

# TARGETING OPPORTUNITIES FOR SHARED POLICE SERVICES

TONY J. CARRIZALES

*Marist College*

JAMES MELITSKI

*Marist College*

RICHARD W. SCHWESTER

*City University of New York*

**ABSTRACT:** *Using New York municipalities as the units of analysis, we estimate a probit model examining the factors that drive the municipal decision to either maintain its own police force or rely on the county or state police for local policing. Our research considers how demographic changes over time may influence a municipality to eventually establish a police force, disband its existing force, or continue to rely on county or state law enforcement. The probit results are used to formulate a decision matrix to inform public policymakers as to what types of municipalities offer favorable opportunities for shared police initiatives. Results indicate that municipalities with a police force that are losing population and have income levels rising at an annual rate lower than the state average are prime candidates for shared police services. Municipalities that do not currently have a police force, are growing in population, and have income growth that outpaces the state average are also ideal for shared service targeting.*

**KEYWORDS:** *policing, contracting, municipal expenditures, shared services*

Local policing in the United States is often carried out by a combination of state, county, and local law enforcement organizations. In New York State, this arrangement creates service redundancies related to jurisdictional overlaps in local government structures. Ward contends that “many areas of the State are still served by both [state] troopers and [local] deputies. Formal arrangements to minimize duplication of efforts are rare” (2006, p. 453). Law enforcement advocates argue that duplication of services is necessary to provide for public safety. In

New York, for example, they further argue that the history of the New York State Police highlights the need for duplication of local policing services. The impetus for developing the New York State Police occurred following a 1912 murder in Bedford Hills, New York. The local constable refused to investigate, and residents became enraged at the lack of local policing and security provided in rural New York. As a result, the public successfully lobbied for forming a committee to set up a state police in 1915, which led to the formation of the New York State Police in 1917 (Kurek, 2007).

When it comes to the role of counties in New York, Article X (§13) of the state constitution requires all counties to have an elected sheriff, although the degree to which each county provides local law enforcement services varies considerably. Across the United States, sheriffs are charged with a variety of law enforcement tasks beyond any responsibilities they may have for local policing—for example, 80 percent of sheriff's offices nationwide are charged with managing county corrections (Reaves & Hickman, 2002). Nationwide, many municipal police forces predate their state and county counterparts. In other cases, municipalities established their own forces as a response to growth in population and crime rates. There are, however, a significant number of municipalities in New York that currently maintain no police force.

In New York, like many states throughout the United States, the state police or county police departments service municipalities that do not maintain a police force. This fact underscores two critical problems from a public administration perspective. First, when state and county police resources are allocated across several municipalities, there is a risk of inefficiency—that is, an inefficient match of state or county services with local demand. Second, there are inherent equity problems with state and county police services being provided without charge to municipalities. Municipalities that rely on the state or county for their policing are receiving subsidies from other municipalities that have their own police forces. This subsidy includes low-income urban municipalities with less healthy per capita tax bases.

One potential solution is to encourage municipalities without police departments to enter into shared-services agreements with neighboring municipalities. We estimate a probit model examining the factors that drive the municipality's

---

Funding for this research was provided by the New York State Department of State, Office of Coastal, Local Government, and Community Sustainability under the Shared Services Program. This program provides financial and technical assistance to local governments for intergovernmental programs to promote cost savings and service efficiencies. A previous version of this research was submitted as a grant report to the funder and the Shared Municipal Services Incentive Government Law Center of Albany Law School.

decision to either maintain its own police force or rely on the state or county for local policing. We examine how demographic changes over time may influence a municipality to eventually establish a police force, disband its existing force, or continue to rely on county or state law enforcement. The probit results are used to formulate a decision matrix to inform public policymakers as to what types of municipalities present favorable opportunities for shared police initiatives.

### **Personnel Trends in Local Law Enforcement**

Nationally, local police departments are the largest employers of full-time law enforcement personnel (53 percent). Local departments are followed by county sheriff's offices (30.3 percent) and state law enforcement agencies (8.3 percent; Reaves, 2007). According to the U.S. Justice Department in 2006, the total number of personnel employed in state and local law enforcement in New York was 94,960. Only California employs more full-time employees at 120,206. Taking into account population, New York has the fourth highest number of full-time law enforcement personnel per resident at 494 per 100,000 residents. In 2004, only Louisiana, Wyoming, and the District of Columbia had more law enforcement personnel per 100,000 residents. This section examines national personnel trends in law enforcement and compares them to New York to assess personnel shifts at the local, county, and state levels.

Between 1996 and 2004, the number of local sworn police employees nationally increased by 8.3 percent. In contrast, between 1996 and 2004, there was a minimal 1 percent decline in the total number of sworn local law enforcement personnel in New York. However, the data are skewed by the size of the New York Police Department (NYPD), which consists of 4.9 percent of all sworn police nationally and 54.7 percent of all sworn law enforcement personnel in the state.

If we examine non-NYPD sworn local law enforcement between 1996 and 2000, there is a modest 1.7 percent increase (from 17,844 to 18,153), followed by a decrease of 1.2 percent (from 18,153 to 17,921) between 2000 and 2004. In total, non-NYPD local sworn law enforcement personnel remained about the same between 1996 and 2004 (from 17,844 to 17,921) (Reaves, 2007; Reaves & Goldberg, 1998; Reaves & Hickman, 2002). Between 2000 and 2004, there was a 10.6 percent decrease in sworn NYPD employees, while there was a corresponding increase of less than 1 percent in sworn local law enforcement personnel in communities other than New York City. These trends are likely the result of financial trends but are also significantly influenced by a reduction in the number of officers that retired, were disabled, or were killed in the line of duty as a result of the September 11, 2001, terrorist attacks in New York City.

Nationally, the U.S. Department of Justice suggests that county sheriffs' staffing levels are influenced by the number of prison inmates, as four out of five

sheriff's departments across the United States are responsible for jail operations (Reaves, 2007). Nationally, the number of sworn sheriff's office employees held constant at 60 officers per 100,000 residents between 1996 and 2004. However, the number of nonsworn officers increased 11 percent in the same time timeframe (1996–2004). Further, Reaves (2007) and Reaves and Goldberg (1998) indicate that the country's inmate population (county and local government) increased 28 percent between 1996 and 2004.

In New York, the number of sworn sheriff's office employees declined 26.7 percent between 1996 and 2004, indicating a trend opposite to national statistics. Likewise, the population of inmates in county jails in New York declined 22 percent between 1996 and 2004 (New York State Commission on Corrections, 2010); however, the number is skewed by the decrease in prison populations in New York City, which fell by approximately 39 percent. Non–New York City county prison populations had a negligible 2 percent increase, which is more than 25 percent less than the national trend. New York's counter trends in both the number of sworn sheriff's officers and the number of inmates in county jails is consistent with the U.S. Bureau of Justice statistics assertion that a relationship exists between county sheriffs and county jail populations.

When it comes to state policing, New York experienced increases in the number of sworn state police personnel relative to the total number of state residents, maintaining growth of 10 percent from 1996–2000 and 9.1 percent from 2000–2004. In the eight years between 1996 and 2004, sworn New York State Police personnel increased nearly 20 percent, while sworn employees in primary state law enforcement agencies nationwide saw no increase. Contrary to national trends, decreases in personnel at the local and county levels suggests that New York is shifting the burden of local policing away from local governments (both county and state) and toward its primary state law enforcement agency, which has seen its personnel numbers rise.

### **Shared Police Services Literature**

Shared services are the “concentration or consolidation of functions, activities, services, or resources, into one stand-alone unit” (Burns & Yeaton, 2008, p. 9). The opportunities for shared-services programs in policing include dispatching, patrolling, criminal investigation, training, and equipment purchases (Varga, 2007). In the private sector, companies have been consolidating and centralizing, with more than 70 percent of senior executives claiming success with their shared-services efforts (*Shared Services in Government*, 2005). Gould and Magdieli define shared services in the private sector as “a framework for bringing together services that are common to multiple business units, such as human resources, financial management, and information technology, as well as functions such as

billing and call centers” (2007, p. 2). The definition aptly reflects processes in public sector shared services. Gould and Magdieli argue that shared services in the public sector can benefit from the private sector’s framework of shared services given that government applies lessons learned. Similarly, Kearny (2005) suggests governments can avoid many of the pitfalls encountered by the private sector in their early pioneering of shared services.

There is no one ideal model for shared services in government. Organizations develop shared services with different priorities and objectives (Forst, 2001). Various models for shared services have been identified. Gould and Magdieli (2007, p. 8) identify four specific models that help meet the various demands of public agencies:

1. Government Center of Excellence (COE): In this model, an organization conducting several functions is shared across operating units internal to the agency.
2. Government Shared Services Provider (SSP): A government agency provides one functional service for both internal and external clients.
3. Commercial Shared Services Provider (SSP): In this shared service model, a commercial company provides shared services to public sector clients.
4. Public–Private Partnership (PPP): In this model, both a commercial and government organization team up to provide shared services to government.

An often-advertised benefit of shared service arrangements is cost savings. Alexander and Mack argue that “unification between law enforcement agencies can lead to economies of scale and resulting decreases in costs especially when the consolidation occurs in smaller municipalities searching for ways to control rising costs and to increase efficiency” (2007, p. 32). In other words, larger organizational units are presumably more efficient—providing comparable service quality at a lower cost than smaller organizational units (Staley, Faulk, Leland, & Schansberg, 2005).

In addition to cost savings, police service consolidation can be motivated by goals of improved performance (Cresswell, 2008). One indicator of consolidated police performance is crime rates, such as those reported by the Uniform Crime Report (Alexander & Mack, 2007). Crime reporting from the Uniform Crime Report highlights violent and nonviolent crimes for comparison across different communities. In addition, performance measures such as the number of calls for service, response time, and cost savings can help evaluate the overall results for the consolidation of police services (Alexander & Mack, 2007).

In the earliest study of shared police services, Ostrom, Parks, and Whitaker (1973) compared service quality and service costs among consolidated and independent municipal police departments. The authors identified three consolidated “precincts” within the city of Indianapolis and matched these precincts to three adjacent and independent municipal police forces. The Indianapolis precincts were

a proxy for a shared police department. Their study found that the independent municipal departments provided better-quality services; that is, police response times were reported as being faster and crime victimization rates were lower compared to the consolidated precincts. However, from a cost perspective, the consolidated precincts reported lower per unit costs compared to the independent municipal departments. Pachon and Lovrich (1977) examined whether police department size predicted a high level of citizen satisfaction with police services. Using 64 municipalities as their units of analysis, Pachon and Lovrich did not find that police department size predicted citizen satisfaction. In other words, citizens were just as likely to be satisfied (or dissatisfied) with larger police departments as they were with smaller departments.

More recently, Krimmel (1997) examined the North York (Pennsylvania) consolidated police department (consisting of eight municipalities). This consolidated police department was compared to eight municipal police departments in the neighboring county of Lancaster. Krimmel found that per capita costs of the North York department were 25 percent less than the eight independent municipal departments. In the New York context, the Town of Lancaster and Village of Lancaster have a history of sharing services. Both communities have consolidated their financial offices, parks and recreation, and health and human services. In 2003, the town and village also consolidated police services into one police department as a cost-saving initiative in 2003 (Giza & DePalma, 2008). Doing so eliminated inefficient jurisdictional boundaries between the two communities. Community patrolling efforts were no longer dictated by geographic boundaries. In addition, the consolidated Lancaster police force was estimated to save both communities approximately \$750,000 annually. As noted, cost savings and performance improvements are touted as benefits of shared-services arrangements. Evidence supports this argument that shared police departments are more cost efficient than smaller municipal departments. Less evidence is available that the shared-services model is preferable to independent municipal departments in terms of service quality—or vice versa.

### **Implementation and the Politics of Shared Services**

While this research focuses on identifying shared-services opportunities using demographic and economic data, the implications for local leadership, particularly when it comes to implementation cannot be understated. A shift toward shared services is a transformational change requiring “strong leadership, informed decision-making, focus on execution and clear communication” (Gould & Magdieli, 2007, p. 7). Shared services can succeed with management support among other necessary steps (Cecil, 2000). Key success factors in governments’ efforts in implementing shared services include (a) strong project management skills, (b)

senior-level support, (c) effective communication, (d) strong change management, and (e) a phased approach to implementation (Burns & Yeaton, 2008).

Productively employing shared services calls for leaders to champion the process in an ethical manner. It involves engaging citizens at multiple levels, using multiple mechanisms to encourage citizen participation, and necessitates seeking assistance from external experts when necessary. Ultimately, successful implementation requires leaders to create an environment in which collaboration between communities becomes the focus of shared-services initiatives (Benjamin, Hattery, & Rachel, 2007).

The implementation of shared services highlights the need to address local politics and challenges associated when communities share services. Benjamin et al. (2007) suggest both cultural and structural barriers to shared-services implementation. Structural barriers include legal mandates and coterminus local boundaries where school districts and other local government boundaries overlap, leading to fragmentation. Cultural barriers include potentially disadvantaged groups, lack of respect for local history, inexperience with sharing services, and disregard for local governance structures. Overcoming these barriers requires ethical leadership as local governments struggle to maintain service levels with limited or decreasing resources.

As Brand (2006) underscores in his research, shared services may have efficiency and effectiveness benefits but still remain a marginal practice among public organizations because of political and organizational challenges. The various challenges are necessary obstacles to overcome for shared service initiatives to progress to the point of successful implementation. Common barriers toward successful shared-services implementation include loss of municipal identity, complexity of the process, conflicting objectives, and uncertain benefits (Dollery, Akimov, & Byrnes, 2007).

According to Brand (2006), the political and organizational challenges to shared services are typically internal. Internal challenges include a reluctance of elected officials to surrender control over the delivery of services. Local government staffs may view shared services as a threat to their jobs, organizational ethos, and service delivery. Managers may fear redundancies and loss of influence. Mohan (2006) points out that concerns over loss of autonomy is a critical "perceived" barrier to shared services. Even in the earliest attempts of shared services and consolidation in the United States (e.g., Jacksonville County in 1968), government employees were strong opponents to such efforts (Swanson, 2000).

The internal challenges presented by political players, government staff, and managers could be addressed through specific recommendations set out by Brand (2006). First, a citizen-centered approach helps minimize arguments against shared services. Second, efforts should be made to work across the political spectrum to help build support, thereby minimizing political opposition and making projects

more resilient against political changes. Third, an open and consultative approach dialogue around the future of services will ensure the creation of better services. Finally, Brand (2006) recommends making it “real for people” by encouraging firsthand experience of shared services to all internal players. Fleishmann (2000, p. 224) found that the merger of local services should focus on building a winning coalition around issues such as governmental turf and equality before such issues as effeminacy and community image.

Race and minority representation also becomes key political issues that arise amid shared-services proposals (Fleishmann, 2000). Shared-services success can also be attributed to accountability (Jones & Stewart, 2009; Walsh, McGregor-Lowndes, & Newton, 2008). Swanson concludes that local government reforms in cases of consolidated service initiatives should ask whether the reform will “emphasize efficiency and effectiveness at the expense of accountability and equity” (2000, p. 236).

The changing demographics of the United States have led to transformational changes in local governments that allow for “new regionalism” and practices such as shared services (Savitch & Vogel, 2000). The benefits of shared services remain mixed (Dollery & Akimov, 2007a). There is too little empirical evidence that shared-services arrangements can solve many of the service provision problems local governments face (Dollery & Akimov, 2007b), even though it is believed that shared-services initiatives capture efficiency and effectiveness gains resulting from the creation of economies of scale (Staley et al., 2005). Shared-services initiatives flourish when structural and cultural barriers are addressed along with resource constraints. Shared services allow local governments to focus on collaboration, service delivery, and quality rather than dissolution and cessation of services. While factors such as political and organizational constraints are critical for successful implementation, they must accompany a realistic analysis of demographic and economic conditions. Ultimately, the need for identifying municipalities that are demographically well-suited for shared services allows for proactive action to meet the various political and organizational challenges that lay ahead.

## **Research Method**

Drawing on previous literature, we define as critical factors for identifying shared policing opportunities population and population density (Alexander & Mack, 2007; Coate & Schwester, 2009), income (Coate & Schwester, 2009), crime (Ostrom et al., 1973), and expenditures (Mehay, 1979; Ostrom et al., 1973). This study, therefore, includes the independent variables population, median household income, population density, per capita county police expenditures,<sup>1</sup> and the county crime rate. We regress the independent variables on the PD\_DUMMY variable. The PD\_DUMMY is dichotomous, so that 1 indicates that a municipal-

ity has police personnel expenditures in FY2005 and zero indicates no personnel expenditures. The expenditure data serve as a proxy for identifying municipalities that have a police force (i.e., police group) and municipalities that do not (i.e., no police group).<sup>2</sup> Using probit analysis, we regress the independent variables on the variable PD\_DUMMY to estimate which variables predict whether a municipality will be classified within the police group or the no-police group. The probit results are presented as elasticities. This method allows us to consider how hypothetical changes in statistically significant variables might influence this municipal decision; that is, how changes in certain variables impact the number of municipalities within the police group and the no-police group.

Data were collected from three specific sources and matched according to municipality. These data sources are the New York State Division of Budget (BDGT) for 2006, the U.S. Decennial Census (2000), and the New York State Division of Criminal Justice Services (CRME) for 2007. We use data for all New York municipalities with less than 20,000 in population. Municipalities of this size are less frequently studied. Further, smaller municipalities are thought to be better candidates for shared service initiatives; that is, they are more likely to capture greater proportional benefits resulting from economies of scale than larger municipalities (Coate & Schwester, 2009; Staley et al., 2005).

## Results

Statistical results are presented in three parts. First, descriptive statistics are presented to provide a surface explanation of the differences between New York municipalities that maintain a police force (PD\_DUMMY = 1 [police group]) and municipalities that do not (PD\_DUMMY = 0 [no police group]). Second, probit results are presented to identify which variables best predict group membership. Finally, statistical results are translated into actionable recommendations as to what type of municipality should be targeted for shared-services resources.

Based on the descriptive statistics, which are provided in Table 1, there are *prima facie* differences between the police group municipalities and the no-police-group municipalities. Municipalities within the police group have larger populations, greater population density, and slightly greater household income levels compared with municipalities within the no-police group. The mean population for the police group municipalities is 5,251. This result compares to a mean population of 2,970 for municipalities within the no police group. Police-group municipalities are more densely populated, as the mean number of residents per square mile for these municipalities is 1,451. This result compares to 646 for the no-police municipalities. The household income disparity is slight: \$46,741 for the police-group municipalities and \$44,000 for the no-police-group municipalities. Furthermore, there are slight differences between the groups regarding county crime rates

**Table 1. Summary Statistics: New York Municipalities with a Police Force Compared to Municipalities Without a Police Force**

	<i>Police Group (n = 528)</i>		<i>No Police Group (n = 896)</i>	
	<i>Mean</i>	<i>Std. dev</i>	<i>Mean</i>	<i>Std. dev</i>
Population	5,251	4,728	2,970	3,114
Population density	1,451	1,805	646	1,808
Income	46,742	26,419	44,000	23,211
County crime rate	2,203	647	2,072	619
County police expenditures	189	114	183	125

and per capita county police expenditures. The mean county crime rate for the police group municipalities is 2,203 violent and nonviolent crimes per 100,000 residents, compared to 2,072 for the no-police-group municipalities. Police-group municipalities spend slightly more per capita on their county police forces than do municipalities within the no-police group—\$189 and \$183, respectively.

According to the probit equation, 36 percent of New York municipalities are classified within the police group, which translates into 501 municipalities. The remaining 64 percent are within the no-police group. This translates into 892 municipalities. All of the independent variables are statistically significant at the 0.05 level. The probit results are provided in Table 2.

The elasticity for the population variable suggests that municipalities with greater populations are more likely to be in the police group. Implied is that population growth increases the likelihood that a municipality without a police force will opt for an alternative policing model, which could include establishing a shared police department or an interlocal contracting agreement. The population elasticity of 0.30 ( $z = 7.59$ ) suggests that a 10 percent change in the population variable ( $0.10 \times 0.30$ ) would increase the percentage of municipalities within the police group from 36 to 39 percent (from 501 to 516 municipalities). Conversely, a 10 percent decrease in the population variable would increase the percentage within the no-police group from 64 to 67 percent (from 892 to 919 municipalities). The probit model reveals the importance of population as a predictor of group membership; that is, changes in municipal population directly impact the municipal decision to maintain a police force or rely on an alternative model (i.e., county and state police) for local policing.

Income is positively related to the PD\_DUMMY variable, suggesting that municipalities with higher median household income levels are more likely to be in the police group. The income elasticity of 0.24 ( $z = 2.43$ ) suggests that a 10 percent change in median household income ( $0.10 \times 0.24$ ) would increase the percentage of municipalities within the police group from 36 to 38.4 percent (from 501 to 513 municipalities). Conversely, a 10 percent decrease would increase the percentage of municipalities within the no-police group from 64.0 to 66.4 percent

**Table 2. Determinants of the Municipal Decision to Maintain a Police Force: Probit Results and Elasticities**

<i>Municipal Police Decision (Municipality Within Police Group/PD_DUMMY = 1)</i>	<i>Coefficient</i>	<i>z value</i>	<i>Elasticity</i>	<i>Elasticity z value</i>
Population	0.00007*	7.73	0.30	7.59
Population density	0.00014*	6.25	0.14	6.16
Income	5.13e-06*	2.44	0.24	2.43
County crime rate	0.00016*	2.76	0.35	2.75
County police expenditures	-0.0015*	-3.32	-0.30	-3.31

*Notes: N = 1,393. \*significant at the .05 level.*

(from 892 to 915 municipalities). Much like the population variable, the model implies that changes in income may cause municipalities to reconsider their decision to maintain a police force.

Results indicate that New York municipalities within the police group differ from those within the no-police group in terms of population, population density, and household income levels. The implications of the probit model results and summary statistics with respect to identifying municipalities where intermunicipal shared-services arrangements should be targeted are presented in the following discussion.

### **MORE FAVORABLE OPPORTUNITIES FOR SHARED SERVICES**

1. Municipalities that currently have a police force, are losing population, and have income levels that are rising at an annual rate that is less than the state average are prime candidates for shared police services. The rationale is that if these municipalities continue to lose population and experience lower than average income growth, they may be inclined to eventually disband their police forces and rely on the state or county police for local services, thus causing the efficiency and equity problems to worsen.
2. Municipalities that do not currently have a police force, are growing in population, and have income growth that outpaces the state average are ideal for targeting. These municipalities may be less amenable to relying on the state or county police. In this case, incentives to explore the implementation of interlocal shared-services arrangements may be well received.

### **LESS FAVORABLE OPPORTUNITIES FOR SHARED SERVICES**

1. Municipalities that currently maintain a police force, are growing in population, and have income levels that are rising faster than the state average are not ideal candidates to adopt shared police initiatives. These municipalities are unlikely to alter the service delivery arrangement, given that their growing population and income is, by and large, indicative of a growing tax base. The probit results

**Table 3. Matrix for Targeting Shared Services**

	<i>Highly favorable opportunities for shared police</i>	<i>Moderately favorable opportunities for shared police</i>	<i>Less favorable opportunities for shared police</i>
Police force	<ul style="list-style-type: none"> <li>• Decreasing population</li> <li>• Weak income growth</li> </ul>	<ul style="list-style-type: none"> <li>• Decreasing population</li> <li>• Moderate or strong income growth</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing population</li> <li>• Moderate or weak income growth</li> </ul>
No police force	<ul style="list-style-type: none"> <li>• Increasing population</li> <li>• Strong income growth</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing population</li> <li>• Moderate or weak income growth</li> </ul>	<ul style="list-style-type: none"> <li>• Decreasing population</li> <li>• Weak income growth</li> </ul>

*Note:* Weak income growth is income growth that does not keep pace with state average; moderate growth is less than 10 percent growth relative to the state average; strong growth is growth that exceeds 10 percent of the state average.

suggest that larger, wealthier communities are inclined to be in the police group.

2. Municipalities that do not currently have a police force, are decreasing in population, and have income growth that fails to outpace the state average are not ideal for shared services. These municipalities will likely continue to rely principally on the county or state police as the benefits of entering into a shared-services arrangement (e.g., more effective policing) are not likely to outweigh the cost savings.

At this point, an obvious dilemma deals with municipalities that have population growth yet sluggish income growth—or vice versa. In this case, the probit model results indicate that population is a more robust predictor as opposed to income and thus should be the basis of decisions to target municipalities for shared services. Recall as well that higher population density increases the likelihood that a municipality will have or eventually establish a police force. Growing population implies greater population density—assuming, of course, that a municipality does not redraw its boundaries. This assumption strengthens the case that population serves as the primary criterion. In other words, a municipality with growing population and sluggish income growth that has a police force may not be an ideal candidate for shared services. At the same time, a municipality with a police force that is declining in population but has experienced better than average income growth would be more ideal for shared services. Table 3 provides a matrix for targeted shared services.

Noting that population and income changes impact whether a municipality is ideal or not ideal for shared services, it is important to identify population

and income baselines. This clarification will help to specifically identify which municipalities should be targeted. The mean population for all municipalities in this analysis is 3,816 with a standard deviation of 3,949. The mean income for all municipalities is \$45,000 with a standard deviation of \$24,456. It is recommended that the matrix presented in Table 3 be applied initially to municipalities that have populations within two standard deviations above the mean (or a range of approximately 3,800 to 12,000) and municipalities that have income levels within one standard deviation above and below the mean (or a range of approximately \$20,500 to 69,500).

## **Conclusion**

Shared services remain a viable alternative for communities struggling to remain true to their sense of community, while seeking to maintain local government services in the face of stagnant income and population growth. Despite the opportunities that exist for communities to enter into shared-services arrangements with other communities, there are often barriers to implementation involving local control, efficiency, and equity. Successful initiatives often build political trust and support, demonstrate quality improvements and cost savings, and attempt to mitigate risks. To address these barriers, communities often consider a range of shared-services alternatives, including informal handshake agreements, service contracts, joint service agreements, and consolidation (Ruggini, 2006). Communities interested in sharing services should weigh the options available along with their own needs.

This research utilizes public demographic and criminal data that allow any municipal government to analyze the current and potential status of their local policing based on population and income trends. This research of police shared services is one of the first to comprehensively utilize municipal data, but there are some limitations that should be noted for future research. In utilizing crime statistics data from the state of New York, we were limited to municipalities reporting crime data, and not all municipalities file these reports. Most municipalities that report crime data do so because their police department is required to collect and report such information; however, not all municipalities have police departments, leaving a gap in statistical analysis. Although we were able to utilize county data as a proxy, the ideal data would be reported by responding police departments, sheriff's departments, or state police agencies and would identify the exact location of the crime.

The municipal state policing model developed for this study adds to the growing literature of shared services. The findings indicate the following: Municipalities that currently have a police force, are losing population, and have income levels that are rising at an annual rate that is less than the state average are prime candidates

for shared police services. At the same time, municipalities that *do not* currently have a police force, are growing in population, and have income growth that outpaces the state average are ideal for targeting. On the other hand, municipalities that currently maintain a police force, are growing in population, and have income levels that are rising faster than the state average are not ideal candidates to adopt shared police initiatives. Finally, municipalities that do not currently have a police force, are decreasing in population, and have income growth that fails to outpace the state average are not ideal for shared services.

Overall, this research examines the history of local policing in New York and investigates statewide trends relative to national trends in local law enforcement. The analysis is grounded in relevant academic literature and presents a valid statistical model for taking an in-depth quantitative look at the degree to which key variables can predict potential municipalities for exploring shared services. The need for municipalities to explore the possibility of shared services, specifically police services, is a critical public management tool that can help prevent significant economic and policing challenges.

## Notes

1. The county police expenditure variable is specified as exogenous. Counties with many municipalities that have their own police force do not necessarily have low per capita county police expenditures. For example, significant proportions of municipalities within Westchester and Suffolk counties have their own police departments, in addition to high per capita county police expenditures relative to the other counties. The data indicate the reverse as well. Also, county police functions throughout New York (and the New England and Middle Atlantic regions) are not similar to municipal police functions. County police are almost chiefly responsible for prison operations, not local patrolling. In contrast, county police functions throughout the South have similarities to municipal police functions. In this case, county police expenditures might be endogenous.

2. Using nonzero police personnel expenditures as a proxy for identifying whether a municipality maintains a police department enables us to distinguish between municipalities that express a willingness to pay more for police services. It does not provide clarity as to how services are provided (e.g., it does not allow for the differentiation between full-time and part-time police forces). In some cases, a municipality may employ officers to patrol during daytime hours but rely on the county and state police for overnight coverage. Further, known municipalities currently engaged in some form of police sharing were identified by the New York State Department of State, Office of Coastal, Local Government and Community Sustainability under the Shared Services Program. These municipalities were not included in the analysis.

It might be argued that using cross-sectional data to predict municipal decisions that were made years prior engenders validity concerns. The municipal decision to maintain a police force (or not maintain a police force) may be thought of as continuous; that is, each year that a municipality chooses to maintain or not maintain a police force, it has effectively made a decision. In a similar study, Coate and Schweser (2009) estimated two models of the municipal decision to rely on the state police for local police services (as opposed to an alternative policing model). Like our study, Coate and Schweser (2009) used a dichotomous left-hand variable that did not capture change. Path dependence was not deemed a factor in this municipal decision. Furthermore, according to Liebowitz and Margolis, "a minimal form of path dependence is present whenever there is an element of persistence or durability in a decision" (1998, p. 18).

This persistence or durability stems from historical factors. While such historical factors may arguably influence the municipal decision to maintain or not maintain a police force, it does not mean that the decision is irreversible. Consider a 2006 survey of Pennsylvania police chiefs in municipalities with less than 10,000 in population. According to this survey, 61 percent of the police chiefs sat with municipal officials and discussed the possibility of changing their current policing model. Thirty-nine percent discussed creating a shared or regional police force, 12 percent discussed disbanding their police forces, and 10 percent discussed the option of contracting with a neighboring municipality for police coverage (Center for Rural Pennsylvania, 2006). We, therefore, argue that historical hand-forcing events precluding a municipality from altering its police service model appears to be a minor concern.

## References

- Alexander, M.A., & Mack, K. (2007). *An examination of consolidated law enforcement agencies in the United States and the proposal for local law enforcement consolidation in Memphis and Shelby County, Tennessee*. Memphis Shelby Crime Commission: Best Practice no. 11. [www.memphiscrime.org/research/bestpractices/bp11.pdf](http://www.memphiscrime.org/research/bestpractices/bp11.pdf), accessed July 30, 2008.
- Benjamin, G., Hattery, M., & Rachel, J. (2007). Lessons on sharing services from the first two years of the SMSI program: The highlights. *NYSB Government, Law, and Policy Journal*, 9(2), 69–77.
- Brand, A. (2006). *The politics of shared services: What are the underlying barriers to a more successful shared services agenda?* London: New Local Government Network.
- Burns, T.J., & Yeaton, K.G. (2008). *Success factors for implementing shared services in government*. Washington, DC: IBM Center for the Business of Government. [www.businessofgovernment.com](http://www.businessofgovernment.com), accessed July 21, 2008.
- Cecil, B. (2000). Shared services: Moving beyond success. *Strategic Finance*, 81(10), 64–68.
- Coate, D., & Schwester, R. (2009). The use of state police services for local policing: The case of New Jersey. *Public Budgeting and Finance*, 29(3), 97–109.
- Cresswell, S. (2008). *Town of Waterford–Saratoga County Police study case study*. Albany: New York Department of State. <http://www.dos.state.ny.us/Igss/sharedservices/smsi-casestudies/FullCaseStudies/Waterford-Saratoga%20Police%20Study.pdf>, accessed on September 1, 2010.
- Center for Rural Pennsylvania. (2006). *Survey of small town police departments*. Harrisburg, PA. [www.rural.palegislature.us/small\\_town\\_police06.pdf](http://www.rural.palegislature.us/small_town_police06.pdf), accessed December 11, 2009.
- Dollery, B., & Akimov, A. (2007a). *An evaluation of shared services in the Queensland local government association's size, shape, and sustainability program*. Working paper, University of New England, Armidale. [www.une.edu.au/clg/working-papers/07-2007.pdf](http://www.une.edu.au/clg/working-papers/07-2007.pdf), accessed September 1, 2010.
- Dollery, B., & Akimov, A. (2007b). *Critical review of the empirical evidence on shared services in local government*. Working paper, University of New England, Armidale. [www.une.edu.au/clg/working-papers/06-2007.pdf](http://www.une.edu.au/clg/working-papers/06-2007.pdf), accessed September 1, 2010.
- Dollery, B., Alimov, A., & Byrnes, J. (2007). *An analysis of shared local government services in Australia*. Working paper, University of New England, Armidale. [www.une.edu.au/clg/working-papers/05-2007.pdf](http://www.une.edu.au/clg/working-papers/05-2007.pdf), accessed September 2, 2010.
- Fleishmann, A. (2000). Regionalism and city–county consolidation in small metro areas. *State and Local Government Review*, 32(3), 213–226.
- Forst, Leland I. (2001). Shared services grows up. *Journal of Business Strategy*, 22(4),

13–15.

- Giza, R.H., & DePalma, K.A. (2008). Lancaster shared services case study. Albany: New York Department of State. [www.dos.state.ny.us/Igss/sharedservices/smsicasesstudies/FullCaseStudies/Town%20%26%20Village%20of%20Lancaster%20and%20Village%20of%20Depew%20Shared%20Services.pdf](http://www.dos.state.ny.us/Igss/sharedservices/smsicasesstudies/FullCaseStudies/Town%20%26%20Village%20of%20Lancaster%20and%20Village%20of%20Depew%20Shared%20Services.pdf), accessed September 1, 2010.
- Gould, K., & Magdieli, A. (2007). *Optimizing government effectiveness through shared services: Perspectives from the IBM Corporation*. Bethesda, MD: IBM. [www-304.ibm.com/easyaccess/fileserve?contentid=104553](http://www-304.ibm.com/easyaccess/fileserve?contentid=104553), accessed on September 1, 2010.
- Jones, G., & Stewart, J. (2009). New development: Accountability in public partnerships. The case of local strategic partnerships. *Public Money and Management*, 29(1), 59–64.
- Kearney, A.T. (2005). *Shared services in government: Turning private-sector lessons into public-sector best practices*. Chicago: A.T. Kearney. [www.atkearney.com/main.taf?p=5,3,1,95/](http://www.atkearney.com/main.taf?p=5,3,1,95/), accessed July 21, 2008.
- Krimmel, J.T. (1997). The Northern York County Police consolidation experience: An analysis of the consolidation of police services in eight Pennsylvania rural communities, *Policing: An International Journal of Police Strategies and Management*, 20(2), 497–507.
- Kurek, A. (2007). *The troopers are coming*. Bloomington, IN: Rooftop.
- Liebowitz, S.J., & Margolis, S.E. (1998). Path dependence. In P. Newman (Ed.), *The new Palgrave dictionary of economics and the law* (Vol. 3, pp. 17–23). London: Macmillan Reference.
- Mehay, S.L. (1979). Intergovernmental contracting for municipal police services: An empirical analysis. *Land Economics*, 55(1), 59–72.
- Mohan, S. (2006). Making the case for shared services in the public sector. *Accountancy Ireland*, 38(4), 14–15.
- New York State Commission on Corrections (2010). *Inmate population statistics*. [www.scoc.state.ny.us/pop.htm](http://www.scoc.state.ny.us/pop.htm), accessed September 20, 2010.
- Ostrom, E., Parks, R.B., & Whitaker, G.P. (1973). Do we really want to consolidate urban police forces? A reappraisal of some old assertions. *Public Administration Review*, 33(5), 423–432.
- Pachon, H.P., & Lovrich, N.P. (1977). The consolidation of urban public services: A focus on the police. *Public Administration Review*, 37(1), 38–47.
- Reaves, B.A. (2007). *Census of state and local law enforcement agencies, 2004*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics. <http://bjs.ojp.usdoj.gov/content/pub/pdf/csllea04.pdf>, accessed September 20, 2010.
- Reaves, B.A., & Goldberg, A. (1998). *Census of state and local law enforcement agencies, 2000*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics. <http://bjs.ojp.usdoj.gov/content/pub/pdf/csllea96.pdf>, accessed September 20, 2010.
- Reaves, B.A., & Hickman, M.J. (2002). *Census of state and local law enforcement agencies, 2000*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics. <http://bjs.ojp.usdoj.gov/content/pub/pdf/csllea00.pdf>, accessed September 20, 2010.
- Ruggini, J. (2006). Making local government more workable through shared services. *Government Finance Review*, 21(1), 30–35.
- Savitch, H.V., & Vogel, R.K. (2000). New regionalism and its policy agenda: Paths to new regionalism. *State and Local Government Review*, 32(3), 158–168.
- Shared services in government: Turning private-sector lessons into public-sector best practices*. (2005). A.T. Kearney, Chicago. [www.atkearney.com/index.php/Publications/shared-services-in-government.html?q=shared+services+government/](http://www.atkearney.com/index.php/Publications/shared-services-in-government.html?q=shared+services+government/), accessed September 1, 2010.

- Staley, S.R., Faulk, D., Leland, S.M., & Schansberg, D.E. (2005). *The effect of city–county consolidation: A review of the recent academic literature*. Fort Wayne: Indiana Policy Review Foundation. [www.in.gov/legislative/interim/committee/2005/committees/prelim/MCCC02.pdf](http://www.in.gov/legislative/interim/committee/2005/committees/prelim/MCCC02.pdf), accessed September 1, 2010.
- Swanson, B.E. (2000). Quandaries of pragmatic reform: A reassessment of the Jacksonville experience. *State and Local Government Review*, 32(3), 227–238.
- Varga, A. (2007). Steps to shared services. *Law and Order*, 55(7), 49–54.
- Walsh, P., McGregor-Lowndes, M., & Newton, C.J. (2008). Shared service: Lessons from the public and private sectors for the nonprofit sector. *Australian Journal of Public Administration*, 67(2), 200–212.
- Ward, R. 2006. *New York state government*, 2d ed. Albany: Rockefeller Institute Press

*Tony Carrizales, Ph.D., is an assistant professor of public administration at Marist College. Dr. Carrizales received his Ph.D. in public administration from Rutgers University–Newark and his MPA and B.A. from Cornell University. His research interests include digital governance and representative bureaucracy.*

*James Melitski, Ph.D., is an associate professor of public administration at Marist College in the School of Management. Dr. Melitski's research and teaching interests examine public performance measurement, shared services, and the impact of information technology on government management. His research assesses the use of technology to engage citizens, deliver services, measure public performance, and strategically plan, implement, and evaluate public programs.*

*Richard W. Schwester, Ph.D., is an assistant professor in the Department of Public Management at John Jay College of Criminal Justice, City University of New York. His research interests include police service models and shared municipal services.*