REGIONAL POVERTY, NATIONAL TRANSFERS: TRANSFER PROGRAMS AND POVERTY IN RURAL ALASKA

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INTRODUCTION

Poverty in the urban areas of the United States presents a dramatic image of the problem of poverty; scenes of poverty among the plenty of urban America focus our attention on this problem. Poverty is also an important problem in the rural parts of the country. In certain regions of the U.S. the incidence of rural poverty exceeds the incidence of urban poverty (Reich, 1988 and Gwynn, et al, 1989). This paper examines the problem of poverty in rural Alaska. The paper's focus is on the role that transfers from outside the region play in determining the level of rural poverty.

Alaska shares the problem of persistent poverty with the rest of the country, and the problem is centered in the rural parts of the state. In 1980 statewide poverty rates were similar to the U.S. averages, but the poverty rates in rural Alaska were almost 40% higher than for the U.S. Recent evidence, while not definitive, suggests that poverty among the rural population of the state has not declined since 1980, eventhough the state has experienced dramatic economic growth in this period (Berman and Foster, 1986).

"Why has poverty persisted?" is a most important question. When we consider the resources spent and the range of programs tried this persistence seems a puzzle. In her recent article, Sawhill reviews explanations ranging from those that suggest the problem is not with the programs but with their level of funding to those which suggest the programs themselves cause the problem (Sawhill,1988). She concludes that, eventhough we have mountains of information about the extent of poverty, we know little about either why it persists or what effects poverty programs have.

Transfer payment programs provide an example of our confusion. While transfer payment programs serve to alleviate poverty by directly supplementing the incomes of the poor, many authors have suggested these programs may also change people's behavior in a way which makes them poorer. Three specific mechanisms by which transfers produce increased poverty have been suggested (as presented in Darity and Meyers,1986). First, transfers reduce labor supply and the resulting earned income. Second, transfers may have negative effects on family structure, which reduces family income. Finally, transfers may result in adverse psychological and material dependency. While empirical support has been found for only the first of these, these arguments suggest the programs may increase as well as reduce poverty.

This paper adds a fourth potentitally negative consequence of transfer programs. The availability of transfers may limit the mobility of the poor. One difference between urban and rural poverty is that while urban poverty often takes place in an area with economic opportunities, rural poverty often occurs in regions with limited opportunities. A simple solution to rural poverty may be the migration of the population to areas with greater opportunitites. Transfers available in rural areas may reduce migration by reducing the gains from moving.

The remainder of this paper is divided into five parts. The next section describes the pattern of poverty in rural Alaska. The following section reviews the literature relative to this topic. The fourth section presents arguments which isolate the transfer effects on rural population and income. Following that the paper examines the role of transfers in rural Alaska. Finally, the paper extends the analysis to certain policy recommendations.

POVERTY IN RURAL ALASKA

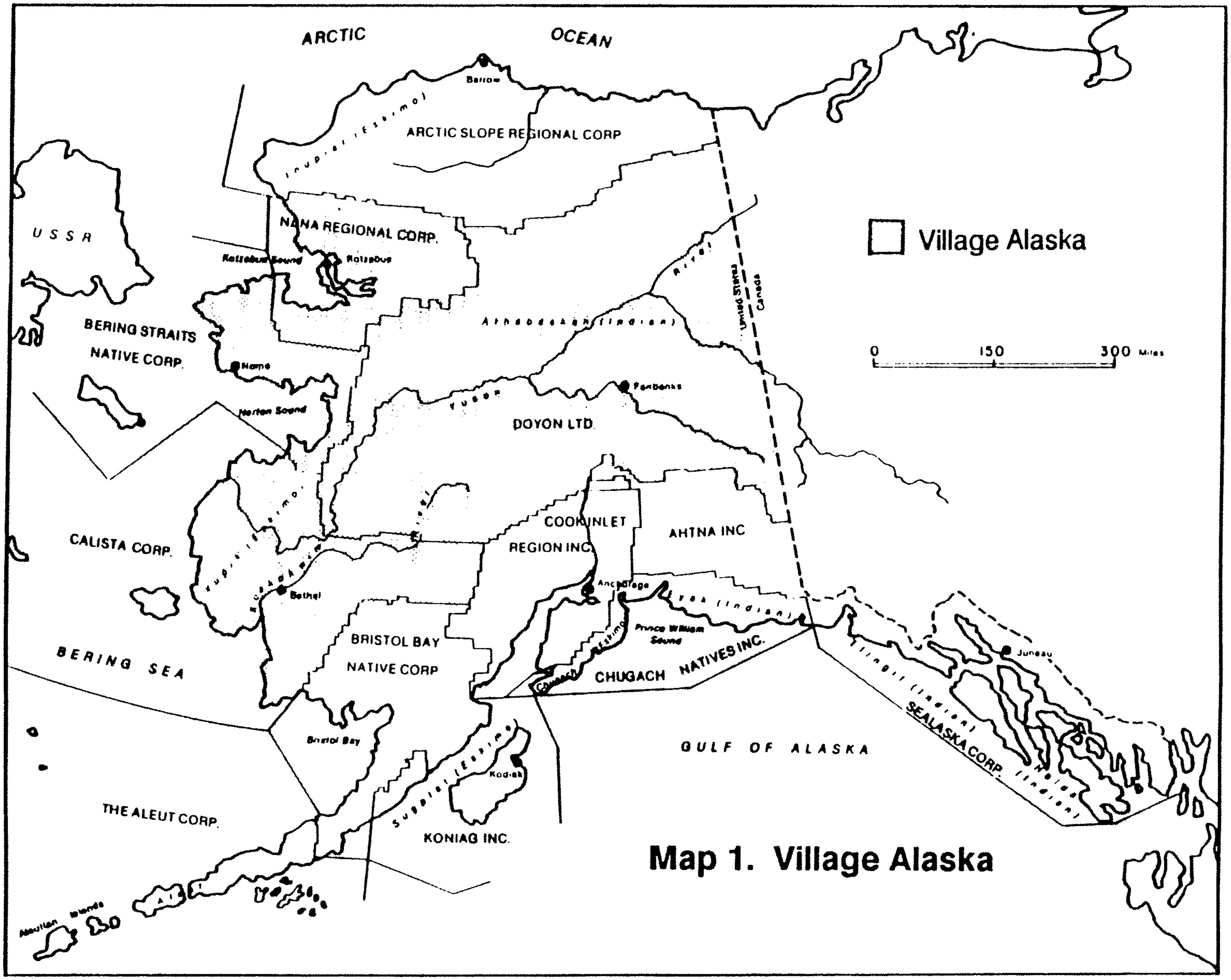
Rural Alaska cover a vast area and contains three distinct economic regions. Our concern in this paper is with the region which Knapp has called "Village Alaska" (Knapp, 1988). This region (see Map 1) is distinct from the remainder of rural Alaska, because of its limited access to marketable natural resources. Village Alaska has neither the rich fishery and forestry resources of the coastal regions, nor the oil resources of the North Slope. Growth in this region has been dominated by public sector activity.

Village Alaska is a region of over 300,000 square miles which contains only 48,500 people. There are only three communities in the region with over 2,000 population; the largest, Bethel, had a population of 4,200 in 1987 (Ak. Dept. of Labor, 1989). The majority of the population lives in small remote villages with access only by air and water.

Alaska Natives account for almost 75 percent of the region's population, and the region contains almost 45 percent of the state's Native population. Subsistence activities, such as hunting, fishing, and gathering, continue to be a significant source of food in the region. The remote nature of the region and the limited scale of its communites make the cost of living high and the potential for market opportunities limited.

Tables 1 and 2 present a description of the pattern of poverty in rural Alaska. The demographic detail is available only for the larger region which includes all rural areas of the state. The problems of poverty are even greater in that part of rural Alaska we have called Village Alaska.

The overall poverty rate of the rural population was well above both the state and national rates in 1980. While the overall rate fell between 1970 and 1980, they did not fall as fast as the rate for the state. Rural poverty rates rose from 143% to 153% of the state



Map 1. Village Alaska

Table 1. Comparison of Poverty Rates
Rural Alaska, 1970 and 1980

Poverty Rates (%)

	Rural Alaska		Alaska		United States	
	1970	1980	1970	1980	1970	1980
Total	18.1	16.4	12.7	10.7	12.1	11.7
Native		28.7	39.4	25.7		
Nonnative		10.7	6.5	7.7		
Female Headed	58.3	36.5	41.6	28.0	45.2	39.4
All Families	17.1	14.9	11.6	9.4	6.7	5.3
Elderly (65+)	31.0	20.1	24.6	14.2	25.3	15.1
Adults	15.1	15.2	12.0	9.9	8.2	8.3
Children (<16)	21.0	18.5	14.6	12.5	14.5	17.2
Village Alaska CD						
Bethel	64.7	31.3				
Wade Hampton	63.1	38.1				
Nome	34.8	28.4				
Northwest Artic	34.8	27.0				
Yukon-Koyukuk	24.3	29.3				
Dillingham	35.8	22.7				

Sources: U.S. Dept. of Commerce, Bureau of the Census. Alaska Census of Population: General Social and Economic Characteristics.1970 and 1980. Alaska Census of Population: Detailed Population Characteristics. 1970 and 1980.

rate. With the exception of Female-headed families, poverty rates for selected demographic groups in rural Alaska did not fall as fast as the statewide rates.

Poverty rates in 1980 were high for most groups in rural Alaska. Native poverty rates were almost twenty-nine percent, which is similar to the national rate for Blacks. Female-headed households experienced the highest rates in the region; the rural Alaska rate was similar to the U.S. rate. Of the groups in Table 1 only Nonnatives had poverty rates as low as the overall state and national rates.

Table 2 provides view of the geography of poverty in the state. In 1980 rural Alaska had over 54 percent of the state's poverty population and only 36 percent of the total population. In every case, rural Alaska had a larger share of the poor in a demographic group than the population.

The problem of poverty was even more pronounced in the region of Village Alaska. In those census divisions which make up the region poverty rates ranged from twice to three and one-half times the state rates. In 1980 the region contained almost 30 percent of the state's poverty population eventhough the region contained only ten percent of the state's population. Over fifty percent of the poverty population in rural Alaska lived in this region, while in 1980 the region contained only thirty perecent of total rural population.

Before we can draw any conclusions from this discussion of relative poverty rates we need to assess our confidence in them. Sawhill pointed to a number of measurement problems in defining the poverty population. Her 1984 estimate of the poverty rate varied between 5.9% and 18.6% depending on the measurement used (Sawhill, 1988). There are two measurement problems important in rural Alaska, treatment of all available resources and cost of living differences.

In addition to the common problem of treating noncash transfers, such as food stamps and medical services, measuring income in rural Alaska must also account for subsistence incomes. Residents of rural areas in Alaska have access to a noncash income in the form of subsistence products. The store value of subsistence harvest has been estimated at close to $2000 per cpaita (Wolfe,1983). Residents' decision to pass by market work to harvest subsistence products may be perfectly rational when the returns are higher. Low money incomes may simply imply time is more porductively spent out of the market economy. Inclusion of subsistence income may reduce the measured poverty problem.

Will ignoring subsistence income bias our estimates of the poverty population so that we over estimate the problem? There are two reasons this is probably not a problem. First, subsistence harvests are gross not net harvest; net income would be significantly less, because there is a significant money and time cost to

Table 2. Share of Poverty
Rural Alaska, 1980

	Rural Alaska Share of the Poor	Rural Alaska Share of the Population
Total	54.9	35.9
Native	78.5	70.2
Nonnative	42.6	30.6
Female Headed	42.6	32.7
All Families	58.2	36.6
Elderly	63.0	44.4
Adults	53.4	34.7
Children	56.6	38.2
Village Alaska CD		
Bethel	8.2	2.7
Wade Hampton	4.2	1.2
Nome	4.4	1.6
Northwest Artic	3.1	1.2
Yukon-Koyukuk	5.1	2.0
Dillingham	2.5	1.1

Sources: same as Table 1.

Just as there is to wage labor: time on the job, commuting, clothing, business entertainment.

subsistence. Second, there is evidence that the poor are also poor subsistence harvesters (Wolfe, et al, 1984). Whether this is because they lack the cash to purchase market inputs for subsistence or because market income is a good indicator of general human capital, it suggests that subsistence harvest may have only limited impact on the incomes of the poor.

The poverty income guidelines used in the census were the national limits. The guidelines in Alaska (and Hawaii) are 25 percent higher to reflect higher costs of living. This is slightly less than the measured cost of living differential between major cities in Alaska and in the lower 48 states (Ak. Dept. of Labor, 1988). In addition, costs are higher in rural communities. Not accurately reflecting the cost of living differential will underestimate the poverty population. Expanding poverty limits by 25 percent in 1980 would increase poverty rates, since another five percent of the population had incomes less than 25 percent higher than poverty limits.

1990 still?

In RA much of the mkt basket is unavailable.

Rural Alaska is an extreme example of the problem of persistent rural poverty. The incidence of poverty was much higher than national rates in 1980. While changes between 1970 and 1980 reduced poverty rates, rates still exceed the statewide rates as well as the overall rate for the nation. Poverty is more widespread in the region; all demographic groups except Nonnatives experience high rates of poverty. Rural Alaska may be considered a chronically poor region of the country along with Appalachia and the Mississippi Delta region.

TRANSFERS, MOBILITY, AND POVERTY

Persistent poverty can be best understood from the perspective of human capital theory. Human capital is the sum of the knowledge, skills, and abilities individuals possess. People are poor because the market places a low value on their place-specific human capital. Anything which limits a person's attempts to increase the value of their human capital will make them poorer.

The central assumption underlying the human capital model is that an individual can trade earnings today for increased earnings in the future (Borjas,1988). Learning may be the most discussed form of human capital investment, but workers may also invest by moving from a place where human capital has low value to a place where it has higher value. In terms of the interest of this paper migration is the most important type of human capital investment. In this section we review a portion of the literature which examines how limits to mobility affect poverty and the impact of transfers on migration.

or earnings + familiarity for earnings elsewhere.

Limits to mobility are explicitly considered as a cause of high unemployment among black teenagers in urban areas. The job access hypothesis suggests that housing segregation which keeps blacks in the inner city and the movement of employment opportunities to the suburbs limit black teenagers ability to secure entry level employment. Limited mobility may be the result of the lack of information about suburban jobs, limits on teenagers willingness to search in unfamiliar areas, or difficulty and costs of commuting (Ihlanfeldt and Sjoquist,1990). Wilson (see Wacquant and Wilson, 1989 and Danziger and Gottschalk,1987) extends this hypothesis to explain urban poverty and its increased concentration. Wilson considers limits to mobility in urban areas to contribute to the creation of an urban underclass.

The empirical evidence supporting the job access hypothesis is mixed. Ellwood(1986) suggests that the spatial mismatch between jobs and housing is relatively unimportant in explaining black teenage unemployment. Ihlanfeldt and Sjoquist(1990) reach the opposite conclusion. They concluded, "the nearness of jobs was found to have a strong effect on the job probability of both white and black youth living in Philadelphia and differential job access was found to explain a large portion of the racial difference in youth employment rates"(p.274).

Much of the work on regional development policy implicitly assumes mobility out of poverty regions is limited. Leven(1986) has offered the concept of a remote economic region. A remote economic region is a region which without subsidy can offer only limited employment opportunities for its residents at the national wage rate. Leven recognized a number of conditions necessary for this situation to exist. A remote region is one with both limited economic opportunities and limits to outmigration. Economic limits may result from the region's location or environment or may be the result of regulation which impose a national standard, such as the minimum wage. Limits to outmigration may, in the extreme, be barriers, but more likely they are a positive preference for living in the region
and
or the ability to receive transfers from a national government. On a regional level transfers limit outmigration by reducing the gains associated with moving and help to create remote regions.

There are two important strands of analysis concerning the role of transfers and there influence on migration. These reflect differences in the way transfers are used in different countries. In the U.S., where welfare payment differentials tend to be positively correlated with income across states, analysis has focused on the hypothesis that potential transfer recipients will be attracted to high transfer payment states. In other countries, transfers are explicitly used to equalize differences among regions. In these countries empirical work has tested the hypothesis that these differential limit outmigration from poor regions.

In the U.S. work has been done examining the impact of payment differentials on the migration of AFDC recipients and blacks. Work with data on AFDC recipients has geneerally supported the hypothesis that a positive differential in AFDC payments between states will encourage the migration of recipients. Southwick(1981) found that higher potential payments increased inmigration and limited the outmigration of recipients. Gramlich and Laren (1984) found a similar effect but only in the very long run. The evidence that transfer payment differentials effect the migration of other groups is less certain. Cebula, Kohn, and Vedder (1973) found that the availability of higher welfare payments attracted black migrants. More recent work by McHugh (1988) examining migration over the same period found differential welfare payments to have little effect on black migration.

Work in Canada and Sweden suggests that differentials in transfers limit outmigration from poor regions; the consequence of equalizing payments in these countries is significant lost efficiency. Copes (1986) suggested that the combination of national transfer payments and an open access fishery work to keep the residents of Canada's Atlantic provinces poor. The transfer payments, primarily unemployment insurance, allow residents to stay in the provinces which reduces ~~to~~ per person take from the fishery. So what?

is this the hidden agenda of those advocating migration?

In a recent study Shaw(1986) has shown that fiscal variables such as unemployment insurance and federal government equalization payments to provinces limit outmigration from poor regions. The effect of these variables has grown over time. In his examination of migration between Canadian metropolitan areas, Shaw finds support for the hypothesis that the effect of traditional market forces have been "crowded out" by the increased importance of these fiscal variables. This work supports the analysis of Courchene (1968) and others which describe the limits to outmigration and the efficiency costs of theses programs.

OK

Nelson and Wyzan (1989) examine the consequences of similar equalization programs in Sweden. Like Canada, Sweden has a series of programs which attempt to equalize incomes across regions. Unlike Shaw, they find that traditional market variables play an important role in explaining interprovincial migration in Sweden. In addition, regional equalization programs, such as tax equalization grants play a similar role to that found in Canada; these transfers limit outmigration from poorer regions. One additional finding of interest was that subsidies designed to encourage migration from depressed regions did not seem to affect the level of migration.

Aha! because of utility from living in your home

Transfer payments to communities may limit economic adjustment in one additional way. Mulligan and Gibson (1984 and Mulligan,1987) and Knapp and Huskey (1988) describe the effect transfers have on small communities as being similar to basic sector income. Spending transfer income generates secondary economic activity. This means transfers have a multiplier effect in the reduction of outmigration from nonviable regions. Knapp and Huskey show that under certain conditions this transfer multiplier can be significant.

Transfers payments affect interregional migration. Higher transfer payments in richer regions can attract poor migrants.

probability of getting employment in the rural region and reduce the share of the common property resource consumed. Individuals who no longer move because of the increased transfers will, as long as (m>0), have lower incomes than residents of urban areas. Increased transfer payments will make the population more dependent on transfer payments.

TRANSFERS AND RURAL POVERTY IN ALASKA

Transfer payments have two contradictory effects on rural poverty. First, transfer payments will reduce poverty by adding to the income of the rural poor. Secondly, transfer payments may increase the poverty population if they keep people in poor regions. This will be more important to the extent that there are resources in rural communities which are in fixed supply but commonly consumed. In this section we will examine each of the transfer effects in rural Alaska. First, we will examine the importance of transfers as a source of income and their role in reducing poverty. After that we will examine the relation between transfers and population.

Transfers as a Source of Income Transfers became a more important source of income for rural Alaskans between 1970 and 1980. Table 3, which compares income sources in rural Alaska, shows the dramatic change in sources of income in this period. For families in poverty earnings dropped from 95.2 percent of income to 66.6 percent. Both Social Security and all forms of Public Assistance increased as a source of income for the poor. The same pattern was shown in the share of families with income from earnings and transfers; the share of poor families with earnings fell and with transfers rose. For nonpoor families transfers did not become a more important source of income, however more families received transfers.

Transfer payments did little to lift the rural poor from poverty. Less than four percent of the rural nonpoor would have been poor without transfers. This suggests that approximately 20 percent of the pretransfer poor were lifted from poverty by transfer programs. This is half of the rate estimated by Sawhill for the U.S.

The limited success of these programs may reflect the more widespread poverty in rural Alaska; adult poverty was twice the rate in the U.S. Considerable poverty existed in groups not specifically targeted by poverty programs. The limited coverage of these programs is suggested by the fact that in 1980 only 27 percent of families in poverty received transfers. Transfer programs were more successful in both coverage and lifting families from poverty for groups with specific programs, such as the elderly and female-headed households.

Did transfer payments improve the incomes of the rural poor? In real terms the mean income of rural households in poverty fell between 1970 and 1980; in nominal terms average incomes rose by 56.3 percent. Transfers accounted for a good portion of this increase; the only the adjustment to the transfer-free economic conditions.

Transfers from a higher level of government to poor regions will also affect migration. In this second case there is evidence that transfers reduce the economic adjustment through outmigration from poor regions. Limits to mobility may make people poorer as the job access hypothesis has suggested, however it is not certain that transfers which keep people in poor regions will keep them poor. If the transfer was equal to the income increase from the move, this would not be the case. In the next section we examine the conditions under which transfers by limiting outmigration from poor regions make people poorer. but w/ higher $U(\cdot)$ or higher $E(U(\cdot))$

THE INCOME EFFECTS OF TRANSFER PROGRAMS

A general assumption used in the economics literature to model migration is that migration has the important function of equilibrating expected utility in two regions (see Harris and Todaro, 1970; Lucas,1977). Under this assumption migration occurs as long as a resident of one region can increase their expected uitility by moving; migration will be a function of the cost of moving and the regional differences in expected real incomes. In this section we use this framework to show the effects of transfer payments on incomes.

We assume there are two regions,an urban region where economic opportunities are plentiful and a rural region where economic opportunities are limited. Assume f~~or simplicity that~~ the urban wage (w) and rural wage ($\bar{w}$) are not the same ~~(w)~~, and differences in economic opportunities reflect different levels of employment. In the urban region anyone can have a job; while in the rural region there are only a fixed number of jobs (N). This generally describes labor markets in rural Alaska, since the dominant jobs are government funded jobs where wages are set outside the local economy through statewide union contracts or laws,like the Davis-Bacon Act.

Is this true?

are transfers correlated w/ jobs?

Rural residents have access to a transfer payment (t) if they are out of work. All rural residents have access to a common property resource (Z) which is shared equally by the entire rural popualtion. The resource, Z, could be subsistence resources or any public good (see Berman,1990 for a more detailed explanation of the role of Z in rural labor markets).

Also public xfers in kind, Tax rates

NSB fund $ sole/prefer.

If we also assume residents migrate to equalize expected incomes, then rural and urban populations are in equilibrium when:

$$(1)\quad (N/P)\bar{w} + [(P-N)/P]t + Z/P + m = w$$

where P is the rural population and m is the cost of migration. This gives us the following equation for the level of rural population:

$$(2)\quad P = \cancel{N + Z/(w-t-m)}\ \frac{N(\bar{w}-t) + Z}{(w-m-t)}$$

This result shows that increases in the transfer payment will lead to an increase in population. Increased population will reduce the

$$(3)\quad \frac{dP}{dt} > 0 \quad \text{if } (\bar{w}+m) + \frac{Z}{N} > w$$

Table 3. Measures of Transfer Program Success
Rural Alaska, 1970,1980

	Income Above Poverty Level		Income Below Poverty Level	
	1970	1980	1970	1980
Source of Family Income:				
Earnings	97.8	9.21	95.2	66.6
Social Security	0.1	1.0	2.1	7.2
Public Assistance	0.2	0.7	1.5	14.3
Share of Families with:				
Earnings	97.9	97.0	84.6	76.3
Social Security	1.4	9.6	4.5	11.7
Public Assistance	2.9	7.5	4.2	21.9
Share of Families with Transfer Income:				
All Households		15.2		26.8
Age 60-64		45.7		43.8
Age 65+		85.4		73.4
Female Head		39.3		45.4
Share of Families in Poverty Without Transfer, 1980:				
All Households		3.6		
Age 60-64		11.4		
Age 65+		31.0		
Female Head		8.7		

Sources: same as Table 1.

increase in mean income was 36 percent of the 1980 income and transfers accounted for over 21 percent of income for poor families.

In the 1970's transfers became an important source of income for the rural poor in Alaska. Their effect on poverty,however, seems to be limited. While transfers were relatively more successful for special populations such as female-headed households and the elderly, the more widespread poverty in rural Alaska limited the contribution of transfer programs.

Since 1980 the state of Alaska has experienced dramatic economic expansion followed by a recession. The level of economic activity in the state during this time period was most importantly related to state government spending of revenues generated by oil production at Prudhoe Bay. State spending reached a peak in 1985; spending followed oil prices and state revenues down after that (Goldsmith,1988). As one indicator of the dimensions of this cycle total employment rose from 170,000 in 1980 to 228,000 by 1985 only to fall again to 208,100 by 1987. After 1987 the economy began to stabilize.

Rural Alaska shared this government boom. Government spending affected these communities in a number of ways. First, government spending on community capital projects provided both short term construction job opportunities and public facilities. In addition, government jobs in schools, local governments, and social service organizations were funded by the state. Finally, the state's Permanent Fund Dividend program shared revenues directly with all residents of the state in the form of a yearly payment.

Even during this period of economic expansion there was concern expressed about the welfare of the state's rural Native residents. Symptoms of social distress such as sucide and alcoholism suggested to some that the health and well being of Native residents of rural Alaska was deteriorating (Morehouse,1990). Potential economic problems were forecast, because of the importance of state and federal government spending to the local economies (Knapp and Huskey,1988). In one region of the state Knapp and Huskey pointed out spending by higher levels of government accounted for almost two thirds of the economic activity. Budget deficits at the federal level and the decline in the state's oil revenues meant this level of support could not continue.

Indirect evidence suggests that even during the state's economic boom the problem of poverty in rural Alaska was not significantly reduced. Plotnick (1989) estimated state poverty rates for the mid-1980's using three years of pooled data from the Current Population Survey. This data represented 1984, 1985, and 1986; which represents the last years of Alaska's boom period. He estimated the state's poverty rate at 10.4 percent which is approximately the same as in 1980. Given the boom in the urban areas in Alaska its hard to believe this would suggest any improvement in rural poverty rates.

Examination of participation in public assistance programs during this period generates similar conclusions. Berman and Foster (1986) examined participation of Alaska Natives in public assistance programs. They found "the proportion of Native beneficiaries seems as great or greater in 1986 than it was in 1980. This large share of public assistance enrollments has persisted, eventhough the overall number of Alaska households receiving public assistance appears tohave increased substantially in the 1980's and despite Natives making up a smaller share of the total state population in 1986 than in 1980" (p.2). This suggest poverty may still be a problem in rural regions were Natives dominate the population.

Using AFDC as an indicator suggests that the problem of poverty remains disproportionately rural. Per capita participation in AFDC at the state level followed the economic cycle, falling as the economy expanded then rising in the recession. There is no consistent pattern of change in AFDC particiapation in rural areas; in some areas per capita participation fell over the period while in others it rose. What is consistent is that the rates of participation in rural areas are as much as two times as high as the state rates. In addition, the AFDC population is disporprotionately distributed in small villages, outside of the rural regional centers (Huskey and Hill, 1989).

Table 4 examines the growth of income in Village Alaska; we are interested in examining the possible role of earnings and transfers in reducing the poverty rate in this region. Over the period personal income, earnings, transfers and population all expanded. The growth, measured as annual averages, was more rapid through 1985 than beyond. This pattern reflected the cycles of state government spending. The difference was significant; personal income grew almost twice as fast in the first part of the period while earnings and population grew almost three times as fast.

Over the period earnings and transfers grew faster than population, even when price changes are accounted for, so that real per capita incomes increased over the period. Examining per capita real earnings shows its variability which reflects the importance of short term employment opportunities, like construction. Real per capita transfers grew more than three times as fast as real per capita earnings.

Figure 1 examines whether the growth in real per capita income was enough to reduce the incidence of poverty in the region. It compares the growth of total personal income to an estimate of the level of income required to eliminate the poverty gap found in the 1980 Census, which I call Nonpoverty Income. Nonpoverty income was calculated with the following formula:

$$NPI = PI(79)*CPI(i)*POP(i)/POP(80)+POVGAP(80)*POVGD(i)*POP(i)/POP(80)$$

Where NPI= nonpoverty income
PI = personal income

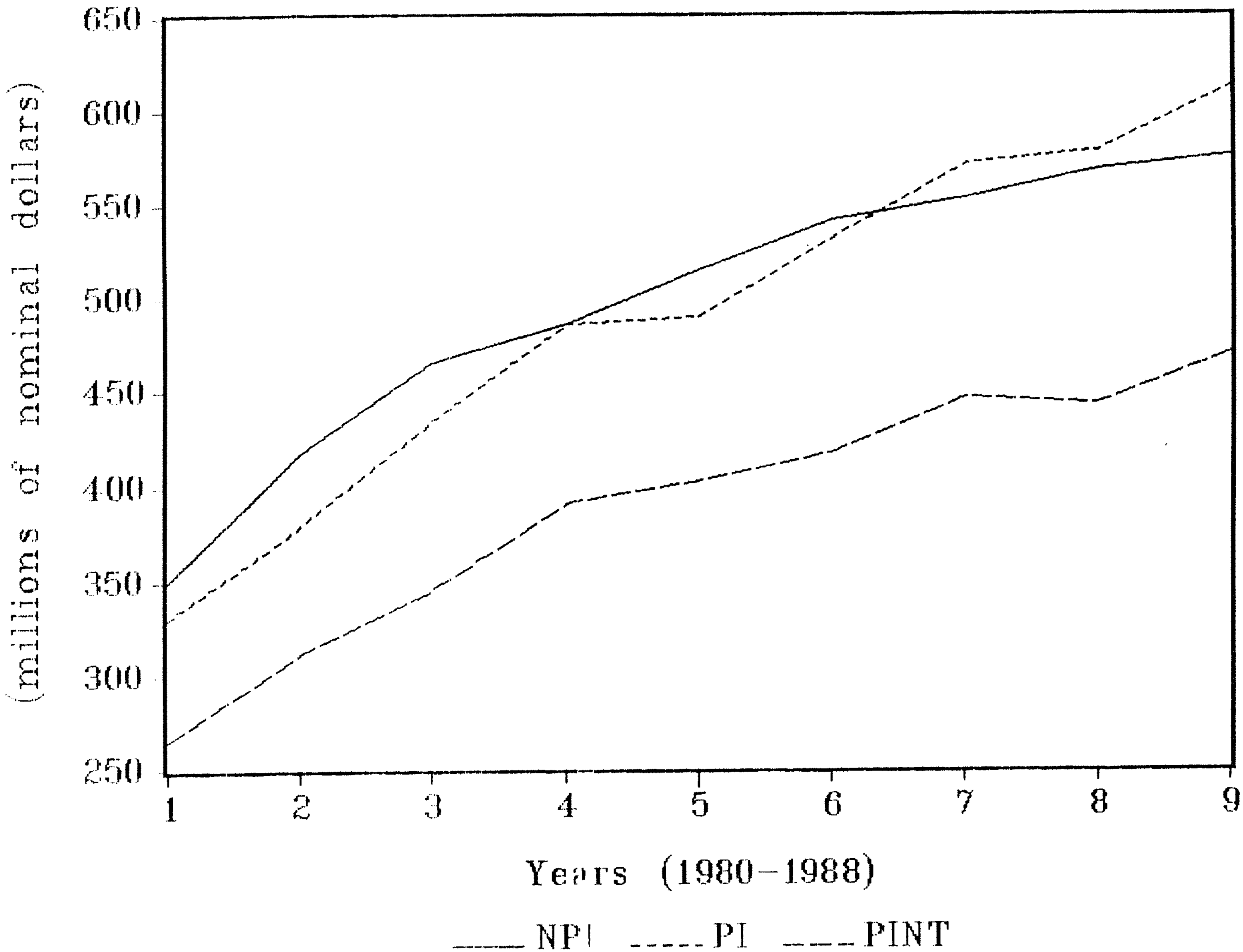
Table 4. Estimates of the Poverty Gap
Village Alaska, 1980-88
(millions of nominal dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	Average Annual Growth
Personal Income	330.06	379.23	433.59	485.27	489.49	532.19	571.21	578.12	612.30	8.03
Earnings	243.35	286.85	314.23	352.49	358.06	366.03	388.51	378.61	400.92	6.44
Total Transfers	75.54	77.55	98.63	106.62	100.55	131.59	143.47	155.91	163.78	10.16
Income Maint.	22.11	23.12	21.09	22.54	25.48	30.65	31.21	31.84	32.48	4.92
Other Payments	14.48	14.63	33.84	32.08	17.03	26.94	32.07	38.40	44.37	15.02
Population(000)	41.30	42.24	43.94	46.00	46.94	47.70	48.14	48.95	49.18	2.21
Real Per Capita(000's 1980 $)										
Income	7.99	8.35	8.57	9.21	8.79	9.09	9.58	9.46	9.91	2.73
Earnings	5.89	6.32	6.21	6.69	6.43	6.25	6.52	6.19	6.49	1.22
Transfers	1.83	1.71	1.95	2.02	1.81	2.25	2.41	2.55	2.65	4.75
Poverty Gap	20.05	21.67	23.83	26.37	28.44	30.54	32.58	35.02	37.20	8.04
Nonpoverty Income	350.11	417.06	464.84	485.60	514.35	541.39	553.29	568.33	575.44	6.41
Estimated Gap	20.05	37.83	31.25	0.33	24.86	9.20	-17.92	-9.79	-36.86	
PI minus Transfers	254.52	301.67	334.96	378.65	388.94	400.60	427.74	422.21	448.52	7.34

Note: Village Alaska is defined to include the following Census Divisions: Bethel, Wade Hampton, Nome, Northwest Artic, Yukon-Koyukuk, and Dillingham. Southeast Fairbanks is not included.

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, Regional Economic Information System.
Bureau of the Census,1980 Census, General Social and Economic Characteristics, Alaska.

Figure 1. Village Alaska Personal Income



CPI= consumer price index with 1980 base
POP= population
POVGAP= the poverty gap in 1980
POVGD = index of poverty guidelines with 1980 base

Income growth in the aggregate is enough to eliminate the poverty gap in Village Alaska by 1986. There are two important observations from this excercise. First, aggregate income does not exceed the nonpoverty income by much; total income in 1988 is only 6.4 percent above the nonpoverty level. This narrow excess suggests that poverty problem may still exist at levels equal to those in 1980. The elimination of the poverty gap depends on the even distribution of income; the less evenly income is distributed, the more likely the poverty gap was not eliminated. Evidence suggest that incomes are not evenly distributed in rural Alaska. Examining the spatial distribution of jobs and population in the region suggest that incomes are unevenly distributed; jobs outside regional centers are limited relative to the population(Huskey and Hill, 1989).

The second observation is that transfer payments were very important in closing the poverty gap. Without transfer payments, income in 1988 would have been $125 million below the nonpoverty income. The importance of transfers is also shown by the fact that the gap between nonpoverty income and personal income begins to narrow after 1984 when the economic expansion slows. The rapid increase in transfers after 1982 is a result of the state's Permanent Fund Dividend program which distributes oil revenues directly to the population. In 1988 approximately $30 million in Other payments are Permanent Fund Dividend; this is eighty percent of the amount by which income exceeds the nonpoverty level.

<u>Transfers and Mobility</u> While transfer payments were important to the growth of incomes in Village Alaska, the increase in incomes did not seem to be great enough to significantly lower poverty levels in the region. One reason for this might be that increased transfers prevented the adjustment of regional population in line with economic opportunities. In this section we examine some preliminary evidence of the limiting effect of transfer payments on mobility.

The period between 1970 and 1980 saw two trends which are at least consistent with our hypothesis. First, this was a period when transfers became a more important source of income for the poor in rural Alaska. Second, during this period the historic trend which saw the Native population moving to larger communities was reversed. During this period small communites experienced growth (Kruse and Foster,1986). These smallest communities have only limited employment opportunities. Although many explanations have been offered, increased transfers may have allowed the movement to smaller communites.

To test the hypothesis that increased transfer payments will reduce the migration from rural communities we estimated a model of population change in rural Alaska. The results are presented in Tables A1 and A2. We pooled time series and cross section data from the six Village Alaska census divisions for the period 1980 to 1988 for these regressions. Observations were at the census division level.

The model of population change described by these equations assumes that regional migration responds to changes in regional employment. The level of migration from any level of employment change will be influenced by the number of unemployed in the region. The role of transfer payments in this model is to allow the unemployed to remain in the region to wait for work.

According to our results (Table A1) increasing real transfer payments increase the level of population in a region for any given level of employment. NTPOP is the dependent variable in this equation; it is a proxy for unemployed population and is defined as population minus employment. Our transfer variables are the real AFDC payment for a family of three(AFDCR) and the Permanent Fund Dividend payment(PFDVR); both of these have the expected positive sign. NTPOP is also influenced by the previous year's employment and the relative wage(RW). RW is the average monthly regional wage relative to the Anchorage wage; as this increases a larger share of the population works, reducing NTPOP.

The relative size of the coefficients on the transfer variables is of interest. The coefficient on AFDCR is greater than the one on PFDVR. The elasticity calculated at the means is .35 for AFDC payment and .02 for the Permanent Fund Dividend(PFD). Since the PFD is available to everyone it might be expected to have a larger effect. However, when comparing income opportunities in two regions, the PFD will not reduce the gains from moving. The availability of AFDC does reduce the gains from moving because the net gains from work are less than the wage in the new region. For this reason we might expect the larger effect of AFDC.

The regression presented in Table A2 completes the model. Population change(DPOP1) does respond positively to change in employment(DEMP). Greater unemployment in the previous period, measured by NTPOP, will reduce the population change associated with any given change in the level of employment.

CONCLUSIONS

Chronic, persistent poverty is a problem in rural Alaska. Dramatic increases in both transfer payments and employment opportunities during the 1980's have probably not reduced the incidence of poverty in the region significantly. This paper has argued that transfers from higher levels of government may have actually worked to keep people poor by allowing them to stay in regions with limited economic opportunities. This effect of transfer programs may more generally applicable to the explanation of poverty in other rural regions of the country.

The role of transfer payments will depend importantly on their relative importance in limiting mobility. Anything which limits mobility makes an individual poorer. There are five other reasons mobility from rural Alaska may be limited. First, any human capital investment requires both monetary and social costs; as these costs increase mobility is reduced. In rural Alaska the loss of subsistence benefits are both significant social and monetary costs. A second factor limiting mobility is the lack of information about opportunites in other regions. The more the poor are culturally and spatially isolated,the more limited this information will be. Third, social and institutional barriers such as discrimination may limit mobility. Fourth, to the extent that migration is self financed, the rural poor may not have the resources to move. Finally, the human capital possessed by the rural poor may have limited value in other regions, so the benefits of moving may be limited. The relative importance of these other limits to mobility should influence the approach to transfer policy.

There is no easy public policy solution to the problems of rural poverty. The dilemma for policy makers is to find a way to help the poor without encouraging poverty. This paper suggests that transfers may impose a distortion in settlement patterns as well as work effort that reduces their ability to reduce poverty. Discussions of this effect must recognize that there is no general agreement that efforts to limit outmigration from rural Alaska are bad. In some places, mobility is perceived as a direct threat to cultural integrity. Rural Alaska is a region under tremendous social and cultural stress; this is reflected in tragically high rates of suicide and substance abuse. The role of transfers, mobility, and past poverty programs must be examined inthe light not only of efficiency but aslso accounting for the human dimension of the problem.

Table A1.

LS // Dependent Variable is NTPOP
Date: 6-24-1990 / Time: 14:47
SMPL range: 1 - 54
Number of observations: 54

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	3.4782931	0.5285670	6.5806100	0.000
AFDCR	0.0026349	0.0004441	5.9334563	0.000
RW	-2.0749544	0.5421173	-3.8275006	0.000
PFDVR	0.0002020	0.0001128	1.7905746	0.080
EM1	1.2909866	0.0300705	42.932054	0.000
EM2	0.0543210	0.1237767	0.4388625	0.663
EM3	0.5788370	0.0423254	13.675864	0.000
EM4	0.0876893	0.0611079	1.4349923	0.158
EM5	1.1096187	0.0528436	20.998157	0.000

R-squared	0.987643	Mean of dependent var	5.372630
Adjusted R-squared	0.985446	S.D. of dependent var	1.840549
S.E. of regression	0.222046	Sum of squared resid	2.218694
Durbin-Watson stat	1.394463	F-statistic	449.5683
Log likelihood	9.563082		

NTPOP=Census Division population minus employment
AFDCR=Real AFDC monthly payment for a three person family
RW=Average monthly wage in region divided by average monthly Anchorage wage.
PFDVR=Real Permanent Fund Dividend payment.
EMi=Lagged regional employment.

Table A2.

LS // Dependent Variable is DPOP1
Date: 6-24-1990 / Time: 14:54
SMPL range: 1 - 54
Number of observations: 54

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	1.4136582	0.1858524	7.6063487	0.000
DEMP	0.3469311	0.1087055	3.1914758	0.003
NTPOPLG	-0.3855845	0.0648231	-5.9482603	0.000
TME	0.0269082	0.0116099	2.3176982	0.025
DM1	2.0465109	0.3245486	6.3057156	0.000
DM2	0.1812184	0.0571374	3.1716265	0.003
DM3	0.5459670	0.1042513	5.2370276	0.000
DM4	0.0402829	0.0477400	0.8437966	0.403
DM5	1.0319709	0.1734949	5.9481347	0.000

R-squared	0.687009	Mean of dependent var	0.188537
Adjusted R-squared	0.631367	S.D. of dependent var	0.161999
S.E. of regression	0.098358	Sum of squared resid	0.435344
Durbin-Watson stat	2.123359	F-statistic	12.34679
Log likelihood	53.53362		

DPOP1=Change in regional population.
DEMP=Change in regional employment.
NTPOPLG= Last years net population.
TME= Trend variable.
DMi= Regional dummies.

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