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COMMUNITY ECONOMIC EFFECTS OF POPULATION CHANGE
IN THE MID-CONTINENT REGION

Peter Stenberg and Wilbur R. Maki



Department of Agricultural and Applied Economics

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University of Minnesota
Institute of Agriculture, Forestry and Home Economics
St. Paul, Minnesota 55108

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COMMUNITY ECONOMIC EFFECTS OF POPULATION CHANGE
IN THE MID-CONTINENT REGION

Peter Stenberg and Wilbur R. Maki

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of the Mid-Continent Regional Science Association
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This report provides background information on population change and its effects on public facility needs and spending in nonmetropolitan areas. It relates to research completed under the Minnesota Agricultural Experiment Station project on Infrastructure Development Alternatives in Rural Areas. Financial support of the Minnesota Agricultural Experiment Station has made possible the compilation and assessment of the statistical series needed in this study.

Abstract

Population estimates for counties in the Mid-Continent Region were compiled by multi-county economic area for 1950, 1960, 1970, 1974 and 1976. Net migration estimates were compiled, also, by economic area. Finally, community economic effects for a metropolitan area and a nonmetropolitan area in Minnesota were estimated in terms of local government and personal income and expenditures and their relation to population change.

Summary and Conclusions

Recent population trends show a reversal of population growth in rural and metropolitan areas. Heretofore declining rural areas are growing while metropolitan areas are slowing down or declining in total population.

Net migration trends are changing, also. Many rural counties experienced rapid de-population in the 1950's and 1960's. For many of these counties, the population statistics of the 1970's revealed net in-migration. The population growth was accompanied by rapidly expanding local government expenditures.

A total of 60 multi-county economic areas in the Mid-Continent Region are compared in this report. The 30 economic areas of the eastern portion of the Mid-Continent Region are dominantly metropolitan. The 30 economic areas of the western portion of this Region are dominantly rural and nonmetropolitan. For reporting purposes the 30 economic areas in the east make up an East North Central Region while the 30 economic areas in the west make up a Northern Plains Region.

The larger proportion of the total population residing in places of less than 50,000 population in the Northern Plains than in the East North Central portion of the Region accounts for the contrasting trends in migration and population growth and decline. More of the total population growth in the East North Central Region occurred in nonmetropolitan than metropolitan areas during the 1970's. The opposite occurred in the Northern Plains Region in the 1950 to 1976 period. Most recent data show declining rates of total population growth in both metropolitan and nonmetropolitan areas of the two regions.

The contrasting trends in total population growth are accompanied by similar patterns of population migration. The total out-migration of population is becoming larger for the metropolitan areas while it is becoming smaller for the nonmetropolitan areas. Indeed, for the nonmetropolitan areas in the Northern

Plains Region, net in-migration of population occurred in the 1974-1976 period.

The changes in total population and its distribution between and within regions were associated with changes in the number and location of jobs. A rapid growth in the employed work force was reported for nonmetropolitan areas, especially those closest to major population centers and transportation networks. However, some nonmetropolitan areas, though gaining in total population, lagged in employment growth. In these areas, transfer payments to individual and local governments helped reduce the income gap between these areas and high-income metropolitan areas.

Two multi-county planning regions in Minnesota -- the five-county Headwaters Region in northern Minnesota and the seven-county Metropolitan Council Region centered on the cities of Minneapolis and St. Paul -- were chosen for comparisons of recent trends in population, employment and income and their implications for local governments. The findings show the increasing burden of nonmetropolitan area local government for metropolitan area residents. Population growth in the nonmetropolitan areas will be accompanied by corresponding increases in local government expenditures, which are being supported more and more by federal and state government transfers to local governments. Since these transfers depend heavily on income-sensitive tax sources, residents of the high-income metropolitan area help support local government services in the low-income nonmetropolitan area. Thus, an income redistribution occurs between metropolitan and nonmetropolitan areas, which is likely to be accelerated as a result of recent population trends.

Total transfer payments to local governments in the Headwaters and Metropolitan Council Region were \$540 and \$448, respectively, in 1974. Thus, the transfer payments helped reduce the adverse community effects of low personal income in the nonmetropolitan area.

Transfer payments to individuals also reduced the community effects of low earnings per capita. In the Headwaters Region, the individual transfer payments (which include payments of civilian and military retirement programs, unemployment insurance programs, medical assistance, educational assistance, public assistance and other transfer programs) accounted for 23 percent of total personal income in 1974. Total transfer payments per person were \$719 in the Headwaters Region and \$605 in the Metropolitan Council Region.

Per capita payments in 1974 to individuals and local governments totaled to \$1,259 in the Headwaters Region and \$1,053 in the Metropolitan Council Region, while per capita income totaled to \$3,096 and \$6,159, respectively, in the two regions. Thus, transfer payments, which were split about equally between local governments and individuals, reduced the per capita income gap by \$206. This was equivalent to roughly a seven percent increase in personal income levels in the Headwaters Region.

Transfer payments to local governments and individuals facilitate nonmetropolitan area growth insofar as a significant proportion of private fiscal resources are not tied to the current income and job status of the resident population. Additional social services, which are important dimensions of quality of life measures, can be provided through the transfer payments. The attractiveness of nonmetropolitan areas to present and potential migrants thus improves with population growth.

COMMUNITY ECONOMIC EFFECTS OF POPULATION CHANGE IN THE
MID--CONTINENT REGION ^{1/}

Peter Stenberg and Wilbur R. Maki ^{2/}

Discussion of recent population changes in the United States frequently refers to the more rapid growth of nonmetropolitan than metropolitan areas (12). In this paper the community effects of the population changes in selected economic areas of the Mid-Continent Region are listed.^{3/} First, however, the general pattern of population change in the United States since 1940 is briefly reviewed.

People were leaving rural and open country in the 1940 to 1970 period and concentrating in cities and towns. Between 1940 and 1960 an average of more than one million people left farming annually, though not all went to metropolitan areas. Nonmetropolitan areas lost population despite their high birth rates. By the 1960's, this trend began to slow down and by the 1970's nonmetropolitan areas were growing faster than metropolitan areas. Nonmetropolitan areas adjacent to the metropolitan areas grew at the fastest rate. However, the nonmetropolitan growth was not confined to the expansion of metropolitan areas. Nonmetropolitan counties that were not adjacent to metropolitan counties also grew faster than did the metropolitan counties. Generally, the greater the size of a metropolitan area, the less its growth. This was most evident in the largest metropolitan areas, those with more than five million

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^{2/} The authors gratefully acknowledge the assistance of Jerome Oster, Mason Chen and Pronsak Chitphakdithai in the preparation of the statistical series used in this paper.

^{3/} A total of 60 U.S. Department of Commerce, Bureau of Economic Analysis (BEA) Economic Areas in 15 states are included in this study. The 60 economic areas are split evenly between the Northern Plains Region and the East North Central Region.

people. For smaller metropolitan areas, regional location was a key factor in accounting for differences in growth experience. Indeed, population growth trends of metropolitan areas, from largest to smallest in size, were nearly reversed between 1940 and the mid-1970's.(1,3,15).

Contrasting Regional Trends in Population Growth and Distribution

The general trends in population redistribution apply also to the selected economic areas in the Mid-Continent Region delineated in figure 1. Much of the American Manufacturing Belt is located in the East North Central Region, while the Northern Plains Region has much of the agricultural economy of the Nation. In each BEA economic area in these two regions, total population is separated into two groups of counties, those in Standard Metropolitan Statistical Areas in 1972, and those outside these areas. The metropolitan counties are those in Standard Metropolitan Statistical Areas (SMSA's) while the nonmetropolitan counties are those outside SMSA's. The two groups of counties in each economic area are referred to as subareas in tables 1, 2, and 3.

The two regions differ in population trends, especially since 1970, as shown in table 1 and figure 1. Population was increasing in both regions from 1950 to 1976, but the growth rates were declining. In the East North Central Region, these trends continued in the 1970's, while for the Northern Plains Region the trends were reversed from 1970 to 1974 and reversed, again, from 1974 to 1976.

The two regions differ, also, in migration patterns (table 2). In the East North Central Region, net in-migration resulted in population growth in the 1950's, which was slightly above the national average. This was followed by increasing net out-migration in the 1960's and 1970's. In the Northern Plains Region, the net out-migration of the 1950's and 1960's gradually shifted to net in-migration in the early 1970's. The most recent estimates show net out-migration of population in both regions (16,17).

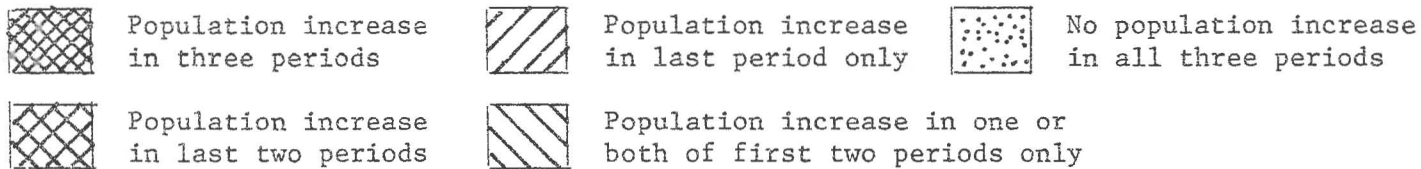
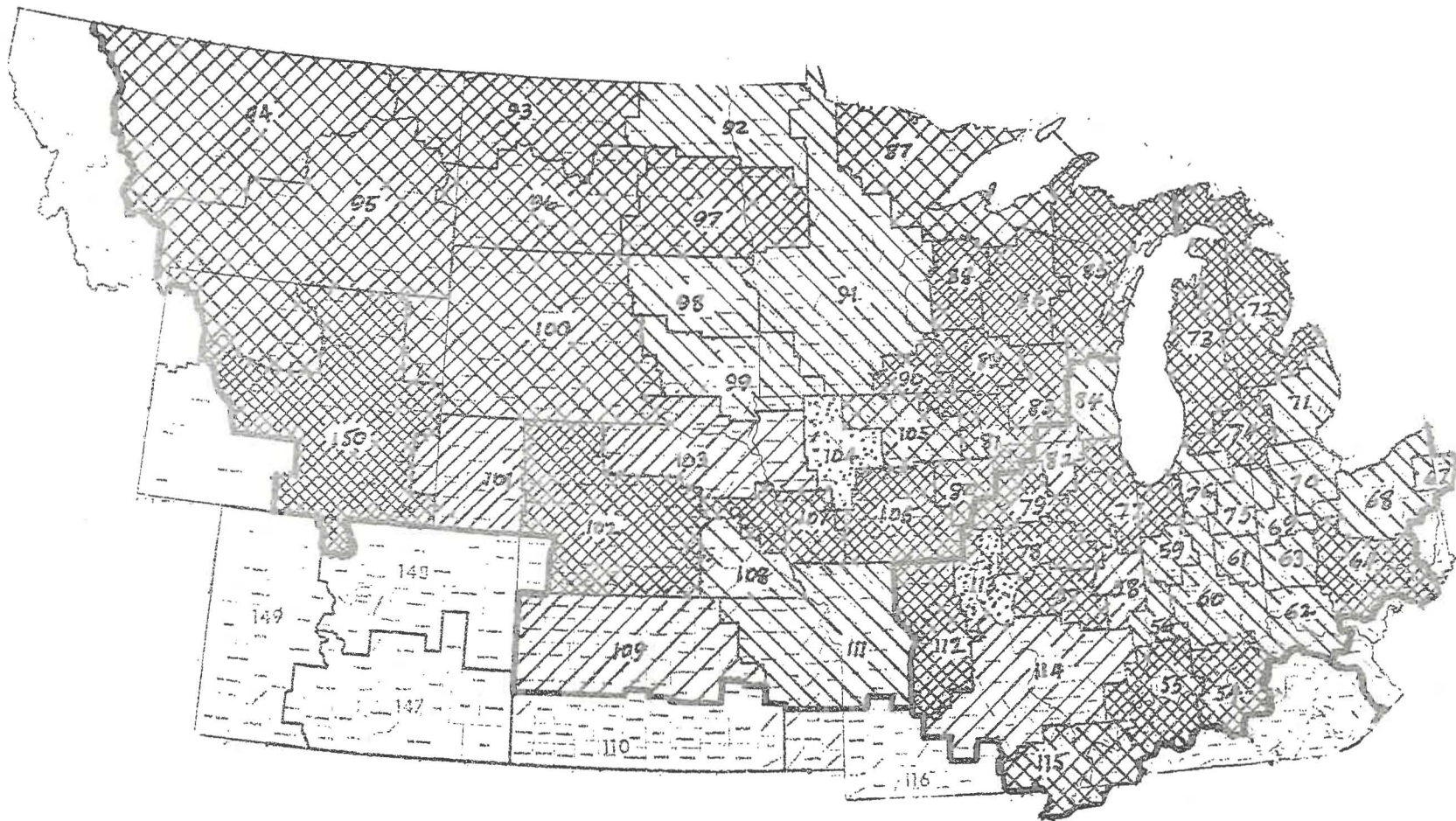


Figure 1. BEA Economic Areas with increasing total population in East North Central and Northern Plains Regions, 1960-1970, 1970-1974 and 1974-1976.

Table 1. Annual change in total population in East North Central and Northern Plains Regions, by subarea, 1950-1976.^{1/}

Year and Region	Metropolitan Subareas ^{2/}	Nonmetropolitan Subareas ^{2/}	Total
	(percent)		
East North Central:			
1950-60	2.11	0.75	1.77
1960-70	1.19	0.59	1.05
1970-74	0.13	0.82	0.29
1974-76	-0.04	0.25	0.02
Northern Plains:			
1950-60	2.60	-0.03	1.10
1960-70	1.03	-0.17	0.41
1970-74	0.75	0.66	0.70
1974-76	0.36	0.28	0.32

^{1/} Based on data from: Bureau of the Census, Estimates of the Population of Counties and Metropolitan Areas: July 1, 1975 and 1976. Current Population Reports. Series P-25, No. 739. U.S. Government Printing Office, Washington, D.C., November 1978.

^{2/} Metropolitan subarea refers to the counties in one or more Standard Metropolitan Statistical Areas in an economic area while nonmetropolitan subarea refers to the remaining counties in the economic area. Where the SMSA is lacking, the county with largest population center is designated as the metropolitan subarea.

Table 2. Annual change in total migration in East North Central and Northern Plains Regions, by subarea, 1950-1976.^{1/}

Year and Region	Metropolitan Subareas ^{2/}	Nonmetropolitan Subareas ^{2/}	Total
	(number)		
East North Central:			
1950-60	118,990	-45,676	73,315
1960-70	9,097	-21,412	-12,315
1970-74	-109,771	28,070	-181,700
1974-76	-228,038	-3,850	-231,888
Northern Plains:			
1950-60	22,771	-108,904	-86,134
1960-70	8,335	-69,414	-61,079
1970-74	-5,482	22,271	16,788
1974-76	-17,200	1,775	-15,425

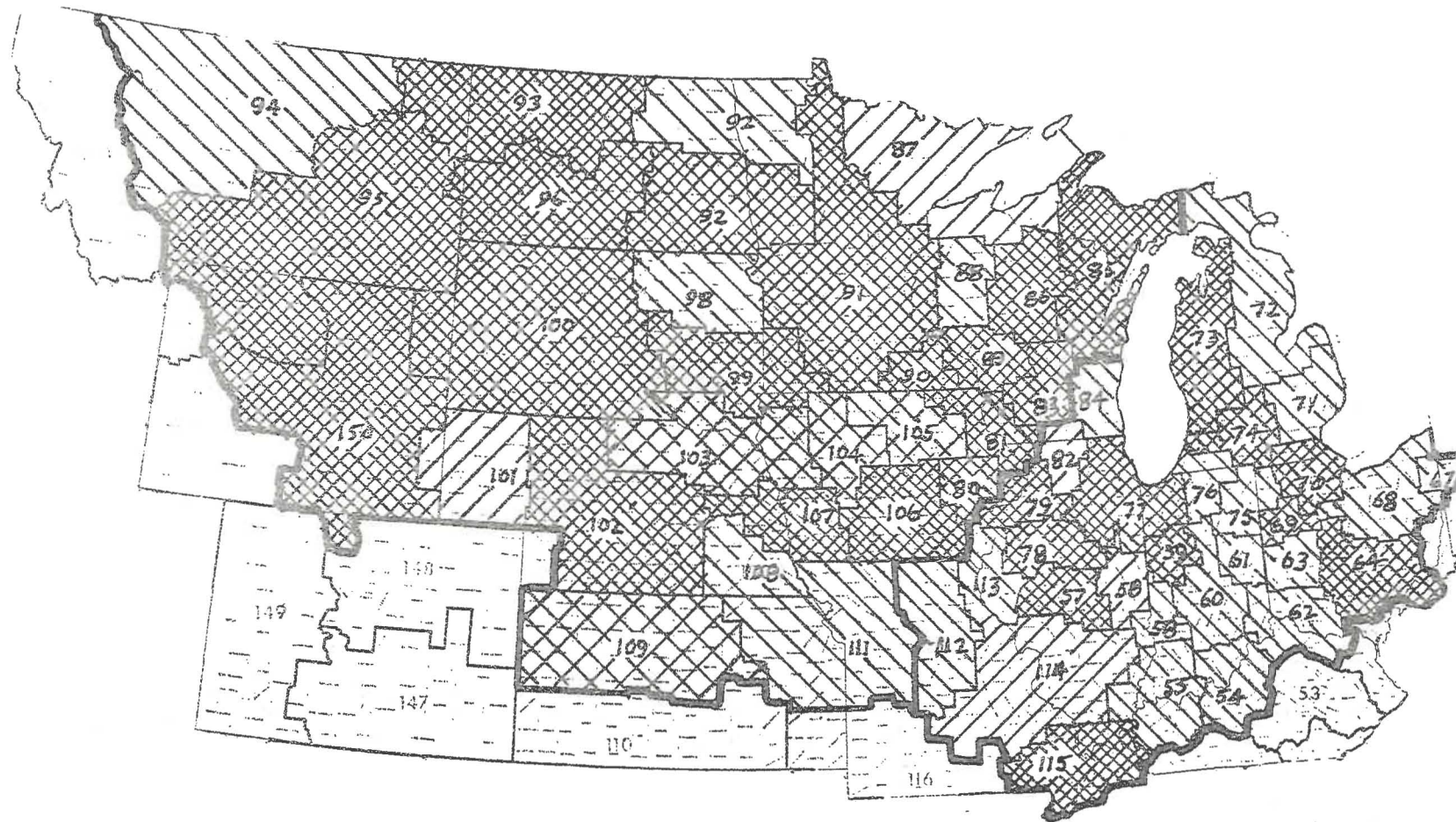
^{1/} Based on data from: Bureau of the Census, Estimates of the Population of Counties and Metropolitan Areas: July 1, 1975 and 1976. Current Population Reports. Series P-25, No. 739. U.S. Government Printing Office, Washington, D.C., November, 1978.

^{2/} Metropolitan subarea refers to the counties in one or more Standard Metropolitan Statistical Areas in an economic area while nonmetropolitan subarea refers to the remaining counties in the economic area. Where the SMSA is lacking, the county with largest population center is designated as the metropolitan subarea.

Both regions had net in-migration to the metropolitan areas in the 1950's, which changed slowly, but steadily, to net out-migration in the 1970's. This trend continued through the 1974-76 period. Individual subareas increased in population, however, as shown in figure 2. Population increases were reported in the 1960-1970, 1970-1974 and 1974-1976 periods in 17 subareas in the East North Central Region and 18 subareas in the Northern Plains Region. Population decline in the 1974-1976 period was reported in 16 subareas in the East North Central Region and six subareas in the Northern Plains Region.

Nonmetropolitan areas in both regions experienced net out-migration in the 1960's and net in-migration in the 1970's, but their impacts differed. In the Northern Plains, the movement away from nonmetropolitan areas was large enough in the 1960's to result in net decline in total population in 13 of the 30 subareas (figure 3). In the East North Central Region, total population increased in 16 subareas in all three periods despite the overall net out-migration. The Northern Plains Region is the less metropolitan of the two, with the largest proportion of farm population. Much mineral resource development has occurred in the western portion of the Region and in the Duluth-Superior Economic Area, which accounts for the population increases in Economic Areas 94,95,96,97,100, 102,150 and 87. Recreation-and-retirement-related population growth accounts, in part, for the steady population growth in the eastern portion of the Region in Economic Areas 85,86 and 88.

Since 1974, population movement to rural areas has slowed down. The latest shift is due, in part, to out-migration from the two regions as a whole. In the Northern Plains Region, net in-migration slowed appreciably, from an average of 22,271 a year in the 1970 to 1974 period to an annual average of 1,775 in the 1974 to 1976 period (table 2). The annual population growth rate for nonmetropolitan counties again fell below that of metropolitan counties. In the East North Central Region, nonmetropolitan growth rates exceeded metropolitan growth rates.








- | | | | | | |
|---|---|---|--|---|---|
|  | Population increase in three periods |  | Population increase in last period only |  | No population increase in all three periods |
|  | Population increase in last two periods |  | Population increase in one or both of first two periods only | | |

Figure 2. Metropolitan subareas of BEA Economic Areas with increasing total population in East North Central and Northern Plains Regions, 1960-1970, 1970-1974 and 1974-1976.

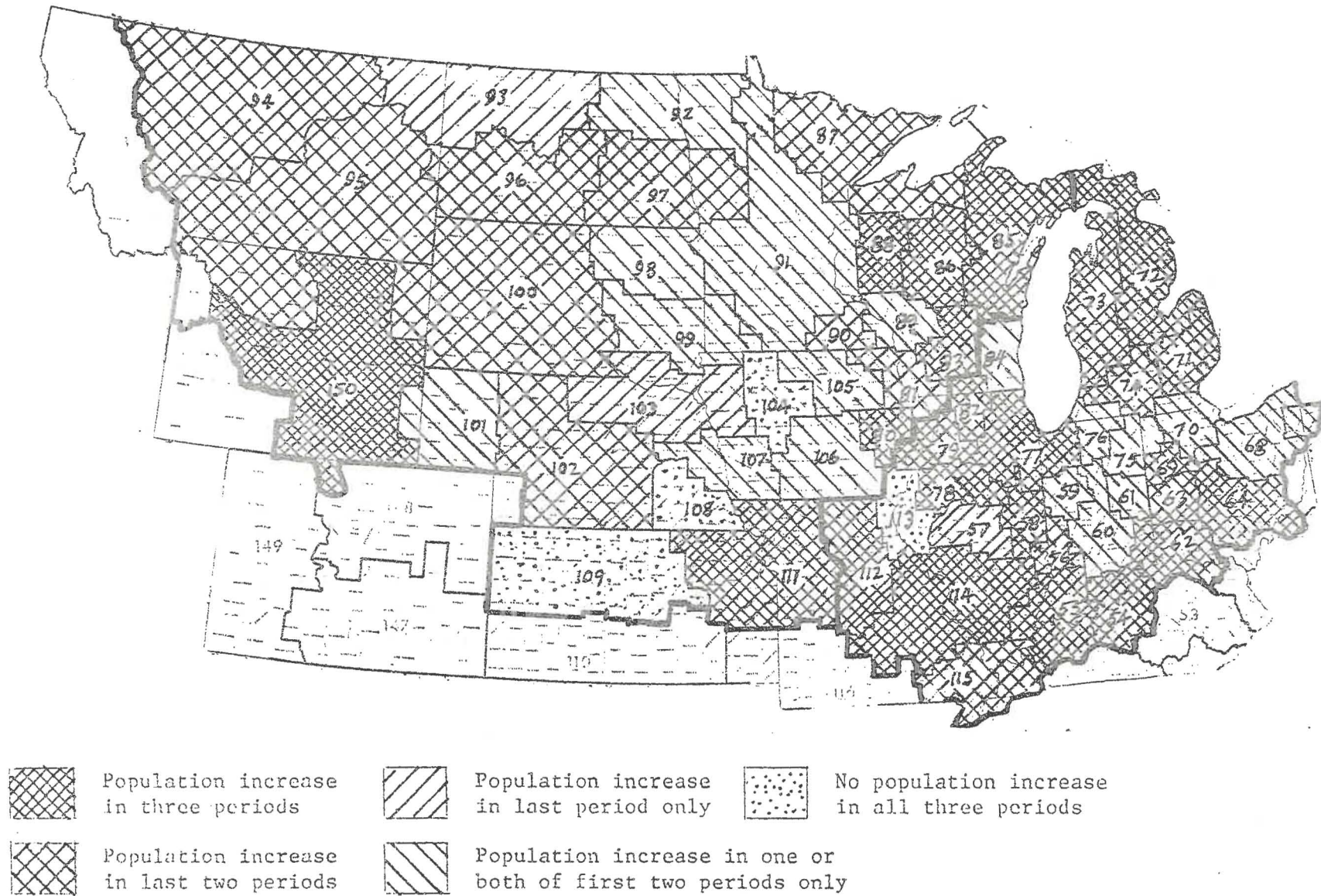


Figure 3. Nonmetropolitan subareas of BEA Economic Areas with increasing total population in East North Central and Northern Plains Regions, 1960-1970, 1970-1974 and 1974-1976.

Data on individual economic areas in the two regions show that 28 of the economic areas in the Northern Plains had net out-migration in the 1950's. The number declined to one-third of the areas in the 1974 to 1976 period. The nonmetropolitan portions of the economic areas also show more population retention than the metropolitan portions. In the 1950's all of the nonmetropolitan subareas showed net out-migration, but this changed in the 1970's so that the nonmetropolitan subareas showed population gains from in-migration. In the 1950's, 18 of the metropolitan portions of the economic areas gained by migration, but this decreased to 12 in the 1960's and early 1970's. However, over half of the subareas gained from migration in the mid-1970's.

The East North Central Region had slightly more economic areas gaining than losing population from migration in the 1950's. This changed until slightly less than half gained population by in-migration in the 1960's, while only about one-fourth gained population by in-migration in the 1970's. The nonmetropolitan subareas experienced considerable change: 22 had net out-migration in the 1950's and 1960's. This declined to 12 in the early 1970's and increased to 15 in the mid-1970's. The metropolitan portions showed a steady decline from the 1950's, when 22 of the subareas gained population by in-migration, to the 1970's, when only three gained population by net in-migration (table 3).

Causal Factors in Regional Population Change

Population growth in nonmetropolitan counties was associated with an increase in non-agricultural jobs. Manufacturing accounted for about half of the nonmetropolitan job growth in the 1960's (2, p. 9). Nonmetropolitan counties as a whole became less dependent on agriculture for jobs. Indeed, in the late 1960's employment growth in manufacturing was higher in nonmetropolitan than metropolitan areas.

Population decline was averted, and even reversed, in many nonmetropolitan areas in the 1960's by non-manufacturing, as well as manufacturing, activity. Public works investment provided construction jobs initially and, later, new

Table 3. Number of BEA Economic Areas in East North Central and Northern Plains Regions, by total population change, 1950-1976.^{1/}

Year and Region	Population Increase in BEA Economic Area			Population Constant or Decrease in BEA Economic Area			Total
	Only metropolitan subareas	Only nonmetropolitan subareas	Both subareas increase	Only metropolitan subareas	Only nonmetropolitan subareas	Both subareas decrease	
	(number)						
East North Central:							
1950-60	1	0	25	0	3	1	30
1960-70	3	0	25	0	2	0	30
1970-74	1	2	21	3	3	0	30
1974-76	0	4	12	4	3	7	30
Northern Plains:							
1950-60	11	1	13	0	5	0	30
1960-70	6	0	5	1	12	3	30
1970-74	2	2	22	1	2	1	30
1974-76	6	2	15	1	3	3	30

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^{1/} Based on data from: Bureau of the Census, Estimates of the Population of Counties and Metropolitan Areas: July 1, 1975 and 1976. Current Population Reports. Series P-25, No. 739. U.S. Government Printing Office, Washington, D.C., November 1978.

employment opportunities in recreation-related activities. In addition, the growth of institutions of higher education and other social services improved the quality of life in many nonmetropolitan areas (2, p. 12). Highway building further improved access of these areas to new industry and residents.

For many people, the nonmetropolitan areas became more attractive as places of residence than they were previously. People working in metropolitan areas found economic and social attractions in the rural areas which were sufficient to overcome commuting costs to jobs in metropolitan areas.

In the early 1970's the increase in non-farm job opportunities, which occurred in every major industry group, except government, more than offset the decline in farm-related jobs in many rural areas. This is a change from the 1960's when only manufacturing jobs were increasing at above-average rates. Thus, the trade and service sectors, as well as the goods-producing sectors, provided jobs to support local population growth. While manufacturing was a major factor in the nonmetropolitan growth in the 1960's, accounting for 50 percent of nonmetropolitan employment growth, it became less important in the 1970's, when it accounted for only 18 percent of employment growth (2, p. 9). Non-manufacturing activity increased sharply in nonmetropolitan areas in the 1970's.

Growth in recreation-related and, also, retirement-related activities accounted for some population changes in the early 1970's (1, p. 26). In counties where 15 percent or more of the in-migration consisted of white population, age sixty and over, the average annual population growth was 4.1 percent -- well above the U.S. average and, also, the averages for other nonmetropolitan areas.

An example of the growth of nonmetropolitan area employment in the early 1970's are the six dominantly rural substate development regions in Minnesota (10).

Total population increased in each region, which also experienced employment growth greater than population growth.

Social Costs of Migration

The social costs of migrating, which include the added costs of private housing, and of providing and maintaining social overhead capital (both privately- and publicly-owned), are overlooked in the migration decision. Usually the migrant weighs only housing costs, which is not the way social costs are determined. Out-migration often creates an under utilization of social overhead capital, while in-migration causes its overuse and, eventually, its expansion.

Migration impacts on business differ between declining and growing areas (8, p. 19). Out-migration reduces local business prospects and enhances conservatism in community outlook, while in-migration results in "unearned" gains in private assets because of new construction and increased business activity associated with population growth. Size of the growing or declining area will affect business profit expectations and, therefore, private investment. A small growing area, for example, may be growing very rapidly and may not necessarily be as favorable for private investment as a slowly growing area with a large total population.

Population loss from migration affects public expenditures, also. This effect can be small for most economic areas in the Northern Plains Region, but it will be substantial in the East North Central Region with high out-migration. Public expenditure losses result from the accumulated social value of education, health, and other public services that are transferred from the areas sending to those receiving the migrants. Also, personal and business savings move with people. Thus, sending areas support growth in employment, income and output in the receiving areas.

Public Facility Investment and Population Change

Public facility investment is closely linked to population change and, also, to the economic and social determinants of population change. Included with public facility investment are the basic community facilities, such as water, sewer, and gas, electric and sanitation utilities, and transportation, education, health care, recreation and cultural, and other public facilities.

The type and location of public facilities affect the delivery of social and economic services and, thus, the quality of life in an area. Residents of both declining and growing areas face rising per capita costs of service delivery. Since the 1950's, the service sectors have experienced above-average employment growth. They require an increasing share of total public and private spending. However, a declining proportion of total spending is available for capital outlays in these sectors (11).

Recent data for two substate planning districts in Minnesota show slightly lower levels of total public spending per person in the nonmetropolitan area than in the metropolitan area (table 4). However, large differences occur in capital outlays, and debt retirement and interest. The per capita spending for these categories in the metropolitan area is more than twice the level in the nonmetropolitan areas.

Large differences occur in local government revenues in the two areas, also (table 5). Per capita levels of local taxes, service charges and borrowing are two to 10 times higher in the Metropolitan Council Region than in Headwaters Region. ^{4/}

^{4/} Included in the two areas are the following counties: Beltrami, Clearwater, Hubbard, Lake-of-the-Woods, and Mahnomen in the Headwaters Region and Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington in the Metropolitan Council Region. Total population in 1974 was 60,200 and 1,904,400 in the two regions, respectively.

Table 4. Estimated per capita disbursements for specified function of local government in Headwaters and Metropolitan Council Regions, Minnesota, 1974.^{1/}

Function	Headwaters Region					Metro Council Region							
	Counties	Cities	Town- ships	School Districts	Special Districts	Total	Counties	Cities	Town- ships	School Districts	Special Districts	Metro- politan Agencies	Total
(dollars)													
Current Expenditure:													
Education	0	0	0	346	0	346	0	0	0 ^{2/}	325	0	0 ^{2/}	325
Streets & Roads	49	10	6	0	0	56	8	15	0 ^{2/}	0	0	0 ^{2/}	23
Health & Hospitals	4	0 ^{2/}	0	0	3	7	36	5	0 ^{2/}	0	5	0	46
Police & Fire Protection	5	12	1	0	0	18	14	49	0 ^{2/}	0	0	0	62
Public Welfare	117	0	0	0	0	117	118	0 ^{2/}	0 ^{2/}	0	0	0	118
Other ^{3/}	45	20	4	0	3	72	26	59	0 ^{2/}	0	8	26	120
Total Current	212	42	11	346	6	618	201	163	1	325	13	26	730
Capital Expenditure:													
Education	0	0	0	35	0	35	0	0	0 ^{2/}	51	0	0	51
Streets & Roads	26	10	4	0	0	39	7	28	0 ^{2/}	0	0 ^{2/}	0	35
Health & Hospitals	0	0	0	0	0 ^{2/}	0 ^{2/}	7	0 ^{2/}	0 ^{2/}	0	0 ^{2/}	0	8
Police & Fire Protection	0	1	0	0	0	1	0 ^{2/}	2	0 ^{2/}	0	0	0	2
Other ^{3/}	10	22	0	0	0 ^{2/}	32	14	29	0 ^{2/}	0	32	5	80
Total Capital	36	32	4	35	0 ^{2/}	107	29	99	1	51	32	16	227
Other Disbursements ^{4/}	23	7	0 ^{2/}	0	0	30	0	0	0	0	0	0	0
Debt Service & Retirement	2	6	0	9	3	21	4	59	2	37	24	11	137
Total Disbursements	273	87	15	391	10	776	235	321	3	413	69	53	1,094

^{1/} Based on data in: Robert W. Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Local Governments in Minnesota, July 1, 1974 to June 30, 1975; Robert Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Cities in Minnesota, July 1, 1974 to June 30, 1975, State Auditor, State of Minnesota, State Capitol, St. Paul, MN 55101.

^{2/} 50 cents or less.

^{3/} General government, sanitation, libraries, recreation, conservation of natural resources, contributions to public service enterprises, urban redevelopment and housing, and unallocated.

^{4/} Includes other non-revenue disbursements and fund withdrawals.

Table 5. Estimated per capita receipts from specified sources of local governments in Headwaters and Metropolitan Council Regions, Minnesota, 1974.^{1/}

Source	Headwaters Region						Metro Council Region						
	Counties	Cities	Town- ships	School Districts	Special Districts	Total	Counties	Cities	Town- ships	School Districts	Special Districts	Metro- politan Agencies	Total
	(dollars)												
Taxes	49	12	4	79	1 ^{2/}	144	68	65	0 ^{2/}	143	4	12	292
Charges & Assessments	11	9	0	6	0 ^{2/}	27	29	84	0 ^{2/}	10	8	17	147
Transfers:													
Federal	18	40 ^{4/}	0	47	5	110	8	18	0 ^{2/}	20	31	13	90
State	178	0	8	241	2	430	115	51	1	184	4	4	358
Total	195	40	8	289	7	540	123	69	1	204	34	17	448
Other Revenues	13	11	2	10	2 ^{2/}	38	12	20	0 ^{2/}	18	6	6	62
Borrowings	0	3	0	0	0 ^{2/}	4	3	88	2	17	29	7	145
Other ^{3/}	5	11	2	5	0	25	0	0	0	0	0	0	0
Total Receipts	273	89	15	388	11	777	235	326	3	392	80	58	1,094

^{1/} Based on data in : Robert W. Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Local Governments in Minnesota, July 1, 1974 to June 30, 1975; Robert Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Cities in Minnesota, July 1, 1974 to June 30, 1975, State Auditor, State of Minnesota, State Capitol, St. Paul, MN 55101.

^{2/} 50 cents or less.

^{3/} Includes other non-revenue receipts and fund accruals.

^{4/} Transfer payments from federal and state sources.

A third set of differences between metropolitan and nonmetropolitan areas in local government financing are presented with reference to total personal income rather than total population (table 6). In 1974, per capita personal income was \$6,159 in the Metropolitan Council Region and \$3,095 in the Headwaters Region. Thus, the local government expenditures per \$1,000 of personal income were more than 40 percent greater in the Headwaters Region than the Metropolitan Council Region. Only the capital outlays per \$1,000 of personal income approached equality in the two areas.

The revenue side of local government finances has the key to the fiscal differences. While the tax receipts per \$1,000 of personal income were identical in the two areas, transfers from federal and state governments to the Headwaters Region were more than twice their level for the Metropolitan Council Region. The differential for service charges was reversed: they were more than twice as high in the Metropolitan Council Region than in the Headwaters Region.

The local fiscal analysis shows, in effect, the consequences of the State collecting high per capita levels of income and sales taxes from the high-income metropolitan area and then returning a disproportionate share of these taxes as transfers to the low-income nonmetropolitan area. Fiscal disparities between metropolitan and nonmetropolitan areas in Minnesota have been reduced dramatically through this process. At the same time, the population shifts in the State place an increasing fiscal burden on metropolitan area residents.

The functional breakdown of local spending shows higher levels of spending on urban services and lower levels of spending on education in the metropolitan area than in the nonmetropolitan area. Above-average growth of population in nonmetropolitan areas would maintain these spending patterns, except that new and expanded basic community facilities to provide the urban services

Table 6. Estimated disbursements and receipts of local governments per \$1,000 in Headwaters and Metropolitan Council Region, Minnesota, 1974.^{1/}

Item	Headwaters Region (dollars)	Metropolitan Council Region (dollars)	Headwaters Region as a Proportion of Metropolitan Council Region (percent)
Disbursements:			
Current	200	119	168
Capital	35	37	95
Other	16	22	73
Total	251	178	141
Receipts:			
Taxes	47	47	100
Charges	9	24	38
Transfers	174	73	238
Borrowings	1	24	4
Other	20	10	200
Total	251	178	141

^{1/} Based on data in: Robert W. Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Local Governments in Minnesota, July 1, 1974 to June 30, 1975; Robert Mattson, Report of the State Auditor of Minnesota on the Revenues, Expenditures, and Debt of the Cities in Minnesota, July 1, 1974 to June 30, 1975, State Auditor, State of Minnesota, State Capitol, St. Paul, MN 55101.

also must be built in the nonmetropolitan areas. Because per capita income levels remain lower in the nonmetropolitan areas, government transfer payments will further redistribute income from the metropolitan to the nonmetropolitan area.

Both the metropolitan and the nonmetropolitan areas experienced population growth in the 1970 to 1976 period (16). One of the five counties in the Headwaters Region and five of the seven counties in the Metropolitan Council Region were in the first quartile of counties ranked according to population growth. In addition, two counties were in the second quartile and two counties were in the third quartile in the Headwaters Region while two counties in the Metropolitan Council Region were in the fourth quartile (because of large population decrease from 1970 to 1975).

Growth in employment failed to keep pace with the growth in population in the Headwaters Region where four of the five counties were in the fourth quartile. In the Metropolitan Council Region, six of the seven counties were in the first quartile in employment growth. The employment growth was associated with growth in personal income. Thus, the income disparity between the substate regions was even greater in 1975 than in 1970.

Despite roughly the same per capita levels of local government expenditures in the two regions, quality of life indicators are among the highest in the Nation and the State for the Metropolitan Council Region while for the Headwaters Region they are among the lowest (3, 7). Area-to-area differences in quality of life correlate more closely with area-to-area differences in levels of urbanization and personal income than public spending. Perceived quality-of-life differences of new migrants may include, however, many intangible and currently non-quantifiable variables. According to Liu, the Minneapolis-St. Paul Standard Metropolitan Statistical Area ranks third in the Nation in

overall quality of life. Braun ranks the same metropolitan counties among the highest in the State. He ranks the five nonmetropolitan counties in the Headwaters Region among the lowest in the State.

Per capita personal income in the Headwaters Region in 1974 was 50 percent of its level in the Metropolitan Council Region (table 7). Personal income derived from earnings was an even lower proportion for the Headwaters Region. Transfer payments to individuals helped reduce the income gap between the two regions by \$114 in 1974.

The positive residence adjustment (of \$23 per capita) denotes net out-commuting of the resident labor force in the Headwaters Region. Dependence of local residents on jobs outside the Region is further indicated in the reported change in employed work force from 1970 to 1975. Four of the five counties were in the fourth quartile and one was in the second quartile of total employment change in the 1970 to 1975 period (9). The Headwaters Region ranked lowest in the State in total employment change. Potential participants in the labor force thus were not seeking work, in part, because of the lack of jobs in the Region. Thus, transfer payments to individuals becomes an increasingly important source of personal income in a growing, nonmetropolitan area, especially when population growth exceeds the growth in jobs.

Total per capita transfer payments in 1974 to local governments and individuals amounted to \$1,259 in the Headwaters Region and \$1,053 in the Metropolitan Council Region -- a difference of \$206. The proportion of this total due to local governments is increasing. The total payments to individuals are increasing also in both the Headwaters and Metropolitan Council Regions. An above-average increase in retired and unemployed persons in the Headwaters Region would lead to an above-average increase in transfer payments to individuals, while an above-average increase in total population would lead to an above-average increase in transfer payments to local governments.

Table 7. Estimated personal income payments per person from specified income source in Headwaters and Metropolitan Regions, Minnesota, 1974.^{1/}

Income Source and Year	Head- waters Region		Metro- politan Council Region		Headwaters Region as a propor- tion of Metropolitan Council Region (pct.)
	Total	Propor- tion of Total	Total	Propor- tion of Total	
	(dol.)	(pct.)	(dol.)	(pct.)	
Net Earnings, by Work	1,931	62	4,876	79	40
Residence Adjustment	23	1	-223	-4	--
Net Earnings, by Residence	1,954	63	4,693	76	42
Property Income	422	14	860	14	49
Transfer Payments	719	23	605	10	119
Total Personal Income ^{2/}	3,095	100	6,159	100	50

^{1/} Based on data in: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 1977.

^{2/} Individual entries may not sum to totals because of rounding.

References Cited

1. Beale, Calvin L. Rural development: Population and settlement prospects. Reprint from Journal of Soil and Water Conservation, 29(1): 23-27, Jan.-Feb. 1974.
2. Beale, Calvin L. The Revival of Population Growth in Nonmetropolitan America. Economic Development Division, Economic Research Service. U.S. Department of Agriculture, 1975.
3. Braun, Dennis Duane. Patterns of living. Social Indicators Research, Mankato, Minnesota, 1977.
4. Clayton, Christopher. The structure of interstate and interregional migration: 1965-1970. Annals of Regional Science, 2(1): 109-122, March 1977.
5. Greenwood, Michael J. Lagged response in the decision to migrate. Journal of Regional Sciences, 10(3): 375-384, 1970.
6. Kuehn, John A. and Bender, Lloyd O. Migration, growth centers and the Ozarks. Growth and Change, 43-48, April 1975.
7. Liu, Ben-Chieh. Quality of Life in the U.S. Metropolitan Areas, 1970, Midwest Research Institute, 425 Volker Blvd., Kansas City, Missouri, May 1975.
8. Maki, Wilbur R. and Venegas, Ernesto. The Emptying of the Countryside and Its Cost. Staff Papers Series P72-21, Department of Agricultural and Applied Economics, June 1972.
9. Maki, Wilbur R., Michaels, Gregory H., Laulainen, Jr., Leonard A., and Chen, Mason. Employment Trends and Projections for Minnesota and Its Substate Development Programs, Staff Paper Series P79-2, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, Minnesota, February 1979.
10. Maki, Wilbur R. Income Trends and Projections for Minnesota and Its Substate Development Regions. Staff Papers Series P79-9, Department of Agricultural and Applied Economics, March 20, 1979.
11. Maki, Wilbur R. State Government and Regional Development. Staff Papers Series P79-12, Department of Agricultural and Applied Economics, April 1979.
12. Morrison, Peter A. Current Demographic Changes in Regions of the United States. Paper presented at a conference on "Alternatives to Confrontation: A National Policy Toward Regional Change" at the University of Texas at Austin. September 1977.
13. Oster, Jerome O. Population Redistribution in the United States: Trends, Outlook, Implications. Dayton-Hudson Corporation. May 1976.
14. Riew, John. Migration and public policy. Journal of Regional Science, 13(1): 65-76, 1973.

15. U.S. Bureau of the Census. Mobility of the Population of the U.S.: March 1970 to March 1975. Current Population Reports. Series P-20, No. 285. U.S. Government Printing Office, Washington, D.C., October 1975.
16. U.S. Bureau of the Census. Estimates of the Population of Counties: July 1, 1975 and 1976. Current Population Reports. Series P-25, No. 759. U.S. Government Printing Office, Washington, D.C., November 1978.
17. U.S. Bureau of the Census. Geographical Mobility: March 1975 to March 1978. Current Population Reports. Series P-20, No. 331, U.S. Government Printing Office, Washington, D.C., November 1978.
18. U.S. Water Resources Council. OBERS Projections: Regional Economic Activity in the U.S. 1972.