Providing Efficient Police Services:

A Cost-Benefit Analysis

Serdar Kenan Gul and Cemil Dogutas

ABSTRACT

This case study evaluates and compares several alternatives for increasing efficiency in the Kent State University (KSU) Police Department in Ohio, USA by using Bardach's Eightfold Path Model. The KSU Police Department provides money escort services despite the recent decrease in the number of personnel allocated to routine police services. The community expects the campus police to be more visible and respond to calls for service more swiftly. In order to increase efficiency in terms of visibility and rapid response on campus, this study recommends contracting out the money escort services to a private company and redeploy police officers to foot patrol and community policing activities on campus.

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Introduction

This case study evaluates and compares several alternatives for increasing efficiency in the Kent State University (KSU) Police Department in Ohio, USA by using Bardach's (2004) Eightfold Path Model. This model includes the following steps: (1) define problem, (2) assemble evidence, (3) construct alternatives, (4) select criteria, (5) project outcomes, (6) confront tradeoffs, (7) decide, (8) tell story. By using this model, this study makes a cost-benefit analysis of the police services at KSU Police Department. Finally, this case study provides recommendations in order to increase efficiency at the department.

1. Problem Definition

There are fewer sworn police officers in the Kent State University (KSU) Police Department to do basic and daily jobs such as patrol services and responding to calls in spite of the increase in the number of KSU students in the last few years. Table 1 presents the number of students at KSU from 2001 to 2004. It shows that the number of the students at KSU has been increasing over the years. There are 24,347 students in 2004.

Table 1: The Number of Students at KSU from 2001 to 2004

	2001	*2002*	*2003*	*2004*
Student Population at Kent State University	22,828	23,504	24,242	24,347

Source: *Kent State University Student Profile.*

In terms of the ratio of deployment (the number of officer/population), the KSU Police Department is under marginal deployment standards. The national average is 2.4 officers per 1,000 students[1]. According to the National Research Council (2004), only at this margin the police are effective in controlling crime. Table 2 presents the ratio of officer per 1000 students in some of the universities in Ohio. According to this table, the University of Cincinnati has the highest ratio two (2) of officer per 1000 students. As can be seen from the Table 2, the KSU has the lowest rate of 1.06 among those universities.

Table 2: The Ratio of Officer per 1000 Students in Some of the Universities in Ohio

UNIVERSITIES	Number of police officers	Student Numbers	Student Numbers per one officer	Officer per 1000 students
Youngstown State University	21	13,000	619	1.62
Kent State University	**26**	**24,300**	**935**	**1.06**
Bowling Green State University	23	18,500	804	1.24
University of Cincinnati	60	30,000	500	2

Source: The information about the number of students is taken from NCES (National Center for Education Statistics); retrieved from http://www.nces.ed.gov/ipeds/cool/index.asp. The information about the number of police officers is taken from FBI 2003 uniform crime report; retrieved from http://www.fbi.gov/ucr/cius_03/pdf/03sec6.pdf

Improved allocation of personnel not only decreases response time to in-progress calls but also enhances officer safety[2]. Most of the expectations from the KSU Police Department, such as more visibility and rapid response time, are parallel to the goals and objectives of the police department as well. "The Kent State University Police Services is committed to the development and maintenance of a safe and peaceful campus environment through the application of the community

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[1] U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, Campus Law Enforcement Agencies, 1995,December 1996, NCJ 161137.
[2] Retrieved on November 20, 2004 from http://www.ci.larkspur.ca.us/3069-FBINAA_rpt.pdf

policing philosophy, fairness, and integrity"[3]. In addition, the KSU Police Department's goal for Fiscal Year 2004-2005 is to enhance communication with students through residence halls meetings, personal contacts with various student organizations, and foot patrol. Community policing philosophy requires foot patrol, bike patrol, more communication with the community, etc. It is very difficult to reach these goals with limited number of officers in the department.

At present, the KSU Police Department deploys only three officers per shift. Since the department does not have enough officers, they are not able to provide bike patrol service, which was highly appreciated by the community since it allows immediate access. Response time increased along with the demand for service from the department in the recent years in terms of reported incidents and total services provided. There is a 43% increase (5423 to 7742) in the number of total services provided and 35 % increase (6385 to 8643) in total reported incidents in the year 2004 when compared to the figures of previous year (Fiscal Year Report for 2003-2004).

The Kent State University Police Department has been struggling with budget cuts, which resulted in loosing of five officers since 2002. The police department had thirty-one sworn police officers two and a half years ago[4]. Currently, the department has twenty-six sworn police officers, which indicates a significant decrease. The department was told by the university administration that they could not expect any increase in the budget to hire new officers. As a result, the department is striving to decrease the impact of having fewer officers in such a way that the community the department is serving will not be as greatly affected.

Therefore, the department had to change its policy on responding to all calls, irrespective of the nature of the call, and prioritize them. The non-urgent calls have to wait during the peak times, and only urgent calls are responded when there is crime in progress. The community has to wait longer to file a report or the complainants have to come to the police department. Another change is that the department becomes more selective for granting vacation to its officers and

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[3] The mission statement of Kent State University Police, KSU Fiscal Year 2003-2004 Report.
[4] The information about the background of KSU Police Department is composed based on the personal interview with Chief John Peach held on 11.09.2004 at 02:00 p.m.

reduces the training for police officers. These have been the primary results of having fewer officers in the department.

The department has also gone through a self-assessment[5] in order to find out the expectations and perceptions of the community towards the police department. This included assessing what the department has been doing, what limitations the department has, and what changes must be made because of the reduced officers in the department that will minimize the negative impact.

One of the basic services provided by the KSU Police Department is money escort services. Everyday, two police officers from the KSU Police Department take Bursar personnel along with the money from the Bursar Office to a local bank and wait until the transaction is finished. They then take the Bursar personnel back to the office. This takes about an hour. It should be noted that everyday there are three sworn officers that are on duty responsible for answering calls. Three days a week a police officer goes through all the offices at KSU (that has previously requested the officer to come and pick up packages), gathers the packages, and takes them to the Bursars Office, which takes approximately two hours. While the total number of money escort requests in 2003 was 1337, the total number of money escort requests in 2004 so far is 1413. As a result, the total hours spent by sworn officers for this service is 832, and this costs the department $26,905 annually.

Weimer and Vining (2003) define public goods as an economic good which non-rivalrous in consumption or non-excludable in use, or both. We can say that policing and security is a pure public good, which is both non-rivalrous in consumption and non-excludable in use. This means that all citizens can benefit from the police service without reducing the benefits of others and it is impossible to prevent people from enjoying the benefits of this good. However, this very important public good supplied by the police department is under-supplied and the identified market failure in this situation is under-supply of a pure public good. This public good is also "congested" by these other duties (money escort, etc.), which hurts the delivery of public safety.

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[5] Strategic Planning 08.07.2003 by Dr. James Tinnin Director and Jeremy Tawney, Graduate Assistant.

Statutorily, providing money escort service is not part of the identified duties[6] of the university police department. However, the department cannot reject such requests coming from the university administration even if it creates inefficiencies in providing basic police services. This is an indication of bureaucratic supply failure since the agency is responding to the principal's requests even though the response is not an identified duty. Weimer and Vining (2003) suggest privatization as an option for bureaucratic supply problems. In police services, some aspects of services that are not related to crime control initiatives can be contracted out. Osborne and Gaebler (1992) argue that public organizations should be driven by their mission, not by their rules and their budgets. Rules on operations, budgets, personnel, procurement, and accounting are embedded in rule-driven systems, which result in wasted time and inefficiency in government.

2. Assemble Some Evidence

Supplying police services that meet community needs and demands within budgetary limitations is a main problem that faces public administrators, police officials, and the public. One response to those needs and demands has been greater public-private sector cooperation in recent years in securing and maintaining public safety. With the growth of the private sector industry as an aide and at times as an alternative to traditional ways of providing police services, such cooperation becomes more and more important (Chaiken and Chaiken, 1988).

The alternatives such as contracting out, hiring part time officers etc. are ways to reduce the cost and increase the effectiveness of local governments. Local governments have been driven to find alternative methods to provide inexpensive and efficient public services. "Government agencies have experimented with privatization in a variety of forms, including the use of volunteers, the sale of assets, contracting out with the private sector, vouchers, and subsidy arrangements" (Freeman, 1992, p.131).

Law enforcement executives are likely to contract out the functions of public police that do not involve crimes or emergencies. "The benefits gained from

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[6] Personal interview with Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30.

privatization are primarily the cost savings and the perception that public services are efficiently provided" (Freeman, 1992, p.131). However, the law enforcement profession is against some forms of privatization if it relates to public safety (Freeman, 1992). For that reason, "only selected functions of police and sheriffs' departments are going to be transferred to the private sector and the practice of contracting or privatizing does not realistically present a threat of total takeover of entire police agencies" (Chaiken and Chaiken, 1987, p.1).

As one of the best practices, the Fresno, California, Sheriff's Department reaped savings by outsourcing its transport of prisoners. The total cost for the department to transport a prisoner from San Diego to Fresno was $284 using a private firm. The same trip using Sheriff's department personnel and equipment would cost three times as much (Youngs, 2004). Another example is the Lakewood Police Department that contracts with a private security firm to guard prisoners hospitalized in facilities in the Denver metropolitan area and to provide assistance in protecting crime scenes. In Lakewood, the cost of an off-duty police agent is $37 per hour, including vehicle. Many crime scenes take an average of 2 days to process. Because 24-hour protection is required, using private security at $29 per hour for this assignment, a saving of nearly 22 percent, makes economic sense. Furthermore, the partnership has strengthened the lines of communication and trust between police and private security personnel. Everyone is a winner in that police department which is providing essential services at a reduced cost. For private sector, it is good for business because it employs people and in common, it is good for economy (Youngs, 2004).

"Governance is the process by which we collectively solve our problems and meet our society's needs." (Osborne and Gaebler, 1992, p.24). In this process, Osborne and Gaebler see government as an instrument that we use. They argue that government is an important mechanism to be able to make collective decisions such as how to provide security. Government must be mission-driven, decentralized, results oriented, and more importantly customer-oriented. Traditional government is not focused on the consumer, but on pleasing the bureaucracy or legislature (funding).

Based on the customer focus group assessment about the KSU Police Department, the main expectations and aspirations of the KSU community from the police

department are high visibility, increased and quicker response time, communication follow up, and visual representation.

3. Construct the Alternatives

If we keep the status quo operating, the complaints about the Kent State University Police Department (KSUPD) regarding the lack of visibility, slower response time, the problems with communication follow up, etc. will continue. The core of the problem for the KSUPD is that they do not have enough officers, to the point that they cannot manage the tasks effectively, despite the best efforts of management. In the status quo, the total cost is calculated by adding the money spent for off-duty officer requests ($963,3) to cover the absence of officers that are providing money escort service, the money spent on fuel ($251,7) for providing money escort service, and the opportunity cost of money escort service ($25,690). As a result, the total cost for status quo is $26,905.

Reducing patrol services and reassigning those officers to specialized services such as money escort services will result in lowered police response time and adversely affect citizen attitudes about police effectiveness and crime control (Spelman & Brown, 1996). In that sense, in order to increase police efficiency new ways to deploy more officers in patrol services should be considered.

3.1. Alternative-1: Contracting-out for Money Escort

Police functions might be privatized through contracting out either by partial or complete privatization. Financial concerns are at the very core of the idea of privatization of police functions in today's capitalistic societies (Forst and Manning, 1999).

By privatizing the money escort service[7], a two-fold gain could be achieved. The department will not only assign their officers for money transfer, but also the department will be able to deploy more officers in the community policing practices and crime control initiatives. Currently, the police department has three

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[7] A large majority of the law enforcement services on 4-year campuses with 2,500 or more students were performed by employees of the university or college; however, 25% of the campuses did outsource, or contract out, for some portion of such services (U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, Campus Law Enforcement Agencies, 1995, December 1996, NCJ 161137).

officers during each shift. They do not have the luxury of dealing with money transfer, while the community expects the high level of visibility, rapid response, and the better communication follow-up. Therefore, contracting the money escort service out frees up two officers everyday and allows them to be more available for important services, which are directly related to citizens' needs. By contracting money transfer out, the Kent State University would partly solve the problem of having fewer officers on campus. Consequently, the department will save 0.5 FTE hours and after subtracting the cost of contracting out ($6,975) from the benefits ($26.905), there will be an absolute saving at the level of $19,930.

3.2. Alternative- 2: Hiring Part-time Officer for Money Escort

In cases where hiring more sworn officers is not an available option due to budgetary constraints, cheaper alternatives such as hiring part-time officers might be a proper solution. Because, the hourly rate for part-time officers is relatively less ($15,34), and then benefits are not required. If the KSU Police Department hires a part-time officer to escort money transfer, the department will maintain the same job, but in a more efficient way and also at a reduced cost ($11,775 compared to status quo cost of $26,905). As a result, the department will save $15,130, and the department will deploy this part-time officer for escorting money transfer so that the full-time sworn officers will always be available for providing security within the community.

3.3. Alternative- 3: Hiring Part-time Officer for Peak Hours

Due to the lack of personnel, the non-urgent calls have to wait during the peak times, and only urgent calls are responded when there is crime in progress. Thus, the community has to wait longer in order to get the police service. Therefore, a reasonable alternative would be assigning part-time officers especially in the peak hours.

According to the KSUPD's call for service by hour, the peak times are between 8-9 am, 4-5 pm, and 12-1 am respectively. The total peak hours in a day are six hours, and 2184 hours in a year. If the department hires part-time officers to cover these peak hours, the total cost would be $37,594, including training costs, in a year.

3.4. Alternative- 4: Hiring two more Sworn Officers and Expanding the Dispatching Service

Since the main identified problem is the lack of personnel, hiring two more full-time sworn officers will result in an increased efficiency in police services. If the KSU Police Department hires two more sworn officers and expands the dispatching service, the department will benefit from this. By expanding the dispatching service for the Brimfield Fire Department, and providing computer aided (CAD) service for the Kent City Police Department, the department will generate revenue at the amount of $100,000, which is enough to hire two more sworn officers. Since there are enough dispatchers to cover the Brimfield Fire Department, and the investment has already been made for computer aided dispatching service, this will not bring any extra costs, but benefits.

Osborne and Gaebler (1992) talk about state and local government's using innovative methods to actually earn money that would otherwise need to be raised from taxes. KSUPD's providing communication service for Brimfield Fire Department and CAD service for Kent City Police Department is a good example of enterprising government. By doing this, the police department generates revenue, which might help increasing the quality of their service.

Having two extra officers will enable the department to assign more officers to the field operations during peak activity periods or regular shifts. In addition, hiring two more officers improves the visibility of officers in patrolling and allows officers to develop more proactive strategies to address crime and community needs rather than reactive responses.

3.5. Alternative- 5: Hiring Thirty-three more Sworn Officers and Expanding the Dispatching Service

If the KSU Police Department hires thirty-three more officers and expands the dispatching services, the police department will function with plenty of full-time sworn officers concerning the national standards. It will also cover two officers' expenses by getting money from other agencies for dispatching. However, the cost of hiring thirty-one officers will bring the huge amount of need for money to KSU. Compared to other university police departments through out the United States, the KSU Police Department deserves to have thirty-three more officers,

which costs $1,661,659. Even though this alternative does not look like a feasible solution, it is better to present this option here. The KSU administration might want to reach the same level of police officer with the national standards, which will result in an increased efficiency in police services.

4. Select the Criteria

This section explains the selected criteria to assess the pluses and minuses of the alternatives presented. The main criteria in this study are cost, benefit, full-time equivalency (FTE), response time and visibility, and number officer per 1000 students.

4.1. Cost

Cost of status quo was calculated by adding the cost of calling off-duty officers in lieu of officers on money escort services, cost of fuel consumed for money escort services and the opportunity cost lost on sending officers to money escort services 16 hours a week which totals up to 832 hours a year.

Cost of Status Quo

Cost of Calling Off-Duty Officers in Lieu Of Officers on Money Escort Services

$37.05 (average over time rate for officers)[8]
0.5 (weekly average request for off-duty officers during money escort services calculated based on service request log during money escort services)[9]
52 (number of weeks in a year)

$37.05 * 0.5 * 52 = *$963.3*

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[8] The cost figure obtained from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.
[9] Information obtained from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

Cost of Fuel Consumed for Money Escort Services

0.3 (gallon per 5 miles)[10]

2.017 (price of premium gasoline per gallon)[11]

8 (number of money escort service per week)

52 (number of weeks in a year weeks)

0.3 * 2.017 * 8 * 52 = *$251.7*

Opportunity Cost of Money Escort Services

832 (number of hours a year spent for money escort services)

1824 (The COPS standard for one FTE)

$51,379[12] (average annual salary of a sworn officer)

(832 / 1824) * $51,379 = *$25,690*

Total Cost of Status Quo = $963.3 + $251.7 + $25,690 = $26,905

Cost of Contracting Out

The cost figure is based on private company tender offer dated 02/04/2003 received from Bursar's Office Director Les Carter. According to this bid, made by Brinks Security Company, the university will pay $550 per month and $375 one time installation fee for money escorting service. Yearly, it costs total $6975.

Cost of Hiring a Part-time Officer for Money Escort

Cost for hiring a part-time officer or any other qualified person only for money transfer was calculated by summing the training cost and the part-time wage. The total cost of hiring part-time officer for money escort service, including training costs, is $11,774.48.

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[10] U.S. Department of Energy. Retrieved November 19, 2004, from
http://www.avt.nrel.gov/pdfs/barwood.pdf.
[11] Akron Gasoline Prices. Retrieved November 19, 2004, from http://198.6.95.31/OHmetro.asp.
[12] The annual cost per officer including benefits obtained from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

$15.34 (hourly rate for part time officers)[13]

572 (hours of work in a year)

$3000 (training cost for part time officers)[14]

Total Cost of Hiring Part-time Officer for Money Escort=($15.34*572)+$ 3000 = $11,774.48

Cost of Hiring a Part-time Officer for Peak Hours

Summing the training cost and the part-time wage the cost was calculated this time for hiring a part-time officer for peak hours. The total cost of hiring part-time officer for peak hours, including training costs, is $37,594.

$15.34 (hourly rate for part time officers)

2184 (hours of work in a year)

$3000 (training cost for part time officers)

Total Cost of Hiring Part-time Officer for Peak Hours= ($15.34*2184)+$3000= $37,594

Cost of Hiring 2, and 33 more full-time Sworn Officers

The annual cost of hiring a full-time officer including benefits is $49,523. The cost of hiring two more full time police officers is $99,076, and the cost of hiring thirty-three more full time police officers is $1,634,754. In addition to these costs, the cost of status quo ($26,905) is added and the final costs are $125,981, and $1,661,659 respectively.

4.2. Full-time Equivalency (FTE)[15]

Full time equivalency (FTE) is used by U.S. Department of Justice Office of Community Oriented Policing Services (COPS) as a measure of how much time is gained by the police department as a result of redeployment by hiring civilian officers or use of new technology or related solutions. COPS Office uses 1,824

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[13] The cost figure obtained from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[14] The cost figure obtained from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[15] FTE full time equivalency based on U.S. Department of Justice Office of Community Oriented Policing Services Fact Sheet.

hours as the standard for a full-time equivalent of a sworn officer in a year. That is to say, a total gain of 1,824 hours in a year equals to 1 FTE, full time personnel.

1824 (The COPS standard for one FTE)

52 (number of weeks in a year)

Total hours spent for money escort services in a week:

10 (hours spent for money escort services from Bursar Office to Bank by 2 officers).

6 (hours spent for money escort services from KSU Offices to Bursar Office by 1 officer).

Total FTE gained by redeployment 52*(10+6)/1824=832/1824 =0.456140= 0.5

4.3. Visibility

In order to learn the needs and preferences of its customers, government should give them a voice through methods such as surveys, customer contact, customer interviews, etc. To that end, the KSU Police Department did a self-assessment in order to identify the needs of the customers they serve. This makes the police department accountable to its customers and this can also prevent the bureaucratic (political) influence.

Skogan and Hartnett (1997) argue, based on the results of their research, that the most successful interventions for improving perceived police effectiveness used mechanisms designed to improve the visibility and familiarity of police officers. In terms of perceptions of safety, increased foot patrol produced the most positive results. Perceptions of police responsiveness improved in most of the experimental areas. The visibility of officers was also linked to positive views around the quality of police service. A Likert Scale is used to assess the visibility.

4.4. Response Time

There are five general types of strategies that have been prominent in the standard model of policing and have been the focus of systematic research over the last three decades. These strategies are: increasing the size of police agencies, random patrol across all parts of the community, rapid response to calls for service,

generally applied follow-up investigations, generally applied intensive enforcement and arrest policies (National Research Council, 2004).

Rapid response to emergency calls for service is the third component of the standard model of policing. Although there are limited studies on the effects of this strategy on reducing disorder or fear of crime, responding swiftly to citizen calls increases citizen satisfaction and positive attitudes towards police (National Research Council, 2004).

Consequently, visibility and reducing response time are used as a criterion that is highly related to citizens' perception of the police. A Likert Scale is used to assess both visibility and response time:

The Scale

Very Poor   10
Poor   20
Moderate   30
Large   40
Very Large   50

4.5. Officer per 1000 Students

The number of police officers per student population might be a good indicator of police efficiency and customer satisfaction. The total number of current students in KSU's main campus is 24,300[16] and the number of sworn police officers is twenty-six. Therefore, the rounded figure of officer per 1000 students in KSU main campus is 1.08.

For example in Youngstown State University, there are 13,000[17] students on campus, and twenty-one sworn police officers currently employed at the University Police Department. The number of officer per 1000 students in Youngstown State University is 1.6, which is higher than KSU.

Next, we will discuss the Criteria Alternatives Matrix (CAM). Cost-benefit analysis (CBA) is a technique developed to evaluate investments from a social-economic point of view. It helps decision makers (1) to decide on the optimal

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[16] Kent State University Student Profile Report 2004.
[17] Personal Communication with Sergeant Ramias from Youngstown State University Police Department on November, 19 2004.

level of the investment, (2) to find the optimal mix of investments maximizing efficiency and (3) to choose among several alternative investments (Loomis and Walsh, 1997). A key factor of CBA is that the evaluation is made based on monetary values.

5. Project the Outcomes

Table 3: Criteria Alternatives Matrix (CAM) with Real Figures

		Status Quo	*Alternative1 Contracting-out for Money Escort*	*Alternative2 Hiring Part-time Officer for Money Escort*	*Alternative3 Hiring Part-time officers for peak hours*	*Alternative4 Hiring 2 more Sworn Officers and Expanding the Dispatching Service*	*Alternative5 Hiring 33 more Sworn Officers and Expanding the Dispatching Service*
Criteria	**Cost**	$26,905[18]	$6975[19]	$11,775[20]	$37,594	$125,981 [21]	$1,661,659
	Benefit	---	$26,905	$26,905	---	$100,000[22]	$100,000[23]
	FTE[24]	---	0.5	0.5	1.2	2	33
	Response Time[25]	10	20	20	40	30	50
	Visibility	10	20	20	30	30	50
	Officer per 1000 Students	1.06	1.08	1.08	1.12	1.15	2.4

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[18] The cost figure calculated based on information received from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[19] The cost figure based on private company tender offer dated 02/04/2003 received from Bursar's Office Director Les Carter.

[20] The rounded cost figure calculated based on information received from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[21] The cost figure calculated based on information received from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[22] The cost figure calculated based on information received from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[23] The cost figure calculated based on information received from Associate Director of KSU Police Department Dean Tondiglia on 11/18/2004 at 13:30 during a personal interview.

[24] FTE full time equivalency based on U.S. Department of Justice Office of Community Oriented Policing Services Fact Sheet.

[25] Response time and visibility are measured by a Likert scale (from 10 to 50).

Table 4: Criteria Alternatives Matrix (CAM) with Adjusted Figures

		Status Quo	Alternative1 Contracting-out for Money Escort	Alternative2 Hiring Part-time officer for Money Escort	Alternative3 Hiring Part-time officer for peak hours	Alternative4 Hiring 2 more Sworn Officers and Expanding the Dispatching Service	Alternative5 Expanding the Dispatching Service and Hiring 33 more Sworn Officers
Criteria	**Cost**	-$269	-$69	-$117	$-375	-$1259	-$16,616
	Benefit	---	$269	$269	---	$1000	$1000
	FTE	---	50	50	120	200	3300
	Response Time	100	200	200	400	300	500
	Visibility	100	200	200	300	300	500
	Officer per 1000 Students	106	108	108	112	115	240
	Total Figures	37	758	710	1307	-317	-11,076

Unweighted Analysis

Status Quo =(-269)+(0)+(0)+(100)+(100)+(106)=37

Contracting-out for Money Escort=(-69)+(269)+(50)+(200)+(200)+(108)=758

Hiring Part-time Officer for Money Escort=(-117)+(269)+(50)+(200)+(200)+(108)=710

Hiring Part-time Officer for Peak Hours=(-375)+(120)+(400)+(300)+(112)= 557

Hiring 2 more Sworn Officers =(-1259)+(1000)+(200)+(300)+(300)+(115)= 656

Hiring 33 more Sworn Officers =(-16616)+(1000)+(3300)+(500)+(500)+(240)=-11076(minus)

Weighted Analysis

Cost is weighted 10%

Benefit is weighted 10%

FTE is weighted 10%

Response time is weighted 20%

Visibility is weighted 20%

Officer per 1000 students is weighted 30%

Status Quo=(-269x10)+(0x10)+(0x10)+(100x20)+(100x20)+(106x30)=4490

Contracting-out=(-69x10)+(269x10)+(50x10)+(200x20)+(200x20)+ (108x30)=13740

Hiring Part-time Officer=(-117x10)+(269x10)+(50x10)+(200x20)+(200x20)+ (108x30) =13260

Hiring Part-time Officer for Peak Hours=(-375x10)+(0x10)+(120x10)+(400x20)+(300x20)+(112x30)= 14810

Hiring 2more Sworn Officers=(-1259x10)+(1000x10)+(200x10)+(300x20)+(300x20)+ (115x30) = 14860 (winner)

Hiring 33 more Officers=(-16616x10)+(1000x10)+(3300x10)+(500x20)+ (500x20)+ (240x30)=-95960 (minus)

As previously indicated, there are five different alternatives: contracting out for money escort, hiring part-time officer for money escort, hiring part-time officer for peak hours, hiring two more, and thirty-three more sworn officers with expanding the dispatching service. According to CAM analysis, without consideration of any other criteria, the most efficient alternative is contracting out for money escort, while the most expensive one is hiring thirty-three sworn officers and expanding the dispatching service. However, this analysis cannot rely on only costs.

In addition to the most obvious and necessary factor of cost, several criteria are used in this analysis: benefit, FTE, response time, visibility, and officer per 1000 students, which are all essential in order to make a better evaluation. The primary results are weighted at 10% of the cost, benefit at 10%, FTE at 10%, response time at 20%, visibility at 20%, and officer per 1000 students is weighted 30%. I think these are reasonably accurate assumptions since it was based on customer focus group assessment.

The results of CAM indicate that the preferred alternative, considering the criteria with appropriate weighting, is hiring two more sworn officers and expanding the dispatching service. Because, the cost of hiring two more sworn police officers could be paid by from providing dispatching service for other local departments.

6. Confront the Trade-offs

Although contracting out and hiring part-time officer for money escort services are the least costly alternatives the degree of availability of police in terms of visibility and reduced response time is not considerably higher than the status quo since with these alternatives increase in the full time equivalency (FTE) is merely by 0.5. However, these solutions would not be sufficient to solve the bigger problem the department is facing. The KSU Police Department needs more staff in order to allocate adequate personnel to achieve its goals and objectives or foot

patrol and closer contacts with the customers, which are related to the increase in community-oriented policing. Although achieving the national standard of 2.4 officers per student sounds like a great idea for both the community served and the police department, this is the most costly option even though its advantages are weighted more than the cost. Thus, the weighted CAM analysis suggest that the most efficient alternative is hiring two more sworn officers, which is considerably least costly, and which leads to larger availability than contracting out and hiring part-time personnel.

7. Decision

Hiring two more sworn officers and expanding dispatching services to other local departments is the best alternative since the cost of hiring two more sworn police officers can be compensated with the money gained from providing dispatching service. However, this alternative can be suggested along with other alternatives since they are not exclusive. In that sense, contracting out, which is the second best alternative is also recommended as a solution to the policy problem. Implementing both contracting out and expanding dispatching services and hiring two more sworn officers will result in combined benefits in money, FTE, response time, visibility, and increased number of officers per 1000 students.

8. Conclusion

In conclusion, we believe that the police department at KSU is trying to do their best with limited resources and current circumstances. However, it is the fact that rapid response time, and higher level of visibility can only be possible after the solving the problem of having fewer officers. Besides, rapid response time and higher level of visibility, specialized patrols on campus could be beneficial to carry out preventive measures of crime based on community oriented policing philosophy. If specialized patrols are to be implemented as a supplementary service to routine patrol, additional personnel should be hired. Otherwise, KSUPD ought to carry out more reactive strategies like rapid response time rather than proactive ones such as specialized patrols and informative seminars and trainings etc., which requires added personnel.

The KSU Police Department is functioning with fewer sworn officers than that of the other universities, which have almost the same student population. Many

university police agencies double or triple the KSUPD regarding their size. Regarding the national average and standards, KSUPD should have 59 full-time sworn officers instead of only twenty-six. As we all might assume twenty-six officers are not able to do what fifty-nine officers can do. It is an enormous problem of staffing. If the Kent State University Administration does not solve this measurable problem, the future life on campus will not be safer, and the cost of disorganization and fear of crime will be immeasurable.

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