Sparsely populated areas and regions, many relying on farming as an economic base, continue to experience heavy outmigration with attendant problems of human capital depletion and personal psychic costs to emigrants stemming from severed ties with relatives and familiar surroundings. Public policy in part created the need for economic adjustments in sparsely populated areas. That public policy, which made so little attempt to foresee the ultimate consequences of programs, is now under review.

The review is proceeding under the label national growth policy. Though some specific legislative proposals have been made [17, 18], the policy remains in a formative stage. Before congealing, it affords fertile grounds for input of economic theory and research. The first objective of this paper is to provide such input. The second objective is to examine how a national growth policy would apply to sparsely populated areas in addressing their perennial problems of human capital outflow, shrinking employment base, high dependency rates, and inadequate or expensive community services. The premise of this paper is that people in low and high population density areas have much to gain from a national growth policy of the form outlined herein.

Before turning to these issues, I review the economic setting of sparsely populated areas. No attempt is made to review definitively the manifold contributions to the economics of sparsely populated areas reported in publications of the Great Plains Agricultural Council, Western Agricultural Economics Association, the North Central Center for Rural Development and other sources. Rather the thrust in this paper is toward less well charted issues posed by a national growth policy.

ECONOMIC SETTING

Sparsely populated areas are dotted with small towns originated to serve agriculture in settlement days. With the advent of the automobile, these towns lost much trade to the viable trade center. Unlike the

* Regents Professor, Department of Agricultural Economics, Oklahoma State University, Stillwater. Journal article of the Agricultural Experiment Station, Oklahoma State University. Generous comments of Dean Schreiner, Gerald Doeksen and Evan Drummond added much to this paper; the author is responsible for shortcomings. Paper presented at AAEA meetingd, Edmonton, 1973.
mining ghost town, these communities seldom die but it was thought they slowly fade away. After fading for decades in Oklahoma, they appear to enjoy a rebirth [7]. Of the 341 small Oklahoma communities that were not satellite (bedroom) communities, only 102 gained population from 1940-50 and 96 gained population from 1950-60. But 209 gained population from 1960-70, for an aggregate population increase of 8 percent in contrast to overall population declines in the two previous decades. The turnaround is caused in part by an inflow of retired farmers. It is also caused by increasing numbers of active farm operators who have their residence in town and commute to the farm, a phenomenon that has been studied by Bond and Gardner [5].

Labor-saving rather than output-increasing technology has proved the undoing of the population base of farm communities in sparsely populated areas. The share of U. S. agricultural output produced in the Great Plains increased from 19.0 percent in 1941 to 24.1 percent in 1964 to 26.2 percent in 1971 [21]. The gain was largely the result of a major increment in the livestock share, which went from 21 percent of national output in 1941 to 30.3 percent in 1971 while crop output increased from 17.8 percent in 1941 to 21.5 percent in 1971. Continued inflow of labor-saving technology is expected in the future with consequent net outmigration. Still in absolute numbers, farm outmigration, which has been the major source of the declining employment base in sparsely populated rural areas, is dropping off sharply because there are few farmers left compared to earlier decades.

Data in Table 1 summarize economic conditions in sparsely populated rural areas. These areas comprise 125 of 489 multicounty economic areas (Rand McNally classification) in the 48 contiguous states. They included large geographic sections of the Great Plains and Western states but accounted for only 9 percent of the nation's population in 1960. The areas ranked below the national average in per capita income, occupational status, proportion of houses rated "sound," retail sales per capita, bank deposits per capita and local government expenditures per capita. Sparsely populated areas ranked above the national average in incidence of poverty and population classified as rural.

Federal human resource outlays per capita in sparsely populated rural areas exceeded the national average primarily because of high social security and other retirement payments—a condition explained by the high proportion of elderly residents remaining after heavy outmigration of the young. Areas of low density were not served in proportion to need by federal funds for public assistance and common schools. Federal community development outlays for housing were well below the national average in the sparsely populated rural areas despite below average proportions of sound housing. The total outlay for community development in these areas exceeded the national average because of transportation outlays substantially in excess of the national mean. The low spending for defense, NASA and AEC was offset to a considerable extent by high spending per capita on agriculture and natural resource development programs. This pattern of expenditures has implications for policies of national growth to be discussed in more detail.
Table 1. Selected Measures of Economic Conditions for Sparsely Populated Rural Areas (average 18 persons per square mile), 48 Contiguous States.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Sparsely Populated Rural Areas</th>
<th>U. S. Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population distribution, 1960 (million)</td>
<td>16.0</td>
<td>178.5 (total)</td>
</tr>
<tr>
<td>Percent urban, 1960</td>
<td>39.8</td>
<td>69.9</td>
</tr>
<tr>
<td>Percent white collar, 1960</td>
<td>33.9</td>
<td>41.1</td>
</tr>
<tr>
<td>Income per capita, 1960 ($),</td>
<td>1369</td>
<td>1849</td>
</tr>
<tr>
<td>Percent of families with incomes below $3,000 in 1959</td>
<td>34.1</td>
<td>21.4</td>
</tr>
<tr>
<td>Percent of housing units sound</td>
<td>37.2</td>
<td>41.0</td>
</tr>
<tr>
<td>Percent of commercial farms with sales over $10,000 in 1964</td>
<td>60.1</td>
<td>73.7</td>
</tr>
<tr>
<td>Retail sales per capita, 1963 ($)</td>
<td>1246</td>
<td>1363</td>
</tr>
<tr>
<td>Bank deposits per capita, 1960 ($)</td>
<td>866</td>
<td>1393</td>
</tr>
<tr>
<td>Local govt. exp./capita, 1962 ($)</td>
<td>191</td>
<td>222</td>
</tr>
<tr>
<td>Federal outlays per capita, fiscal 1970 ($):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td>319</td>
<td>268</td>
</tr>
<tr>
<td>Community development</td>
<td>137</td>
<td>124</td>
</tr>
<tr>
<td>Agri. and natural resources</td>
<td>281</td>
<td>45</td>
</tr>
<tr>
<td>Defense, NASA and AEC</td>
<td>72</td>
<td>307</td>
</tr>
<tr>
<td>Total</td>
<td>808</td>
<td>745</td>
</tr>
</tbody>
</table>

Source: Edwards, Coltrane and Daberkow [9] except federal expenditure data which are from USDA [54] and which apply to sparsely populated rural areas without urban population.
Because sparsely populated rural areas offer few agglomerative economies and other primary location factors sought by industry, it is of interest that the Great Plains expanded its share of manufacturing employment in the nation from 3.6 percent in 1929 to 6.7 percent in 1971 according to Doeksen, Kuehn, and Schmidt [7]. In Oklahoma, two-thirds of all jobs created by new manufacturing plants from 1963 to 1971 were in communities of under 10,000 population. This decentralization pattern is characteristic of micropolitan America in general: manufacturing employment increased 31 percent in micropolitan areas and only 12 percent in metropolitan areas from 1960 to 1970 [16]. Nationwide growth rates in jobs were surprisingly even among city sizes except for small towns, which experienced declines. While industrial growth will not give most sparsely settled areas an alternative to outmigration as a way to enhance resource returns, it does offer an option for some communities. An eastern Oklahoma study [46] revealed that the net economic gains to the community from industry can be very large. Some of the most impressive success stories apparent in the eastern Oklahoma study as well as in other parts of the nation (e.g. Melrose in North Dakota, Winnebago Industries in Iowa) are industries "home grown" by local entrepreneurs and inventors.

In brief, the incidence of poverty is above the national average in sparsely populated areas, but low income is not the overriding problem found in some more densely populated rural regions such as the Southeast. Outmigration has been a principal means of adjustment to economic realities and the outflow of human capital has been huge. In the Great Plains states where towns were small and population density was already low in 1940, two-thirds of the counties experienced population losses from 1940-60, the same percentage as from 1960 to 1970 [45]. Population losses in the Great Plains were more widespread than in other regions of the nation. Although growth in manufacturing employment has exceeded the national rate, the manufacturing base is small and cannot be expected to constitute a realistic alternative to outmigration in vast stretches of sparsely populated areas. The rate of outmigration will continue to be high, but the absolute number of net outmigrants will drop sharply.

NATIONAL GROWTH POLICY

"National growth policy" is not a growth policy in the traditional sense of more GNP or population.¹ Those who use the term more or less subscribe to conclusions of the national Commission on Population Growth and the American Future that "in the long run, no substantial benefits will result from growth of the nation's population, rather that the gradual

¹For a more comprehensive discussion of the origins of a national growth policy and specific legislation, see Hartke [17, 18]. For a more extended treatment of goals and definitions of growth, see the report of the National Goals Research staff [35] and other sources [49].
stabilization of our population through voluntary means would contribute significantly to the nation's ability to solve its problems." In recognition of the rapid depletion of non-renewable natural resources, and the folly of counting once as GNP the dollar value of burning air-fouling fuels and again in the dollar value of measures to clean the foul air, national growth policy is not so much concerned with the size of GNP as with the quality of life [see 12]. In recognition of the past failure of the richest nation to end poverty despite adequate national output to do so, national growth policy is more concerned with the distribution than the level of national income. In recognition of low current birth rate and severe problems of providing adequate community services to residents of sparsely populated areas and to densely populated inner cities, national growth policy is more concerned with the distribution of people (and where they can receive adequate services efficiently) than with the number of people in the nation.

If there is agreement that problems of environment, rural-urban balance, efficient use of resources to improve the quality of life, and distribution of income are on the national growth policy agenda, there is little agreement on the specific form that policy should take. While continuing articulation of goals and reformulation of plans is inherent in the very concept of a national growth policy, it is also important to recognize that economic theory and recent research results can help formulate a policy.

I view programs to enhance economic opportunity in rural areas as an integral part of national policy to foster a more equitable and efficient economic system. It rests on the judgment that national public policy should first deal with problems of equity through tax, welfare and school funding reform; then deal with problems of efficiency by changing the structure and incentives facing industry. 2

2Priority to issues of equity rests to a degree on the proposition that the marginal utility of money declines with higher income. This proposition receives at least tenuous empirical support from experiments with the von Neuman standard gamble technique and political support evident in the rising nominal income tax rates established by representatives of the public. Each of these grounds can be disputed. Overall tax rates are nearly proportional, although that is partly due to the ingenuity of the rich in subverting the public intent and partly due to deliberate choice of regressive local and state taxes as a concession to tax goals such as ease of collection. The rural rank and file do not strongly support income redistribution [6], in part because as stated by rural residents in a recent meeting, "There are no poor people in our area" (a claim clearly contradicted by the data) and "Poor people are just as happy as other people" (a claim that provides strong support for diminishing marginal utility of money).
Equity has two dimensions: horizontal equity (treating alike, with public programs, those in similar economic circumstances) and vertical equity (providing more benefits of public programs to those with low incomes than high incomes). Efficiency means getting more output of goods and services per unit of input, where quantities of aggregated inputs and outputs are weighted by prices that reflect social benefits or costs. The discussion of equity and efficiency issues below is within the context of a national growth policy rather than a policy only for sparsely populated areas, in accord with the premise stated earlier that sparsely populated rural areas have much to gain from a well-conceived national policy.

EQUITY IN A NATIONAL GROWTH POLICY

It is impossible entirely to separate equity from efficiency. For example, there are advantages in dealing with the low income problem, primarily an equity issue, by applying "efficiency" principles of cost-effectiveness to public policy [48, Ch. 14]. On the other hand, attempts of numerous programs to obtain both economic efficiency and equity obtained neither [48, Ch. 13; 53].

In general, programs that rank high in efficiency measured by cost-benefit ratios or rates of return on investment rank low in equity, defined as providing the most benefits to those with fewest resources [48, Ch. 13; 53]. One of the lessons learned from the war on poverty in the past decade is that it is prohibitively expensive to compensate through remedial education programs such as Head Start and the Job Corps for inadequate genes, family background, ill health and discrimination that stifled the development of competence. A related lesson is that the schooling has only a minor impact on economic outcomes compared to fate and the home. The nationwide "equal educational opportunity survey" was originated to document the lack of schooling resources devoted to the disadvantaged and rested on the proposition that provision of equal educational opportunity would mean lifting the socioeconomic position of the disadvantaged. The findings from the survey eventually led to a very nearly opposite conclusion: Providing equal educational resources or even outcomes measured by achievement scores would have nominal impact on narrowing income disparities in the nation [29]. Rates of return on investment in schooling have been found to be favorable [23] and I believe that providing equal educational opportunity is imperative. But more direct efforts are needed to deal with equity problems. The following proposals for reform of welfare, school funding and taxes treat this issue.

Income Maintenance

Export base theory, a cornerstone of regional economics, stresses that a region grows by developing export industries, defined as activities that bring dollars from outside a community or region. Welfare reform, with federal takeover of public assistance programs, would bring in dollars and, as such, public assistance may be defined as an "export industry."
The argument for reform rests on grounds of efficiency as well as equity. On efficiency grounds, a given real income can be provided those receiving public assistance at lower costs in rural areas than in the metropolis. People move from depressed rural areas which provide low payments to metropolitan areas where payments are far more generous. Ghetto problems of low incomes, high incidence of welfare, crime and drugs frequently are associated with residents who one or two generations earlier were living in rural areas which seemed to accommodate such persons with fewer social problems than encountered in the ghetto. New York obviously has a stake in the welfare reform in Mississippi, for example.

States with the least ability to finance an adequate public assistance program also have the greatest need. This factor helps explain why the state of New York provided an average monthly payment of $288 per family on AFDC in 1971 while the state of Mississippi provided only $55. Since rural states have more poverty, lower per capita income and less federal assistance per needy person than other states [8], they stand to benefit from federal takeover (already underway for public assistance categories other than AFDC) of all public assistance which would equalize payments among states. The past neglect of the rural poor also is implicit in the estimate that of the $3 billion net increase in outlays for public assistance under the Family Assistance Plan, half would go for rural people although rural people comprise one-fourth of the nation's population [22]. The working poor, especially prominent in rural areas, frequently have less income than welfare recipients. Major welfare reform proposals include the working poor.

Three major income maintenance proposals are (a) the demogrant plan, which would provide a continuing grant to every person scaled as deemed appropriate for age and place in the family [38], (b) the negative income tax [see 42] which would provide a guarantee of say $2400 to a family of four with 50 cents deducted from that guarantee for each dollar earned by the family up to a breakeven level of $4800 of earnings and (c) a wage (or earnings) supplement [20] which would provide a payment of 50 percent of the difference between a target wage of $2.50 per hour and the actual wage. Adoption of any one of these proposals would be a tremendous boon to rural people and would add substantially to the economic base of rural communities. It is now becoming clear that the cost as measured by reduced output of goods and services under a comprehensive income maintenance program is small, probably less than one percent of national income [10, 13].

Communities lagging in economic growth often rely on intergovernment transfers to support local services [see 4]. Categorical grants to communities are inefficient means to help low income people—few dollars trickle down [56]. Target efficiency is much greater if welfare assistance is provided families rather than communities. An adequate income maintenance program allows people to decide whether to spend their income for food, housing or a community water system—a nonexisting option if only a water grant is available. Grants to communities to improve utilities and other services for the purpose of making them more attractive to industry have low target efficiency (many funds go to communities that are unsuccessful in getting new jobs) and should be terminated.
Most payment-in-kind welfare programs for housing and other services have low target efficiency, with a small proportion of the dollars spent on them going to the poor. And in-kind programs with high target efficiency such as Food Stamps and Public Housing could be replaced by an increase in cash income maintenance payments. The justification for payment-in-kind is that low income people spend unwisely and need to have their budget set by outsiders. If competent spending is measured by high budget proportions devoted to necessities such as food, clothing and shelter, then low income people are the most competent spenders of all. A given amount of real income can be provided to low income people at less cost to the public through cash assistance.

Theory and empirical evidence indicates that the same satisfactions could be provided the poor with substantially less payments in cash rather than kind. Smolensky and Gomery [47] estimated the resource cost of a public housing unit to be $109 per month. Rental payments by residents averaged $44 per month, and the cost to the taxpayer was $65 per unit per month. It was found that the tenants were indifferent between a cash subsidy of $26 per month and the payment in kind (housing) subsidy of $65 per month. One conclusion is that the housing program was a highly inefficient way to provide public assistance; it is also well known that such programs are an administrative nightmare.

School Funding Reform

It is now well documented that outmigration selects toward the young and well educated, hence depletes an area of human resources it can ill

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3 The Consumer Expenditure Survey [55] indicates that families (including single consumers) with incomes of under $1,000 in 1961 devoted 65.8 percent of their expenditures for current consumption to food and housing, a percentage that declined consistently across the ten recorded income classes to a low of 49.0 percent in families with incomes of $15,000 and over. Whereas the lowest income families spent 2.0 percent of their income for tobacco and alcoholic beverages, the highest income families spent 2.7 percent—middle income families spent the highest percentages of all income classes on these items. Pennsylvania research [32] revealed no nutritional benefits to consumers from the commodity distribution program nor from food stamps except under very special circumstances.

4 Some type of nationwide health insurance has merit and may be legislated. At any rate, low income persons require insurance against costly medical expenses, and cash assistance can be used to pay the premium on a graduated basis. Rural health needs will not be well served without a major expansion in the supply of medical personnel, including paraprofessionals as well as medical doctors.
afford to lose if it is to attract outside private investment and have progressive local leadership.

Outmigration exits vast amounts of local capital. The private cost of raising a rural child (low-cost food plan) to age 13 in the north central region was over $19,000 in 1969 expressed in dollars of that year [41]. With net outmigration of 40 million persons from farming alone since 1929, the human capital outflow approaches $1 trillion—although a major portion of this capital embodied in retiring adults did not generate a future income stream. The public cost of schooling, counting only the local portion financed out of property taxes, averaged approximately $6,000 per migrant. Earnings from that investment accrue elsewhere when the high school graduate leaves.

Two approaches to avoid severe capital depletion exist. It is impossible to avoid outmigration [26], but one alternative is for the community to attract inmigrants who offset the outflow of community capital and who generate earnings to maintain community services. The second alternative is to receive compensation for net outflow of local investment in schooling.

Many communities in less densely populated areas desire to avoid net outmigration and expand their resource base by attracting new industry. Although considerable industry is footloose and no longer tied to traditional natural resources such as minerals, wood, water and soil as evidenced by the massive development of jobs in Florida, California and the Southwest where climate appears to be the main attraction, the odds are not with the small community in attracting industry. Currently, three out of four new jobs are in service industries which are either (a) secondary industries such as local government, trade and services building on basic agricultural or mining activity, or (b) basic service industries that export (brings dollars in from outside regions) and prefer the adequate communications and amenities of the large city.

Rexroth and Anthony [44] report results of a sample survey taken since 1966 of residents of 9 Nebraska towns. Fifty-three percent of the respondents agreed that "most citizens have maintained a favorable attitude toward attracting new business and industry in our community" and more respondents agreed with than disagreed with the statement that they would be willing to pay more taxes if they knew the money would be spent in their area to develop an industrial site. A more recent study [6] of attitudes based on a sample of 288 respondents from largely rural counties in Kansas revealed that 32.7 percent strongly agreed and another 55.6 percent agreed with the statement "Considering all the good and bad effects of rural industries, we should really try to get more industries in rural areas to provide more jobs." Furthermore, more respondents in both the sparsely populated Great Plains of western Kansas and the more densely populated corn belt fringe of eastern Kansas agreed than disagreed with the statement that revenue bonds should be sacrificed to create more jobs in a community. If environmental concerns have dimmed ardor for industry in rural communities, it is not apparent in these surveys.
Thus the community in sparsely populated areas turns to manufacturing industry. The specter of 15,000 local development corporations chasing something on the order of 1,000 new industrial plants a year invites skepticism. Despite the lack of facilities, a large pool of skilled labor, and agglomerative economies, many rural communities are successful in creating jobs in manufacturing, often with home-grown enterprises of which numerous success stories abound.

Economists seem bewildered by such local determination to generate jobs, reckoning that most communities can ill afford to subsidize industry with low wage labor, tax exemptions and low interest loans. A closer look affirms the economic rationality of the community.

An Oklahoma study [46] makes a more definitive accounting than do previous studies of dollar costs and benefits to the private sector, school sector, municipal sector and to the community as a whole from new or expanded industry. Whereas on the average the public sectors about broke even (in several cases either the school or municipal sector was made worse off), the private sector realized substantial gains. Annual net gains to the communities from the 12 plants studied averaged $3,772 per plant employee.

On the other hand, the young man raised in the community who leaves after completing high school exits with approximately $6,000 of local capital embodied in him through schooling paid from local property taxes. This human capital may well generate earnings far in excess of the investment made in his schooling, but such earnings will accrue elsewhere. If the choice facing the community is economic progress by adding $3,772 annually through creation of an industrial job or subtracting $6,000 through exodus of a high school graduate, which route should the rational community take? One objective of a national growth policy is to correct for schooling spillover and align incentives so that what is perceived by its residents as good for the community is also good for the nation.

School funding procedures [23, 26] have been devised to compensate for loss of schooling capital through net outmigration. A less complicated approach would be simply for each state and the federal government to assume a large share of the cost of common schools. Compensation for net outflow of capital can be justified on efficiency as well as equity grounds, because communities which experience high net outmigration underinvest in schooling relative to their ability as measured by the percent of local income spent on schooling [57].

**Tax Reform**

The farmer, primarily because of property taxes, pays considerably higher total taxes in relation to his income than the nonfarmer, based on studies in Iowa, Oklahoma and other states [see 23]. Less reliance on property taxes would raise the disposable income of farmers, but reforms to raise tax rates on capital gains to the level of rates on earnings
could offset this gain. Tax loopholes such as exemptions for interest on state and municipal bonds benefit the super rich. This loophole could be removed and replaced by a federal government subsidy on state and municipal bonds with $2 gained by the federal government in tax revenues for each dollar it would cost the federal government to subsidize state and local bonds at the level of terms currently available. Extended treatment of tax reform issues is found elsewhere [39, 40].

EFFICIENCY IN A NATIONAL GROWTH POLICY

It is my belief that after these issues with primary regard for equity are treated, then other programs and policies should be administered with primary regard for efficiency. Inability to define efficiency within the context of a national growth policy has severely hampered application of the concept to the fundamental issues of our time. Foremost among the efficiency consideration and absolutely basic to economically sound population dispersal policies for sparsely populated rural areas (or any area for that matter) is the issue of optimal place of residence.

Optimal Place of Residence

The issue has several dimensions including (a) where people vote with their feet to live as evidenced by growth patterns by place of residence, (b) where people vote to live as evidenced by opinion polls, (c) attitudes and satisfactions where people now live, (d) efficient provision of public goods and services by place of residence, and (e) efficient provision of private goods and services by place of residence as evidenced by comparative profit by industry by location.

In general in the 1960's, growth rates were faster for suburbs than elsewhere and for population centers neither very large nor very small [3, 11]. The relationship between rate of population growth in the 1960's and initial population of communities at the start of the decade is weak at best, however. Even if people vote with their feet to maximize well being, they will not in fact accomplish this for society if institutional rigidities and externalities distort the incentives of firms (and individuals) in making location decisions.

People have not made location decisions consistent with their preferences. A nationwide Gallup Poll [43] in 1972 found that about half of all persons interviewed preferred their current place of residence, but the percentage dropped from 80 to 55 to 39 percent, respectively, from rural to small urban to large urban center residents. Whereas 90 percent of rural residents who were past rural residents preferred rural residence, only 46 percent of the large urban residents who were past large urban residents preferred their current place of residence. Only 27 percent of past rural residents living in large urban centers at the time of the poll preferred to reside in that setting. Moreover, disenchantment with the city is growing. The proportion of respondents preferring city life
fell from 22 percent in 1966 to 13 percent in 1972 while the proportion preferring rural residence increased from 49 percent to 55 percent.

The principal reason stated by respondents for not carrying out their preferences were economic. The wishes of the people appear to be secondary—the location of people depends on the location of jobs (and public assistance) which in turn depend on the decisions made by firms and public officials. Empirical evidence is mounting in support of this proposition anticipated by Paul Barkley in his statement that “To be employed at all, the book editor must follow his firm to New York even though he himself despises that metropolitan area” [2, p. 201]. Equations accounting for movement of farm labor repeatedly find explanatory variables measuring availability of jobs rather than wage rates to be dominant. Censes data [33] again document the dominance of job availability over income levels in explaining gross migration patterns among states.

Before we rush into premature policies to permit people to live in the place of their choice, it is well to examine further the empirical evidence. Four attitudes that relate to well being were found to be for the most part unaffected by place of residence but were instead a function of education, income, and occupation [52]. The implication is that place of residence, per se, need not be the focal point for centrifugal policies of balanced growth, population redistribution and decentralization. Peoples satisfactions will be improved only if opportunities for income, occupation and education attend a change in place of residence. People will only be made worse off if public policy sends them to sparsely populated rural areas that are unable to provide adequate economic opportunity.

At least two important economic dimensions exist in the location of economic activity so that the limited resources of this nation can provide the greatest real output. One is provision of public goods and services; the other is provision of private goods and services.

The cost of providing a given quality of a large number of public services have been estimated for cities of various sizes by Morris [34]. After accounting for externalities, the least cost per capita is in cities of 20,000 to 1 million residents. Costs in smaller cities and open country are exceedingly high because of the large per capita cost for schools, roads, health care, utilities and fire protection. Costs in larger cities are high because of the large per capita cost for crime prevention, pollution control and traffic congestion. Other authors [12, 19] have reached

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6The Morris study has shortcomings and does not correct for quality differences in utilities where service quantity probably does not vary systematically by city size. His study does substantially improve on earlier studies [cf. 24] which failed to account for service quality and divergence between private and social costs, most notably in the case of crime and pollution control.
similar conclusions on deductive grounds.

The unit cost curve derived by Morris is an average cost for each city size, but a long-run marginal cost curve among city sizes. It is a reasonable measure of long-run savings in costs of providing community services associated with an incremental shift of residents from one size of community to another. The situation is different in the short run. Because very small communities not only experience economies of size as "plant" is expanded but also have excess capacity, their marginal cost of providing services to an additional resident is low and below the average cost in the short run. On the other hand, larger cities not only experience increasing costs per capita as facilities are expanded but also often have little or no excess capacity, hence marginal costs of population growth are large and lie above average cost. Because towns and cities practice average cost pricing rather than marginal cost pricing, real costs of locating in small places are overestimated and in large places are underestimated, even aside from externalities. The result of these distortions is that firms, jobs and people have overreacted to centripetal forces and centralization has progressed beyond a socially desirable level.

Although a given quality of community services can be provided most efficiently in cities of 20,000 to 1 million residents, if private enterprise is unable to operate efficiently and make a profit in such places, some other place of residence may be optimal. So we must look to another dimension of national growth policy, namely efficient provision of private goods and services. The issue of efficient provision of private goods and services conceptually can be viewed as a problem in maximizing the real output of the private economy, given transport costs, manpower, technology and demand. In reality no such optimizing model is operational, and it is necessary to revert to second best empirical procedures.

A study by Janssen [27] examines efficient location of private firms by estimating profit rates by industry by place of residence. Preliminary results indicate that profit rates within a given industry do not differ significantly by city size. While one interpretation of these findings is that industry can locate anywhere and is equally efficient whatever its location, a more realistic inference is that industry does respond rather quickly to comparative profit incentives and locates where it can make the greatest profit. The latter conclusion also follows if firms locate at random and those which do not make profits fail. In any event, overall industry performance appears to be satisfactory—firms locate in a manner consistent with private economic efficiency.

But the economic efficiency thereof is myopic, equating private marginal costs and returns. If private costs (benefits) differ from social costs (benefits), then superb industry performances measured by adherence to principles of profit maximization and equating of costs and returns at the margin does not maximize social real income. Evidence points to the need to change the structure and incentives rather than the performance of the market to raise social efficiency.
Numerous distortions in the market which impede adjustments optimal from the standpoint of society operate to the disadvantage of rural areas. One element is labor costs. Underemployment exceeds 30 percent in numerous sparsely populated rural counties because rural living is a way of life and people are reluctant to go to large urban centers for jobs even if jobs are available. In other instances, workers have returned home to rural areas after an unsuccessful stay in the city where they could not get or hold a job because of cultural shock, low skills, lack of experience and institutional restraints on job entry.

Underemployed rural labor has low opportunity cost because little output is foregone as workers are employed in new local industry. Farm output frequently expands as operators are employed elsewhere and units are consolidated. Minimum wage laws, high costs (including paperwork) for social programs such as social security and unemployment insurance, de facto structural wage patterns among industries, labor unions and concepts of a socially acceptable wage all combine to create inflexible wage rates and to make employers pay actual wages above rates that would utilize underemployed rural labor at a profit. If Ford or General Motors must pay a union wage; then they can most profitably locate their plants in large cities where workers are more skilled than elsewhere.

Another imperfection in the market is externalities. Firms in large urban centers do not pay the full costs of crime, air pollution and transportation congestion which attends the agglomeration of jobs and people in densely populated areas. If firms in rural areas (or in growth centers of 20,000 to 1 million residents within commuting distance of rural workers) were allowed to pay the low opportunity cost of labor and if firms in metropolitan areas were taxes for the full social costs of these externalities, the results of the Oklahoma State study indicate that decentralization would be speeded. Some costs of congestion are charged to the firm because workers demand higher wages to compensate for traffic congestion (although workers are constrained in their demands if jobs are unavailable elsewhere). Other costs of congestion do not accrue to firms because, for example, many workers do not accept the fact that their life will be cut short by air pollution.

Programs to Improve the Mobility of Jobs and Workers

Based on the foregoing analysis, cities of 20,000 to 1 million constitute the most efficient size range within which to encourage growth. Few such cities are found in sparsely populated regions. In

7 The economic viability of this size range may be questioned. Miles Hansen [15, p. x] asserts that "...although the location of economic activity is more and more free with respect to large regions, it is less and less so with respect to size of community." While central place theory may sometimes be interpreted as supporting an immutable, hierarchical pattern of city size fixed from the top down, a realistic look at the actual pattern of cities clearly points to considerable digression from a rigid pattern. The optimal size range of 20,000 to 1 million can accommodate most functions cities are to perform. Furthermore, I do not in any way recommend destroying the economic viability of very large (or small) cities, but only suggest that private and social costs be aligned in them—undoubtedly the result would be to cut the population of some.
some instances, this means that area employment and population growth should not be encouraged by state or national programs, in other instances where a city of (say) 10,000 to 20,000 is the trade center of a large geographic area, it might be singled out as a place to encourage growth. Local analysis by planners can help to select viable cities to use as growth centers—in some instances 20,000 is larger than necessary, in other instances too small, for viability.

A system of taxes and subsidies can align social costs (benefits) with private costs (benefits) and create incentives for firms to locate where social efficiency is greatest. Because taxes on private firms to adjust for urban externalities are politically unacceptable, a system of positive incentives to firms which locate in micropolitan areas is more appealing. These incentives could take a number of forms. I suggest that writeoffs from federal income taxes of locating firms be tied to the degree of underemployment in an area. An alternative or complementary program is to terminate minimum wage laws and replace them with a wage supplement program to accomplish the intent of minimum wages (provide an acceptable wage to low-skilled workers) but which in fact do the opposite (they cause disadvantaged workers to be unemployed or to be underemployed in secondary labor markets).

The goal of improving the efficiency of markets calls for a federally funded program of worker relocation financial assistance, counseling and training in areas that are unable or unwilling to create jobs for local residents. Such programs have been found to have favorable economic payoffs and can direct workers to places where jobs are more plentiful and where adequate community services can be provided at reasonable cost [36]. One major role of economic planning would be to determine the optimal mix of industry location incentives and worker mobility incentives to a given region or multicounty district. People in areas unable or unwilling to provide jobs would be eligible for financial assistance to help workers relocate where jobs are available, areas willing and able to attract jobs with location incentives set at the level necessary to overcome market imperfections would be provided inducements for industry location and job creation.

LOCAL EFFORT TOWARD DEVELOPMENT

This paper has emphasized federal programs for sparsely populated areas within the context of a national growth policy. Local effort is, of course, also important. Local initiative can either expand the resource base or utilize a given resource base more efficiently. Ways

\[\text{Comparison of the cost-effectiveness of these industrialization programs with manpower programs reveals advantages for the latter [50]. But the payoffs can be expected to differ from one situation to another—again offering an opportunity for planners to make a contribution in determining the optimal level and mix of growth programs.} \]
to expand the local resource base through improved farm management, attracting industry and other means have been discussed elsewhere and will not be dealt with further at this point.

Using Community Resources More Efficiently

Numerous government agencies as well as local leaders focus on raising community real income through more efficient use of resources. The federal-state extension service has helped to identify community leaders and community goals, and to organize for action to reach community goals. State and multicounty planning specialists, the Economic Development Administration, and Department of Housing and Urban Development "701" planning grants have assisted in formulating comprehensive development and land use plans to better utilize resources. Rural zoning to prevent urban sprawl, prohibit nuisance enterprises from encroachment, preserve historic and scenic attractions and to protect farm land while providing for orderly development is receiving wider support from rural people and can raise long-run real income through better resource use.

Whatever its economic or demographic circumstances, a community is likely to want efficient delivery of community services. A growing body of literature [14, 25, 31, 34, 37, 45] suggests ways to reduce the cost or raise the quality (and quality) of services such as schooling, health care and utilities in rural areas. In the case of health care, approaches are being used such as volunteer ambulance services, prepaid monthly fees for comprehensive health care under group medical practice (health maintenance organizations), helicopter emergency ambulance service, use of paramedical professionals (e.g. former military medical corpsmen assisting medical doctors), registered nurses in remote rural areas tied by space-age communications to medical doctors located at a major medical center, and provision of hospital-type services in nursing homes.

A recurring finding throughout studies of services and local government administration is potential saving from consolidation of units to achieve economies of size. Yet the Census of Governments reported 73,268 governmental units in 1972, a decline of only 3,031 since 1967. The decline was almost entirely attributed to the reduction in the number of school districts from 21,782 in 1967 (34,678 in 1962!) to 15,780 in 1972, reflecting legislative pressures as well as economic advantages from consolidation.

Additional opportunities to save on community resources are available by encouraging farmers to build their new house in town rather than in the open country, and commute to the farm. The opportunity should be strictly voluntary, but could be compensated from money saved by not having to furnish postal, school bus, and, in some instances, first class roads to farmsteads.

Increasing the efficiency of local resource use is a laudable and continuing need. But my belief is that efficient use of local resources cannot alone provide adequate community services and levels of living for declining rural communities. Outside assistance is essential and
justified. Problems and opportunities spill over community, county and state boundaries in a complex, interrelated political economic characterized by high migration rates, environmental pollution and other problems which are no respecter of local political boundaries. My belief is that the local government should deal with local problems where possible and that many problems which are internal to metropolitan or multi-county areas can be resolved by expanding political boundaries without the federal government bailing out the political entity for pockets of problems confined within its boundaries. But many local problems require regional, state or national government participation to be resolved.

Growth Centers

Emphasis on growth centers in development appears to be dead for now, the victim of misguided metropolitan enthusiasts who claimed cities of 20,000-250,000 were too small for economic viability and rural enthusiasts who claimed cities of that size were too remote, who see no need to focus development efforts into a critical mass and who see every community as an opportunity for job growth. The growth center concept should not be forgotten, however, even if it is not stressed in current legislation. Growth centers offer industry a large pool of labor and other inputs, adequate transportation, markets and agglomerative economies, as well as cultural and other secondary location advantages. Growth centers offer workers an alternative to the unfortunate "company town" with a single major employer (monopsony); give continuity to employment through having employment alternatives when one firm fails, moves or exploits workers, and provide potential access to a wide array of quality services at reasonable cost. In this context, it is apparent that sparsely populated areas are at a real disadvantage in expanding their economic base and have a major stake in a national growth policy that also includes provisions from training, counseling and financially assisting the relocation of workers from communities unable to provide adequate jobs.

SUMMARY AND CONCLUSIONS

To enhance economic opportunity in sparsely populated rural areas in the face of declining employment in farming and mining requires perceptive leadership, planning and action. Two approaches can enhance economic opportunity through local action: broaden the resource base through industry or other means and use the existing resource base more efficiently. While local measures are worthy and deserving of full support in their own right, they should not obscure the fact that the majority of communities in sparsely populated areas cannot provide adequate services (including education for migrants who leave) and avoid anomie without outside help.

The federal government, early committed to decentralization as evident in the Homestead Act and use of land grants to finance railroads, later shifted to a powerful de facto policy of centralization. Commodity programs for agriculture have pushed from rural areas the small farmer and
hired worker, while heavy spending per capita for federal payrolls, procurement of military hardware, airlines and welfare (see Table 1) pulled people to the metropolis [53]. Average cost pricing of community services and failure to account for externalities also encouraged centralization. Strong policies of centralization have speeded outmigration from sparsely populated rural areas and unduly concentrated people in metropolitan areas. Subsidies have been required for both extremes of population density continuum—the growth policy outlined herein calls for an end to centralization policies as well as subsidies that specifically encourage people to live in high cost places. 9

A case is made in this paper for a vastly simpler yet more direct national growth policy than the existing de facto centralization policy and a "Christmas-tree" policy which some have proposed. The foundation of the policy is a comprehensive income maintenance program, which rests on the judgment that the nation should first initiate a strong program to foster equity, then stress efficiency in programs of balanced growth using public funds where possible to encourage investment by private industry.

Equity entails providing low income persons with means to avoid deprivation, treating those in similar economic circumstances alike, and compensating for economic spillover. A comprehensive income maintenance program could provide the working poor with incomes at least as high as those on welfare, encourage family stability, maintain work incentives, align payment rates among states and shift costs to the federal government in recognition of the inability of some states to provide assistance at levels that keep social problems from spilling over into other states. School funding reform could at once provide outlays for an adequate curriculum, align local taxes with ability to pay, compensate schools for net spillout of benefits, and reduce now powerful incentives for communities to seek industry rather than outmigration as a solution to their economic ills.

The above programs emphasize equity; the remaining national policy for rural development could focus on efficiency—improving the market structure and incentives of private industry in making location decisions with maximum free choice left to firms. Incentives to private firms would align social costs (benefits) with private costs (benefits). Means include a system of tax writeoffs to industry geared to underemployment in an area, a wage supplement to reduce the private cost of underemployed rural labor to the real cost, and labor mobility assistance to

9 In the case of farming, commodity program payments limitations are called for. However, one can make a strong case for public programs to hold commodities and resources in reserve to reduce price and income variation for farmers and consumers and for programs to develop natural resources and technology (through education and research) if benefit-cost ratios are favorable.
overcome lack of knowledge, capital constraints and other impediments to efficient functioning of labor markets.

This policy is as notable for what is omitted as for what is included. It calls for people to be free to locate where they want subject to their paying the social costs as well as receiving benefits of that location. Accordingly, all federal programs that subsidize community services and encourage people to locate in socially inefficient places should be terminated. Federal grants to local governments and organizations for urban renewal, mass transit, model cities, utility construction and tax revenue sharing obviously have little justification in this framework. There appears to be no more justification for residents of sparsely populated areas to spend $75 each annually (the cost of auto emission control [34]) to clear the air over our largest cities than for residents of these cities to pay additional taxes to subsidize utilities encouraging people to reside in country estates. Since the federal government can borrow or guarantee loans on better terms than others in many instances, concessional loans for water, sewer, electrical and telephone systems and for other infrastructure can be justified.

The grant programs which now constitute the bulk of the rural and urban development efforts are difficult to justify on equity grounds because few dollars reach low income people and are difficult to justify on efficiency grounds because community service grants are not as cost-effective as other means for stimulating economic activity. If communities wish to expand their social overhead capital, they should be free to make their own choice of the level and combination of services they wish to provide, with appropriate exceptions for funding of schools and other services with obvious spillover and ability effects as discussed in the text. But on the whole the appropriate national growth policy is to assist viable communities to generate an economic base, then depend on the community to fund local services.
REFERENCES


