THE POTENTIAL FOR ECONOMIC DEVELOPMENT IN RURAL COMMUNITIES IN THE NORTHEAST

Frank M. Goode

ABSTRACT

Recently released reports of the 1980 Census of Population has again focussed attention on the relatively poor economic performance of the Northeast region. This paper suggests that the labor costs and market conditions that have allegedly been responsible for the movement of traditional manufacturing out of the Northeast may be changing. Thus, this movement will not be a "drag" on the future economic development of the Northeast. The potential "turnaround" in the Northeast is suggested by the recent economic performance in New England and by Pittsburgh's ability to attract firms in rapidly growing manufacturing sectors.

INTRODUCTION

The preliminary 1980 Census of Population statistics serve to remind us of the continuing decline of the industrial Northeast. An important question on the minds of policymakers, economists, and interested individuals is what does the future hold for the Northeast in general and the rural Northeast in particular. That is, what is the outlook for the Northeast in terms of employment and population change and can anything be done to positively improve the prospects?

In order systematically to discuss the future economic change in the rural Northeast, it is useful to consider two separate but related issues. The first issue is how well is the region going to perform economically in the future? The second issue is, within the context of the future economic performance of the Northeast region, how are rural areas of the region likely to perform relative to the urban areas?

To address these questions, the following steps are useful and these steps provide the organizational structure for this paper. First, a review of industrial location studies provides information concerning the factors associated with inter- and intra-regional shifts in employment. The second step involves describing major regional and national trends as they relate to the geographical distribution of employment. This step has two objectives. First, the long-term trends may provide more information about the future of the region than the trends over the past two or three decades. Secondly, it is useful to determine if the long-term regional and national trends are consistent with the information provided by the industrial location literature discussed in step one. The third step involves an attempt to anticipate how relevant location factors may change in the future and thereby affect the relative position of the Northeast in general and the rural communities in the Northeast in particular. The final step in the process involves a discussion of two studies whose findings are consistent with the projected changes in the region.

Frank M. Goode is Associate Professor, Department of Agricultural Economics and Rural Sociology, The Pennsylvania State University, University Park, PA 16802.

GENERALIZATIONS FROM INDUSTRIAL LOCATION STUDIES

Introduction

Industrial location theory is one of the most diverse literatures in the profession. No two studies use the same geographical units of analysis, the same independent variables, nor in many cases, the same dependent variables. Thus, the generalizations I am about to make from this body of literature are risky at best.

Size of Community

If there is one variable that is nearly always included in industrial location studies, it is some measure of community size. Generally, this variable is either population size or the employment size of the manufacturing sector. The reasons for including these types of variables are quite varied. It is argued that these variables represent such diverse concepts as the demand for output, the supply of labor, and in some cases they are used to measure agglomeration economies (whatever they are). Whatever the reason for including them, the empirical results are very consistent when SMSA's are the unit of analysis. Namely, there is always a strong negative relationship between size of the community and economic growth. Very simply, this means the larger the SMSA the less it grows (and in many cases, actually declines).

The empirical results of nonmetropolitan studies that use a size variable are not nearly as consistent. For example, Kuehn (Kuehn, et al., 1979) in a study of small communities in Missouri found a significant negative relationship between town population and economic development. On the other hand, Dorf and Emerson (1978) in studying small communities in the North-central region (the region including Missouri) found that "the main determinants of location are community size...". Finally, both Smith and Deaton (1978), in a Kentucky-Tennessee study and Weaver (1976), in a Wisconsin study, found that measures of size, namely, manufacturing base or community population were not significantly related to economic development. Thus, with regard to community size measures, all that can be said is that for SMSA's, the larger they are the less they are growing. For non-SMSA communities, the results are quite ambiguous.

Labor Supply

Most industrial location studies include measures of labor supply, but the measures are quite varied. In general, the measures used are designed to reflect one of four dimensions of the concept of labor supply. These four dimensions are price of labor (wages), quantity of labor,

quality of labor, and labor attitudes. In general, either the wage rate or the quantity of labor available are significantly related to economic development. Very little empirical work has been conducted to investigate the hypothesized relationship between worker attitudes and economic development. However, popular literature constantly makes references regarding the cooperative nature of workers in the South and the West as contrasted to those in the North-central and Northeast regions.

The importance of the quality of labor is very much dependent on the type of economic development being studied. For example, Kramer, in studying SMSA's, found that the number of college graduates was positively related to employment change in the newspaper industry, the books industry and engineering and scientific instrument industry (1979). On the other hand, the same variable was negatively related to changes in employment in the fabricated metal products industry and the electronic component industry, and was not related to a variety of other industries. In general, the quality of labor force variables have not been significant in explaining economic development of non-SMSA communities. On the other hand, the price and quantity variables are generally important. Kuehn's findings are representative of most location studies in non-metro communities. Kuehn found that the factors "which significantly and favorably influence plant acquisition, are...low labor costs as measured by operatives earnings and large labor supply...". Thus, industrial location studies lead to the conclusion that price and/or quantity of labor is an important determinant of industrial location both in an inter- and intra-regional context and that the quality of labor depends upon the industry in question. Finally, conventional wisdom continues to suggest that a cooperative labor force is a positive influence on economic development.

Access to Markets

In terms of inter-regional industrial location, market access is the dominant explanatory variable for industrial location. Mueller and Morgan (1962) interviewing plants in Michigan, found that access to market was the most important location factor. Greenhut and Colberg (1969), interviewing Florida plants, found that 52 percent of the respondents cited access to market as a major factor in their industrial location decisions. Thompson and Mattila (1959), in explaining inter-regional shifts in manufacturing industries, concluded that growth in local markets is the major factor explaining interstate shifts in manufacturing employment.

On the other hand, measures of market access used in intra-regional studies have not produced strong relationships between market access and employment growth. Generally speaking, the variable distance from nearest SMSA is used to reflect a rural community's access to markets. This variable is probably not a good measure of market access but it is interesting to note that there is not a consensus that nearness to SMSA's is positively related to the economic development of rural communities. For example, Smith and Deaton (1978) in studying Kentucky-Tennessee industrial location found that miles to SMSA was not a significant explanatory variable. In Weaver's (1976) Wisconsin study of rural communities, he concludes that "the net influence of location (distance to surrounding SMSA's) is quite limited. On the other hand, Dorf and Emerson (1978), studying a seven-state region in the upper Midwest found that distance to SMSA was significantly related to employment change. Thus, it would appear that access to markets is important in an inter-regional context but in the intra-regional context either it is not important or has not been adequately measured.

Availability of Transportation Facilities

Almost all industrial location studies involve variables relating to the availability of various transportation services. For inter-regional type studies, these variables generally are not very important probably because of the general availability of most types of transportation services. Basically, the same results are found in intra-regional studies. In general, the availability of rail, truck and interstate highways does not significantly affect the economic development of rural communities. The one transportation variable that does show a positive relationship in a limited number of studies is the availability of air service (Kuehn, Braschler and Shonkwiler, 1979).

Community Infrastructure

The conventionalism over the past couple of decades has been that communities did not have much control over their economic destiny. The argument was that there are macro-economic forces at play that so overwhelm any local initiatives that communities are impotent with respect to influencing economic change. However, the more recent industrial location studies tend to show that community infrastructure does, in fact, play a major role in explaining intra-regional economic development and, of course, much of the infrastructure is provided by the local community. For example, in his Missouri study, Kuehn (1979), found sewer capacity, zoning, and availability of airports all positively related to attracting new plants. In Weaver's study of the Wisconsin area (1976), he found that fire protection was significantly related to employment change. Weaver also found that building assistance improved the community's chances of attracting new employment opportunities, particularly if the locality did not currently have a manufacturing establishment. Smith and Deaton (1978) found that the availability of quality sites, bond financing, and a favorable fire protection rating were all positively related to employment generation in rural communities. Thus, it appears that infrastructure of various types does play a role in explaining intra-regional industrial location. However, systematic study of the role of infrastructure in an inter-regional context is conspicuously absent in the literature.

Taxes

In 1961, Due conducted a study to investigate the effect of taxes on industrial location.

He concluded that taxes were not an important factor. Since that time there has been very little attention devoted to the relationship between taxation and industrial location. However, there is an infant body of literature developing representing a rekindling of interests in this factor. For example, the September 21, 1979 Wall Street Journal carried an editorial which reported on a study by Genetski and Chin which concluded that there is a very strong relationship between state tax burden changes and the economic location of industry.[1] Also, in his Wisconsin study, Weaver (1976), found that the full-value property tax rate was negatively related to employment change. However, he concluded that it was not a relevant policy variable. In general, it appears that local taxes are not very important in explaining industrial location within a state, but a combination of state and local tax burdens may influence locational decisions at the state level.

MAJOR NATIONAL AND REGIONAL ECONOMIC TRENDS

A current concern in the Northeast involves the rather dramatic net out-migration from the region and the relatively poor economic performance of the Northeast as compared to the South and West. The first major trend area is that these population migration flows and economic growth trends have been in evidence at least as far back as the end of the Civil War (Browne, 1979). That is, throughout the post Civil War period, there have been significant migration flows from the Northeast and North-central regions to the South and particularly the West. The thing that differentiates the early part of this time period from the current experiences is that the early part of the period was also characterized by an in-migration to the Northeast and North-central areas from European countries and from the South. The strength of these historical migration flows is indicated by the fact that on the average, the Pacific and Mountain States have had a net in-migration of two and one-half million people per decade during this century. On the other hand, the Northeast achieved that level of net in-migration only once during this century. Unfortunately, reliable employment figures are not available for this historical period but it is probably fair to assume that these migration flows were to those regions of the country that were experiencing rather rapid economic development. We do have relatively good manufacturing employment data since 1950 and these trends are consistent with those found in an analysis of the migration data. During the decade, 1950 to 1960, the New England and mid-East states basically maintained a constant level of manufacturing employment (Pack, 1978). During that same period, manufacturing employment grew at an annual rate of approximately 2 percent in the Southeast, and 4.65 percent in the far West. Again, in the decade 1960 to 1970, the New England and mid-East regions basically maintained constant employment whereas the nation's manufacturing employment grew at 1.4 percent per year. Again, the Southeast's growth rate during the 1960's was roughly double the national rate while the far West grew at slightly more than the national rate.

The second major trend to be found in this historical data is the fact that the down-turn in economic activity in New England preceded that of the mid-Atlantic Region by one or two decades. Using net migration figures as economic indicators, the New England states had a net in-migration of 343,000 during the decade 1910 to 1920 (Browne, 1979). This in-migration dropped to 45,000 in the 1920's followed by a net out-migration in the 1930's. During the 1920's when net in-migration into New England dropped dramatically, net in-migration into the mid-Atlantic states increased fifty percent over the previous decade resulting in a net in-migration of approximately one and one-half million people. The mid-Atlantic states continued to experience a net in-migration in the 1930's as compared to a net out-migration for the New England region.

The relative performances of the New England and mid-Atlantic states is also represented by per capita income figures. In 1900, the per capita income figures in New England and the mid-Atlantic states were roughly equal, each having incomes about fifty percent higher than the national average (Pack, 1978). Over the next 30 years, per capita income in the mid-Atlantic states increased somewhat relative to the national average. In contrast, the per capita income in New England decreased relative to the national average. However, between 1930 and 1950, per capita income in New England decreased rather dramatically falling below the national average in 1950. The mid-Atlantic states in 1950 had a per capita income approximately 130 percent of the national average. Thus, based on migration and per capita income figures, it appears that the decline in the Northeast occurred much sooner in the New England region than it did in the mid-Atlantic states.

The third major economic trend that has become evident in the last decade is the rather substantial migration from urban to rural areas accompanied by more rapid increases in employment in rural areas than in urban areas. For example, Kuehn (1979) estimates that for the 1972-74 time period, rural communities in Missouri obtained 71 percent of the new manufacturing employment. These rural communities, however, contained less than 20 percent of the state's population. The economic performance of the rural areas vs. urban areas in the Northeast is well documented in a forthcoming publication by Fuller (1981). In New England during the period 1962-71, none of the metropolitan areas of New England was classified as fast growing. However, 22 percent of the non-metro areas were classified as fast growing. In the time period 1971-78, 8 percent of the metro areas in New England were classified as fast growth as compared to 40 percent of the non-metro areas. A slightly different pattern is evidenced for the mid-Atlantic areas, in that, during the 1962-71 period, 13 percent of the metro areas grew as compared to 11 percent for the non-metro areas. The 1971-78 period showed

[1] Copies of this study are available from Harris Economics, Harris Bank, Chicago, Illinois.

that the picture in the mid-Atlantic states had reversed with none of the metropolictan areas being classified as fast growth while 15 percent of the non-metro areas were so classified. Thus, it is generally conceded that non-metro areas have substantially outperformed metro areas for the past two decades.

THE ECONOMIC REASONS FOR THESE TRENDS

The central question is are the empirical industrial location studies consistent with these national trends, and if so, what insights does this literature provide relative to future economic developments? It does appear that these national trends are quite consistent with the empirical industrial location literature.

First, there is no question that the portion of the market for final goods and services that is found in the Northeast and North-central states has been decreasing over time. Specifically, the migration to the West and the rather dramatic increases in per capita income in the South have combined to make these two regions a sizeable market for most products. Thus, as was suggested in the locational studies cited previously, it is only reasonable to expect major increases in industrialization outside of the Northeast and North-central regions. The rate at which these adjustments take place depends upon the rate at which the regional markets increase, the rate at which manufacturing plants in the Northeast become obsolete, and how "foot-loose" the various industries are.

The industrial location studies discussed above also indicate that the industry tends to favor low wage rate areas. If per capita income figures are a reasonable proxy for wage rates, then it is clear that until recently, all regions of the country have had lower wage rates than the mid-East Region. For example, as recently as 1950, the per capita income in the South was roughly one-half that of the mid-Eastern region (Pack, 1978). Even in the far West, which had the Nation's second highest per capita income, the general pattern has been that since 1930, per capita income has been 5 to 10 percent greater than in the mid-East. Thus, in general, wage rates have been relatively high in the mid-East region as compared to the South and to some extent, the West.

The industrial location studies also indicated that infrastructure, in combination with building assistance and/or municipal bonding assistance, positively influenced the location of economic activity. Although there is no good information on the relative position of the North relative to the West and South with regard to these inducements the conventional wisdom is that the West and particularly South, have been using industrial sites and other subsidy programs very aggressively for several decades. The Northeast, however, has only recently made major efforts along these lines. For example, Alabama was the first state to pass enabling legislation to allow municipalities to issue bonds to subsidize industrial construction.

It was suggested earlier that state tax burdens may be a relevant consideration in industrial location decisions. Clearly the South and West have had, and continue to have, relatively low taxes as compared to the Northeast (Genetski and Chin, 1978). For example, an article in the Wall Street Journal (September 21, 1979) characterized the Frostbelt/Sunbelt dichotomy as a Tax Belt vs. Growth Belt issue.

Given the historical pattern of labor costs, markets, infrastructure, and taxes, it is not at all surprising that we have witnessed in this country major economic growth outside of the Northeast. The relevant question that will be addressed shortly is how long can one anticipate this trend to continue? Before addressing that question, the economic reasons for the superior economic performance of rural areas will be discussed.

One of the major reasons for the rural/urban turnaround has probably been residential preferences and their effect on the labor market. That is, public opinion surveys for thirty years have shown that a large proportion of the population would prefer to live in less congested communities (DeJong, 1977). However, there were other economic factors that made large metropolitan communities preferable locations for industry. Because there was a simultaneous and substantial labor force being released from the agricultural sector during this period, the preference for nonmetropolitan settings was not effectively transmitted through the labor market to industrial firms locating in metropolitan areas. However, as this agriculture to nonagriculture population movement decreased, industry had to become more aware of laborers' residential preferences. Accompanying environmental regulations also tended to undermine substantially some of the economic advantages of being located in a metropolitan area. For example, if a major manufacturing plant has to stop operations for two weeks because air pollution standards were being violated, it is clear that that was a costly activity for the manufacturing firm. Essentially, then, environmental laws made firms bear some of the social costs associated with their being located in metropolitan areas.

In addition, most metro markets can be served with reasonable efficiency from small rural communities in the surrounding hinterlands. Taxes also tend to be substantially lower in these rural communities than they are in the major metropolitan centers. Of course, wages in depressed rural communities tend to be lower than in urban areas. Thus, again it seems that the location theory and empirical work are consistent with a major rural to urban turnaround.

Incidentally, it may very well be that the urban to rural turnaround is also partially responsible for the regional redistribution of economic activity. Namely, industry is growing in the nonmetropolitan South more rapidly than in the metropolitan Northeast.

WHAT DOES THE FUTURE HOLD FOR THE NORTHEAST IN GENERAL AND FOR THE RURAL NORTHEAST IN PARTICULAR?

As was discussed above, there does seem to be some consensus in the industrial location

studies concerning the dominant factors that determine the location of industry. This empirical work also seems to be consistent with the broad national trends that have characterized the last several decades. Thus, it would appear that the problems arising from examining the future reduce to problems of predicting what is going to happen to the relative position of the Northeast with respect to these relevant location factors.

Is the Northeast Region Likely to Continue To Lag Behind Other Regions of the Nation In Terms of Economic Growth?

The information presented previously for the relative employment growth rates for various regions indicates that regional changes involving the traditional manufacturing industries have been going on for quite some time and that these adjustments have been rather massive. It is possible that this adjustment may be approaching an equilibrium. A crude indication that we may be approaching this equilibrium is provided in Table I. For example, in 1920 the Northeast had 28 percent of the nation's population and 46.4 percent of the nation's manufacturing employment. The ratio of these two proportions (the ratio can be viewed as a manufacturing concentration index) for 1920 is 1.66. This ratio indicates that, in 1920, manufacturing activity was relatively concentrated in the Northeast. This ratio declined to 1.46 in 1940, held constant in 1950 and then continued to decline to 1.18 in 1980. What value this ratio will assume when equilibrium is reached is not known, but it might be reasonable to suggest the ratio might stabilize at a value somewhat greater than one. If this is true, then it can be argued that the "drag" that has been put on the economy of the Northeast by this regional adjustment process can be expected to end in the near future or at least moderate significantly. However, the moderation of this "drag" does not necessarily suggest a bright future for the Northeast because the manufacturing sector is a relatively slow growing sector. The future of the Northeast is going to be tied much more directly to the "new" manufacturing sectors and to the other sectors of our national economy. Thus, the future of the Northeast depends more on how successfully they react to the market for computers than whether they are able to recapture their previous share of the textile and steel market.

How effectively the Northeast can compete in these rapid growth industries probably depends on the competitive position of the Northeast with respect to the dominant industrial location factors. Again, one can argue that an inter-regional equilibrium is being established in these markets. For example, the inter-regional variations in labor costs have been dramatically reduced by the increased industrialization of low labor cost areas, particularly the South. As was mentioned above, the ratio of per capita income in the mid-East region as compared to the South was approximately two in 1950 (Pack, 1978). By 1975, that ratio had been reduced to 1.15 and if adjustments for cost of living differentials were incorporated the ratio was 1.07 in 1975. Thus, the low-wage attraction of the South has been virtually eliminated in the last twenty-five years.

There is some indication that state and local government industrial recruitment programs are on the up-swing in the Northeast. This, to some extent, should neutralize similar efforts in the South. There are also some indications, Massachusetts for example, that there may be major tax reform underway in portions of the Northeast. Another indication is that the "runaway" growth of state and local governments in New York has been moderated. The role of tax burdens in influencing future economic development must be viewed with caution. First, the existing evidence about the detrimental effects of taxation is not conclusive. Secondly, the rapid growth industries of the future may be influenced as much by the services that state and local governments provide as they are by the taxes these governments levy. Examples are skilled labor, community services, and clean environment. Thus, the relative high taxes in the Northeast may become a positive influence (at least neutral) rather than a negative influence.

Although it is a gross over-simplification, it would appear that the dominant economic forces that have been spurring economic development in areas other than the Northeast and North-central are abating. Furthermore, employment growth in the Northeast may depend heavily on how aggressively business and political leaders in the Northeast compete in the markets for products in fast growing industries.

Is the Economic Performance of Rural Areas Likely to Continue to Surpass That of the Urban Areas?

Whether or not rural areas of the country will continue to develop more rapidly than the urban areas depends primarily on policy decisions in Saudi Arabia and in Washington, D.C. If the Saudis decide to increase energy prices even further, the cost of supplying markets from rural communities might increase enough that there would be a tendency to reverse recent trends. Likewise, if the current administration successfully reduces environmental standards, there could be further reversals in the trend of superior economic performance in rural areas. Several energy "experts" argue that world demand for oil has decreased enough and will continue to decrease so the Saudis can not significantly increase oil prices. It is also improbable that major environmental regulations will be rescinded. There may be some reduction in planned future standards but it would seem unlikely that there will be a major re-direction in environmental standards. Thus, it would appear that the metro to non-metro movement of people and the superior performance of non-metro economic development, are bound to continue for the foreseeable future. However, economic theory would suggest that this trend will continue only until a rural-urban equilibrium is established. Surely this is an event difficult to predict.

Table I. Percentage Distribution of U.S. Population and Manufacturing Employment by Region: 1920-1980.

Region	1920		1930		1940		1950		1960		1970		1980	
	Pop[1]	Manf[1]	Pop[1]	Manf[1]	Pop[1]	Manf[1]	Pop[1]	Manf[1]	Pop[1]	Manf[1]	Pop[1]	Manf[1]	Pop[2]	Manf[1]
New England	7.0	14.8	6.6	13.2	6.4	12.0	6.2	10.3	5.9	8.7	5.8	8.1	5.5	7.1
Middle Atlantic	21.0	31.6	21.3	29.6	20.8	27.8	19.9	27.7	19.0	25.6	18.3	22.6	16.2	18.4
Northeast Total	28.0	46.4	27.9	42.8	27.2	39.8	26.1	38.0	24.9	34.3	24.1	30.7	21.7	25.5
Manf/Pop Ratio		1.66		1.53		1.46		1.45		1.38		1.27		1.18
East North Central	20.2	26.4	20.5	27.7	20.2	30.0	20.1	30.2	20.2	26.6	19.8	26.7	18.4	25.4
West North Central	11.9	5.5	10.8	5.4	10.2	4.7	9.3	5.5	8.6	6.0	8.0	6.2	7.6	6.6
South Atlantic	13.2	9.0	12.8	10.5	13.5	11.6	14.0	10.7	14.5	11.8	15.1	12.9	16.3	14.4
East South Central	8.4	3.6	8.0	4.3	8.2	4.3	7.6	4.4	6.7	4.9	6.3	5.7	6.5	6.8
West South Central	9.7	3.1	9.9	3.2	9.9	3.2	9.6	3.8	9.5	5.0	9.5	5.6	10.5	7.4
Mountain	3.1	1.2	3.0	1.1	3.1	0.9	3.3	1.0	3.8	1.4	4.1	1.6	5.0	2.4
Pacific	5.5	4.8	7.1	5.0	7.7	5.5	10.0	6.4	11.8	10.0	13.1	10.6	14.0	11.5

1. U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1922, 1935, 1941, 1955, 1965, 1978. Population figures are from the Decennial Census Reports. Manufacturing employment figures are from the 1919, 1927, 1937, 1947, 1958, 1967, 1977 manufacturing reports.

2. _____, Advance Report on 1980 Census of Population and Housing, U.S. Summary.

ARE THERE ANY INDICATIONS THAT THE RELATIVE AND ABSOLUTE DECLINES IN EMPLOYMENT IN THE NORTHEAST ARE ABATING?

In addition to the articles in the popular press such as the textile mill that moved to the South in the 1950's that is now returning to Rhode Island, there are two studies of economic activity that are particularly encouraging from the Northeast's point of view. The first study is an upcoming report by Fuller (1981) which documents the rather dramatic economic turnaround in the New England states. For example, this report indicates that in the 1962-71 time period, 39 percent of the metro areas in New England had growth rates in total employment at or above the national rate. In the time period 1971-78, that percentage had grown to 77 percent. A similar pattern exists in the non-metro areas of New England. Namely, in years 1962-71, 64 percent of the non-metro areas in New England grew at the national rate or above. In the 1971-78 period, that proportion had increased to 86 percent.

Manufacturing employment in New England demonstrated similar patterns. For example, for metro areas of New England in 1962 through 1971, only 7 percent grew at the national rate or above. In the 1971-78 time period, 61 percent of the metro areas had manufacturing employment growth rates that exceeded the national average. In non-metro areas of New England in years 1962-71, 36 percent of the non-metro areas had manufacturing growth rates above the national average and by 1971-78 this percentage had increased to 62 percent. This performance when contrasted to the mid-Atlantic states can be characterized by decline in the metro areas and stability in the rural areas.

This turnaround in New England if sustained, is particularly encouraging for its own sake, but also because it may indicate what the rest of the Northeast can do if it adopts the appropriate strategies. Recall that earlier documentation showed that the decline of the New England region preceded that of the mid-Atlantic; perhaps recent growth in New England foretells the future of the mid-Atlantic states. That is, national economic forces are tending to reach an equilibrium whereby the relative decline of the mid-Atlantic states as well as New England may be ending.

The second study that provides some encouragement regarding the future growth of the Northeast is a study of a nine-county area including and surrounding Pittsburgh, PA (Wise, 1977). In this study, four-digit manufacturing industries were classified as declining, slow growth and rapid growth. This classification depended upon (1) whether employment in that industry declined nationally, (2) grew at a rate less than the national average for manufacturing or (3) whether it grew more rapidly than the national manufacturing average. Thus, all industries were either categorized nationally as declining, slow growth or rapid growth. Then the performance of each of these industries was evaluated in the Pittsburgh area. As one would expect, employment in the Pittsburgh area was heavily biased toward nationally declining industries. Specifically, 63.5 percent of the employment in Pittsburgh was in industries that were declining at the national level; 5.5 percent of the employment was in industries that were slow growth and 31 percent of the employment in Pittsburgh was in industries that were growing at or above the national level. The performance of the nationally declining industries in the Pittsburgh area was poor. That is, approximately 97 percent of the industries that were declining nationally were declining more rapidly in Pittsburgh than they were nationally. However, the one-third of Pittsburgh's industrial structure that was made up of rapidly growing industries was quite surprising. Again, based on employment, the nationally rapid growth industries were growing more rapidly in Pittsburgh than they were in the nation. Thus, Pittsburgh's industrial structure could be characterized as consisting largely of declining industries and those industries were declining more rapidly in Pittsburgh than they were nationally. On the other hand, a third of Pittsburgh's industrial structure was comprised of industries that were growing rapidly at the national level and those industries were doing even better in Pittsburgh than they were in the nation.

This information would indicate that the Pittsburgh area was successfully competing for industry in the rapid growing four-digit manufacturing industries. Whether or not Pittsburgh was representative of the Northeast in this regard was, to my knowledge, unknown, but it may be an indication that the Northeast could successfully compete in the rapid growth sectors. If so, then one could anticipate a levelling out and perhaps even major reversals in the economic performance of the Northeast vs. other regions of the country.

CONCLUSIONS

It would appear then, that the economic destiny of the Northeast region, particularly its rural communities, is not in the hands of Washington's politicians or influenced by their federal funding policies nor is it in the hands of our Creator who gave us frost instead of sun, but it is basically in our hands. Namely, we appear to have the markets for rapid growth industries. We must provide the skilled labor these industries require as well as the infrastructure and those inducements that appear to be effective in attracting economic activity.

REFERENCES

Browne, Lynn E. "The Shifting Pattern of Interregional Migration," New England Economic Review, November/December, 1979, pp. 17-29.

DeJong, Gordon F. "Residential Preferences and Migration," Demography, Vol. 14, No. 2, May 1977, pp. 169-178

Dorf, Ronald J. and M. Jarvin Emerson, "Determinants of Manufacturing Plant Location for Nonmetropolitan Communities in the West North Central Region of the U.S." Journal of Regional Science, Vol. 18, No. 1, 1979, pp. 109-120.

Fuller, Theodore E. "The Northeast: Two Decades of Metro and Nonmetro Employment Change," paper to be published by Economic Research Service, USDA.

Genetski, Robert J. and Young D. Chin. "The Impact of State and Local Taxes on Economic Growth," Harris Economics, Chicago, Illinois, November 3, 1978.

Kamer, Pearl M. "An Econometric Model to Evaluate the Competitive Position of U.S. Metropolitan Areas for Manufacturing Activity," Socio. Econ. Plan. Sci., Vol. 13, February 1979, pp. 227-234.

Kuehn, John A., Curtis Braschler and J. Scott Shonkwiler. "Rural Industrialization and Community Action: New Plant Locations Among Missouri's Small Towns," Journal of the Community Development Society,, Vol. 10, No. 1, Spring 1979, pp. 95-107.

Oster, Sharon, "Notes: Industrial Search for New Locations: An Empirical Analysis," The Review of Economics and Statistics, Vol. 61, No. 2, May 1979, pp. 288-296.

Pack, Janet Rothenberg, "Frostbelt and Sunbelt: Convergence Over Time," Intergovernmental Perspective, Vol. 4, No. 4, Fall 1978, pp. 8-15.

Smith, Eldon D., Brady J. Deaton and David R. Kelch, "Location Determinants of Manufacturing Industry in Rural Areas," Southern Journal of Agricultural Economics, July 1978, pp. 23-37.

Weaver, Rob and Melville McMillan, "Factors Influencing Manufacturing Employment Change in Small Wisconsin Cities: 1960-1970," Research Bulletin R2776, College of Agricultural and Life Sciences, University of Wisconsin-Madison, January 1976.

Wise, J. Karl, "Geographical Dimensions in Plant Location Decisions: A Case Study of the Pittsburgh Area," Ph.D. dissertation, Department of Agricultural Economics and Rural Sociology, The Pennsylvania State University, August 1977.