

WORKSHOP IN POLITICAL THEORY & POLICY ANALYSIS

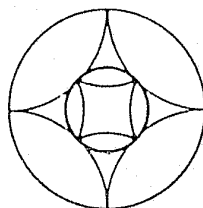
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POLICE CONSOLIDATION AND ECONOMIES-OF-SCALE:
DO THEY GO TOGETHER?

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POLICE CONSOLIDATION AND ECONOMIES-OF-SCALE: DO THEY GO TOGETHER?

Whenever officials discuss urban service provision, the words efficiency, effectiveness, and productivity are likely to be heard. Limited finances have meant that public officials must attempt to provide adequate service levels without increasing costs. Police services are normally a large part of a city's budget, and these costs in particular have risen sharply during the last decade. As a result, much attention has been focused on this problem.

The problems of financing urban public services have rekindled an interest in consolidating local government services. Local police services are no exception. The per unit costs of policing are generally expected to decrease as a result of economies-of-scale. But, the concepts of both consolidation and economies-of-scale suffer from considerable confusion. Many individuals refer to different things when they talk about consolidation. For some, consolidation means the merger of all police departments (or, on a broader scale, all governments) serving a metropolitan area. For others, consolidation refers to efforts to eliminate the very small police departments that predominate in metropolitan areas across the country. For still others, any arrangement enabling a current police agency to obtain some service from another agency is called consolidation.

Some call this latter form of consolidation "functional consolidation." Much of this activity results from a contract between two departments. One department contracts with the other to obtain such services as dispatching, training, crime lab services, and so on. Both departments in this arrangement continue to exist. I think this

last use of the term is inappropriate and confusing. A contractual arrangement between two agencies differs from the merger of the two agencies. Efforts to develop complex arrangements through contracting, however interesting, do not necessarily herald consolidation itself.

Consolidation or merger of police departments is frequently recommended because its proponents believe economies-of-scale will be found in police services production. This is an assumption I would like to discuss.

When someone speaks of economies-of-scale in production, what is meant? Technically, it means there is one homogenous, well-defined product (loaves of bread and automobiles are good examples). To produce this well-defined product, a large investment in fixed costs is required. In most production processes, these fixed costs involve the cost of the plant or equipment as well as management. When the fixed costs are large, the more units produced, the lower the per unit cost of producing them. In other words, the fixed costs can be averaged over a large number of units.

Many products meet these assumptions. Most of these products are private goods such as radios, refrigerators, and plastic buckets. These goods are easily bought and sold on the private market.

Are the assumptions of economies-of-scale transferable to the public sector? For many goods normally provided in the public sector, the answer would be yes. Large scale transferral of water, the production of energy, the reduction of air pollution, and many other public goods are characterized by economies-of-scale. For these goods, larger production units should be more efficient.

But what about policing? Is there a homogeneous product? I

think most people who know much about police would have to answer no on this question. General area patrol and response to emergency calls for service are quite different from homicide investigation, crime lab analysis, or detention.

What is the basic unit of output? On what basis do we take the total costs of an agency and divide them by some unit to determine the average cost of producing the product? Only in this way can one determine whether the product cost rises or falls as the number of units produced in one facility increases.

Without such a unit, one must assume a great deal when speaking of economies-of-scale. Strong assumptions are frequently made about police services.

One of these assumptions is that "unit" of output is the number of residents served. If this were the case, economies-of-scale in the provision of police services would be indicated if the per capita cost of police agencies fell as the number of residents served increased. In a cross-sectional study, the per capita costs of large city police departments would be lower than the per capita costs of small police departments. There have been many studies of city expenditures, in general, and police agencies, in particular. Most of these studies have found the opposite pattern. They have not confirmed the economies-of-scale hypothesis. In other words, most studies have found that the per capita costs of larger police agencies are considerably higher than the per capita costs of the smaller agencies. No study of police expenditure has found the per capita costs of police decreasing as the number of residents increased. If per capita costs were a good measure of output, the evidence

strongly negates the assumptions about economies-of-scale in police service production.

Other observers have used the FBI crime rate as an inverse measure of output. I would strongly argue that this is an inadequate measure of output. But those who have used this indicator have consistently found the Part I crime rates increase as city size increases. If this were an adequate measure of output, it would also negate the hypothesis that there are economies-of-scale in the production of police services.

If we don't use per capita costs or the FBI crime index, what measures do we have? Some have posed using activity measures such as arrest rates to determine the output of police services. Although this is an important police activity, one would hardly call it the output of the agency. It is only one of many activities police perform as they attempt to enforce the law and maintain the safety of the community. The many other activities are also important. Indicators of these activities include the number of tickets issued, the number of miles driven, the number of service calls responded to, and so on. These are important indicators for any student of police administration. But if we mix up the means with the final output we are in deep trouble. When only one of these is used to measure police performance, it is very simple for an agency to "increase" or "decrease" its output by simply detailing more officers to issue tickets or arresting a larger number of individuals on simple, misdemeanor charges, if those are the "measures."

Clearance rates are another suggested output measure. It is a better measure of output than arrest rate, but is still susceptible

to the internal incentive system of a department. As soon as a clearance rate indicator is used to measure performance, it can be greatly inflated through bargaining when criminals are charged with a crime. A suspect held on a single case may, for instance, be induced to admit to a number of crimes in exchange for a lesser charge. This would obviously "clear" a larger number of earlier crimes, regardless of the suspect's actual involvement or not.

I think we would have to agree that a range of output indicators is needed. Many of these do not have the nice attribute of being unitized. Suggested measures include victimization rates, response rates, level of follow-up, clearance, citizen satisfaction with particular services, and citizen evaluation of police services. Reliance upon a set of multiple indicators reduces the bias introduced by reliance upon any single indicator.

The group of measures to describe some police services should also differ from the types of measures used to describe other types of police services. The output of a crime lab, for example, is much different than the output of a large police department's patrol division. To analyze the efficiency of a crime lab, one could compute the per unit cost of performing different types of forensic analyses. This becomes a relatively decent measure of output and provides a rather easily computed per unit cost. Further, for this type of police work, an effective, logical argument for economies-of-scale could then be made. The production of forensic laboratory analysis involves large capital costs. The equipment is itself quite expensive; the more analyses performed on this equipment, the lower the per unit cost of any one analysis. Although I have not

yet seen any empirical analysis of the per unit costs of analysis for different crime labs of differing sizes, I would not be surprised if economies-of-scale were found. Even so, any single metropolitan area may not have enough lab cases to fully obtain these economies-of-scale. Crime lab analysis may require a much larger area, such as a state, or even the nation before real economies-of-scale are achieved in the production of this service.

Indeed, few local departments in the United States do extensive crime lab analysis themselves. Most police departments, except the very largest, obtain their crime lab services from state or private labs. These labs are able to better use their expensive equipment by conducting many separate analyses.

Many police services, however, do not require large overhead. Most police agencies allocate between 80 and 90 percent of their budgets to personnel. Some of that labor is devoted to administration, which would be considered overhead. In small departments, administrative officers frequently perform the same duties as regular officers. The police chiefs of most departments having fewer than 25 full-time officers do general area patrol and investigative work. These are not "behind-the-desk" police chiefs.

Much police work, such as the attempt to prevent crimes to property or persons, to respond to calls of service, or to solve some of those crimes that do happen, is a process of co-production. Police cannot produce these services by themselves, but must rely heavily on citizens for their cooperation.

From theory, would we expect the labor-intensive parts of police services to have economies-of-scale? No! Not for these

types of services, except in the smallest agencies. We would not expect economies-of-scale for several reasons:

- The overhead cost is relatively small for these services. The more services produced, the more personnel must be added. There is little capital cost to spread.
- Adding personnel means adding layers in the hierarchy. As additional layers are added to the hierarchy, problems of communication and command accelerate.
- Since the co-production of citizens is involved, residents of large communities may not involve themselves as readily as do residents of small communities. Thus, larger jurisdictions may face less citizen cooperation with local police.

Thus, contrary to the predominant assumption that economies-of-scale are possible in the production of most police services, the necessary theoretical conditions are not met in the police industry, except for such auxiliary services as the production of crime lab, entry-level training, and (possibly) detention. One might also speculate that economies-of-scale are possible in the creation of specialized investigation units. Homicide investigations, for instance, requires many cases to enable officers to gain expertise in this area.

But the largest proportion of police work is in activities for which one would not have any expectation of economies-of-scale.

Have these assumptions ever been tested? Yes. In a series of studies over the last five years, we have examined whether agencies of differing sizes serving communities with very similar problems produced more or less output and their relative efficiency. In no case have we found small- to medium-sized police agencies performing less effectively than the very large agencies serving similar neighborhoods. We have used multiple indicators of performance and

have examined the array of indicators to see if the pattern was consistent. The consistency of cross-indicators has been maintained in each study.

Thus, from a strictly economies-of-scale argument, one would make the following set of conclusions:

- One would expect the average costs of producing some auxiliary type of police services to decrease as the size of the producing unit increased.
- But for much police work involving immediate response to citizens, one would not expect economies-of-scale. Further, much evidence demonstrates that economies-of-scale do not exist in the production of these types of police services.
- Wholesale consolidation of all police services in a metropolitan area into a single agency may not make sense from an economies-of-scale argument.
- A complex system of large, medium, and small agencies, however, may be a very effective of organizing police services in metropolitan areas. Since large agencies could probably undertake some police service with greater efficiency than small agencies could, one would want to see some fairly large agencies in all metropolitan areas. But these large agencies may be comparatively disadvantaged in responding to most daily demands placed upon the police. Small- to medium-sized agencies may be more effective in responding to these needs.

A wide variety of mechanisms are, of course, available for achieving such a mixture. Many metropolitan areas have developed their own rich array of mechanisms including contracting, joint provision, interjurisdictional arrangements, and other related means of achieving mixed scales of production.

Major case squads are a way of making highly skilled investigators available to all jurisdictions in the metropolitan area. Many states also have organized state-level bureaus of investigation, and these are available for assignment in metropolitan areas regardless of the size of the police department taking the original case.

Economies-of-scale have been a crucial issue in the arguments for consolidation. But other issues are also important. Many observers have recommended consolidation as a means of achieving a more equitable base for the financing of police services. The question of financing is indeed major. Some services do benefit a large number of citizens. If the citizens of a small proportion of a metropolitan area pay to provide these services to other citizens, some are benefitting without having to pay. But in a complex mixture of large and small agencies, large agencies can be financed by a broad jurisdictional base, such as the county or a special district, while smaller agencies draw upon the financial base of smaller jurisdictions. It is also possible to finance the larger agencies through means other than property taxes. Payroll tax and commuter parking stickers are other mechanisms of financing.

There is no necessary relationship between the size of a financing unit and the size of a production unit. If increases in production unit size mean the agency becomes less effective, then it is important to ensure that production unit size is not the same as the financing unit size.

Another topic raised in arguments for consolidation concerns the level of training and professionalization required for adequate policing. But in several of our studies, we have found no relationship between police agency size and entry-level requirements regarding college education. As state laws have been passed across the country, more and more small agencies are sending their entry-level recruits to academies offering a minimum level of training. State laws have already achieved a very large equalization in the training levels

between small and large police departments. The most effective way of achieving adequate levels of training thus seems to be continued work on state legislation regarding entry-level training for departments of all sizes. In several states, the financing of training has been transferred to the states. This reduces the fiscal strain on all agencies.

Some observers see consolidation as a mechanism for dealing with graft. But recent events have shown us that some of our most severe graft problems have occurred in some of our largest and most professional police agencies. Graft may be more effectively dealt with by the presence of external agencies. Where there is only a single agency, those who receive the reports of suspected graft and corruption may themselves be a part of the corrupt system. Nothing is done. With multiple agencies, however, an outside agency may be invoked to investigate the problems. The probability of early follow-up on complaints may be much higher.

Another argument used to support consolidation is the need to cope with wide-spread problems. The problems of organized crime and civilian disorder are frequently cited. There is no question that to effectively deal with organized crime, very large agencies are needed. But a metropolitan area is frequently not large enough to effectively deal with organized crime. State and federal agencies are needed in dealing with this problem.

We have found effective exchange mechanisms among jurisdictions in some metropolitan areas for dealing with common problems such as bad checks, gangs, and some aspects of organized crime. One might argue that there is greater need for information exchange when agencies are

separately organized than when there is only a single agency. But we have observed large agencies where the intradepartmental competition and conflict was so great that the officers in one division would not share information with officers in another division. There is no evidence that the degree of coordination within large agencies is greater than the degree of coordination among multiple jurisdictions in a metropolitan area.

I have focused on a number of assumptions -- particularly those concerning economies-of-scale -- that are frequently used to support arguments for wholesale consolidation of police departments. Many such arguments abound. Some would drastically reduce the number of police departments within the U.S. to a mere 300 or 400 agencies. Before such wholesale conditions are accomplished, I would hope the logic and empirical evidence supporting these assumptions receive a very serious look. We have witnessed an equally massive consolidation of public school districts in the United States during the last 50 years. Given the consistently negative evidence for economies-of-scale and production of educational services, one can only wonder whether the considerable difficulties faced recently by the American educational system may have been at least partly exacerbated by the massive consolidations that have occurred.

Prior to a similar undertaking in the area of police services, I would hope that we would seriously rethink the underlying assumptions. There is certainly a great need to improve the effectiveness and efficiency of American police agencies. There are many ways to accomplish this. But I would argue that a simple movement toward massive merger of all police agencies into very large agencies and

very large constituencies would not lead to a general improvement in the effectiveness and efficiency of American policing. We may be heading in the wrong direction.

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