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Author(s): Glenn L. Nelson

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Elements of a Paradigm for Rural Development

Glenn L. Nelson

Rural development specialists seek to explain and anticipate changes in the well-being of rural residents and in the rural environment. Their motivation stems in part from the opportunities and satisfaction which greater understanding of society yields, but they are also interested in policy objectives. In particular, they would like to be able to show the connection between changes in governmental policies and changes in the well-being of rural residents and therefore to be able to make policy recommendations.

The reality of the work falls well short of this ambitious goal, as Edwards noted. The growth in nonmetropolitan population which became apparent in the mid-1970s after decades of decline surprised most rural development specialists. From 1976 to 1982, on the other hand, employment grew less in nonmetropolitan areas than elsewhere, reversing the earlier pattern (Daberkow and Bluestone). This finding suggests that the population turnaround in rural areas in the late 1960s and early 1970s may have been an aberration. Again, analysts have little basis for judging whether these findings are consistent with the nature of the structure of rural areas before the late 1960s and thus expected or whether the structure has changed and the population and employment shifts should surprise us. Analysts attempt to explain these phenomena only by offering lists of underlying factors or regressions on descriptive variables (e.g., Beale, Deavers and Brown).

Changes such as those noted above are not necessarily unexpected or puzzling. A known, stable structure of relationships among variables may allow analysts to understand sources of change. Analysts may even be able to anticipate changes based upon relationships

between variables whose future paths are projected with some confidence and others whose future paths are less obvious. Economists in other fields devote considerable time to the search for stable relationships which can form the basis for improved projections.

This paper addresses issues surrounding a paradigm for rural development. The first section develops further the consequences of the lack of a generally accepted paradigm. The following three sections present elements of a framework by focusing in turn on target variables, policy instruments, and the structural relationships which link causal factors and target variables. The final section draws conclusions about developing better paradigms and improved policy analysis.

The Problem

The lack of a well-accepted paradigm of rural development creates problems in our information systems and our professional activities.

Information Gaps

Analysts are less able to anticipate problems with less understanding of structure. In such a setting current policy problems heavily influence applied research priorities, but these problems are often no longer policy concerns by the time the results appear. For example, the population turnaround stimulated studies of how rural communities can cope with growth, but the results became available when rural communities' growth may have stagnated. Leaders and citizens can more easily adjust to change with more time between recognition of the change and its appearance on a broad scale. Similarly, policy analysts can provide better information on the specific nature of the change and ways of dealing with it when they have more time for study.

Policy makers have difficulty designing ap-

The author is a Resident Fellow, National Center for Food and Agricultural Policy, Resources for the Future, Washington, D.C.; on leave from the Department of Agricultural and Applied Economics, University of Minnesota.

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propriate public policies when the relevant structural relationships are not well established. Appropriate public policies reflect an accurate characterization of the problem and its causes, an awareness of the linkages between the available policy instruments and the variables of concern to society, and attention to implementation problems (Dewar, especially pp. 183–97). For example, the absence of an accessible treatment of the relationship between state and local policies and regional development increases the likelihood that state and local efforts to attract businesses are overly influenced by intuition, anecdotes, and short-term political concerns.

Less structural knowledge decreases the capability of publicly supported institutions to provide information for private sector decisions. Information on broad social trends has extensive positive externalities, that is, individual private units do not reap sufficient gains from providing such information to recoup the costs of creating it, even when society's gains are sufficient to justify its creation. The underlying paradigm determines what data to collect and how to organize it, and without a strong paradigm the needed data may be missing or presented in a misleading fashion.

Professional Isolation

Most analysts of rural development policy view the field as in the doldrums. A malaise at the national level shows in a number of ways. The National Rural Center closed, bringing to an end an important effort to highlight and focus rural interests. The Reagan administration noted in the 1984 rural development strategy report that its plan for progress will proceed "without any additional commitment of Federal funds" (USDA, p. 1). The publication of the 1984 report created little stir among traditional congressional proponents of rural development despite the report's rejection of the need for new resources.

Scientists working on developing a better understanding of rural development address a wide array of questions, often with little attention to an overarching paradigm. They typically find the work of their colleagues interesting but not so closely related as to challenge their own work or to help them make greater progress. They have little sense either of contributing to a larger whole or of attacking a critical gap in understanding. In short, while much individual enthusiasm exists, this scien-

tific community lacks the intellectual excitement of a group of scholars pursuing answers to commonly recognized gaps in knowledge.

The low levels of policy involvement and of intellectual excitement trace part of their origins to the lack of a generally accepted paradigm for rural development. Policy makers seem to recognize implicitly the problems in the information system noted above and thus see little need to seek the advice of rural development analysts. With respect to intellectual excitement, a widely used paradigm guides scientists in setting priorities by helping them to identify gaps in understanding and by providing a focus for those claiming to have a better framework. The resulting concentration of effort creates the necessary, albeit not sufficient, conditions for an excited exchange among researchers addressing closely related topics.

The first step in developing a paradigm for rural development is choosing those variables to be explained.

Target Variables

The image and, to a lesser extent, substance of rural development is close to "rural studies." While such a broad license has advantages, economists in the field probably would find stronger support from funding sources and more recognition from policy makers and other economists with a narrower set of priorities. The identification of target variables helps to focus research on what we care about. Target variables are variables given priority, such as income and employment, for explanation of their causes. Our priorities may come from unsolved problems in the discipline, from philosophical positions, or from policy objectives.

Rights to basic necessities of life and to basic liberties are primary goals. Both conceptual works on political philosophy and applied analyses recognize this (e.g., Rawls, p. 61; Gilford, Nelson, and Ingram, p. 27). These rights suggest the importance of addressing severe poverty and of studying the characteristics of institutional forms.

Goals dealing with economic security and prosperity follow closely behind those of basic necessities (e.g., Rawls; Gilford, Nelson, and Ingram). The level and distribution of income and wealth are important measures of these concepts. Employment opportunities are im-

portant due to their contribution to self-fulfillment as well as to income. Less commonly noted in philosophical treatments but very important in practice, the productivity of resources devoted to publicly provided goods and services is an important component of this set of goals.

Each of us could list many other proxies for individual and social welfare. I suggest we limit our principal target variables to those noted above, bringing other variables into the framework as they help to link primary causal factors and these target variables. For example, demographic variables, especially migration, help to explain employment and transfer payments.

Policy Instruments

The causal factors underlying target variables, especially those which policy makers can change, are an important part of a framework of potential use for policy analysis. Policy makers take one of two general approaches in establishing policy which are not entirely separable. They set parameters within the context of current institutions (for example, increase social security taxes and benefits), or they change institutions (for example, prohibit discrimination on the basis of race or sex). A framework should take account of each of these.

Policy Parameter Setting

A broad range of policy parameters affect the target variables noted above. Defense expenditures, social security, and welfare programs are examples of instruments which have a larger impact on rural economies than "developmental" policies such as infrastructure development, business incentives, and housing assistance. The 1984 rural development strategy report discusses only developmental programs in its budget analysis (USDA, pp. 24-30). This and similar reports miss the major impacts of federal activities on rural incomes, employment, and wealth. The framework should include the broad range of policy parameters.

In a policy context an analyst placing priorities should often take into account the probability of affecting a policy as well as the consequences of the policy. A rural development specialist with close connections with Farmers

Home Administration (FmHA), for example, might decide to emphasize FmHA programs in analysis. *Ceteris paribus* assumptions are more important as an analyst examines policy instruments which are less important in determining the values of target variables. These assumptions should be explicit, especially as background for forecasts of future events. The user of the analysis is then in a better position to judge which variables subsumed under *ceteris paribus* are likely to dominate future developments and whether these variables are reinforcing or counteracting the factors studied by the analyst. The analyst must utilize a paradigm to perform this function well.

Institutional Change

Institutions provide assurance to people regarding their expectations of others (Runge). Laws codify many institutions. Culture also contains behavioral specifications which are sufficiently accepted to be institutions.

Several factors underly the growing interest in a theory of institutional change and its application (e.g., Ruttan and Hayami, Deaton). Increased knowledge of the nature of institutional change enhances our ability to understand the past and project into the future; that is, positive knowledge regarding institutions is desirable.

Normative concerns are also important. Institutional change often modifies many individual decisions which would be cumbersome and perhaps even unmanageable to change by manipulating numerous parameters within existing laws. In addition, those seeking change increasingly recognize that politicians and public bureaucrats are endogenous; that is, public sector actors respond to incentives and constraints as private agents do. This view contradicts the assumption that an exogenous public sector actor acts without concern for his or her own well-being, independently of the system under study, and is receptive to the advice of analysts. Changes in the incentives and constraints facing public sector actors often imply institutional change. In sum, institutional change is an important component of policy instruments.

Structure

Structure here refers to a framework of qualitative and quantitative relationships between

causal factors and target variables. Structural models are fundamental scientific outputs with attendant anticipated and unanticipated consequences. Among its applications, structural knowledge facilitates the systematic design of policy to accomplish goals. Policy makers desire structural models which are stable over time, stable over the feasible range of policy parameters, and communicable without extensive study. Policy analysts inevitably compromise among these criteria.

The following sections discuss four important concerns which structure should be able to address: poverty, regional development, the vitality of places, and the relationship between rural communities and agricultural policy.

Poverty

The alleviation of poverty helps to achieve some of the most basic goals of society. An explanation of the causes of poverty and of escaping from poverty should be a component of structure.

Rural poverty continues to be an important problem. A recent longitudinal panel study indicated that the poor are disproportionately rural residents (Duncan). The temporarily poor, persons in poverty for one or two years between 1969 and 1978, have characteristics which generally mirror the characteristics of the total population although females, blacks, and rural residents are more frequently poor than others (Duncan, pp. 48–49). The persistently poor, persons in poverty for eight or more years between 1969 and 1978, come from a distribution quite different from that of the general population or the one-year poor as measured in 1978 (Duncan, pp. 50–52). The study concludes:

Southern and rural poverty are much more persistent than is urban poverty. These findings do not support . . . [an] emphasis on northern, urban blacks nor . . . [a] depiction of the persistently poor as an urban underclass. . . . Despite the fact that the official poverty standards were lower for farm families than for nonfarm families during the 1970s, rural poverty appears to be more persistent than urban poverty, characterizing about one-third of the persistently poor. (p. 51)

The results, as the study states, imply that the one-year measure of poverty used in allocation formulas does not effectively target programs whose purpose is alleviating persistent poverty:

In particular, for rural areas, the South, and especially areas with heavy concentrations of blacks, allocations based on one-year figures are lower than warranted by the longer-term poverty prevalent in these areas. (p. 62)

This study is an excellent example of an examination of the link between policy instruments and target variables. Rural development specialists should perform follow-up analyses and examine other aspects of poverty.

In one such study of counties Stinson found that income and race were related to expenditures falling below national norms for local government services (p. 597). After controlling for these factors, population density and percent rural showed little or no relationship to local government spending falling below the poverty line (p. 597). Stinson reaches some conclusions which are encouraging for those seeking to alleviate poverty and others which are discouraging. The most discouraging result is that from 1972 to 1977 poor counties lost almost all of their considerable gains from 1962 to 1972 in educational spending, an important antipoverty policy instrument (p. 599).

Regional Development

Analysts can draw upon a considerable body of qualitative knowledge about demand as a stimulus to a local economy and thus about the nature of the linkages between government fiscal actions and citizen well-being. Government expenditures in a community stimulate a local economy. The size of the stimulus varies with the composition of spending and the structure of the local economy. Taxes as well as expenditures are important. Socioeconomic differences among regions cause differences in expenditures and tax burdens. Thus, the implementation of programs without explicit goals of regional redistribution may have very different effects on regions even when the net federal fiscal balance is unchanged. These effects are true for states as well as for the nation. In particular, state taxes and aids redistribute a portion of the gains and losses in one region of the state to other regions.

The addition of a quantitative dimension to this qualitative picture of demand in a regional economy raises further estimation and modeling problems. Simple calculations of flows of government expenditures and taxes are not an adequate base for analyses of regional impacts. The impacts of expenditures and taxes

quickly diffuse across regions from the location of the original expenditure or tax. Asymmetries of flows between regions are common due to differences in the areas served by businesses located in different regions. The indirect effects of government programs may outweigh the direct effects. For example, increasing farm transfers and federal taxes by equivalent amounts at the national level has a negative direct impact on Minneapolis and a positive direct impact on the surrounding agricultural regions. After accounting for the stimulus to Minneapolis due to servicing the surrounding areas, the city's economy expands rather than contracts (Nelson 1984).

Analysts have less understanding of labor markets and other factor markets than of demand in regional economies. An internally consistent qualitative discussion of factor markets at the regional level is rare and a quantitative estimate of such relationships even rarer. The labor market is a critical link between the target variables of income and employment and many policy instruments such as unemployment compensation, labor legislation, worker training, and education. Without a stronger conceptual and empirical understanding of this linkage, projections and policy analyses for regions, both rural and urban, will be very uncertain.

Vitality of Places

The economic vitality of places is an important component of the structure linking policy instruments and target variables although not an objective on its own merits. Forces beyond an individual's control make migration and attendant costs necessary for some to earn incomes consistent with general levels in society, while others find many work opportunities within commuting distance of their locations. The migration of people affects others at both the sending and receiving locations and is thus a matter of general concern. The effects consist partly of private interactions and partly of public repercussions. Thus, the exclusion of the vitality of places from the target variables does not imply that area concerns are irrelevant but places them in a different perspective.

Agricultural Policy and Rural Communities

Analysts and policy makers have recently shown increasing interest in the relationship between agricultural policy and the nonfarm

component of rural communities, partly as a reaction to the adverse impacts of payment-in-kind on suppliers of farm inputs and handlers of farm outputs (e.g., USDA). The traditional concern focused on the impacts of agricultural policies on rural communities, an important issue in heavily agricultural areas. Current authors are placing greater emphasis on the impacts of the community on farming (e.g., Powers, p. 36; USDA). Nonfarm conditions influence the structure of agriculture more than the agricultural situation from the viewpoint of those who accept a considerable portion of part-time farmers as a legitimate component of the agricultural sector. In turn, policies which strengthen the nonfarm economy of rural areas may have a greater impact on the structure of agriculture than agricultural price and income support policies. The current debate over the goals of agricultural policy has implications for the choice of instruments as well as for parameter settings in traditional agricultural policies.

Conclusions

The above analysis leads to three conclusions with respect to increasing the contributions of rural development specialists to better paradigms and improved policy analysis.

Regional Economic Analysis

An organized effort should focus work on the causal relationships underlying the income and employment of rural citizens. The organization should be one in which the leadership results from institutional capacity and intellectual respect rather than bureaucratic hierarchies. Analysts should have the opportunity to collaborate with colleagues and the independence to follow personal initiatives. The following organization consists of two loosely coordinated levels consistent with the division of effort in many research areas within the Land Grant system.

A group at the federal level should construct and maintain a framework suitable for analyses of the regional impacts of governmental policies. The framework should link the policy instruments and target variables identified earlier in this paper. It should consist of a formal model as well as simpler rule-of-thumb principles. The model should not compete with national macroeconomic models but rather be

constrained by given national aggregates. The regional modeling effort would allocate national estimates among regions rather than compute regional estimates which could be summed to obtain endogenous national estimates. This methodology possesses the advantages of narrowing the problem and of avoiding conflict with an entrenched macroeconomic forecasting bureaucracy. This group would be recognized as a prime source for staff work on the regional impacts of federal policies, including comparisons of metropolitan and nonmetropolitan areas. The number of regions would reflect the capacity of the group; a number between fifteen and thirty might be a reasonable compromise between a sufficiently large number to be relevant to policy issues and a sufficiently small number to be manageable.

Several agencies are logical candidates for housing such work. The Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce manages much of the relevant data base and maintains a multiregional econometric model. The overall model includes a national model and fifty-one state models including the District of Columbia (U.S. Department of Commerce). The national model contains 190 equations and each state model contains 320 equations, yielding a total of over 16,000 equations. The model is unwieldy because of its size, and its managers are inevitably unfamiliar with the economies of many of the states. Further partitions based upon metropolitan-nonmetropolitan criteria would add to the complexity and to the distance between the model builders and the regions. Regardless of whether BEA would house the effort described in this paper, the current BEA work is a rich source of ideas and empirical estimates. The Economic Development Division of the Economic Research Service (ERS) has experience with models, particularly with rural-urban comparisons. An ERS effort would be consistent with improving executive branch decision-making processes by broadening the subject matter scope and clientele base of USDA (Nelson 1983). Finally, a regional analysis group in the Congressional Budget Office could directly serve congressmen, who are major supporters of regional analysis, while maintaining a professional, nonpartisan stance.

Regional studies within the regions used in the national study would complement the federal effort. Each regional study would develop

a model for allocating the regional estimates among areas within that region with special attention to areas with a high incidence of poverty. The analysts at the national and regional levels should agree to certain conventions, such as variable names and definitions, which facilitate linkage of their models. A cooperative effort has the disadvantages of needed coordination and necessary interdependency but also has advantages. Analysts at the regional level could incorporate their knowledge of the regional economy, while having a national context for completeness. Multiple modeling efforts would strengthen and create relationships among analysts with similar interests, leading to greater learning. The dispersed efforts would also lead to greater use by policy makers because the analysts in each region would have working relationships with analysts and decision makers in state and local government.

Institutional Innovation

Institutions should play a complex and pervasive role in a paradigm of development. Institutional forms are often target variables which embody societal goals or which capture scholars' attention as fitting objects for study. Institutions are also major causes of the values of target variables such as income and employment.

Rural development specialists have compiled extensive descriptions of institutions in rural areas and of differences between rural and urban areas. The differences are substantial, often because lower population densities and greater distances between businesses and organizations in rural areas lead to smaller scale institutions. The literature also documents the diversity within rural areas (e.g., Gilford, Nelson and Ingram).

The combination of descriptive information, improved theories of government behavior, and recent work on institutional innovation lays the foundation for rural development specialists to contribute to the general knowledge of institutions and to the ability to use institutional innovation as a policy instrument. More specifically, improved knowledge of the characteristics of institutions which facilitate and retard innovation is an important scholarly contribution and is useful in solving specific problems and in preparing for an uncertain future. Results pertaining to consistent

tendencies associated with scale will be especially useful in analyzing the comparative advantages of rural and urban areas in the productive creation and adoption of new institutions. The concepts synthesized and extended by Bish which deal with scale are useful inputs, as noted by my discussant, James Shaffer.

This recommended line of inquiry may contribute more to conceptual understanding than to practical problem solving in the short term. In the long run progress in this area offers promise for making rural areas a better place to live and work. Institutions which deal with persistent poverty, human capital, and information are likely to be especially important in accomplishing goals in the near future.

Is There an Audience?

Finally, analysts concerned with policy impacts as well as contributions to knowledge might wonder if anyone important will listen. Policy makers' current lack of interest in rural development is not irrevocable. Policy makers are endogenous rather than exogenous. Public officials respond to the body politic and thus indirectly to analysts who shape public opinion. The body politic seeks information for evaluating policies. As noted earlier, the public sector should play a major role in creating and dispersing information of use to individual persons and firms. The direct influence of analysts on policy makers greatly understates the potential role of analysts (e.g., Powers, p. 35).

Certainly in the long run and perhaps even in the short run, the most effective strategy for influencing policy makers is to affect the thinking of the general public on development issues. Translating research results into a language and form suitable for opinion leaders, such as newspaper editors, and the general public is very important for those seeking to influence policy.

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