THE ECONOMY OF VILLAGE ALASKA

by

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Supported by
The Henry M. Jackson Foundation

Anchorage, Alaska
March 1992

This publication is printed on recycled paper.
Lee Huskey is professor of economics with the School of Public Affairs at the University of Alaska Anchorage. He has long been interested in the economies of small Alaska villages. In 1991 he and Thomas Morehouse wrote a paper entitled “Development in Remote Regions: What Do We Know?” His other previous work on the subject includes “Effects of Transfers on Remote Regional Economies: The Transfer Economy in Rural Alaska,” ISER Working Paper 87.3, which he and Gunnar Knapp wrote in 1987.
INTRODUCTION

How well Alaska's villages can survive in the coming years has long worried Native leaders and others (Alaska Federation of Natives 1978). To survive they need viable economies. Some of the state's 200 or so villages have relatively strong economies, but many do not. Overall, the villages did see economic gains in the past few decades—but in most communities the new jobs and additional income did not keep pace with their rapidly growing populations (Marshall 1985). And, perhaps most important, the sources of previous economic growth in the villages—largely state and federal transfers—are likely to dwindle and erode economic gains over the next decade.

Therefore, villages around Alaska will confront a crucial question in the 1990s: to what extent and under what conditions can village economies continue to survive and achieve desired self-sufficiency? This paper provides an understanding of the economics of village Alaska. It reviews the current thinking about the status of the village economy, and examines the contributions of subsistence, transfers, and the market to the economic well-being of villages. It also describes, in general, the limits to village economic self-sufficiency. Finally, the paper outlines how public policy could influence the future economics of the villages, and raises questions that could help inform policy decisions.

BACKGROUND

The village economy actually consists of three related economies: the subsistence, the market, and the transfer economies. In the market economy, residents earn income by working for wages or by selling resources (like fish) valuable to others, and then buying goods for their own use. The transfer economy relies on money and services the federal and state governments provide—through welfare, pension, and other payment programs; through jobs in post offices and other public agencies; and through subsidized schools and other services. Residents qualify for such transfers either as U.S. citizens or because of the special status of Alaska Natives in the federal system. In the subsistence economy, residents hunt, fish, and gather local resources for their own consumption.

Recent growth of the village economies resulted primarily from expansion of the transfer economy, with spending by state and federal governments creating jobs and increasing income in the villages. For many villages the transfer economy is the most important source of money income. But the villages can't rely on the continued growth of transfers. In fact, the current fiscal problems at both the federal and state levels suggest transfers will decline.

So attempts to create more self-sufficient village economies—by preserving the subsistence sector and expanding the market sector—are increasingly important. A self-sufficient economy relies on its own human and natural resources to provide for its population. There are, however, constraints on the growth of village market economies—including high costs, limited control of resources, and lack of local participation. But the alternative to the creation of more viable village economies is that more residents will leave and the welfare of the remaining residents will be reduced.

Understanding the economics of Alaska villages requires an appreciation of the contradictions they present. Langdon (1986) describes the conflict between the profit-oriented village and regional corporations set up under the Alaska Native Claims Settlement Act, and traditional village activities like subsistence. At first glance, the
economic importance of subsistence harvests would seem to contradict village links to the modern world—air transportation and advanced communications, up-to-date goods and services, and dealings at the highest levels of business and politics. The dependence of local populations on government transfers seems to contradict the independent nature of the subsistence economies. Despite these apparent contradictions, the subsistence, transfer, and market economies each has a place in the villages, and the welfare of village residents depends on their access to all three.

THE ALASKA VILLAGE

The small size of Alaska villages limits their economic performance. Villages are small communities with predominantly Alaska Native populations. According to the 1990 census, Alaska had almost 150 predominantly Native communities with populations of less than 500. The largest primarily Alaska Native place, Bethel, had a population of less than 5,000 in 1990. Approximately 70 percent of Alaska’s Native population lives in communities with populations of less than 5,000.

Remoteness also limits the economic potential of Alaska villages. They are spread throughout the vast coastal and interior regions of the state, and most are connected to Alaska’s major cities only by air and water. Natural resources, which vary substantially from region to region, provide the economic base for the villages. Both production for local consumption and for sale to the market depend on local natural resources. The quantity and quality of local resources determine a village’s standard of living.

Despite their broad similarities, the distinct natural and cultural environments of the villages create wide variations in their economic performance. Diversity among villages is also heightened by their lack of economic integration. Most village economies are linked through their regional centers more directly to the state’s urban economies than to other village economies. While the movement of goods and people between villages within a region may be common, it is relatively uncommon between regions. This means factors affecting the economy of one village or one group of villages may not affect other villages in the same way.

Knapp (1988) suggests that rural Alaska can be divided into three regions with widely varying economic outlooks: the North Slope Borough, Maritime Alaska, and Village Alaska. Villages in the North Slope Borough and Maritime Alaska have relatively healthy economies. Villages on the North Slope are well off because of the region’s wealthy borough government, which includes within its tax jurisdiction the Prudhoe Bay oil field complex. Maritime Alaska includes villages along the Gulf of Alaska from Southeast through the Aleutians as well as those surrounding Bristol Bay. The maritime villages have healthy economies based on natural resource industries like fishing and timber.

In contrast, Village Alaska, which Knapp describes as the villages along the west coast and in the interior, has a much less secure economic future. Development opportunities are limited in this region, and its economic well-being depends on transfers from federal and state government. This region best illustrates the economic problems of the villages.

Not only are the economic bases and local natural resources of the villages diverse, so are the skills and educational levels of their human resources—their residents. Despite those differences, Alaska’s villages share common problems. These are problems associated with small markets, limits on local control of resources, and remoteness.
THE PERSISTENT VILLAGE

Conventional wisdom about the economies of village Alaska presents the casual observer with a puzzle: if these economies are in such bad shape, why do the villages continue to exist and grow? Why haven't they disappeared, like numerous small towns throughout the United States? In this section we examine the current economic status of the villages by looking at employment, income, and population. Those statistics allow us to test the conventional wisdom and define the extent of the economic problems in village Alaska.

Throughout the remainder of this paper we use one region, Western Coastal Alaska, to illustrate the village economy. That region includes the four census divisions between Bristol Bay and the North Slope Borough: Bethel, Wade Hampton, Nome, and Northwest Arctic. This region lies within Knapp's Village Alaska, and represents the extremes of village economic problems.

In 1990 Western Coastal Alaska had a population of about 34,000, more than 80 percent Native. Almost 45 percent of the total regional population lived in communities of less than 500. The region has limited market opportunities; subsistence and transfers play an important economic role.

The economic data for this region suffer from two general problems. First, normal problems in data collection are often magnified for regions with small populations. For example, preserving confidentiality and obtaining a valid sample are more difficult the smaller the region. The second problem has to do with the level at which the data are presented. Data at the regional or census division level mask differences between communities within the region. In the Western Coastal region, the most important differences are between villages and the three regional centers with populations of over 2,000. These centers provide administrative, transport, and market services for the region. Employment and money income are concentrated in the regional centers, so the regional averages are not exact representations of economic activity in the villages.

JOBS AND INCOME

Despite substantial growth in incomes and numbers of jobs in the 1980s, the villages of western Alaska still have much smaller incomes and higher unemployment rates than the state as a whole. In 1989 per capita income in Western Coastal Alaska was just 62 percent of the statewide average. Since 1985 unemployment has averaged 17 percent above the state rate, and would be much higher if discouraged workers were counted.

Table 1 compares the growth of employment and income in Western Coastal Alaska and the entire state during the 1980s. In the western region, personal income grew at a faster rate than it did statewide, so that real (adjusted for inflation) income in

<table>
<thead>
<tr>
<th>Year</th>
<th>Western Coastal Alaska Employment</th>
<th>Real Income</th>
<th>Alaska Employment</th>
<th>Real Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>8,138</td>
<td>$237.0</td>
<td>170,020</td>
<td>$6,549.1</td>
</tr>
<tr>
<td>1981</td>
<td>8,607</td>
<td>254.7</td>
<td>185,390</td>
<td>6,979.2</td>
</tr>
<tr>
<td>1982</td>
<td>8,790</td>
<td>280.3</td>
<td>199,850</td>
<td>7,937.9</td>
</tr>
<tr>
<td>1983</td>
<td>9,213</td>
<td>307.8</td>
<td>212,830</td>
<td>8,830.4</td>
</tr>
<tr>
<td>1984</td>
<td>9,591</td>
<td>303.8</td>
<td>222,500</td>
<td>8,847.8</td>
</tr>
<tr>
<td>1985</td>
<td>9,821</td>
<td>324.7</td>
<td>228,060</td>
<td>9,264.4</td>
</tr>
<tr>
<td>1986</td>
<td>9,713</td>
<td>335.2</td>
<td>218,810</td>
<td>9,100.8</td>
</tr>
<tr>
<td>1987</td>
<td>9,819</td>
<td>346.3</td>
<td>208,010</td>
<td>8,828.5</td>
</tr>
<tr>
<td>1988</td>
<td>10,238</td>
<td>368.3</td>
<td>212,080</td>
<td>9,209.1</td>
</tr>
<tr>
<td>1989</td>
<td>10,748</td>
<td>396.1</td>
<td>225,030</td>
<td>10,075.1</td>
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</tbody>
</table>

1 Western Coastal Alaska includes the Bethel, Wade Hampton, Nome, and Northwest Arctic census divisions.
2 Total wage and salary employment, Alaska Dept. of Labor, Statistical Quarterly, various years.
3 Real income in millions of dollars. Total personal income is deflated by Anchorage Consumer Price Index (1982-84=100). Regional Economic Information System, Bureau of Economic Analysis, U.S. Dept. of Commerce, various years.
the region was almost 70 percent greater in 1989 than in 1980. Real income statewide grew about 54 percent over the same period. Employment in the western region grew about 32 percent over the past decade—the same rate as job growth statewide.

Has that economic growth made the village population better off? Table 2 offers some evidence that it has. Per capita income and the unemployment rate indicate how economic growth has affected the welfare of the population. Per capita income in the region increased sharply, even after we adjust for the effects of inflation. But despite that rapid growth, by 1989 per capita income in the region was still only 62 percent of the statewide average.

<table>
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<tr>
<th>Western Coastal Alaska</th>
<th>Alaska</th>
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<tr>
<td>Unemployment Rate (%)</td>
<td>Real Per Capita Income</td>
</tr>
<tr>
<td>1980</td>
<td>12.4</td>
</tr>
<tr>
<td>1981</td>
<td>10.5</td>
</tr>
<tr>
<td>1982</td>
<td>10.0</td>
</tr>
<tr>
<td>1983</td>
<td>10.3</td>
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<tr>
<td>1984</td>
<td>10.6</td>
</tr>
<tr>
<td>1985</td>
<td>12.2</td>
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<tr>
<td>1986</td>
<td>12.7</td>
</tr>
<tr>
<td>1987</td>
<td>12.7</td>
</tr>
<tr>
<td>1988</td>
<td>10.6</td>
</tr>
<tr>
<td>1989</td>
<td>8.0</td>
</tr>
</tbody>
</table>

1 Alaska Dept. of Labor, Alaska Economic Trends, various years, and Alaska Planning Information, various years.

And the difference in buying power is even greater than those numbers reflect. To measure the change in real income over time, we adjusted the figures in Tables 1 and 2 by the Anchorage consumer price index, the only available measure of changes in Alaska prices. While price changes over time may be similar in Anchorage and in Western Coastal Alaska, the cost of living is much higher in rural Alaska. The most recent estimate puts living costs in the regional centers of Western Coastal Alaska 30 percent above costs in the state’s urban areas (McDowell Group 1985). When adjusted for those higher living costs, real per capita income in Western Coastal Alaska in 1989 was less than 50 percent of the state average.

Also keep in mind that per capita income is a measure of average welfare. If incomes in a region are not evenly distributed, a rising per capita income does not guarantee an increase in the welfare of the average resident. Incomes in Village Alaska are not evenly distributed; they’re relatively lower outside the regional centers. For example, per capita income in the Wade Hampton census division, which has no large regional centers, is less than 75 percent of income in the Bethel division. Furthermore, in many villages a small number of non-Native professionals—largely teachers—earn a disproportionate share of total village income.

The unemployment rate is another measure of economic well-being. Employment by itself just measures total jobs in the region, not how much those jobs benefit local residents. Some jobs—in construction or cannery work, for instance—may be taken by nonresidents. Changes in the unemployment rate over time suggest whether the local labor force can more easily find jobs.

During the 1980s unemployment rates in Western Coastal Alaska followed a cyclical pattern similar to that at the state level. Regional unemployment rates did fall relative to the state rates, especially during the first half of the decade, but the unemployment rate in the region is still higher. Since 1985 the regional rate has been on average 17 percent higher than the state rate.

Change in the unemployment rate is not an unambiguous measure of change in resident welfare. Unemployment rates will fall when new residents move into the region and take jobs, even though the original residents are no better off.
Reported unemployment rates will also fall if residents drop out of the labor force because they know there is no chance of finding jobs. These drop-outs are called discouraged workers, and they're not counted in unemployment statistics because they're not actively looking for work. Rae (1990) has estimated that statewide non-white unemployment rates would be one third higher if the discouraged workers were included. Adjusting the estimated regional unemployment rate to account for discouraged workers suggests the real unemployment rate in Western Coastal Alaska may be over 55 percent higher than the state rate.

Overall during the 1980s the money economy of Western Coastal Alaska expanded. While this expansion probably helped improve the welfare of the region's residents, changes in the aggregate measures most likely overstate that improvement. The growth was not enough to close what still appear to be significant gaps between the welfare of the region's residents and of other Alaskans.

### A Region of Chronic Poverty

*Economic growth in the 1980s was generally insufficient to significantly reduce chronic, widespread poverty in rural Alaska.*

One generally accepted measure of economic welfare is the proportion of the population living in poverty. Our ability to make statements about current poverty rates for specific regions of the state, such as Western Coastal Alaska, is limited because data from the 1990 census are not yet available. We can, however, get an idea of the level of poverty in the region by examining poverty rates for all of rural Alaska at the time of the 1980 census, and reviewing indicators of change in the poverty rate since then.

When the 1980 U.S. census was taken, 16.4 percent of all households in rural Alaska had incomes lower than the national poverty level. That level of poverty exceeded both the statewide and national rates by over 40 percent. And the real extent of poverty was even larger, since that statistic doesn't reflect the relatively higher cost of living in rural Alaska (Huskey 1990).

Poverty in Alaska in 1979 was concentrated in rural areas. Almost 55 percent of Alaska’s poor population but only 36 percent of its total population lived in rural areas. The concentration of poverty was even more extreme in Western Coastal Alaska. The poverty rates in two southwestern census divisions, Bethel and Wade Hampton, exceeded 30 percent. These census divisions had three times the share of Alaska's poor population as they had of the total population.

And poverty was even more extreme among Native residents of rural Alaska. In 1979 almost 29 percent of Alaska’s rural Native population had incomes below the national poverty level. This rate was similar to the national rates among other minorities in 1979. Poverty among the state’s urban Natives was slightly lower. While rural Alaska had approximately 70 percent of the state's Native population in 1979, it had almost 80 percent of the state's Native poor.

Has poverty lessened since 1979? Given the dramatic changes in the state’s economy over the decade, we might expect that it has. However, while we have only indirect information, it seems the poverty problem in rural Alaska has not improved dramatically since 1979. Using the U.S. census bureau's Current Population Survey for 1984 through 1986, Plotnick (1989) estimated that Alaska’s overall poverty rate was approximately the same in the mid-1980s as it had been in 1979.

Studies of transfer programs support the conclusion that recent state economic growth has not significantly reduced poverty among rural Alaska Natives. Berman and Foster (1986) found that the proportion of Natives among beneficiaries of welfare programs was at least as great in 1986 as in 1980—even though total participation in welfare programs rose over that period, and the Native share of total population declined. They also found rural areas...
had a disproportionately high share of public assistance recipients. The distribution of Aid to Families with Dependent Children (AFDC) cases also supports the hypothesis that poverty is more widespread in rural areas: per capita AFDC participation is higher in rural areas, especially outside the regional centers (Huskey and Hill 1989).

Huskey (1990) compared the growth of income between 1980 and 1988 in the Village Alaska region with the growth that would be required to eliminate the poverty gap existing in 1979. The poverty gap is the amount of income needed to lift everyone out of poverty. The growth in personal income between 1979 and 1988 was just barely enough to eliminate this gap for the region as a whole, after we adjust for population growth. But income growth did not eliminate the gap for census divisions outside Bethel. Considering the uneven distribution of income in the region, these results suggest that a significant portion of the regional population continues to live in poverty.

**Population Growth**

The population of Western Coastal Alaska grew substantially during the 1980s, but not as much as the state population did—about 25 percent as compared with 37 percent. And it appears that Natives moved out of western Alaska throughout the decade.

In an examination of changes in Alaska's rural population from 1950 through 1984, Kruse and Foster (1986) isolated three important trends. First, they found that Natives seemed to be moving out of rural Alaska, and second, that non-Natives were moving in. During this period the rural population grew because of natural increase among Natives and because non-Natives moved in.

Third, Kruse and Foster found that growth varied by community size. For the first part of the study period the regional centers of rural Alaska seemed to grow at the expense of smaller communities. This suggested a movement out of the smaller communities, as many analysts had predicted (Alonso and Rust 1976). During the 1970s that trend was reversed, with people moving into the smallest communities. Kruse and Foster suggest that this shift may have been due to the addition of public facilities and the creation of jobs in the small villages, which also offered the best subsistence opportunities.

How did population growth in western Alaska in the 1980s relate to these long-term trends? Table 3 describes the population growth in Western Coastal Alaska between 1980 and 1990. Population growth in the region was much slower than for the state and its urban areas, and it appears that Natives continued to leave Western Coastal Alaska through the decade.

The state’s Alaska Native population increased almost 34 percent in the 1980s. If we assume that relatively few Natives emigrate from Alaska, the statewide growth in Native population is a good proxy for the rate of

<table>
<thead>
<tr>
<th>Table 3. Population Growth, Western Coastal Alaska 1980-1990</th>
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<tbody>
<tr>
<td><strong>Total Population</strong></td>
</tr>
<tr>
<td>1980</td>
</tr>
<tr>
<td>Western Coastal</td>
</tr>
<tr>
<td>Communities with pop. less than 500</td>
</tr>
<tr>
<td>between 500-1,000</td>
</tr>
<tr>
<td>greater than 1,000</td>
</tr>
<tr>
<td>Other Rural</td>
</tr>
<tr>
<td>Urban</td>
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<tr>
<td>State</td>
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</tbody>
</table>

Source: U.S. census figures, as reported by the Alaska Department of Labor. 1990 figures are preliminary estimates.
natural increase among Natives. Since the rate of growth in the Native population of Western Coastal Alaska was less than 23 percent over the past decade, this suggests Natives were leaving the region. This trend was generally true for all the rural regions of the state.

However, the Native population in the region continued to grow because more Natives were being born than were leaving. Alaska Natives have relatively high birth rates. These high rates reflect a growing share of the female population in the child-bearing years (AFN 1989). High birth rates also guarantee that a large share of the population in the villages will be children.

The second long-term population trend—that of non-Native migration to the rural areas—also appears to have continued through the 1980s. The non-Native population in Western Coastal Alaska continued to grow at a rate exceeding the rate of natural increase (estimated in Williams 1990). The share of Alaska Natives in the region declined slightly. That contrasts with what occurred in the rest of rural Alaska, where the non-Native share of the population increased dramatically.

The pattern of growth by community size also reverted to the longer term trend found by Kruse and Foster. While all sizes of communities grew during the 1980s, the largest communities in Western Coastal Alaska grew fastest. The growth rates for both Native and total population were greatest in places with populations of more than 1,000. While the Native share of the population increased in the smallest places, it fell in the larger places.

**Summary of Indicators**

The statistics paint a mixed picture of the village economy in the 1980s. Both employment and per capita real income increased over the period. The money economy expanded at rates comparable to the expansion in other parts of the state. This economic growth is even more remarkable when considered in its historic context: the growth of a significant cash economy in the region is a relatively recent phenomenon.

Economic growth has narrowed but not eliminated the difference in economic well-being between village and urban Alaska. Rates of unemployment remain significantly higher, and real per capita income significantly lower, in Western Coastal Alaska. To understand the true impact of this recent growth on the welfare of the region's residents we would need information on the distribution of income—which we don't have. The evidence we do have suggests that the growth has done little to reduce poverty in the region.

Population continued to grow in the villages of Western Coastal Alaska throughout the 1980s, as a result of non-Natives moving into the region and of natural increase among the Native residents. The census data suggest that Natives continue to leave Western Coastal Alaska. The crossflow of Natives leaving and non-Natives arriving presents a puzzle. If migration is partly determined by economic opportunities, what does this pattern suggest about the economic opportunities in the region?

Migration to areas of greater economic opportunity is an important determinant of population change. Given the healthier economies in urban areas, we would expect people to move from rural to urban areas. And because the gaps in real per capita income and employment opportunities are so great, we might expect the flow of people out of rural areas to be even greater than it has been. There are two types of explanation for residents remaining in villages. Alaska Natives may stay because they place such a high value on the unique way of life offered in the villages, even though jobs are scarce. On the other hand, they may stay because they lack the skills to take advantage of jobs in urban areas. Each of these possible explanations suggests alternate policy recommendations.
THE MIXED ECONOMY OF VILLAGE ALASKA

The current mixed economy of Alaska villages— with subsistence, market, and transfer components—is the result of over two hundred years of contact with the external world (Langdon 1986). Contact, first with external markets and then with external governments, provided village residents with both opportunities and constraints. The evolution of the economies has been complex; subsistence hunters have not simply changed into modern wage workers. Instead, the modern mixed village economies are built on a combination of traditional and new. The relative importance of the three economic sectors varies across communities, but most residents of the state's small communities rely to some extent on all three.

THE SUBSISTENCE ECONOMY

Hunting, fishing, and gathering continue to be important sources of food for village Alaskans in all regions of the state. A significant proportion of rural households get most of their meat through subsistence hunting (Kruse 1986). Subsistence is a real (although non-monetary) source of income that complements cash—so the real income of village residents is greater than what it appears if we look only at cash sources. Moving to an area with greater job opportunities may offer no increase in real incomes if villagers have to give up subsistence incomes.

Availability of subsistence resources explains the size and location of villages. Small, remote communities minimize the competition for subsistence resources, and their locations on rivers or along the coast ease access to marine life. We would expect communities with subsistence activity as their economic base to develop in these patterns.

Subsistence activity is very different from other economic activity. It often involves extended family groups and sharing of both equipment and products. Subsistence also relies on open access resources. Customary or traditionally defined land use replaces private property rights (Langdon 1991).

In communities outside the regional centers in western, northern, and interior Alaska, annual subsistence harvests are in the range of 700-1,100 pounds per capita (as reported in Langdon 1991). So apart from their cultural significance, it's clear that subsistence activities are important to the economic welfare of the villages.

The subsistence economy of the villages does not, however, operate independently of the other sectors. Villagers need cash for subsistence activities. Subsistence producers have adapted modern technology to traditional pursuits, but modern technology requires cash. This need for cash to carry out subsistence ties villagers closely to the market and transfer sectors of the economy. The importance of cash and modern technology in subsistence also constrains the villages' ability to be self-sufficient (Chance 1987).

The subsistence sector should not be thought of as the economy of last resort. Research has shown that subsistence participation is an efficient use of resources for village residents (Wolfe 1986). Villagers make the choice to continue subsistence hunting and fishing, given the opportunities available in the other sectors (Stabler 1990). Increased money income does not simply substitute for subsistence goods; in fact, increased market earnings may result in increased subsistence harvests, as villagers substitute capital for time (Wolfe et al. 1984).

The importance of the subsistence economy also reduces the economic gains villagers can expect from leaving the villages to take jobs elsewhere. Subsistence skills are likely to be location specific: knowledge of a particular region and participation in groups for sharing are not things that are easily portable. Subsistence opportunities may also be more limited in bigger communities where more jobs are available.
The health of the subsistence sector is very important to the future of village economies (Morehouse 1989 and Berman 1986). But three factors could threaten subsistence in the future. First, the fixed subsistence resources may not be enough to support growing village populations. The open access nature of subsistence resources might reduce the average harvest as population grows. Second, increased private land ownership and governmental regulation of hunting and fishing could restrict access to subsistence resources (Berger 1985). Finally, increases in other economic activity—such as mining, timber production, and sport and commercial hunting and fishing—could conflict with subsistence. Any limit to future subsistence income makes increases in the other sectors of the village economy more important for the survival of the villages.

**THE TRANSFER ECONOMY**

Transfers accounted directly for nearly 60 percent of per capita personal income in Western Coastal Alaska in 1989. Transfers also indirectly generate a significant additional share of total personal income, and subsidize costs of village services. Researchers have estimated transfers in western Alaska may have increased population by as much as three times what the region could support without transfers.

The transfer economy of the villages is based on money and services the state and federal governments provide. Transfers are brought into the community, not in exchange for local resources, but as a right of citizenship in the larger governments. Alaska Natives also receive transfers as a result of their special relationship with the federal government.

Transfers create income for local residents in three ways. First, the state and federal governments provide direct income payments to individuals. Poor individuals or families can collect payments under the Aid to Families with Dependent Children (AFDC), state General Assistance, and other income maintenance programs. Other programs, like the Alaska Permanent Fund Dividend program, the Alaska Longevity Bonus, and Social Security, provide an income supplement to individuals independent of their incomes.

Second, transfers can be used to fund jobs, creating wage and salary income in the villages. Those can be state or federal jobs, like post office or airfield jobs. Transfers to municipal governments also support jobs in local governments and schools. State and federal funds also directly support private jobs; jobs in social service organizations and utilities are funded by grants, contracts, and other transfers. Capital improvement projects funded by the state and federal governments also create numerous construction jobs in the villages.

Finally, transfers from the state and federal governments lower the cost of certain goods and services for village residents. By lowering the cost of living in villages, these programs increase real income—because they increase what residents can buy with a given amount of money. Transfer programs help pay for schools, medical services, and housing in the villages. Subsidies to power producers lower the cost of electricity. Postal subsidies reduce the cost of most goods consumed in the villages by allowing them to be shipped to the villages at less than the actual transportation costs.

Table 4 examines the importance of the first two types of transfers on the income of Western Coastal Alaska. Real per capita total personal income for 1969, 1979, 1985, and 1989 is disaggregated into three major components: transfer income, basic sector income, and support sector income. (A residual category, other income, includes dividends, interest, rents, and miscellaneous other income.) Transfer income includes direct payments and wage and salary income from government. Basic income is earned through the production of goods and services for export from the region, and support sector income is earned by providing goods and services for local residents.
We chose the years shown in Table 4 to provide a picture of the economy prior to oil development on the North Slope (1969), prior to the dramatic expansion of state spending (1979), prior to the state's recent recession (1985), and the most recent information available (1989).

Transfer income was important to the region throughout the period. However, it became more important as state spending increased. In 1969 transfers accounted directly for 49 percent of total per capita income, and transfers as a share of total income continued to grow to a peak of 62 percent in 1985. By 1989 the share had dropped just slightly, to 58 percent.

Transfer income was the fastest growing component of income over the period, and was responsible for the increase in total per capita income, since basic sector income declined in real (inflation-adjusted) terms.

The importance of transfers to the regional economy is in fact greater than it appears in Table 4, since the spending of transfer income also indirectly creates support sector income. In 1989 transfers accounted for 79 percent of the externally derived income (basic income plus transfers plus dividends)—which suggests that transfers indirectly created an additional 79 percent of support sector income.

Transfer income not only grew but changed in composition over the period, as Table 4 shows. The fastest growing components of transfer income were direct transfers and state and local earnings. Although wages and salaries provided the majority of transfer income in each year, the share from direct transfers increased over the period. Direct transfers were 33 percent of total transfer income in 1969 and 49 percent by 1989. State and local earnings more than doubled, growing from 31 percent of total transfer wages and salary income in 1969 to 72 percent in 1989.

Table 5 shows that the composition of direct transfer payments also changed. In 1979, income maintenance and unemployment compensation accounted for 43 percent of total transfers. By 1989 these categories made up only 22 percent of the total; they fell in real per capita terms over the period. Retirement and medical payments accounted for the largest share of transfers in 1989. The second fastest growing component of government transfers was the other payments category, which includes the Alaska Permanent Fund dividend.

Table 4. Importance of Transfer Economy, Western Coastal Alaska

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</tr>
</thead>
<tbody>
<tr>
<td>Real Per Capital Income(^1)</td>
<td>4,910</td>
<td>8,426</td>
<td>11,083</td>
<td>11,744</td>
</tr>
<tr>
<td>Basic Sector</td>
<td>1,047</td>
<td>625</td>
<td>467</td>
<td>951</td>
</tr>
<tr>
<td>Support Sector</td>
<td>1,324</td>
<td>2,428</td>
<td>3,122</td>
<td>3,100</td>
</tr>
<tr>
<td>Transfer Sector</td>
<td>2,405</td>
<td>5,158</td>
<td>6,890</td>
<td>6,834</td>
</tr>
<tr>
<td>Direct Payments</td>
<td>790</td>
<td>2,070</td>
<td>2,865</td>
<td>3,348</td>
</tr>
<tr>
<td>Federal Wages &amp; Salary</td>
<td>775</td>
<td>874</td>
<td>514</td>
<td>399</td>
</tr>
<tr>
<td>State &amp; Local Wages &amp; Salary</td>
<td>503</td>
<td>1,616</td>
<td>2,807</td>
<td>2,494</td>
</tr>
<tr>
<td>Private Direct</td>
<td>337</td>
<td>598</td>
<td>704</td>
<td>593</td>
</tr>
<tr>
<td>Other</td>
<td>134</td>
<td>216</td>
<td>604</td>
<td>899</td>
</tr>
<tr>
<td>Transfer Income Share (%)</td>
<td>49.0</td>
<td>61.0</td>
<td>62.0</td>
<td>58.0</td>
</tr>
</tbody>
</table>

\(^1\) Per capita personal income deflated by Anchorage Consumer Price Index (1982-84=100)

Note: Basic sector income includes income earned in the following industries: agriculture, forestry, fisheries, mining, military, manufacturing. Transfer wage and salary income includes 80 percent of earnings in state and local government and construction and 20 percent of earnings in transportation, utilities and service employment. Other income includes dividends, interest and rents.

Source: Bureau of Economics Analysis.

Table 5. Direct Real Per Capita Transfer Payments, Western Coastal Alaska

<table>
<thead>
<tr>
<th></th>
<th>1979</th>
<th>1979</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Total</td>
<td>% of Total</td>
</tr>
<tr>
<td>Total Direct Payments</td>
<td>$2,070</td>
<td>100</td>
</tr>
<tr>
<td>Government Payments</td>
<td>1,921</td>
<td>93</td>
</tr>
<tr>
<td>Retirement and Medical</td>
<td>395</td>
<td>19</td>
</tr>
<tr>
<td>Income Maintenance</td>
<td>734</td>
<td>36</td>
</tr>
<tr>
<td>Unemployment Compensation</td>
<td>174</td>
<td>8</td>
</tr>
<tr>
<td>Veterans Payments</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>Other Government</td>
<td>567</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis
Knapp and Huskey (1988) isolated three general factors responsible for the growth of the transfer economy in rural Alaska. One source of transfers was the continuing special relationship between the federal government and Alaska Natives. The federal government continues to provide substantial funding for Native health care, education, and a variety of social programs. Between fiscal years 1984 and 1988, these Native entitlement programs made available an average of approximately $273 million, or about $3,400 per Alaska Native (Cowper 1988).

A second factor has been the growth of federal and state programs aimed at providing minimum levels of income or goods and services to all citizens. Nationally means-tested transfers have more than quintupled in real terms since 1960. This type of assistance expanded from 1.2 percent of the gross national product (GNP) in 1965 to almost 3 percent by the early 1980s (Burtless 1986).

In rural Alaska the economic effects of these programs were widespread. In 1979 over 25 percent of families in rural Alaska received some form of this type of transfer income. The right to a decent house lies behind the $25 million spent on Indian housing programs in Alaska in fiscal year 1988. Villages won the right to local high schools in the mid-1970s. School construction and funding accounted for state and federal transfers of approximately $2,200 per capita in the region in fiscal year 1989 (Snow and Depue 1990).

A third factor in the growth of transfers to village Alaska was the enormous increase in revenues to the state government in the first part of the 1980s. The state received billions of dollars in royalty and tax revenues from oil production at Prudhoe Bay. These revenues made possible a wide variety of transfer programs for state residents. State spending increased 178 percent from 1980 to 1985. While a decline in oil prices reduced revenues in 1985, resulting in some cutbacks in state spending, state spending continues to play a very significant role in the state economy.

The growth of state spending had an especially large impact on rural areas—not because programs were specifically designed for rural areas, but because of the region's relatively low incomes and limited economic opportunities. The importance of state spending in Village Alaska is plain in Table 6. (Election districts 23 through 25 cover the approximate area of Village Alaska.) Per capita state spending in fiscal year 1989 ranged between $5,950 and $7,660 in these areas. Comparing per capita state spending to the region's average 1989 per capita income of $13,150 illustrates the importance of state spending.

In addition to creating jobs and providing direct payments, state spending increases the effective incomes of village residents by subsidizing the costs of goods and services. Table 6 shows that in 1989 village residents would have had to pay almost $3,000 per capita—or more than 20 percent of their average per capita incomes—for the same level of school and local government services and electric power, if those costs had not been subsidized.

The importance of the transfer economy has a number of implications for the welfare and behavior of village residents. While transfers

| Table 6. Village Alaska Per Capita State Spending for Fiscal Year 1989 |
|----------------|----------------|----------------|
|                | ELECTION       | DISTRICTS      |
|                | Norton Sound   | Interior River | Lower Kuskokwim |
|                | (23)           | (24)           | (25)            |
| Total State Spending | $7,541         | $5,952         | $7,657          |
| Loan Disbursements   | 240            | 76             | 196             |
| Capital Appropriations| 1,071          | 437            | 761             |
| Operating Expenditures| 6,230          | 5,439          | 6,700           |
| Individual Income    |                |                |                 |
| Payroll and Leases   | 915            | 595            | 1,059           |
| Direct Income        | 1,690          | 1,451          | 1,425           |
| Subsidies            |                |                |                 |
| Schools              | 2,032          | 1,883          | 2,498           |
| Power Cost           | 254            | 283            | 199             |
| Local Government     | 214            | 195            | 183             |

improve the economic welfare of village residents, they can also have negatives effects. First, capital facilities increase the cash needs of the villages; operations and maintenance expenses increase the villages' ties to the market and transfer economies (Sparck 1989).

The transfer economy also increases dependency. As transfers grow, decisions affecting village life are increasingly made outside the villages. Laws, regulations, and programs implemented at the state and federal levels have important implications for village welfare, and villagers have little control over those decisions (Morehouse 1989). That dependent relationship also limits economic growth, because village residents tend to focus entrepreneurial time and energy on activities that increase transfers but don't improve the long-term economic outlook for the community (Knapp and Huskey 1988).

But the most important effect of transfers may be on the mobility of village residents. Certain types of transfer programs (like AFDC and Indian housing programs) link the amount of the transfer to the participant's other income. If villagers receiving these types of transfers move to other places to take jobs, their transfers are reduced. This effect of transfer income on mobility is also amplified by the low cost of local public goods in the villages. Migration may increase the cost of living, if the migrant has to pay for goods he formerly received at no charge.

These effects of transfers on local population growth may be very significant. Knapp and Huskey (1988) estimated that transfers in western Alaska may have increased population by as much as three times that which the region could support without transfers.

The future of the transfer economy does not look bright. Political decisions at the state and federal level will determine what happens to transfers to the villages. While the exact course is impossible to predict, fiscal problems at both the federal and state level suggest they won't be able to continue to support the transfer economy at its current level.

Fiscal problems at the state level are likely to have the biggest effect on the village transfer economy. It was the expansion of state spending that led to the dramatic increase in this sector in the first part of the 1980s. In addition, the magnitude of the state's potential fiscal problems suggests that solutions will require large cuts in state spending. The decline in state spending may be as dramatic as its expansion. Goldsmith (1989) has projected that the gap between expected revenues and current spending could exceed one billion dollars—approximately one-half the current budget—by the turn of the century.

The exact effects on rural residents will depend on the approach the state takes to close the gap. It is likely that incomes will be reduced as state-funded jobs are cut in the both the government and private sector. And as the state deals with its budget crisis rural residents will be particularly hard hit, because of the small rural tax bases and low incomes (Hill 1991). In Western Coastal Alaska jobs created by state spending account directly and indirectly for almost 35 percent of personal income; direct payments from the state add approximately 10 percent more; and state subsidies increase real income approximately 20 percent. Given the importance of this income to the villages, a substantial cut in state spending could have a drastic effect on the village cash economy.

The Market Economy

The private economy in the villages is small. In 1989 private sector earnings in Western Coastal Alaska accounted for less than 40 percent of total personal income. That was significantly less than for the state as a whole, where private sector earnings made up about 60 percent of personal income. The market economy in the region is even smaller than those figures suggest, since some share of private sector earnings come from the transfer economy.
In the market economy, income is created through the exchange of resources, goods, and services for cash. Market transactions reflect the relative costs of production. While participants in the market are primarily private companies, government also plays an important role.

The small size of the private sector is reflected in the relatively small size of the support sector in the villages. The support sector is that part of the economy which provides goods and services for the local population. Income brought into the community through the transfer sector or through the sale of resources outside the community is multiplied by residents' local spending, creating additional income in the support sector. The size of this income created—known as the multiplier effect—is a good measure of the size of the support sector. In Table 4 the multiplier for Western Coastal Alaska is estimated as 1.3—so for each new dollar brought into the region, local spending creates approximately 30 cents of income. (We estimated the multiplier by dividing the change in total income from 1979 through 1989 by the change in non-support sector income.) Multipliers for the state were estimated to be in the range of 1.5 in the early 1980s (Goldsmith 1985).

The basic sector of the village market economy is overwhelmingly based on natural resources. Although there may be a few exceptions, fishing, trapping, mining, and petroleum production provide the economic base for rural Alaska. Prudhoe Bay petroleum, and mines such as the Red Dog zinc mine in the Northwest Arctic Borough, provide examples of major resource projects. The rich fisheries of coastal southern Alaska are also familiar examples. Western Coastal Alaska also has an important fishery where the value of the catch averaged $20.3 million per year throughout the 1980s (Knapp and Smith 1991). The income generated by the village market economy reflects the quality and quantity of the local natural resource base.

Commercial harvesting and processing of natural resource products is the major non-governmental source of income for most rural communities. Surveys taken in four western communities between 1982 and 1984 showed that fishing, cannery work, and trapping accounted for between 50 and 80 percent of non-transfer income and almost all the income from non-government sources (Wolfe et al. 1984; and Impact Assessment, Inc. 1988). Comparing across communities in the region, transfer incomes are more important when resource incomes are smaller.

The importance of natural resources in the economic base of these communities should not be surprising. Traditional settlement patterns reflect favorable subsistence locations, which were chosen for their concentrations of renewable resources. In addition, natural resource production, like fishing and trapping, complements subsistence activities, using the same technology and following similar seasonal cycles.

**LIMITS ON ECONOMIC DEVELOPMENT**

_In general, economic development in Alaska villages is limited for a number of reasons: villages are small and remote; villagers have limited access to and control over local resources; not all areas have commercial resources; relatively few projects in rural Alaska can meet market tests; and a significant share of existing jobs go to non-residents._

What limits the ability of village market economies to create jobs and economic opportunities for their residents? Job creation and economic development must be based on the region's comparative advantages. A community has a comparative advantage if it can produce something at a lower cost than competing regions can.

Two general reasons are given for why villages can't create enough jobs. One argument suggests there are simply limits to what is economically feasible in village Alaska. The other argument suggests that job opportunities are limited because of the limited ability of regional residents to take advantage of their comparative economic advantages. Both arguments have some validity.
For residents to benefit from economic activity in the villages, they have to be able to take advantage of jobs created. During the economic expansion of the 1980s, jobs were created in the public and private sectors—but many were taken by non-residents. Teachers, administrative officials, health professionals, and others moved to the rural areas of the state to take jobs. Resource producing industries in rural Alaska also have a high proportion of non-resident workers. This pattern of employment helps to explain why non-Natives continue to move into the region while Natives leave.

The limits to local participation have been documented in the construction industry and resource production industries. Rainery (1982) found that over half of the employment opportunities created by public projects in a sample of rural projects went to non-residents. A recent state survey found that over 10 percent of the employees in western and interior Alaska were not residents of the state (Keith et al. 1988). Resource industries also have a high proportion of non-Alaskan workers. In 1988 over 35 percent of the employees in the food processing, logging, and hunting and guiding industries were from out of state.

There are two general explanations for this pattern of many village jobs going to non-residents. Local residents may not have the skills required; for example, teachers and health workers require specialized training which village residents typically don’t have. Access to management jobs, which often depends on having years of experience, may also be limited for village residents.

But villagers may also choose not to take some jobs. Local residents may choose only limited participation in the labor force because wage work conflicts with subsistence activities. Kleinfield and others (1983) found low participation rates among Inupiat men even though jobs were available that were “culturally adapted.”

Increased local training and adaptation of jobs to the high turnover resulting from subsistence participation might increase local hire. One general limit to this type of program may be externally imposed wage rates which do not reflect local market conditions. State and federal Davis-Bacon provisions for construction projects and public sector wage schedules require workers to be paid according to prevailing rates in urban areas, with adjustments for higher rural living costs. The resulting relatively high wages limit local hire, because they reduce the incentive for employers to train local workers and to tolerate high turnover. Lane and Thomas (1987) suggest that lowering wage rates and adjusting job schedules might increase local participation.

Berman (1986) suggests that limited access to and control over local resources also limits the ability of villagers to make the most of local resource production in which they have a comparative advantage. While harvest limits are necessary to protect fish and game stocks, restrictions on local residents’ access to the allowable harvest prevents them from making the most productive use of those resources. Access may be limited because of land ownership and externally imposed regulations. While these concerns about limited access have been widely expressed for subsistence resources, similar concerns exist in the market sector. Laws such as the federal Marine Mammal Protection Act, which limits the ability of Natives to sell the products of the hunt, significantly reduce economically feasible activities for village residents. Berman suggests that an economy based on resource harvesting activities with fewer limitations on access and control could support a significant population in rural Alaska.

An example of this type of economic restriction is that imposed by limited entry in the commercial salmon fisheries. The State of Alaska limited access to the fisheries through a permit system in 1973 because of concerns about over-harvesting. But this limit also affected village residents. While the majority of local fishermen initially received permits, villagers wanting to get into the fishery later had to buy or otherwise acquire one of the limited number of permits. The policy trade-off the state government chose was greater incomes for those in the fishery and limited participation by the growing population. An alternative would have been to limit harvest levels but not numbers of fishermen.
Villagers have also sold some permits to non-residents, further reducing rural participation. Langdon (1987) found that by 1982 almost 10 percent of the permits originally issued to local residents had been sold to non-residents.

Not every region has economically feasible activities that can support its current population. Local resource development is economically feasible only if resources can be produced and delivered to market at a cost at or below the current market price. The total cost will be influenced by the cost of inputs, such as labor and capital, the cost of transportation, and the quality and quantity of the resource. Resources may exist at a location but still not be developed because they are not economically feasible. Certain factors in the environment of rural Alaska limit the activities which are economically feasible.

Any factor that raises the local costs of production reduces economic feasibility. The small size and remoteness of the villages increase costs of production. While Alaska villages may be extreme cases, these are limits they have in common with small communities throughout North America. High costs are created by three characteristics of small, remote communities: limited market size, high transportation costs, and the importance of imports. Limited markets have cost disadvantages relative to larger markets with significant economies of scale. Limited, high cost transportation systems facing remote communities mean goods transported into and out of the region will be expensive. Finally, reliance on imported inputs and high transport costs makes local production of goods expensive. (Huskey 1986).

The lack of capital in rural Alaska is also frequently mentioned as a constraint to development. The argument is that local labor and natural resources could be the basis for development, if only capital were available. Numerous studies have examined this hypothesis; while they are based on limited empirical analysis, they have generally concluded that there is no real capital shortage in rural Alaska. For the most part capital seems to be available—however, the cost of capital is high (see Fry 1980).

These high capital costs reflect the increased risk and transaction costs associated with doing business in small, remote places. What residents may perceive as a capital shortage is in fact a shortage of projects that can meet the market test: earning a rate of return comparable to market rates. Limited investment opportunities are often cited as an explanation of the limited success of the regional and village business corporations formed under ANCSA (Alaska Federation of Natives 1989).

And even for projects that could meet the market test, outside financiers unfamiliar with rural Alaska may overestimate the risks of investing capital. Rural entrepreneurs' limited equity also increases the risk of rural loans. These factors may limit the flow of capital in certain cases (Rainery 1982).

The future of the village market economy depends on the future of the natural resource base. Three factors can change the market economies of particular regions. First, world market prices for existing resources could change, bringing them into production if prices rise or taking them out of production, if prices fall. Recent increases and declines in the price of salmon are an example. Second, new resources could be discovered and produced. The discovery of oil at Prudhoe Bay significantly changed the economy of Alaska as a whole and of the North Slope region. Finally, changes in regulation, ownership, or control may allow rural residents to produce resources they previously couldn't—or conversely, remove resources from development. The Alaska Native Claims Settlement Act (ANCSA) opened large areas of the state to resource development by putting them into private ownership.

Future production of resources in rural Alaska may have limited effects on village economies. Development of resource deposits may supply jobs in rural areas, but the deposits may not be located near existing communities. Resource enclaves such as Prudhoe Bay have little interaction with even the closest villages. Residents would have to leave their villages to take advantage of these enclave developments. Development may also conflict with other resource uses, such as subsistence or commercial fishing. These conflicts could reduce village economic well-being.
Future economic growth in rural Alaska will reflect the limits of resource production. Developments based on non-renewable resources, such as oil or minerals, have limited spans. Village economies based on non-renewable resource production must be prepared to shift to other activities when the resource deposits have played out.

There are also limits to production of renewable resources. Yearly harvests need to be limited to protect long-run production. Harvest regulations constrain the incomes that even renewable resources can provide.

**ANCSA: AN EXPERIMENT IN THE MARKET ECONOMY**

Congress passed the Alaska Native Claims Settlement Act (ANCSA) in 1971. While the act was designed to extinguish Native aboriginal claims to Alaska, it was also an experiment in market economics in rural Alaska. The act created 13 regional and over 200 village for-profit corporations. Alaska Natives living in 1971 became shareholders in these corporations. The corporations were given land and money to pursue economic development; corporate development and corporate earnings would theoretically improve the social and economic lot of the Native shareholders.

The village and regional corporations have had a wide range of experience. Corporations have invested in everything from village stores to seafood processing to oil field services. NANA regional corporation in northwest Alaska has pursued goals of resident employment. Other corporations, including Calista, Aleut, and Bristol Bay, have focused investments outside their regions.

The success of these investments has varied widely (Waring 1988; and Colt 1991). But with some notable exceptions, the experiment in rural market economics so far has met with only limited economic success. While the corporations are often credited with advancing Native political skill and power in the state, economic gains have come primarily for those corporations with marketable resources.

Implicitly, ANCSA assumed the limits to development were only the lack of capital and access to resources. In fact, there were a number of reasons for the limited economic success of ANCSA to date. The act underestimated the corporate leadership and political skills necessary to implement the act. Some provisions of the law—like the one that requires regional corporations to share resource revenues—limited corporate incentive to take risks on resource projects, since the gains had to be shared across corporations (Anders 1989). The limited success of the corporations may also support the hypothesis that there simply aren’t many market opportunities in rural Alaska.

A number of Native leaders and others worry about the potential conflict between the corporate organization established by ANCSA and the subsistence economies of the villages. The potential loss of lands important to subsistence, and the conflict between resource development and subsistence, are often cited as areas of concern (Berger 1985 and Langdon 1986). Since corporate membership does not require village residence, actions that are best for corporate shareholders may not be best for village residents.

**CONCLUSIONS**

The economic welfare of village residents depends on the health of the subsistence, transfer, and market components of their economies. Economic well-being in the villages most likely exceeds that described by the money income and employment statistics. Subsistence “income” and the added purchasing power of subsidized goods and services are not counted in income statistics. This non-money income may be the most important reason that the populations of villages, even those with limited economic opportunities, continue to grow.
Alaska villages are often compared to less developed countries. This is misleading; village residents have real incomes which substantially exceed those found in most of the Third World. Villages are also part of a nation which is both wealthy and democratic. Citizenship not only allows village residents to seek better opportunities outside the village, it also means that higher levels of government have an interest in village economies.

Public policy has been more important in Alaska villages than in most American communities. This reflects the special relation between the government and the Native people, the poverty of the region, and the importance of government to village economies. Government has attempted to encourage economic development through loan programs, capital projects, and training. Creation of the village and regional corporations and the transfer of land and money to them under ANCSA was an important experiment in economic development.

On the other hand, government also limits economic development. Regulations and programs that limit access to resources limit the prospects for development.

For villages in the 1980s, government's most important role was creating income through the transfer economy. Transfer programs have increased jobs and real incomes in the villages. This growth may have created a false sense of economic development, and increased population above levels that are viable in the long run. The problem with this transfer economy is that it is transitory; a state budget crisis is likely to severely restrict this component of the village economy in the future.

The subsistence economy provides the rationale for the villages. However, villages can not rely solely on subsistence; subsistence activities and the new public capital goods require cash. Since the transfer economy will not continue to provide past levels of support, villages need to expand their market economies. Village economies face a contradiction in what makes the best location for subsistence activity and the conditions for profitable market activity. Not every place has the potential for economic development, and those that do provide only limited opportunities.

The widely held goal of creating a sustainable economy in the villages centers on the market economy. Developing such an economy is a difficult task for small communities everywhere. A sustainable economy must provide its residents with an adequate income, defined as either some minimum standard, if people aren't mobile, or as the income which keeps residents from moving, if they are mobile. A sustainable economy must also be able to adjust to changes in the economic environment; when one activity is no longer feasible, another must replace it. While a sustainable economy may be an obtainable goal for some communities in rural Alaska, it is not likely for the majority.

Economic self-sufficiency may be particularly hard to achieve in village Alaska for two reasons. First, the required market expansion would be large. Village populations are growing, increasing the economic growth required to provide adequate incomes. Also, the importance of transfers in village income means the market economy would have to expand dramatically to substitute for likely reductions in transfers. Second, while marketable resources like minerals, petroleum, and timber may be available for development in rural Alaska in the future, there is no guarantee they will be located near the villages. To take advantage of resource development residents might have to leave the villages.

The pursuit of sustainable market economies in the villages must take account of the special nature of villages. The importance of subsistence in the villages means that the subsistence costs of economic development must be carefully measured. As Berman (1986) has pointed out, economic development efforts that transform communities based on hunting, fishing, and gathering into wage-based communities could destroy exactly what they are meant to save.


**Policy Issues**

Public policy has been important in creating the current village economies, and it can also be important in pursuing the goal of self-sustaining economies and mitigating the effects if this goal is unattainable. Devising policy answers to these questions depends on two things. First, appropriate policy must reflect the goals of the village residents. Second, a better understanding of the village economy is required for policy design. Three critical policy questions concerning the village economies are outlined below.

1. *What policy changes would be required to allow village residents to maximize the local income from those activities in which their areas have comparative advantages?* We have suggested that in regions with economically feasible activities, benefits to local residents may be limited by laws and regulation as well as by the fact that local residents either can not or choose not to take many of the available jobs.

   This question generates two general topics for examination. First, which laws and regulations limit the development of those activities that might generate local income? Policymakers need to examine the costs of changing such laws. Second, what limits the participation of local labor in rural employment opportunities? Numerous explanations have been offered, but effective policy prescriptions depend on understanding the real reason for this limited participation. Examination of local hire programs such as the one at the Red Dog zinc mine could provide important insights.

2. *For those communities that cannot feasibly support their existing and growing populations, the central question facing policymakers is whether policy should promote people or place prosperity.* A place oriented approach would attempt to improve the welfare of the population in a particular place: the villages. A people oriented strategy would promote improved welfare of a particular group—rural Alaska Natives—independent of where they were.

   Central to this discussion is the question: How mobile is the village population? While people may not want to leave the villages, will they leave if economic opportunities are not there? If they won't move, then limits to economic development will result in increased poverty. Patterns of migration need to be examined. Factors which may limit mobility, such as transfer programs and education, should be assessed. For villagers willing to move to seek employment, do they have the skills, knowledge and expertise necessary to make such a move? Limits to commuting should also be examined, since this option would allow village residents to work in economically feasible activities without permanently leaving the villages. Commuting from the villages has enabled a number of rural Alaska to take advantage of jobs in the past.

3. *If governments decide to provide cash to villages with limited economies, the critical policy question is how: should governments provide transfers or subsidize market development?* Policymakers must examine the feasibility and costs of these options. Both put cash into the villages, but they are likely to have different efficiency and equity consequences.

   We need to understand which development policies work. To start, an examination of the success and failures of the ANCSA corporations would be helpful. ISER recently published a study of the financial performance of regional corporations (Colt 1991), but there is little information available on the finances of village corporations. Review of state and federal projects would also be useful.

   The role of transfer programs also needs to be examined. Transfers do not simply provide money and goods: they also change behavior. The effects of different approaches to transfers must be examined. Similarly, efforts to keep village costs low and the delivery of services efficient will increase local purchasing power and service availability.
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