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Building Local Government Capacity: The Toolbox for Outreach Educators¹

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Abstract. The environment in which local governments, particularly smaller more rural governments operate, has undergone fundamental changes. What was once modest part-time volunteer service by civic-minded persons has been transformed into complex, time-consuming political environments. As the responsibilities and challenges of managing local government mounts, institutions of higher education can play a significant role in helping these community volunteers better understand and act upon the new environment in which they find themselves. In this article, we lay out one potential line of thinking to help institutions of higher education address this growing need for applied research and outreach education.

1. Introduction

Among the significant political/institutional changes of our times has been the shifting of responsibility for individual and community well-being from broader levels of government to local levels. Over the past 20 plus years, we have profoundly changed our notions about who can best respond to local needs and how that is best achieved. Greatly diminished are national-scale models to respond to economic and social problems. Increasingly common is the bundling of federal financial assistance together with broad program goals and shipping block grants (and responsibility) to the states. In many cases, the responsibility is

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passed along to cities, counties or regional institutions that are expected to devise local strategies for program delivery.

Local governments are assuming vastly expanded service responsibilities. While many cities and counties have the wherewithal to successfully cope with a growing slate of programs and services, many others do not. Rural communities in particular, even those of size and substance, are struggling under the burden of increasing need and responsibilities in an era of limited financial and human resources. For these communities, the assistance provided by state government and university-based applied research and outreach education programs can be a significant help.

The state land grant universities, and the Cooperative Extension Service in particular, have a long history of providing assistance through applied research and educational opportunities to communities. Just as the focus and content of these outreach educational programs have evolved over time to meet the changing needs of rural people, there is a new set of challenges to undertake in areas of local government assistance. Whether through institutions such as the Extension Service or the service programs of other institutions of higher education there is a substantial opportunity to play an important role in facilitating the transition to locally based service-delivery systems. Indeed, there is significant increased pressure for institutions of higher education to be more relevant to local and regional needs within an outreach educational mode (Webb 1997; Phillips 1997).

While there is much that can be done to improve local government leadership and institutional capacity, this article focuses on technical assistance services and issues associated with outreach education. Frequently, what local officials need is information and analytical assistance of the sort that university-based applied researchers and outreach providers are well suited to deliver. Often, this type of technical assistance can help inform local decision-making in a way that can improve outcomes and utilize limited local resources more effectively.

Our objective is to outline a number of the technical services that can be found in the toolbox of outreach assistance providers. A toolbox approach provides many avenues of entry into the community while responding to the varied needs across communities. We advocate an approach adept at responding to technical questions related to economic policies and events, public financial management, or public service organization and provision. Providing competent analytical assistance is the entree of an effective outreach program. In the context of providing technical consultation, we have opportunities to engage in a dialogue that enhances local capacity to better conceptualize the situation and make choices that enhance long-term community viability. In essence, specific questions related to technical problems opens a 'teachable mo-

ment' that allows institutions of higher education an opportunity to expand the thinking of local officials and concerned citizens.

In this article we review potential tools ranging from simple to complex economic modeling tools, simple descriptive analysis to accounting practices that can be used to gain the necessary policy insights. We then discuss in detail alternative models for 'in the field teaching' of issues to local residents. We close this short overview with some potential ideas for future thinking.

2. Technical Assistance Toolbox

Maintaining and enhancing rural community viability requires attention to multiple facets of local institutions and social organizations. Of considerable importance are efforts to enhance individual leadership skills and organizational effectiveness. Some programs, such as community strategic visioning (Walzer et al. 1995; Walzer 1996), can mobilize communities to take action. In this era of public service devolution the need for competent analysis to better inform decision making becomes vastly more important. In particular, the lack of knowledge of issues coupled with the inability to distinguish 'red-herrings,' often rampant at the local level among volunteer community leaders, hinders effective local action. In such cases, a realistic understanding of issues based on applied research can have significant impact.

Local officials have relatively more responsibility to make service decisions that have important consequences for individual and community welfare. Organizations that offer technical assistance can provide high-value services to communities faced with choices about how to expend scarce local resources in areas related to local economic development, community planning and local public service provision. Institutions of higher education can provide insights into specific questions based on knowledge of current policies and the results of the current research. In the next section, we briefly outline several of the analytical services that have high-value and high-impact in community decision-making. In the final section, we discuss several issues associated with the delivery of outreach services.

2.1 Economic and Fiscal Impact Modeling

One of the common information requests university faculty and staff receive relates to the impacts that some economic event or change in policy has on the economic and fiscal position of the local government. Regional economic modeling provides a useful framework for addressing these types of questions. These models provide quantitative representa-

tions of the local economy such that the interactions between economic sectors and other components of the economy become apparent. Such models can be used to forecast impacts related to employment, income and population that are associated with economic events or policy changes. More sophisticated models can also provide projections related to local public finance, housing, retail sales and other demographic changes. This information is very useful to local officials attempting to evaluate alternative actions and plan for efficient service provision.

Identifying the impacts of economic events and policies requires understanding the relationship between productive activities and related factors such as employment and income. Regional modeling techniques help identify and quantify these relationships. The class of models dealt with in this discussion begins by specifying a series of economic accounts that chart various financial flows. The realism of these models increase as the accounting of economic flows becomes more comprehensive, assumptions regarding the relationships between economic agents are allowed to vary, and as temporal dimensions are incorporated.

2.1.1 Economic and Fiscal Impact Modeling

A major branch of regional quantitative analysis that opens possibilities for understanding the regional economy begins with input-output analysis. Input-output (I-O) analysis is a system of accounting for the economic flows within a region at a point in time. The I-O system is fundamentally concerned with the economic flows between economic agents selling and buying goods and services within the economy. The transactions between regional agents (firms, households and public institutions) are organized to show how each agent purchases factor inputs (labor, capital, land) and sells goods and services to every other agent (Miller and Blair 1985; Richardson 1985; Rose and Miernyk 1989). The predictive power of the accounting system is realized through a number of straightforward transformations to generate economic multipliers. The multipliers can be used to project the impact of an event or policy to such things as the level of local economic activity, income generation or jobs.

An extension of I-O analysis is social accounting matrix (SAM) analysis. SAMs are highly detailed and flexible accounting systems that emphasize income flows across institutions. Whereas I-O tends to focus on the interaction of production and consumption (buyers-sellers and/or supply-demand) sectors and how changes to the economy ripple throughout the rest of the economy, SAM methods were built to focus on the interaction between economic and social structures to show how income is distributed (Pyatt and Round 1985).

The SAM fully accounts for the flow of all regional income in greater accounting detail. A SAM can include disaggregated matrices of demo-

graphic and occupational structure. In addition, a SAM incorporates critical organizational structures that determine how income (including savings, transfers and investment) flows through the region. Social accounts detail the linkages between production, the institutions that organize wealth, and household income classes. Thus, SAM analysis has several important advantages over input-output analysis: it focuses on the household as the unit of analysis and it includes consideration of more income sources that are important to identifying the beneficiaries of economic change (Rose, Stevens and Davis 1988; Leatherman and Marcouiller 1995).

Input-output and social accounting matrix approaches offer insight into regional economic relationships. They incorporate a number of simplifying assumptions, however, that limit their utility in evaluating policy alternatives. Linear programming (LP) models permit policy analysis that reveals optimal outcomes based on multiple objectives, taking into account the role of prices and specifying the constraints to which the system is subject. The constraints can include such considerations as levels of production, income generation and distribution, and political feasibility. Such programming models can simultaneously consider alternative perspectives in response to a policy change, including those of policy-makers, regional producers and households (Dervis, de Melo and Robinson 1982).

The advantage the LP approach offers is that the maximization of multiple objectives, including perhaps non-economic measures, implies many potential solutions to the policy problem, whereas input-output approaches typically imply only one best outcome. Secondly, the introduction of the constraints can allow much greater flexibility in specifying trade-offs and other limitations associated with the use of factor inputs and the types of production outputs. Finally, the models can be considered dynamic because they can extend over a period of time. The limitation, however, is that the models need to be narrowly defined to remain tractable. While for specific questions, this is not necessarily an issue, for broader questions it can become troublesome.

There has long been interest among regional scientists in integrating methodological approaches. From the perspective of regional economic modeling, the integration of input-output and econometric methods is most relevant. Rey (2000) recently reviewed the status of integrated econometric/input-output (EC/I-O) modeling. He indicated there were both theoretical and practical advantages associated with integrated models. The principle theoretical motivation for integrating EC/I-O models is to compensate for the restrictive assumptions associated with using either approach in isolation. I-O modeling assumes linear economic relationships, no economies of scale, and no adjustments associated with changing prices. Regional EC models can incorporate more

realistic behavioral assumptions. Given the extensive data and calibration requirements of these models, however, they tend to be highly aggregated. I-O models, on the other hand, can be built with the high degree of disaggregation for detailed policy questions. By integrating these approaches, both are improved. More realistic economic behavioral assumptions can be incorporated into policy analysis, yet the high degree of disaggregation needed for understanding impacts for specific sectors and entities can be maintained. On the practical side, integration can help to improve forecast performance, create more comprehensive impact analysis capability, and reduce measurement error. Much of the improvement stems from creating a dynamic model that incorporates a temporal dimension, yet maintains inter-sectoral detail.

Regional computable general equilibrium (CGE) is probably the most complex system for modeling policy and economic impact analysis. CGE models begin with a fully-specified economic theory of how regional and/or local economies should respond to market and policy forces. The data required to empirically operationalize these models are housed in a social accounting matrix framework that comprehensively accounts for interregional commodity and income flows (Kraybill 1993). The accounts and assumptions of agent interactions are imported into specialized computer programs where the modeler specifies relationships between the economic entities. The advantage of this system is the capacity to specify nonlinear relationships between economic entities based on changes in relative prices associated with output, labor and other factors. The disadvantage of CGE approaches tends to be the high degree of effort needed to correctly specify economic relationships and the large quantity of information required to specify the model. Given these requirements, CGE models tend to be highly aggregated and somewhat inflexible.

2.1.2 Fiscal Impact Analysis

Fiscal impact analysis is concerned with the tangible effects of a policy or event on public sector costs and revenues. Fiscal impact analysis is frequently used in the context of local decision-making related to land use changes, such as conversion of farm land to new housing or business development. It can help local policymakers determine whether the public benefits of a development proposal or land use policy outweigh the public costs. Three types of fiscal impact analyses are planning approaches, case studies, and econometric approaches.

Robert Burchell, David Listokin and their colleagues (1978, 1980, 1994) are probably the best known for their periodic summaries of the evolving state-of-the-art in applied fiscal impact analysis. Their focus is at municipal and school district levels, attempting to estimate how population and employment changes are likely to affect demand for public

services and generate local government revenues. The task is to estimate how a particular type of development is likely to affect local population (number of residents, employment and school-aged children) and to translate those changes into public service costs and public sector revenues.

There are several ways to project population increases associated with development based on the use of demographic multipliers. The demographic multipliers are obtained from either national standards or from local surveys. Depending on the type of community, the type of proposed development, and the existing service capacity in the municipality and school district, public service costs are estimated based on gross average service costs or marginal service costs. No effort to address community capacity to absorb the growth is considered.

To project impacts to local government revenues, the analyst needs to consider the basis for each type of revenue. Many revenues are formula-driven, and the projection requires applying the appropriate rate to the expected change. Other types of revenues are generated by changes in the population. Historical trends in taxable retail sales, user fees, or fines can be charted, converted to a per capita or per unit basis, and applied to the projected population or unit change. The final step is simply to compare the costs to the benefits to determine whether there is likely to be a net fiscal surplus or deficit.

The methods discussed in this section provide a reasonably efficient way to project municipal fiscal impacts associated with economic policies and events across a range of communities. In essence, what happened to a “typical” community can be described and why, but specific circumstances are often lost to the analysis. Care should be taken, however, to check that the underlying assumptions inherent in their application are reasonable in light of a given situation.

Three cautions deserve specific mention. There needs to be a reasonably good estimate of the likely direct changes associated with the economic policy or event. The change scenario needs to be carefully constructed and checked. In almost any type of policy analysis, the accuracy of assumptions associated with the direct impacts determines whether the analysis output is valid.

Similarly, consideration is needed to determine whether the development or other change is typical, and whether it is reasonable to use multipliers or other parameters based on averages or national norms. It may be appropriate for the analyst to adjust the parameters if the standard approach is likely to result in under- or over-estimates. Similarly, there may be instances where it is appropriate to subject certain parameters to a sensitivity analysis.

Finally, there also needs to be an accurate understanding of the existing capacity within the municipality. If the change of interest trips the

threshold where new municipal investments in staff, facilities or infrastructure are required, the costs to the municipality will change dramatically. In such a case, it is essential to use a marginal cost, rather than an average cost approach. Specifically, the capacity to change is not readily clear. For example, the fiscal impact of adding 100 new homes to a sewer treatment system operative at 80 percent capacity will be vastly different then adding the same 100 homes to a system operating at 98 percent capacity. The models that are often available cannot pick up such subtle but important differences.

In some instances, it is more appropriate to conduct a detailed case study of the development proposal. Here, it is highlighted to emphasize the importance of understanding the municipality's existing situation prior to performing the analysis. Too often, there is an assumption that existing municipal staff and facilities have sufficient capacity to absorb changes. The fallacy of this assumption, however, is where many impact analyses fall short. It is essential to consider the irregular, but often substantial staff and capital costs that accompany growth. The case study approach is a marginal-cost impact analysis method, best suited for use when there is significant over- or under-capacity in local public services.

Econometric approaches go beyond per capita and case study methods insofar as they attempt to capture the interaction between components of the economy that determine levels of supply and demand of public goods. The approach uses statistical techniques that relate public expenditures to the factors that drive demand in a dynamic context. A series of equations are specified to predict functional expenditures and own-source and intergovernmental revenues. Such a system of fiscal equations can be used in isolation or can be linked to other components of the economy known to interact with the public sector, such as changes in private sector employment and the labor market. In essence, the marginal approach is expanded to its logical conclusion within a statistical framework.

Local government fiscal models can be specified and used as a stand-alone impact analysis tool. Recently, however, a number of researchers have been working to develop systems that link local government fiscal models to other economic models to increase their accuracy given known economic relationships. There have been important recent advances in modeling systems that conjoin separate econometric models (integrated regional models such as discussed above) that deal with various spheres of community economic activity (e.g. labor market, housing, retail sales, etc.) and include input-output modeling systems. A principal benefit of this approach is combining the dynamics of econometrics with the industrial and institutional disaggregation available from input-output tables (Rey 2000). Such an approach is thought to be more holistic in capturing the interrelationships between local economic entities (Deller 1996).

A noteworthy effort to disseminate these types of impact models has been undertaken by the Rural Policy Research Institute (RUPRI) (Scott and Johnson 1998). RUPRI has spearheaded an initiative to create a standard procedure for conjoining input-output models with fiscal and labor market models to permit both local impact analysis and broader rural policy analysis. Employment changes are estimated using input-output procedures. These changes are introduced into an econometric model that simultaneously solves labor market and fiscal impacts. Extending these models, researchers have endeavored to conjoin a number of modules that affect local conditions, including housing demand, retail sales, demographic composition, income distribution, and other modules (Batey and Rose 1990; Shields 1998). In this way, policymakers are presented with a wider range of impacts known to be associated with economic policy and change.

2.2 Local Government Budget Trends and Comparative Analyses

Among the simpler and more edifying analyses local officials can use are budget trend analyses and comparative studies. In a trend analysis, detailed revenue by source and expenditure by function are tracked over a period of years. Multi-year public sector financial data is best reported in real dollars to reveal underlying trends that reflect local policy choices (as well as mandates and economic conditions). In Kansas for example, trend analyses also track property and sales tax capacity and effort by adapting the U.S. Advisory Commission on Intergovernmental Relations (ACIR) Fiscal Capacity and Tax Effort measurement system to monitor conditions related to the available tax base and tax rates (US ACIR 1993). Unfortunately, the ACIR is no longer with us, and a tremendous source of information has been lost.

Local officials are also interested in seeing how they compare to others, especially to similar municipalities. In Wisconsin, for example, an effort is underway to create software capable of allowing user-driven analyses of local government revenues and expenditures (Deller and Lawton 1999). The Graphing Revenue, Expenditures and Taxes (G.R.E.A.T.) system allows the user to generate a wide variety of graphical analyses related to expenditures, property valuation and taxes, and revenues, establishing comparisons against similar-sized communities in Wisconsin. The ability to compare individual municipal (city, village, town, county government) levels to statewide averages has proven to be an extremely powerful research and educational tool. The 'hard data' often dispels red-herring arguments and counteracts perceptions about rampant taxation and expenditure levels.

While comparative analyses seem a simple proposition, care needs to be taken to ensure the comparison communities are, indeed, similar

places. In Kansas, for example, local home rule has a long history. Cities, counties and townships have a great deal of flexibility in organizing service delivery systems. Thus, road and bridge budget items can represent very different types of services. While simple comparison criteria such as population, size of budget, and geography may be adequate for total revenue or expenditure comparisons, there may be important organizational and structural differences between places when considering specific functions or revenues. Indeed, in the Wisconsin G.R.E.A.T. program, only average comparisons are provided to avoid direct municipal-to-municipal comparisons. Providing comparative analyses, typically requires gathering information beyond that provided in financial documents. Local involvement becomes vital in constructing the analysis and interpreting the results.

2.3 Community Service Budgets

One educational program that has received significant attention is based on the work of Doeksen (1997) at Oklahoma State University. In his community service budgets program, Doeksen leads communities through a process of estimating local need and usage, capital and operating budgets and revenue requirements in a strictly accounting format. The information used in establishing the budgets comes from a variety of state and national sources as well as operators and dealers of capital equipment. In analyzing the data, community leaders determine an appropriate and sustainable level of service. Thus far, Doeksen has conducted budget studies for emergency medical services, rural health clinics, fire protection services, transportation systems, solid waste facilities, physicians, water systems, and police services. Through this process, Doeksen has enabled local officials to think about not only the budgetary process, but also the process to determine needs and identify alternatives. In addition to service budgets, Doeksen points out additional opportunities to provide assistance in areas related to utility rate analysis, transportation routing, and optimum location of emergency facilities.

2.4 Revenue Projection Systems

Revenue forecasting involves the use of analytical techniques to project the amount of financial resources available in the future. In the public sector, revenues come from taxes, fees, license sales or intergovernmental transfers. Forecasting attempts to identify the relationship between the factors that drive revenues (tax rates, building permits issued, retail sales) and the revenues government collects (property taxes, user fees, sales taxes). The ability to accurately project future resources is critical to avoiding budgetary shortfalls or collecting excess taxes or fees. As local governments continue to shift reliance from the property tax to

user fee-based revenues, forecasting will be increasingly important to smaller units of government and department administrators.

Revenue forecasts can apply to aggregate total revenue or to single revenue sources such as sales tax revenue or property tax revenue. There is no single method for projecting revenues. Rather, different methods tend to work better depending on the type of revenue. Similarly, there is no standard time frame over which to attempt a forecast. State government might look ahead to the next year fiscal budget, while managers of a city water system may be concerned about a twenty-year time horizon. Revenue forecasting is intimately tied to the public policy process and is subject to considerable scrutiny and even political pressure. A margin of error of two percent at the local level may be acceptable and something that is easily dealt with, but at the state level, two percent errors can run into the millions of dollars and have significant political ramifications.

There are a large number of forecasting techniques available (Frank 1993; Makridakis and Wheelwright 1987, 1989; Guajardo and Miranda 2000). They range from relatively informal qualitative techniques to highly sophisticated quantitative techniques. In revenue forecasting, more sophisticated does not necessarily mean more accurate. In fact, an experienced finance officer can often 'guess' what is likely to happen with a great deal of accuracy. In Maine for example, the state economist in charge of revenue forecasting had a vast internal knowledge of the state and his revenue forecasts were amazingly accurate. Upon his retirement, 'official' forecasts were off by as little as three to four percent, but in a multimillion dollar state budget such a margin of error was unacceptable. While some have suggested the timing between the forecaster's retirement and the 'New England boom' explains much, personal knowledge remains vital. Seldom does a forecaster take the 'raw' forecast from the models without making subjective adjustments. In general, forecasters use a variety of techniques, recognizing that some perform better than others depending on the nature of the revenue source. But in the end, local knowledge is fundamental.

Qualitative forecasting methods rely on personal knowledge or judgments about future revenue and expenditure patterns. These techniques are often referred to as judgmental or nonextrapolative approaches. In addition to their relatively small dependence on numbers, these techniques frequently do not provide a rigorous specification of underlying assumptions. Judgmental approaches tend to work best when background conditions are changing rapidly. When economic, political or administrative conditions are in flux, quantitative methods may not capture important information about factors that are likely to alter historical patterns. Quantitative methods rely on numerical data and empirical methods relevant to the revenue source. Quantitative

methods also make explicit the assumptions and procedures used to generate forecasts. Finally, quantitative methods will also generally assign a margin of error to forecasts, providing an indication of the degree of uncertainty associated with the estimates.

There are two general types of quantitative forecasting methods. The first is a time-series approach, a large number of techniques that use past trends to project future revenues. The second general approach constructs causal models that use the variables assumed to influence the level of particular revenue (Wong 1995). In general, quantitative methods do a better job of predicting future revenues than do qualitative methods (Cirincione, Gurrieri and van de Sande 1999; Makridakis and Wheelwright 1989). Simpler quantitative methods also perform as well as more complex methods (Makridakis, et al. 1984). Finally, the time-series approach typically outperforms the causal modeling approach in the near term, given the uncertainty associated with capturing all the relevant economic factors that influence revenue generation (Frank 1993).

2.5. Local Government Financial Condition

Several years ago, a number of major cities were newsworthy for their perilous financial condition. While most local governments are not in danger of bankruptcy, there is merit to the idea of monitoring financial condition, such as outlined in the Wisconsin G.R.E.A.T. program above. In addition to the frequently cited reasons of providing early warning of pending financial problems (Groves and Valente 1994), there is also the practical reason that bond-rating services evaluate financial condition when a municipality issues a bond. If local governments were able to identify and strengthen areas of weakness, there may be opportunity to improve bond ratings and reduce debt costs.

Financial condition evaluation systems typically use ratios of various types and either track them over time or compare them to other places. Such ratios might include debt to property values, interest payments as a percent of total budget, or own source revenues as a percent of total revenues. The Financial Trend Monitoring System developed by the International City/County Management Association (Groves and Valente 1994) utilizes a series of 36 indicators that are monitored over time. The indicators include information relating to a wide range of factors, including many that are not available in financial statements.

The 10-Point Test of financial condition (Brown 1993) compares a series of ten ratios related to revenues, expenditures, operating position and debt structure against quartiles of similar-sized cities found in the General Finance Officer Association (GFOA) Financial Indicators Database. A city then identifies how they compare against the best and worst in the database and what kinds of ratio values are possible.

In an application of these systems to a county government, Honadle and Lloyd-Jones (1998) concluded the 10-Point Test was easiest to use and provided information of immediate utility. They noted the analysis is static, however, unless replicated for a number of years, and that the GFOA database does not provide distinctions among counties at populations of less than 100,000. The ICMA system also produced useful information, but was more complicated and data-intensive.

Another potential problem with these types of systems is the danger of misinterpreting a given trend. To effectively utilize these systems with a community requires considerable interaction to correctly interpret the meaning of the indicators. Direct comparison between communities can be misleading because of significant difference in local institutional differences. For example, one community may fund a local police department while another contracts with the county sheriff department. Clearly the level of costs and services delivered are different.

3. Program Delivery Issues

The discussion of local government technical service opportunities is not meant to imply that all outreach providers should have capacity to deliver all types of programs; nor is it meant to suggest these are the only types of assistance outreach providers should offer, or even the most important. Rather, among this list of high-impact and high-value services are several that should be within the capacity of nearly any person within an institution of higher education outreach program. Similarly, these are the types of services that bring together important local leaders to discuss community issues that almost invariably lead to broader discussions about where the community is headed.

3.1. Public Policy Education

Choices about local service delivery are fundamentally public policy choices. Indeed, the entire process associated with devolution is a matter of changing public policies related to who can best meet the needs of individuals and communities. Thus, there is a fundamental need at the start to define the role of the outreach educator and applied researcher.

In the provision of technical assistance, it would be easy for the analyst to serve as advisor to the community. After all, the analyst may well have an enlightened opinion based on experience across many settings and the analyses performed. Yet, a greater value to be served is one of community self-determination that is best accomplished when the role of the outreach provider is as public policy educator.

The Cooperative Extension Service has long recognized the need for public policy education (Barrows n.d.). Since the inception of the Land Grant University system, there has been recognition that university-based information could be put to work to improve the local quality of life for all citizens of the state. The application of science to real-world problems was a powerful tool for understanding. Still, science is limited in its capacity to identify the correct policy choice. This is because the creation of public policy is fundamentally a system where varied interests engage in a democratic political process to choose between the competing alternatives. For its part, science cannot determine whose interests are paramount nor what the optimal public policy choice should be.

The public-policy education approach generally advocated within the Extension system serves as a good model for the provision of technical assistance. The alternatives and consequences model is one that focuses on the range of feasible alternatives and identifies the likely consequences of each (Dale and Hahn 1994). The fundamental distinction between this model and other available approaches is that the alternatives and consequences approach sets aside values in the analysis of alternatives, or at least makes explicit the values inherent in the assumptions used. This is because the values that have standing in the policy arena are those of the elected and appointed officials and the citizens they represent. In the final determination, it is for the community to decide what is optimal policy. Indeed, selecting an alternative that may be deemed less efficient (or whatever the optimizing criteria may be) is an acceptable choice, so long as the community understands its alternatives and the likely consequences.

Other models of information delivery are also available and frequently employed. The problem with each from the standpoint of maximizing democratic principles is that all are essentially value-based systems. One model close to many in academia is the scientific approach, where an expert evaluates alternatives against a predetermined set of criteria. The problem here is who establishes what criteria is fundamentally a value-based decision. An analytical approach through applied research identifies the pros and cons of alternatives. Again, what constitutes a pro or a con is a matter of one's values. Finally, a promotional approach is one where the analyst feels so strongly that there is a need to sell the alternative. In every case of establishing local public policy, it is the local values and not the analysts that have standing. The key to 'success' for the outreach educator is the ability to balance local knowledge and insights with the broader knowledge gained through applied research.

3.2. Models of Community Interaction

In considering the alternative models of community intervention, Christenson (1989) identified three major themes employed by practitioners. The first is the selfhelp approach based on the premise that persons from within the community can collaborate to solve community problems. The approach assumes that the collaborative process fosters an environment where community change becomes possible, where individual capacity is enhanced, and where the changes enacted become more sustainable. The role of the practitioner, in this case, is one of helping to bring the relevant community members together and fostering a process whereby participants can engage in effective problem solving. The practitioner may also be useful in providing relevant background information and helping identify consequences of alternatives being considered.

The second general model of community intervention is the technical assistance role. Technical assistance involves accomplishing pre-specified tasks. The practitioner in this role is conceived of as a quasi-consultant performing tasks *for* the community rather than *with* the community. The third general model identified by Christenson is the conflict approach, which is an explicitly normative approach intended to empower under-represented groups in the face of entrenched power. University-based outreach providers probably least use this model because of the potential for political backlash against the individual and the institution they represent.

The stark distinction between these approaches is probably more pedagogical than real, insofar as elements of all are present in most instances. Certainly, there are times when resource constraints or other obstacles prevent the implementation of a long-term process that fully achieves the potential of enhancing individual and community capacity. Yet, there are clear distinctions in the view of many outreach providers as to the primary importance of one role versus another.

3.3. Integrating Technical Assistance and Process Roles

Our view of an effective outreach program is one that starts with the capacity to respond to requests for assistance in solving important community problems. Communities generally request assistance to help solve discrete and immediate concerns. In an era of decentralizing responsibility for service provision, the number and types of community concerns are growing. Each of these situations represents a *teachable moment* in the community (Deller and Shields 1998). The availability of technical assistance serves as the hook that opens discussion about broader trends that affect community prospects and local intervention

strategies that can enhance local prospects. Marketing the toolbox provides an impressive array of alternative services that provide an important entree to these discussions.

One model of community intervention that can employ the types of technical assistance tools we use is one that generally involves interacting with the community over a period of three or four meetings (Deller and Shields 1998). In the case of providing an economic or fiscal impact analysis, for example, there would be typically four distinct points of discussion, each of which builds to a broader understanding of community change and the creation of adaptive local strategies.

The first encounter with community leaders is one where there is desire to understand how some event or policy is likely to affect the local economy or public finances. To perform the analysis, we need to clearly identify the change-taking place. The first discussion needs to carefully define the nature of the change and the likely direct effects. In itself, this discussion forces community leaders to critically evaluate the nature of the change occurring in the community. Without this careful definition, a great deal of decision-making would otherwise occur on the basis of supposition or anecdote. From an analytic standpoint, it is also necessary to clearly understand the community capacity to absorb change. This again forces community leaders to think about the interrelationship between change and affected community services.

The second step in the process is to consider a likely baseline scenario. This is to project the probable future without change. Of course, the community is likely to move forward on some track without the event or policy. Understanding the true impact is to consider only the incremental difference between the status quo and the new course the change engenders. The discussion of the baseline encourages thinking about what will likely occur without the event or intervention.

The third step in the analysis is to consider the impact of the event or policy. The practitioner simulates the change of interest and compares it to the baseline to estimate the private or public sector impacts. What frequently occurs at this stage is discovery that the presumed impacts do not match the results of the simulation. Local officials come to understand that not all growth is necessarily beneficial to public finances or that much of the economic impact actually leaks from the community. Such a discovery often results in a more critical thinking process about future events.

Finally, there may be additional discussion about locally adaptive strategies in light of the event or policy. Such a discussion actually incorporates a considerable element of the collaborative decision-making inherent in the self-help approach. These discussions may occur over a period of time both with and without the assistance of the practitioner.

Given this conception of the intervention process, there has been ample opportunity to provide not only applied research-based informa-

tion and assistance to help inform local decision but also to foster critical discussion about what is happening in the community and where it is going. In the ideal, the outcome of working with the community in an outreach educational mode is enhanced community viability.

4. Conclusions

Devolution creates a teachable moment unprecedented in recent times. The challenges are great and the needs of rural community leaders may never have been greater. Increasingly, institutions of higher education are expected to be more relevant to local issues and concerns. Given the current environment of devolution the opportunity to have a positive impact may never be greater.

Outreach educators and applied researchers can bring a great deal of expertise to bear on the practical challenges with which local officials are dealing. They can provide especially valuable assistance through the development of services that have practical significance in helping to solve these challenges. Similarly, targeting local elected officials as the primary clientele, and by extension state legislators who see the success of their policies, provides an opportunity to demonstrate the value of services supported by state and local tax dollars. In viewing the changes and challenges of devolution strategically, the work of outreach service providers has never been more important.

References

- Barrows, R. No Date. *Public Policy Education*. North Central Regional Extension Publication No. 203 (reprinted 1993). NCR Educational Materials Project. Ames, IA: Iowa State University.
- Batey, P.W.J. and A.Z. Rose. 1990. Extended Input-Output Models: Progress and Potential. *International Regional Science Review*, 14(1&2): 27-49.
- Brown, K.W. 1993. The 10-Point Test of Financial Condition: Toward an Easy-to-Use Assessment Tool for Smaller Cities. *Government Finance Review*, 9(6): 21-26.
- Burchell, R.W. and D. Listokin. 1978. *The Fiscal Impact Handbook: Estimating Local Costs and Revenues of Land Development*. Center for Urban Policy Research. New Brunswick, NJ: Rutgers, The State University of New Jersey.
- Burchell, R.W. and D. Listokin. 1980. *Practitioner's Guide to Fiscal Impact Analysis*. Center for Urban Policy Research. New Brunswick, NJ: Rutgers, The State University of New Jersey.

- Burchell, R.W., Listokin, D., Dolphin, W.R., Newton, L.Q., and S.J. Foley. 1994. *Development Impact Assessment Handbook*. Washington, D.C.: ULI - the Urban Land Institute.
- Christenson, J.A. 1989. Themes of Community Development. In J.A. Christenson and J.W. Robinson, Jr. (eds.) *Community Development in Perspective*. Ames, IA; Iowa State University Press. Pp. 26-47.
- Cirincione, C., Gurrieri, G.A., and B. van de Sande. 1999. Municipal Government Revenue Forecasting: Issues of Method and Data. *Public Budgeting & Finance*, 19(1): 26-46.
- Dale, D.D. and A.J. Hahn (eds.) 1994. *Public Issues Education: Increasing Competence in Resolving Public Issues*. Madison, WI: University of Wisconsin-Extension, Cooperative Extension.
- Deller, S.C. 1996. Theoretical Foundations of CE Models. Unpublished paper presented at the Community Economic Modeling Conference. Madison, WI. June 9-10, 1996.
- Deller, S.C. and K. Lawton. 1999. *Wisconsin G.R.E.A.T. Local Government Finance* software. Beta version 3b. Madison, WI: University of Wisconsin-Extension.
- Deller, S.C. and M. Shields. 1998. Economic Impact Modeling as a Tool for Community Economic Development. *Journal of Regional Analysis & Policy*, 28(2): 76-95.
- Dervis, K., de Melo, J., and S. Robinson. 1982. *General Equilibrium Models for Development Policy*. Washington, D.C.: The World Bank.
- Doeksen, G.A. 1997. Building a Local Government Decision-Making Tool Kit: The Oklahoma Experience. Paper presented at the Economic Modeling Conference, Kansas City, MO, November 7, 1997.
- Frank, H.A. 1993. *Budgetary Forecasting in Local Government: New Tools and Techniques*. Westport, CT: Quorum Books.
- Groves, S.M. and M. Godsey Valente. 1994. *Evaluating Financial Condition: A Handbook for Local Government*. 3rd ed. Washington, D.C.: International City Management Association.
- Guajardo, S.A. and R. Miranda. 2000. *An Elected Official's Guide to Revenue Forecasting*. Chicago: Government Finance Officers Association.
- Honadle, B. Walter and M. Lloyd-Jones. 1998. Analyzing Rural Local Governments' Financial Condition: An Exploratory Application of Three Tools. *Public Budgeting and Finance*, 18(2): 69-86.
- Kraybill, D.S. 1993. Computable General Equilibrium Analysis at the Regional Level. In D.M. Otto and T.G. Johnson (eds.). *Microcomputer-Based Input-Output Modeling: Applications to Economic Development*. Boulder, CO: Westview Press. Pp. 198-215.
- Leatherman, J.C. and D.W. Marcouiller. 1996. Income Distribution Characteristics of Rural Economic Sectors: Implications for Local Development Policies. *Growth and Change*, 27(4): 434-459.

- Makridakis, S., Andersen, A., Carbone, R., Fildes, R., Hibon, M., Lewandowski, R., Newton, J., Parzen, E., and R. Winkler. 1984. *The Forecasting Accuracy of Major Time Series Methods*. New York: John Wiley & Sons.
- Makridakis, S. and S.C. Wheelwright. 1987. *The Handbook of Forecasting: A Manager's Guide*. (2nd ed.). New York: John Wiley & Sons.
- Makridakis, S. and S.C. Wheelwright. 1989. *Forecasting Methods for Management*. (5th ed.). New York: John Wiley & Sons.
- Miller, R.E. and P.D. Blair. 1985. *Input-output Analysis: Foundations and Extensions*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Phillips, M.J. 1997. Land Grant Colleges and Universities of the Future. In D.P. Ernestes and D.M. Hicks (eds.), *Increasing Understanding of Public Problems and Policies*. Oak Brook, IL: Farm Foundation.
- Pyatt, G. and J.I. Round. (eds.) 1985. *Social Accounting Matrices: A Basis for Planning*. Washington, D.C.: The World Bank.
- Rey, S.J. 2000. Integrated Regional Econometric + Input-Output Modeling: Issues and Opportunities. *Papers in Regional Science*, 79(3): 271-292.
- Richardson, H. 1985. Input-Output and Economic Base Multipliers: Looking Backward and Forward. *Journal of Regional Science*, 25(4): 607-662.
- Rose A. and W. Miernyk. 1989. Input-Output Analysis: The First Fifty Years. *Economic Systems Research*, 1(2): 229-271.
- Rose, A., Stevens, B., and G. Davis. 1988. *Natural Resource Policy and Income Distribution*. Baltimore, MD: Johns Hopkins University Press.
- Scott, J.K. and T.G. Johnson. 1998. The Community Policy Analysis Network: A National Infrastructure for Community Policy Decision Support. *Journal of Regional Analysis & Policy*, 28(2): 49-63.
- Shields, M. 1998. An Integrated Economic Impact and Simulation Model for Wisconsin Counties. Unpublished dissertation. Department of Agricultural and Applied Economics, University of Wisconsin-Madison.
- U.S. Advisory Commission on Intergovernmental Relations. 1993. *State Fiscal Capacity and Effort 1991*. Washington, D.C.
- Walzer, N. (ed.) 1996. *Community Strategic Visioning Programs*. Westport, CN: Praeger.
- Walzer, N., Deller, S.C., Fossum, H., Green, G., Gruidl, J., Johnson, S., Kline, S., Patton, D., Schumaker A., and M. Woods. 1995. *Community Visioning/Strategic Planning: State of the Art RRD 170*. Ames, IA: North Central Regional Center for Rural Development.
- Webb, B. 1997. A Reality Check. In D.P. Ernestes and D.M. Hicks (eds.), *Increasing Understanding of Public Problems and Policies*. Oak Brook, IL: Farm Foundation.

Wong, J.D. 1995. Local Government Revenue Forecasting: Using Regression and Econometric Revenue Forecasting in a Medium-Sized City. *Public Budgeting & Financial Management*, 7(3): 315-335.