

Open Systems Model to Analyze City Government Service Delivery

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A framework for analyzing and evaluating city government organization structure and the delivery of public services is described. The model recognizes internal and external influences and community attitudes as determinants of structure and process and of interactions between structure and process. In application, the interactive, open systems model provides a basis for evaluative research, comparative research, and organizational development.

Introduction

Organizations are large-scale social units designed to achieve explicit objectives. Organizations should change both form and procedures in response to an increasingly complex environment and to expanded tasks. It is critical that changes are monitored to insure effective continuity of operation and accomplishment of objectives. Specific applications in the management science disciplines are required to properly analyze the operations of the organizational unit.

These remarks are particularly relevant with respect to city governments in that:

- (1) These organizations are complex and multi-functional.
- (2) They must respond to several environments.
- (3) Both political and economic considerations, frequently con-

flicting, must be fused in organizational and operating decisions.

- (4) Characteristic bureaucracy and accountability may stultify innovation.
- (5) External controls typically lack the immediacy and specificity characteristic of the private sector.
- (6) Funds and staff for management research and development are extremely limited.

These difficulties are compounded when analysis depends on measurements and assessments which must be generated externally as well as internally, which relate to both economy and satisfaction, and which consider total effectiveness, perceived and actual, as well as technical efficiency as defined by traditional economic analysis.

In a recent poll conducted by CBS News, for example, 39 percent of the respondents indicated dissatisfaction with the operations of governments and the services they provide. In answer to the public dissatisfaction with the operations of government, many political scientists contend that most Americans want better — not

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smaller — government. Even politicians, like for instance, Senator Birch Bayh, generally state that the problems of government will not be resolved with less government; what is needed is better government.

According to the Bureau of the Census data, employees on the payroll of state and local governments increased from 3.2 million in 1945 to over 12 million in 1975. This increase is directly related to the growth of social and other programs administered by state and/or local governments. With programs sponsored by the federal government, burdensome reporting procedures are required. In many cases, questions are being raised about the net benefits of such programs when public administration is made more difficult. Bureaucratic inefficiency has surfaced as a critical public concern. In some agencies, it has been estimated that 20 percent of staff time is absorbed by reporting requirements.

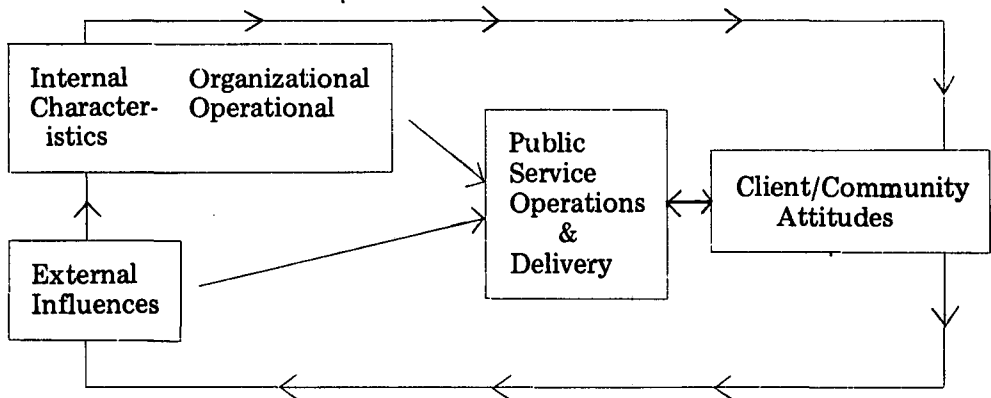
**Framework of Analysis:
Systems Model**

Faced with rising costs and declining tax revenues, city governments are

beginning to feel the pinch more than ever. Despite added reporting requirements and demands for more services, some local governments have had to slash their operating budgets. A review of cutbacks indicates that most budgets have been reduced by curtailing services and/or by laying off personnel. A more logical procedure would be to review and evaluate present organizational and operating procedures. Such analysis must examine the governmental structure, the services offered, and the process of interaction between structure and social service. The authors have developed a systems analytic framework for examining city government structure, social service process, and the relationship between structure and process. Several specific research areas have been delineated for analysis in order to develop a basic model of public service delivery within the context of city government.

The research framework employed in analyzing the service delivery system is presented in Figure 1. In application, this model consists of three stages of analysis: (1) internal characteristics, (2) external influences,

Figure 1. General Model of Public Service Delivery



and (3) client and community attitudes. The first stage involves both organizational structure and operational or process characteristics. The latter component includes the support functions of accounting and finance and such service functions as public safety, refuse collection, and transportation. The second stage is an examination of specific external influences, *viz.*, federal, state, regional, and local factors which affect organizational structure and operations. The third stage focuses on the services delivered and the constituency served by city governments.

Internal Characteristics

Organizational Elements

These have two components: (1) organizational structure and (2) organizational functions.

(1) *Organizational Structure*. The internal organizational analysis includes measures and evaluations of major structural dimensions of the total community government organization as a whole and of each of the subdepartments as well. The structural dimensions are identified and defined as follows:

- (a) *Centralization* is the degree to which power is concentrated in a social system.
- (b) *Complexity* is the degree of structural differentiation within a social system.
- (c) *Formalization* is the degree to which the norms and rules of a social system are explicit.

(d) *Innovation* is the degree to which a social system is a first or early user of an idea among its set of similar social systems.

(e) *Routinization* is the degree to which role performance in a social system is repetitive.

(2) *Organizational Functions*. The structure of any organization must be designed to facilitate the process of communication to ensure that planning, staffing, controlling, and coordinating functions are enhanced. These functions comprise the second focus of organizational analysis.

(a) *Planning*. The first step in the planning function is *forecasting*. The major questions of concern are what resources, information, and procedures are utilized to project community service needs. A second factor is the projection of available revenue from taxes, federal and state assistance, and other sources. On the basis of these two projections, secondary forecasts of manpower, equipment, and materials needs can be evaluated.

The second element in planning is the *establishment of goals*. Are goals clearly stated? Are they revised periodically to reflect changes in needs forecasts? What methods are used to insure that subgoals are consistent with major goals? Are priorities established? What methods

are utilized to insure that members of the organization are aware of and understand their part in achieving these goals?

- (b) *Staffing*. This function begins with the projection of manpower needs and the resulting *manpower plan*. How are jobs analyzed? Are job specifications developed to reflect the education, skills, and attitudes necessary to adequately perform the duties of each position? Is this information utilized to provide guidelines for recruiting, screening, selecting, orienting, placing, and training employees?

Once the employee is on the job, what *training* opportunities are available for improving performance in the present position or for developmental purposes? Are standards established for each job? What policies and procedures are utilized for determining promotions? What incentives are provided? How is discipline handled? What information is kept in personnel records and how is this information utilized?

A third area of concern in performing the staffing function is *wage and salary administration*. What criteria are utilized to determine beginning wages and salaries for each position? How is performance evaluated and rated? How is this information used in

determining wages, salaries, bonuses, and promotion? What external influence through government and unions is present? What planning procedures are in use and what provision is made for negotiating with unions? What fringe benefits are provided and how are they determined?

The staffing function also includes *employee relations*. Employees will be surveyed regarding their satisfaction with respect to the job itself, the work environment, leadership and supervision, recognition for performance, communications, services for employees, wage and salary, opportunity for advancement, and fringe benefits.

- (c) *Control*. The *control function* actually begins with the planning function since it is in this activity that goals are determined, budgets are developed, and standards of performance are established. Control is exercised through leadership and supervision and interim reports of the on-going processes. Feedback control is the evaluation of actual expenditures with budgeted projections, comparison of services rendered with respect to community expectations, and performance evaluations of individuals and departments with regard to pre-established goals and standards. The analysis, therefore, is con-

cerned with the nature of data used for control purposes, who utilized this information, and how it is used to improve performance.

- (d) *Coordination.* The *coordination function* is closely related to the control function. It is effected by providing information regarding internal structure and functions, relations between departments, and relations with other external organizations which may affect the quality, quantity, and cost of delivering public services. For example:

- (1) What overlaps and duplications exist within the total governmental structure, especially in relation to delivery of services?
- (2) Are activities, definitions, etc., standardized among interacting units? Where might greater standardization be useful? Where does standardization hinder operations?
- (3) What mechanisms exist for facilitating coordination between governmental units in the community? Between city and state? The federal government? Regional organizations?

Operational Elements

The actual operations of city government are also subject to evaluation. The relevant taxonomy here

includes: (1) accounting, (2) financing government operations and capital expenditures, (3) marketing and public information, and (4) service delivery.

- (1) *Accounting.* Local government has a primary goal of providing services in an effective and efficient manner. Managers must ascertain that funds received from taxes and other sources are at least equal to the costs of rendering services.

In order to have effective management, success must be attained in the following areas: pricing, programming, and budgeting.

- (a) *Pricing.* Many services are rendered for the good of the public, free of charge. The concept that no price be charged is being challenged increasingly. Consequently, governmental pricing policies need to be explored.
- (b) *Programming.* A well managed organization makes the plans in terms of programs. Programs can be subdivided into two types -- new and ongoing. Programs need to be analyzed in terms of costs and benefits. In addition, zero base review techniques are needed, i.e., examining each function from scratch.
- (c) *Budgeting.* Not only useful as a planning tool, budgets assist in the control process.

- (2) *Finance.* The financing of operations and capital expenditures takes place in one of four ways:

(a) revenue from taxation, (b) grants, subsidies, and contracts (usually with state or federal government), (c) user fees and fines, and (d) short- and long-term borrowing. Criteria for sound financing includes: (1) adequacy of funds to meet expenditures in the light of any gap between receipts and expenditures, (2) net cost of financing operations including interest paid less interest received and expenses of collecting, processing, and accounting for receipts, and (3) adequacy of forecasting procedures.

- (3) *Marketing and public information.* Local agencies generally engage in providing services without directly charging the user. Examples of such services are parks and police and fire protection. Service organizations are concerned with exchanges and can apply marketing principles and employ marketing research to aid decision-making. In many respects these local government agencies are very much like profit-oriented businesses. The users of these services are essentially consumers whose wants and needs should be of utmost importance to the providing agency.

In an era when increasing numbers of business organizations are embracing the consumer orientation and marketing concept, logic dictates that local government agencies do the same. A typical result of placing the consumer in a central position is increased profitability due to providing

goods or services which the consumer wants or needs. Developing such desired goods and services greatly reduces the promotional task and, hopefully, contributes to a more favorable institutional image. The consumer is also more willing to pay the required price.

- (4) *Service delivery processes.* Evaluation of an organization's service systems (and the data processing system serving them) involves the measurement of efficiency and effectiveness.

(a) *Efficiency.* An efficiency measure compares inputs to outputs and essentially asks, "How much service is provided per dollar or per man-hour?" For example, as a service becomes more expensive, the efficient use of passenger and service delivery vehicles (e.g., snow plows and trucks, garbage trucks and police cars) has become an important consideration for city government officials and agencies. Five specific questions relating to this field, therefore, need to be reviewed:

- (1) What are the most important trip purposes for city government passenger and service delivery vehicles?
- (2) What criteria are used for assignment of city government passenger and service delivery vehicles during a normal workday?
- (3) What policies have

been created to aid in the efficient and effective use of city government passenger and service delivery vehicles?

- (4) What are the important attributes of an ideal city government passenger and service delivery vehicle system or systems?
 - (5) How are existing city government passenger and service delivery usage systems viewed by the general public as compared to the ideal?
- (b) *Effectiveness*. This measure compares actual outputs to some predetermined norm or standard. Several standards will be investigated:
- (1) Performance of similar organizations.
 - (2) Ideal. The maximum output of a given resource set, as determined deductively, provides another standard.
 - (3) Value judgment. Goals may be set for a service organization in terms of experience or expertise regarding the service process, the resource mix available to it, and what is determined to be acceptable.

External Influences

The effectiveness of the service delivery system is dependent on the relationship to the general environment. Relationships to be analyzed

are those: (a) between departments, (b) between departments and executives, and (c) between city and external influences.

- (a) *Between departments*. Data described in the earlier section should be considered in the light of inter-unit relationships. What mechanisms for inter-departmental activity exists? What new structures should be considered? Where, if any, does conflict exist between city departments? What can be done to resolve conflict situations?
- (b) *Between departments and executives*. What checks and balances exist between the various city departments and the Mayor and Council? What informational mechanisms exist? Where does the feedback process need improvement in terms of speed and accuracy of information obtained?
- (c) *Between city and external influences*. Emphasis should be placed upon four sources of external influences: (1) federal impact, (2) state impact, (3) regional organizations, and (4) local influence structure.
 - (1) *Federal impact*. Are revenue sharing funds available? How are these funds being used? How may they be reallocated? What impact do various federal programs have on the delivery of local services?
 - (2) *State impact*. What resources are supplied by the state? How are these resources utilized? What mechanisms are available for improving local-state relationships?

- (3) *Regional influence.* To what regional organizations does the city belong? What impact do these regional bodies have? Is regionalization a viable means to accomplish local objectives?
- (4) *Local influence structure.* What kinds of non-governmental influence exist?

Client/Community Attitudes

The city government's response to efforts by the public to secure delivery service over which it has control depends in large measure on the government's estimate of the degree to which its programs enjoy public favor. The government must decide whether an unreceptive attitude toward their delivery of services risks reprisal at the polls. A second major problem can be traced to the possible existence of differences in the perception and attitudes of the provider of the services delivered (community/client). Local governments, therefore, should strive to provide those services that are perceived by constituents as desirable and/or necessary. User expectations and priorities should be determined and programs established to satisfy these, as nearly as possible, according to perceived importance ratings. Where public priorities are impossible to implement or where city leaders view them as detrimental to the general welfare, educational programs may be designed in an attempt to restructure desires and priorities. A necessary part of any local government's strategy is the task of winning a sufficient degree of public support for its programs. Monitoring of public desires and priorities also aids greatly in the establishment of rate structures, methods of delivery, location of

institutions, prediction of referenda and bond issue outcomes, as well as in countless other areas.

Analysis of the attitudes of the public and of government officials and employees related to the local service delivery system and of the local government in general is important. There are two thrusts to this analysis.

- (a) *Provider vs. citizen/client responses.* Differences in opinions with respect to program priorities and evaluation may exist between citizens and the officials responsible for service delivery. Such differences may be associated with socio-economic differences between the two groups or may reflect biases inherent in providers.
- (b) *Within citizen/client responses.* Differentiation or segmentation within a population's attitudes is a recognized phenomenon in consumer behavior studies and in welfare economics. Such differences may be based on variations in tastes and values or in real needs and problems. When significant, such differences present government officials with a mandate or opportunity to seek ways of segmenting public service delivery in accord with segmented priorities and standards of performance.

Implication and Conclusions

The primary purpose of this systems model is to provide information concerning internal structure and functions, as well as external relations with other organizations, that may have an effect on the quality of community

services delivered, and the attitude of the community/client toward the service delivery process.

The development of the framework and line of investigation described above is based on organizational realities in city government as well as customary criteria for effective and efficient management. To be sure, this model adds detail to the organizational review process which more conventionally has focused on the span of control, chain of command, and costs. But this added detail recognizes that city departments and units and the whole of city government cannot be validly distilled out of their political and financial environments without the considerable risk of separating them from the forces that stimulate and justify their activities.

A further advantage of this model is that it may be applied in a wide variety of situations. First, its most obvious application is in reviewing or evaluating the organization and performance of a specific governmental entity. The data base developed permits the analyst to determine whether the entity is meeting public expectations and professional norms for city management. Second, a review of the findings generated in this paper provides directions for improvement in training, restructuring of jobs and responsibilities, and reorganization. Third, the model lends itself to comparative studies between different cities in different and similar

situations. This is of great interest in academic research as a means of understanding how local organizations respond to external and internal factors. A pragmatic value of comparative research is that leaders of one municipality can, at once, compare their city to others in a more detailed fashion and obtain a more than superficial view of how different cities are organized. Of particular interest is the potential for before-after comparisons for the same city with respect to significant internal and external changes.

Finally, the model described requires involvement throughout the governmental organization of a city, from councilmen to individual workers. Thus, those responsible for service delivery directly participate in an evaluation process that is both instructive and performance-based. With the possible exception of the citizen survey component, this kind of evaluation can be conducted with minimal assistance from outside organizations.

In conclusion, the open systems model emphasizes the interactive nature of the municipal enterprise. The investigative detail required to analyze municipal government in its application also provides the basis for workable, economical, and effective strategies for improving the delivery of public services at a time when these aspects of city management are being challenged.