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Capacity of Local Government to Provide Services

Arlo Biere and John Sjo

Local government, the core of local collective action, strengthens community development when it can initiate and carry out local programs. Local government is greatly influenced by its relationship with other parts of the public sector.

This paper discusses the role of local government and the forces working to alter that role; presents a model to view the role and capacity of local government; and proposes research on the economics of local government.

Role of Local Government

Since the Great Depression, local government has increasingly depended on the federal government. Citizen demands for more public services were met by new federal programs and by federal grants to local and state governments. Also, states have taken over programs from local governments. As a result local governments lost responsibility in determining social programs but gained responsibility for providing social services. In Kansas, for example, the state has completely removed control and operation of social welfare from the county government. Sewage and waste disposal standards in all states are established by state and federal agencies. Cities and counties can receive state and federal aid to meet disposal requirements through cost sharing grants. Local public health offices are operated by cities and counties but are supervised by the state.

While local government has lost to state and federal agencies authority to initiate programs

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Contribution No. 614-a, Department of Agricultural Economics, Agricultural Experiment Station, Kansas State University of Agriculture and Applied Science.

and to set organizational policies and standards, it has gained responsibility for executing expanded old and new programs. An analysis of Gross National Product (GNP) shows local government expenditures are increasing relative to federal expenditures. Since 1955 local government purchases as a percentage of GNP have doubled, while federal purchases as a percentage of GNP have declined.

The future role of local governments will be shaped by citizen a) concern about the size and growth of the public sector, the growth of bureaucracies, and the decline of citizen participation in public decision making; b) resistance to higher taxes; c) demands for more public services; and d) recognition of the limits of government to produce. The financial crisis of our cities, especially New York City, has directed attention to problems of local government.

The public sector has grown from a minor to a major user of our nation's resources. Government purchases of goods and services now account for nearly one-fourth of the nation's gross national product, and government transfer payments, another one-tenth. Increased population, increased external costs associated with people and industries concentrated in the cities, and increased citizen demands for more and better services not provided by the private sector resulted in increased production of public services and in substantial growth of the public sector.

When public sector production used a small portion of the GNP, increasing government efficiency would not have saved many resources so public interest in productive efficiency of government was not great or intense. With the public sector growing more rapidly than the private sector the last two decades, interest in government efficiency has increased. Because government is a major user of our nation's resources today, even

small improvements in productive efficiency will result in significant resource savings. Thus, interest in the efficiency of government today is greater than in the past.

Public bureaucracies expanded with the growth of the public sector. Some citizens have rebelled. To them bureaucracy symbolizes the transfer of government from the people to bureaucrats. Those who are rebelling think that bureaucrats are substituting their own objectives, desires, and aspirations for those of the people [Nisbet]. They believe bureaucrats resist change other than growth and especially resist size reductions because the bureaucrats are trying to keep their jobs, the same as nongovernment employees do. The Colorado Legislature enacted a "Sunset Bill" in response to that belief. The bill established a maximum fixed life for all state programs. To continue a program, it must be explicitly renewed. Similar legislation has been introduced in other state legislatures and the United States Congress, and the idea is part of the 1976 Democratic party platform.

Citizens are seeking a voice in public decision making through court action opposing decisions of public agencies, by demanding open public decision making, and by participating in public hearings and deliberations of governing bodies. Citizens have effectively prodded along, reversed, or stalled environmental programs through court action. "Sunshine laws" require public officials to open meetings to the public and to provide public records of their actions. That forces public officials to be prepared to explain and justify their decisions to the public.

Citizens are simultaneously resisting tax increases and asking for new and improved public services. School bond referendums are failing with increasing frequency. Kansas law limits the rate total ad valorem property tax revenues may increase without a local referendum. Yet, citizens demand better schools, better law enforcement, more day-care centers, and more public housing.

To satisfy those competing objectives New York City has obtained revenues for new programs by selling bonds. But increasing debt to finance current expenses only delays the time when citizens must pay for the expenditures—as citizens of New York City have recently discovered. Public agencies can fulfill the public's competing objectives only by obtaining more output from present

resources. The pressure to provide public services more efficiently is great and is believed by some to be the most acceptable way to provide new and improved services. The Committee on Economic Development supported that belief in its recent report [see references].

The criteria for optimal resource allocation are the same in the public as in the private sector. However, public managers have been unable to measure the quantity and the value of public-sector output. Both measures are required to apply accurately the criteria for optimal resource use and to compare productive efficiency of various government units producing the same service or product or to compare the efficiency of public and private organizations producing the same product. Yet resource allocations are made between the private and public sector and among public uses. We need to find ways to apply the optimizing rule or to develop new criteria for allocations.

All needs and wants of the public cannot be met with our limited resources. The energy crisis alerted the public to the finiteness of our natural resources. That has been reflected in the comments of such public leaders as Governor Brown of California and Senator Hart of Colorado. They are saying because the world's resources are limited, we cannot satisfy all private and public wants. They also maintain that big business exploits big government and that state and federal grants to local government do not result in effective local operations.

The size and growth of government, citizen attitudes toward government and its bureaucracies, citizen resistance to higher taxes, citizen demand for public service, and recognition by some of the limits of government are influencing the roles of local, state, and federal governments. Advocates of new federalism, a move to redefine the relationships among levels of government, envision new leadership responsibilities for local government. At the same time, they would relieve local governments of programs that have overriding national concern such as social welfare and income redistribution. Revenue sharing is providing new revenues to local governments so they can use local initiative to meet some citizen demands. A basic objective of the new federalism is to find how government can be more effective and efficient.

Model for Studying Capacity of Local Government

Our framework for analyzing the public sector is analogous to welfare economics as applied to the whole economy. We use the framework to analyze efficiency and effectiveness of the public sector and of individual government units. Let individual units of government in their executive function correspond to the individual producers in the welfare economics model. The resources available to each unit are its physical assets plus available revenue and the resources purchased with that revenue. As a producer of public services, each government unit has a production function. Public services are produced to satisfy specific public objectives. We assume that each legislative body has an objective function to guide it in making choices. That objective function corresponds to the individual consumer's utility function in welfare economics. In the welfare model, economic goods and services produced provide utility to individuals as they consume the goods and services. In an analogous way, public services attain the objectives of a legislative body. Here, the social welfare function aggregates the individual objective functions to produce total public sector effectiveness. Thus government effectiveness is obtained in the same manner as economic social welfare.

Applying the welfare economics model to the public sector helps to identify the factors affecting efficiency and effectiveness and to recognize the information needed to measure efficiency and effectiveness within the public sector. That helps to identify the role and capacity of local government to produce goods and services and to identify research needed to help local governments.

Government effectiveness refers to the level public choices are attained. Measuring effectiveness requires weighting each individual unit's or agency's contribution to attaining overall objectives. That weighting involves value judgments by society (social choice), so it cannot be objectively measured.

Besides making social choices, governments develop production and delivery systems to provide the goods and services to fulfill the social choices made. Frequently, past social choices were made anticipating results that did not materialize. Either the program proposed action that was impossible with the resources available or the government unit failed to meet expectations. In the economics

of government research, social choice has not been effectively separated from production and delivery techniques.

Pareto optimum in welfare economics provides for suboptimization of social welfare. Pareto optimum provides the concept to isolate objective issues from social-choice issues. At Pareto optimum it is not possible to make anyone better off without making someone else worse off. That is efficient allocation of resources. In our model when it is not possible to attain more of any objective without sacrificing some of another, government is operating efficiently or at a Pareto optimum. That defines efficiency more generally than the common notion that government efficiency is synonymous with reduced government spending.

Our approach permits us to analyze the efficiency of a unit of a given government and the efficiency of transactions among government units. It also permits us to identify more clearly the massive information flows required among government units to attain overall efficiency. Efficiency is not an end in itself but an aid to attain chosen ends. Efficiency concepts help to separate government social-choice problems from production and delivery problems.

An individual government unit producing a given service is efficient when the ratio of the marginal physical product of the resource to the resource price equals the same ratio for any other resource used. Problems in measuring both output and input in the public sector make it difficult to know when that condition is met. It is common to use population-served as a measure of output. Only when per capita services are equal in quality and quantity among units will "population" be a valid proxy for output. Although the true measure of the value of public services is consumer satisfaction, it may be possible to develop intermediate or proxy measures of value. Price in a competitive economy is a measure of value because it is a good proxy for consumer satisfaction.

We think the problem of measuring output of the public sector, although admittedly difficult is not impossible. Outputs can be classed as physical goods (water, sewage treatment), or standardized services (licenses issued), or creative services (health services, law enforcement). A physical good can be measured using the ordinary system of weights and measures. A service is not tangible and cannot be described by physical

weights and measures. However, if a service can be standardized, then it can be measured in terms of some standard unit. For example, if issuing a license provides a standard service to all recipients, the number of licenses issued can be made as a measure of output. The most difficult output to measure is a service that is not standardized. Such a service requires creative activities by public employees each time the service is performed, and each performance is unique. Some services that are now standardized and thus measurable were once creative services, such as building inspection. As more was learned about the service, it was possible and desirable to standardize the service. Services are standardized for two reasons. First, standardizing a service is a prerequisite to standardize producing the service from which economies-of-scale may arise. The resulting productive efficiency may also improve the satisfaction of those receiving the service if it reduces waiting time, confusion, and/or other frustrations associated with receiving the service. Standardizing also permits the service to be measured and it provides the user with a guide regarding what to expect. The benefit is similar to benefits from grading products in the marketplace, but the public sector has shown little interest in grading its outputs. An example of measuring quality is the insurance industry's ratings of capabilities of city fire departments, which are used to establish local fire insurance rates. But that quality evaluation of a public service is by the insurance industry, not the public sector.

Information on cost to produce public services provides managers a basis to make comparisons both over time and with other units of government. Such information, thus, is an incentive to achieve more efficient production. Fund accounting, used in the public sector for budget control, yields little or no useful information on production costs.

Although measuring government inputs presents no conceptual problems, present measures of resources used in the public sector are not accurate. Fund accounting does not treat the typical government unit as a single accounting entity. Rather a typical government unit is financed through several accounting entities, called funds, established by legislative action. A typical county may have, for example, a general fund, a road and bridge fund, and a mental health fund.

The funds segregate revenues according to use, so a given department often is financed from several different funds because it performs several different functions. Segregating resources by funds in a department makes accounting difficult. To complicate the problem, more than one fund may be involved in financing one function. For example, Kansas counties have a special fund to finance employer contributions to social security and another special fund to finance employer contributions to retirement benefits of all county employees, regardless of sources of their salaries or wages.

In fund accounting all expenditures are treated as current expenses. When a fund purchases capital equipment, the equipment is not entered in an asset account of that fund. Rather it is recorded in a general fixed asset account. Thus, except for enterprise and intragovernmental service funds the cost of capital services used to produce a public service is not included as part of the cost to produce the service except in the year that new capital equipment was purchased. Using that accounting procedure, managers lack adequate information to make optimum resource allocation decisions. Charging full cost of equipment when purchased and charging no cost for existing equipment distorts current cost estimates. Likewise, failing to recognize deferred costs when the liability is incurred, as with unfinanced retirement obligations, obscures the true cost of government.

A measure of efficiency is the quantity of resources required to produce a unit of output. Usually the efficiency of a given unit of government or an agency is of most interest. But a unit or an agency likely produces a number of different services. Either the overall efficiency of the unit or the efficiency of producing each service could be used in evaluating a unit or an agency. Overall efficiency requires aggregating the different outputs into a composite output. This is not yet conceptually possible because we have no system of weights to use in aggregating unlike goods and services that have no market price. Present deficiencies in that approach are most vividly seen in economies-of-scale studies of government. Those studies correlate per capita expenditure (as a measure of unit cost) with the number of people served (as a measure of output) [Alesch and Dougharty; Sjo et al.]. Only in rare cases is number served a valid measure of output. Evaluat-

ing the efficiency of producing each good or service does not require aggregating outputs, but it does require allocating costs according to the resources used to produce each service. That is difficult but not impossible except in cases of truly joint production. It appears most fruitful to study efficiency of public services at the most elemental level and to use individual production efficiencies to evaluate the efficiency of an agency or unit of government.

Government units give little attention to a balance sheet for the whole unit. It is not natural to want to do so because the basic accounting entity is the fund. Also it is felt that because the primary use of a balance sheet is to measure changes in net assets, it has no use in such a non-profit organization as a government unit. Yet, the balance sheet does provide a useful record in meeting long-term obligations and improves accounting for changes in the values of capital equipment.

For total public-sector efficiency it is necessary to have efficient resource use among units as well as within units of government. Many transactions are between government units, e.g., grants, regulations, and contracts. Do those transactions and the actions of individual units sum to an efficient condition? In a purely competitive economy the price system provides the organizing mechanism or information system for achieving efficiency among government units. One of the tasks of the public bureaucracy is to provide such an information system. Many of the problems in bureaucracies center in their information processing systems. Different government structures most likely require different information systems. It is argued that the "new federalism" would greatly reduce the massiveness of the present information system. Is it possible to reorganize government to reduce the amount of information processing required? Cost and quality of alternative information processing systems is a fruitful area to study. Sometimes pseudo price mechanisms may be used to augment the information system for the public sector.

Among information transferred between units of government is the cost to perform specific services. As previously shown government accounting procedures do not measure the true cost of resources used to produce a service. Transmitting present cost information would be misleading and could lead to inefficient production of public services.

Accounting is a strong organizing concept and its impact on the structure of the public sector can be easily underestimated. Present accounting procedures do not discourage proliferation of local government units. Because a county is not a single financial entity but a conglomeration of financial entities, called funds, there is little to restrain forming new special districts. Then a new accounting entity likely will be formed whether the function is provided by the county or by a special district.

Externalities and Efficiency

Even when individual government units accurately measure cost and value of outputs and are organized to produce efficiently, individually, the total public sector may not be efficient. Inefficiency in the combined sum of efficient units results from conflicting objectives among the units and from benefits and costs of individual programs and functions extending beyond the unit's jurisdiction. Failing to recognize and to transmit those externalities to the individual government unit leaves an incomplete information system that is inadequate to formulate individual unit goals or to make decisions consistent with total government goals. In some instances the problem is solved when an externality is internalized by moving the program to a higher government unit where all costs and benefits are internal to the larger jurisdiction.

Externalities in both producing public services and in satisfying public objectives are similar to externalities of production and consumption in the private sector. Fire protection, community parks, and libraries have few production externalities. Education has externalities because many people are living and working in a community other than the one that educated them. Government rules on property rights and on commerce have implications far beyond a single community. Externalities in law enforcement result from investigation and apprehension going beyond the jurisdictional boundaries of any one police department. The cost to provide a service to another jurisdiction, for example apprehending another jurisdiction's escaped prisoner, is another type of externality. Externalities can be either positive or negative. A negative one (cost) would result from a local health department failing to enforce a stream quality-control

regulation so polluted water flows into the next jurisdiction.

Externalities exist in satisfying objectives when the level of attainment of an objective in one community influences satisfaction in another community. Recent American history shows that citizen concern for equal rights extends beyond one's own community. The same is true for social welfare and public health. The approach in equal rights has been to eliminate the externality by moving the issue to the federal level. Social welfare remains a state and local obligation even though it is recognized that costs and benefits of such a program transcend state and local boundaries. Serious national health hazards such as this year's vaccination program against swine flu and past eradication of cholera and other dreaded diseases have been co-ordinated at the national level. Coping with such externalities is one of the challenges of any public-sector information system.

Research Opportunities in Local Government

We have attempted to analyze the role and the capacity of local government as a component of the public sector. We found these research opportunities in local government structure and operation: descriptive analyses of local government structures and operations; restructuring management systems for local governments; refining techniques to measure output, input, and efficiency; analyzing the legal-economic foundations for local governments; analyzing the effect of state regulation on local governments; reorganizing government operations and structures; and determining reasons for and alternatives to proliferating local government units.

Detailed description of the structure and operation of the offices and departments of counties and cities is the foundation to study local government. Yet, such information is scarce. We did such a study of Ellis County, Kansas, to obtain the institutional information required to design a new financial management system [Sjo and Biere]. County officers, state officials, and state legislators have indicated that the report on that study has aided their understanding of county operations.

Although financial management systems have been designed for large cities and counties, moderate sized local governments have not received

equal attention. Furthermore, present local government, financial-management information is organized primarily to provide accountability. It could also feedback to local government officials on performance if it provided accurate cost information. Fund accounting founded on legal requirements rather than accounting principles is not well suited to providing that information. It appears that a two-part accounting system is necessary to provide both cost information and statutory information. One part would be the fund accounts; the other, function or activity accounts. The complexity of a dual accounting system would necessitate a computerized accounting system, so the complexity would be in the software. Then operation would be no more complex than operating the present fund accounting system. We are taking that approach in designing a new financial management system for Ellis County, Kansas.

Another research need is to refine the techniques to measure output. By dividing output into its most elemental forms as discussed on page 67, output can be measured better. Improved measures of output, along with improved measures of costs, can be used more effectively to measure efficiency.

The state constitution and the statutes of the state provide the legal foundation for local governments. Local governments could be more efficient and effective if their officials accurately understood the opportunities and limitations of local government. Many states have "home rule" for cities and for counties. Paragraphs governing local governments in Kansas (more than 5000 paragraphs in *Kansas Statutes Annotated* related to county government) are widely dispersed throughout Kansas Statutes. A synopsis of those paragraphs would be useful to decision makers in Kansas.

Local governments are also affected by statute interpretation and administrative regulations of the executive branch of state government. What is the nature of those regulations? What role do they play in the overall information system? Vague, volatile, and conflicting regulations increase uncertainty for local decision makers and reduce efficiency and effectiveness of local government. Regulations may serve purposes other than efficiency, for example, to constrain social choice at the local level.

The structure of institutions in the private sector is continually modified as a reaction to

changing economic forces, but the structure of many local governments is fixed by statutes. As the environment for an institution changes, it seems likely that the institution will also need to change to cope with its new environment. For example, new technologies may provide organizational economies when offices and departments that perform similar functions are combined.

The number of special districts continues to increase. Why are we experiencing such a growth? Will that growth eventually lead to consolidation as we experienced with schools? Studies of special districts and reasons they proliferated would help answer those questions.

In summary, we identified major forces influencing local government today and developed a model for analyzing those forces. From the analysis we propose research opportunities to increase the capacity of local government.

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