample evidence and data to review police performance. However, reducing fear and enhancing security is a much more qualitative measure since perceptions of crime and security are dynamic and hard to quantify. Nonetheless, the argument for improving security and reducing fear of crime are worthy goals of police agencies.

Enhancing the subjective sense of security is ultimately the purpose of police. Similarly, reducing fear can make an important and independent contribution to reducing

serious criminal victimization because reduced fear of crime enables informal, social controls to take over. Finally, reduced fear of crime lends to other benefits including increases in economic and social capital in particular neighborhoods. Arriving at the conclusion that reduced fear of crime and enhancing security is a relatively intuitive task while determining how to measure these values is, instead, a very difficult undertaking. The most agreed upon and practical method involves surveying the population and asking them about their levels of fear and their investment in self-defense efforts (Moore & Braga, 2004; Moore & Braga 2003).

The next dimension proposed by Moore and Braga (2004) is structuring the burden of defending against crime. This measure investigates what the quantity and quality of the police does to the overall distribution of the burden of defending against crime between the public and private sector. The police were created, in part, as a public entity to fairly enforce the laws for all citizens, especially those who could not afford to hire their own protection. Society should investigate the relationship between private security (gated communities, home security systems, and self-defense) and public security and determine where the line should be drawn. In assessing this dynamic, the public may also understand how much of their own protection is their responsibility and how much is the responsibility of the police.

The fifth dimension, the regulation of public spaces and traffic safety, encompasses police agencies somewhat overlooked role in traffic safety. Moore and Braga (2004) argue that traffic enforcement is valuable for police performance measurement in at least four ways. First, the safety of citizens is more threatened by

careless driving than by murderers or rapist. Second, traffic and parking enforcement activities provide police with the most exposure to the public as opposed to any other function of policing. Third, the police inevitably spend a considerable amount of time enforcing traffic and parking laws, therefore, measuring such a time and resource consuming activity is implied within a performance measurement system. Lastly, it is possible that there is a connection between traffic enforcement and success in reducing crime and apprehending offenders. There is a strong belief that it is traffic violations that often motivate police to stop citizens who turn out to be offenders for other, more serious violations (Moore & Braga, 2004; Moore & Braga 2003).

Finally, the last dimension of a performance measurement system is emergency medical and social services. The medical and social services police provide to individuals, especially those who are vulnerable and desperate are invaluable to society and should be measured to provide a picture of their impacts. These services often ease the pain and reduce the shock of citizens who have been victimized. While the goal of policing is to reduce crime, emergency medical and social services aid in lessening the consequences of those who suffer which is considered a value producing activity. Furthermore, it is impractical to assume that the police can eliminate victimization, so police medical and social services will always be needed. Also, police establish a connection between themselves and victims by providing medical and social services. These connections are invaluable and would not be created in other circumstances. They also lead to productive results in current cases as well as further cases and fit into a community policing framework (Moore & Braga, 2004; Moore & Braga 2003).

Considering these dimensions of police performance, Moore and Braga (2004) suggest the following steps be taken to pursue developing an appropriate performance measurement system. The first step in developing a performance measurement system is to make the distinction between the practical goals of the police and the moral values pursued by the police. Practical goals include reducing crime, enhancing security, and respectfully and courteously responding to citizens while moral values are things like fair treatment, accountable officers, transparency, and honesty. The next step is to separate the wishes of stakeholders and customers. Following the aforementioned issues of police department customers, the most important stakeholders in policing are the citizens. Citizens are the entity that provides the police with the authority and resources to perform their job. The approval or disapproval of citizens influences politicians, police administration, budgets, and other important factors of policing. Furthermore, citizen taxes are where police funding is provided. Since the citizens are the source of authority and existence for the police, it is the citizen's desires that should primarily influence police departments (Moore & Braga, 2004).

Next, distinguishing aggregate values from the quality of individual encounters is important for considering police performance. What this means is that emphasis should be placed on both aggregate data that is used as an overall, broad picture of police performance and individual encounters should be valued in the services individuals receive and their satisfaction with the police. The fourth step is to create an ordered list of values to be pursued through public policing. This list will set the foundation for police performance measurement because it will allow departments to link values to

measured results. The final step Moore and Braga (2004) suggest is focusing on the future by monitoring strategic changes and working relationships. More specifically, while there should be measures on current police performance, citizens should want the police to improve on their performance for the future. There should be measures that let citizens and police administrators know that they are doing their old jobs more efficiently and effectively and also are adapting to deal with new problems as they arise (Moore & Braga, 2004).

Using Data Driven Methods to Improve Police Performance

Police departments have evolved from the professional model of policing towards a strategy of community and problem-oriented policing and, with this evolution as well as current technological advancements, the traditional measures of police performance have become outdated and ineffective. Performance measurement systems based on response time, clearance, rates, and number of arrests do not offer a complete evaluation of police department performance or community needs. These measurement systems prevent police departments from moving towards more community oriented and problem-oriented efforts. However, departments have made strides in developing and implementing performance measurement systems. Specifically, Moore and Braga (2003) identify New York's Compstat system as a considerable development in efficient and relevant police measurement (Moore & Braga, 2003).

The reasons why departments should be concerned and involved in measuring their performance are threefold. First, it is important because police executives may have no choice of whether to do so. Citizens, mayors, city councils, and persistent interest

groups can demand for such measurements and, often, police budgets and livelihood depend on performance measures. Therefore, if police managers are forced into measuring performance, it is only logical that they should understand how to effectively measure and pursue high performance standards. Second, it is ethically and morally right to assess a public police department. It is a department's duty to use publicly trusted resources effectively. Finally, the third reason is that by evaluating police performance, police managers may be able to drive department performance to higher levels or shift the department's goals and strategy to be more effective. Once police executives understand the nature and importance of measuring performance, it is important for police departments to measure important principles of police performance. These values include reducing crime and victimization, calling offenders to account, reducing fear and enhancing security, ensuring civility in public spaces, efficient and fair use of public resources, using force and authority fairly, and providing quality services and maintaining citizen satisfaction (Moore and Braga, 2003).

It is not enough to simply identify the important values to measure. Police executives must carefully develop a performance measurement system that includes the following five features outlined by Moore and Braga (2003). First and most importantly, internal and external measures must be aligned. If citizens are demanding certain expectations and, internally, the department is not working to meet those wishes and is not measuring performance on them, the system will not be aligned. However, if internal and external measures are aligned, then a great deal of important will be placed on achieving the established goals. Second, the system must guide behavior to the internal

structure of the organization and to real consequences for police managers. More specifically, there has to be accountability within the organizations structure to a performance measurement system. Next, important parts of a performance measurement system are frequency of measures and speed of feedback to managers. Fourth, transparency and publicity of the reports created from the measures. If a police manager's expectations and performance are known to his subordinates, peers, and community, then the police leadership will be more inclined to achieve success. Finally, the extent to which the results of the measurement system are taken as definitive and strict liability is imposed on police managers as opposed to being just a conversation about improving performance should be stressed. More accountability linked to the results of the measurement system will coincide with more determination by police managers to achieve their goals (Moore & Braga, 2003).

Issues Related To Law Enforcement Strength

Scholars have used three theoretical frameworks to describe police agency sworn officer strength. First, rational public choice theory links variation in police strength to variables like crime rates and population which are believed to reflect the need for police services. Second, conflict theory refers to changes in police force by government bodies in response to growth of populations seen to be threatening to society. Finally, organizational theory holds that internal organizational factors influence the size of police agencies. These theories predict future police strength by reviewing previous police strength. However, as the literature has shown, police strength and performance measures are commonly developed with arbitrary and ineffective methods, thereby,

reducing the usefulness of these theories to understand or predict police strength (Koper, Maguire, & Moore, 2001).

Koper et al. (2001) found numerous factors that affect police strength. Most notably, they found that police growth in strength is fueled by increased crime rates but, surprisingly, reductions in crime rates have little to no effect on staffing (Koper et al., 2001). Other studies have duplicated these results in part by suggesting that crime rates have no short term effect on police strength, but changes in crime have long-term impacts on police force strength (Chamlin & Sanders, 2008). Instead of causing staffing reductions, decreased crime rates have little impact on the strength of the police. This may be caused by the political difficulty in justifying reductions in police strength. Additional factors impacting police staffing include grant money and the availability of qualified recruits. Police agencies in both growing and shrinking communities indicated that the availability of grant money was a top factor in determining police strength. The availability of qualified recruits is contingent on the state of the economy and the funding available to recruits. Strong economic times provide police departments with more resources to hire recruits but also may reduce the applicant pool because qualified recruits are seeking higher paying private sector jobs. Alternatively, weak economic times and fiscal constraints of governments are linked with reductions in police staffing but may offer larger applicant pools because possible recruits are seeking more reliable public sector jobs (Koper et al., 2001).

Implications of Literature

Measuring police performance is no easy task. Prompted by the O. W. Wilson's call for increased police professionalism, communities, researchers, and police administrators have attempted to establish effective and continuous police performance measures, whether voluntarily or reluctantly. As a result, numerous methods of police performance are used across the country to assess police performance in response to community demand or for police administrator accountability. While this push for police performance measurement is admirable, the vast majority of methods used by law enforcement agencies are perceived to be inadequate and misleading. The Police Executive Research Forum and International City/Council Management Association both provide detailed and practical methods for assessing police performance.

This review has shown strong recommendations for using multiple variables in assessing police performance and basing those assessments off accurate data and community requests. This review has also indicated the difficulties of performing performance reviews for departments of all sizes. The next chapters will incorporate the current economic and budgetary standing of U.S. police departments according to PERF's 2013 report. This will allow for the Cape Girardeau Police Department to compare its fiscal budget and resources in a broader context to the rest of the country. Furthermore, the recommendations for assessing police performance and improving police staffing and resource allocation will be used to develop a needs and workplace analysis for the Department. Specifically, the recommendations of PERF and the IACP

for performance assessment and patrol strength will be relied on heavily to establish goals for the Department to work towards.

CHAPTER 3

Description of Internship

This internship project was first introduced in September 2013 Cape Girardeau Police Department Chief Wes Blair contacted Carl Kinnison, previous Chief of Police and instructor at Southeast Missouri State University, proposing this topic as an opportunity for a criminal justice graduate student. After receiving information about this project, I briefly met Mr. Kinnison and discussed the details and goals of this project. Following my meeting with Mr. Kinnison, I met with Dr. Diana Bruns, Criminal Justice and Sociology Chair, to briefly discuss and finalize this internship opportunity. In October 2013, Mr. Kinnison and I met with Chief Blair for 90 minutes to discuss the parameters, timeline, and goals of the internship project. In the beginning of December 2013, I met with Chief Blair for a short time to finalize my internship schedule to work Thursdays and Fridays of every week.

On December 19 I began working at the Department. Upon arrival, Chief Blair led me through the Department to introduce me to the officers and command staff and explained my role and duties for the upcoming months. Chief Blair also introduced me to key individuals within the Department who I would rely on for the crucial information and data I would need for this project. The tour and subsequent meetings with individuals from the Department lasted approximately two hours. On December 20th, I began reviewing the history of the Department through the Department's website. Additionally, I began researching and compiling literature on conducting a Department employment assessment. In January 2014, I continued to review the Department's

history through the website and the *Commemorative History Book* (Hetzel, 2000) which I obtained from Chief Blair. Additionally, I spent the next few days researching the history of Cape Girardeau County and obtaining population data from the United States Census Bureau and criminal data from the Federal Bureau of Investigations Uniform Crime Report (UCR).

With this information, I began writing the population and crime data and history of the Department and City found in Chapter 1. After creating a framework of the geographic area, community, and history of the Cape Girardeau Police Department, I moved on to the current structure of the Department. In order to present the current Department structure accurately, I relied on the previous Cape Police Department Yearly Annual Reports to provide a more recent history and organization of the Department as well as provide the most recent data and changes in the Department. I also took advantage of the *Comprehensive Evaluation of the Cape Girardeau, Missouri Police Department Final Report* (September, 2001) conducted by the Police Executive Research Forum. This report served as the most current assessment of the department to review and utilize. The PERF evaluation of the Department extensively reviewed the history, current issues, management, policies and procedures, and organization of the Department. The PERF evaluation was very comprehensive; therefore, I focused on the sections of the evaluation that most closely aligned with the evaluation I would conduct. Also, the PERF evaluation was completed by a team of experienced and trained evaluators with considerably more resources at their disposal. Therefore, the PERF evaluation presented a number of limitations for my assessment if I decided to implement them. Nonetheless,

this PERF evaluation supplemented the literature in chapter 2 by the unique and specific focus on the Cape Girardeau Police Department.

PERF's evaluation, although valuable, was considerably dated in terms of using it as a framework for my assessment. Therefore, I met with Chief Blair to discuss the current state of the Department to fill in the gaps from the PERF evaluation and the *Commemorative History Book* (Hetzel, 2000). Drawing from Chief Blair's institutional knowledge, the Department's 2012 Annual Report and the most recent Census and UCR data, I described the Department's current organization within the city and within the Department's historical context. After completing Chapter 1, I continued researching literature involving department assessments, department resource allocation, and measuring police performance. I used academic and scholarly databases such as ProQuest and EBSCOHost as well as government and private resources. My literature findings included academic journals covering topics such as developing effective police performance measures, the economic impacts on policing, how to efficiently allocate resources, and how to use data driven methods to analyze police agencies.

Additionally, I relied on government reports from organizations including the Police Executive Research Forum (PERF), Federal Bureau of Investigations Law Enforcement Bulletin, International City/County Manages Association (ICMA), and U.S. Department of Justice Community Oriented Policing Services (COPS). This research was not only necessary to complete the chapter 2 literature review but it was instrumental in developing my understanding of the variety of methods, complexity, and challenges of accurately assessing a police department, the rationale for each method, and the results of

each method in a national framework within the United States criminal justice system. The previous assessments completed by PERF, ICMA, and COPS are instrumental resources to base my assessment of the Cape Girardeau Police Department. During this time, I also took the opportunity to attend a command staff meeting for an hour on Monday, February 17, to experience the collaboration and weekly events that the command staff discussed and organized within the Department and the Cape Girardeau community.

After completing the Chapter 2 literature review, I developed an operational list from the literature detailing the required data for my assessment. In order to accurately and objectively conduct a workplace analysis of the department, I incorporated a variety of methods, rationale, conclusions, and ways to implement the results. I met with Officer Darin Hickey on March 13th to discuss the data I needed for the assessment. Officer Hickey demonstrated the capabilities of the Department's computer aided dispatch system (CAD) and trained me on navigating within the CAD system. We then discussed the methods for providing me with access to the CAD system data while at the Department as well as off-site using the virtual private network (VPN) installed on officer's mobile car laptops. I met with Officer Hickey on March 27th and April 3rd to install the VPN program and gain access to the CAD system. The CAD system allows for incident searches based on factors such as case number, incident number, start date and time, end date and time, name, location, etc.

Based on the operational list I developed, the data necessary to complete this assessment was collected from two 24-hour, one-week timeframes in the beginning of

winter (December 21st, 2013) and summer (June 21st, 2013). Using these two timeframes, my dataset has approximately 2,200 calls for service. Outside of the CAD system, I also used the Department's June and December 2013 schedule to determine how many actual officers were scheduled during each 12 hour shift, taking into account vacation, sick time, holiday, training, and other officer absences. Additionally, the FBI UCR was accessed to provide reported crime data for the city of Cape Girardeau including number of violent crimes and number of property crimes. Finally, the population and number of Cape Girardeau Police Department sworn officers were included with the UCR crime data.

I exported all the datasets into an Excel spreadsheet to further delineate the CAD calls for service into the data I needed to conduct my analysis. The Excel data from the CAD system consisted of the date and time the call was created in day/month/year hour/minute/second format, incident number, case number, status, location, disposition, type, and date and time the call was closed in day/month/year hour/minute/second format. In order for the Excel data to match my desired variables in SPSS, I had to restructure some of the data output by the CAD system. This included separating the date the call was created from the time the call was created, and removing case number location and disposition. Additionally, new columns were created that used different pieces of the CAD data. The first, named 'time spent handling calls', subtracted the dispatched time and the time the call was closed. The second was named 'season' and simply indicated the season the call occurred in, winter (December) or summer (June). The other columns were 'day/night shift' and 'weekday/weekend' which used the date and dispatched time

data to respectively indicate the time of day and time of week the call occurred. Finally, the 'type of crime' column listed each incident by the crime that was called into the police dispatch center. In order to organize this data, I categorized the call types by category one and category two calls. Category one calls included murder, robbery, burglary, rape, assault, arson, domestic violence, and auto theft. Category two calls covered the remaining crime types including, but not limited to, suspicious person, theft, property damage, fraud, traffic, disorderly conduct, etc.

Once the data was arranged, I organized the variables in SPSS according to the data in Excel. I established 10 variables: 'incident number', 'date created', 'dispatched time', 'dispatched time in 24-hour format', 'time spent', 'call category', 'day/night shift', 'weekday/weekend shift', 'season', 'average patrol strength', and 'day of week'. The total number of calls for service within SPSS totaled 2,256 (two calls for service were removed for invalid data). In reviewing the goals of this assessment and the literature's recommendations for ways to assess a department, the variables within SPSS allow for a range of different statistical analysis to be run that will meet the needs of this assessment. On April 11th, I met with Chief Blair to review the data I retrieved from the CAD system and the format I input it into SPSS. After discussing the type of statistical test to run and the data I would be producing, Chief Blair provided recommendations for other tests and comparisons to make as well as insight into further extrapolating the results.

The data was filtered using multiple methods including season, shift, weekday or weekend, date, call category, day of week, and hourly calls for service. Filtering the data allowed for the results to be specifically tailored, providing the type of data necessary to

gauge whether the department's resources are allocated effectively and if the department is under or overstaffed. In order to calculate the workload per hour for each day, I used the 'select case' function of SPSS to limit the cases to a date, time, and day or night specification. This allowed me to determine the number of calls per hour as well as the time spent per hour on each call.

The results of each of these tests, approximately 384 hourly increments, were transferred into an Excel spreadsheet where I listed the number of calls per hour and converted the time spent from hour:minute:second (h:mm:ss) to decimal format. Then, I divided the total time spent answering calls by .6 for the 'Rule of 60' calculation. Next, I took the result of time spent divided by .6 and added an additional 25% to that calculation to account for time off, sick leave, vacation, training and other leave. At the end of each day, I calculated the average officers needed based on the 'Rule of 60' calculation and the number of calls. I further calculated the average number of officers needed and calls for the whole two week sample as well as for the summer sample and winter sample.

Next, I ran a number of tests using SPSS to develop descriptive statistics and correlations of the data set. I developed descriptive frequency statistics on calls for service by day and night shifts and season, and frequencies of calls for service by day and night shift, season, and weekday and weekend. I also conducted a correlation test using the variables dispatched time, time spent, UCR crime category, average patrol strength, date, day and night shift, weekday and weekend, and season to determine if any significant correlations were found. Chapter 4 will discuss the findings of these tests and analysis, consider the implications for the Cape Girardeau Police Department and City of

Cape Girardeau, and make recommendations based off the literature review and analysis as to how the City of Cape Girardeau and the police department should move forward to provide their community with the services they require.

CHAPTER 4: Discussion and Conclusion

Findings

Table 1 describes crime statistics for Cape Girardeau City reported to the FBI's Uniform Crime Report. Table 2 presents the findings of the Cape Girardeau Police Department assessment using data from their CAD system. I discuss the data from the UCR first and then proceed to the findings of the Department assessment.

Table 1 shows the amount of variation between crimes committed in Cape Girardeau. Only 8.4% of all crimes committed in 2012 were violent crimes while the vast majority were property crimes. Compared with Saint Louis, Missouri, Cape Girardeau experiences much lower crimes per 10,000 population. When measuring violent and property crimes per 10,000, Saint Louis rates are 177.65 and 690.22 respectively. While Saint Louis's population, at 318,677, is nearly 10 times larger than Cape Girardeau's, it is still worth noting that Cape Girardeau crime rates are generally much lower. However, when compared to a more similar city such as Jefferson City, the capital of Missouri, Cape Girardeau's property crime rates are significantly higher; Jefferson City's rates are only 365.33 crimes per 10,000. Jefferson City's violent crime rates remain nearly equal to Cape Girardeau's at 60.12 per 10,000. Additionally, when comparing these crime statistics with the study of 62 agencies conducted by the ICMA, Cape Girardeau crime statistics fit somewhere in the middle of their findings. Therefore, while Cape Girardeau does not experience the same crime rates as much larger populated cities, it does boast considerable differences when compared to similar sized cities (Uniform Crime Report, 2013a).

Table 1: City of Cape Girardeau Crime Statistics

Variable Descriptives	Total
Population	38,474
Officers per capita	0.00198
Officers per 10,000 population	19.75
Index crimes per 10,000	746.22
Violent crime per 10,000	63.16
Property crime per 10,000	683.06
Calls for service (CFS) per 1000	1397.91

Table 2 presents the data retrieved and analyzed from the Cape Girardeau Police Department's CAD system. When the patrol strength of the department was measured for June 21st to June 28th and December 21st to December 28th, the highest numbers of officers on patrol were eight while the lowest were five. Calls for service time per hour varied greatly depending on a number of factors that are explained below. The lowest call for service was 0 seconds while the longest call for service lasted 13:01:11 (h:mm:ss). The calls under 10 seconds were mostly 911 hang up calls or system tests. The longest calls, on the other hand, included special assignments, property discovery, funeral escorts, and warrant arrests. Similarly, the calls for service per hour varied from 2.85 calls to 7.81 calls. Analysis of this data revealed that, in general, the more calls for service that occurred within an hour were positively correlated to the time spent handling calls for service and vice versa.

The CFS findings in Table 2 were also separated by summer and winter entries. From Table 2, it appears that that the summer months experience both a much greater call volume and more time spent on calls than in the winter months. The officers needed for the summer months remains very close to the number of officers actually staffed by the

Department while the winter months appear to require fewer officers relative to the call workload. When the category of calls were measured, Category 2 calls such as theft, property damage, and disorderly conduct were much more common than Category 1 calls such as murder, assault, and robbery. This trend is found throughout national, state, and city crime rates and was found in the ICMA analysis. In the same way that summer had more calls for service than winter, there were more Category 1 and 2 calls for the summer than the winter.

Further measurements indicated that for both the summer and winter, approximately two-thirds of the calls for service were during the day shift and only one-third of the calls were during the night shift. The peak call volumes occurred in the summer between 9 A.M. and 2 P.M. and during the winter, the peak call volume was reached during 9 A.M. and between 1-3 P.M. When measuring by the type of day, Friday received the most calls in the summer and Saturday received the most calls in the winter. If this data can be generalized for the summer and winter seasons, the assumptions would be that the summer months receive more calls for service and the most calls occur on Friday.

When the 'Rule of 60' calculations were measured to determine the workload and officers needed for each hourly shift increment, it varied substantially depending on the number of calls and time spent on each call. However, the measurements did reveal that a total of 81 hourly shifts, or 21.09% of shifts in June and December required eight or more officers per shift. The most officers required within an hourly shift was 33 officers responding to 19 calls during that hour. Specifically in the summer and winter weekly

samples, the summer requires more officers than the winter. The number of summer shifts requiring eight or more officers was 48, or 25.26%, while the winter had 33 shifts, or 17.37% of shifts requiring eight or more officers. Considering the 'Rule of 60' requirements for patrol staffing, the results show the patrol staff makes up only 52.63% of the department and only 9.8% of calls for service required more than 60 minutes to complete.

Table 2: Police Staffing Data Analysis*

Variable Descriptives	Total	Mean	Minimum	Maximum
Avg. number of patrol officers		7	5	8
Avg. CFS time		0:26:57	0:00:00	13:01:11
Total officers needed per workload		**6**	**3**	**8**
Total CFS per hour		5.94	2.64	8.77
Summer officers needed per workload		**6**	**5**	**8**
Summer CFS per hour		**7.33**	**5.08**	**8.77**
Winter officers needed per workload		**5**	**3**	**7**
Winter CFS per hour		**4.99**	**2.64**	**6.14**
Total Category 1 index crimes	152			
Total Category 2 index crimes	2103			
Summer Category 1 index crimes	88			
Summer Category 2 index crimes	1254			
Winter Category 1 index crimes	64			
Winter Category 2 index crimes	849			
Time spent on Category 1 CFS		0:32:45	0:00:44	3:21:38
Time spent on Category 2 CFS		0:25:50	0:00:00	13:03:11
Total number of shifts needing more than 8 officers	81			
Total percent of shifts needing more than 8 officers	21.09%			
Number of Summer shifts needing more than 8 officers	48			
Percent of Summer shifts needing more than 8 officers	25.26%			
Number Winter of shifts needing more than 8 officers	33			
Percent Winter of shifts needing more than 8 officers	17.37%			
Patrol Percent of Department	**52.63%**			

*(The data shown in this table relates to time periods of June 21st to June 28th and December 21st to December 28th, 2014)

Discussion

Following the ICMA guidelines for assessing a police department, this assessment utilized the actual workload approach in determining the demand on police services and management of police resources within the City of Cape Girardeau. In comparing Cape Girardeau with other cities, it should come as no surprise that Cape Girardeau exhibits similar types of crimes and issues within its community. However, certain features of the city such as operating as a commuter hub for as many as 90,000 travelers, having direct access to the Bill Emerson Bridge connecting Illinois and Missouri as well as close proximity to Arkansas and Tennessee, providing for Southeast Missouri State University and its students, and the substantial retirement population make for a very unique community to police effectively.

The findings in Table 1 show that compared with other cities, Cape Girardeau experiences similar levels of crime. However, Cape Girardeau crime rates are much more analogous with Saint Louis than Jefferson City for example. Jefferson City has a larger population but experienced nearly 1,000 fewer crimes than Cape Girardeau in 2012. Surprisingly, however, Jefferson City employs approximately 10 more officers than Cape Girardeau. While comparisons between Cape Girardeau and Saint Louis are problematic, it should be concerning to any Cape Girardeau resident that Saint Louis and Cape Girardeau are nearly equal in property crimes per 10,000 while Saint Louis employs over double the amount of officers per 10,000.

The findings in Table 2 are the result of the data pulled from the Department's CAD system and the tests that were completed based off that data. The average number of patrol officers represents the actual number of officers working patrol on the day and night shifts during the two sample time periods according to the Department's archived schedules. When reviewing the measurements for workload, the data represents the total number of officers required to meet the workload demands of the department while maintaining a 25% increase in patrol staffing to account for officer leave. If we consider the mean number of officers needed for patrol, the two sample time periods suggest that patrol shifts were adequately staffed to handle the call volume. Similarly for summer and winter, the average number of patrol officers met the workload needs of the patrol shifts. This was also the case for the minimum and maximum number of officers needed per workload; however, simply matching minimum staffing and officers needed per the workload would be incorrect since the staffing was reliant on officer leave and not the workload demand. For example, at the highest call volume and workload during the summer, there were 19 calls for service handled by seven officers when the workload calculations required 33 officers.

Considerations should be taken when interpreting the information regarding workload in Table 2 for multiple reasons. The first, which will be discussed later in limitations, is that the data does not accurately reflect the actual workload of the department. It will be argued that these results represent the minimum workload the patrol division handles. Second, hourly workload data should not be taken as an absolute for officers needed to handle the call volume, but should be considered in the context of

the time of day, type of calls, and within a broader scope when making staffing decisions. Next, as mentioned in the literature review, police officer duties are not simply to respond to calls. Instead, communities demand a considerable number of responsibilities from the police. The issue that should be raised is not that it appears that the average number of patrol officers is within the range of the required officers based on the workload because, as stated, it is not the entire picture. Instead, the issue that should be raised is how often the workload exceeded the number of patrol officers. Community members rarely would be upset if Departments were so well staffed that they could respond to a call within seconds; however, if an individual is under attack and it takes an officer several minutes to respond because they are only meeting the workload staffing, the community would express disapproval. Along the same lines, officers have a multitude of other activities they can perform in the community aside from answering calls such as writing reports, assisting traffic units, engaging in community oriented or problem solving policing strategies, and reserving time for emergency situations.

Using the 'Rule of 60' approach presents the same mentality as mentioned above. The 'Rule of 60' approach holds that if officers exceed the 60% workload saturation index, their mindset transitions from proactive behavior to reactive behavior. In reviewing Table 2, the 60% saturation index was exceeded 81 times, or 21,% of the time during the sample timeframes. As previously mentioned, the summer months received more calls for service and more crimes; therefore, it should be expected that the summer months also experienced higher instances of exceeding the saturation index when compared with the winter months. Additionally, 'Rule of 60' states that calls should not

exceed 60 minutes; however, during June and December, 9.8% of calls for service exceeded this time limit. Finally, the 'Rule of 60' suggests that 60% of a police department's sworn officer staff be assigned to patrol. In the Cape Girardeau Police Department, the patrol percentage is only 52.63%. This would require an additional six officers transferred to patrol to achieve the 60% patrol threshold. If officers were hired, then the Department would have to provide additional officers to patrol in order to meet the 60% threshold.

Limitations

This assessment presented numerous limitations that should be considered when analyzing the results. The first limitation is the type of data and accuracy of data used. The CAD system relies first on the accuracy of the Cape Girardeau dispatchers to correctly code calls for service and record the time spent by the officers. In at least two cases, the dispatchers made errors in the time an officer spent on a call. Other errors may exist within the timeframes of data extracted from the CAD system that are impossible to determine. Additionally, the CAD system output presented data that I did not want to be included in this analysis. This type of data included calls for service where no time elapsed which was coded as 9-11 hang-ups and system tests as well as patrol officers working on special assignments or assisting other agencies which skewed the data because these calls consumed a large amount of time. This was not determined harmful to the results of the assessment until I was too committed and rooted in the data to be able to change it.

The CAD system itself also presented numerous limitations, some more serious than others. First, it was difficult to extract the necessary data from the CAD system because there was no systematic function to output the data. Therefore, I had to copy and paste each calls for service page into Excel for each time frame, a very archaic process. This repetitious method could have produced errors in the data. More importantly, though, was the inaccuracy of the data due to the CAD system outputs. The calls for service copied to Excel do not include crucial data regarding the number of additional officers responding to a call and the time each spent on that call. Within the CAD system, it is possible to extract this information by clicking on each incident, counting the number of officers who responded to the call and calculating the time each officer spent. This, however, would be impossible for me to accomplish within the time frame of this assessment.

The consequences of this particular limitation are challenging. Without having the data on how many officers responded to a call and how long they assisted with a call, the results of this assessment are considerably underestimated. Consider, for example, that only 20% of the calls for service result in two officers responding and spending equal time on the call. The required average number of officers for June 21st alone would increase from seven to nine officers. Consequently, it should be apparent that the results presented in Table 2 represent the minimum workload requirements only. If Cape Girardeau wishes to consider its staffing of the patrol unit, the overwhelming conclusion should be that patrol officers are understaffed.

Finally, the third limitation again reflects the CAD system data output. The location of each call for service is provided; however, there are no indications of which of the four zones the call for service originated. While this issue could be resolved by reviewing each location in the CAD system and assigning a zone number, I did not have the time or resources to consider this an option. If the CAD system did output the zone number, this would have allowed for considerably more statistical tests, results, discussion, and implications as to whether the department is adequately staffed, adequately assigns department resources, and, most importantly, appropriately zones off each section of the city for patrol functions.

Implications and Recommendations

The findings and discussion of this assessment provide ample reasons to assume that the Cape Girardeau Police Department patrol units are understaffed. First and foremost, the Department does not fall within the 60% recommendation for patrol assignment. Considering whether to reallocate officers or hire new officers, reallocating officers would undoubtedly create understaffing issues elsewhere in the Department. However, adding officers will require further consideration of the 60% recommendation as adding officers will increase the overall size of the Department. However, when comparing the Cape Girardeau Police Department with the Jefferson City Police Department which experiences much lower crime rates, Jefferson City Police Department employs 11 more sworn officers. Additionally, the Department should consider staggering shifts to accommodate for the increases in crime during the peak hours when calls for service increase.

Looking further into the patrol unit staffing and the 'Rule of 60' workload calculations, at the very least 21.09% of patrol workload during June and December timeframes were understaffed. Within the sample time frames there were 152 category one calls for service. Category one calls, in summary, were calls for serious violent or property crimes including domestic disturbance, robbery, burglary, assault, and shootings. It would be very appropriate to assume that the Department assigned two officers to these calls for service because of the dangerous nature for both the officers and those involved. Based on the data, the average amount of time spent on a category one call was approximately 30 minutes by one officer. Thus, the average amount of time per category one crimes would increase to at 60 minutes. As with the previous example of increasing the amount of workload by 20%, increasing the category one time spent per CFS serves as yet another example of the inaccuracies in Table 2 caused by the CAD data. Incorporating this limitation into the workload calculations and number of patrol officers required per shift, the Department and city must seriously consider the impacts of the lack of patrol staffing within the city, community, and for officer safety.

The limitations of the CAD systems output presents an opportunity for the Department to seriously consider investing in improved CAD software or at least incorporating modifications to the current software. Within PERF, ICMA, and IACP's recommendations for assessing police agencies, this Department is collecting the necessary data to perform the assessment. However, the capabilities for analyzing and interpreting the data are not present. This issue is undoubtedly frustrating for the Department, city leaders, and community because the Department is recording the

necessary information but it has no way of providing feedback for assessment and transparency purposes. Furthermore, finding improved CAD software will save considerable time and effort if and when the Department decides to conduct an assessment of this kind in the future. If the Department invested in software that provided better outputs, statistical tests and measurements, and extracting functions, it could provide these types of assessments quicker, easier, cheaper, and even more often.

Also, the Department should consider incorporating officer daily and monthly productivity reports. Historically these reports were cumbersome, difficult to complete on the job, and inaccurate. However, with the advent of technologically advanced patrol cars, daily productivity reporting software would allow for officers to complete reports with only a few clicks of a button. This would benefit the department on multiple fronts. Officers would be able to review their own productivity reports for personal improvement. Supervisors would be able to use productivity reporting software to run monthly productivity reports for immediate feedback of the previous month's activity. Finally, coupled with an improved CAD system, officer productivity reports would present a much better overall picture of officer workload by incorporating self-initiated activities as well as a system to double check the accuracy of the CAD system and dispatcher entries.

Finally, the CAD system and officer daily productivity reports only provide quantitative data for the department to use in its assessment of its performance. I would also recommend incorporating electronic and paper surveys to core community

stakeholders to expand on the assessment approach of the Department, encourage community involvement, and provide more transparency with the community. The surveys would provide the Department with unobtainable knowledge into crimes that are not reported to the Department as well as provide a sense of security and approval of the department that calls for service and officer productivity reports cannot deliver. Additionally, the Department should consider readdressing the city zones. In 2001 PERF indicated the officer workload was not evenly distributed between the four zones, and it would be incorrect to assume that has changed. Although I was not able to review the four zones in this assessment, it should be a top priority for the city and Department to reevaluate the city zoning because of the changes that have occurred within the city, and the needs of the city and Department.

Conclusion

This assessment and analysis for the Cape Girardeau Police Department required research, critical thinking, collaborative efforts, confidential material, access to the inner workings of a police department, and comprehension of national standards to accurately and effectively gauge the performance of a police department. This opportunity provided me with institutional knowledge on how to determine best practices for a police agency's patrol unit, and the complications and complexities of defining what police services are and who police serve within the community. The literature over this topic was abundant with comprehensive and complex philosophies regarding the goals and duties of police agencies. It became apparent to me that the vast majority of individuals do not comprehend the complexities of determining whether a police agency is staffed correctly,

allocates resources correctly, or performs its duties effectively. I was extremely fortunate to obtain this opportunity to develop and conduct an assessment of the Cape Girardeau Police Department and make recommendations on ways I believe the Department could improve the services it provides to the city.

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