

PROJECT NUMBER: NE-162

TITLE: Rural Economic Development: Alternatives in the New Competitive Environment

DURATION: October 1, 1997 to September 30, 2002

STATEMENT OF THE PROBLEM:

As rural (nonmetropolitan) America steps into the new millennium, it faces new and increasing uncertainty concerning viability of rural economies, brought on by industrial and employment restructuring, new international trade agreements and changing relationships among federal, state and local governments. How these changes will affect rural economies, the fiscal and management capabilities of rural local governments, and the rural social structure are issues of major concern to rural people, rural business and rural communities in the Northeast and across the nation. Some of these issues have been addressed under the previous regional project NE-162; others have just begun to be explored. These issues form the basis for the continuation of NE-162 as a new regional rural development project. In addition, with the enactment of the Fund for Rural America, the continuation of NE-162 regional project would address Fund for Rural America competitive grant initiatives which are: 1) reduce economic and health risks; and 2) increase economic opportunities in farming and ranching communities.

JUSTIFICATION:

Rural communities will face new challenges and opportunities as they step into the new millennium. The increasingly rapid changes in industrial structure, governmental relationships, and international trade agreements mean that Americans living in rural areas will continue to face uncertainty with respect to the future of their economies. The changes impact the quantity and quality of rural job opportunities, and the ability of rural households to earn an adequate level of income. Also, in the near future, policy changes at the federal level will likely have important impacts on rural communities across the U.S. as governmental services "devolve" to the state and local levels. NE-162 has examined some of these issues, but the continuing and increasingly rapid changes taking place in rural economies emphasize the need for additional work to understand the direction of the rural economy and the impacts of social, institutional and economic change.

In the 1980's and 1990's rural areas of the U.S. have been affected by major changes at the global and national levels. Barkley (1993) identified five major influences on rural areas:

1. Productivity gains in the manufacturing and resource-related industries that mean the need for fewer workers in these industries.
2. Expansion of the service industries,
3. Deregulation of the transportation and communication industries and financial markets,
4. Changes in manufacturing production technology and organization, and
5. Out-migration of the population from rural areas, coupled with aging of the U.S. population.

All of these trends are evident, in varying degrees, in different states throughout the Northeast and other parts of the nation. In Delaware, for example, the growth of service and financial industries has outpaced growth in the manufacturing sector. Also, population growth in

the fastest growing county in Delaware is being fueled not by industrial growth, but by an ever increasing retirement age population.

Even with these socio-economic structural changes, the estimation of linkages between agriculture and other economic sectors within a rural economy is still important to local policy makers and leaders. Knowledge of these linkages provides local decision makers information as to potential impacts of targeting agricultural value-added products and industries into an area.

The past decade has seen a shift from core sector employment to more secondary sector employment, and formal sector work to more informal sector work (Martin, et al. 1996). Relatively well-paying manufacturing jobs are being replaced with growing numbers of low-wage jobs which primarily recruit and employ immigrants, ethnic minorities, and women. High unemployment in Mexico, and large disparities in potential income between Mexico and the United States, encourage continuing immigration from Mexico (Martin et al. 1995). The availability of low-wage workers allows for the industrial restructuring within the United States, while the restructuring of industry creates demand for low-wage workers (Rochin 1992, 1995). The Midwest, for example, offers jobs with higher incomes than those available to Mexican-origin workers in the Southwest and in Mexico, encouraging migration to areas with expanding employment. Poultry processing operations in the mid-Atlantic states are contributing to a similar situation in the Northeast.

The recent growth in the U.S. economy, that also has occurred in urban areas, has spilled over into many rural or nonmetropolitan areas adjacent to urban or metropolitan areas. Employment rates have increased and underemployment rates have generally declined, but important regional differences in these outcomes have been observed. Remote rural areas, in many cases, have not benefited from this revitalization. This remoteness and scale have often been identified as factors which have caused lagged nonmetropolitan economic development. Why some rural areas have experienced economic growth in recent years while other rural locations continue to lag further and further behind is an important issue. The impacts of economic, social, and institutional change vary, and an understanding of differences in impacts on different rural communities is important.

As opposed to the 1980's, there are indications of an economic turnaround in the 1990's, and a slowing of the widening income gap between rural and urban areas. This suggests some rural areas have overcome the remoteness and small scale of these areas. Nevertheless, national projections show continued employment decreases in manufacturing, mining and production agriculture through the rest of the decade. Rural areas will be most affected by these shifts in sector employment.

The overriding theme in rural America is the shift in the employment base from agriculture and natural resources to manufacturing, and currently to services. The continuing concern, in rural communities, and by government at all levels, is the ability of rural areas to successfully adjust to these changes in economic structure; to maintain an employment base and a viable economy.

Changes in the economic structure of nonmetropolitan areas are being experienced in all regions of the nation. In the Northeast, the changes are important enough that the Northeast Regional Center for Rural Development has identified "enhancing rural economic productivity

and adaptability” as a key issue in future rural development research and extension in the region. Most types of rural areas (agricultural, manufacturing, natural resource based), except those specializing in retirement and tourism activities, are struggling in the new economic climate.

The agriculture sector will continue its long run employment decline. From 1981 to 1994, the number of farm jobs fell by 749,000, substantially decreasing total employment in farm-dependent regions (U.S. Department of Commerce 1996). Any gains in the agriculturally-related sectors are likely to be in the provision of services related to these industries. Further impacts can be expected from the 1996 Farm Bill and reorganization of the USDA. Commodity price support programs may be eliminated or reduced, which may cause increased instability in farm incomes as there is greater reliance on the market. The greater fluctuations may impact the resource base industry of agriculture, which will highly influence future rural economic stability and viability. Virtually every state in the Northeast, particularly those in the Mid-Atlantic states, is struggling with how to stem the conversion of farm land to urban uses. The development of effective, equitable and efficient land use policies has become critical to the future of production agriculture. Maintenance of family farms and farm family incomes under these conditions make it necessary to also maintain a strong nonfarm rural economy. Thus, broader rural development efforts are imperative.

When farm job losses are excluded, growth in total rural nonfarm employment exceeded national growth rates in 88 economic areas or Component Economic Areas as designated by U.S. Department of Commerce. Recent trends in manufacturing employment in rural areas show some gains in employment, but not to the level witnessed previously. Employment in both durable and nondurable manufacturing and in mining is expected to decline in the next decade at the national level (Crandall 1993; Franklin 1995), and rural areas are likely to be disproportionately affected. Changes in manufacturing production technology and organization have reduced the attractiveness of rural areas as locations for manufacturing activities.

High-tech industries and firms utilizing small-batch, flexible production techniques require greater proximity to skilled labor and markets. For these firms, the cheap land, abundant labor and the historically lax environmental regulations available in rural areas no longer receive great consideration in the location decision. Many rural areas, however, continue to have a vibrant and growing manufacturing sector. Examining these cases could prove valuable to rural economic efforts. What has caused these changes, what factors can be identified, and how factors are different for different areas all need to be investigated. One particular direction for such research is the impact of agglomeration, which increasingly is hypothesized to have considerable influence on economic activity.

The jobs that have been lost in the good-production have been replaced, in part, by jobs in the service industries. From 1975 to 1989, 89 percent of the net employment growth in nonmetropolitan counties was in service-producing industries. By 1989, two-thirds of the employment in nonmetro counties was in these industries (Smith 1993). Unfortunately for rural areas, the growth in higher-paying service industry jobs has been concentrated in urban areas, with rural service industry jobs being concentrated in the lower-wage service jobs. These jobs also may be part-time and often lack benefits.

The transition from a goods-producing to a service-based economy has created challenges for rural communities trying to maintain a viable local employment base and minimize both

unemployment and underemployment of local residents. For example, tourism often has been championed as an area of service sector development for rural areas. Tourism development, however, needs to be carefully focused, because in some areas tourism adds to instability, may not produce viable levels of economic activity and income, and may not balance other costs incurred by a community. Many communities in the Northeast are dependent on the tourism industry. Research on these changes is necessary to determine the potential of the rapidly growing service industries to contribute to the rural economic base.

Another oft-cited hindrance to improving economic activity in rural areas is deregulation. Nonmetropolitan communities have become less attractive to businesses due to deregulation in the financial markets and transportation and communication industries. An increase in interstate banking has encouraged a flow of funds out of the slower growing rural areas to the more rapidly expanding communities (both urban and rural).

Transportation and communication costs for geographically isolated rural communities have also increased relative to urban areas as the airlines and telecommunication industries concentrated their expanding services on the metropolitan centers. On the other hand, the phenomenon of the Internet may provide opportunities to rural communities if access is provided.

Social capital between local business operators and community leaders appears to be an important precursor to successful local economic development efforts (Putnam, 1993, Flora and Flora, 1993). One of the explicit aims of extension programs in business retention and expansion (BR & E) is to build the capacity of communities (i.e., social capital) to do local economic development (Morse and Loveridge, 1996). Over thirty states have outreach/extension programs to assist communities in establishing BR & E outreach programs.

While there has been some research evaluating the effectiveness of BR & E efforts, this work still can not answer many of the questions posed by community leaders and policy makers. Research on this popular local development topic can also improve Extension/University BR & E outreach programs.

Perhaps one of the most far-reaching changes that will significantly affect rural communities and households is devolution of federal authority and services. Devolution is the political effort to simultaneously reduce the scale of the federal government and pass greater programmatic authority to the states and local governments. Many rural areas may champion the idea of devolution, but many may find that they are unprepared for this new governmental focus. In order to prepare rural areas for substantive change in federal policies and funding, research is needed to help rural areas identify and assess areas of possible impacts from devolution.

Finally, the impacts on rural areas of the increasingly open work market ("globalization") as exemplified in the new international trade agreements, such as NAFTA and GATT, is somewhat unclear. The opening of new foreign markets may greatly impact the natural resource-based industries such as agriculture and mining, but as is often the case, these impacts will not be uniform across rural America. Rural communities on the border of Canada and Mexico may find new business opportunities. However, at the same time, these communities must struggle with the problem of illegal aliens. Rural communities further from the borders may perceive expanded international trade as a threat to many established industries. What is clear is that rural

industries across the board will face a more competitive and changing market. The differential impacts of new foreign trade agreements and alliances on rural economies need to be investigated.

The geographic and industrial pervasiveness of the several issues just identified implies that new rural development efforts must have a broad focus if significant improvement in rural economies is to result. These efforts must go beyond identifying changes in the economic structure of rural areas. They must identify the impacts of these changes on social and economic factors as well as the impacts of the social and economic factors on the economic structure. Further, the determinants of these factors must be identified if effective policies to change them are to be developed.

Research into rural development issues also must be undertaken on a multi-state and multi-region scale. A narrower geographic perspective often limits the research results to anecdotal evidence or case studies with limited usefulness when developing rural development policy. A national research effort is needed to adequately address these issues facing rural America. This national effort would permit a more complete and systematic analysis of development alternatives. Moreover, through the sharing of data sources, software packages, methodologies and expertise, the limited resources allocated to rural development will be more efficiently used. Also, through shared research efforts, land grant universities may more adequately address the research issues enumerated by the Fund for Rural America.

RELATED CURRENT AND PREVIOUS WORK:

The nation's industrial structure continues to change, leading to further changes in the sources of employment and income for rural residents. Examples are: 1) the movement of jobs to the service sector and away from traditional manufacturing jobs; 2) changes in manufacturing organization; such as, just-in-time inventory; 3) the role of high technology; and 4) the role of traditional rural resource based industries; i.e., agricultural, wood products, and mining. Accompanying the new industrial structure is the change in federal, state, and local government relationships and responsibilities or what is called "devolution". The 1996 Farm Bill also will cause change in the viability and stability of the rural agricultural industry from the substantive changes in agricultural price supports and other agricultural commodity programs. In addition Fund for Rural America will encourage multi-disciplinary and outcome oriented research. Finally, the structure of international trade has changed through NAFTA and GATT. Rural areas which are dependent upon the agricultural and manufacturing sectors will be sensitive to new international trade agreements. The impacts to these rural economies will be both positive and negative. The emergence of many of these changes in rural industrial structure was identified and examined under NE-162, the previous project (Henry et al. 1986, 1987; Drabenstott et al. 1987; Henry and Drabenstott 1996).

Changes in types and organization of manufacturing will lead to demands for different occupational skills and create new demands upon local governments. This will put some communities in more advantageous positions, and others in less. Knowledge about these changes and their impacts on employment and income is necessary if local policies, especially given devolution, are to be developed to help rural people, rural communities, and states to respond to problems more effectively and efficiently.

The previous regional project approached this issue by examining the growth potential of traditional rural industries, primarily manufacturing (Goode and Hastings 1988, 1989). Major findings were that transportation facilities and the complexity of the service and trade sector are important factors in industrial location, while the development of industrial sites was no more influential than other factors which communities can control. An industrial targeting model was developed out of this research to help elected officials and leaders of rural and small metropolitan communities identify their potential to attract new manufacturing employees (Goode and Hastings 1988).

Initial investigation of the location, employment, and entrepreneurial aspects of high-tech manufacturing were initiated under the previous project (Barkley 1988; Smith and Barkley 1988; Barkley et al. 1988; Barkley and Smith 1991). Given the expansion of international manufacturing investment in rural America, the past project estimated factors which entice foreign manufacturers to rural areas and their impacts on rural businesses, labor market and economy. (Barkley and McNamara 1992 and 1994).

Since the late 1940's, the proportionate share of total employment in the service sector has been increasing. The service industry has become a primary source of employment in nonmetropolitan areas, providing up to two-thirds of all jobs, and this sector has generated all net new employment in recent years (Miller and Bluestone 1988; Porterfield 1990; Smith 1993). The previous project investigated the role of the service sector in rural areas (Smith 1984, 1990 and 1993; Hushak 1992). Also the previous project identified factors for rural commercial sector development and the influence that dependency among commercial sectors has on the probability of rural commercial sector development (Shonkwiler and Harris 1992; Harris and Shonkwiler 1994 and 1996; Harris et al. 1996; Deller and Harris 1993). Additional research on the location requirements of the rural commercial sector is needed.

Prior research on business retention and expansion (BR & E) outreach programs focused on the perceptions of volunteer local leaders (Morse, 1990; Smith, Morse, and Labao, 1992; and Loveridge and Smith, 1992). Neither the effectiveness of the BR & E program in building social capital nor the impacts on individual businesses have been examined in prior work.

Leones, Schluter and Goldman (1994) examined earlier studies of the dependency of an economy on a given sector. The economic importance of the poultry industry has been examined in North Carolina (Vakina and Roka, 1995) as well as the nursery industry in Arizona (Cox et al., 1995) and agriculture in Delaware (Tanjuaquio et al., 1996).

The literature on infrastructure and economic development can be divided into theoretical and empirical issues. A number of authors have discussed the theoretical dimensions of this relationship (Deller 1991; Eberts 1990; Johnson 1990a; 1990b). Economic theory suggests that infrastructure is an input in aggregate economic development; yet the precise relationship between infrastructure and economic development may take numerous forms. Doeksen and Allen (1990) summarized conclusions of the empirical work as follows: "Many studies have attempted to document the linkages between infrastructure and economic growth. Research exhibits a high positive correlation but has not firmly established causation due to statistical and empirical problems." Previous research by Johnson (1990a); Madden (1985); Diewert (1986); Kriesel et al. (1988) and Goode and Hastings (1988) have employed alternative procedures to measure the impacts of infrastructure on economic development.

With devolution and the potential for reduced federal funding of rural infrastructure, there is a demand for higher efficiency in our public services. In the past regional project, Bhattacharyya et al. (1995a and 1995b) and Deller and Halstead (1994) have investigated factors to increase rural infrastructure efficiency for rural water systems and roads. As devolution becomes more prevalent, efficiency studies of rural infrastructure systems will be in more demand.

Improving rural education has continued to be a critical issue for analysis and research. Estimating the relationships between educational production inputs and outputs has been the focus of several studies. Most of the studies (Coleman 1966; Burkhead 1967; Hanushek 1972; Katzman 1971) have used a production function framework to identify the influences of various school inputs on educational output. Stallmann et al. (1990) have investigated the influence of occupational structure in the community on dropout incentives. Further research is required to investigate the productive efficiency of rural schools and to improve their output.

During the 1980's, there was divergence in metropolitan and nonmetropolitan incomes. It has seemed to some that the linkage between metropolitan and nonmetropolitan counties was little or negligible. Holland et al. (1996) and Harris et al. (1996) developed interregional interindustry models to derive economic linkages between these two economies. Barkley, Henry, and Bao (1995) tested for urban-rural linkages using spatial statistical analysis and Geographic Information System (GIS) techniques. Stenberg and Maki (1996) investigated urban and rural linkages among technology intensive industry clusters. In these studies, linkages between metropolitan and nonmetropolitan counties were found. Given devolution and more power to state governments where one-man, one-vote elects both houses of the legislature and results in urban control of the legislature, identification of metropolitan and nonmetropolitan economic linkages is even more critical.

With devolution of federal relationships and responsibilities to state government and possibly to lower local levels, local self-development strategies may be more important than ever to mobilize local resources and generate locally controlled growth. Local self-development projects include the involvement of local resources and local ownership and control of enterprises or activities (Reid 1987). Therefore more quantitative work is needed to estimate benefits and costs associated with these approaches.

In order to aid quantitative analysis at the state and local level, more complex modeling such as dynamic Computable General Equilibrium (CGE) models may be developed. CGE models advance the fixed-price models of the past in that the inclusion of relative prices which reflect economic scarcity of all commodities and factors are modeled. In the past project, state and local CGE models were developed and applied to alternative problems (Kraybill 1993; Waters et al. 1996; and Harris et al. 1995).

With the inclusion of investment, migration, and growth components in static CGE models, dynamic CGE models have been developed to estimate a time trend of growth for state and local economies. Upadhyaya and Holland (1995) investigated the economic impact of reductions of state business and occupational taxes on the State of Washington's economy and fiscal accounts. Seung (1996) developed a dynamic CGE model for the state of Ohio which included public goods in the household production function. Seung derived impacts of a

business tax cut on public capital stock and the interaction of reduced public capital on private capital productivity. Berck et al. (1996) developed a dynamic CGE model for the state of California which will be employed by the California state government for "dynamic scoring" of alternative assembly legislation and expenditure bills. Further development of dynamic CGE models, at the state and local level, is needed in order to derive potential impacts of devolution, the 1996 Farm Bill, reallocation of natural resources and new international trade agreements.

Several current projects have been identified that are related to this proposed research but none appear to duplicate the proposed project. In many cases, the proposed project will build upon the work undertaken as part of these projects.

A Northeast regional project, "Tourism Impacts and Development Alternatives from the Local Government Perspective", is evaluating the role of tourism industries in the economic development process. The project proposed here does not specifically consider tourism. A Southern regional project, "The Changing Structure of Local Labor Markets in Non Metropolitan Areas" examines the changing nature of rural labor markets in the South. Information from that project may be complementary to the proposed study. The new Western regional project "Rural Communities and Public Lands in the West: Impacts and Alternatives" is examining the impacts to rural western communities of alternative public lands policies. Information from that project will be useful to the proposed study.

Several state projects are examining employment changes and trends. Examples of these are: "Employment and Income Trends, Growth and Potentials in Rural West Virginia" (West Virginia); "An Economic Analysis of Financial Strategies and Programs for Improving Rural Economic Development" (University of Georgia); "Service-Producing Industries: A Base for Rural Economic Growth" (University of Idaho); "Impact of Economic Expansion and Recession in Nonmetropolitan Areas of Kentucky" (University of Kentucky). All of these projects focus on rural areas within a state, and therefore applicability of results regionally, or nationally are limited. The proposed project will expand upon these efforts by employing similar data and methodologies in different state to broaden the usefulness of these findings.

Additionally, the continuation of NE-162 will help land grant institutions focus on proposed competitive grant programs of the Fund for Rural America. By organizing a regional research group whose past research has been very practical and beneficial for rural constituents, participants in the NE-162 project may have advantages in formulating and developing research programs for the Fund for Rural America.

OBJECTIVES:

1. Identify the implications of industrial and employment restructuring on nonmetropolitan communities.
2. Identify and analyze the demographic and socioeconomic implications of economic restructuring in nonmetropolitan areas, with special emphasis on labor market implications and how various ethnic groups are affected by policy and market changes.

3. Identify changing public policy initiatives and relationships and their impacts on rural economies and governments and investigate the effectiveness of alternative policy instruments to affect rural economic and fiscal viability and structure.

PROCEDURES:

Objective 1

Research on the implications of industrial restructuring on nonmetropolitan economies has four principal components. First, researchers from Delaware, Pennsylvania, New York, South Carolina, Wisconsin, and Utah will identify commonalities across the U.S. in changing industrial structures among nonmetropolitan communities. The focus of this research team is to develop a common database and research methodology that permits comparisons of restructuring trends across regions (e.g. Northeast versus the South) and states (e.g. New York versus Pennsylvania). Specific rural restructuring trends to be investigated are: (a) the growth in value-added agricultural processing industries; (b) the growth in service-related activities relative to manufacturing and production agriculture; and (c) the growth of small, specialized firms relative to traditional, large-scale plants. The researchers will use distributional, shift-share, and location quotients analyses to estimate and describe the specific industrial shifts of interest (a, b, or c above). The common database for this descriptive analysis will be developed from three data files: Enhanced County Business Patterns, ES 202, and BEA REIS.

Second, the effects of the changing industrial structures on rural economies will be investigated using two complementary research methodologies. Researchers from Pennsylvania, Delaware, Utah, Oregon and South Carolina will develop and estimate small-region econometric models. These models will have measures of nonmetro economic well-being (e.g., changes in income or employment) as the dependent variable. The explanatory variables will be measures of industry structure and structural change and other area characteristics relevant to local economic development (control variables). A complementary approach will be undertaken by Wisconsin, Oregon, and Missouri. This approach involves the use of IMPLAN input-output (I/O) models to provide a detailed analysis of current industrial structure in specific rural areas and a simulation of the impacts of structural changes on employment and income in specific sectors of the local economy. Following the econometric and input-output analyses, the researchers will attempt to formally link the two approaches by constructing county-level, conjoined I/O econometric models. Missouri, Nevada, and Wisconsin will assume the lead in developing the conjoined model. The model will be refined by researchers in Delaware, Pennsylvania, Utah and Oregon, and South Carolina to reflect institutions and fiscal structures unique to the specific states. The application of a common model in a number of states enables researchers to determine how different institutions influence the economic changes resulting from industrial restructuring.

Third, researchers at Kentucky and Indiana will lead the analysis of the determinants of food manufacturing location decisions in the United States. All NE-162 participants will assist in the development of a national database from state and commercial sources. Analysis of this data will focus on understanding factors influencing the location selection among states and the selection among communities (e.g. metro versus nonmetro). This research will enable local and state governments to better assess their potential for attracting food manufacturers and target recruitment and small business development activities at specific food manufacturing sectors.

Fourth, the policy implications for rural regions experiencing restructuring are diverse and must be tailored to the specific circumstances of the regional economies. However, trends identified in the above analyses will provide common strategies for assisting rural areas in their adaptations to changes in the national and global economies. Potential strategies to be examined include industry clusters, industry targeting (e.g., wood products and food processing), industry retention and expansion, labor training, and retail market potential analysis. All researchers assigned to Objective 1 (Delaware, Pennsylvania, New York, Utah, Oregon, South Carolina, Indiana, Kentucky, Wisconsin, Missouri, Oregon, and USDA-ERS) will be involved in investigating the efficacy of alternative rural industrialization strategies. Analysis of common strategies across states permits the estimation of the role of institutions and location in space and on the effectiveness of these industrial development strategies.

Objective 2:

Research on changing employment conditions, as well as socioeconomic and demographic trends has three principal components. The first approach will complement the studies incorporated in Objective 1 which look at the implications of industrial restructuring. Researchers from California, Pennsylvania, Missouri, Washington and Utah will lead the national analysis of direct and indirect nonmetropolitan labor market impacts from policy and market driven restructuring. Beyond measures of economic growth, researchers will analyze the effects such changes have had on income levels and distributions, employment cycles and human capital demands. Descriptive statistics and spatial data analysis will be used to compare rural labor availability with employment opportunities. Although ES202 data are available in each state, there will be an effort to obtain a common set of socioeconomic, education and unemployment data from all states and regions involved through the Census and state agencies.

Second, the demographic effects of rural economic development and labor market trends will be studied. There is great uncertainty about the flows and magnitudes of migration to and from nonmetropolitan areas--an issue which is exacerbated by the changing face of rural migrants. Although many states have had an historic presence of ethnic enclaves to supply low-skill, low-wage labor (Rochin, Western states: Rochin and Castillo, California), numerous other states are relatively new choices for significant ethnic settlements (Thilmany). Multiple case studies have documented the dramatic effects of Latino population growth on the economic condition of places, and the character of community life. However, the pattern of this changing ethnicity throughout rural America, and the implications for community development and public policy are generally unknown. Researchers from Michigan, Missouri, Pennsylvania, Washington and Utah will focus on recent migration and settlement patterns, and ultimately, their impact on the general socioeconomic health of rural communities. Of special interest is the relationship between the changing rural labor market, migration, demographic changes and rural poverty.

The method of analysis for this section of the objective entails the following steps; First, a regional database of places and counties in nine Midwestern states will be constructed with data from the 1990 STF 3 census files, the 1990-1995 County Business Patterns Data, and 1990-1995 data on school district enrollment from state departments of education. This database will be used to discern trends in immigration and changing ethnicity throughout the region, including such correlates as employment, unemployment, poverty and educational attainment. Procedures developed in Michigan will be incorporated in Georgia, Utah and other interested states to

investigate adequacy of transferability. Changes because of a shift to geographic location of analysis will be noted and analyzed. Additionally, procedures and analysis employed to investigate the impacts of the Latino population on rural areas of the nation can likewise be transferred to analyze other immigrant group impacts. (Rochin, Michigan; Kriesel, Georgia; Findeis, Pennsylvania; Holland, Washington; Thilmany, Utah).

Finally, the implications of the findings in objectives 1 and 3 will be integrated from the findings of this study's labor market, migration and demographic findings to analyze how economic trends and public policies have affected demands on nonmetropolitan communities and public services. Using the Census' Survey of Income and Program Participation, a baseline analysis of social and welfare program usage in the states included in this project will be conducted. It is important to understand how the changing environment in rural areas has affected those most in need of development, which are often included in such social programs. In addition to negative labor market shocks, it is likely that migration patterns and demographic changes will affect the dependency of the rural population on assistance programs.

Although there are some clear plans of research, the relatively recent evolution of issues in this objective require more exploratory data-gathering and methodology activities. A primary activity of this group of researchers in the initial years of this project will be to develop rich, complementary data sets across states and regions. Research coordination in this objective will be vital because employment patterns in Pennsylvania, for example, will be impacted by the state's programs plus the employment programs offered in neighboring states. Furthermore, in-depth information on employment programs is typically available to scientists within particular states, but harder for outsiders to obtain. Regression analysis and spatial data analysis (GIS, spatial statistics) will be used to identify explanatory factors for and spatial trends in labor demand, migration and public program usage.

Objective 3:

Rural areas are reacting to an environment of multiple changes: FAIR, NAFTA, WTO, devolution and deregulation. Although the policies are national, the impacts on rural areas will not be homogenous. Because of the differential impacts, each state will in turn respond with policies and programs to mitigate impacts and to enhance its ability to compete for businesses, jobs, incomes, and Federal dollars, leading to cross-state impacts.

For example, the impact of devolution will not be homogenous in rural areas because of differing economic bases (both within and across states) and differing local government structures across states. Thus, it becomes important to demonstrate to policy makers the rural impacts, intended and unintended, positive and negative, of policy initiatives. In addition, the impact of a policy will differ among socio-economic groups. Impacts on citizens, legal immigrants and illegal immigrants will be investigated. Impacts by income levels will also be investigated.

In order to show the differential impacts of changes in federal, state and local government relationships, policies and responsibilities on rural areas, socio-economic and fiscal impact models are required. However, use of these models requires investigation of the accuracy and applicability to local situations. The IMPLAN input-output model software and data base

(Minnesota IMPLAN Group, 1997) acts as a primary programming and data source for local impact analysis.

However, the initial IMPLAN input-output or Social Accounting Matrix (SAM) accounts often require modification with survey data or data from agricultural enterprise budgets to develop more accurate and policy specific hybrid-type models for a given region or state. Each state may identify important sectors that require survey based estimation depending on its particular circumstances, and often the agricultural, mining, and/or manufacturing sectors are selected. Also the IMPLAN model derives a state and local government sector which for region specific analysis may be too aggregated. Procedures to separate state and various local government entities for specific local government impact analysis is also needed.

In order to develop hybrid input-output and SAM models that function across states, standardized procedures are needed. These standardized procedures apply to data sources and survey data incorporation into an input-output or SAM model that is consistent and uniform. This regional project has served and will continue to serve as an ideal laboratory for such procedures to be tested and refined across states. The sharing of these data and techniques across states will hasten development of state and local models which more accurately reflect local conditions and markets (Holland, Washington; Kraybill, Ohio; Fletcher and Harris, Nevada; Stallman, Texas; Goldman, California; Keith, Utah; Howard and Tyrrel, Rhode Island).

Fiscal impact models will be used to derive impacts to local governments from devolution of the federal government, changes in international trading agreements and other exogenous changes to the local economy. Development of those fiscal impact models will begin from a common base; the fiscal impact models for Virginia (Johnson and Keeling) developed as part of a previous NE-162 project. The model consists of econometric equations and spreadsheets. The model must be updated to reflect new fiscal conditions. Updating would require specifying new econometric equations and updating databases. NE-162 participants will work together to specify the new equations. Collaborative work will ensure a common base in the models and theoretically and empirically well-specified equations. Each researcher will identify the state and local data needed for the model. The participants will agree on a common aggregation of the data for the equations (Harris, Nevada; Jansen, New Hampshire; Johnson, Missouri; Stallmann and Jones, Texas; Weber, Oregon; and Foster and Tyrrell, Rhode Island). The participants will also coordinate with the RUPRI (Rural Policy Research Institute) project that is developing models of representative rural communities.

Each state will need specific equations to reflect specific state and local government structures, such as tax policy (income tax, no income tax, property tax, etc.) Researchers in states with similar structures will work together to specify local equations. For example, Texas and Nevada do not have a state income tax. Specific equations developed for each state will be evaluated by the collaborating researchers for theoretical soundness and consistency with the basic model.

Cross state comparisons of model results will provide information concerning the range of differential impacts of national policy. In addition, the comparison can yield evidence of differential response by states as they attempt to mitigate impacts and enhance their competitive position. The results of the state models can be used to demonstrate to policy makers and

differential impacts of national policies and can be used to make a series of consistent policy recommendations.

As states experience the differential impacts of policy, they will respond to mitigate impacts and to enhance their competitive position vis-à-vis other states. Examples of such responses include the economic incentive wars that use incentives to lure businesses from one state to another. One research question is, "Does use of incentives result in a net economic gain for the state that gets the firm, or does the competition between states result in incentives being so high that there is no economic gain to the state? West Virginia and Ohio are preparing a joint method and evaluation of these location incentives (Kraybill, Ohio and Loveridge, West Virginia).

Other state responses that may be evaluated include business expansion and retention programs. The impacts of the business retention and expansion (BR & E) program on building a community's social capital for dealing with local economic development and the impacts on changes in individual business participants will be studied. In contrast to earlier studies, which used a single respondent per BR & E program, data will be collected via mail, telephone, and personal interviews from a wide variety of local leaders and business participants in each of fifteen communities. Morse, from Minnesota will collect retrospective data on six communities, interviewing 180 community leaders and 300 businesses during the first year. During the second and third years, Morse and Loveridge (West Virginia) will develop a monitoring system to collect better data. McNamara (Indiana) will provide guidance to the questionnaire design for the businesses.

A related issue is state tax policy. This is especially problematic in small states where citizens can easily work in one state and live in another (New Hampshire and Boston, Massachusetts). The issue also exists along the borders of larger states where it is possible for citizens to work in one town and cross the state border to shop or to live in order to avoid taxation. In addition, cross border issues on a larger scale at international borders where the number of variables that differ between the two jurisdictions is even greater than those between states. The differences lead to legal and illegal migration across borders. (Jansen, New Hampshire; Harris, Nevada; Goldman, California; Leones, Arizona).

Another example of a cross-state issue that requires collaboration involves natural resources that cross state lines - public lands, watersheds, etc. It is well recognized that for many rural areas the resource base and its management will affect the current and future trend of economic development. Public lands are an increasingly important policy issue in the West. Watersheds are a major issue in the Northeast where rivers often form state boundaries. Thus, the management of the watershed requires cross-state collaboration. (Harris, Nevada; Goldman, California; Weber, Oregon).

The above are a few of the many existing issues that can be addressed using fiscal impact modeling. In addition, as governments change their policies, there will be new and unforeseen issues during the life of this project. The fiscal impact models have the power to address future issues as they arise.

EXPECTED OUTCOMES:

This regional project will produce the following:

1. A national committee of policy analysts to examine specific policy issues by applying the best research currently available. This committee can provide timely analysis of current issues facing rural America.
2. A set of standardized social, economic and fiscal impact assessment tools for evaluating impacts of exogenous changes (such as industrial restructuring or devolution) on rural communities.
3. This regional project will provide information as to industrial and employment restructuring on nonmetropolitan communities. Results should provide insights for public policy officials to help mitigate negative impacts in rural areas from this restructuring.
4. The success of this regional project will be evaluated by the capability of the models and analysis developed to assist public officials and policy makers in evaluating social, economic, and fiscal impacts of exogenous changes on rural communities, states and regions.
5. The socio-economic demographic will complement the findings of from the modeling and economic assessment to give a broader picture of the health of rural communities.

ORGANIZATIONS:

The project will be planned and executed by a Technical Committee made up in the usual manner; each participating state or agency will have an official representative appointed by the Experiment Station Director. There will also be a representative of USDA-SEA, and an administrative advisor designated by the Experiment Station Directors. Nonvoting representation from ERS-USDA and the Federal Reserve System will be sought to provide interaction with those agencies.

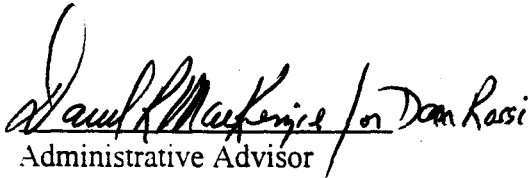
The Technical Committee will meet at least once a year. The technical committee will evaluate plans of work to insure adherence to the project outline. The committee will coordinate publication of research results generated by the participating researchers.

Officers: A chairperson and secretary will be elected annually by the Technical Committee. The chairperson, in consultation with the administrative advisor, calls and presides over the Technical Committee and Executive Committee. He/she is responsible for preparing or supervising the preparation of the annual report of the regional project. The secretary records and distributes the minutes and performs other duties assigned by the Technical Committee.

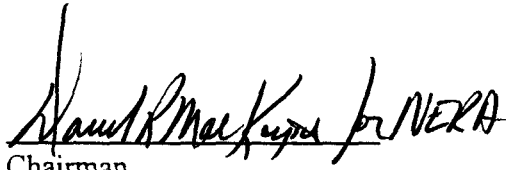
The Executive Committee consists of the chairperson, secretary, administrative advisor and the immediate past chairperson. The Executive Committee may be designated to conduct business between the annual meetings and perform other duties as assigned by the Technical Committee.

SIGNATURES:

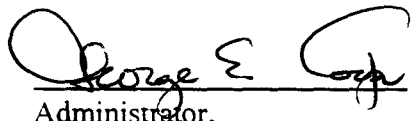
Regional Project Title: Rural Economic Development:
Alternatives in the New Competitive Environment


Administrative Advisor

8/13/97
Date


Chairman.
Regional Association or Director

8/11/97
Date


Administrator,
Cooperative State Research, Education and
Extension Service

8/25/97
Date

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